

Panasonic



General Catalogue 2020-

Electrical Construction Materials

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Panasonic®

To the next stage

Panasonic has been presented in the Vietnam market over many years. During all this time, our customers have come to appreciate Panasonic and our extensive range of products from Home Appliances to Wiring Devices. Playing a key role in Panasonic company history since 1918, Panasonic has established a reputation for safety, durability and comfort around the world.

As Panasonic continues to develop new product technologies along with highly advanced manufacturing abilities, our concepts regarding safety and comfort continue to evolve. Panasonic's uncompromising commitment makes it possible to offer our Vietnam customers a higher level of satisfaction with any of our diverse product categories.



*Panasonic Original Product
1918
Attachment plug*

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Company Profile

Since the Panasonic Corporation was founded in 1918, it has based corporate activities on a Basic Management Objective. Through its business activities, Panasonic strives to help society progress and develop so as to improve the well-being of people throughout the world. By focusing on people, we intend to enrich their lifestyles as we move forward together with our customers.

Panasonic Life Solutions Company handles diverse businesses. The Energy Systems Business supplies everything from wiring devices and distribution switchboards to photovoltaic modules, storage battery systems and energy management devices. The Lighting Business innovates illumination in an energy-efficient manner with LED lighting bulbs, fixtures and other devices. The Housing Systems Business's comprehensive range of residential equipment and building materials create comfortable living environments. The Environmental Systems Business helps to reduce environmental impact by maintaining good air quality and by purifying contaminated water and soil.

We are helping to create an environment in which people around the world can live in comfort while minimizing environmental harm. Harmoniously combining ecology and comfort is our vision. We seek to achieve this by creating solutions in residential and non-residential (buildings and public facilities) fields, leveraging Panasonic Group's extensive product lines. As we address issues our worldwide customers face with Panasonic solutions, we contribute to realizing a sustainable society.

Panasonic - dedicated to eco-conscious manufacturing

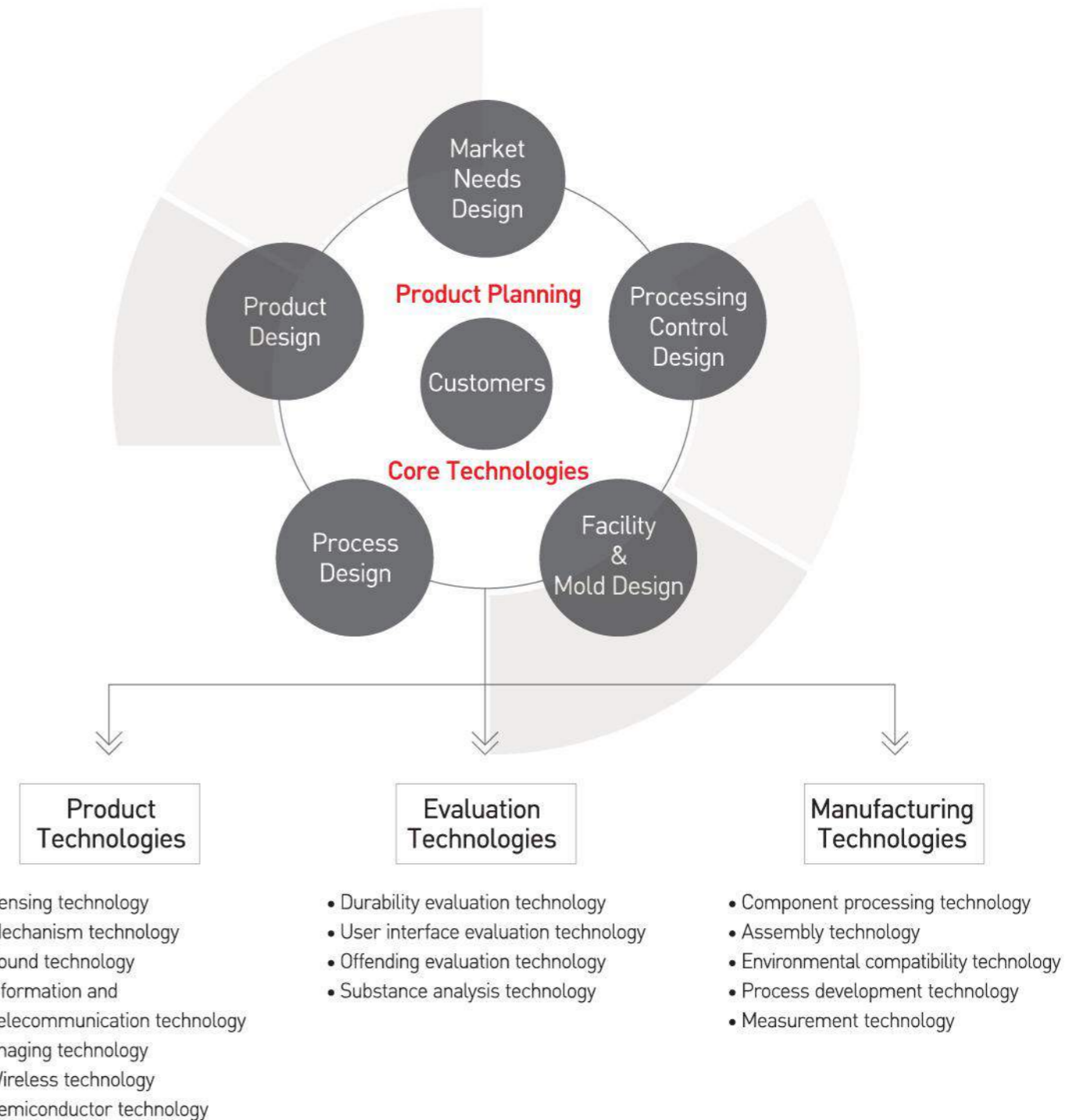
Manufacturing eco-conscious products that do not harm humans and the environment have always been a priority for Panasonic. Conforming to the RoHS directive originating from the EU, Panasonic restricts the usage of hazardous substances that might adversely affect the environment and humans such as lead, cadmium, chromium and mercury, etc. Panasonic contributes to creating a greener environment with lead-free welding, cadmium-free contacts and hexavalent chromium-free plating.



Products Concept

Panasonic's "Five-Elements" Design Concept

The integrated system that our product development process is based on makes it possible to produce consistently high-quality products. It begins with assessing market needs accurately goes on to develop advanced basic technologies and extends to product planning, design and production, all the way to sales and after-sales activities.





Panasonic's products will continue to work in diverse settings all around the world.

Home and lifestyle environments, as well as business environments which evolve every day.

The Panasonic group has made available to you safe and secure products which you can use in various places, whether it is your home, or office, or in various institutions or public areas.

Our rich and varied product range offers true value to our customers.

We shall continue to offer you the best in smart living.



HOME

-  MINERVA
-  HALUMIE
-  MCB/RCBO
-  VENTILATING FAN
-  CEILING FAN
-  WALL FAN
-  AIR PURIFIER
-  PUMP



CONDOMINIUM

-  MINERVA
-  GEN X
-  MCCB/MCB/RCBO/GD BREAKER
-  VENTILATING FAN
-  ERV
-  HAND DRYER
-  CEILING FAN
-  AIR PURIFIER



OFFICE

-  HALUMIE
-  FULL-COLOR WIDE SERIES
-  EXTENSION CORD
-  FLOOR OUTLET SERIES
-  PASSIVE INFRARED SENSOR
-  MCCB/MCB/RCBO/GD BREAKER
-  FULL-2WAY REMOTE LIGHTING CONTROL SYSTEM
-  VENTILATING FAN
-  ERV
-  HAND DRYER



FACTORY

-  FULL-COLOR WIDE SERIES
-  INDUSTRIAL SOCKET
-  FLOOR OUTLET SERIES
-  PASSIVE INFRARED SENSOR
-  AUTOMATIC TIME SWITCH
-  MCCB/MCB/RCBO/GD BREAKER
-  FACTORY LINE SYSTEMS
-  PHOTOVOL TAIC MODULE HIT®
-  CABINET FAN
-  INDUSTRIAL FAN



SHOPPING CENTER

-  MINERVA
-  HALUMIE
-  TWIST LOCK
-  FLOOR OUTLET SERIES
-  AUTOMATIC TIME SWITCH
-  MCCB/MCB/RCBO/GD BREAKER
-  VENTILATING FAN
-  AIR CURTAIN
-  AIR MOVING EQUIPMENT
-  ERV
-  HAND DRYER
-  MID FAN



Applying advanced technologies that truly make life better, we live by an unparalleled commitment to product quality. Our approach to product development originates in the DNA of Japanese craftsmanship. Panasonic is building on the Japanese tradition of uncompromising quality control worldwide, developing and manufacturing fine products and delivering them to customers everywhere.

WORLDWIDE STANDARDS

Safety design conforming to IEC standards

Switches conform to the IEC60669-1 standard (16A 250V-).
 Socket Outlets conform to the IEC60884-1 standard.
 MCB/RCBO conform to the IEC60898-1, IEC60947-2, IEC61009 standard.
 All devices guarantee protection against electric shock and are designed for endurance, service longevity and safety.

Based on Internationally Accepted Standards

Manufactured based on the industrial norms for environmental conservation and quality assurance prescribed by ISO. We undertake the manufacture of products using processes with high quality and high safety which have cleared the IEC.



Examination and registration card.



Panasonic now conforms with Conformity Regulation (CR) mark
 All Panasonic fans are borne CR mark issued by Vietnam Certification Center (Quacert) in comply with QCVN 4:2009/BKHCN



Panasonic MCB BD-63R and RCBO BDE-63R are tested by Vietnam Quality Assurance and Testing Center 3 (QUATEST 3), in comply with IEC 60898-1 : 2003

Electrical Construction Materials



Easy To Install

Panasonic-designing one-touch action products that are easy to install
 The All One-Touch Action design concept to assemble devices to Cover Plate and Body Plate. Making the installation process easier than ever, saving both time and labour.

1-TOUCH Construction



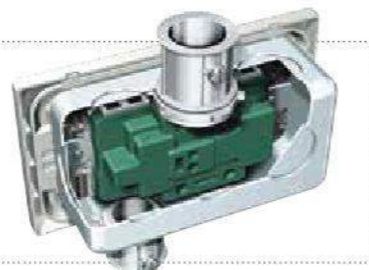
■ Device & Body Plate



■ Body Plate & Cover Plate



Highly efficiency, because of improvements in the utility box.
 Sufficient space has been provided to house the connectors, and this has resulted in a higher efficiency than ever before.



Various Terminals Available

We offer a wide range of terminals to suit the electrical cabling requirements of every country

Panasonic has made available various terminals to suit the cabling environment anywhere in the world. With a structure which can be handled with more safety than ever before. Connections can be smoothly made, which leads to labor saving.

■ Types of Electrical Cables and Terminals

Terminal	ICON	APPLICABLE WIRE
Quick Connect Terminal	 Quick & 1.5Safety Solid Wire only: 1.5-2.5mm ²	Solid OK
	 Solid Wire: 1.5-2.5mm ² Stranded Wire: 1.5-2.5mm ²	Solid Stranded OK

Terminal	ICON	APPLICABLE WIRE
Global Terminal	 Solid Wire: 1.5-4.0mm ² Stranded Wire: 1.5-4.0mm ²	Solid Stranded OK
Pillar Terminal II	 1.5-4.0mm ² Solid, Stranded and Flexible wire	Flexible OK

Safety

Safety design conforming to IEC standards

Switches conform to the IEC60669-1 standard(16A 250V~). Receptacles conform to the IEC60884-1 standard. All devices guarantee protection against electric shock and are designed for endurance, service longevity and safety.

Switches

- Designed for long service life (compliant with IEC standard) with 40,000 testing operations at 16A 250V~ full rating.
- Heat-resistant, highly conductive material used for the terminal plate reduces temperature increases in the terminal section.

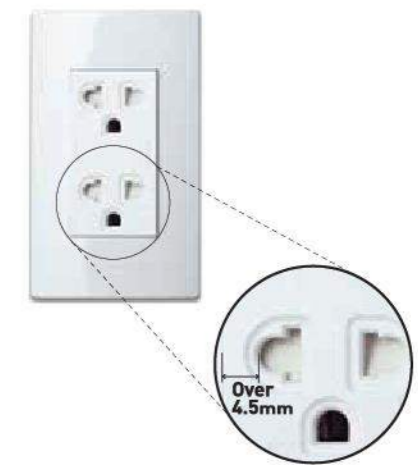


■ Terminal Section Temperature Rise

IEC60669-1 Standard value		Conditions
Initial	45K max.	20A current
Use as 40,000 testing operations		16A current

Receptacles

- Wide Receptacles secures insulation distance between contacts and external metal parts improving safety. (Compliant with IEC standard which requires insulation distance over 4.5mm)
- Long-life design, capable of 10,000 strokes at 16A 250V ~ full rating.
- Heat-resistant, highly conductive material is used for the blade receptacles and terminal point to reduce temperature increase.



■ Terminal Section Temperature Rise

IEC60884-1 Standard value		Conditions
Initial	45K max.	20A current
After 10,000 Strokes		16A current

■ Insulation Resistance

IEC60884-1 Standard value	
Initial	5M Ω min.
After 10,000 Strokes	

■ Withdrawal Forces

IEC60884-1 Standard value		
After 10,000 Strokes	3 blades	54N max.
	2 blades	50N max.
	Single blades	2N min.

■ Electric Strength

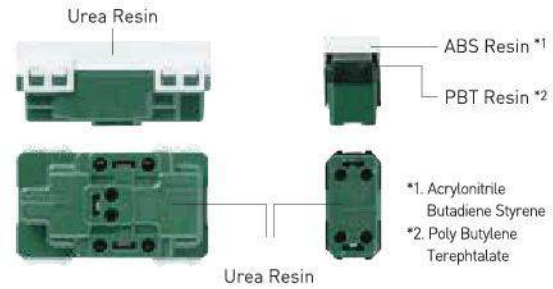
IEC60884-1 Standard value	
Initial	2,000V 1 min.
After 10,000 Strokes	1,500V 1 min.

Security And Comfort

1 Flame-retardant Material Urea Resin

Utilizing urea resin improves flame resistance and outstanding anti-tracking prevents electric shocks.

Completely Insulated Construction



Protection Against Electric shock

Enclosure Material Characteristics (Reference)

	Urea	PBT	Polycarbonate
Tracking Performance	Excellent	Good	Poor
Heat Deformation	Good	Good	Fair
Self-Extinguishment	Good	Good	Good



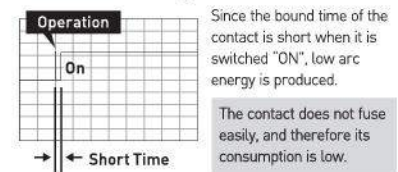
Switch



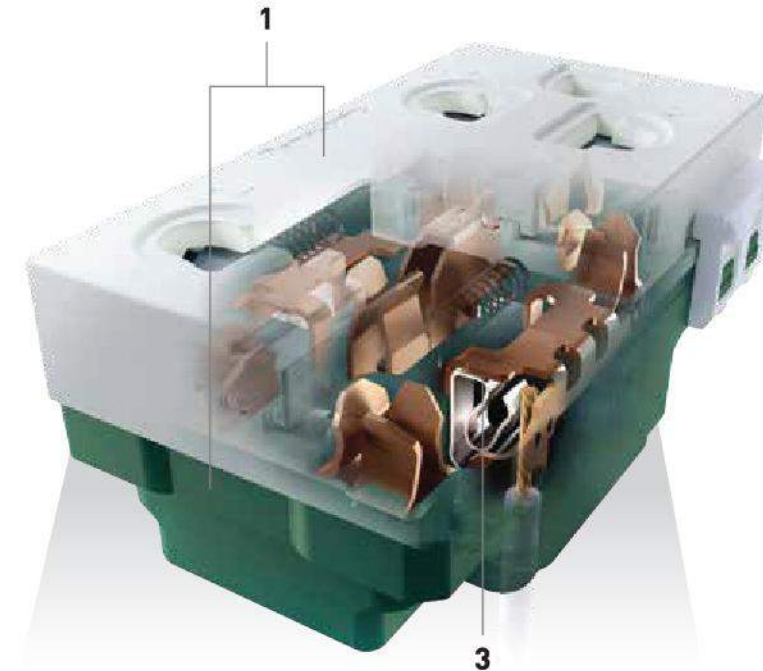
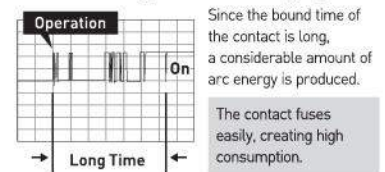
2 Durable & Smooth Operations Direct Driving Mechanism

Panasonic's proprietary method helps stabilizing the pressure applied to the contacts to ensure low heat and minimize the arc energy. This process reduces the risk of contact fuse and provides longer lasting resistance.

Direct Driving Mechanism



Seesaw Type of Switching System



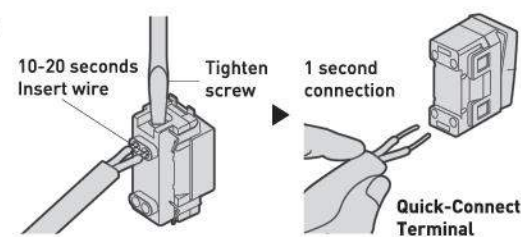
Receptacle



3 Quick & Secure Connect Quick-Connect Terminal

These terminals improve site construction quality since fewer tightening screws are required, simplifying connections.

Reduces the execution time considerably



Tensile strength after connection

IEC60669-1 IEC60884-1 Standard Value	FULL-COLOR WIDE SERIES / Halumie	
IEC Standard	Wire	Strength
30N min.	1.5mm ² 4.0mm ²	30N min. or more

Product Positioning

(SERIES OF WIRING DEVICES)

Whether living room, office, public space or any other facility, Panasonic enhances its appearance. A wide range of switch and receptacle product series, each with its distinctive designs, color variations and operational ease is offered to ideally match installation requirements.



MINERVA **NEW**
The new Luxury Square Type
Wiring Device series from Panasonic



HALUMIE
New slim designs to harmonize
with any living space



GEN-X
Exclusive switch series with ultrathin panel and
refined appearance adding elegance to your interiors



FULL-COLOR WIDE SERIES REFINA
Wide color range suits modern interiors



FULL-COLOR WIDE SERIES
The beauty of simplicity



FULL-COLOR SERIES
The standard of excellence for any installation

The new Luxury Square Type Wiring Device series from Panasonic

NEW STANDARD OF ELEGANCE

■ Elegant Design and Colors
Complete the interior design with the elegant finish and perfect shadowing

■ Polishing and frameless surface

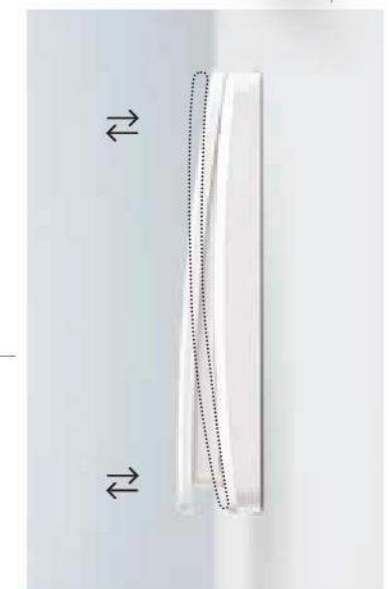
■ Small On/Off reversing angle
For the limitless experience in every usage



Metallic Pearl Gold



Metallic Pearl Gray





Switches & Accessories

WMT501-VN

Switch "B", Single Pole
1-Gang 1-Device
16AX 250V~



WMT503-VN

Switch "B", Single Pole
1-Gang 2-Devices
16AX 250V~



WMT505-VN

Switch "B", Single Pole
1-Gang 3-Devices
16AX 250V~



WMT501MYZ-VN

Switch "B", Single Pole
1-Gang 1-Device
[Metallic Pearl Gold]
16AX 250V~



WMT503MYZ-VN

Switch "B", Single Pole
1-Gang 2-Devices
[Metallic Pearl Gold]
16AX 250V~



WMT505MYZ-VN

Switch "B", Single Pole
1-Gang 3-Devices
[Metallic Pearl Gold]
16AX 250V~



WMT507-VN

Switch "B", Single Pole
1-Gang 4-Devices
10AX 250V~
*Applicable Wire: 1.5-2.5mm²
(Solid and Stranded Wire Only)



WMT502-VN

Switch "C", 3Way
1-Gang 1-Device
16AX 250V~



WMT504-VN

Switch "C", 3Way
1-Gang 2-Devices
16AX 250V~



WMT507MYZ-VN

Switch "B", Single Pole
1-Gang 4-Devices
[Metallic Pearl Gold]
10AX 250V~
*Applicable Wire: 1.5-2.5mm²
(Solid and Stranded Wire Only)



WMT502MYZ-VN

Switch "C", 3Way
1-Gang 1-Device
[Metallic Pearl Gold]
16AX 250V~



WMT504MYZ-VN

Switch "C", 3Way
1-Gang 2-Devices
[Metallic Pearl Gold]
16AX 250V~



WMT506-VN

Switch "C", 3Way
1-Gang 3-Devices
16AX 250V~



WMT508-VN

Switch "C", 3Way
1-Gang 4-Devices
10AX 250V~
*Applicable Wire: 1.5-2.5mm²
(Solid and Stranded Wire Only)



WMT594-VN

Switch "E", 4Way
1-Gang 1-Device
10AX 250V~



WMT506MYZ-VN

Switch "C", 3Way
1-Gang 3-Devices
[Metallic Pearl Gold]
16AX 250V~



WMT508MYZ-VN

Switch "C", 3Way
1-Gang 4-Devices
[Metallic Pearl Gold]
10AX 250V~
*Applicable Wire: 1.5-2.5mm²
(Solid and Stranded Wire Only)



WMT594MYZ-VN

Switch "E", 4Way
1-Gang 1-Device
[Metallic Pearl Gold]
10AX 250V~



WMT596-VN

Switch "E", 4Way
1-Gang 2-Devices
10AX 250V~



WMT707K-VN

Foot Light with Passive Infrared
Sensor and Illuminance Sensor
*Applicable Wire: 0.75-1.5mm²
(Solid and Stranded Wire Only)



WEC5781W-VN

Electronic Key Card Switch



NEW

WMT596MYZ-VN

Switch "E", 4Way
1-Gang 2-Devices
[Metallic Pearl Gold]
10AX 250V~



WMT707MYZK-VN

Foot Light with Passive Infrared
Sensor and Illuminance Sensor
[Metallic Pearl Gold]
*Applicable Wire: 0.75-1.5mm²
(Solid and Stranded Wire Only)



WEC5781MYZ-VN

Electronic Key Card Switch
[Metallic Pearl Gold]



NEW

WSBC7010SW-VN

Cable Outlet with 20A
Terminal Block
*Applicable Wire
Input: 2.5-6.0mm²
(Rigid Copper Wire)
Output: 1.5-2.5mm²
(Flexible Wire)



NEW

WMT540108-VN

Bell Switch



NEW

WSBC7010MYZ-VN

Cable Outlet with
20A Terminal Block
[Metallic Pearl Gold]
*Applicable Wire
Input: 2.5-6.0mm²
(Rigid Copper Wire)
Output: 1.5-2.5mm²
(Flexible Wire)



NEW

WMT540108MYZ-VN

Bell Switch
[Metallic Pearl Gold]































NEW





Plates *Compatible with Full-Color WIDE series module (P.42-44)

<p>WMT501MYH-VN Switch "B", Single Pole 1-Gang 1-Device (Metallic Pearl Gray) 16AX 250V~</p> 	<p>WMT503MYH-VN Switch "B", Single Pole 1-Gang 2-Devices (Metallic Pearl Gray) 16AX 250V~</p> 	<p>WMT505MYH-VN Switch "B", Single Pole 1-Gang 3-Devices (Metallic Pearl Gray) 16AX 250V~</p> 	<p>WMT6891-VN 1-TOUCH PLATE 1-Gang Cover</p> 	<p>WMT7811-VN 1-TOUCH PLATE 1-Gang 1-Device</p> 	<p>WMT7812-VN 1-TOUCH PLATE 1-Gang Center 2-Device</p> 
<p>WMT507MYH-VN Switch "B", Single Pole 1-Gang 4-Devices (Metallic Pearl Gray) 10AX 250V~ *Applicable Wire: 1.5-2.5mm² (Solid and Stranded Wire Only)</p> <p>★</p> 	<p>WMT502MYH-VN Switch "C", 3Way 1-Gang 1-Device (Metallic Pearl Gray) 16AX 250V~</p> 	<p>WMT504MYH-VN Switch "C", 3Way 1-Gang 2-Devices (Metallic Pearl Gray) 16AX 250V~</p> 	<p>WMT7813-VN 1-TOUCH PLATE 1-Gang 3-Device</p> 	<p>WMT6891MYZ-VN 1-TOUCH PLATE 1-Gang Cover (Metallic Pearl Gold)</p> 	<p>WMT7811MYZ-VN 1-TOUCH PLATE 1-Gang 1-Device (Metallic Pearl Gold)</p> 
<p>WMT506MYH-VN Switch "C", 3Way 1-Gang 3-Devices (Metallic Pearl Gray) 16AX 250V~</p> 	<p>WMT508MYH-VN Switch "C", 3Way 1-Gang 4-Devices (Metallic Pearl Gray) 10AX 250V~ *Applicable Wire: 1.5-2.5mm² (Solid and Stranded Wire Only)</p> <p>★</p> 	<p>WMT594MYH-VN Switch "E", 4Way 1-Gang 1-Device (Metallic Pearl Gray) 10AX 250V~</p> 	<p>WMT7812MYZ-VN 1-TOUCH PLATE 1-Gang Center 2-Device (Metallic Pearl Gold)</p> 	<p>WMT7813MYZ-VN 1-TOUCH PLATE 1-Gang 3-Device (Metallic Pearl Gold)</p> 	<p>WMT6891MYH-VN 1-TOUCH PLATE 1-Gang Cover (Metallic Pearl Gray)</p> 
<p>WMT596MYH-VN Switch "E", 4Way 1-Gang 2-Devices (Metallic Pearl Gray) 10AX 250V~</p> 	<p>WMT707MYHK-VN Foot Light with Passive Infrared Sensor and Illuminance Sensor (Metallic Pearl Gray) *Applicable Wire: 0.75-1.5mm² (Solid and Stranded Wire Only)</p> 	<p>WEC5781MYH-VN NEW Electronic Key Card Switch (Metallic Pearl Gray)</p> 	<p>WMT7811MYH-VN 1-TOUCH PLATE 1-Gang 1-Device (Metallic Pearl Gray)</p> 	<p>WMT7812MYH-VN 1-TOUCH PLATE 1-Gang Center 2-Device (Metallic Pearl Gray)</p> 	<p>WMT7813MYH-VN 1-TOUCH PLATE 1-Gang 3-Device (Metallic Pearl Gray)</p> 
<p>WSBC7010MYH-VN NEW Cable Outlet with 20A Terminal Block (Metallic Pearl Gray) *Applicable Wire Input: 2.5-6.0mm² (Rigid Copper Wire) Output: 1.5-2.5mm² (Flexible Wire)</p> 	<p>WMT540108MYH-VN NEW Bell Switch (Metallic Pearl Gray)</p> 	<p>WBC8981SW-VN Weatherproof Cover for BS-TYPE Switch Plastic IP43 (White)</p> 	<p>WBC8991W-VN Weatherproof Cover for BS-TYPE Receptacle Plastic IP43 (White)</p> 		

HARMONY
IN EVERY ANGLES

New slim designs to harmonize
with any living space

Slimmer and easier-to-use setting the
standard for advanced wiring device designs



■ **Designs in harmony with living spaces**

Simple and elegant design matches any room interior



■ **Always pleasant to the touch**

Advanced mechanism allows smoother ON/OFF switching. Designed for easiest possible operation



■ **Always reliable and beautiful**

Made of a material that resists color fading even when constantly bathed in room light or sunlight



IP protection of Halumie

Panasonic holds the rights of numerous patents and designs of the Halumie series in the Vietnam. The Halumie series is protected by the following design rights.



Switches



Receptacles & Accessories



Dimmer Switches



Plates

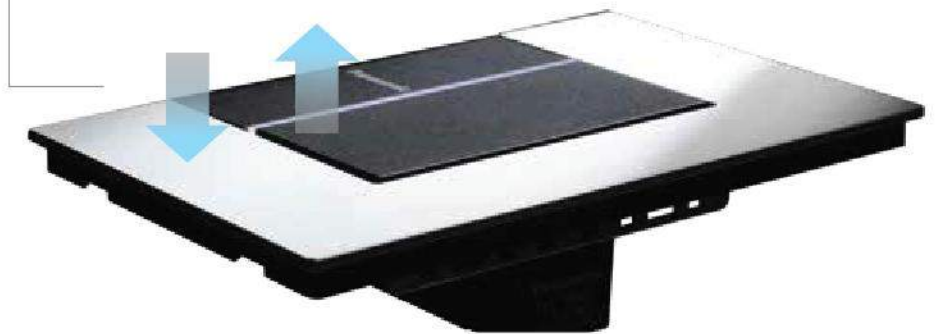


Exclusive switch series with ultrathin panel and refined appearance adding elegance to your interior

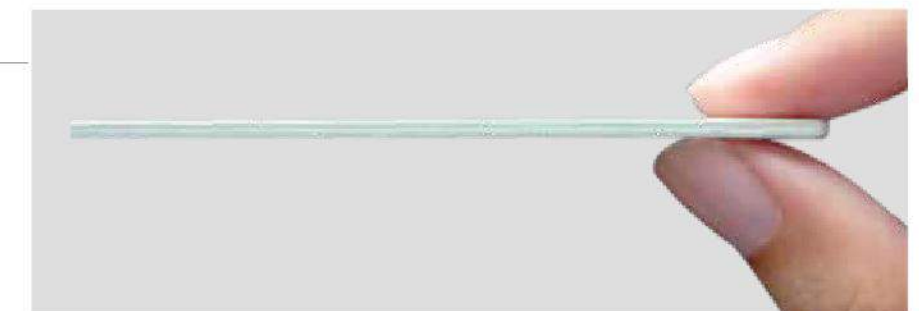
FLAT PANEL WITH ULTRATHIN DESIGN



- **Heat-resistant, easy-to-use latest switch mechanism**
On/Off with just a soft push of the switch. Built for trouble-free operation



- **Sophisticated surface with a super-slim design**
Ideal asymmetric design using 2mm-thick, high-quality aluminum plate



Switches

WTEGP51552S-1-G
Illuminated Switch "C", 3Way
1-Device with Plate
16AX 250~
(Neon Lamp: 220V~)



WTEGP52562S-1-G
Illuminated Switch "C", 3Way
2-Devices with Plate
16AX 250~
(Neon Lamp: 220V~)



WTEGP53572S-1-G
Illuminated Switch "C", 3Way
3-Devices with Plate
16AX 250~
(Neon Lamp: 220V~)



EGG331
Weatherproof Push Button for Door Chime
1A 220V~



EGG335
Weatherproof Push Button for Door Chime
1A 220V~
(Dark Brown)



EBG888
Door chime 220V~
Two tone 9.5W, 50Hz.
Easy-to-hear 82 dB Chime



WTEGP54562S-1-G
Illuminated Switch "C", 3Way
4-Devices with Plate
16AX 250~
(Neon Lamp: 220V~)



WTEGP55582S-1-G
Illuminated Switch "C", 3Way
5-Devices with Plate
16AX 250~
(Neon Lamp: 220V~)



WTEGP56572S-1-G
Illuminated Switch "C", 3Way
6-Devices with Plate
16AX 250~
(Neon Lamp: 220V~)



Dimmer Switches

WEG57912B-1
Dimmer Switch
(Incandescent and LED Light Control)
200W(LED50W) 220-240V~
※ Push On/Off Function Type



WEG57813B-1-G
Dimmer Switch (Incandescent
and Low Voltage Halogen with
Transformer 12V Light Control)
300W 220V~
※ Off Function Type



WEG57816B-1-G
Dimmer Switch (Incandescent
and Low Voltage Halogen with
Transformer 12V Light Control)
500W 220V~
※ Off Function Type



WTFBP51552S-1-G
BS-TYPE Illuminated Switch "C", 3Way
1-Device with Plate



WTFBP52562S-1-G
BS-TYPE Illuminated Switch "C", 3Way
2-Devices with Plate



WTFBP53572S-1-G
BS-TYPE Illuminated Switch "C", 3Way
3-Devices with Plate



Plates

WTEG6503S-1-G
1-Gang 3-Device



WTFB6503S-1-G
1-Gang 3-Device



WTEG6506S-1-G
2-Gang 6-Device



Receptacles and Accessories

WEG15829B-G
Grounding Duplex Universal Receptacle
with Safety Shutter 16A 250~



WEV2364B
Telephone Modular Jack (6P4C)



WEV2488B
CAT5E Data Modular Jack



WTEG6506S-G
2-Gang 6-Device



WEV2501B
DIN Type Television Terminal



WEG3020B-G
Blank Chip



WEG1181BK-G
Grounding Universal Receptacle
with Safety Shutter
16A 250V~



**COLORFUL
MULTI-STYLE**

Wide color range suits modern interiors

Stylish color coordination enhancing your living environments

■ **Wide color palette to perfectly match lifestyle interiors**

Luxurious appearance with wide color variations creating attractive living spaces



Various Combination: 8 Plate Colors × 8 Switch Colors



The last 2 or 3 characters in of Refina product numbers show the item color.

Switches

<p>WEG5511 M H Switch "B", Single Pole 16AX 250V~</p>	<p>WEG5521 M H Switch "B", Single Pole 16AX 250V~</p>	<p>WEG5531 M H Switch "B", Single Pole 16AX 250V~</p>	<p>WEG5512 M H Switch "C", 3Way 16AX 250V~</p>
<p>WEG5522 M H Switch "C", 3Way 16AX 250V~</p>	<p>WEG5532 M H Switch "C", 3Way 16AX 250V~</p>	<p>WEG5551 M H Illuminated Switch "B", Single Pole 16AX 250V~ [Neon Lamp: 220V~]</p>	<p>WEG5561 M H Illuminated Switch "B", Single Pole 16AX 250V~ [Neon Lamp: 220V~]</p>
<p>WEG5571 M H Illuminated Switch "B", Single Pole 16AX 250V~ [Neon Lamp: 220V~]</p>	<p>WEG5552 M H Illuminated Switch "C", 3Way 16AX 250V~ [Neon Lamp: 220V~]</p>	<p>WEG5562 M H Illuminated Switch "C", 3Way 16AX 250V~ [Neon Lamp: 220V~]</p>	<p>WEG5572 M H Illuminated Switch "C", 3Way 16AX 250V~ [Neon Lamp: 220V~]</p>
<p>WEV5533-7SW Glow Switch "D", Double Pole 20A 250V~</p>	<p>WEC5542-7SW Twin Switch "C", 3Way 10AX 250V~</p>		

Receptacles with Switches

<p>WEGP1282 Grounding Duplex Universal Receptacle with Safety Shutter and Switch</p>			
<p>Metallic White WEGP1282MW</p>	<p>Metallic Gray WEGP1282MH</p>	<p>Metallic Brown WEGP1282MF</p>	<p>Metallic Black WEGP1282MB</p>
<p>Metallic White M W</p> <p>Metallic Pearl White M W Z</p>	<p>Metallic Gray M H</p> <p>Metallic Dark Brown M A</p>	<p>Metallic Brown M F</p> <p>Metallic Gold M Y</p>	<p>Metallic Black M B</p>
<p>WEV5511SW Switch "B", Single Pole 16AX 250V~</p>	<p>WEV5521SW Switch "B", Single Pole 16AX 250V~</p>	<p>WEV5531SW Switch "B", Single Pole 16AX 250V~</p>	<p>WEV5512SW Switch "C", 3Way 16AX 250V~</p>
<p>WEV5522SW Switch "C", 3Way 16AX 250V~</p>	<p>WEV5532SW Switch "C", 3Way 16AX 250V~</p>	<p>WEV5511-7SW Switch "B", Single Pole 16AX 250V~</p>	<p>WEV5521-7SW Switch "B", Single Pole 16AX 250V~</p>
<p>WEV5531-7SW Switch "B", Single Pole 16AX 250V~</p>	<p>WEV5512-7SW Switch "C", 3Way 16AX 250V~</p>	<p>WEV5522-7SW Switch "C", 3Way 16AX 250V~</p>	<p>WEV5532-7SW Switch "C", 3Way 16AX 250V~</p>

Receptacles

WEV1081SW
Universal Receptacle with Safety Shutter
16A 250V~



WEV1091SW
Universal Receptacle
16A 250V~



WEG1001SW
Receptacle
16A 250V~



WEG1090SW
Round Pin Receptacle
16A 250V~



WEV1181SW
Grounding Universal Receptacle with Safety Shutter
16A 250V~



WEV1582SW
Grounding Duplex Universal Receptacle with Safety Shutter
16A 250V~



WEV1081-7SW
Universal Receptacle with Safety Shutter
16A 250V~



WEV1181-7SW
Grounding Universal Receptacle with Safety Shutter
16A 250V~



Accessories

WEV1582-7SW
Grounding Duplex Universal Receptacle with Safety Shutter
16A 250V~



WEF11721W8
2-port USB Charger 2A



WEV24886SW
CAT6 Data Modular Jack



WEV2488SW
CAT5E Data Modular Jack



Dimmer Switches

WEV2364SW
Telephone Modular Jack (6P4C)



WEV2501SW
DIN Type Television Terminal



WEG57912SW
Dimmer Switch (Incandescent and LED Light Control)
200W(LED50W) 220-240V~
※ Push On/Off Function Type
*Applicable Wire: 1.0-4.0mm²
(Solid, Stranded and Flexible Wire)



WEF5791301SW-VN
Dimmer Switch with Minimum Brightness Adjustment (Incandescent and LED Light Control)
100W(LED100W) 220V~
※ Push On/Off Function Type



WEF5791501SW-VN
Dimmer Switch with Minimum Brightness Adjustment (Incandescent and LED Light Control)
240W(LED200W) 220V~
※ Off Function Type



EGG331
Weatherproof Push Button for Door Chime
1A 220V



EGG335
Weatherproof Push Button for Door Chime
1A 220V~ (Dark Brown)



EBG888
Door Chime
220V~ Two Tone 9.5W, 50 Hz.
Easy-to-Hear 82 dB Chime



Plates

FULL-COLOR WIDE SERIES Refina A-TYPE	Unit: mm									
	Plastic Plate 1-Gang 1-Device	Plastic Plate 1-Gang 2-Device	Plastic Plate 1-Gang 3-Device	Plastic Plate 1-Gang Center 2-Device	Plastic Plate 1-Gang Cover	Plastic Plate 2-Gang 4-Device Plate	Plastic Plate 2-Gang 6-Device Plate	Plastic Plate 1-Gang for HB Breaker	Plastic Plate 1-Gang for 1P1E MCB	Plastic Plate Double Cover Plate
Snow White [S][W]	WEV68010SW	WEV68020SW	WEV68030SW	WEV680290SW	WEV68910SW	WEV68040SW	WEV68060SW	WEV7061SW	WEV7001SW	WEV68920SW
Metallic Pearl White [M][W][Z]	WEG68010MWZ	WEG68020MWZ	WEG68030MWZ	WEG680290MWZ						
Metallic White [M][W]	WEV68010MW	WEV68020MW	WEV68030MW	WEV680290MW	WEV68910MW	WEV68040MW	WEV68060MW	WEV7061MW	WEV7001MW	
Metallic Gray [M][H]	WEV68010MH	WEV68020MH	WEV68030MH	WEV680290MH	WEV68910MH	WEV68040MH	WEV68060MH	WEV7061MH	WEV7001MH	
Metallic Black [M][B]	WEV68010MB	WEV68020MB	WEV68030MB	WEV680290MB	WEV68910MB	WEV68040MB	WEV68060MB	WEV7061MB	WEV7001MB	
Metallic Gold [M][Y]	WEG68010MY	WEG68020MY	WEG68030MY	WEG680290MY						
Metallic Brown [M][F]	WEG68010MF	WEG68020MF	WEG68030MF	WEG680290MF						
Metallic Dark Brown [M][A]	WEG68010MA	WEG68020MA	WEG68030MA	WEG680290MA						
Weatherproof plates										
Metal IPX3	Metal WEG7801	Metal WEG7802	Metal WEG7803	Metal WEG7829						
Plastic IP55	Plastic WEG7901	Plastic WEG7902	Plastic WEG7903	Plastic WEG79029						
Weatherproof cover plates (Horizontal Type)										
Metal IP55						Metal WEG8881-P				
Plastic IP55						Plastic WEG8981-P				

The last 2 or 3 characters [] in of Refina product number show the item color.
*IP=Ingress Protection (when flap is closed).

Receptacles and Accesories

WEV1081-7H
Universal Receptacle
with Safety Shutter
16A 250V~
WEB7811 **M** **W** (Plate)
1-Gang 1-Device



★

WEV1081H
Universal Receptacle
with Safety Shutter
16A 250V~
WEB7812 **M** **W** (Plate)
1-Gang 2-Devices



WEV1181H
Grounding Universal Receptacle
with Safety Shutter
16A 250V~
WEB7812 **M** **W** (Plate)
1-Gang 2-Devices



WEV1081-7SW
Universal Receptacle with
Safety Shutter 16A 250V~
WEV5531-7SW
1Way SP Switch "B" 16AX 250V~
WEB7812SW (Plate)
1-Gang 2-Devices



★

WEV2501SW
DIN Type Television Terminal
WEV2364SW
Telephone Modular Jack (6P4C)
WEB7812SW (Plate)
1-Gang 2-Devices



WEV2501SW
DIN Type Television Terminal
WEB7811SW (Plate)
1-Gang 1-Device



WEV1582-7H
Grounding Duplex Universal
Receptacle with Safety Shutter
16A 250V~
WEB7813 **M** **W** (Plate)
1-Gang 3-Devices



★

WEV1191H
Grounding Universal Receptacle
16A 250V~
WEG5151-51HK
Illuminated Switch "B", Single Pole
16AX 250V~ (Neon Lamp 220V~)
WEB7813 **M** **W** (Plate)
1-Gang 3-Devices



WEV2501H
DIN Type Television Terminal
16A 250V~
WEV2364H
Telephone Modular Jack (6P4C)
WEB7812 **M** **W** (Plate)
1-Gang 2-Devices



WEV2488SW
CAT5E Data Modular Jack
WEB7811SW (Plate)
1-Gang 1-Device



WEV24886SW
CAT6 Data Modular Jack
WEB7811SW (Plate)
1-Gang 1-Device



WEV2364SW
Telephone Modular Jack (6P4C)
WEV2488SW
CAT5E Data Modular Jack
WEB7812SW (Plate)
1-Gang 2-Devices



WEV2501H
DIN Type Television Terminal
WEB7811 **M** **W** (Plate)
1-Gang 1-Device



WEV2364H
Telephone Modular Jack (6P4C)
WEB7811 **M** **W** (Plate)
1-Gang 1-Device



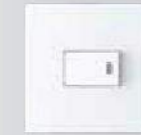
WEV2488H
CAT5E Data Modular Jack
WEB7811 **M** **W** (Plate)
1-Gang 1-Device



WEG575181
Dimmer Switch
(Incandescent Light Control)
800W 220V~
WEB7812SW (Plate)
1-Gang 2-Devices



WEG5151-51SWK
Illuminated Switch "B" Single Pole
WEB7811SW (Plate)
1-Gang 1-Device



WEV5001-7SW
Switch "B" Single Pole
16AX 250V~
WEB7813SW (Plate)
1-Gang 3-Devices



★

WEV24886H
CAT6 Data Modular Jack
WEB7811 **M** **W** (Plate)
1-Gang 1-Device



WEG575181H
Dimmer Switch
(Incandescent Light Control)
800W 220V~
WEB7812 **M** **W** (Plate)
1-Gang 2-Devices



WEV1081-7SW
Universal Receptacle with
Safety Shutter
16A 250V~
WEB7811SW (Plate)
1-Gang 1-Device



★

WEG5401-7SW
Push Bottom "B" Single Pole
10A 250V~
WEB7811SW (Plate)
1-Gang 1-Device



WEBP1041SW-P
1-Gang multiple Receptacle



WBC8981SW-VN
Weatherproof Cover
for BS-TYPE Switch Plastic IP43
(White)

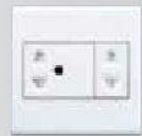


WEV1081-7SW
Universal Receptacle with
Safety Shutter
16A 250V~
WEB7812SW (Plate)
1-Gang 2-Devices



★

WEV1081-7SW
Universal Receptacle with
Safety Shutter 16A 250V~
WEV1181-7SW
Grounding Universal Receptacle with
Safety Shutter 16A 250V~
WEB7813SW (Plate)
1-Gang 3-Devices



★

WEV1582-7SW
Grounding Duplex Universal
Receptacle with Safety Shutter
16A 250V~
WEB7813SW (Plate)
1-Gang 3-Devices



★

WBC8991W-VN
Weatherproof Cover
for BS-TYPE Receptacle Plastic IP43
(White)



WSBC7010SW-VN
Cable Outlet with 20A
Terminal Block
*Applicable Wire
Input: 2.5-6.0mm²
(Rigid Copper Wire)
Output: 1.5-2.5mm²
(Flexible Wire)











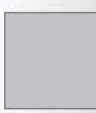





NEW

WEBFP57311W-VN
Passive Infrared Sensor with Plate
(Wall Flush Mount)



NEW

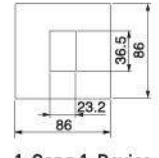



Switches with plate [Pillar terminal]

COLOR	 1-Device 1Way SP Switch "B" 16AX 250V~ ★	 2-Devices 1Way SP Switch "B" 16AX 250V~ ★	 3-Devices 1Way SP Switch "B" 16AX 250V~ ★	 1-Device 2Way SP Switch "C" 16AX 250V~ ★	 2-Devices 2Way SP Switch "C" 16AX 250V~ ★	 3-Devices 2Way SP Switch "C" 16AX 250V~ ★
 Snow White [S][W]	WEBP515117SW	WEBP525217SW	WEBP535317SW	WEBP515127SW	WEBP525227SW	WEBP535327SW
 Metallic Pearl White [M][W][Z]	WEBP515117MWZ	WEBP525217MWZ	WEBP535317MWZ	WEBP515127MWZ	WEBP525227MWZ	WEBP535327MWZ
 Metallic White [M][W]	WEBP515117MW	WEBP525217MW	WEBP535317MW	WEBP515127MW	WEBP525227MW	WEBP535327MW
 Metallic Gray [M][H]	WEBP515117MH	WEBP525217MH	WEBP535317MH	WEBP515127MH	WEBP525227MH	WEBP535327MH
 Metallic Black [M][B]	WEBP515117MB	WEBP525217MB	WEBP535317MB	WEBP515127MB	WEBP525227MB	WEBP535327MB
 Metallic Gold [M][Y]	WEBP515117MY	WEBP525217MY	WEBP535317MY	WEBP515127MY	WEBP525227MY	WEBP535327MY
 Metallic Brown [M][F]	WEBP515117MF	WEBP525217MF	WEBP535317MF	WEBP515127MF	WEBP525227MF	WEBP535327MF
 Metallic Dark Brown [M][A]	WEBP515117MA	WEBP525217MA	WEBP535317MA	WEBP515127MA	WEBP525227MA	WEBP535327MA

The last 2 or 3 characters in of Refina product numbers show the item color.

Plates

Unit: mm

FULL-COLOR WIDE SERIES Refina BS-TYPE	 1-Gang 1-Device	 1-Gang 2-Device	 1-Gang 3-Device
 Snow White [S][W]	WEB7811SW	WEB7812SW	WEB7813SW
 Metallic Pearl White [M][W][Z]	WEB7811MWZ	WEB7812MWZ	WEB7813MWZ
 Metallic White [M][W]	WEB7811MW	WEB7812MW	WEB7813MW
 Metallic Gray [M][H]	WEB7811MH	WEB7812MH	WEB7813MH
 Metallic Black [M][B]	WEB7811MB	WEB7812MB	WEB7813MB
 Metallic Gold [M][Y]	WEB7811MY	WEB7812MY	WEB7813MY
 Metallic Brown [M][F]	WEB7811MF	WEB7812MF	WEB7813MF
 Metallic Dark Brown [M][A]	WEB7811MA	WEB7812MA	WEB7813MA
 Weatherproof cover plates (Horizontal Type) Plastic IP55			WEG8981-P

The last 2 or 3 characters in of Refina product numbers show the item color.

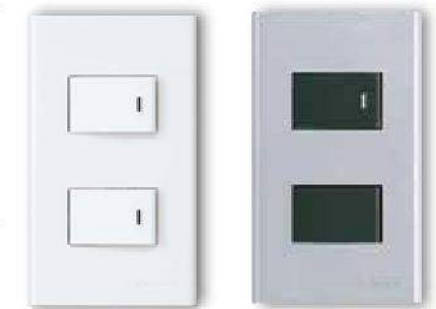
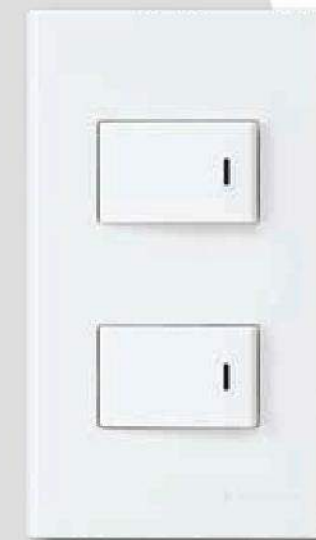
THE **STANDARD** OF
YOUR COMFORTABLE LIFE

The beauty of simplicity

Sharp looking design brings a polished touch to your living room and office

■ Elegantly simple squarish design

Add a refreshing accent to any room. Bold, modern plates with square shapes available in various configurations to suit residential and commercial requirements



■ Heat-resistant, easy-to-use Latest switch mechanism

Panasonic's standard design wiring device with simple, trouble-free switch mechanism

Switches

WEV5001SW
Switch "B", Single Pole
16AX 250V~



WEG5151-51SWK
Illuminated Switch "B", Single Pole
16AX 250V (Neon Lamp: 220V~)



WEG5141SW
Glow Switch "B", Single Pole
2 Wire 6AX 250V~



WEV5001-7SW
Switch "B", Single Pole
16AX 250V~



WEV1081-7SW
Universal Receptacle with Safety Shutter
16A 250V~



WEV1091SW
Universal Receptacle
16A 250V~



WEG1001SW
Receptacle
16A 250V~



WEG1090SW
Round Pin Receptacle
16A 250V~



WEG51517SW
Illuminated Switch "B", Single Pole
16AX 250V~ (Neon Lamp: 220V~)



WEV5002SW
Switch "C", 3Way
16AX 250V~



WEG5152-51SWK
Illuminated Switch "C", 3Way
16AX 250V~ (Neon Lamp: 220V~)



WEV5002-7SW
Switch "C", 3Way
16AX 250V~



WEV1181SW
Grounding Universal Receptacle
with Safety Shutter
16A 250V~



WEV1181-7SW
Grounding Universal Receptacle
with Safety Shutter
16A 250V~



WEV1582SW
Grounding Duplex Universal
Receptacle with Safety Shutter
16A 250V~



WEV1582-7SW
Grounding Duplex Universal
Receptacle with Safety Shutter
16A 250V~



WEG51527SW
Illuminated Switch "C", 3Way
16AX 250V~ (Neon Lamp: 220V~)



WEG5003KSW
Switch "D", Double Pole
16AX 250V~



WEG5004KSW
Switch "E", 4Way
16AX 250V~



WEG5341SW
Glow Switch "B", Single Pole 3 Wire
16A 250V~



WEV24886SW
CAT6 Data Modular Jack



WEV2488SW
CAT5E Data Modular Jack



WEV2364SW
Telephone Modular Jack
(6P4C)



WEV2501SW
DIN Type Television Terminal



Receptacles and Accessories

WEV5033-7SW
Glow Switch (2 poles)
20A 250V~



WEG3032GSW (Green)
Pilot Lamp
220V~



WEG3032SW (White)
Pilot Lamp
220V~



WEG3032RSW (Red)
Pilot Lamp
220V~



WEG5401-7SW
Push Button "B" Single Pole
10A 250V~



WEGP1041SW-1
1-Gang multiple Receptacle
16A 250V~



WEF11721W8 NEW
2-port USB Charger 2A



WEF11821W NEW
2-port USB Fast Charger 3A



WEG5400-7
Push Button NC Contact Type
10A 250V~



WEG3023SW
Telephone Wire Chip
for 9mm Diameter 16 Diameter



WEG3020SW
Blank Chip



WEV1081SW
Universal Receptacle with Safety Shutter
16A 250V~



EGG331
Weatherproof Push Button for Door Chime
1A 220V~



EGG335
Weatherproof Push Button for Door Chime
1A 220V~
(Dark Brown)



EBG888
Door Chime
220V~ Two Tone 9.5W, 50 Hz.
Easy-to-Hear
82 dB Chime



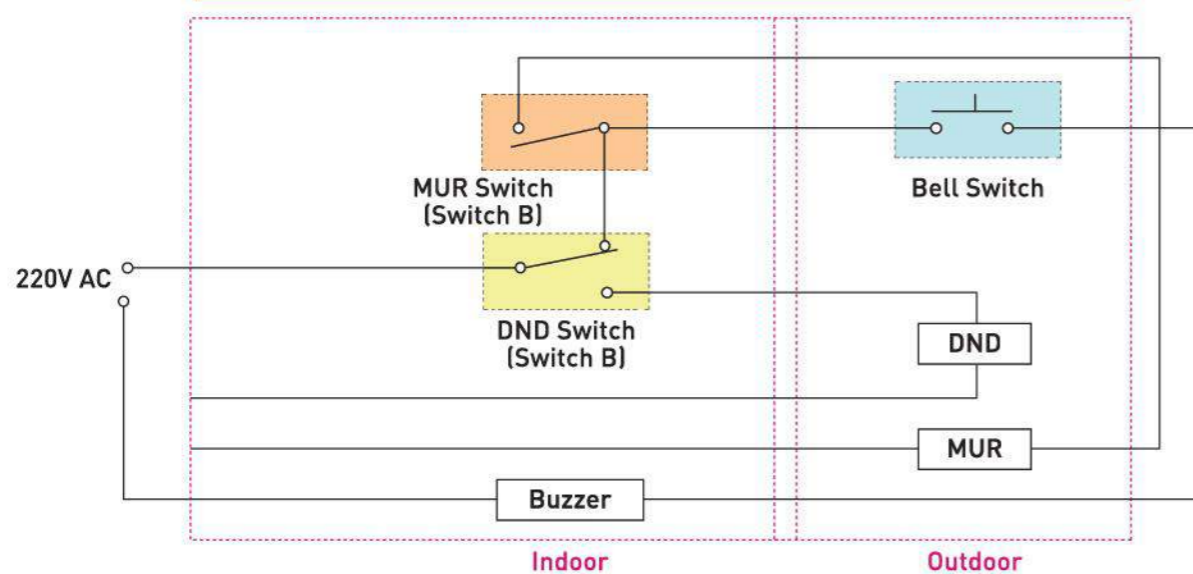
Dimmer Switches

<p>WEF5791301SW-VN NEW</p> <p>Dimmer Switch with Minimum Brightness Adjustment (Incandescent and LED Light Control) 100W(LED100W) 220V~ ※ Push On/Off Function Type</p> 	<p>WEF5791501SW-VN NEW</p> <p>Dimmer Switch with Minimum Brightness Adjustment (Incandescent and LED Light Control) 240W(LED200W) 220V~ ※ Push On/Off Function Type</p> 	<p>WEG575151SW</p> <p>Dimmer Switch (Incandescent Light Control) 500W 220V~ ※ Off Function Type *Applicable Wire: 1.0-2.5mm² (Solid Wire Only)</p> 	<p>WEG575181</p> <p>Dimmer Switch (Incandescent Light Control) 800W 220V~ ※ Off Function Type *Applicable Wire: 1.0-2.5mm² (Solid Wire Only)</p> 
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For Hotel

<p>WEG57912SW</p> <p>Dimmer Switch (Incandescent and LED Light Control) 200W(LED50W) 220-240V~ ※ Push On/Off Function Type *Applicable Wire: 1.0-4.0mm² (Solid, Stranded and Flexible Wire)</p> 	<p>WSBC9120SW-VN NEW</p> <p>Shaver Receptacle Input 220V-240V~ Output 230V/115V~</p> 	<p>WEC5781W-VN</p> <p>Electronic Key Card Switch</p> 	<p>WEG5001SWK-031</p> <p>Hotel Use Switch "B" for Indication "Make up Room" 16AX 250V~</p> 
<p>WEG5401-011SW</p> <p>Entrance Bell 10A 250V~</p> 	<p>WEG5002SWK-021</p> <p>Hotel Use Switch "C" for Indication "Don't Disturb" 16AX 250V~</p> 	<p>WEG3032G-031</p> <p>Pilot Lamp for Indication "Make up Room" Green 220V~</p> 	<p>WEG3032R-021</p> <p>Pilot Lamp for Indication "Don't Disturb" Red 220V~</p> 

Wiring diagram - "Don't Disturb" - "Make up Room" - "Bell Switch"



Plates

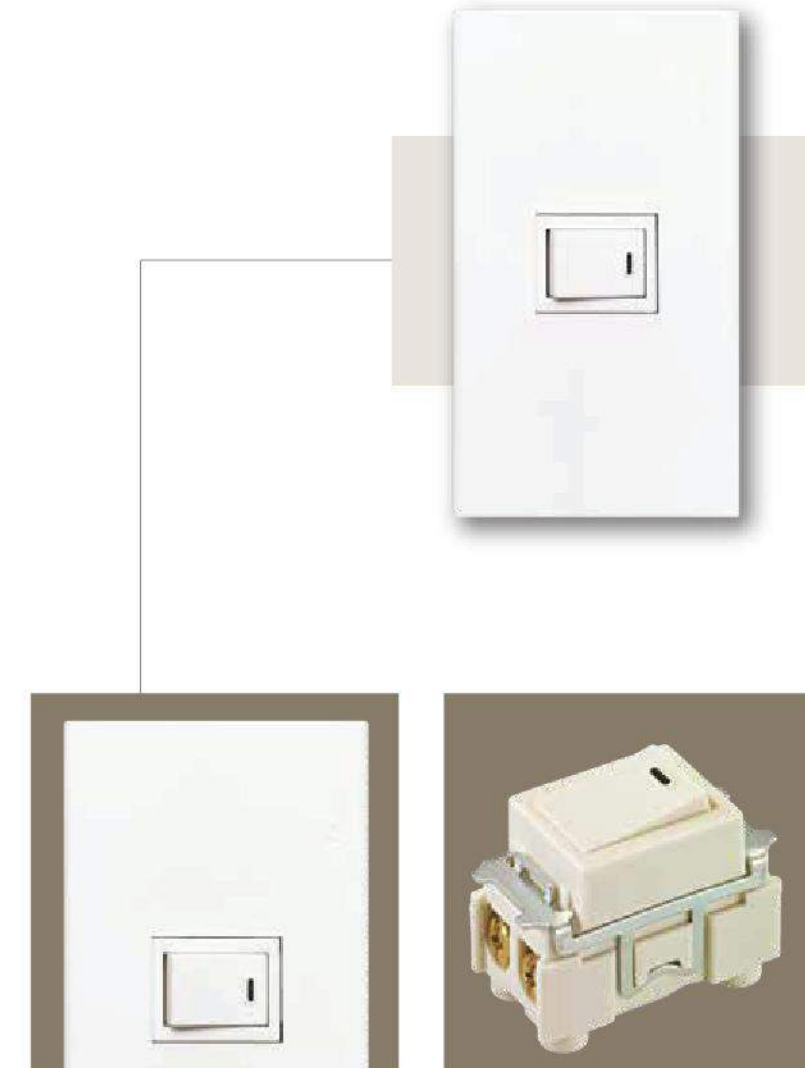
	Unit: mm									
FULL-COLOR WIDE SERIES										
Standard plate	WEV68010SW	WEV68020SW	WEV68030SW	WEV680290SW	WEV68910SW	WEV68040SW	WEV68060SW	WEV7061SW	WEV7001SW	WEV68920SW
Metal plate	WEV6501-1	WEV6502-1	WEV6503-1	WEV65029-1	WEV6591-1					
Metallic	WEV68010MWZ	WEV68020MWZ	WEV68030MWZ	WEV680290MWZ						
Weatherproof plates	Metal WEG7801	Metal WEG7802	Metal WEG7803	Metal WEG78029						
Weatherproof cover plates (Horizontal Type)										

*IP=Ingress Protection (when flap is closed).

FULL-COLOR SERIES

The standard of excellence for any installation

Simple design compatible with any interior plan



- **Heat-resistant, easy-to-use latest switch mechanism**
A basic Panasonic wiring device with simple, trouble-free switch mechanism

Switches

WNV5001-7W

Switch "B", Single Pole
16AX 250V~



WNG5061W-701

Appellation Switch "B", Single Pole
16AX 250V~



WNG5021W-7

Twin Switch "B", Single Pole
10AX 250V~



WN5241W-801

Appellation Glow
Switch "B", Single Pole
4A 300V~



WNG5051W-751

Illuminated Appellation
Switch "B", Single Pole
16AX 250V~
(Neon Lamp: 220V~)



WNG5401W-7K

Push Button "B", Single Pole
10A 300V~



WSG3001

Surface Mounting
Switch "B", Single Pole
10A 300V~



WNV5002-7W

Switch "C", 3Way
16AX-250V~



WNG5052W-751

Illuminated Appellation
Switch "C", 3Way
16AX 250V~
(Neon Lamp: 220V~)



WNG5003W-7

Switch "D", Double Pole
10AX 250V~



WNG5343W-761

Glow Switch "D", Double Pole
for Water Heater
20AX 250V~



WBG5414699W-SP

Glow Switch "D", Double Pole
20AX 250V~



WBG5414699W

Glow Switch "D", Double Pole
for A/C
20AX 250V~



WNG5004W-7

Switch "E", 4Way
10AX 250V~



WNH5611-801

Tablet Switch
10A 250V~



Dimmer Switches

WNGP575152W

Dimmer Switch with
Blank Chip and Modern Plate
(Incandescent Light Control)
500W 220-240V~



WNGP575283W

Dimmer Switch with
Modern Plate
(Incandescent Light Control)
800W 220-240V~



Receptacles and Accessories

WNV1081-7W

Universal Receptacle with
Safety Shutter
16A 250V~



WNV1091-7W

Universal Receptacle
10A 250V~



WN1090-7K-W

Round Pin Receptacle
10A 250V~



WN1001-7K-W

Receptacle
10A 250V~



WN1101-7W

3 Wire Grounding Receptacle
10A 250V~



WNG15923-7W

Grounding Duplex Universal
Receptacle
16A 250V~



NR3170W-8

CAT6 Data Modular Jack



NRV3160W

Enhanced CAT5E Data Modular Jack



WNTG15649W

Telephone Modular Jack
(6P4C)



WZV1201W

Television Terminal
(Current Passing Type)



WN3020W

Blank Chip



WN3023W

Telephone Wire Chip



WKG1092-250

Surface Mounting Universal
Duplex Receptacle
10A 250V~



WKG1091-250

Surface Mounting Universal
Receptacle
10A 250V~





Plates

Unit: mm

FULL-COLOR SERIES A-TYPE	Modern Plate	Aluminum Plate		Stainless Plate
		Screw Visible		Screw Visible
		Without Mounting Strap	With Mounting Strap	With Mounting Strap
	1-Gang 1-Device WZV7841W	WN7501-8	WN65019-8	WN7601-8
	1-Gang 2-Device WZV7842W	WN7502-8	WN65029-8	WN7602-8
	1-Gang 3-Device WZV7843W	WN7503-8	WN65039-8	WN7603-8
	2-Gang 4-Device WZV7844W	WN7504-8	WN6504K-8	WN7604-8
	2-Gang 6-Device WZV7846W	WN7506-8	WN6506K-8	WN7606-8
	1-Gang Cover	-	-	WN7691-8
	1-Gang for HB WZV7061W	-	-	-

Weather Proof Plates IPX3	Dimensions (mm)				
	Metal	WN7801K-8	WN7802K-8	WN7803K-8	WN7821K-8
		Plastic	WN7901-8	WN7902-8	WN7903-8
			WN7901-8	WN7902-8	WN7921-8

*IP=Ingress Protection (when flap is closed).

Locking Receptacles and Weather Proof Locking Receptacles

Form	Rating	Locking Flush Mounting Receptacles		Locking Surface Mounting Receptacles		Weather Proof Locking Receptacles (JIS Weather Proof Type)	Applicable Electrical Wire
		Black	Milky White	Black	Milky White		
2P	15A 125V	WF2215BK	WF2215WK	WK2215	WK2215W	-	Ø1.6, Ø2 2mm ² , 3.5mm ²
	20A 250V	WF2220BK*1	WF2220WK*1	WK2220K	-	-	Ø2, Ø2.6 3.5mm ² , 5.5mm ²
3P	20A 250V	WF2320BK*1	WF2320WK*1	WK2320K	WK2320W	WK6320	Ø2, Ø2.6 3.5mm ² , 5.5mm ²
	30A 250V	WF2331B*1	WF2331W*1	WK2331B	WK2331W	WK6331	Ø2.6, Ø3.2 5.5mm ² , 8mm ²
	60A 250V	WF2360B	WF2360W	-	-	-	8mm ² , 14mm ²
Grounding 2P (Previously 3P)	15A 125V	WF2315BK	WF2315WK	WK2315K	WK2315W	WK6315	Ø1.6, Ø2 2mm ² , 3.5mm ²
	20A (L6-20) 250V	WF2520B*1	WF2520W*1	WK2520B	WK2520W	WK6520	Ø2, Ø2.6 3.5mm ² , 5.5mm ²
	30A (L6-30) 250V	WF2330B*1	WF2330W*1	WK2330	WK2330W	WK6330	Ø2.6, Ø3.2 5.5mm ² , 8mm ²
Grounding 3P (Previously 4P)	20A 250V	WF2420BK*1	WF2420WK*1	WK2420K	-	WK6420	Ø2, Ø2.6 3.5mm ² , 5.5mm ²
	30A (L15-30) 250V	WF2430B*1	WF2430W*1	WK2430	-	WK6430	Ø2.6, Ø3.2 5.5mm ² , 8mm ²
	60A 250V	WF2460B	WF2460W	-	-	-	8mm ² , 14mm ²

* The 3P 30A and the grounding 3P 30A receptacles conform to NEMA standards and are not exchangeable with some of the receptacles used domestically in Japan.
 ** *Multi-Level Weather Proof Valve* is adopted.
 Numbers indicated by a [] mark are the NEMA standard number.

Features

The Japan Electric Association Code has been revised (8001-1990), with the distinction between grounding poles and grounded-side pins clearly identified. In addition, although not stipulated in the Japan Electric Association Code, these receptacles have been established by the standards of the Japan Wiring Devices Association.

Explanation of The Revisions (Related Sections)

Revisions in The Internal Wiring Standards	Before Revision	After Revision	Standards of The Japan Association of Wiring Fixture Manufacturers*1	Our Previous Product	Newly Established
	20A	<p>Could be used as the grounding pole.</p>		<p>Stipulated for exclusive use as the grounding pole.</p>	30A

The diagram above is indicating the face of receptacles.

Pole arrangements which are not stipulated in the Japan Electric Association Code are selected according to the standards of the Japan Wiring Devices Association.

Dimensions (Unit: mm)

• Locking Flush Mounting Receptacles

• Locking Surface Mounting Receptacle

• Weather Proof Locking Receptacle

Model No.	Dimension A	Dimension B	Dimension C	Dimension D
2P	WF2215BK-WK	36.5	59	34.5
2P	WF2220BK-WK	36.5	59	34.5
2P	WF2220BK-WK	38.8	59.5	34.5
3P	WF2331B-W	42.6	67.7	40.5
3P	WF2315BK-WK	37.7	59	34.5
Grounding 2P (Previously 3P)	WF2520B-W	38.9	59.5	34.5
Grounding 2P (Previously 3P)	WF2330B-W	42	69.1	40.5
Grounding 3P (Previously 4P)	WF2420BK-WK	43	61	40.5
Grounding 3P (Previously 4P)	WF2430B-W	42	67	40.5

* For appropriate plates, please refer to pages 39 & 45

Applicable Box for WF2360-WF2460

Use a medium deep-type square receptacle box together with a square double switch cover (inner square 13 mm)

All products have entirely the same specifications as those sold in Japan.

Locking Weather Proof Rubber Cord Connectors, Plugs, Bodies, Locking Plugs, and Locking Cord Connectors

Applicable Wire Types: Rubber Cabtire Cable (Type 2 or less), Round Rubber Cabtire Cord, Vinyl Cabtire Cable, and Round Vinyl Cabtire Cord

Locking Plugs	Tough Plugs	Flush Cord Locking Corner Plugs "Horizontal Type"	Locking Water Proof Rubber Cord Connector Plugs and Cord Connector Bodies (JIS Weather Proof Type)				Applicable Electrical Wire
			Plug WF8420K	Body WA5429K	Set WA5420K	Multi-Level Weather Proof Valve Improves cord insertability without losing weatherproofing performance.	
WF6420	WF62153B	WF3424					
Locking Plugs	Tough Plugs	Flush Cord Locking Corner Plugs "Horizontal Type"	Plugs	Bodies	Set	Applicable Electrical Wire's Outer Diameter (Ø)	
Black	Milky White	Black	Milky White	Black	Black		
WF6215	WF6215W	-	-	WF8215K	WA5219K	WA5215K	9.6-12
-	-	WF62153B	WF62153W	WF8220K	WA5229K	WA5220K	10.5-13.5
WF6220	WF6220W	-	-	WF8320K	WA5329K	WA5320K	11-14.5
WF6320	WF6320W	-	-	WF8331	WA5338	WA5331	13-16
-	-	-	-	WF8360	WA5369	WA5360	17.5-22
WF6331B	WF6331W	-	-	WF8315K	WA5319K	WA5315K	10.5-13
-	-	-	-	WF8520	WA5529	WA5520	11-14.5
WF6315	WF6315W	-	-	WF8330	WA5339	WA5330	13-16
-	-	WF3315B	WF3315W	WF8420K	WA5429K	WA5420K	12-16
-	-	-	-	WF8430	WA5439	WA5430	14-17.5
-	-	-	-	WF8460	WA5469	WA5460	19.5-24

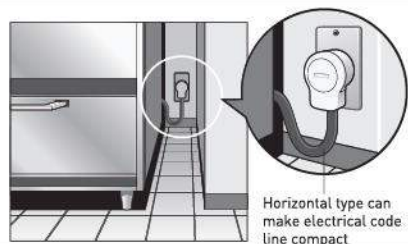
Note: • For outdoor wiring exposed to rain, use either rubber cabtire cable or vinyl cabtire cable.
 • For indoor locations exposed to moisture or high humidity, use rubber cabtire cable.
 • If you use stranded wire on screw terminal, please don't solder up the copper wires at the surface. There is a possibility that heating will occur since long time use may bring about oxidizing on surface of solder and make the contact between terminal and solder defective.

Features

Locking corner plugs are suitable for large kitchen equipment and other electrical equipment.

• Horizontal type can make electrical code line compact.

• Even if in the narrow space, you can arrange equipment in order.



Horizontal type can make electrical code line compact.

For the connection of the power supply to electrical equipment in factories, etc. 2P 15A locking weatherproof rubber cord connector. (Locking flat plugs + weatherproof constructoin + compact size)



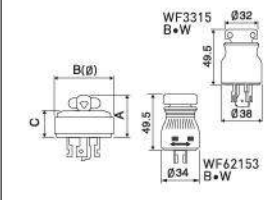
Applicable Wire: 1.25 - 2mm² (Outer Diameter: 9.6 - 12mm)

WF8715
2P 15A Locking weatherproof rubber plug 15A 125V

WA6219
2P 15A Locking weatherproof rubber cord connector body 15A 125V

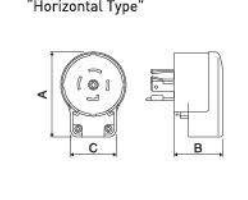
WA6215
2P 15A Locking weatherproof rubber cord connector (set) 15A 125V

Locking Plugs



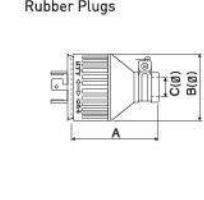
Model No.	Dimension A	Dimension B	Dimension C
2P			
WF6215-W	34	34	19
WF6220	36	41	21
WF6320	38	46	23
WF6319	57.5	62.5	44
WF6315-W	36	38.5	21
Grounding 2P (Previously 2P)	WF3315B-W	49.5	38
WF6330-W	57.5	62.5	44
Grounding 3P (Previously 3P)	WF6420-W	40	56
WF6430-W	57.5	62.5	44

Flush Cord Locking Corner Plugs "Horizontal Type"



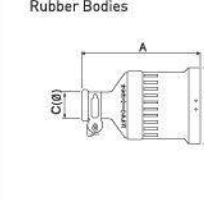
Model No.	Dimension A	Dimension B	Dimension C
Grounding 2P			
WF3314	52	32	38
WF3324	63	37	46
WF3334	73.25	43	56.5
Grounding 3P			
WF3324	63	37	46
WF3424	73.25	43	56.5
WF3434	73.25	43	56.5

Locking Water Proof Rubber Plugs



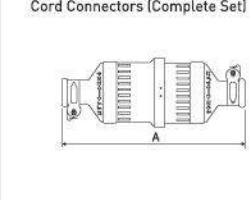
Model No.	Dimension A	Dimension B	Dimension C
2P			
WF8215K	62	41	12
WF8220K	66	47.2	13.5
WF8320K	68.8	53	14.5
WF8331	93.5	69.5	16
WF8360	178	80.5	22
Grounding 2P (Previously 2P)			
WF8315K	64.5	46	13.5
WF8520	78.2	46	14.5
WF8330	93.5	69.5	16
Grounding 3P (Previously 3P)			
WF8420K	79	63.6	16
WF8430	93.5	69.5	17.5
WF8460	178	80.5	24

Locking Water Proof Rubber Bodies



Model No.	Dimension A	Dimension B	Dimension C
2P			
WA5219K	89	44	12
WA5229K	98	51.5	13.5
WA5329K	103.5	56.5	14.5
3P			
WA5338	118.5	74.5	16
WA5369	171.5	74	22
Grounding 2P (Previously 2P)			
WA5319K	97	49	13
WA5529	112	53.5	14.5
WA5339	118.5	74.5	16
Grounding 3P (Previously 3P)			
WA5429K	112	67.5	16
WA5439	118.5	74.5	17.5
WA5469	171.5	74	24

Locking Water Proof Rubber Cord Connectors (Complete Set)



Model No.	Dimension A
2P	
WA5215K	148.5
WA5220K	161
WA5320K	169.1
WA5331	208.5
WA5360	320
Grounding 2P (Previously 2P)	
WA5315K	159
WA5520	183.8
WA5330	208.5
WA5420K	187.5
Grounding 3P (Previously 3P)	
WA5430	208.5
WA5460	320

All products have entirely the same specifications as those sold in Japan.

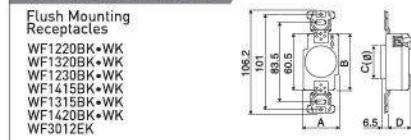
High-Capacity Flush Mounting Receptacles, Surface Mounting Receptacles, Plugs, Tough Plugs, and Cord Connectors

Applicable Wire Types: Rubber Cabtire Cable (Type 2 or less), Round Rubber Cabtire Cord, Vinyl Cabtire Cable, and Round Vinyl Cabtire Cord

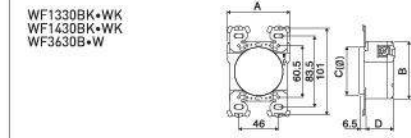
Note	Flush Mounting Receptacles	Surface Mounting Receptacles	Applicable Electrical Wire	Plugs		Tough Plugs		Plugs "Horizontal Type"		Applicable Electrical Wire		
				WF5420	WF52153B	WF52153B	WF52153W	WF56301B	WF56301W			
For models WF1220BK/WK, WF1230BK/WK, WF1320BK/WK, WF1420BK/WK indicated by a ※ mark, due to the size of the plugs, no more than one plug can be plugged in at the same time if the receptacles are installed in a multi-receptacle switch box. Therefore, if two or more circuits are to be used at the same time, use single switch boxes and install the number needed.	WF1220BK	WK36301B										
	Form	Rating	Black	Milky White	Black	Milky White	Black	Milky White	Black	Milky White	Applicable Electrical Wire	
2P	⊕	15A 125V	-	-	-	-	-	-	WF5215	WF5215W	1.25mm ² , 2mm ² , 2.5mm ² , 3.5mm ²	
	⊖	15A 250V	-	-	-	-	-	-	-	-	-	
	⊕⊖	20A 250V	WF1220BK ※1	WF1220WK ※1	WK1220B	WK1220W	WF5220	WF5220W	-	-	2mm ² , 3.5mm ²	
	⊕⊖	30A 250V	WF1230BK ※1	WF1230WK ※1	WK1230	-	-	-	-	-	3.5mm ² , 5.5mm ²	
	⊕⊖	15A 250V	WF1315BK	WF1315WK	WK1315	-	-	-	-	-	1.25mm ² , 2mm ²	
	⊕⊖	20A 250V	WF1320BK ※1	WF1320WK ※1	WK1320	-	-	-	-	-	2mm ² , 3.5mm ²	
	⊕⊖	30A 250V	WF1330BK	WF1330WK	WK1330	-	-	-	-	-	3.5mm ² , 5.5mm ²	
	Grounding 2P	⊕	15A 125V	-	-	-	-	WF7002	WF7002W	-	-	1.25mm ² , 2mm ²
		⊖	15A 250V	-	WF3012WK (Cream)	-	-	WF7011	WF7011W	-	-	1.25mm ² , 2mm ²
		⊕⊖	30A 250V	WF3630B	WF3630W	WK3630	WK36301B Thin Type	WF5630	WF5630W	WF56301B Horizontal Type	WF56301W Horizontal Type	3.5mm ² , 5.5mm ²
	Grounding 3P (Previously 4P)	⊕	15A 250V	WF1415BK	WF1415WK	WK1415	-	WF5415	WF5415W	-	-	1.25mm ² , 2mm ²
		⊕⊖	20A 250V	WF1420BK ※1	WF1420WK ※1	WK1420	-	WF5420	WF5420W	-	-	2mm ² , 3.5mm ²
⊕⊖		30A 250V	WF1430BK	WF1430WK	WK1430	-	WF5430	WF5430W	-	-	3.5mm ² , 5.5mm ²	

Note: Electrical wire indicated in parentheses () cannot be used for surface mounting receptacles.

Dimensions (Unit: mm)

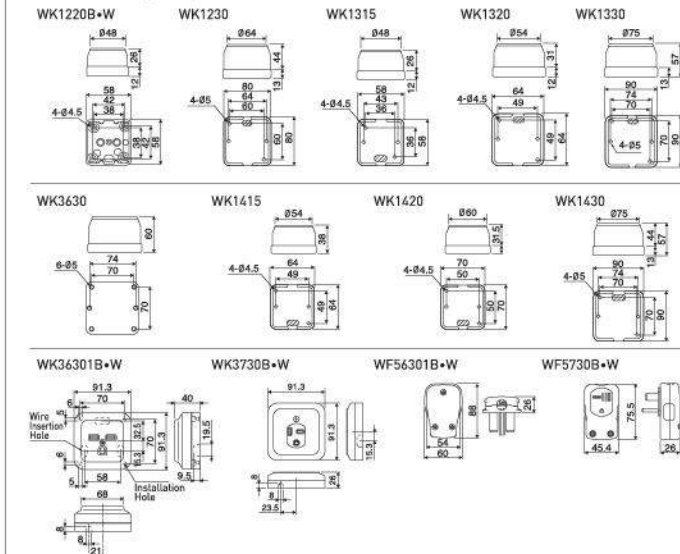


Model No.	Dimension A	Dimension B	Dimension C	Dimension D
2P				
WF1220BK-WK	38.8	60	34.5	24.1
WF1230BK-WK	42	64.8	40.5	35.3
WF1320BK-WK	37.6	60	34.5	24.1
Grounding 2P (Previously 2P)				
WF3012WK	38	-	34.5	19.5
Grounding 3P (Previously 4P)				
WF1415BK-WK	40.4	59	34.5	21
WF1420BK-WK	40.8	59	34.5	24.1



Model No.	Dimension A	Dimension B	Dimension C	Dimension D
3P				
WF1330BK-WK	72.8			
WF1430BK-WK	68	70	57	35.3
Grounding 3P (Previously 4P)				
WF3630B-W	72.8			

Surface Mounting Receptacles



Plugs

Model No.	Dimension A	Dimension B	Dimension C
2P			
WF5215-W	34.2	34	20
WF5220-W	41.2	53	27
WF5230-W	38.2	45.5	24
WF5230-W	50.9	63	33
WF5315-W	35.2	46	21
WF5320-W	41.2	53	27
WF5330-W	50.9	68	33
WF7002-W	35.2	39	21
Grounding 2P			
WF7011-W	35.2	39	21
WF5630-W	61.5	63.5	47.5
Grounding 3P (Previously 4P)			
WF5415-W	35.2	46	21
WF5420-W	41.2	53	27
WF5430-W	50.9	73	33

All products have entirely the same specifications as those sold in Japan.

Locking Weather Proof Rubber Cord Connectors, Plugs, Bodies, Locking Plugs, and Locking Cord Connectors

Applicable Wire Types: Rubber Cabtire Cable (Type 2 or less), Round Rubber Cabtire Cord, Vinyl Cabtire Cable, and Round Vinyl Cabtire Cord

Form	Rating	Weather Proof Rubber Cord Connector Plugs and Cord Connector Bodies (JIS Rain-Proof Type)				Applicable Wire Outer Diameter	Rubber Plug (Non-Weather Proof Type)	Applicable Electrical Wire	Cord Connectors (Body)	Cord Connectors (Complete Sets)	Applicable Electrical Wire
		Plug (WF7420K)	Body (WA3429K)	Set (WA3420K)	Plugs		WA1219		WA1215		
2P	15A 125V	WF7215K	WA3219K	WA3215K	9.6~12	WF7005K	1.25mm ² , 2mm ²	WA1219	WA1215 (Body WA1219 Plug WF5215)	1.25mm ² , 2mm ²	
	15A 250V	-	-	-	-	WF4212	1.25mm ² , 2mm ²	-	-	-	
	20A 250V	WF7220	WA3229	WA3220	10.5~13.5	WF4220	2mm ² , 3.5mm ²	WA1229	WA1220 (Body WA1229 Plug WF5220)	2mm ² , 3.5mm ²	
	30A 250V	WF7230	WA3239	WA3230	12~15	WF4230	3.5mm ² , 5.5mm ²	-	-	-	
3P	15A 250V	WF7315	WA3319	WA3315	10.5~13	WF4315	1.25mm ² , 2mm ²	WA1319	WA1315 (Body WA1319 Plug WF5315)	1.25mm ² , 2mm ²	
	20A 250V	WF7320	WA3329	WA3320	11~14.5	WF4320	2mm ² , 3.5mm ²	WA1329	WA1320 (Body WA1329 Plug WF5320)	2mm ² , 3.5mm ²	
	30A 250V	WF7330	WA3339	WA3330	13~16	WF4330	3.5mm ² , 5.5mm ²	-	-	-	
Grounding 2P	15A 125V	WF75159	WA3519K	WA35159	10.5~13	WF7005K WF7004	0.75mm ² ~2mm ² 1.25mm ² , 2mm ²	WA1519	WA1515 (Body WA1519 Plug WF7002)	1.25mm ² , 2mm ²	
	15A 250V	WF7615	WA3619	WA3615	10.5~13	WF7013	1.25mm ² , 2mm ²	WA1619	WA1615 (Body WA1619 Plug WF7011)	1.25mm ² , 2mm ²	
	30A 250V	WF7630	WA3639	WA3630	13~16	WF4630	-	-	-	-	
		-	-	-	-	-	3.5mm ² , 5.5mm ²	-	-	-	
Grounding 3P (Previously 4P)	15A 250V	WF7415	WA3419	WA3415	11.5~14	WF4415	1.25mm ² , 2mm ²	WA1419	WA1415 (Body WA1419 Plug WF5415)	1.25mm ² , 2mm ²	
	20A 250V	WF7420K	WA3429K	WA3420K	12~16	WF4420	2mm ² , 3.5mm ²	WA1429	WA1420 (Body WA1429 Plug WF5420)	2mm ² , 3.5mm ²	
	30A 250V	WF7430	WA3439	WA3430	14~17.5	WF4430	3.5mm ² , 5.5mm ²	-	-	-	

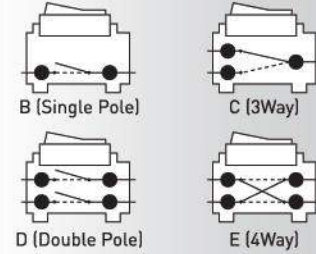
Note: • For outdoor wiring exposed to rain, use either rubber cabtire cable or vinyl cabtire cable.
 • For indoor locations exposed to moisture or high humidity, use rubber cabtire cable.
 • If you use stranded wire on screw terminal, please don't solder up the copper wires at the terminal.
 There is a possibility that heating will occur since long time use may bring about oxidizing on surface of solder and make the contact between terminal and solder defective.

Model No.	Dimension A	Dimension B	Dimension C	
• Cord Connectors				
2P	WA1215	87.5	34	
2P	WA1220	107.5	53	
3P	WA1315	91.5	45	
3P	WA1320	107.5	53	
Grounding 2P	WA1515	91.5	39	
	WA1615	91.5	39	
Grounding 3P (Previously 4P)	WA1415	91.5	46	
	WA1420	107.5	53	
• Weather Proof Rubber Plugs				
2P	WF7215K	60	39	
2P	WF7220	90	54	
2P	WF7230	120	69.5	
3P	WF7315	78	48	
3P	WF7320	90	54	
3P	WF7330	120	69.5	
Grounding 2P	WF75159	60	39	
	WF7615	78	48	
Grounding 3P (Previously 4P)	WF7630	102	73	
	WF7415	78	48	
Grounding 3P (Previously 4P)	WF7420K	91	61	
	WF7430	120	69.5	
• Weather Proof Rubber Cord Connectors				
2P	WA3215K	123		
2P	WA3229	197		
2P	WA3230	264		
3P	WA3315	170.5		
3P	WA3320	197		
3P	WA3330	264		
Grounding 2P	WA35159	126		
	WA3619	169.5		
Grounding 3P (Previously 4P)	WA3630	229		
	WA3415	170.5		
Grounding 3P (Previously 4P)	WA3420K	193		
	WA3430	264		
• Weather Proof Rubber Cord Connector Bodies				
2P	WA3219K	74	46	12
2P	WA3229	120	67	13.5
2P	WA3239	160	85	15
3P	WA3319	105	58	13
3P	WA3329	120	67	14.5
3P	WA3339	160	85	16
Grounding 2P	WA3519K	75	46	13
	WA3619	105	58	13
Grounding 3P (Previously 4P)	WA3639	143	83	16
	WA3419	105	58	14
Grounding 3P (Previously 4P)	WA3429K	120	73	16
	WA3439	160	85	17.5
• Rubber Plugs				
2P	WH4007	53	34	10.5
2P	WF4215	50	32	13
2P	WF4212	54	39	12
2P	WF4220	68	50	13.5
2P	WF4230	90	68.2	15
3P	WF4315	60	45.2	13
	WF4320	68	50.2	14.5
Grounding 2P	WF4330	90	68.2	16
	WF7005K	50	32	13
Grounding 3P (Previously 4P)	WF7004	50	39	10
	WF7013	50	39	10
Grounding 3P (Previously 4P)	WF4630	100	69.5	16
	WF4415	60	45.2	14
Grounding 3P (Previously 4P)	WF4420	70	52.2	16
	WF4430	90	68.2	17.5

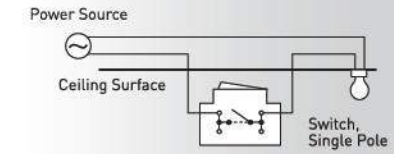
All products have entirely the same specifications as those sold in Japan.

Switches

Contact Structure

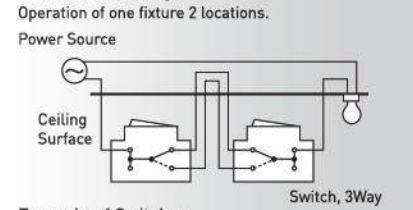


Switch, Single Pole



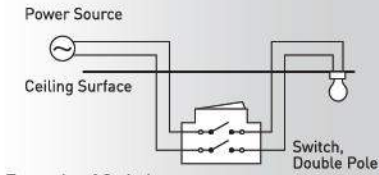
Example of Switches
 WEV5001SW WNV5001-7W WEV5511
 WNG5051W-751 WEV5001-75W WEV5511-7
 WEG5151-75W WMT501-VN

Switch, 3Way



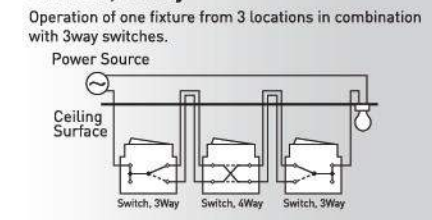
Example of Switches
 WEV5001SW WNV5002-7W WEV5002-75W
 WNG5052W-751 WEG5152-51KSW WEG515275W
 WEV5512 WEV5512-7 WMT502-VN

Switch, Double Pole



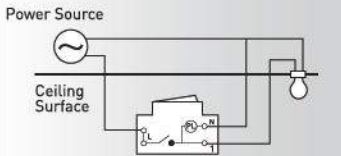
Example of Switches
 WEG5003KSW WEVH5003
 WNG5003W-7

Switch, 4Way



Example of Switches
 WEG5004KSW WEVH5004
 WNG5004W-7 WMT594-VN

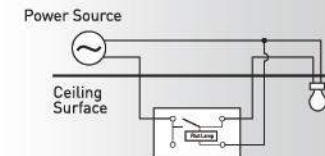
Glow Switch (3Way)



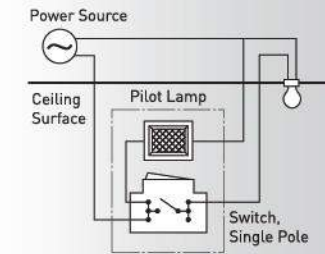
Example of Switches
 WEG5341

Wiring Instructions [Combination with Pilot Lamp]

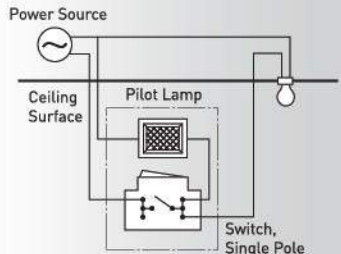
Glow Switch 3 wire



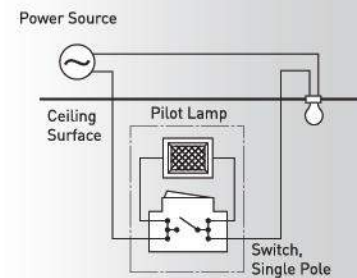
Pilot Lamp Location Indicator



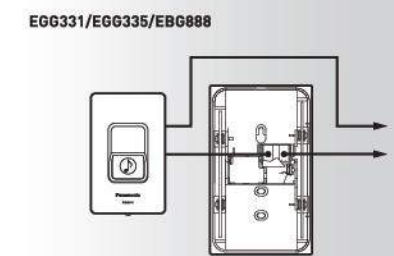
Switch On/Pilot Lamp On



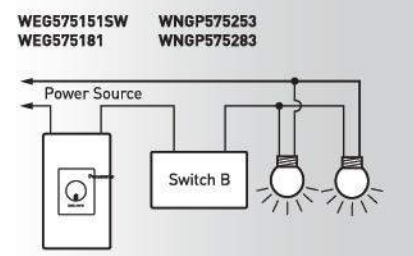
Switch Off/Pilot Lamp On



Door Chime



Dimmer Unit



Easy Installation (WEV2488SW/WEV2488H/WEV24886SW/WEV24886H)

1 2Way Connection
Toolless
 Wire Connection by Using Captip
 Click!
 Point!
 • Use tool when connecting wires 0.65mm
 • Cut the excess wires with nippers after connection

Using Wiring Tool
 Wiring Tool D.Impact Tool
 • Excess wires can be cut with the blade edge of the tool

2 Easy to Remove the Cap
 Point!
 ① Press the Lug
 ② Pull Up

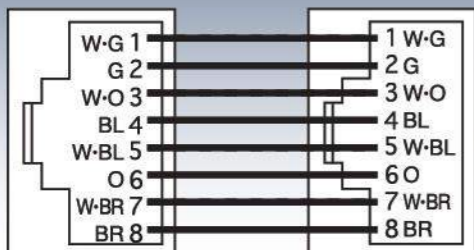
3 Cable Fixing System
 • After connecting the core wires, press the cap down until you hear a click.
 • Fix the cable steadily during installation.
 • Prevent overpeeling of the Sheath of the cable to avoid failures/malfunctions

4 No Need to Untwist the Wires
 Projection Between the Slots
 • No need to untwist the wires on setting to the slots.
 • Minimum untwisting makes uniform installation quality & transmission performance.

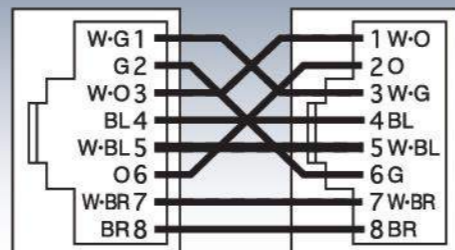
Pin/Pair Assignment

T568A		T568B		Pair No.	
Pin No.	Color	Pin No.	Color	Pair No.	Color
1	W-BL	5	5	①	W-BL
2	BL	4	4	②	W-O
3	W-O	3	1	③	O
4	O	6	2	④	W-G
5	W-G	1	3		G
6	G	2	6		W-BR
7	W-BR	7	7		BR
8	BR	8	8		

Straight Connection with T568A

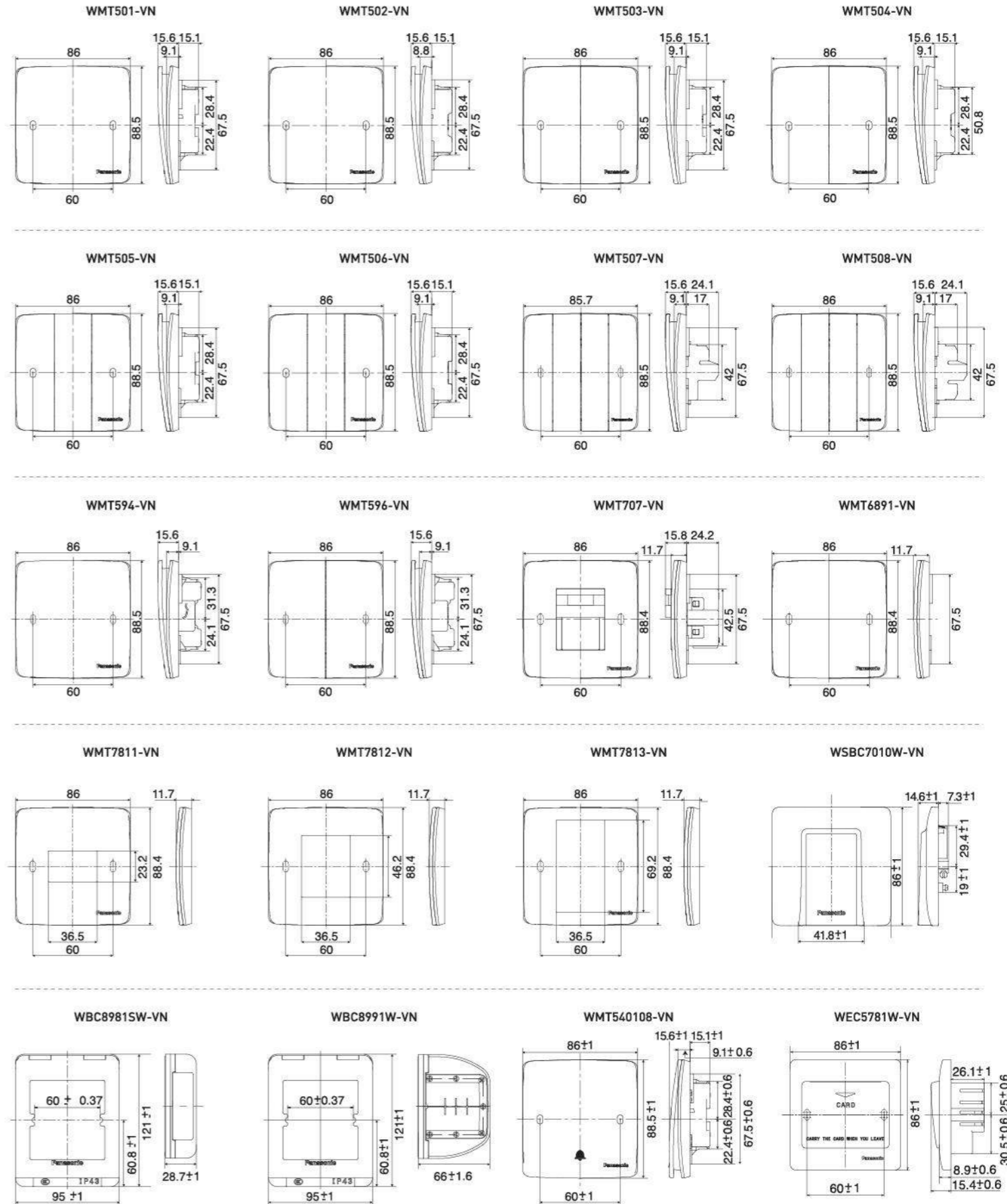


Cross Connection for 10BASE-T/100BASE-TX



MINERVA

Unit: mm



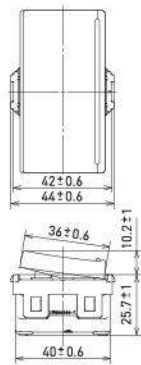
Halumie

Unit: mm

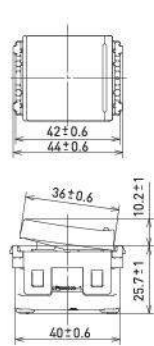
Plates

	<p>Plastic Plate 1-Gang 1-Device</p>	<p>Plastic Plate 1-Gang 2-Device</p>	<p>Plastic Plate 1-Gang 3-Device</p>	<p>Plastic Plate 1-Gang Cover</p>
	WEVH68010	WEVH68020	WEVH68030	WEVH68910
<p>Plastic Plate 1-Gang Center 2-Device</p>	<p>Plastic Plate 2-Gang 4-Device</p>	<p>Plastic Plate 2-Gang 6-Device</p>	<p>Plastic Plate 1-Gang for HB Breaker</p>	
WEVH680290	WEVH68040	WEVH68060	WEVH8061	

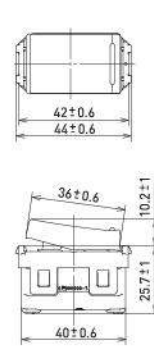
WEVH5511K



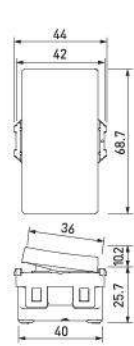
WEVH5521K



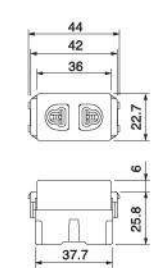
WEVH5531K



WEVH5512



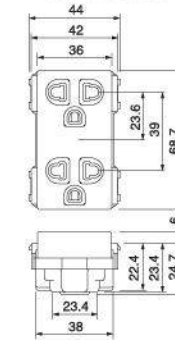
WEV1081SW
WEV1091SW
WEV1081-7SW



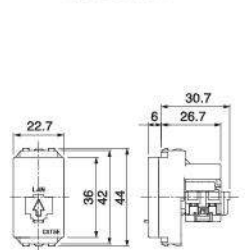
WEV1181SW
WEV1181-7SW



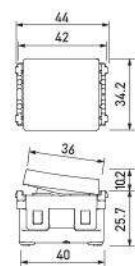
WEV1582SW
WEV1582-7SW



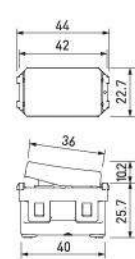
WEV2486SW
WEV2488SW



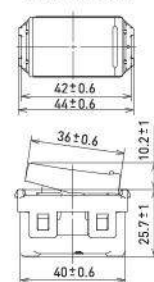
WEVH5522



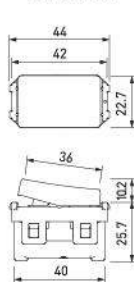
WEVH5532



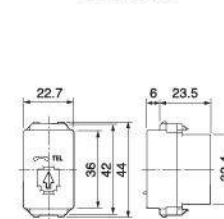
WEVH5003K



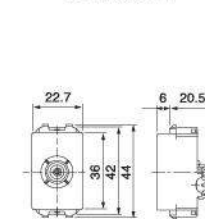
WEVH5004



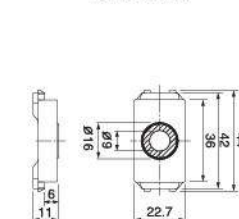
WEV2364SW



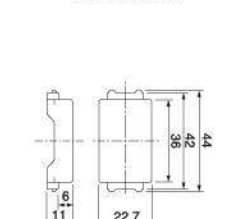
WEV2501SW



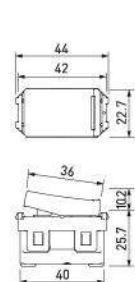
WEG3023SW



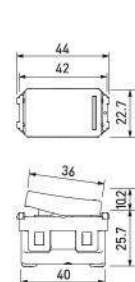
WEG3020SW



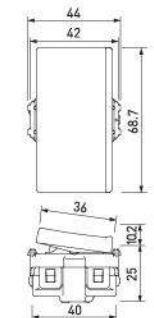
WEVH5151-51



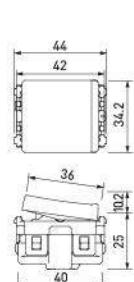
WEVH5152-51



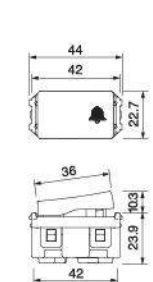
WEVH5511-7K



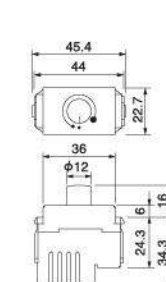
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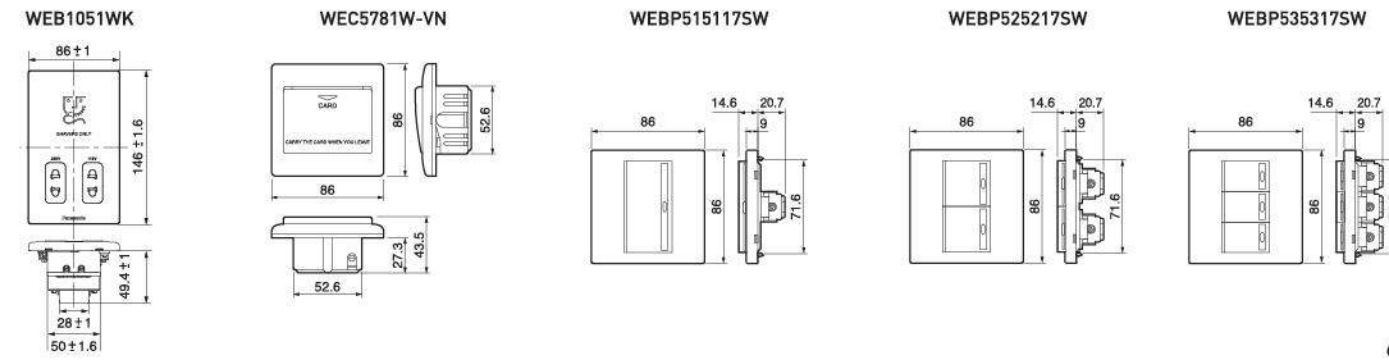
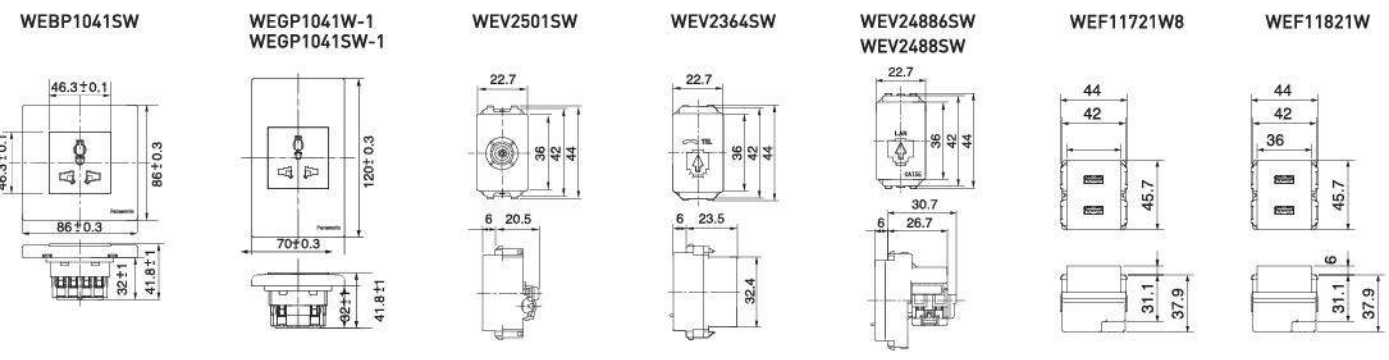
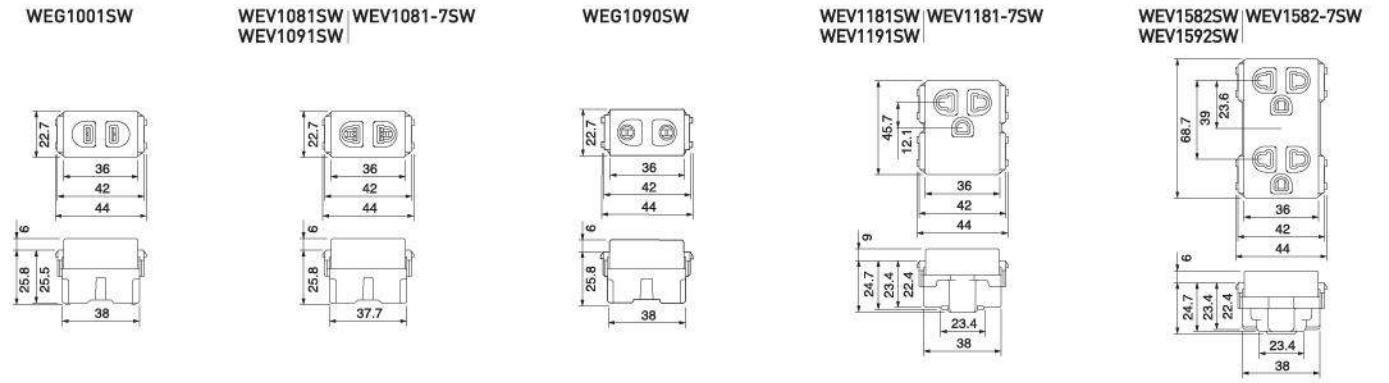
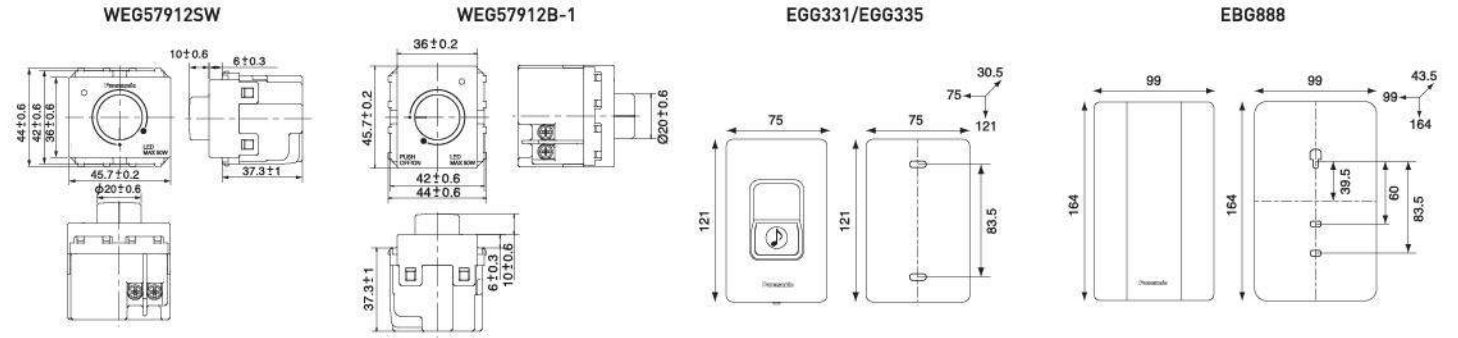
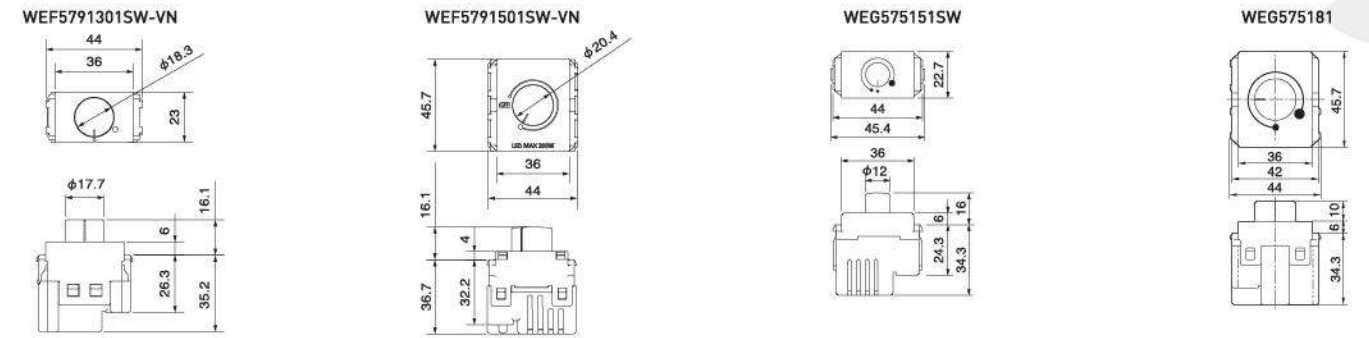
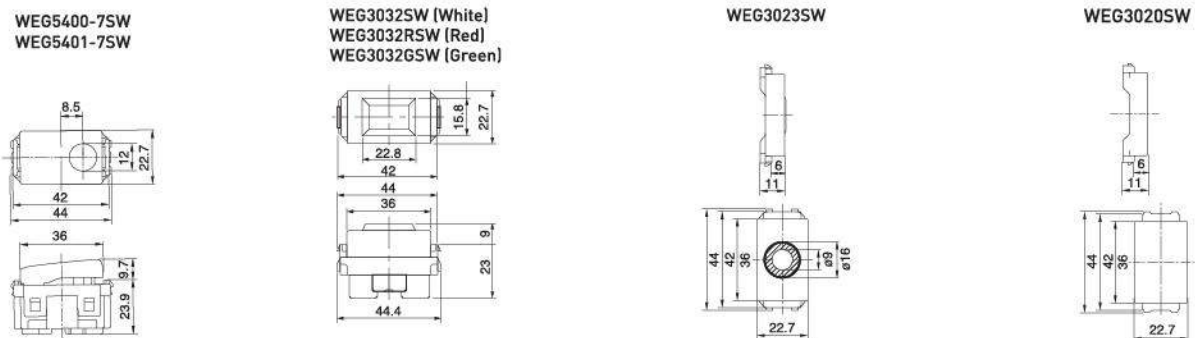
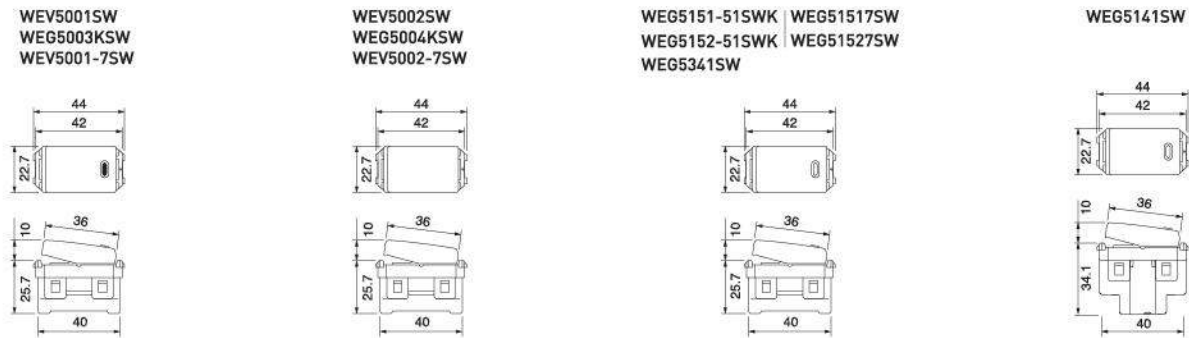
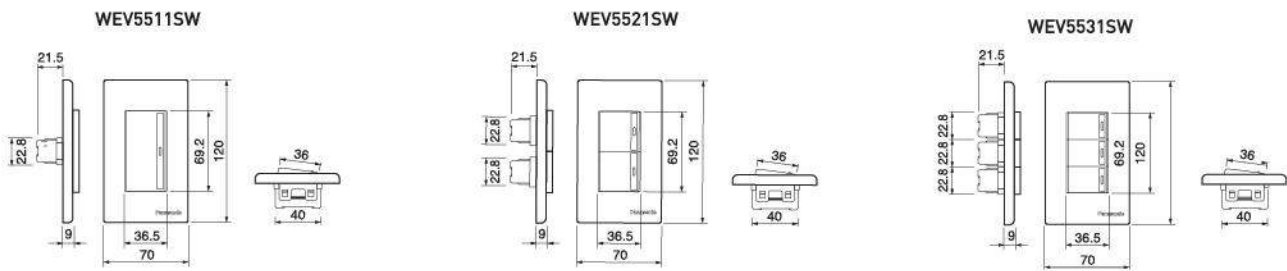
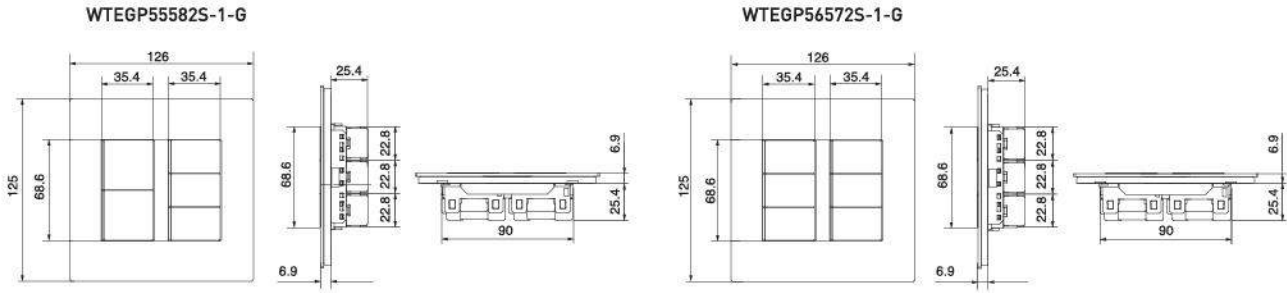
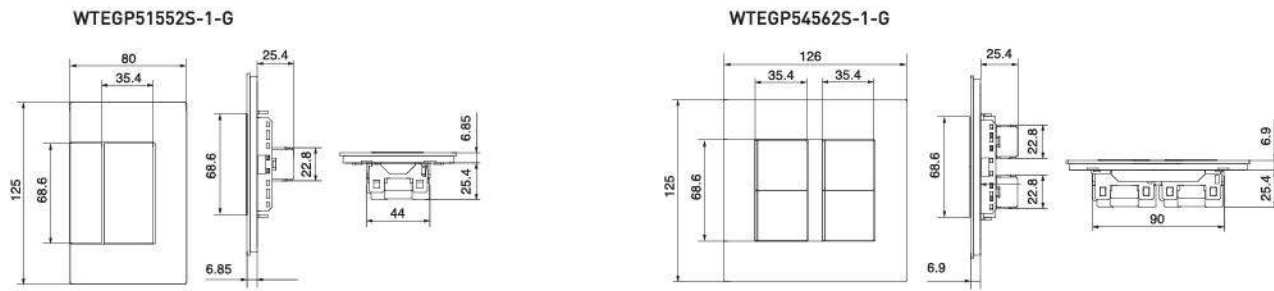


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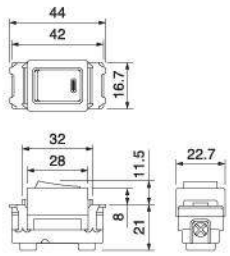


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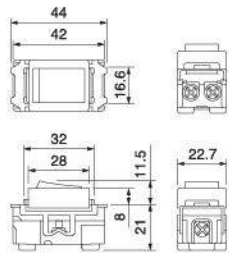




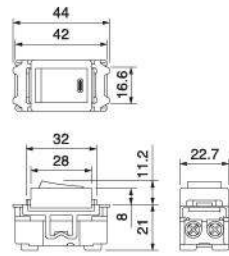
WNV5001-7W



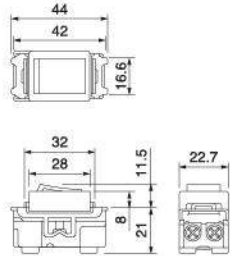
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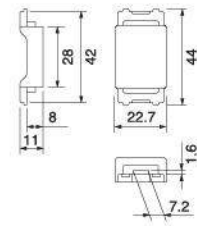
WNG5003-7W



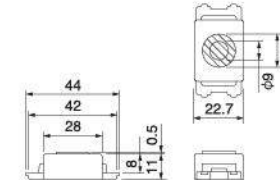
WNG5004-7W



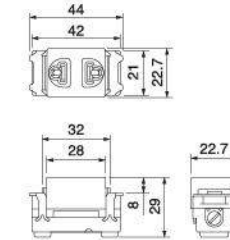
WN3020W



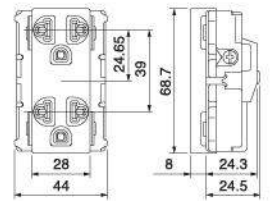
WN3023W



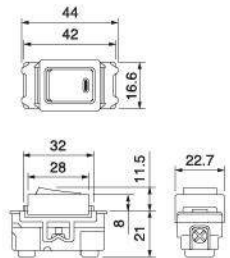
WNV1081-7W
WNV1091-7W



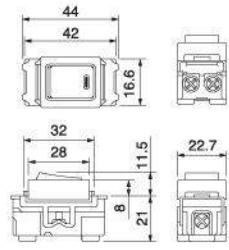
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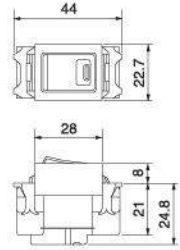
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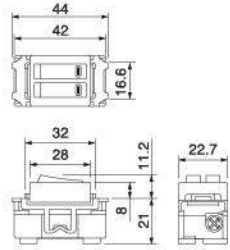
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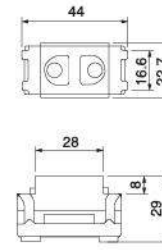
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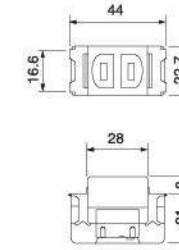
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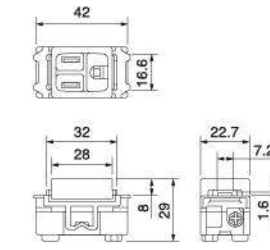
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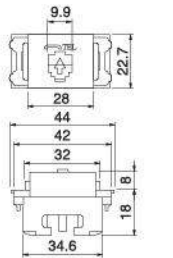
WN1001-7K-W



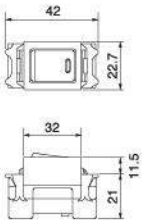
WN1101-7W



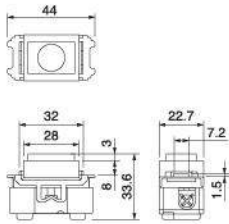
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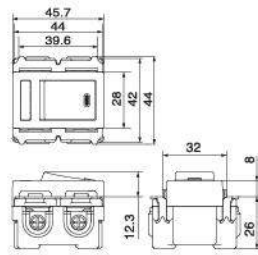
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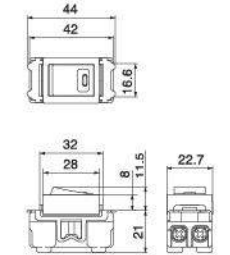
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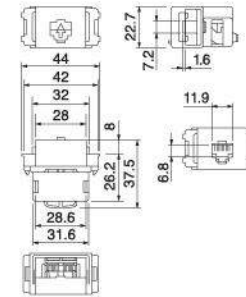
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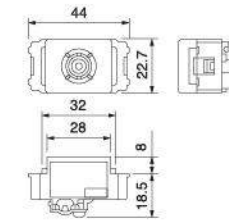
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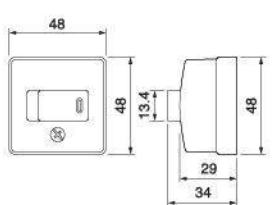
NRV3160W



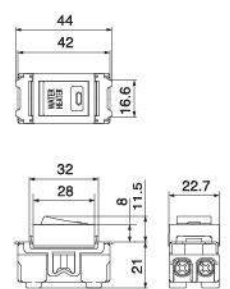
WZV1201W



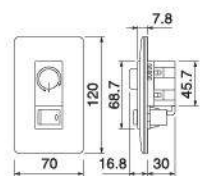
WSG3001



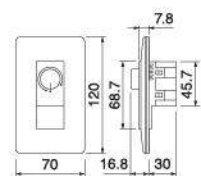
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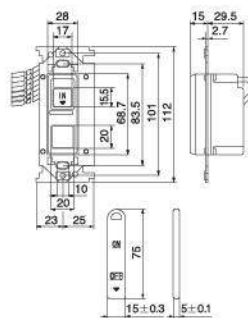
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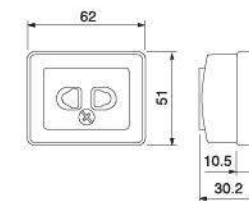
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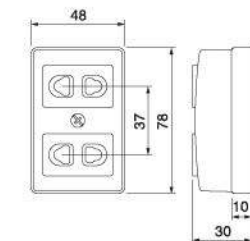
WNH5611-801



WK1091-250



WKG1092-250



High safety that complies with Thai industrial standard (TIS) and civilized design in Japan
HIGH SAFETY AND DURABILITY



Durability:

- Extension cord equipped with highly reliable and safe Panasonic receptacles
- Compatible for both home and office use

Features:

- Maximum capacity 16A, 3,500W
- Line-up available from 3, 5 and 6 modules
- Glow switched receptacles for precise ON/OFF function are also available
- Safety shutter with rigid body
- Build in breaker for overload protection

16A, 250V~

WCHG28334
Extension Cord (3 Sockets)



WCHG28352
Extension Cord (5 Sockets)



WCHG2836
Extension Cord (6 Sockets)



Extension Cord With Safty Shutters & Breaker,
 3 Sockets With Main Switch & 3-Meter Cord
PERFECT FIT FOR YOUR INTERIOR



Durability:

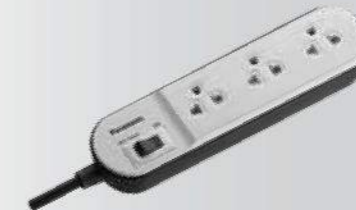
- Suitable to every type of residence space with Simple and Casual design
- Compact and Round shape

Features:

- Maximum capacity 10A, 2,500W
- Equipped with safety shutter
- Build in breaker for overload protection

10A, 250V~

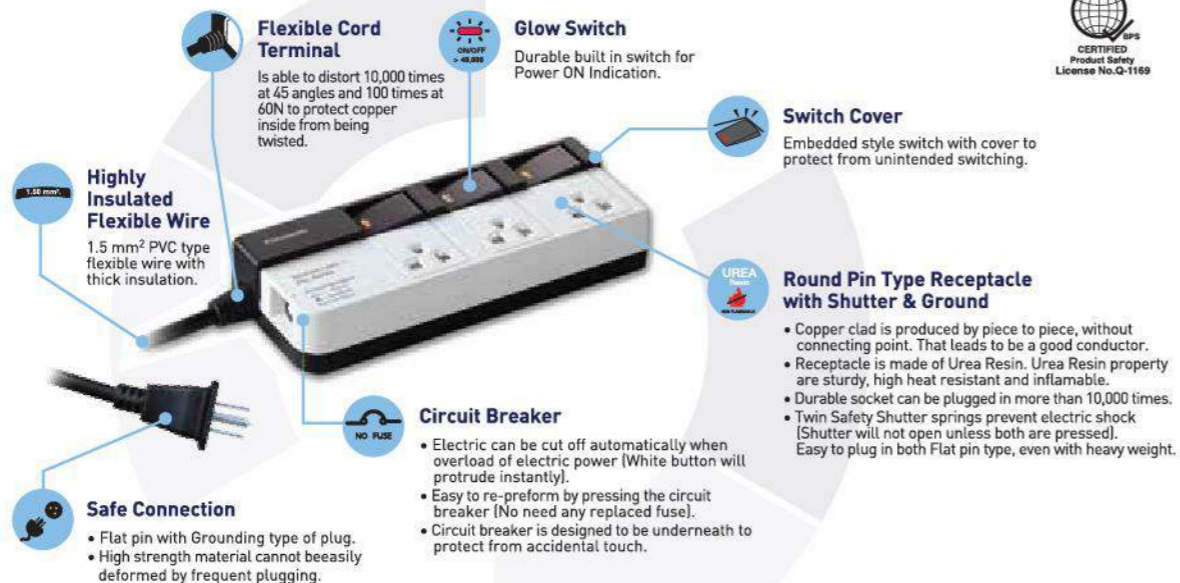
WCHG24332W-G
Extension Cord (3 Sockets)



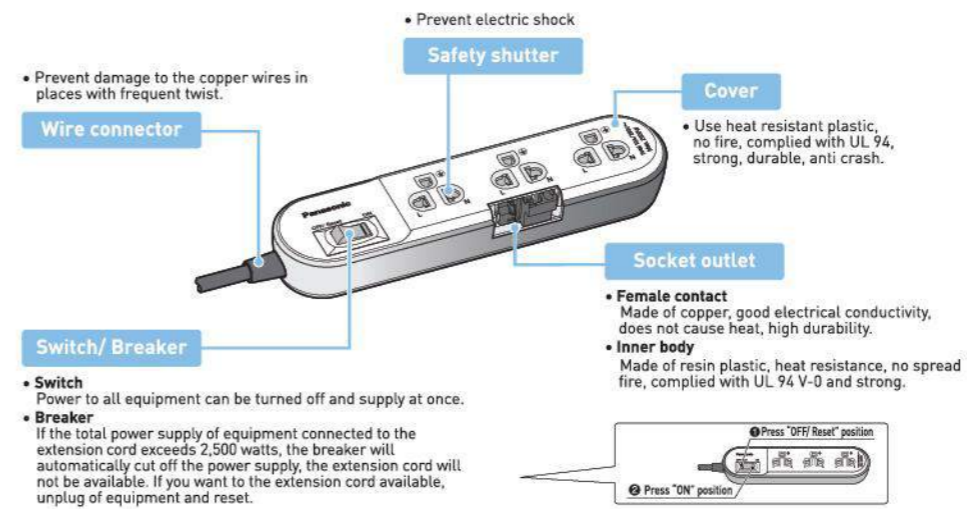
WCHG24332W-VN
Extension Cord (3 Sockets) with 2-Port USB Charger



Features



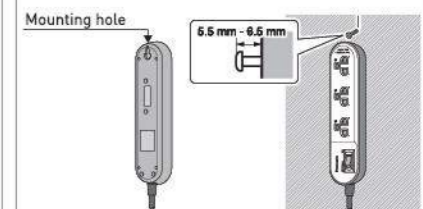
Features



Installation





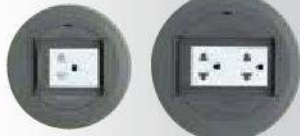
Can be fixed to a wall using the mounting hole
 Hang using wooden screws
 Diameter 4.5mm, length 16mm above

Remark: Wooden screws (Not include in the extension cord, available on the market)



FLOOR OUTLET

Panasonic has a wide range of series depending on the application and building

Product Type	Feature	Specification	Recommended Location
Pop-up type 	<ul style="list-style-type: none"> • Users are familiar with this type • Durability to withstand heavy use • Easy to plug 	<ul style="list-style-type: none"> • Plate 7.6mm • 3 Modules • IP44 	<ul style="list-style-type: none"> • Temporary use such as vacuum cleaner • Heavy-duty use
Shallow type 	<ul style="list-style-type: none"> • Hard to stumble with thin type • Auto-close door prevent dust and water from entering • Small Square design • 46mm box depth (Shallow) 	<ul style="list-style-type: none"> • Plate 3.5mm • 3 Modules • IP44 	<ul style="list-style-type: none"> • Dusty place • Places where design is important, such as shop or cafe
Double Duplex type 	<ul style="list-style-type: none"> • Large module capacity (6 modules) • Luxury finish 	<ul style="list-style-type: none"> • Plate 6.6mm • 6 Modules • IP44 	<ul style="list-style-type: none"> • Where large module capacity is required such as office
Plug stored type 	<ul style="list-style-type: none"> • The plug can be stored inside, making it difficult to trip 	<ul style="list-style-type: none"> • Plate 4.0mm • 3 Modules • IP44 	<ul style="list-style-type: none"> • Places that always use Power, TEL or LAN such as office
Resin type 	<ul style="list-style-type: none"> • 2 types: Single or Duplex • Small and low cost 	<ul style="list-style-type: none"> • Plate 3.7mm~4.1mm • 2 or 3 Modules • IP24 	<ul style="list-style-type: none"> • Two types available, ideal for residential use

Panasonic Quality

We have passed severe tests based on our own standards. The following is an example:

1. Cover open-close durability

Open the cover by hand and let the cover close down test 10,000 times

2. Load performance test

Rolling 1,000N load on the Floor outlet 10,000 times



NEW

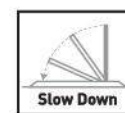


New blank types are available, and modules can be freely selected

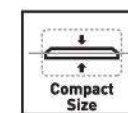
DU5900VT

Blank with Outlet Box and Box Protector

Shallow Type



Comfortable with automatic lid mechanism



Flat and Fit the Floor surface



Dust and Water proof at safety level IP44

Adapted Module	3 modules (Full-color wide)
IP performance	IP44
Height of upper plate (mm)	3.5
Material	Aluminum Diecast
Dimension (mm)	130 x 130
Depth of BOX (mm)	69

DUFS1200LTH-1

Floor Outlet Shadow Aluminum diecast without inside Wiring Devices for Full-Color WIDE series IP44



Double Duplex Type

6 modules mountable
Multiple combination of Power and Data

COVER



WIRING DEVICES



Adapted Module	3 modules (Full-color wide)
IP performance	IP44
Height of upper plate (mm)	6.6
Material	Aluminum Diecast
Dimension (mm)	130 x 130
Depth of BOX (mm)	58

DUMF3200LT-1

Without Inside Wiring Devices for Full-Color WIDE series



Pop-up Type

Temporary use such as vacuum cleaner

Adapted Module	3 modules (Full-color wide)
IP performance	IP44
Height of upper plate (mm)	7.6
Material	Aluminum Diecast
Dimension (mm)	130 x 130
Depth of BOX (mm)	69



Plug stored Type

Places that always use Power, TEL or LAN such as office

Adapted Module	3 modules (Full-color wide)
IP performance	IP44
Height of upper plate (mm)	4.0
Material	Aluminum Diecast
Dimension (mm)	130 x 130
Depth of BOX (mm)	69



Pop-up Floor Outlet IP-44

NEW

DU5900VT
Blank with Outlet Box and Box Protector



DU5990LT9-1
Grounding Duplex Parallel with Outlet Box and Box Protector 16A 250V~



DU5993LT9-1
Grounding Duplex Parallel with Outlet Box and Box Protector 16A 250V~



DU5983LT9-1
Grounding Duplex Universal with Safety Shutter with Outlet Box and Box Protector 16A 250V~



DU59833LT9-1
Grounding Universal with Safety Shutter 16A 250V~ and Telephone Modular Jack 6P4C with Outlet Box and Box Protector



DU59835LT9-1
Grounding Universal with Safety Shutter 16A 250V~ and CAT5E Modular Jack with Outlet Box and Box Protector



DU6933LT9-1
Duplex Telephone Modular Jack 6P4C with Outlet Box and Box Protector



DU6935LT9-1
Telephone Modular Jack 6P4C and CAT5E Modular Jack with Outlet Box and Box Protector



DU6955LT9-1
Duplex CAT5E Modular Jack with Outlet Box and Box Protector



Floor Outlet [Aluminum Diecast] IP-44

DUF1200LTK-1
Blank with Outlet Box and Box Protector for FULL-COLOR WIDE SERIES Wiring Devices



DUF1260LTK-1
Grounding Duplex Universal with Safety Shutter with Outlet Box and Box Protector 16A 250V~



DUF1270LTK-1
Grounding Duplex Universal with Outlet Box and Box Protector 16A 250V~



DUF2214LTK-1
Telephone Modular Jack 6P4C and CAT5E Modular Jack with Outlet Box and Box Protector



DUF2229LTK-1
Duplex Telephone Modular Jack 6P4C with Outlet Box and Box Protector



DUF2259LTK-1
Duplex CAT5E Modular Jack with Outlet Box and Box Protector



DUF3221LTK-1
Grounding Universal with Safety Shutter 16A 250V~ and Telephone Modular Jack 6P4C with Outlet Box and Box Protector



DUF3234LTK-1
Grounding Universal with Safety Shutter 16A 250V~ And CAT5E Modular Jack with box Protector and Outlet Box



DUF5200LT-1
Blank with Outlet Box and Box Protector for BS Type Wiring Devices



Resin Type

Two types available, ideal for residential use

Adapted Module	Single : 2 modules (Full-color wide) Duplex : 3 modules (Full-color wide)
IP performance	IP24
Height of upper plate (mm)	Single: 3.7 Duplex: 4.1
Material	Plastic
Dimension (mm)	Single: φ114 Duplex: φ134
Depth of BOX (mm)	64

Single



Duplex



Floor Outlet Single IP-24

DU8102HTC-1
Grounding Universal with Safety Shutter with Cover Unit 16A 250-



DU5102HTC-1
Grounding Single Parallel with Cover Unit 16A 250-



DU5199HTC-1
Floor Outlet Blank for Single Device with Cover Unit



DU61233HTC-1
Duplex Telephone Modular Jack 6P4C Cover Unit



DU61223HTC-1
Telephone Modular Jack 6P4C and TV Terminal Cover Unit



DU7199HTC-1
Floor Outlet Blank for Double Device with Cover Unit



DU51031HTK-1
Grounding Duplex Parallel with Outlex Box and Box Protector 16A 250-



DU81931HTK-1
Grounding Duplex Universal with Outlex Box and Box Protector 16A 250-



DU81831HTK-1
Grounding Duplex Universal with Safety Shutter with Outlex Box and Box Protector 16A 250-



DU81835HTK-1
Grounding Universal with Safety Shutter and CAT5E Modular Jack with Outlex Box and Box Protector 16A 250-



DU612331HTK-1
Duplex Telephone Modular Jack 6P4C with Outlex Box and Box Protector 16A 250-



DU612351HTK-1
Telephone Modular Jack 6P4C and CAT5E Modular Jack with Outlex Box and Box Protector



DU61355HTK-1
Duplex CAT5E Modular Jack with Outlex Box and Box Protector



DU61466HTK-1
Duplex CAT6 Modular Jack with Outlex Box and Box Protector



DU8199HTK-1
Floor Outlex, Blank for Triple Device with Cover Unit

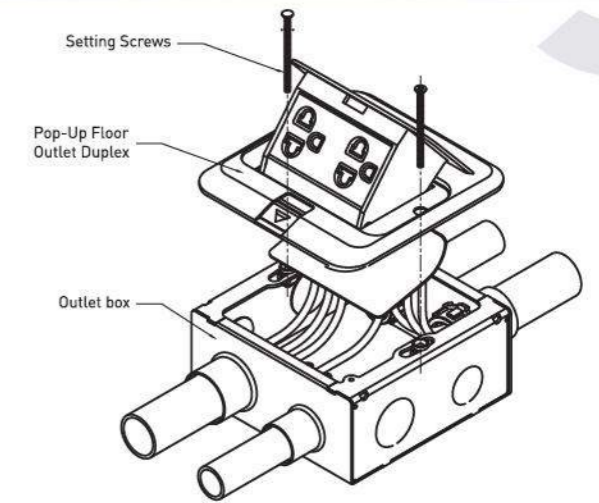
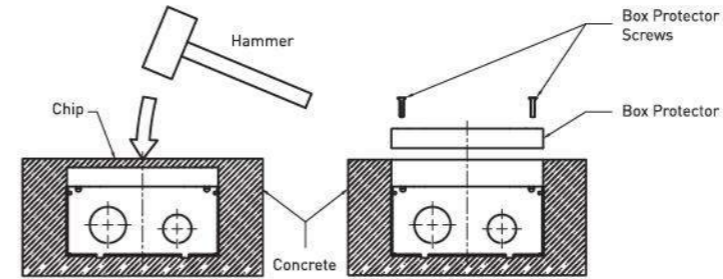


How to mount

Floor Outlet

After putting the concrete on, make the hole to install the product.

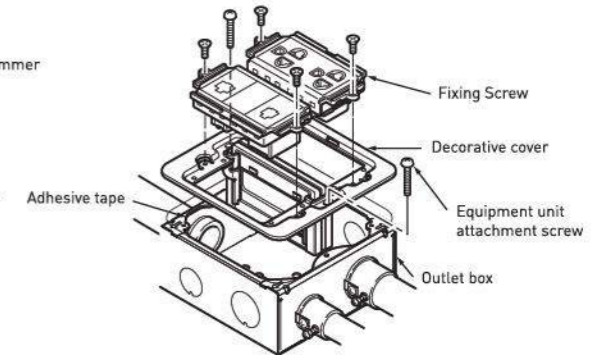
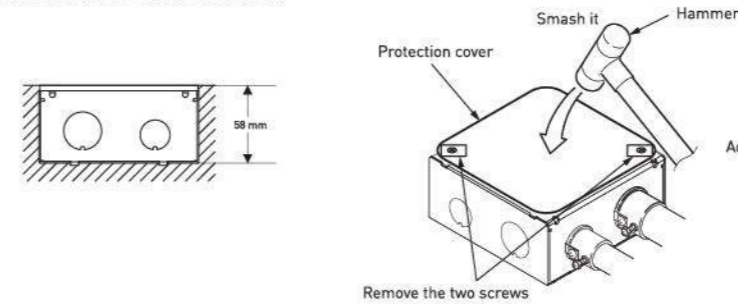
- (1) Hammer the center part of where the box is installed and make the hole for installation.
- (2) After chipping the concrete away, loosen cover unit screws and take the box protector off.



Floor Outlet Double

The upper surface of the protection cover must be the finished surface of the concrete.

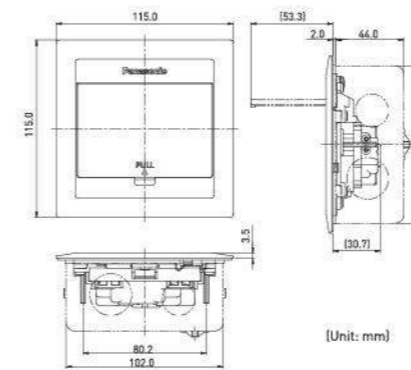
Smash the protection cover and remove the screws.



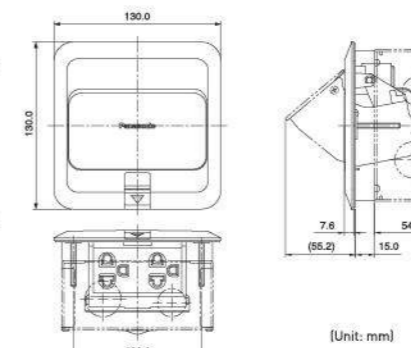
Floor Outlet Duplex IP-24

Drawings

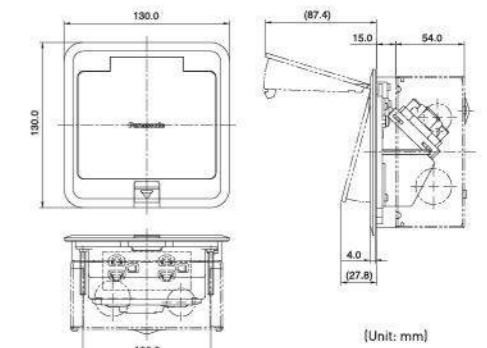
Floor Outlet Shallow Type



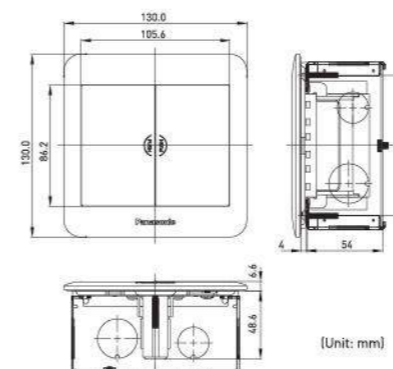
Pop-up Floor Outlet



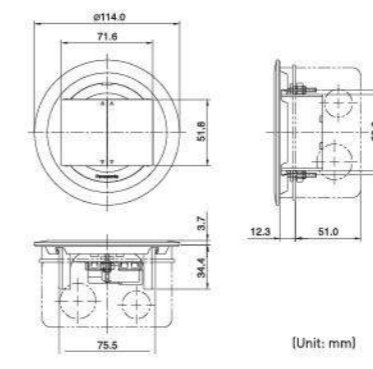
Floor Outlet (Aluminum Diecast)



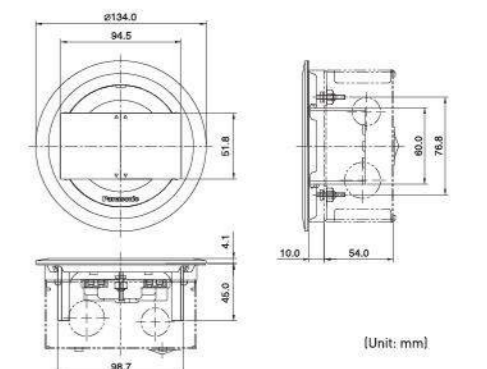
Floor Outlet Double



Floor Outlet Single



Floor Outlet



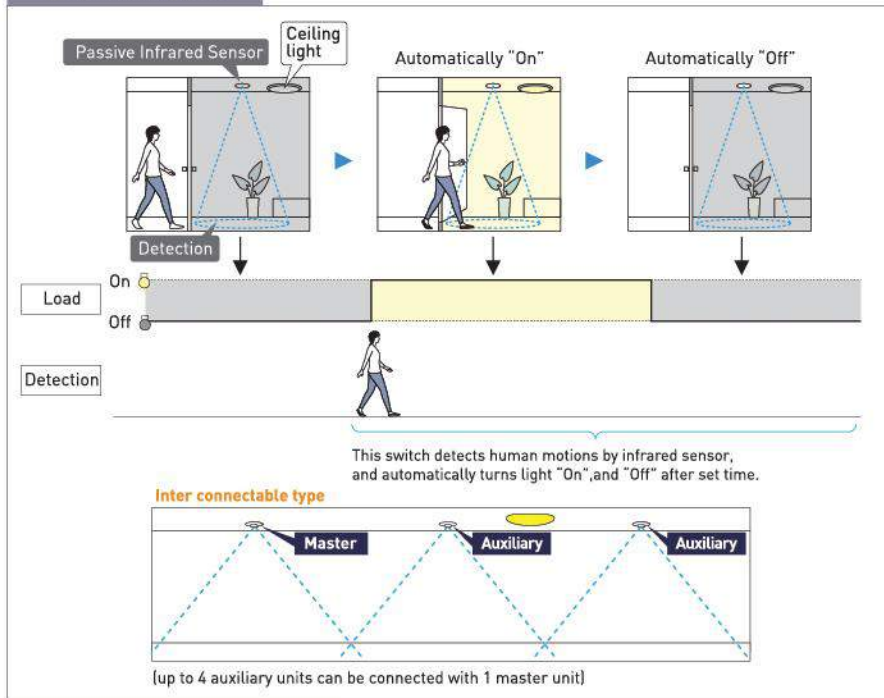
New innovation with
New energy-saving lighting control
PASSIVE INFRARED SENSOR



FULL-COLOR
WIDE
SERIES

Saves Energy Preventing Forgotten On Lights

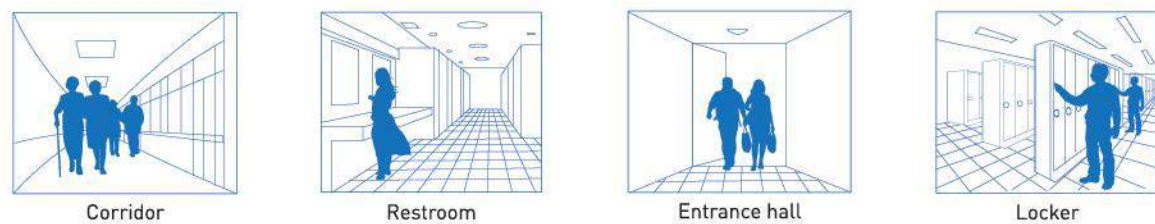
Demonstration



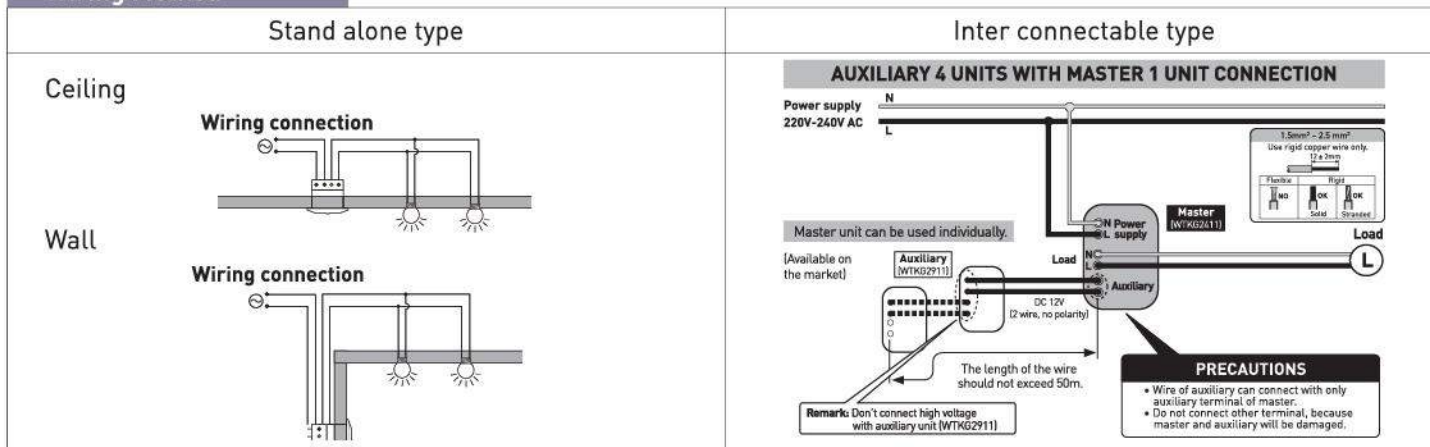
Features

- 1) High sensitive detection with sensor
- 2) Long life 100,000 On/Off
- 3) Safety and Easy with Quick Connect Terminal
- 4) Stand by power consumption less than 2W

Recommended Location



Wiring Method



Stand-alone Type

WTKG2311

Passive Infrared Sensor
(Ceiling Surface Mount Type)
3A 220-240V-10 sec - 30 mins. Time Delay
Day Light Sensor



WTKG2310

Passive Infrared Sensor
(Ceiling Flush Mount Type)
3A 220-240V-1 min Time Delay



WEBFP57311W-VN

WEBFP57311W8, Passive Infrared Sensor with Plate (Wall Flush Mount)



Specifications

Model no.	WTKG2311	WTKG2310	WEBFP57311W-VN
Detectable scope	<p>Height for detection 1.7m Height for detection 3.0m Height for detection 3.5m 2.0m Ø3.9m Ø3.6m Ø7.0m Ø4.2m (With hood)</p>	<p>Height for detection 1.7m Height for detection 3.0m Ø3.9m Ø7.0m</p>	<p>Top View Wall About 3.0m 90° About 5.0m Sensor Directions About 5.0m About 3.0m About 30° About 3.0m est. 1.5m Side View</p>
Dimension	<p>17 ± 0.6 33.5 ± 1 120 ± 1.6 Ø120 x 33.5 + 17 (L=50.5mm)</p>	<p>58.8 ± 1.6 12 ± 1.6 85 ± 1.6 Ø85 x 12 + 58.8 (L=70.8mm)</p>	<p>26.5 ± 1 65.8 ± 1 20 ± 0.6</p>
Rating	3A 220-240V~		220-240V~
Rated Power Consumption	Less than 2W		Less than 1W
Load Capacity	Incandescent Lamp 660W Fluorescent Lamp 330W		Incandescent Lamp 2A Fluorescent Lamp 1A
Applicable Standard	IEC60669 - 2 - 1		-
Ambient Temperature	-10°C to +40°C		-10°C to +40°C
Wiring Connection	Quick Connect Terminal		Screw Terminal
Size of Installation Hole (cm)	7.0 (+0.5)	7.2 (+0.5)	-
Applicable Wire	1.5mm ² - 2.5mm ² Rigid Copper Wire Only		1.5mm ² - 2.5mm ² Rigid Copper Wire Only
Applicable Boxes	Square Box 2 inch or more	1.5 inch or more	1.5 inch or more
	Octagon Box 2 inch or more	1.5 inch or more	-
Time-Out Delay	Fixed 1min.	Adjustable 10sec. - 30min.	3min. ± 30sec.
Detectable Movement Speed	0.3m/s ~ 1.0m/s		0.3m/s

Interconnectable Type

WTKF24816-VN
 Passive Infrared Sensor
 (Master Unit)
 8A 220-240V~

Master



WTKG2411
 Passive Infrared Sensor
 (Master Unit)
 3A 220-240V~

Master



WTKG2911
 Passive Infrared Sensor
 (Auxiliary Unit)
 DC12V

Auxiliary



Specifications

Model no.	WTKF24816-VN	WTKG2411 / WTKG2911
Detectable scope	<p>Use (attachment) special shading Cover detection range can be narrowed</p> <p>Dark gray area indicates - No hood range</p> <p>Light gray area indicates - Range when there is a hood</p> <p>Use finger softly press on sensor and turn (15° oblique ; 360° turn around)</p>	
Dimension		<p>Ø85 x 12 + 58.8 (L=70.8mm)</p>
Rating	8A 220-240V~	3A 220-240V~
Rated Power Consumption	Less than 1W	Less than 2W
Load Capacity	Incandescent Lamp 1760W Fluorescent Lamp 880W LED Lamp 880W	Incandescent Lamp 660W Fluorescent Lamp 330W
Applicable Standard	-	IEC60669 - 2 - 1
Ambient Temperature	-10°C to +40°C	-10°C to +40°C
Wiring Connection	Quick Connect Terminal	Quick Connect Terminal
Size of Installation Hole (cm)	Ø70 (+0.5)	Ø70 (+0.5)
Applicable Wire	1.5mm ² - 2.5mm ² Rigid Copper Wire Only	1.5mm ² - 2.5mm ² Rigid Copper Wire Only
Applicable Boxes	Square Box: 2.5 inch or more Octagon Box: 2.5 inch or more	2 inch or more 2 inch or more
Time-Out Delay	Adjustable 10sec. - 30min.	Adjustable 10sec.-30min.
Detectable Movement Speed	0.3m/s ~ 1.0m/s	0.3m/s ~ 1.0m/s

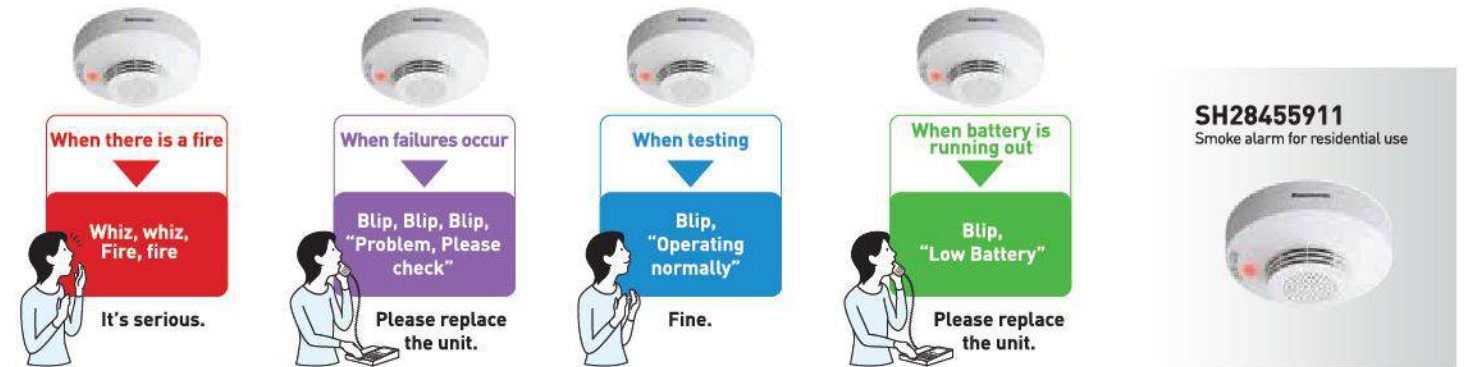
Provides prompt notification in the event of a fire
SLIM SMOKE & VOICE ALARM WITH LONG-LIFE-BATTERY



Rapid indication with a clear "alarm sound" and a "voice" easy to understand.

Approx. 87dB at 1m distance from equipment (at peak value) (measured by our company based on corporate judgment standard)
 For alarm sound "Whiz, whiz", a wide frequency band from 0.3kHz to 4.0kHz is adopted for easy catching even by old people and children.

Immediately understands what happened.



Model No.	SH28455911	
Power Supply	Dedicated Lithium Battery (3V) x 1	
Battery Life	Approximately 10 years [*]	
Detecting Method	Smoke Type (Photoelectric Method)	
Class	Type2	
Alarm Sound/ Voice Alarm	Fire	Whiz, whiz, fire, fire!
	Low Battery	"Blip, Low Battery!" x 3 times "Blip, approx., every 40 seconds after that"
	Trouble	"Blip, blip, blip, Problem, Please check" x 3 times "Blip, blip, blip," approx., every 40 seconds after that"
Alarm Volume	84 dB or more at 1m distance from equipment	
Dimension	Approx. Ø100mm x 44mm (Including attachment base)	
Weight (Including Dedicated Lithium Battery)	Approx. 140g	
Operating Temperature	0 °C to +50 °C	
Installation Location	Ceiling/ Wall Surface	

Function	Mode	Voice Alarm	Indication
	Normal	-	OFF
Alarm	Whiz Whiz Fire Fire	Blink	
Silent	-	OFF	
Trouble #1	Blip, Blip, Blip, Problem please check	Blink	
Trouble [Silent]	-	Blink	
Low Battery #2	Blip, Low Battery	Blink every 8 seconds	
Low Battery [Silent]	-	Blink every 8 seconds	

SH28455911
 Smoke alarm for residential use



Available in a wide variety of models to suit a multitude of environmental and weather conditions

AUTOMATIC TIME SWITCH



What's an Automatic Time Switch?

An automatic time switch automatically controls the use of electricity according to time. It's a device that lowers both electrical and labour costs.

Automatically Turns the Power On and Off

The Time Switch combines a clock with a switch to automatically turn power on or off at preset times. It is generally built into a lightboard or distribution panel, and controls electricity on a 24-hour. It makes it possible to replace conventional manual control with automated, reliable ON/OFF time management.

Simply Set the Time for ON/OFF Control

Time management consists of simply setting the times to turn the power on and off. A wide range of uses are possible across various operations, such as lighting, air conditioning, water supply, and livestock feeding.

Eliminating Waste of Power Is Also Ecological

Because the power is reliably turned on and off according to a preset time schedule, the amount that was wasted by extended use is saved, and electric bills are effectively lowered.

Cutting Labour Costs Is Also Efficient

Since the job of turning the power on and off is done automatically instead of manually, you can assign your valuable human resources to more important jobs. Human error is also eliminated, so power management is more reliable.

Example: Managing electricity in the office



From 1:00 PM to 6:00 PM

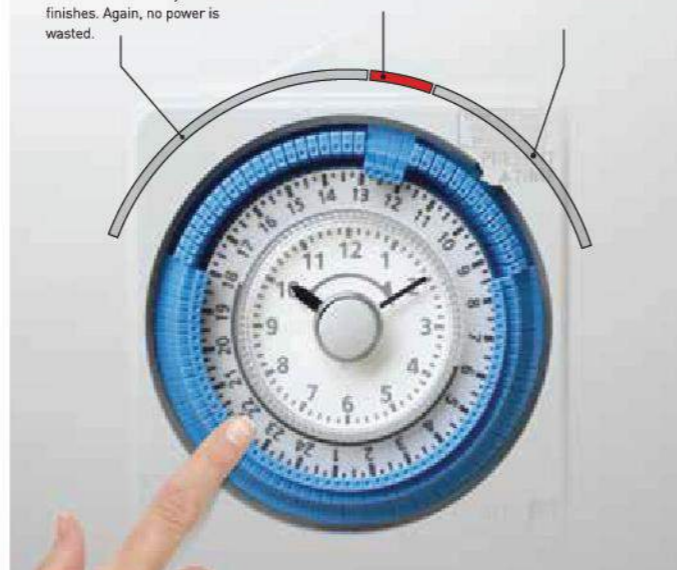
Lighting and air conditioning are turned on precisely when lunchtime ends. Then the power is automatically turned off when the workday finishes. Again, no power is wasted.

From 0:00 PM to 1:00 PM

Lunchtime. Lighting and air conditioning are turned off while people leave the office for lunch. No power is wasted.

From 8:30 AM to 12:00 AM

Turn the power on at the start of the workday. Lighting and air conditioning are turned on to provide a smooth start to office work.



Uses and Advantage of Panasonic Time Switch

Panasonic, with over 100 years of expertise forged in the Electrical Construction Material field with its Wiring Devices series, has also established a name for itself in the Time Control Devices market during the past 50 years with its Automatic Time Switch.

Thorough Quality Control

In addition to advanced functions, Panasonic focuses its manufacturing efforts on providing high durability and performance for many years of reliable use, and selects materials with full consideration of the global environment. Certification by third-party institutions and compliance with a wide range of international standards attest to these efforts. This approach is also used with Panasonic's Automatic Time Switches, to allow our customers worldwide to experience a new level of comfort and safety for the control of electric equipment.

Meeting IEC Standards

Panasonic's product design has been recognised and certified by many international organisations worldwide, such as the IEC (International Electrotechnical Commission), the top reference for electrical and electronic safety standards. Our Automatic Time Switch has successfully passed and complies with the IEC60730-2-7 directives to provide safer and more comfortable use of our line-up to our customers.



Products Compliant with the RoHS Directive

Panasonic's manufacturing processes are based on management standards for chemical substances by complying with the EU RoHS directive in order to provide all of our customers safer products with less impact on the environment.



Example of Use

Example 1 Offices, Residences and Commercial Facilities

Time Switches can be used to save electricity during the times when lighting and air conditioning are not needed, like at lunchtime and late at night.



Example 2 Agriculture and Livestock

Time Switches can be used to automatically supply food and water at appropriate times each day, to increase working efficiency.



Detailed consideration is given to users in the form of functions that are helpful in ordinary usage, and designs that simplify maintenance.

Easy Operation Check



A power lamp is located on the front panel, so the user can see at a glance whether the unit is operating or not, thus helping to provide safe use.

Easy Battery Replacement



With conventional time switches, the unit must be removed from its installation location, such as in a distribution panel, to replace the batteries. Panasonic's Time Switch lets you easily replace the batteries from the front panel. This makes maintenance considerably easier.

Preventing Entry of Ants and Other Small Insects



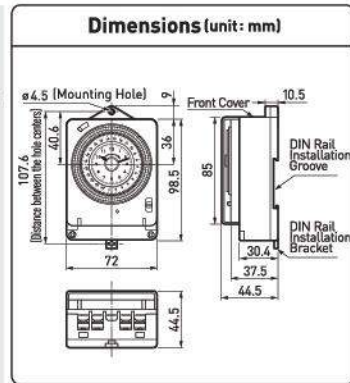
Time Switches are sometimes subject to the entry of ants and other small insects, which can cause malfunctions. Panasonic Time Switches have an airtight construction that prevents this problem for long, trouble-free use.

Surface & DIN rail mount type

TB35N, TB36N, TB38N, TB39N

Features

- 24 hours program
- Surface and DIN rail mount
- 300 hours reserve battery [TB38N, 39N]
- *Battery exchange from the front side
- 96 operations per day
- Minimum setting interval is 15 minutes



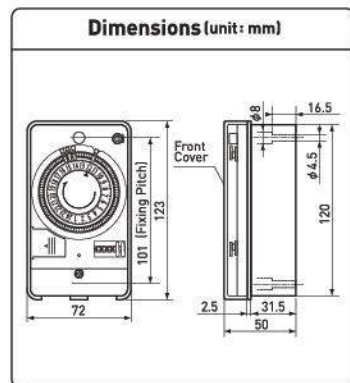
Applicable Installation Type	Indoor Use Daily			
	TB35N series	TB36N series	TB38N series	TB39N series
Series	TB35809NE5 [220-240V AC 50Hz]	TB36809NE5 [220-240V AC 50Hz]	TB38809NE7 [220-240V AC 50Hz]	TB39809NE7 [220-240V AC 50Hz]
Item No.				
Drive Method	AC Motor		Quartz Motor	
Power Failure Backup Time	Same as AC frequency		300 hours	
Time Precision	Same as AC frequency		±15 sec./month [at 25°C]	
Circuit Configuration	Voltage contact output Single Pole, Single Through (1a Contact)	No voltage contact output Single Pole, Double Through (1c Contact)	Voltage contact output Single Pole, Single Through (1a Contact)	No voltage contact output Single Pole, Double Through (1c Contact)
Switch Construction				
Load Capacity	Resistive Load 250V AC 20A Incandescent Lamp Load 250V AC 10A Inductive Load (cos φ ≥ 0.6) 250V AC 12A Motor Load (cos φ ≥ 0.6) 220V AC 1500W Minimum Setting Interval 15 minutes No. of On/Off Operation 96 operations			

Surface mount type

TB11N, TB17N

Features

- 24 hours program
- On/Off operations are set with separated pins
- With a manual On/Off switch
- 300 hours reserve battery [TB11N]
- *Battery exchange from the front side

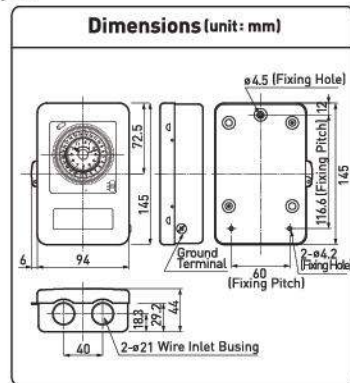


Applicable Installation Type	Indoor Use Daily	
	TB17N series	TB11N series
Series	TB178NE5 [220-240V AC 50Hz]	TB118NE7 [220-240V AC 50Hz]
Item No.		
Drive Method	AC Motor	Quartz Motor
Power Failure Backup Time	Same as AC frequency	300 hours
Time Precision	Same as AC frequency	±15 sec./month [at 25°C]
Circuit Configuration	Voltage contact output Single Pole, Single Through (1a Contact)	
Switch Construction		
Load Capacity	Resistive Load 250V AC 15A Incandescent Lamp Load 250V AC 15A Inductive Load (cos φ ≥ 0.6) 250V AC 12A Motor Load (cos φ ≥ 0.6) 220V AC 1500W Minimum Setting Interval 30 minutes No. of On/Off Operation Standard 6 operations (Max 48 operations)	

TB35N, TB38N [Steel Box Type]

Features

- With robust steel box
- 24 hours program
- Surface mount
- 300 hours reserve battery [TB38N]
- *Battery exchange from the front side
- 96 operations per day
- Minimum setting interval is 15 minutes

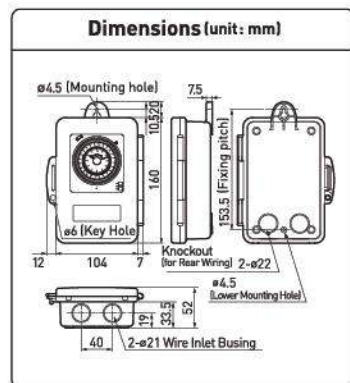


Applicable Installation Type	Indoor Use Daily	
	TB35N series	TB38N series
Series	TB358NE5 [220-240V AC 50Hz]	TB388NE7 [220-240V AC 50Hz]
Item No.		
Drive Method	AC Motor	Quartz Motor
Power Failure Backup Time	Same as AC frequency	300 hours
Time Precision	Same as AC frequency	±15 sec./month [at 25°C]
Circuit Configuration	Voltage contact output Single Pole, Single Through (1a Contact)	
Switch Construction		
Load Capacity	Resistive Load 250V AC 20A Incandescent Lamp Load 250V AC 10A Inductive Load (cos φ ≥ 0.6) 250V AC 12A Motor Load (cos φ ≥ 0.6) 220V AC 1500W Minimum Setting Interval 15 minutes No. of On/Off Operation 96 operations	

TB43N [Plastic Box Type]

Features

- 24 hours program
- Surface mount
- Weatherproof type (IP53)
- 300 hours reserve battery [TB43N]
- *Battery exchange from the front side



Applicable Installation Type	Outdoor & Indoor Use Daily	
	TB43N Series	
Series	TB438NE7 [220-240V AC 50Hz]	
Item No.		
Drive Method	Quartz Motor	
Power Failure Backup Time	300 hours	
Time Precision	±15 sec./month [at 25°C]	
Circuit Configuration	No voltage contact output Single Pole, Single Through (1a Contact)	
Switch Construction		
Load Capacity	Resistive Load 250V AC 20A Incandescent Lamp Load 250V AC 10A Inductive Load (cos φ ≥ 0.6) 250V AC 12A Motor Load (cos φ ≥ 0.6) 220V AC 1500W Minimum Setting Interval 15 minutes No. of On/Off Operation 96 operations	

CIRCUIT BREAKERS



Breaker

Miniature Circuit Breaker (MCB)		Residual Current Circuit Breaker (RCCB)		Residual Current Breaker with Over-Current (RCBO)	
Over current and short circuit automatic breaker, full protection for households' basic needs		Earth leakage automatic breaker		Over current, short circuit and earth leakage automatic breaker	
Safety Breaker (HB Type)	Miniature Circuit Breaker (MCB DIN Type)	Earth Leakage Breaker (ELB Small Type)	Earth Leakage Breaker (ELB J Type)	Residual Current Breaker with Over-Current (RCBO DIN Type)	Earth Leakage Breaker (ELB J Type)
Safety circuit breaker, suitable for household appliances	Automatic breaker protect over current and short circuit *DIN rail mountable			*DIN rail mountable	

Industrial Circuit Breakers

Molded Case Circuit Breaker (MCCB)			
Over current and short circuit automatic breaker, specialized for industrial needs			
GD Breaker *Made in Japan		Molded Case Circuit Breaker (MCCB) NEW	
BBW	BKW		
		BC-100W	BC-250W

Compact and High Breaking Capacity
of Circuit Breaker

MCB-DIN TYPE



Safety Design and Wide Variation of Residual Current
Circuit Breakers with Overcurrent protection

RCBO-DIN TYPE



MCB BD-63R [DIN Type]

Type		BD-63R							
Poles & Elements		1P1E		2P2E		3P3E		4P4E	
Instantaneous		C	D	C	D	C	D	C	D
Type	6A	BBD1061CNV	BBD1061DNV	BBD2062CNV	BBD2062DNV	BBD3063CNV	BBD3063DNV	BBD4064CNV	BBD4064DNV
	10A	BBD1101CNV	BBD1101DNV	BBD2102CNV	BBD2102DNV	BBD3103CNV	BBD3103DNV	BBD4104CNV	BBD4104DNV
	16A	BBD1161CNV	BBD1161DNV	BBD2162CNV	BBD2162DNV	BBD3163CNV	BBD3163DNV	BBD4164CNV	BBD4164DNV
	20A	BBD1201CNV	BBD1201DNV	BBD2202CNV	BBD2202DNV	BBD3203CNV	BBD3203DNV	BBD4204CNV	BBD4204DNV
	25A	BBD1251CNV	BBD1251DNV	BBD2252CNV	BBD2252DNV	BBD3253CNV	BBD3253DNV	BBD4254CNV	BBD4254DNV
	32A	BBD1321CNV	BBD1321DNV	BBD2322CNV	BBD2322DNV	BBD3323CNV	BBD3323DNV	BBD4324CNV	BBD4324DNV
	40A	BBD1401CNV	BBD1401DNV	BBD2402CNV	BBD2402DNV	BBD3403CNV	BBD3403DNV	BBD4404CNV	BBD4404DNV
	50A	BBD1501CNV	BBD1501DNV	BBD2502CNV	BBD2502DNV	BBD3503CNV	BBD3503DNV	BBD4504CNV	BBD4504DNV
	63A	BBD1631CNV	BBD1631DNV	BBD2632CNV	BBD2632DNV	BBD3633CNV	BBD3633DNV	BBD4634CNV	BBD4634DNV
Rated Voltage Interrupting Current	AC240/415V 6kA		AC240V 10kA AC415V 6kA		AC415V 6kA		AC415V 6kA		
Weight	6A-32A 0.1kg 40A-63A 0.13kg		6A-32A 0.2kg 40A-63A 0.26kg		6A-32A 0.3kg 40A-63A 0.39kg		6A-32A 0.4kg 40A-63A 0.52kg		

MCB BD-63R Conform to the IEC 60898-1 standards.

MCB BD-125 [DIN Type]

Type		BD-125							
Poles & Elements		1P1E		2P2E		3P3E		4P4E	
Instantaneous		C	D	C	D	C	D	C	D
Type	80A	BBD108011C	BBD108011D	BBD208021C	BBD208021D	BBD308031C	BBD308031D	BBD408041C	BBD408041D
	100A	BBD110011C	BBD110011D	BBD210021C	BBD210021D	BBD310031C	BBD310031D	BBD410041C	BBD410041D
	125A	BBD112511C		BBD212521C		BBD312531C		BBD412541C	
Rated Voltage Interrupting Current	AC240V 10kA			AC415V 10kA					
Weight	0.18kg		0.36kg		0.54kg		0.72kg		

MCB BD-125 Conform to the IEC 60947-2 standards.

RCBO BDE-63R [2P1E] [DIN Type]

Type		BDE-63R					
Poles & Elements		2P1E					
Instantaneous		C	D	C	D	C	D
Type	6A	BBDE20631CNV	BBDE20631DNV	BBDE20641CNV	BBDE20641DNV	BBDE20651CNV	BBDE20651DNV
	10A	BBDE21031CNV	BBDE21031DNV	BBDE21041CNV	BBDE21041DNV	BBDE21051CNV	BBDE21051DNV
	16A	BBDE21631CNV	BBDE21631DNV	BBDE21641CNV	BBDE21641DNV	BBDE21651CNV	BBDE21651DNV
	20A	BBDE22031CNV	BBDE22031DNV	BBDE22041CNV	BBDE22041DNV	BBDE22051CNV	BBDE22051DNV
	25A	BBDE22531CNV	BBDE22531DNV	BBDE22541CNV	BBDE22541DNV	BBDE22551CNV	BBDE22551DNV
	32A	BBDE23231CNV	BBDE23231DNV	BBDE23241CNV	BBDE23241DNV	BBDE23251CNV	BBDE23251DNV
	40A	BBDE24031CNV	BBDE24031DNV	BBDE24041CNV	BBDE24041DNV	BBDE24051CNV	BBDE24051DNV
	50A	BBDE25031CNV	BBDE25031DNV	BBDE25041CNV	BBDE25041DNV	BBDE25051CNV	BBDE25051DNV
63A	BBDE26331CNV	BBDE26331DNV	BBDE26341CNV	BBDE26341DNV	BBDE26351CNV	BBDE26351DNV	
Rated Voltage	AC240V 6kA						
Application Voltage Range	192V-264V						
Rated Residual Operating Current	30mA		100mA		300mA		
Rated Residual Non-operating Current	15mA		50mA		150mA		
Weight	6A-32A 0.2kg 40A-63A 0.23kg						

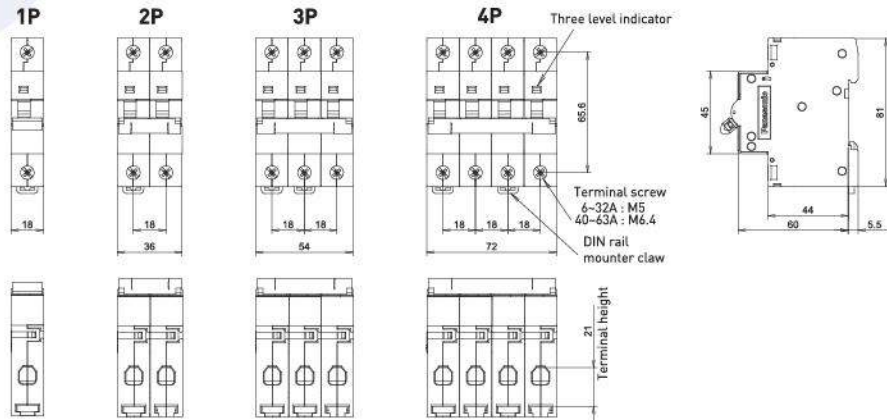
RCBO BDE-63R Conform to the IEC 61009-1 standards.

RCBO BDE-63R [4P4E] [DIN Type]

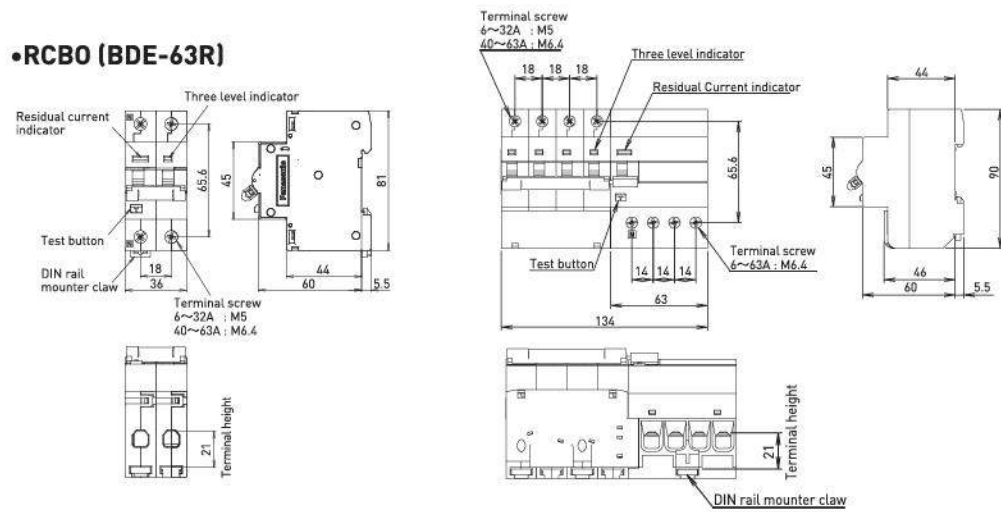
Type		BDE-63R					
Poles & Elements		4P4E					
Instantaneous		C					
Type	6A	BBDE40634CNV	BBDE40644CNV	BBDE40654CNV	BBDE40664CNV	BBDE40674CNV	BBDE40684CNV
	10A	BBDE41034CNV	BBDE41044CNV	BBDE41054CNV	BBDE41064CNV	BBDE41074CNV	BBDE41084CNV
	16A	BBDE41634CNV	BBDE41644CNV	BBDE41654CNV	BBDE41664CNV	BBDE41674CNV	BBDE41684CNV
	20A	BBDE42034CNV	BBDE42044CNV	BBDE42054CNV	BBDE42064CNV	BBDE42074CNV	BBDE42084CNV
	25A	BBDE42534CNV	BBDE42544CNV	BBDE42554CNV	BBDE42564CNV	BBDE42574CNV	BBDE42584CNV
	32A	BBDE43234CNV	BBDE43244CNV	BBDE43254CNV	BBDE43264CNV	BBDE43274CNV	BBDE43284CNV
	40A	BBDE44034CNV	BBDE44044CNV	BBDE44054CNV	BBDE44064CNV	BBDE44074CNV	BBDE44084CNV
	50A	BBDE45034CNV	BBDE45044CNV	BBDE45054CNV	BBDE45064CNV	BBDE45074CNV	BBDE45084CNV
63A	BBDE46334CNV	BBDE46344CNV	BBDE46354CNV	BBDE46364CNV	BBDE46374CNV	BBDE46384CNV	
Rated Voltage	AC415V 6kA						
Application Voltage Range	332V-456V						
Rated Residual Operating Current	30mA		100mA		300mA		
Rated Residual Non-Operating Current	15mA		50mA		150mA		
Weight	6A-32A 0.63kg 40A-63A 0.75kg						

RCBO BDE-63R Conform to the IEC 61009-1 standards.

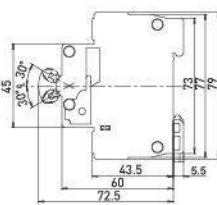
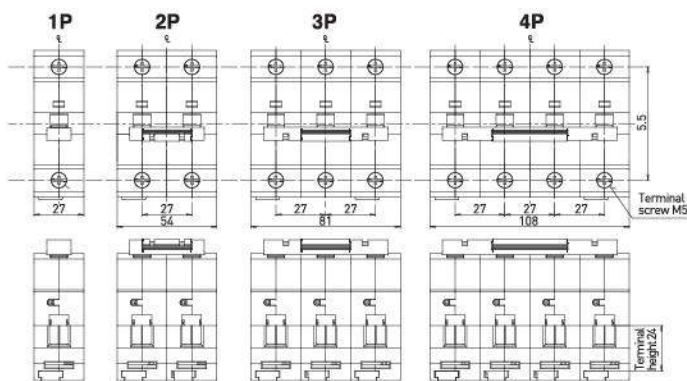
•MCB (BD-63R)



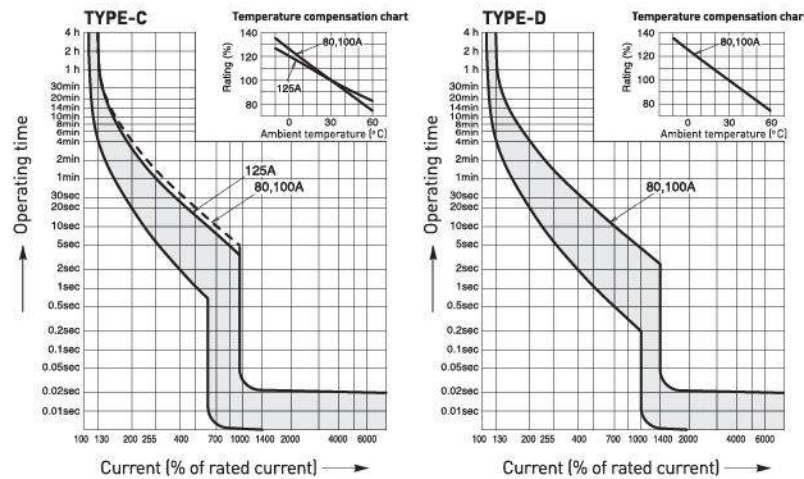
•RCBO (BDE-63R)



•MCB (BD-125)



Operating time curve (Standard temperature 30°C)



Complete range of products with a compact design
SAFETY BREAKER
EARTH LEAKAGE BREAKER



Earth Leakage Breaker Small Type

Dimension Appearance Mounting Pitch	Unit: mm	
Type	BJS3020NA2	BJS3030NA2
Rated Current	30A	
Number of Poles & Elements	2P0E	
Rated Voltage	AC120-240V	
Residual Operating Current	15mA	30mA
Residual Non-operation Current	7.5mA	15mA
Rated Short-time Current	1.5kA	
Phase and Wiring Configuration	1φ2W	
Operating Time	Within 0.1 sec.	
Handle Type	Long	
Standard Terminal Specifications	Solderless terminals (with strap) φ1.6-φ2.6 5.5 - 8mm ² Note: When using electrical appliance wire or other stranded wire [1.25 - 3.5mm ²] use bar lug terminals WV2500 1.25 - 2mm ² (WV2501 2.0 - 3.5mm ²) Tightening torque: 1.6-2.0N·m 16.3-20.4kgf·cm	
Connecting Method	For direct installation of electrical wiring	
Weight	0.09kg	
Overload Current Tripping Mechanism	None	
Approval Standard	-	

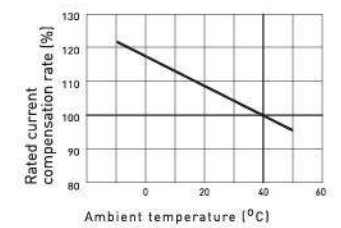
Note: 1. "Rated short-time current" means that although short-circuit protection is not possible, the internal circuitry and conductors can withstand 1.5kA for 0.02 seconds.
2. Ambient temperature range for usage: -10°C to +50°C.
3. Disconnect electrical wiring before measuring insulation resistance between wires.

Dimension Appearance Mounting Pitch	Unit: mm								
Type	BJS1512S	BJS1522S	BJS1532S	BJS2012S	BJS2022S	BJS2032S	BJS3012S	BJS3022S	BJS3032S
Rated Current	15A			20A			30A		
Number of Poles & Elements	2P2E								
Rated Voltage	AC100-240V								
Residual Operating Current	10mA	15mA	30mA	10mA	15mA	30mA	10mA	15mA	30mA
Residual Non-operation Current	6mA	7.5mA	15mA	6mA	7.5mA	15mA	6mA	7.5mA	15mA
Rated Interrupting Capacity (Rated Short-time Current)	1.5kA								
Phase and Wiring Configuration	1φ2W, 1φ3W								
Operating Time	Within 0.1 sec.								
Handle Type	Short								
Terminal Specifications	Solderless terminals (with strap) φ1.6-φ2.6 5.5 - 8mm ² Note: When using electrical appliance wire or other stranded wire [1.25 - 3.5mm ²] use bar lug terminals WV2500 1.25 - 2mm ² (WV2501 2.0 - 3.5mm ²) Tightening torque: 1.6-2.0N·m 16.3-20.4kgf·cm								
Connecting Method	For direct installation of electrical wiring								
Weight	0.09kg								
Overload Current Tripping Mechanism	Thermal operation								

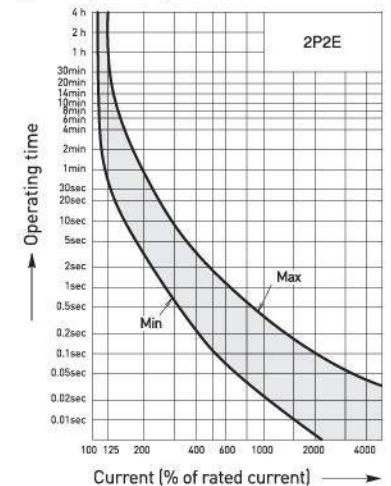
Note: 1. Ambient temperature range for usage: -10°C to +50°C.
2. Disconnect electrical wiring before measuring insulation resistance between wires.

Small Type

Temperature compensation curves



Operating characteristics curves (with O.C.)



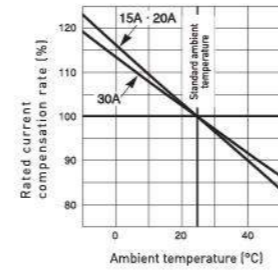
Earth Leakage Breaker J Type

Dimension Appearance Mounting Pitch							
Number of Poles & Elements	2P0E		2P2E				
Type	BJJ230308	BJJ215228	BJJ215328	BJJ220228	BJJ220328	BJJ230228	BJJ230328
Rated Current	30A	15A		20A		30A	
Rated Voltage	AC120-240V						
Residual Operating Current	30mA	15mA	30mA	15mA	30mA	15mA	30mA
Residual Non-operation Current	15mA	7.5mA	15mA	7.5mA	15mA	7.5mA	15mA
Rated Interrupting Capacity (Rated Short-time Current)	[2.5kA]	1.5kA					
Phase and Wiring Configuration	1φ2W	1φ2W, 1φ3W					
Operating Time	Within 0.1 sec.						
Leakage Indication Method	-	Mechanic button					
Terminal Specifications	Solderless terminals (with strap) φ1.6-φ2.6 5.5 - 8mm ²		Note: When using electrical appliance wire or other stranded wire (1.25 - 3.5mm ²) use bar lug terminals WV2500 1.25 - 2mm ² (WV2501 2.0 - 3.5mm ²)				Tightening torque: 1.6-2.0N·m 16.3-20.4kgf·cm
Connecting Method	For direct installation of electrical wiring						
Weight	0.2kg						
Overload Current Tripping Mechanism	Thermal operation						

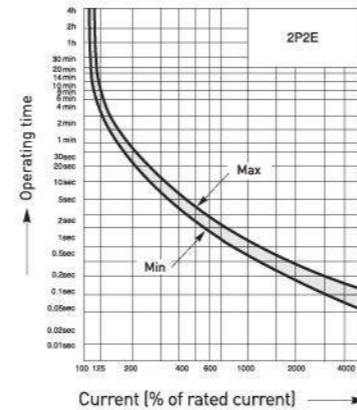
Note: 1. "Rated short-time current" means that although short-circuit protection is not possible, the internal circuitry and conductors can withstand 1.5kA for 0.02 seconds.
2. Ambient temperature range for usage: -10°C to +50°C.
3. Disconnect electrical wiring before measuring insulation resistance between wires.

J Type

Temperature compensation curves



Operating characteristics curves (with O.C.)



Save space and saving cost

MOLDED CASE CIRCUIT BREAKER NEW



No.1

Suitable for isolation with positive contact indication

No.2

Operation in pollution degree 3 to IEC standard

No.3

Unlimited performance up to AC440V when reverse-connected

No.4

Compact size: W75 H130 D68 and high breaking capacity; 25kA 415V BC250

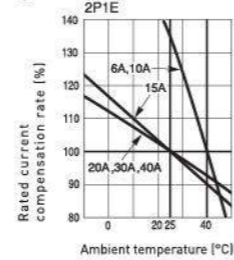
Safety Breaker HB Type

Dimension Appearance Mounting Pitch		
Number of Poles & Elements	2P1E	
Type	6A	BS11106TV
	10A	BS1110TV
	15A	BS1111TV
	20A	BS1112TV
	30A	BS1113TV
	40A	BS1114TV
Rated Voltage	AC 240V 1.0kA (6A) AC 240V 1.5kA (10-15-20-30-40A)	
Terminal Specifications	Solderless terminals (with strap) φ1.6-φ2.6 5.5 - 8mm ²	
Weight	0.07kg	
Structure	Tripping Mechanism	Thermal operation
	Arc Quenching Method	Natureal Quenching
Capacity	Interrupting Time	10ms (100%)
	Passage of Short	23 X 10 ³ A ² sec (100%)

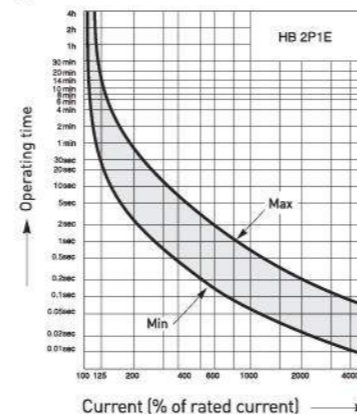
Note: 1. Use 20A for normal branch circuits, and 30A for high capacity dedicated circuits.
2. Use 15A or less for machine protection, after consideration of its characteristic: inrush current and usual current.
3. The data in capacity mentioned above are just for your reference, which are PEW's experimental ones.

HB Type

Temperature compensation curves



Operating characteristics curves (with O.C.)

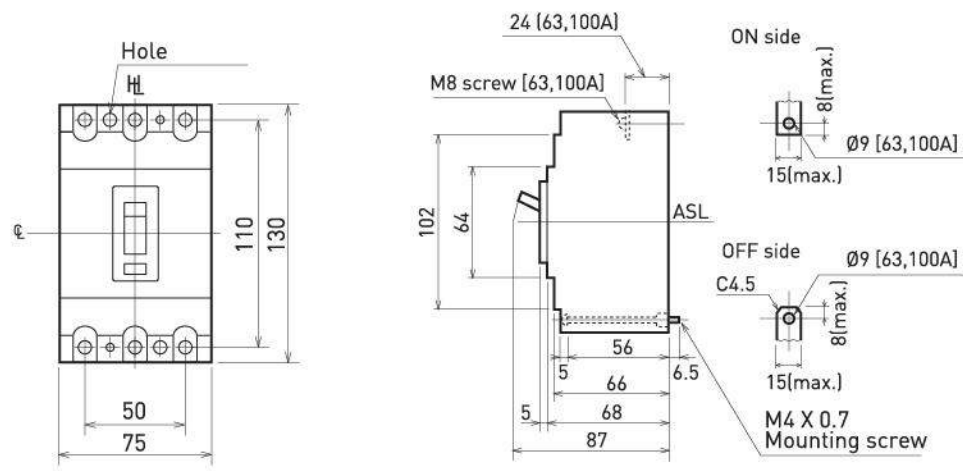


Unit: mm

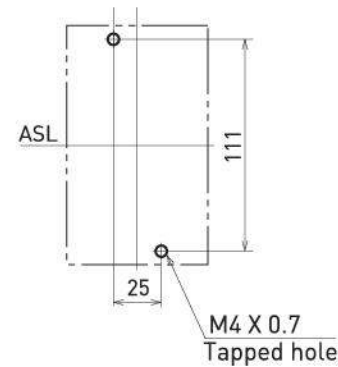
Type	BC-100W		BC-250W		
Reference Standard	IEC 60947-2		IEC 60947-2		
Number of Poles	3P			3P	
Rated Current	63A	100A	150A	200A	250A
Utilisation Category	A type			A type	
	Current specifications				
Max. Rated Operational Voltage	AC 690V			AC 690V	
Rated Insulation Voltage	690V				
Rated Impulse Withstand Voltage	6kV			8kV	
Rated Ultimate S.C. Breaking Capacity @ac 415 (Icu)	10kA			25kA	
Service Short Circuit Breaking Capacity @ac 415v (Ics)	5kA			19kA	
	Protection				
Protection Method	FIXED thermal magnetic			FIXED thermal magnetic	
	Dimension				
Width X High X Depth (mm)	75 x 130 x 68			105 x 165 x 68	
	Special feature				
Line Load Reversibility	Yes			Yes	
Calibration Temperature	40°C			40°C	

• BC-100W

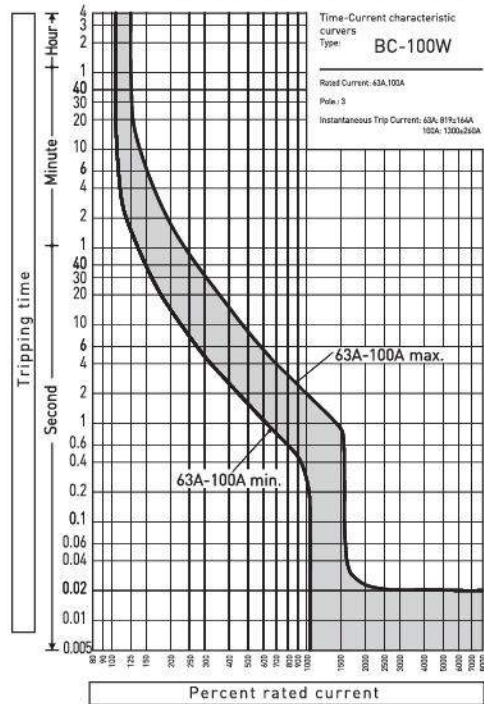
Preparation of conductor



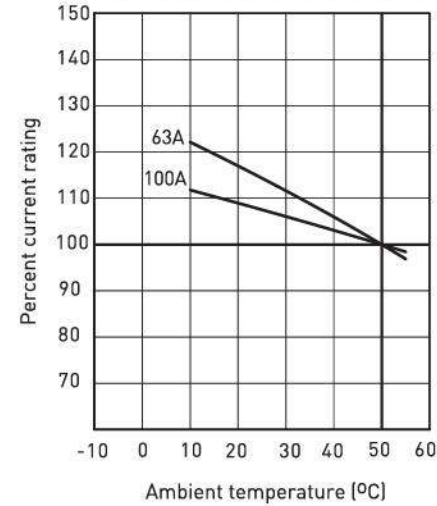
Drilling plan (front view)



Time/Current characteristic curves

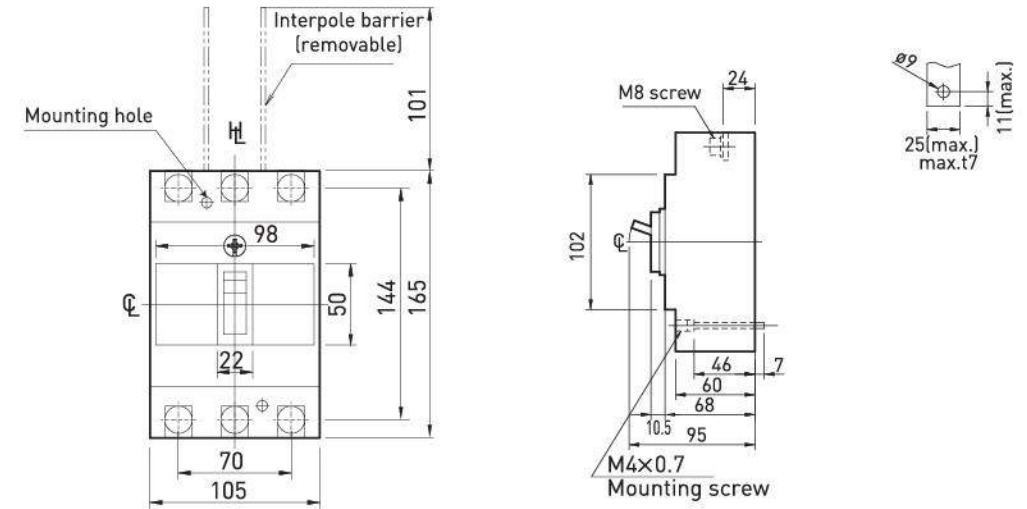


Ambient compensating curves



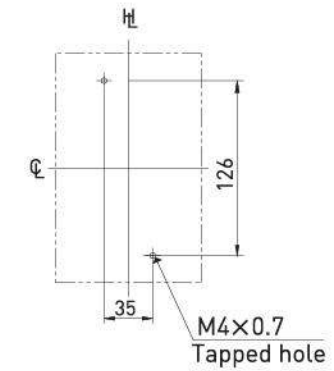
BC-250W

Preparation of conductor

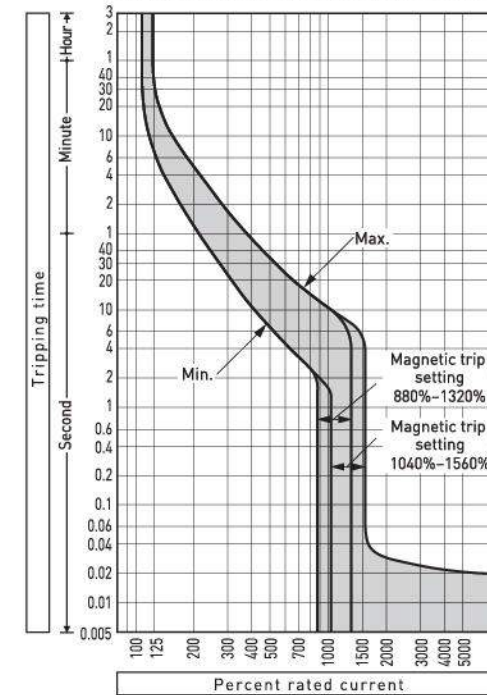


Drilling plan (front view)

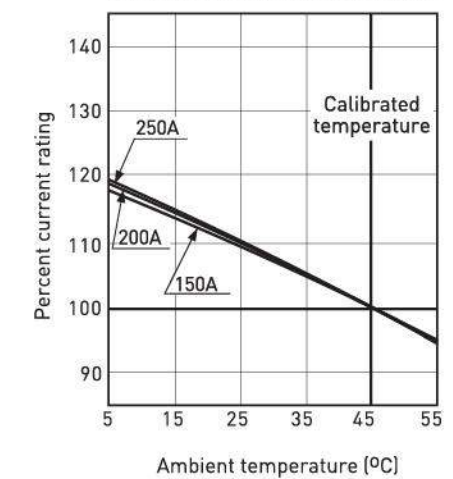
Note: For the extension bars, Straight bars or Spread bars can be supplied.



Time/Current characteristic curves



Ambient compensating curves







HGC electric interrupting technique is power connection safety design
Small dimension, high rated interrupting capacity



GD BREAKER





•MCCB [BBW Type]

Frame Size		30AF					
Type		BBW-30			BBW-30C		
Appearance					DIN rail mountable 		
Number of Poles		2P		3P	2P		3P
Cat. No. & Rated Current (Nominal Ambient Temperature 40°C)		3A	BBW23Y	BBW33Y	3A	BBW23CKY	BBW33CKY
		5A	BBW25Y	BBW35Y	5A	BBW25CKY	BBW35CKY
		10A	BBW210Y	BBW310Y	10A	BBW210CKY	BBW310CKY
		15A	BBW215Y	BBW315Y	15A	BBW215CKY	BBW315CKY
		20A	BBW220Y	BBW320Y	20A	BBW220CKY	BBW320CKY
		30A	BBW230Y	BBW330Y	30A	BBW230CKY	BBW330CKY
Rated Insulation Voltage		AC 500V			500V		
JIS Rated Interrupting Capacity (sym)		AC 415V 1.5kA			1.5kA		
		AC 200V 2.5kA			2.5kA		
		AC 100V 2.5kA			2.5kA		
Dimensions		a	47	70	50	75	
		b	96		96		
		c	52		60		
		ca	67.6		75.6		
Weight of Standard Type		0.3kg		0.4kg	0.3kg		0.4kg

Frame Size		60AF					
Type		BBW-60			BBW-60S		
Appearance					DIN rail mountable 		
Number of Poles		2P		3P	2P		3P
Cat. No. & Rated Current (Nominal Ambient Temperature 40°C)		3A	BBW232Y	BBW332Y	60A	BBW260SKY	BBW360SKY
		5A	BBW252Y	BBW352Y			
		10A	BBW2102Y	BBW3102Y			
		15A	BBW2152Y	BBW3152Y			
		20A	BBW2202Y	BBW3202Y			
		30A	BBW2302Y	BBW3302Y			
		40A	BBW2401Y	BBW3401Y			
		50A	BBW2501Y	BBW3501Y			
		60A	BBW260Y	BBW360Y			
Rated Insulation Voltage		AC 500V			500V		
JIS Rated Interrupting Capacity (sym)		AC 415V 2.5kA			2.5kA		
		AC 200V 5kA			10kA		
		AC 100V 5kA			10kA		
Dimensions		a	47	70	50	75	
		b	96		96		
		c	52		60		
		ca	67.6		75.6		
Weight of Standard Type		0.3kg		0.4kg	0.3kg		0.4kg

Frame Size		50AF					
Type		BBW-50			BBW-50S		
Appearance					DIN rail mountable 		
Number of Poles		2P		3P	2P		3P
Cat. No. & Rated Current (Nominal Ambient Temperature 40°C)		20A	BBW2201Y	BBW3201Y	5A	BBW251SKY	BBW351SKY
		30A	BBW2301Y	BBW3301Y	10A	BBW2101SKY	BBW3101SKY
		40A	BBW240Y	BBW340Y	15A	BBW2151SKY	BBW3151SKY
		50A	BBW250Y	BBW350Y	20A	BBW2201SKY	BBW3201SKY
					30A	BBW2301SKY	BBW3301SKY
					40A	BBW240SKY	BBW340SKY
					50A	BBW250SKY	BBW350SKY
Rated Insulation Voltage		AC 500V			500V		
JIS Rated Interrupting Capacity (sym)		AC 415V 1.5kA			2.5kA		
		AC 200V 2.5kA			10kA		
		AC 100V 2.5kA			10kA		
Dimensions		a	47	70	50	75	
		b	96		96		
		c	52		60		
		ca	67.6		75.6		
Weight of Standard Type		0.3kg		0.4kg	0.3kg		0.4kg

Frame Size		100AF			400AF		
Type		BBW-100			BBW-400		
Appearance		DIN rail mountable 					
Number of Poles		2P		3P	2P		3P
Cat. No. & Rated Current (Nominal Ambient Temperature 40°C)		20A	BBW2203KY	BBW3203KY	250A	BBW22501KY	BBW32501KY
		30A	BBW2303KY	BBW3303KY	300A	BBW23001KY	BBW33001KY
		40A	BBW2402KY	BBW3402KY	350A	BBW2350KY	BBW3350KY
		50A	BBW2502KY	BBW3502KY	400A	BBW2400KY	BBW3400KY
		60A	BBW2601KY	BBW3601KY			
		75A	BBW275KY	BBW375KY			
		100A	BBW2100KY	BBW3100KY			
Rated Insulation Voltage		AC 500V			600V		
JIS Rated Interrupting Capacity (sym)		AC 415V 5kA			25kA		
		AC 200V 25kA			50kA		
		AC 100V 25kA			50kA		
Dimensions		a	75		140 [148]		
		b	96		260 [349]		
		c	60		103		
		ca	75.6		135		
Weight of Standard Type		0.5kg		0.5kg	4.0kg		4.6kg



Note 1) Install breakers with BBW-30, BBW-30C, BBW-50, BBW-50S, BBW-60, BBW-60S, BBW-100 within ±10° of perpendicular.



Note 2) When using 3-poles breaker for 1Ø 3W, neutral conductor cannot have open-phase protection.

Note 3) Please select conformed wire which suit to rated current.

Note 4) Dimensions with [] is the measurement including bar terminal.

•Earth Leakage Breaker [BKW Type]

Frame Size	30AF							
Type	BKW-30			BKW-30C				
Appearance								
Phase and Wiring Configuration	1φ2W		3φ3W 1φ3W		1φ2W			
Number of Poles	2P		3P		3P			
Cat. No. & Rated Current (Nominal Ambient Temperature 40°C)	3A	BKW23□Y	BKW33□Y	5A	BKW25□CKY	BKW35□CKY		
	5A	BKW25□Y	BKW35□Y	10A	BKW210□CKY	BKW310□CKY		
	10A	BKW210□Y	BKW310□Y	15A	BKW215□CKY	BKW315□CKY		
	15A	BKW215□Y	BKW315□Y	20A	BKW220□CKY	BKW320□CKY		
	20A	BKW220□Y	BKW320□Y	30A	BKW230□CKY	BKW330□CKY		
	30A	BKW230□Y	BKW330□Y					
Rated Voltage (AC V)	100-200V Dual use							
High Speed Type	Rated Sensitivity Current (mA)		15, 30		15, 30, 100			
	Operating Time (sec.)		0.1		0.1			
Leakage Indication Method	Mechanical button							
JIS Rated Interrupting Capacity (sym)	AC	415V	-		-			
		200V	2.5kA		2.5kA			
		100V	2.5kA		2.5kA			
Dimensions	a	70		50		75		
	b	96		96		96		
	c	52		60		60		
	ca	67.6		75.6		75.6		
Weight of Standard Type	0.4kg		0.5kg		0.4kg		0.5kg	




Frame Size	50AF							
Type	BKW-50			BKW-50C				
Appearance								
Phase and Wiring Configuration	1φ2W		3φ3W 1φ3W		1φ2W			
Number of Poles	2P		3P		3P			
Cat. No. & Rated Current (Nominal Ambient Temperature 40°C)	20A	BKW220□1Y	BKW320□1Y	15A	BKW215□1CKY	BKW315□1CKY		
	30A	BKW230□1Y	BKW330□1Y	20A	BKW220□1CKY	BKW320□1CKY		
	40A	BKW240□Y	BKW340□Y	30A	BKW230□1CKY	BKW330□1CKY		
	50A	BKW250□Y	BKW350□Y	40A	BKW240□CKY	BKW340□CKY		
				50A	BKW250□CKY	BKW350□CKY		
Rated Voltage (AC V)	100-200V Dual use							
High Speed Type	Rated Sensitivity Current (mA)		15 (below 30A), 30, 100 (above 40A)		15, 30			
	Operating Time (sec.)		0.1		0.1			
Leakage Indication Method	Mechanical button							
JIS Rated Interrupting Capacity (sym)	AC	415V	-		-			
		200V	2.5kA		25kA			
		100V	2.5kA		25kA			
Dimensions	a	70		50		75		
	b	96		96		96		
	c	52		60		60		
	ca	67.6		75.6		75.6		
Weight of Standard Type	0.4kg		0.5kg		0.4kg		0.5kg	



■ Rated Voltage Applicable Range

Rated voltage	Applicable Voltage Range
100-200V dual use	80-242V

■ Cat. No. □ Depends on the sensitivity current
2:15mA 3:30mA 4:100mA 9:100-200-500mA Switchover

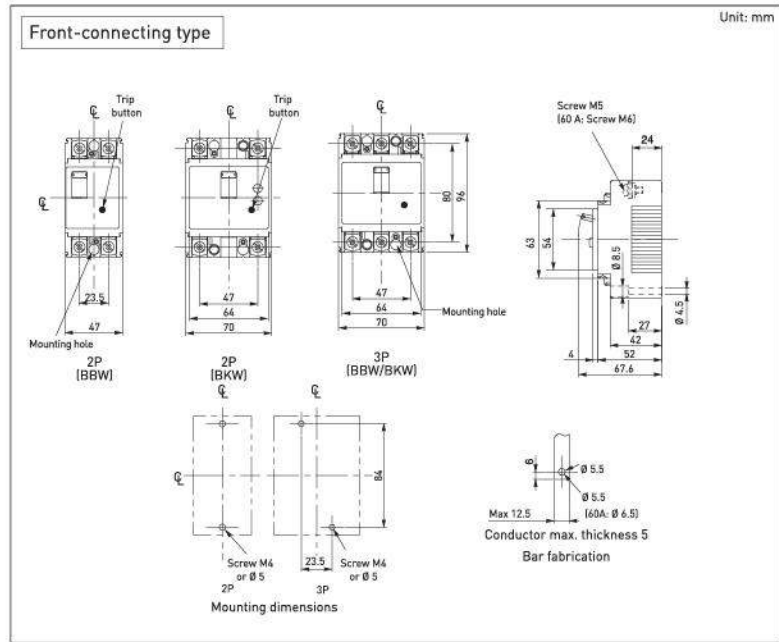
•Earth Leakage Breaker [BKW Type]

Frame Size	50AF			60AF				
Type	BKW-50S		BKW-60		BKW-60S			
Appearance								
Phase and Wiring Configuration	1φ2W		3φ3W 1φ3W		1φ2W			
Number of Poles	2P		3P		3P			
Cat. No. & Rated Current (Nominal Ambient Temperature 40°C)	15A	BKW215□1SKY	BKW315□1SKY	15A	BKW215□Y	BKW315□Y		
	20A	BKW220□1SKY	BKW320□1SKY	20A	BKW220□Y	BKW320□Y		
	30A	BKW230□1SKY	BKW330□1SKY	30A	BKW230□Y	BKW330□Y		
	40A	BKW240□SKY	BKW340□SKY	40A	BKW240□Y	BKW340□Y		
	50A	BKW250□SKY	BKW350□SKY	50A	BKW250□Y	BKW350□Y		
				60A	BKW260□Y	BKW360□Y		
Rated Voltage (AC V)	100-200V Dual use							
High Speed Type	Rated Sensitivity Current (mA)		15, 30, 100 (2P)		15 (below 30A) 30, 100 (above 40A)			
	Operating Time (sec.)		0.1		0.1			
Leakage Indication Method	Mechanical button							
JIS Rated Interrupting Capacity (sym)	AC	415V	-		-			
		200V	10kA		5kA			
		100V	10kA		5kA			
Dimensions	a	50		75		70		
	b	96		96		96		
	c	60		60		52		
	ca	75.6		67.6		75.6		
Weight of Standard Type	0.4kg		0.5kg		0.4kg		0.5kg	

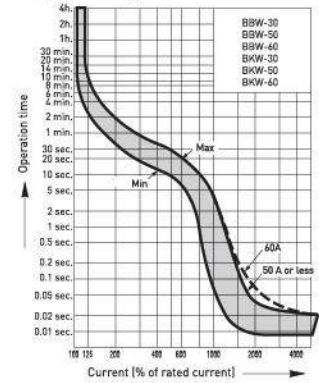
Frame Size	100AF		400AF			
Type	BKW-100		BKW-400			
Appearance						
Phase and Wiring Configuration	1φ2W		3φ3W 1φ3W			
Number of Poles	2P		3P			
Cat. No. & Rated Current (Nominal Ambient Temperature 40°C)	60A	BKW260□1KY	BKW360□1KY	250A	BKW3250□1KY	
	75A	BKW275□KY	BKW375□KY	300A	BKW3300□1KY	
	100A	BKW2100□KY	BKW3100□KY	350A	BKW3350□KY	
				400A	BKW3400□KY	
Rated Voltage (AC V)	100-200V Dual use		100-200-415V Dual use			
High Speed Type	Rated Sensitivity Current (mA)		30		30, 100-200-500	
	Operating Time (sec.)		0.1		0.1	
Leakage Indication Method	Mechanical button					
JIS Rated Interrupting Capacity (sym)	AC	415V	-		25kA	
		200V	25kA		50kA	
		100V	25kA		50kA	
Dimensions	a	75		140 [148]		
	b	96		260 [349]		
	c	60		103		
	ca	75.6		135		
Weight of Standard Type	0.6kg		0.6kg		4.8kg	

- Note 1) When using 3-poles breaker for 1φ3W configuration apply voltage to two end terminal. In this case neutral conductor cannot have open-phase protection.
- Note 2) When using on frequency control circuit (inverter) be sure to install breaker on primary side of inverter.
- Note 3) Breaker can be connected in reverse. However do not reverse connect 400 when used on a 415V circuit.
- Note 4) Install BKW-30, BKW-30C, BKW-50, BKW-50C, BKW-50S, BKW-60, BKW-60S, BKW-100 within ±10° of perpendicular.
- Note 5) Please select conformed wire which suit to related current.
- Note 6) Dimensions with () is the measurement including bar terminal.

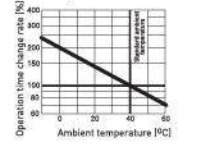
1 BBW-30, BBW-50, BBW-60, BKW-30, BKW-50, BKW-60



Operating characteristic curves



Temperature compensation curve

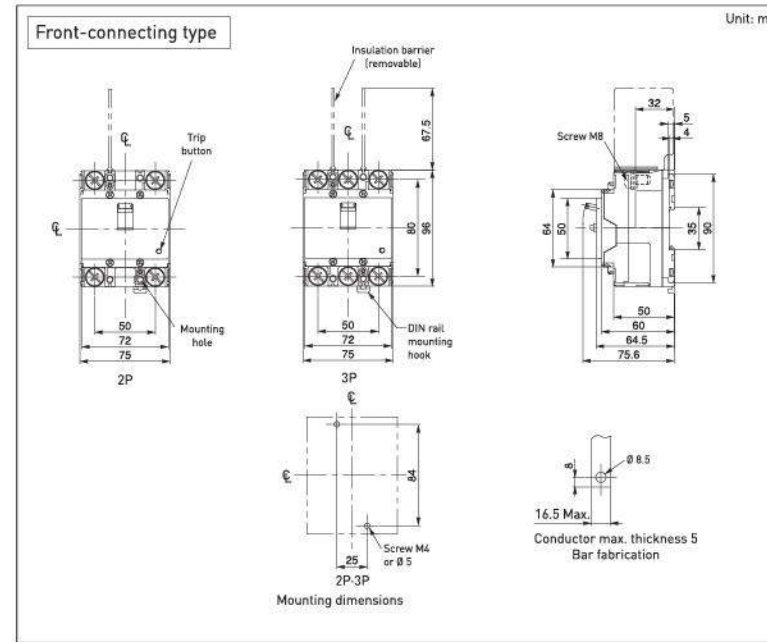


Note: The method used to detect overcurrent is electromagnetic, so temperature compensation takes the form of an increase or decrease relative to the lead-out time and there is no change in the rated current.

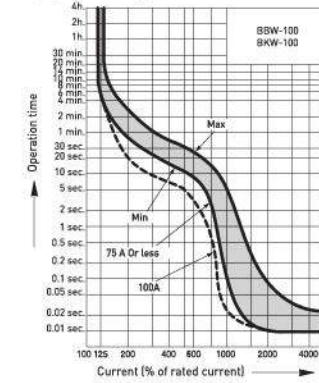
Standard included accessories (frontconnecting type)

Mounting screws	Small round-head screws M4 x 0.7 x 35
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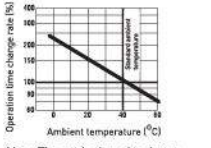
3 BBW-100, BKW-100



Operating characteristic curves



Temperature compensation curve

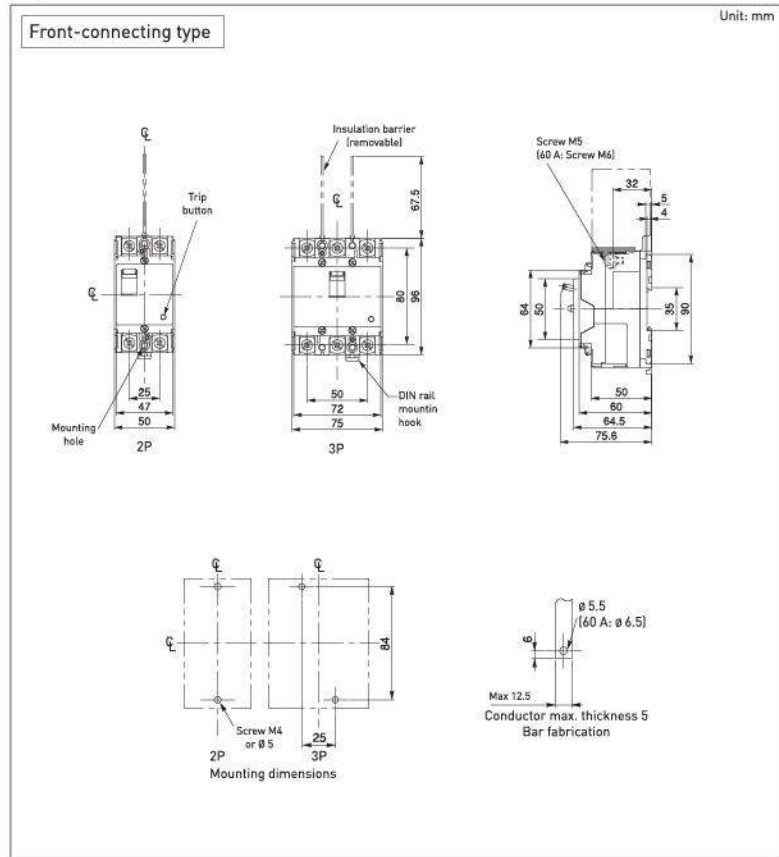


Note: The method used to detect overcurrent is electromagnetic, so temperature compensation takes the form of an increase or decrease relative to the lead-out time and there is no change in the rated current.

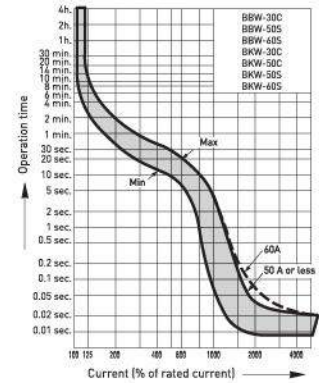
Standard included accessories (frontconnecting type)

Mounting screws	Small round-head screws M4 x 0.7 x 35
Insulation barrier	2 pole: 1, 3 pole: 2

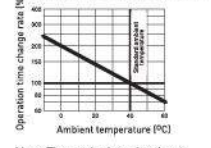
2 BBW-30C, BBW-50S, BBW-60S, BKW-30C, BKW-50C, BKW-60S



Operating characteristic curves



Temperature compensation curve

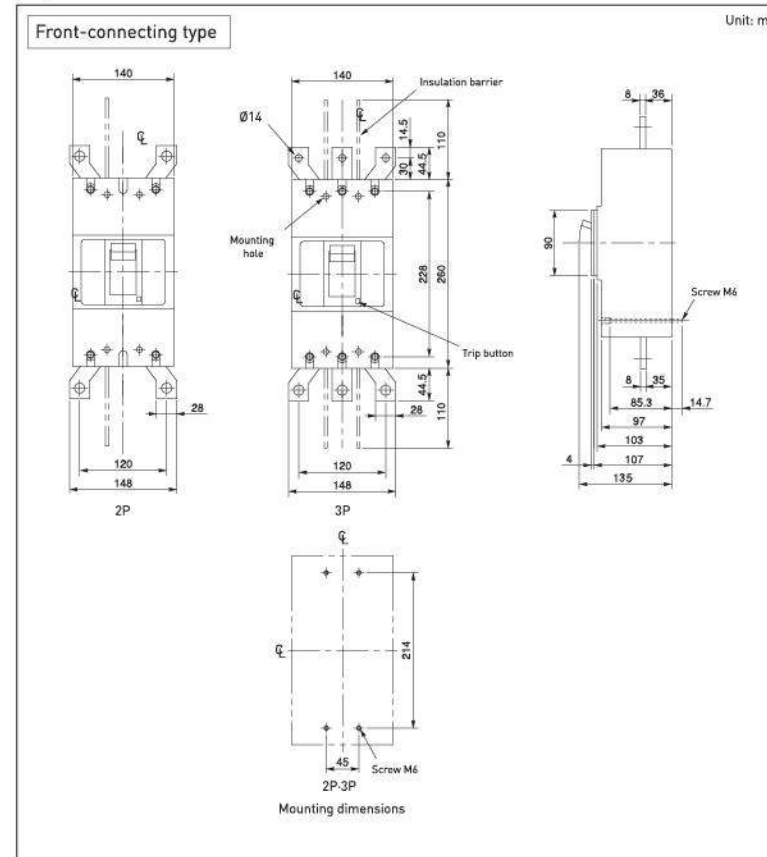


Note: The method used to detect overcurrent is electromagnetic, so temperature compensation takes the form of an increase or decrease relative to the lead-out time and there is no change in the rated current.

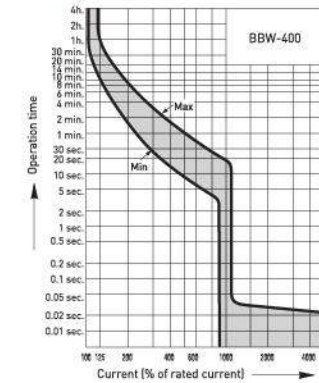
Standard included accessories (frontconnecting type)

Mounting screws	Small round-head screws M4 x 0.7 x 54
Insulation barrier	2 pole: 1, 3 pole: 2

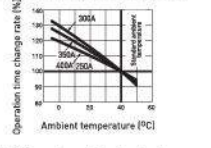
4 BBW-400, BKW-400



Operating characteristic curves



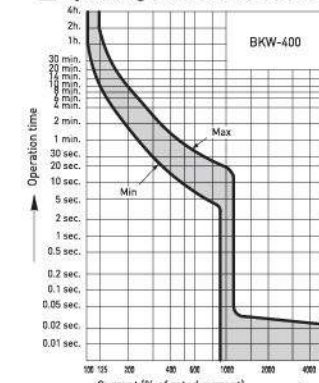
Temperature compensation curve



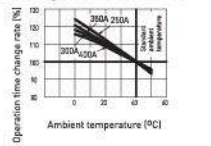
Standard included accessories (frontconnecting type)

Mounting screws	Small round-head screws M6 x 1.0 x 100
Insulation barrier	2 pole: 2, 3 pole: 4

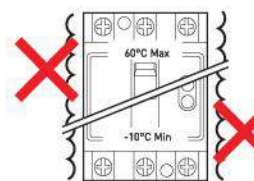
Operating characteristic curves



Temperature compensation curve



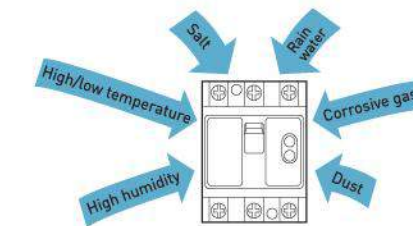
■ Cautions concerning the operating environment



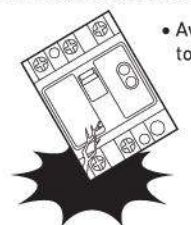
Keep humidity at or below 85%RH

Ambient temperature: -10°C to +60°C
 Note: Range is -10°C to +50°C for residential panel breakers
 Relative humidity: 45% to 85%
 Maximum elevation: 2000m above sea level

- If temperature exceeds 40°C, refer to the current rating table when specifying current rating of the breaker.
- If installed outdoors or in a location exposed to moisture, the breaker must be housed in a suitable enclosure. (Do not use in locations where dew or other condensation will form).
- It is recommended that the breaker be installed in a location not exposed to direct sunlight, as this can result in incorrect operation.



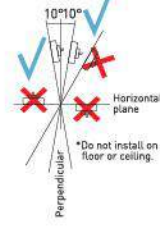
- The breaker must be installed in a suitable enclosure for use in a location exposed to dirt or dust, etc.
- Avoid installation in locations with acidic or alkaline atmospheres, such as chemical plants or breweries, etc.
- Avoid installation in locations exposed to rainwater or water spray, etc.
- Avoid installation in locations exposed to vibration, shock, or impact, etc.



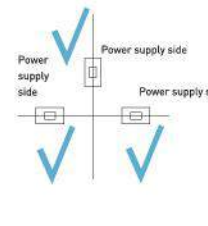
■ Cautions concerning installation

Although perpendicular installation of breakers is recommended, installation is also possible as indicated below.

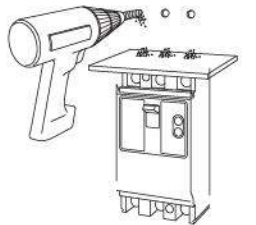
Overload current tripping method	Magnetic	Within ±10° of perpendicular
	Thermal, Thermal and magnetic	No restrictions on installation direction



Side view



Front view

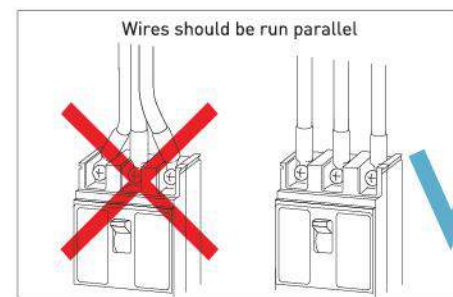


When drilling holes or stripping insulation, cover the breaker with masking tape or paper to prevent sawdust and other foreign matter from entering the breaker mechanism.

■ Cautions concerning connections


1. Connection of electrical wires

- When connecting stranded wire, do not solder or bind the ends of the wire.
- Tighten the electrical wires securely. If the wires are not connected securely, overheating of terminals could cause a fire. If the neutral pole of a single-phase, three-wire breaker is not connected securely, an incorrect voltage could cause damage to the load.
- Do not lubricate the screws. Lubrication will reduce the friction of the screws and make it easier for them to come loose, which can result in overheating.
- Lubricating oil can also cause excessive stress on the screws, even when tightened to the specified torque, thus resulting in damage to the screws.
- Connect wires so that they run parallel.
- Select a wire size suitable to carry the rated current of the load.



2. Connection of MCCB terminals under 50AF

- When connecting directly to a terminal, insert the single wire or stranded wire straight into the terminal and then tighten to the specified torque. It is also possible to use commercially available lug or bar terminals.

- When connecting stranded wire, separate the strands before inserting them into the terminal.
- 

- When connecting two or more wires directly, avoid connecting in any combination other than those listed below. No more than three wires. For stranded wire in particular, use a lug terminal wherever possible. Please use solderless terminal in case of M6.
- Possible wire combinations when connecting two wires.

	Single wire	Stranded wire
M5	ø1.6 & ø1.6mm	3.5mm ² & 3.5mm ²
	ø1.6 & ø2.0mm	3.5mm ² & 5.5mm ²
	ø1.6 & ø2.6mm	3.5mm ² & 8mm ²
	ø2.0 & ø2.0mm	5.5mm ² & 5.5mm ²
	ø2.0 & ø2.6mm	3.5mm ² & 8mm ²
	ø2.6 & ø2.6mm	8mm ² & 8mm ² 8mm ² & 14mm ²

After usage of breakers begins, perform regular inspections to maintain rated performance and prevent failures

Recommended replacement frequency
 Circuit breakers: 15 years
 Leakage breakers: 15 years
 Source: "Investigation related to recommended replacement frequency for low-voltage equipment"
 Japan Electrical Manufacturers' Association

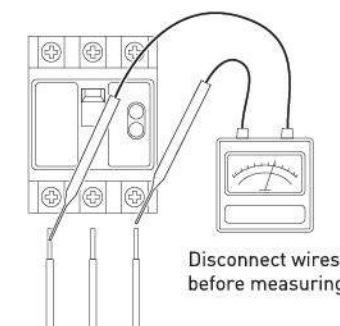
Regular inspection guidelines

Environment	Regular inspection guideline (10-year period following installation)
Location where air is always clean and dry	Once every 2 to 3 years
Indoor location with little dust and no corrosive gases	Once each year
Location with little dust where air contains impurities (0.1 ppm or greater) such as sulfurous acid, hydrogen sulfide, salt, or high humidity	Once every 6 months

Type	Inspection location	Inspection item	Notes
Common	Top of breaker, power supply side	Check for problems such as dust accumulation and oil buildup.	After confirming that no power supply voltage is being applied, use cleaner to wipe away any dust and then wipe away any remaining grime with a clean, dry rag.
	Exhaust opening	Check for evidence indicating that the breaker has been tripped by overcurrent in the past.	If there is clear evidence of overvoltage, such as black soot or melted metal, replace the breaker with a new one.
	Terminals	<ul style="list-style-type: none"> • Tighten terminal screws to ensure they are not loose. • Check for evidence indicating abnormally high temperatures or damage due to humidity or corrosive gas. 	<ul style="list-style-type: none"> • Apply appropriate torque when tightening. • Sight discoloration of the terminal area is not a problem. If the discoloration is extreme or if the insulation is damaged. However, replace the breaker with a new one.
	Handle	Confirm that the breaker closes and opens smoothly.	If the breaker is normally closed, open and close it a few times to ensure stable contact resistance and prevent overheating.
	Body	Check to make sure that the temperature of the breaker body does not exceed 70°C and no smoke or odor is produced when electrical current is flowing.	If there is anything amiss, replace the breaker with a new one.
ELB	Test button	Use the test button to confirm that the breaker operates properly. (When not testing the breaker, avoid using the test button to switch the handle to the off position).	<ul style="list-style-type: none"> • Test the breaker about once each month. • When performing operation inspections, also measure using a leak checker to ensure that the current sensitivity and operation time are normal.

■ Cautions when measuring insulation resistance

- For the places marked with a triangle (Δ) in the table at right, measuring the insulation resistance will not cause damage, but the insulation resistance meter reading will be approximately zero due to the internal circuit. To measure the insulation resistance between wires, first remove the wires from the terminals.
- For leakage breakers or breakers with leakage alarms equipped with the meg measurement switch as an internal function, measurement is possible if the handle is the off position.
- After reconnecting wires, switch the handle to the on position and press the test button to confirm the breaker is operating properly.



	Insulation resistance measurement (500 V or less)	
	On	Off
Handle position		
Between charger and ground	○	○
Between left and middle poles and between middle and right poles	○	○
Between left and right poles	Power supply side	△
	Load side	△
Between power supply and load terminals	—	○

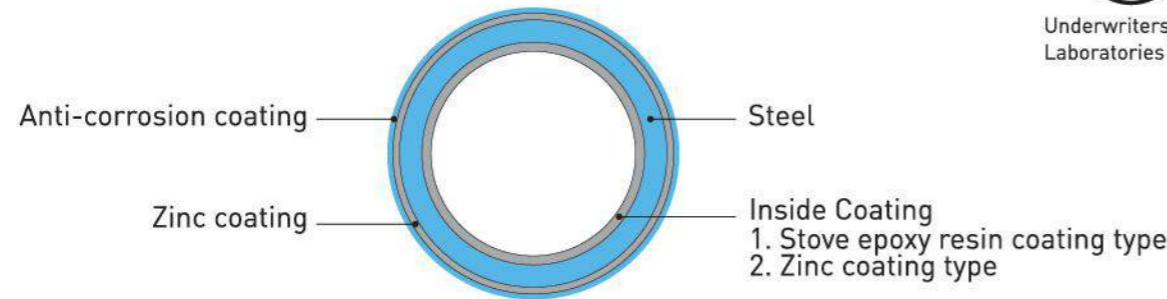
Great protection against corrosion and high durability
Labor-saving in installing pipe

WHITE CONDUIT



Superior galvanizing by in-line hot-dip process for greater protection against corrosion. Finished with durable and clear anti-corrosion coating for higher protection outside and higher grade epoxy coating inside.

CROSS-SECTIONAL VIEW OF Panasonic WHITE CONDUIT



Features

1. Easy and accurate bending

Panasonic WHITE CONDUIT is made of high quality steel and processed by high frequency induction welding to prevent cracking when bend.

2. Easy wire pushing and pulling

The high-grade stove epoxy resin coating on the inside wall makes wire-pulling easy, and protects against corrosion.

3. Easy coupling and fast installation

Precise, sharp threads cut by automated machinery mean fast and easy installation. Precise thread also makes our conduit virtually moisture-tight.

4. High corrosion resistance

Pure zinc coating on the exterior wall and stove epoxy resin finish on the inside protects WHITE CONDUIT from corrosion, even by harsh chemicals and sea air.

5. Uniform quality

Flat steel is rolled, zinc-coated and threaded in one continuous automated process for uniform high quality.

WHITE CONDUIT

ANSI/UL

EMT (Electrical Metallic Tubing)

Listed by "UL" File No. E-44051

UL 797

Item No.	Size (inch)	Outside Diameter (mm)	Nominal Wall Thickness (mm)	Length (mm)	Nominal Weight (kg/pc)	Primary Bundle (pcs)	Master Bundle (pcs)
DWE012Y	1/2	17.93	1.07	3,048	1.46	10	500
DWE034Y	3/4	23.42	1.24	3,048	2.21	10	300
DWE100Y	1	29.54	1.45	3,048	3.08	5	200
DWE114Y	1-1/4	38.35	1.65	3,048	4.74	5	125
DWE112Y	1-1/2	44.20	1.65	3,048	5.49	5	100
DWE200Y	2	55.80	1.65	3,048	6.99	3	75
DWE212Y	2-1/2	73.03	1.83	3,048	9.80	-	40
DWE300Y	3	88.90	1.83	3,048	11.99	-	30
DWE312Y	3-1/2	101.60	2.11	3,048	15.80	-	20
DWE400Y	4	114.30	2.11	3,048	17.81	-	20

IMC (Intermediate Metal Conduit)

Listed by "UL" File No. E-62193

UL 1242

Item No.	Size (inch)	Outside Diameter (mm)	Nominal Wall Thickness (mm)	Length (mm)	Nominal Weight (kg/pc)	Primary Bundle (pcs)	Master Bundle (pcs)
DWM012Y	1/2	20.70	1.97	3,030	2.81	10	300
DWM034Y	3/4	26.14	2.10	3,030	3.81	5	250
DWM100Y	1	32.77	2.35	3,025	5.40	5	125
DWM114Y	1-1/4	41.59	2.41	3,025	7.17	3	75
DWM112Y	1-1/2	47.81	2.54	3,025	8.80	3	75
DWM200Y	2	59.93	2.67	3,025	11.61	-	50
DWM212Y	2-1/2	72.56	3.81	3,010	20.00	-	40
DWM300Y	3	88.29	3.81	3,010	24.63	-	30
DWM312Y	3-1/2	100.86	3.81	3,005	28.53	-	20
DWM400Y	4	113.40	3.81	3,005	31.75	-	15

ANSI/UL

RSC (Rigid Steel Conduit/ Hot-Dip Galvanized Outside and Epoxy Resin Inside)

Listed by "UL" File No. E-157617

UL 6

Item No.	Size (inch)	Outside Diameter (mm)	Nominal Wall Thickness (mm)	Length (mm)	Nominal Weight (kg/pc)	Primary Bundle (pcs)	Master Bundle (pcs)
DWR012Y	1/2	21.34	2.64	3,030	3.72	10	300
DWR034Y	3/4	26.67	2.72	3,030	4.94	5	250
DWR100Y	1	33.40	3.20	3,025	7.30	5	125
DWR114Y	1-1/4	42.16	3.38	3,025	9.89	3	75
DWR112Y	1-1/2	48.26	3.51	3,025	11.93	3	75
DWR200Y	2	60.33	3.71	3,025	15.88	-	50

RSC (Rigid Steel Conduit/ Hot-Dip Galvanized both Inside and Outside)

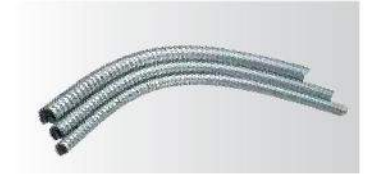
Listed by "UL" File No. E-157617

UL 6

Item No.	Size (inch)	Outside Diameter (mm)	Nominal Wall Thickness (mm)	Length (mm)	Nominal Weight (kg/pc)	Primary Bundle (pcs)	Master Bundle (pcs)
DWR012ZY	1/2	21.34	2.64	3,030	3.72	10	300
DWR034ZY	3/4	26.67	2.72	3,030	4.94	5	250
DWR100ZY	1	33.40	3.20	3,025	7.30	5	125
DWR114ZY	1-1/4	42.16	3.38	3,025	9.89	3	75
DWR112ZY	1-1/2	48.26	3.51	3,025	11.93	3	75
DWR200ZY	2	60.33	3.71	3,025	15.88	-	50
DWR212ZY	2-1/2	73.03	4.90	3,010	25.36	-	40
DWR300ZY	3	88.90	5.21	3,010	32.98	-	30
DWR312ZY	3-1/2	101.60	5.46	3,005	39.92	-	20
DWR400ZY	4	114.30	5.72	3,005	46.72	-	15
DWR500ZY	5	141.30	6.22	2,995	63.50	-	10
DWR600ZY	6	168.28	6.76	2,995	83.46	-	5

Flexible Conduit

Item No.	Size (inch)	Outside Diameter (mm)	Standard pack (m/Roll)	Weight (kg/pc)
DME012	1/2	21.84 ~ 23.37	30	7.80
DME034	3/4	26.54 ~ 28.07	30	9.70
DME100	1	33.02 ~ 35.05	15	5.80



BS31

Threaded Conduit – Medium/ Heavy protection (Class 3)

BS31: 1940

Item No.	Size (inch)	Outside Diameter (mm)	Nominal Wall Thickness (mm)	Length (mm)	Nominal Weight (kg/pc)	Primary Bundle (pcs)	Master Bundle (pcs)
DWB0343S	3/4	18.92	1.60	3,048	2.11	10	350
DWB0343L				3,810	2.63	10	350
DWB1003S	1	25.27	1.60	3,048	2.90	10	250
DWB1003L				3,810	3.61	10	250
DWB1143S	1-1/4	31.62	1.60	3,048	3.69	7	210
DWB1143L				3,810	4.59	7	210
DWB1123S	1-1/2	37.96	1.80	3,048	5.00	5	150
DWB1123L				3,810	6.23	5	150
DWB2003S	2	50.66	2.00	3,048	7.49	3	90
DWB2003L				3,810	9.32	3	90

BS4568

Threaded Conduit – Medium/ Heavy protection (Class 3)

BS4568: Part 1: 1970

Item No.	Size (inch)	Outside Diameter (mm)	Nominal Wall Thickness (mm)	Length (mm)	Nominal Weight (kg/pc)	Primary Bundle (pcs)	Master Bundle (pcs)
DWB0203	20	19.85	1.60	3,750	2.72	10	350
DWB0253	25	24.80	1.60	3,750	3.48	10	250
DWB0323	32	31.80	1.60	3,750	4.54	7	210

Heavy Protection (Class 4)

BS4568: Part 1: 1970

Item No.	Size (inch)	Outside Diameter (mm)	Nominal Wall Thickness (mm)	Length (mm)	Nominal Weight (kg/pc)	Primary Bundle (pcs)	Master Bundle (pcs)
DWB0204	20	19.85	1.60	3,750	2.92	10	350
DWB0254	25	24.80	1.60	3,750	3.71	10	250
DWB0324	32	31.80	1.60	3,750	4.84	7	210

Plain Conduit (Threadless)

JIS C 8305

Item No.	Size (inch)	Outside Diameter (mm)	Nominal Wall Thickness (mm)	Length (mm)	Nominal Weight (kg/pc)	Primary Bundle (pcs)	Master Bundle (pcs)
DW819T	E19	19.1	1.20	3,660	1.94	10	400
DW825T	E25	25.4	1.20	3,660	2.62	10	250
DW831T	E31	31.8	1.40	3,660	3.84	7	175
DW839T	E39	38.1	1.40	3,660	4.64	5	125
DW851T	E51	50.8	1.40	3,660	6.24	3	75
DW863T	E63	63.5	1.60	3,660	8.94	-	50
DW875T	E75	76.2	1.80	3,660	12.09	-	40

Thin Wall Conduit (Threaded)

JIS C 8305

Item No.	Size (inch)	Outside Diameter (mm)	Nominal Wall Thickness (mm)	Length (mm)	Nominal Weight (kg/pc)	Primary Bundle (pcs)	Master Bundle (pcs)
DW119T	C19	19.1	1.60	3,660	2.53	10	400
DW125T	C25	25.4	1.60	3,660	3.44	10	250
DW131T	C31	31.8	1.60	3,660	4.36	7	175
DW139T	C39	38.1	1.60	3,660	5.27	5	125
DW151T	C51	50.8	1.60	3,660	7.11	3	75
DW163T	C63	63.5	2.00	3,660	11.10	-	50
DW175T	C75	76.2	2.00	3,660	13.40	-	40

Thick Wall Conduit (Threaded)/ Hot-Dip Galvanized Outside and Epoxy Resin Inside

JIS C 8305

Item No.	Size (inch)	Outside Diameter (mm)	Nominal Wall Thickness (mm)	Length (mm)	Nominal Weight (kg/pc)	Primary Bundle (pcs)	Master Bundle (pcs)
DW216T	G16	21.0	2.30	3,660	3.88	10	250
DW222T	G22	26.5	2.30	3,660	5.02	10	175
DW228T	G28	33.3	2.50	3,660	6.95	7	125
DW236T	G36	41.9	2.50	3,660	8.89	5	75
DW242T	G42	47.8	2.50	3,660	10.22	3	75
DW254T	G54	59.6	2.80	3,660	14.35	-	50
DW270T	G70	75.2	2.80	3,660	18.30	-	40
DW282T	G82	87.9	2.80	3,660	21.51	-	30
DW392T	G92	100.7	3.50	3,660	30.71	-	20
DW394T	G104	113.4	3.50	3,660	34.72	-	20

Thick Wall Conduit (Threaded)/ Hot-Dip Galvanized both Inside and Outside

JIS C 8305

Item No.	Size (inch)	Outside Diameter (mm)	Nominal Wall Thickness (mm)	Length (mm)	Nominal Weight (kg/pc)	Primary Bundle (pcs)	Master Bundle (pcs)
DWZ216T	G16	21.0	2.30	3,660	3.88	10	250
DWZ222T	G22	26.5	2.30	3,660	5.02	10	175
DWZ228T	G28	33.3	2.50	3,660	6.95	7	125
DWZ236T	G36	41.9	2.50	3,660	8.89	5	75
DWZ242T	G42	47.8	2.50	3,660	10.22	3	75
DWZ254T	G54	59.6	2.80	3,660	14.35	-	50
DWZ270T	G70	75.2	2.80	3,660	18.30	-	40
DWZ282T	G82	87.9	2.80	3,660	21.51	-	30
DWZ392T	G92	100.7	3.50	3,660	30.71	-	20
DWZ394T	G104	113.4	3.50	3,660	34.72	-	20

For your amenity and energy saving
FULL-2WAY REMOTE LIGHTING CONTROL SYSTEM



Simple, Efficient Lighting Control That Matches Your Needs

ECOLOGY

Energy-saving white
 Creating an Efficient
 Lighting Environment

AMENITY

User-friendly

SIMPLE

Simple Design
 and Labor-saving
 Installation

CONVENIENCE

Minimal Design,
 Minimum Maintenance

FLEXIBILITY

Reduced Total Cost

Centralized Monitoring and Control

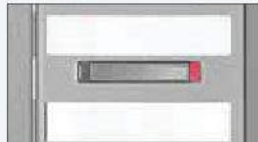
Control and Monitor All Lighting
 from a Central Location



Functional Display of Lightning Status

LED Displays Lightning Status

- ON: Red Light is lit



- OFF: Green Light is lit



Timer and Sensor Control

Connectable with Timer or Sensor Control
 Equipments for Further Energy Saving



- Program Timer Unit



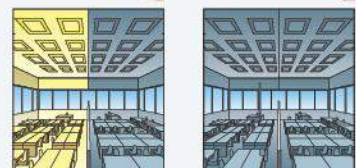
- Passive Infrared Ceiling Unit



- Daylight Sensor Unit

Group Control

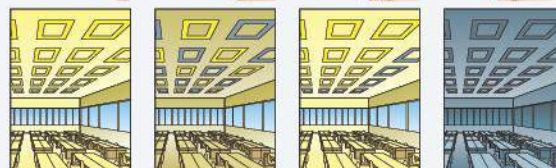
Turn **ON** All Lights
 in The Sales
 Department Turn **OFF** All Lights
 in The Sales
 Department



All Lights **ON** All Lights **OFF**

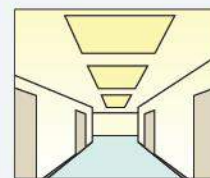
Pattern Control

9:00 AM Noon to 1:00 PM 2:00 to 3:00 PM 6:00 PM
 Work Starts Lunch Break Natural Light
 Come from
 Outside Work Finish



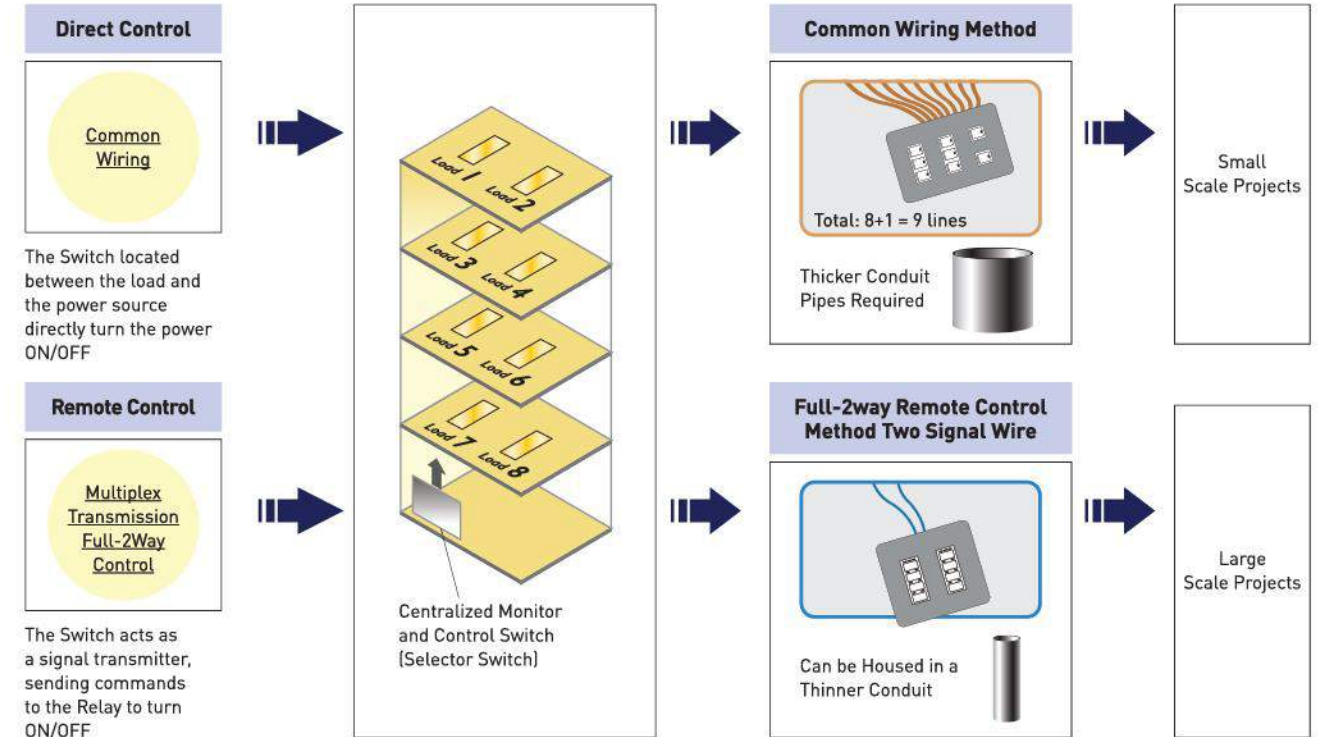
All Lights ON Some Lights ON All Lights OFF

Dimmer Control

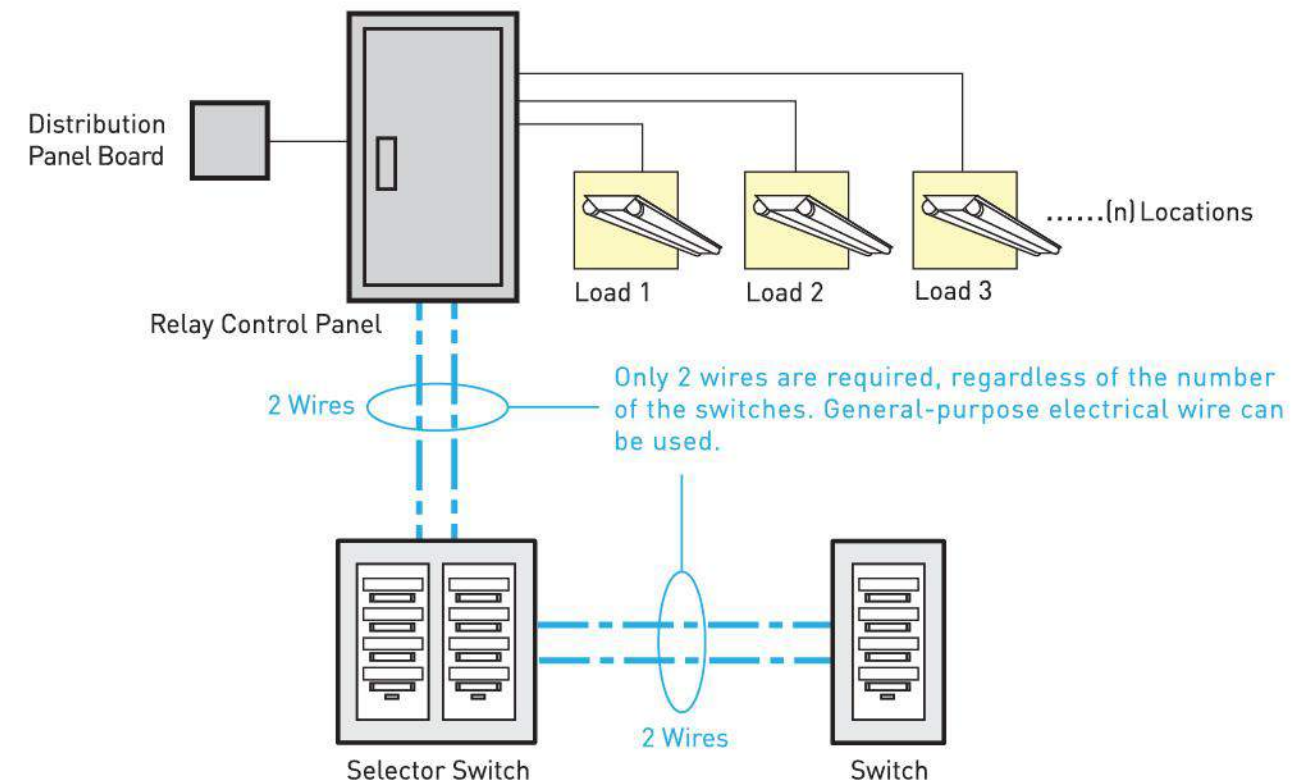


100%

The bigger the building, the more labor-saving the installation



Wiring diagram for Full-2Way remote control system



Flexible wiring systems for stationary loads. Select from four types according to the capacity you desire, from single-phase 20A to three-phase 100A

FactoryLine

Flexible power supply from the ceiling

Ceiling wiring systems capable of providing power for lighting & driving. You can change layout simply by reconnecting plugs to the ducts installed at the ceiling - it allows you to reduce time, labor, and cost significantly without major rewiring.

FLEXIBLE

SAFETY

NICE VIEW

FLEXIBLE

No More Wiring-work After Layout Change.



Basic advantages

Simple layout change - just re-connect plugs at different positions. You can reduce labor, time & cost.

Additional advantages

You can add, reduce & relocate power supply easily. Just pull down lever, and turn the plugs to remove or connect.



Factory Line 100 / 60 Factory Line 30

SAFETY

No more tripping over & damaging a cable on the floor.

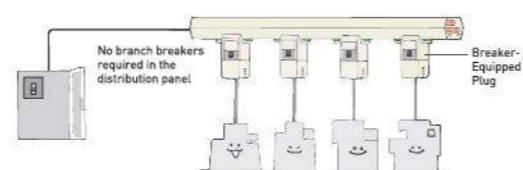


Basic advantages

Wiring from the ceiling keeps the floor tidy. Plugs with breakers provide safety.

Additional advantages

No need to install breakers with distribution panels - it saves space.



NICE VIEW

It simplifies wiring & appearance. Effective for productivity improvement.

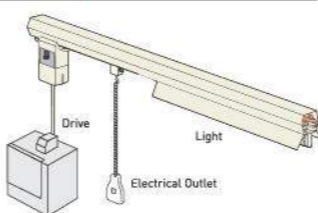


Basic advantages

You can keep ceiling & floor tidy, and appeal to visitors during factory tours.

Additional advantages

One single duct provides three-phase power supply & single-phase power supply - it allows one duct to supply power for machine-driving, conventional sockets and lighting. Factory Line 100/ 60 simplifies the entire wiring plan.



FACTORY LINE SYSTEM

Wide Lineup

Four types of main duct are available - 100A, 60A, 30A and 20A. You can combine them to create your own flexible wiring systems for factories.

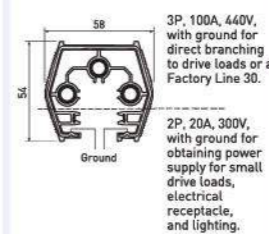
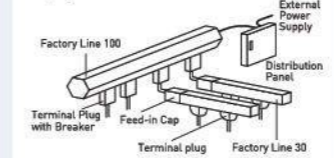
For Main and Branch Lines

Multi-purpose Factory Flexible wiring System - It provides three-phase & single-phase power supplies at a time.

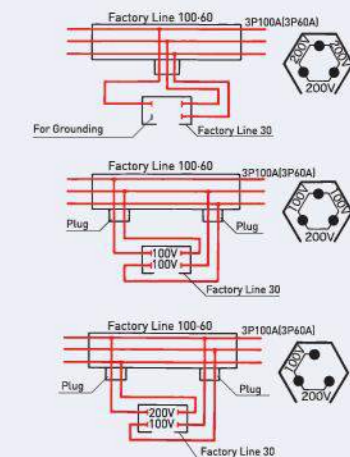
Factory Line 100



- Three-phase power supply (100A max.)
 - Single-phase power supply (20A max.) with breaker-equipped plug
- Can be used simultaneously



Branching from the 3 wires of the upper level to Factory Line 30. [The rating in () is of Factory Line 60]



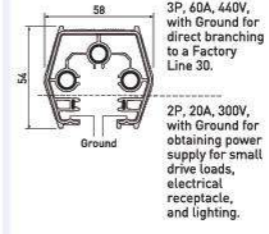
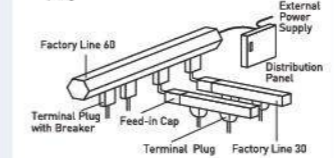
For Branch Lines

Multi-purpose Factory Flexible wiring System - It provides three-phase & single-phase power supplies at a time.

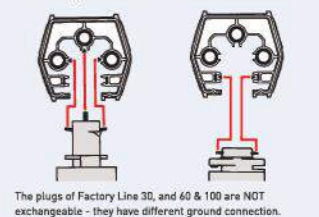
Factory Line 60



- Three-phase power supply (60A max.)
 - Single-phase power supply (20A max.) with breaker-equipped plug
- Can be used simultaneously



Branching from The Upper Level Branching from The Lower Level



The plugs of Factory Line 30, and 60 & 100 are NOT exchangeable - they have different ground connection.

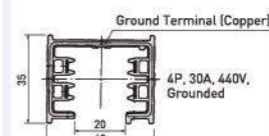
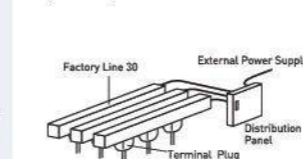
For Small-Scale Branch Lines

Four wire Factory Flexible wiring System - It provides one or the other: three-phase circuit or two single-phase circuits.

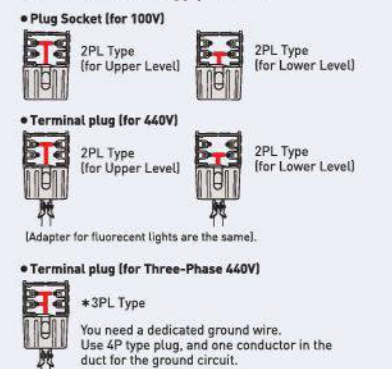
Factory Line 30



- Three-phase power supply, one circuit (30A max.)
- Single-phase power supply, two circuits (30A max.)



Standard Power Supply Take-Off

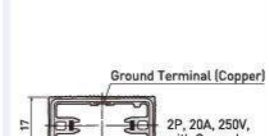
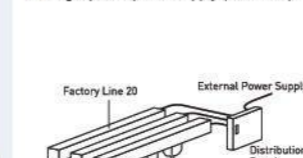


Factory Flexible wiring System for small-scale branching - It provides one single-phase power supply circuit.

Factory Line 20



- Single-phase power supply (20A max.)



Factory Line 100/60

Factory Line 100/60 Main Unit (Cream-Gray Finish; Munsell 5Y7.2/1.4)	Cat. No.	Length & (mm)	Weight (kg)	Rating
Factory Line 100	DGHU2411	1,000	3.3	3P 100A 440V + 2P 20A 300V with Ground
	DGHU2412	2,000	6.6	
	DGHU2413	3,000	9.9	
Factory Line 60	DGHU2311	1,000	3.1	3P 60A 440V + 2P 20A 300V with Ground
	DGHU2312	2,000	6.1	
	DGHU2313	3,000	9.1	

	Cat. No.	Weight (kg)	Rating
Feed-in Cap (Cream-Gray Finish)	DGHU2421	1.1	3P 100A 440V + 2P 20A 300V with Ground
Center Feed-in Joiner (Cream-Gray Finish)	DGHU2422	2.4	
Joiner (Cream-Gray Finish)	DH2431	0.1	2P 20A 300V with Ground
End Cap (Cream-Gray Finish)	DH2423K	0.06	-
Hanger (with Bolt)	DH2451	0.18	-
Terminal plug A (Cream-Gray Finish)	DGHU2481	0.35	3P 30A 440V with Ground
Terminal plug B (Cream-Gray Finish)	DH2463	0.08	2P 15A 300V with Ground
Locking plug socket (Cream-Gray Finish)	DH2477	0.07	Ground 2P 15A 125V Locking
Plug socket (Cream-Gray Finish)	DH2461	0.07	Ground 2P 15A 125V
Reel-Type plug socket (White Finish)	DH24621W	0.7	for Twin Ground 2P 15A 125V
	DH24641W		for Twin Ground 2P 15A 125V Locking
Hanger (with earthquake resistant reinforcement fixture)	DH2452K1	0.03	-

Factory Line 30

Factory Line 30 Main Unit (Cream-Gray Finish; Munsell 5Y7.2/1.4)	Cat. No.	Length & (mm)	Weight (kg)	Rating
Factory Line 30	DGHU2711	1,000	1.6	4P 30A 440V with Ground
	DGHU2712	2,000	3.2	
	DGHU2713	3,000	4.8	

	Cat. No.	Name/Type	Weight (kg)	Rating
Feed-in Cap (Cream-Gray Finish)	DGHU2721	-	0.16	4P 30A 440V with Ground
Center Feed-in Joiner (Cream-Gray Finish)	DGHU2722	-	0.24	
End Cap (Cream-Gray Finish)	DH2723	-	0.01	-
Joiner (Cream-Gray Finish)	DGHU2731	-	0.08	4P 30A 440V with Ground
Terminal Plug (Cream-Gray Finish)	DGHU2781	2PS	0.08	2P 15A 440V with Ground
	DGHU2782	2PL		3P 15A 440V with Ground
	DGHU2783	3P		4P 15A 440V with Ground
※1 Plug socket (Cream-Gray Finish)	DH2773	S	0.05	Ground 2P 15A 125V
	DH2774	L		
※2 Locking plug socket (Cream-Gray Finish)	DH2791	S	0.05	Ground 2P 15A 125V Locking
	DH2792	L		
※2 Reel-Type plug socket (White Finish)	DH27751W	S	0.73	for Twin Ground 2P 15A 125V
	DH27761W	L		for Twin Ground 2P 15A 125V
	DH27781W	S		for Twin Ground 2P 15A 125V Locking
	DH27791W	L		
※2 Hanger (with Bolt)	DH2751	-	0.11	-
Hanger (with earthquake resistant reinforcement fixture)	DH2752K1	-	0.03	-

※1: 2P/3P/4P 15A 300V with Ground, Power Outlet for The Main Unit.
 "L" (for the upper 2P conductors) and "S" (for the lower 2P conductors) plug are available in 2P type.
 ※2: "L" (for the upper conductors) and "S" (for the lower conductors) plug are available.

Factory Line 20

Factory Line 20 Main Unit (Cream-Gray Finish; Munsell 5Y7.2/1.4)	Cat. No.	Length & (mm)	Weight (kg)	Rating
Factory Line 20	DGHU2611	1,000	0.79	2P 20A 250V with Ground
	DGHU2612	2,000	1.58	
	DGHU2613	3,000	2.37	

	Cat. No.	Weight (kg)	Rating
Feed-in Cap (Cream-Gray Finish)	DGHU2621K1	0.11	2P 20A 250V with Ground
Center Feed-in Joiner (Cream-Gray Finish)	DGHU2622K1	0.19	
End Cap (Cream-Gray Finish)	DH2623	0.006	-
Joiner (Cream-Gray Finish)	DGHU2631K1	0.1	2P 20A 250V with Ground
Terminal Plug (Cream-Gray Finish)	DGHU2683	0.05	2P 15A 250V with Ground
Plug Sockets (with Ground) (Cream-Gray Finish)	DH2670	0.04	Ground 2P 15A 125V
Locking Plug Socket (Cream-Gray Finish)	DH2671	0.04	2P 15A 125V
Locking Plug Socket (with Ground) (Cream-Gray Finish)	DH2684	0.04	Ground 2P 15A 125V Locking
Reel-Type Plug Socket (with Ground) (White Finish)	DH26751W	0.7	for Twin Ground 2P 15A 125V
	DH26771W		for Twin Ground 2P 15A 125V Locking
Hanger (with Bolt)	DH2651	0.13	-
Hanger (without Bolt)	DH2652	0.03	-

Factories

You can get power from optimal location quickly even after layout change.

Factory Line 100



Retail Stores

Supplying power for lighting & sockets at a time. Highly functional Factory Line 30, which offers two single phase circuits at a time, allows the store to have power for lighting and extra sockets. It also fits into modern, lightly equipped ceilings - the simple wiring produces spacious environment in the store.

Factory Line 30



Schools

Two circuits can be supplied simultaneously from a single duct, making it possible to connect more devices and keeping floor clearer.

Factory Line 30



[Others]

Research Institutes & Laboratories

One single duct (Factory Line 30) can provide many small capacity power supplies with different voltages & frequencies - it allows many applications.

Data Centers

Factory Line 100, 60 and 30 can supply power to both 200V & 100V devices at a time on server racks. NO NEED FOR WIRING SPACE ON/UNDER FLOOR due to power supply from the ceiling.



Information about Panasonic Factory Line Systems is available at:

www2.panasonic.biz/es/densetsu/haikan/ffs/en/

● Specification drawings, operation and installation manuals can also be downloaded.

PHOTOVOLTAIC MODULE HIT®



Designed for higher energy production and long-term reliability, Panasonic HIT® ensures you a true peace of mind and satisfaction in your energy management.

1. 19.4% module efficiency

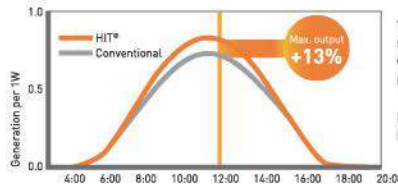
+25% more power from same area



HIT®: 15pcs x 325W = 4.87kW VS Standard*: 15pcs x 260W = 3.9kW

2. High performance at high temperature

Up to +13% more generation in the day time

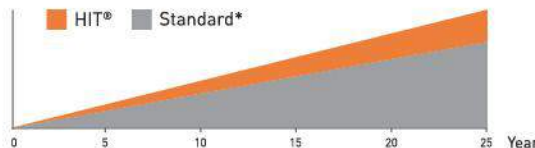


Total yield with a peak module temperature of 85°C, compared with a conventional crystalline module.

Measurement: 8 July 2013, Kaizuka City, Japan

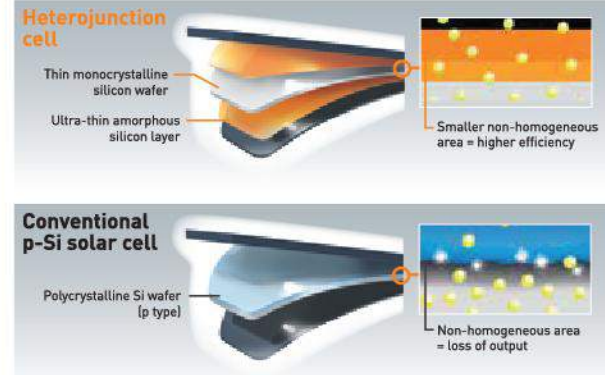
3. More generation, higher profit

Helping you reach a higher final profit with your PV system



Standard*: Conventional crystalline module with Pmax 260W

Heterojunction technology



Unique water drainage

HIT Series

Model: N325 (VBHN325SJ47)	
Module efficiency	19.4%
Output/m ²	194W/m²
Temperature coefficient	0.29%/C

Specification		
Max. power (Pmax)	[W]	325
Open circuit voltage (Voc)	[V]	69.6
Short circuit current (Isc)	[A]	6.03
Size		
W 1,053mm x H 1,590mm x D 35mm	Weight	18.5kg



MONO PERC Series

Model: VBMS380AJ09	
Module efficiency	19.6%
Output/m ²	196W/m²
Temperature coefficient	0.39%/C

Specification		
Max. power (Pmax)	[W]	380
Open circuit voltage (Voc)	[V]	48.5
Short circuit current (Isc)	[A]	10.22
Size		
W 992mm x H 1957mm x D 40mm	Weight	22.5kg



MONO Series

Model: VBMS290AJ07	
Module efficiency	17.8%
Output/m ²	178W/m²
Temperature coefficient	0.39%/C

Specification		
Max. power (Pmax)	[W]	290
Open circuit voltage (Voc)	[V]	39.1
Short circuit current (Isc)	[A]	9.62
Size		
W 992mm x H 1640mm x D 35mm	Weight	18.5kg



VENTILATING FANS & AIR MOVING EQUIPMENT

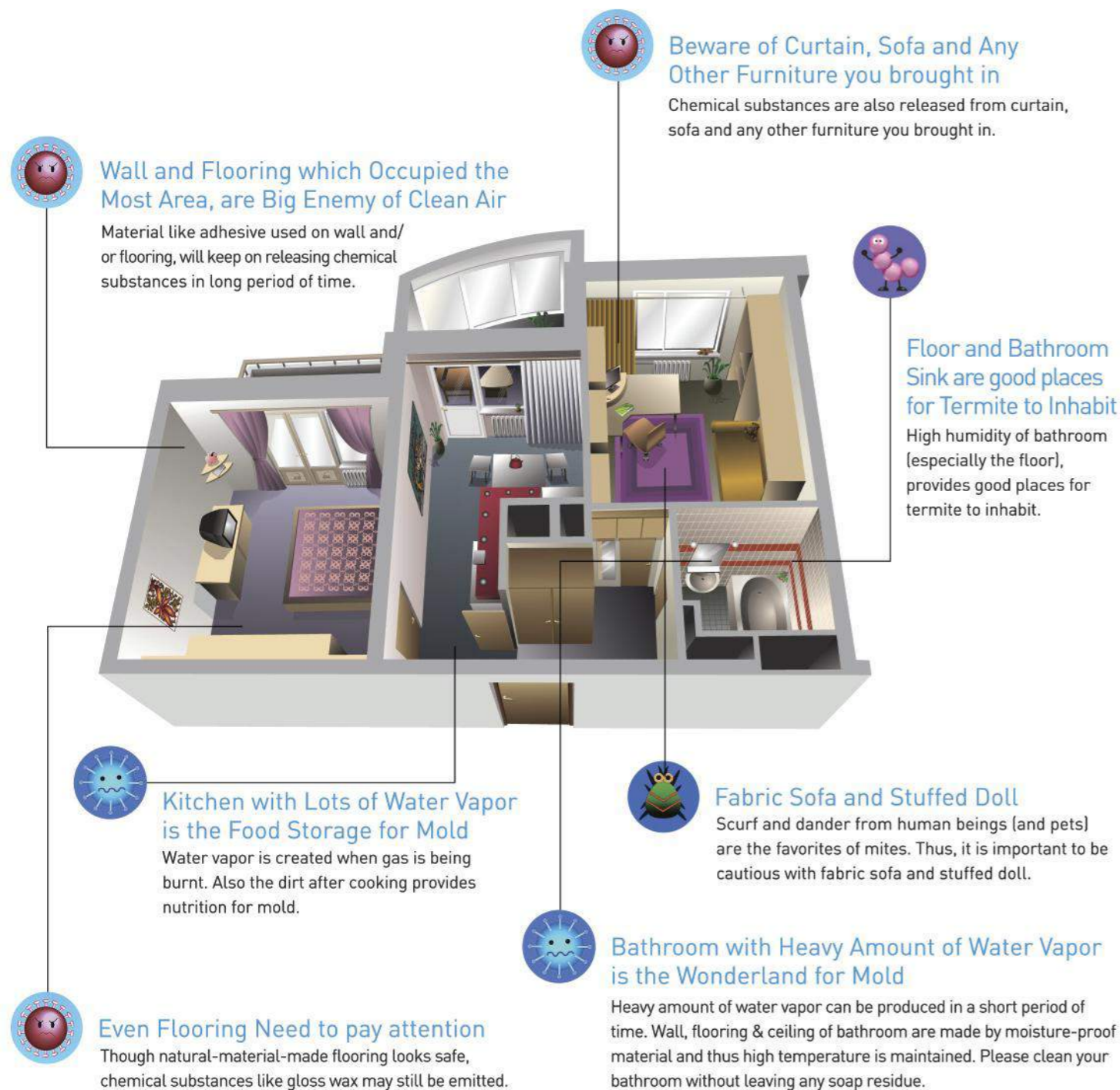
Providing you a breath of fresh air



WHAT ARE THE INDOOR AIR QUALITY PROBLEMS EXISTING IN YOUR HOUSE?

Recently, many reports show that people are in poorer physical condition. It is because of high living density and usage of building or interior material which emit chemical substances in either new-built or reformed house, causing indoor air quality problems.

There are different symptoms, such as eyes/ sore throat, nausea, feeling unwell, skin irritation, headache, dizziness, breathing problem and so on. Furthermore, chemical substances like formaldehyde, can lead to the deterioration of allergic illness.



INDOOR AIR PROBLEMS IN YOUR HOUSE

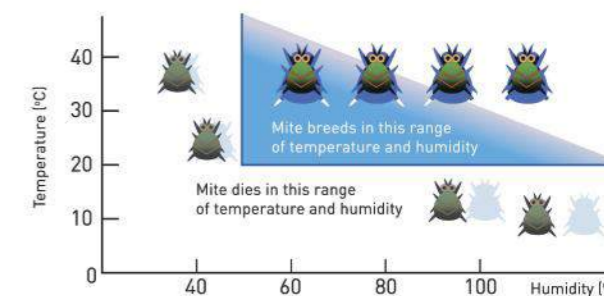


Mites

There are around 30 types of mites found in a home normally. In general, most mites live without causing any harm to human beings. However, sting mites like Cheyletidae, blood-sucking mites like House Mite, and Dust Mite group which can cause allergen also exist.

Temperature and Humidity for Mite Breeding

Mite breeds when temperature is over 20°C and humidity is over 60%



[Source: "Information of Residence and Home"; Environment Hygiene Section, Health and Welfare Department, Osaka Prefecture]



Molds



Mold breeds faster when humidity increases, and nearly everything inside & outside our residence can provide nutrients for it. Not only mold is damaging our home appearance and creating bad smell, it also has bad effects on human body. Furthermore, mold increases during rainy season, and its spores fly around at the end of rainy season.



Termite

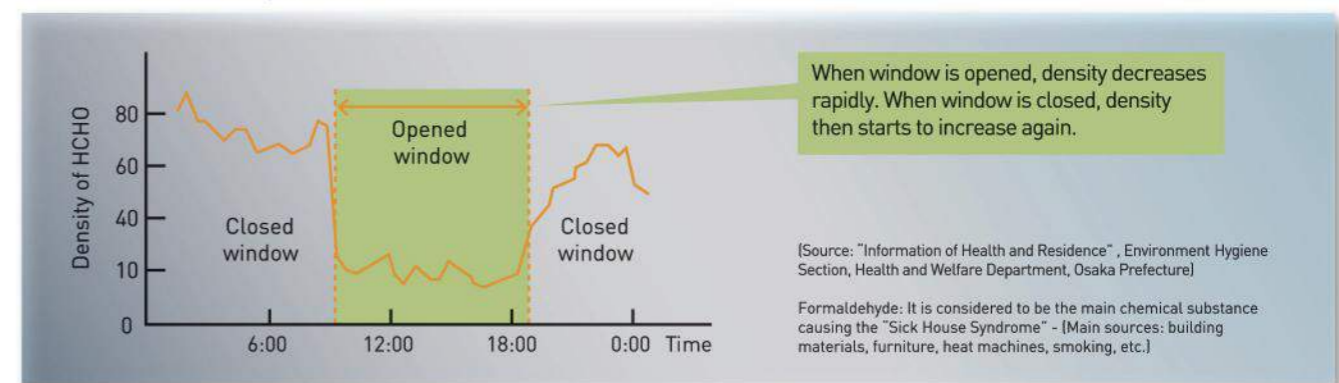
It is common to find termite damages like wall crack, undulating eaves & roof, and even broken window/shutter. Comparing to termite which causes damage mainly under floor, home termite causes damage widely to whole house (till ceiling).



Formaldehyde (HCHO)

Volatile organic compounds (VOC) like Formaldehyde which is generated from building material and/or home furniture. It is easily to cause indoor air pollution.

Indoor Formaldehyde concentration was measured

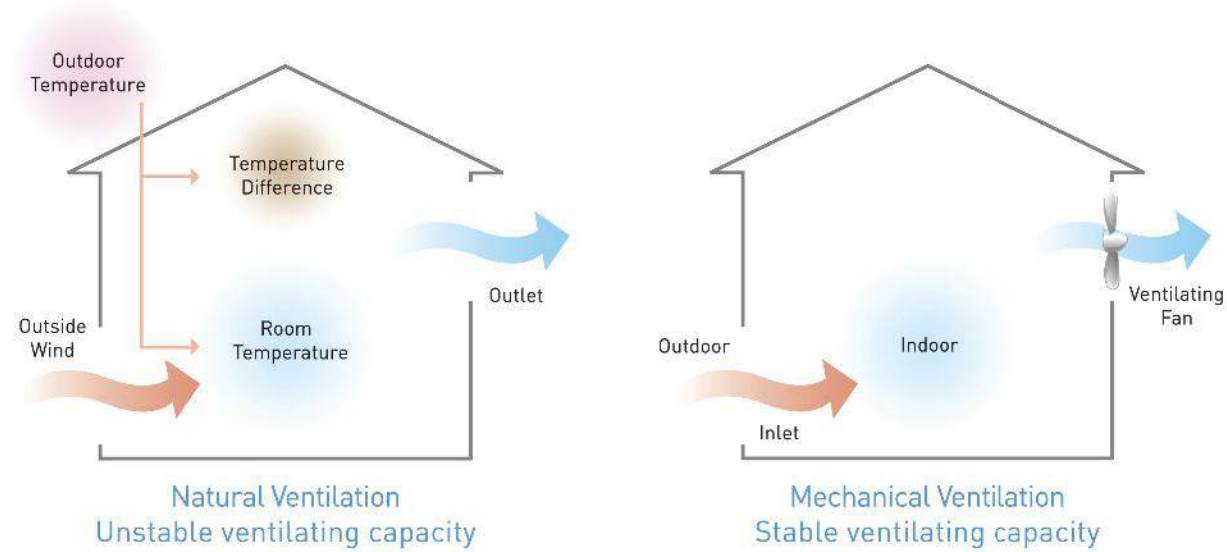


IMPROVE INDOOR AIR QUALITY

Ways to improve Indoor Air Quality

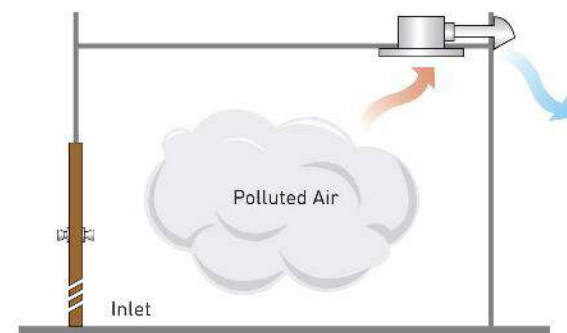
The first step to improve indoor air quality should reduce or remove the source of the pollutants. Unfortunately, indoor pollutant is virtually impossible to eliminate completely, creating the need for a second step - ventilation. Ventilation is divided into "Natural Ventilation" and "Mechanical Ventilation".

Natural ventilation is neither consistent nor reliable since it relies heavily on wind and weather conditions. Mechanical ventilation removes stale, moist, polluted air and replaces it with fresh outside air by using a fan.



Continuous Ventilation

Sometimes referred to as general, central, whole-house or primary ventilation. Continuous ventilation is used to remove stale air and provide fresh air on a slow, continuous basis.



Enhance ventilation in the whole house to replace polluted air with fresh air by ventilation equipment.

VENTILATION SCHEDULE

The Number of Ventilating Fans Required

[A]: Room Size [m³] x [B]: Necessary Frequency of Ventilation Per Hour

[C]: Air Volume of Ventilating Fan [m³/h]

Note: Room size [A] is calculated from the following equation:
 [A] = Floor area [sq. m. or sq. ft.] x Room height [m. or ft.]
 If the room height exceeds 4 meters (13 feet), use 4 meters (13 feet) in the calculation regardless of the actual room height.

Values for [B] in above equation are given in the table on the below. These values were empirically found by the research scientists. Value for [C] in the above equation are given in our catalogs.

Ventilation Schedule

	I: Type of room		II: Necessary frequency of ventilation per hour					
	I	II	I	II				
Hotel	Dance Hall	8	Photo Studio	Dark Room	10			
	Dining Hall	8		School	Laboratory	6		
	Kitchen	15			Cooking Room	15		
	Hallway	5			Auditorium	6		
	Toilet	5			Gymnasium	8		
	Lavatory	10			Toilet	12		
	Boiler Room	20			Library	6		
	Laundry	15			Classroom	6		
	Hospital	Waiting Room			10	Theatre	Auditorium	6
		Clinic			6		Hallway	6
Ward		6	Smoking Room		12			
Bathroom		5	Toilet	10				
Office		6	Projection Booth	20				
Restaurant		8	Workroom	6				
Kitchen		15	Telephone Switch Board Room	6				
Gallery		5	Factory	Painting Room	20			
Toilet		10		Dynamo Room and Substation	20			
Boiler Room		10		Condenser Room	15			
Public Toilet	Laundry	15	Restaurant & Snack Bar	Office	6			
	Operating Room	15		Restaurant	6			
	Disinfecting Room	12	Office Building	Kitchen	20			
	Room for the Patients Receiving Medical Treatment for the Diseases of Respiratory Organs	10		Office	6			
	Vessel	Passenger Room	6	Waiting Room	10			
				Conference Room	12			
				Display Room	10			
	Home	Kitchen	15	Toilet	10			
				Parlor	6			
				Living Room	6			
Library	Reading Roomt	6	Rooms where poisonous or inflammable gas is produced	more than 20				

RECOMMENDED APPLICATION

Panasonic ventilating products can be used in various environment, such as residential house, offices and hotel

Ventilating fans installed throughout the home draw indoor pollutants and vent them outside. So, a continuous and balanced ventilation system brings you with fresh air.



Office

Office also needs a good ventilation system to maintain constant and fresh airflow. Panasonic Cabinet Fan definitely provides you with a quiet and comfortable environment.

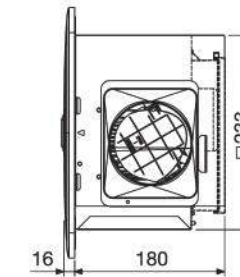
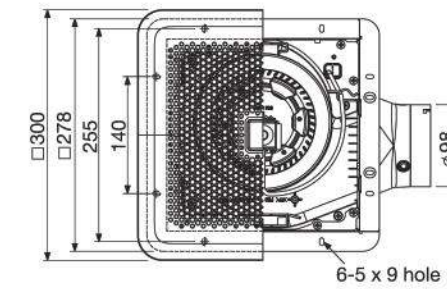


* Local regulations concerning the installation of ventilation fans should be fulfilled.
* Installation methods please refer to the operation instruction.

FV-24CUR1/ FV-24CHR1 Sensor Series



Dimension
Unit: mm



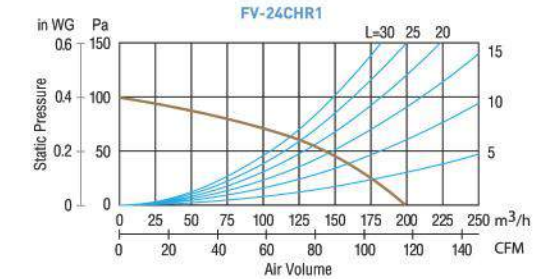
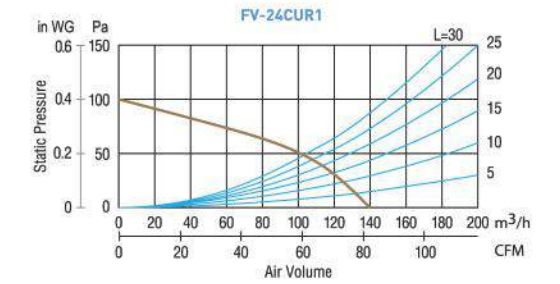
- Auto operation by motion sensor
- Off delay timer (15 minutes)
- HP (half pitch) motor with ball bearing
- Taper blade sirocco fan
- Curve-shaped backdraft shutter
- Super low noise level

Specification

Model No.	Hz	Power Consumption [W]	Air Volume		Noise [dB(A)]	Weight [kg]	Installation Space [mm]	Duct Size [mm]
			[CMH]	[CFM]				
FV-24CUR1	50	11	140	82	25	2.8	240 x 240	Ø100
FV-24CHR1	50	17	200	118	32	2.8	240 x 240	Ø100

Note: Values in Consumption and Noise are specified at Static Pressure of 0 Pa.

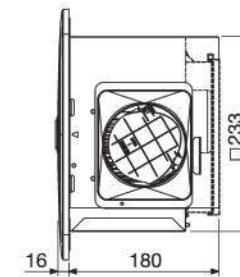
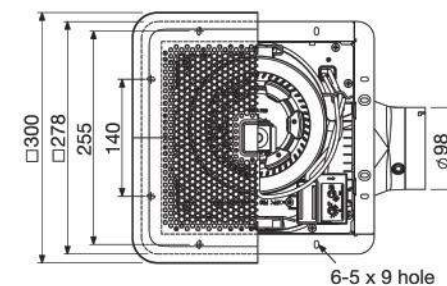
Performance Data (220V 50Hz)



FV-24CURV1/ FV-24CHR1 Sensor Series



Dimension
Unit: mm



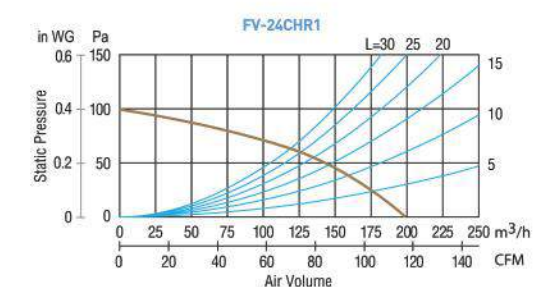
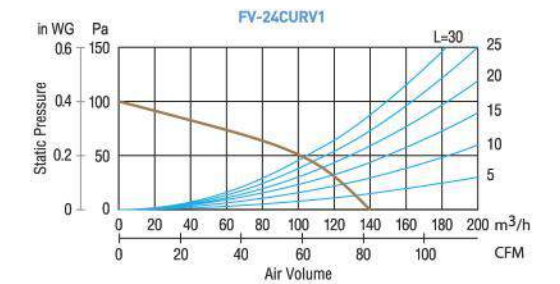
- Auto operation by motion sensor and humidity sensor
- Off delay timer (6 selections)
- HP (half pitch) motor with ball bearing
- Taper blade sirocco fan
- Curve-shaped backdraft shutter
- Super low noise level
- Humidity setting (45% - 95%)

Specification

Model No.	Hz	Power Consumption [W]	Air Volume		Noise [dB(A)]	Weight [kg]	Installation Space [mm]	Duct Size [mm]
			[CMH]	[CFM]				
FV-24CURV1	50	11	140	82	25	2.9	240 x 240	Ø100
FV-24CHR1	50	17	200	118	32	2.9	240 x 240	Ø100

Note: Values in Consumption and Noise are specified at Static Pressure of 0 Pa.

Performance Data (220V 50Hz)

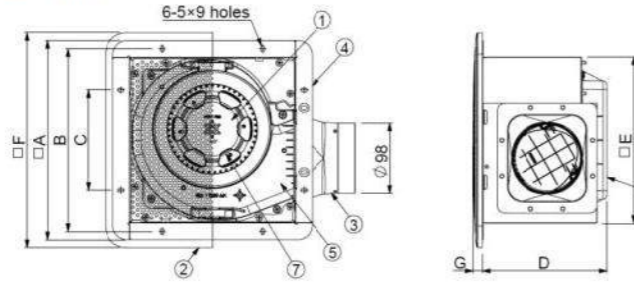


FV-17CU9/FV-24CU9/FV-24CD98/FV-24CH9



Dimension

Unit: mm



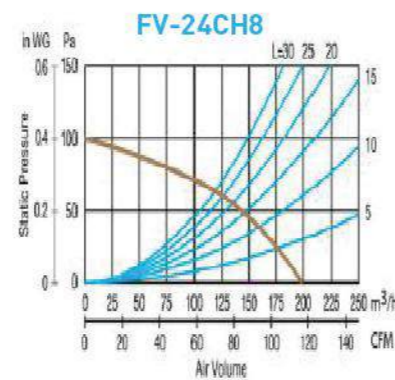
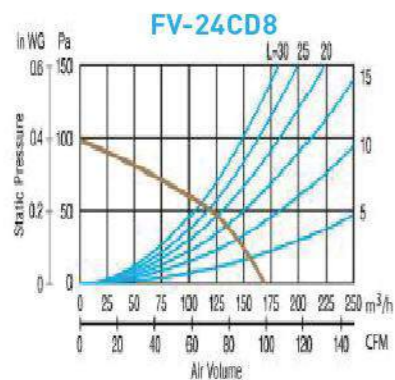
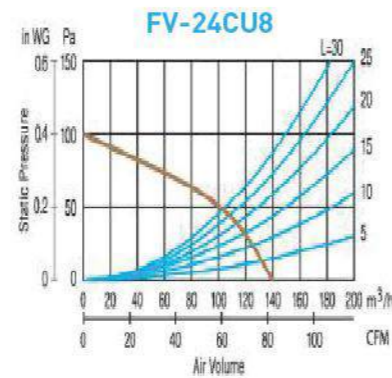
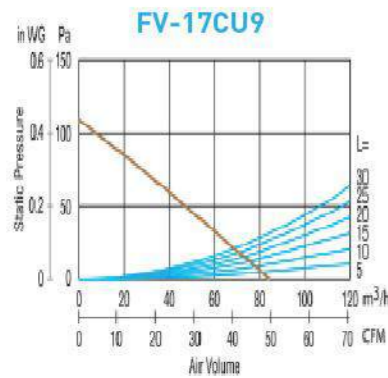
Model No.	A	B	C	D	E	F	G
FV-17CU9	214	194	84	164	170	230	13
FV-24CU9	278	255	140	175	233	300	13
FV-24CD9	278	255	140	175	233	300	13
FV-24CH9	278	255	140	175	233	300	13

Specification

Model No.	Hz	Consumption [W]	R.P.M [min ⁻¹]	Air Volume		Noise [dB(A)]	Weight [kg]	Installation Space [mm]
				[CMH]	[CFM]			
FV-17CU9	50	7.5	680	85	85	23.0	1.7	177x177
FV-24CU9	50	10.5	540	140	140	25.0	2.7	240x240
FV-24CD9	50	13.5	650	170	170	28.5	2.7	240x240
FV-24CH9	50	16.5	740	200	200	32.0	2.7	240x240

Note
 *The value of power consumption, air volume and noise are specified at static pressure of 0 Pa.
 *The value of noise level is measured at 1m apart from the left, the right and the directly below of product, then get the average of three values.

Performance Curve



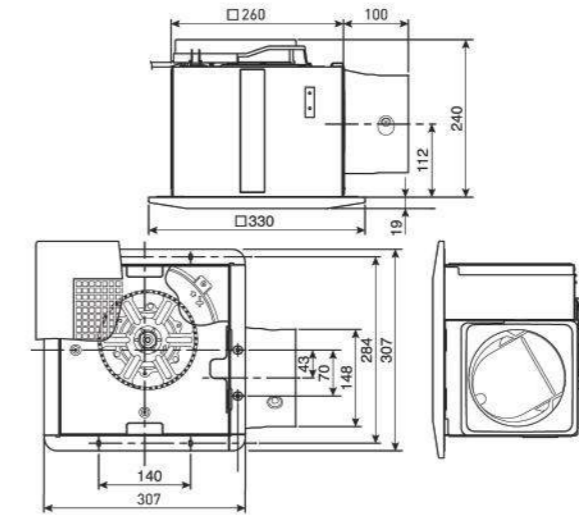
FV-27CH9 Super Quiet Series



- High-Low speed selectable
- Condenser motor with thermal cut-off
- Well lubricated bearing for long life operation
- Pre-installed power cord
- Resonance-Noise-Absorption structure
- High performance taper blade designed sirocco fan

Dimension

Unit: mm



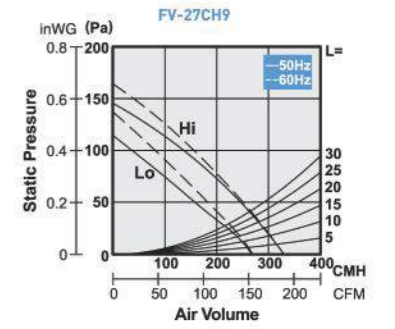
Specification

Model No.	Hz	Consumption [W]	R.P.M [min ⁻¹]	Air Volume		Noise [dB(A)]	Weight [kg]	Installation Space [mm]	Duct Size [mm]
				[CMH]	[CFM]				
FV-27CH9	50	28	570	330	194	34	4.4	270 x 270	Ø150
				260	153				

Note: The value in Specification table are representative characteristics value at 220V, 50Hz. R.P.M. data is for reference only, values may vary subject to different conditions.

Performance Data

(220V 50Hz)



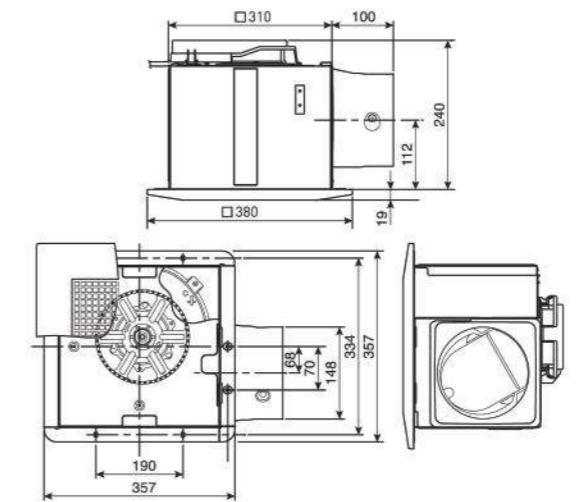
FV-32CD9/ FV-32CH9 Super Quiet Series



- High-Low speed selectable
- Condenser motor with thermal cut-off
- Well lubricated bearing for long life operation
- Pre-installed power cord
- Resonance-Noise-Absorption structure
- High performance taper blade designed sirocco fan

Dimension

Unit: mm



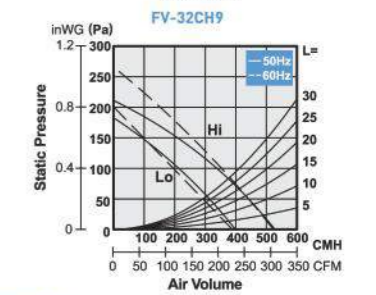
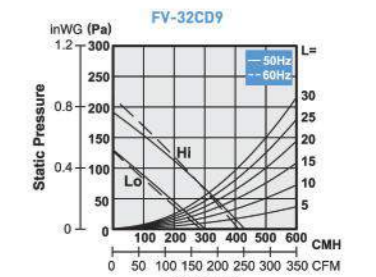
Specification

Model No.	Hz	Consumption [W]	R.P.M [min ⁻¹]	Air Volume		Noise [dB(A)]	Weight [kg]	Installation Space [mm]	Duct Size [mm]
				[CMH]	[CFM]				
FV-32CD9	50	42	590	430	253	36	5.2	320 x 320	Ø150
				300	177				
FV-32CH9	50	55	710	530	312	41	5.6	320 x 320	Ø150
				400	235				

Note: The value in Specification table are representative characteristics value at 220V, 50Hz. R.P.M. data is for reference only, values may vary subject to different conditions.

Performance Data

(220V 50Hz)



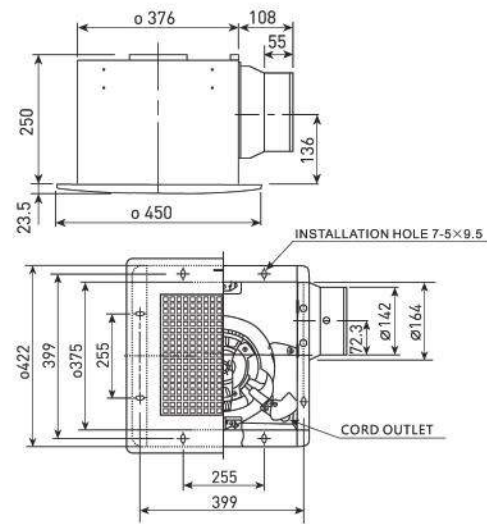
FV-38CD8/ FV-38CH8 Standard Series



- High-Low speed selectable
- Condenser motor with thermal cut-off
- Well lubricated bearing for long life operation
- High performance sirocco fan

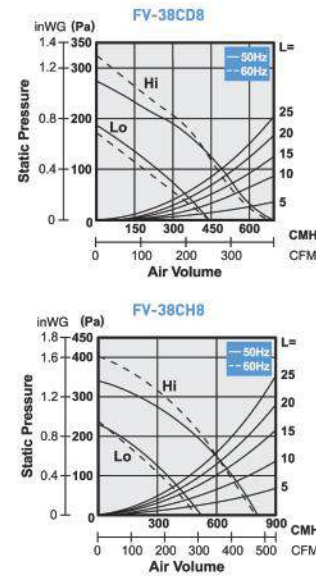
Dimension

Unit: mm



Performance Data

(220V 50Hz)



Specification

Model No.	Hz	Consumption [W]	R.P.M [min ⁻¹]	Air Volume		Noise [dB(A)]	Weight [kg]	Installation Space [mm]	Duct Size [mm]
				[CMH]	[CFM]				
FV-38CD8	Hi	90	645	640	640	44	9.7	385 x 385	Ø150
	Lo	66	456	430	430	35			
FV-38CH8	Hi	122	790	800	800	49	10.4	385 x 385	Ø150
	Lo	89	540	525	525	39			

Note: The value in Specification table are representative characteristics value at 220V, 50Hz. R.P.M. data is for reference only, values may vary subject to different conditions.

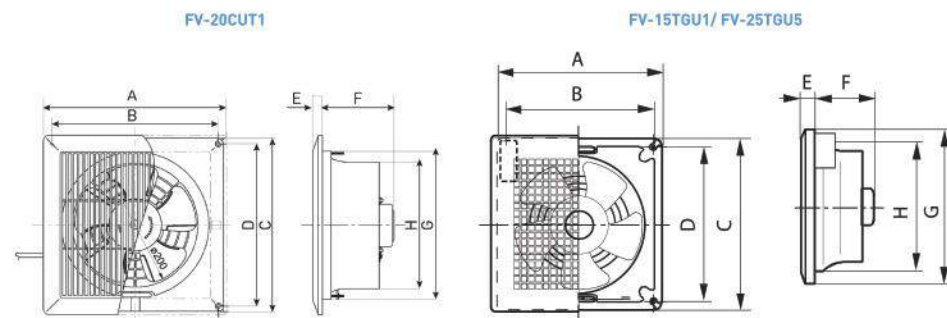
FV-20CUT1/ FV-15TGU1/ FV-25TGU5 Propeller Series



- High air volume
- Easy installation
- Designed for a long service life with continuous daily operation
- Motor equipped with thermal fuse

Dimension

Unit: mm



Model No.	A	B	C	D	E	F	G	H
FV-24CU8	315	286	305	286	18	128	260	223
FV-24CD8	244	224.5	244	224.5	18	108.1	252.5	214
FV-24CH8	355	336	355	336	31	107.5	362.5	310

Specification

Model No.	Hz	Consumption [W]	R.P.M [min ⁻¹]	Air Volume		Noise [dB(A)]	Weight [kg]	Installation Space [mm]
				[CMH]	[CFM]			
FV-20CUT1	50	22.6	1,153	438	258	40.5	1.8	270 x 270
FV-15TGU1	50	10	1330	240	141	35	1.2	220 x 220
FV-25TGU5	50	26.5	970	612	360	39	1.4	320 x 320

Note: The value in Specification table are representative characteristics value at 220V, 50Hz. R.P.M. data is for reference only, values may vary subject to different conditions.

LOW NOISE TYPE CABINET FAN (In-Line Fan)

High Performance

- The newly developed twin flow fan achieves large air volume and high static pressure.
- The tapered scroll at fan case can minimize the turbulence induced by uneven wind velocity inside the casing.

Low Noise

- Noise absorption material adopted for reduction of noise level.

Easy Installation

- Exclusive U-type grooved hanging brackets provide safety installation.
- Able to install upside down for different location of inspection panel.

Easy Maintenance

- Detachable inspection panel can be removed easily for maintenance.

Reliability

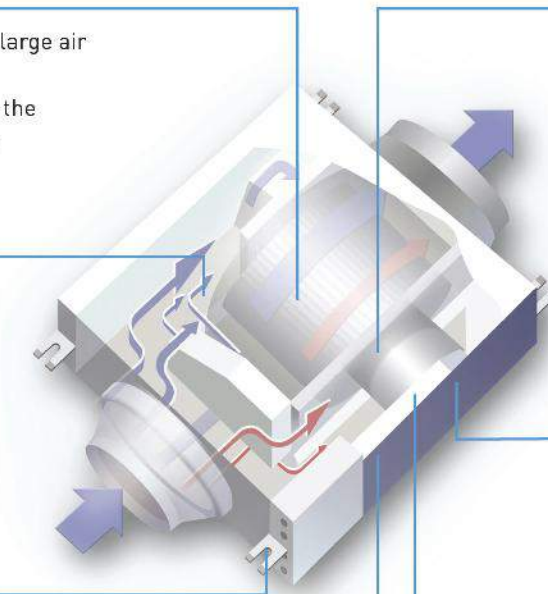
- Long life condenser motor with thermal cut-off is adopted.

Flexibility

- 2-speed selectable enhances flexibility for various usages (for single phase models only).

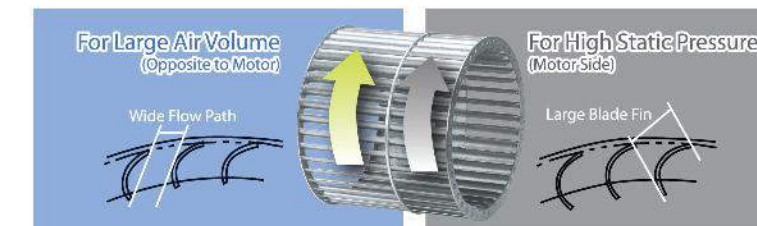
Compact Size

- Slim and compact design allows installation at narrow ceiling space.



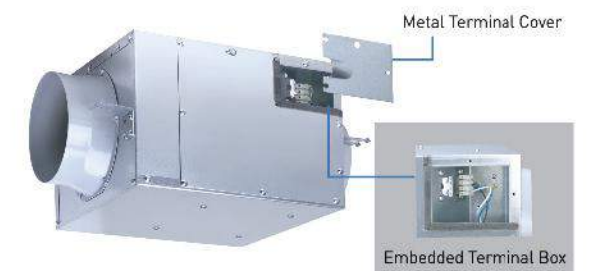
Twin Flow Fan

The newly developed twin flow fan achieves a better airflow inside the fan casing. It is divided into two portions which can generate large air volume and high static pressure respectively.



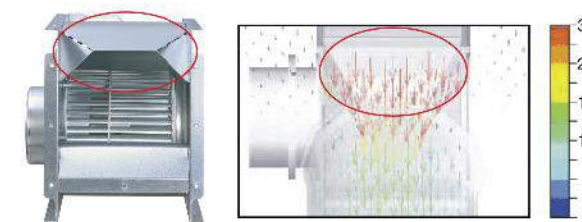
Embedded Terminal Box

Terminal boxes of new models are embedded into the product frame. Wiring to power supply is covered with metal enclosure that enhances the durability and safety concern.



Tapered Scroll

Wind velocity varies according to the shape of fan casing. The tapered scroll at the fan casing can minimize the turbulence induced by uneven wind velocity inside the casing.



Internal Wind Velocity Distribution - Airflow Analysis

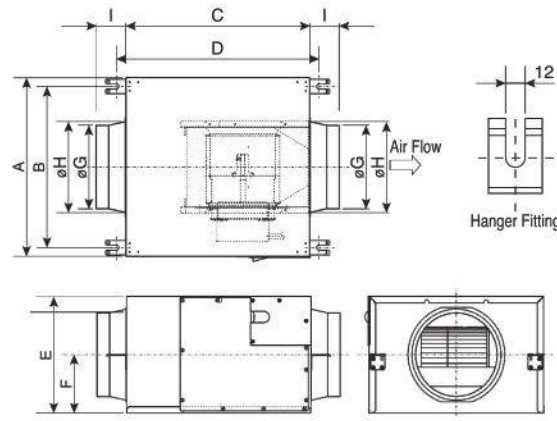
FV-12NS3/ FV-15NS3 Single Phase Series



- Long life condenser motor with thermal cut-off
- Twin flow fan (sirocco fan)
- Fan casing with tapered scroll
- Embedded terminal box
- Noise absorption material adopted
- Compact size

Dimension

Unit: mm



Model No.	A	B	C	D	E	F	G	H	I
FV-12NS3	290	250	291	335	184	92	97	112	51
FV-15NS3	290	250	302	346	206	103	146	163	60

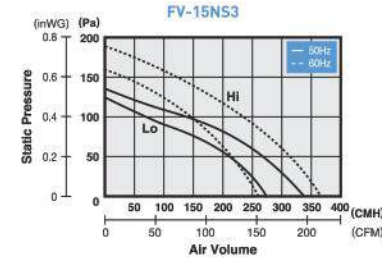
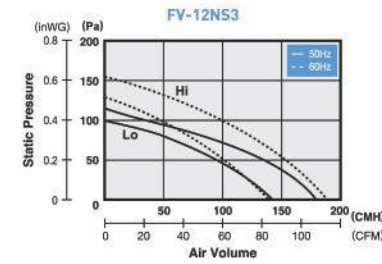
Specification

Model No.	Phase	Hz	*	Consumption [W]	R.P.M [min ⁻¹]	Air Volume		Noise [dB(A)]	Weight [kg]	Impeller Diameter [mm]	Duct Size [mm]
						[CMH]	[CFM]				
FV-12NS3	1	50		18	1,265	180	106	21	5.5	128	Ø100
						Lo	17	1,020			
FV-15NS3	1	50		33	1,270	340	200	25	6.5	128	Ø150
						Lo	29.5	1,100			

Note: The value in Specification table are representative characteristics value at 220V, 50Hz. R.P.M. data is for reference only, values may vary subject to different conditions.

Performance Data

(220V 50Hz)



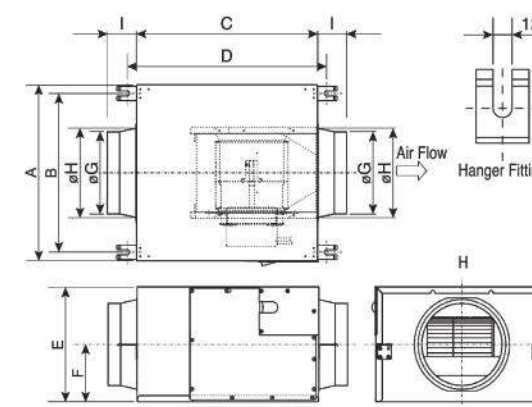
FV-20NS3/ FV-23NL3 Single Phase Series



- Long life condenser motor with thermal cut-off
- Twin flow fan (sirocco fan)
- Fan casing with tapered scroll
- Embedded terminal box
- Noise absorption material adopted
- Compact size

Dimension

Unit: mm



Model No.	A	B	C	D	E	F	G	H	I
FV-20NS3	416	376	441	485	272	136	195	211	70
FV-23NL3	468	424	469	513	298	149	195	211	70

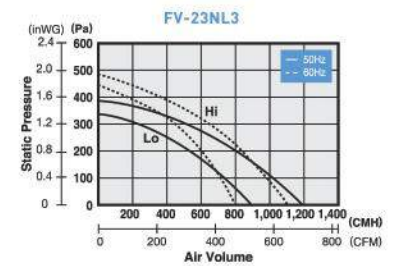
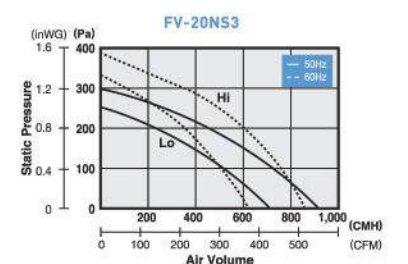
Specification

Model No.	Phase	Hz	*	Consumption [W]	R.P.M [min ⁻¹]	Air Volume		Noise [dB(A)]	Weight [kg]	Impeller Diameter [mm]	Duct Size [mm]
						[CMH]	[CFM]				
FV-20NS3	1	50		120	1,195	920	541	32	14	178	Ø 200
						Lo	113	1,000			
FV-23NL3	1	50		230	1,245	1,200	706	40	18	220	Ø 200
						Lo	170	985			

Note: The value in Specification table are representative characteristics value at 220V, 50Hz. R.P.M. data is for reference only, values may vary subject to different conditions.

Performance Data

(220V 50Hz)



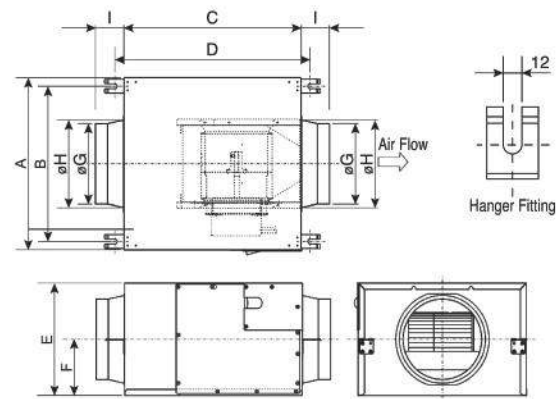
FV-18NS3/ FV-18NF3 Single Phase Series



- Long life condenser motor with thermal cut-off
- Twin flow fan (sirocco fan)
- Fan casing with tapered scroll
- Embedded terminal box
- Noise absorption material adopted
- Compact size

Dimension

Unit: mm



Model No.	A	B	C	D	E	F	G	H	I
FV-18NS3	316	276	338	382	232	116	145	163	60
FV-18NF3	376	336	397	441	254	127	195	211	70

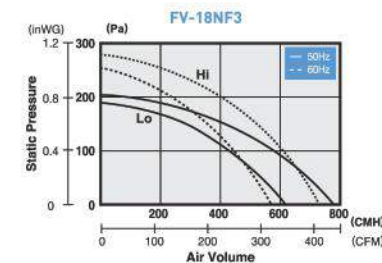
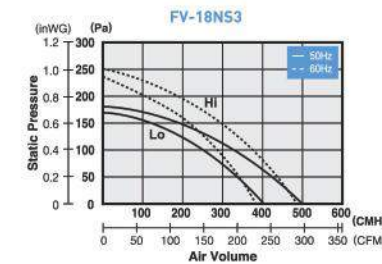
Specification

Model No.	Phase	Hz	*	Consumption [W]	R.P.M [min ⁻¹]	Air Volume		Noise [dB(A)]	Weight [kg]	Impeller Diameter [mm]	Duct Size [mm]
						[CMH]	[CFM]				
FV-18NS3	1	50		60	1,250	500	294	29	8.5	158	Ø150
						Lo	55	1,100			
FV-18NF3	1	50		91	1,190	770	453	31	10	158	Ø200
						Lo	80	1,000			

Note: The value in Specification table are representative characteristics value at 220V, 50Hz. R.P.M. data is for reference only, values may vary subject to different conditions.

Performance Data

(220V 50Hz)



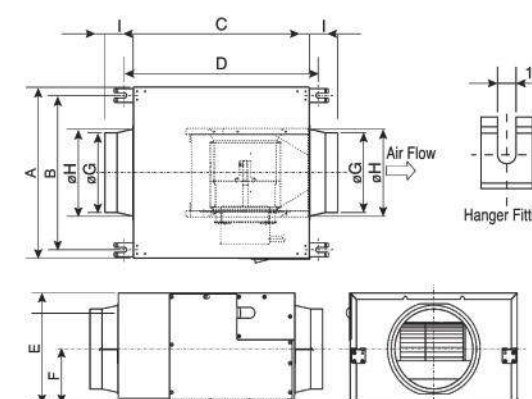
FV-25NS3/ FV-25NF3 Single Phase Series



- Long life condenser motor with thermal cut-off
- Twin flow fan (sirocco fan)
- Fan casing with tapered scroll
- Embedded terminal box
- Noise absorption material adopted
- Compact size

Dimension

Unit: mm



Model No.	A	B	C	D	E	F	G	H	I
FV-25NS3	494	450	505	549	334	167	240	255	85
FV-25NF3	494	450	505	549	334	167	240	255	85

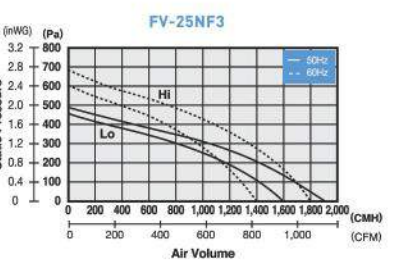
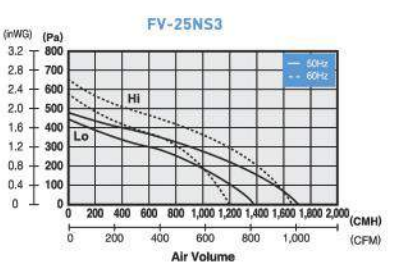
Specification

Model No.	Phase	Hz	*	Consumption [W]	R.P.M [min ⁻¹]	Air Volume		Noise [dB(A)]	Weight [kg]	Impeller Diameter [mm]	Duct Size [mm]
						[CMH]	[CFM]				
FV-25NS3	1	50		345	1,125	1,700	1,001	41	24	220	Ø 250
						Lo	265	950			
FV-25NF3	1	50		390	1,225	1,900	1,118	43	24	220	Ø 250
						Lo	325	1,070			

Note: The value in Specification table are representative characteristics value at 220V, 50Hz. R.P.M. data is for reference only, values may vary subject to different conditions.

Performance Data

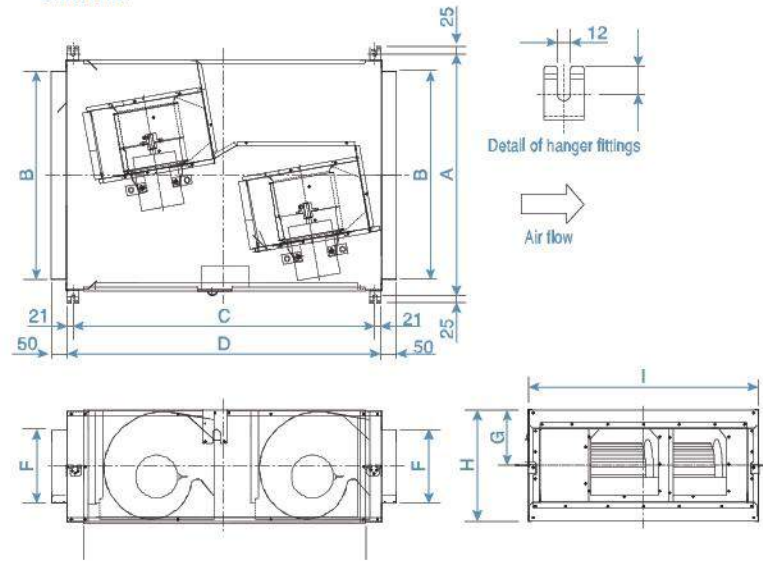
(220V 50Hz)



FV-25SW3 / FV-25SM3 Three Phase Series



Dimension
Unit: mm

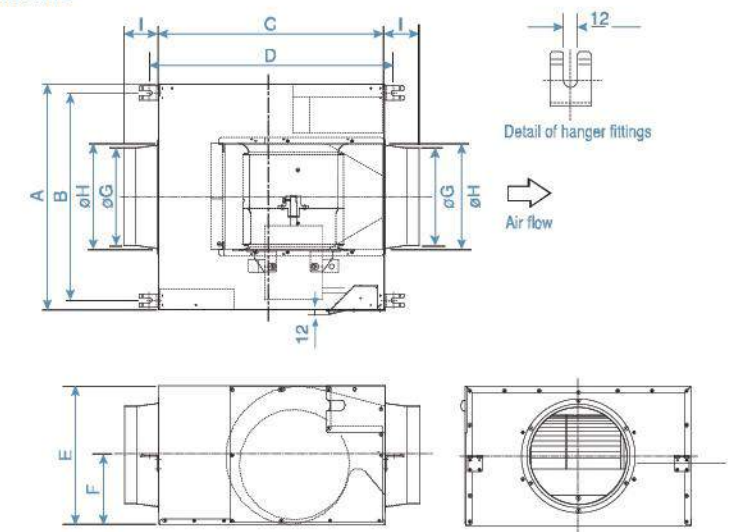


- Long life condenser motor with thermal cut-off
- Twin flow fan (sirocco fan)
- Fan Casing with tapered scroll
- Embedded terminal box
- Noise absorption material adopted
- Compact size

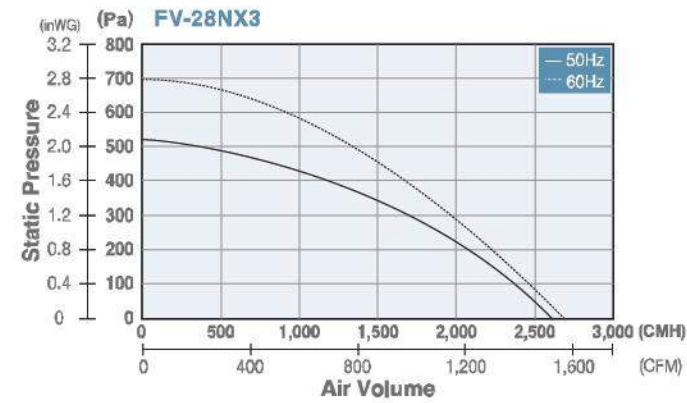
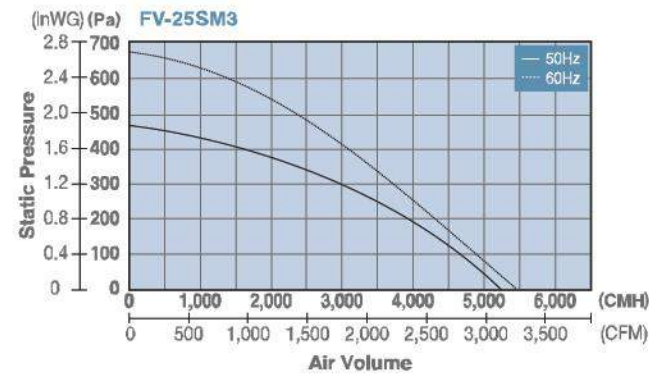
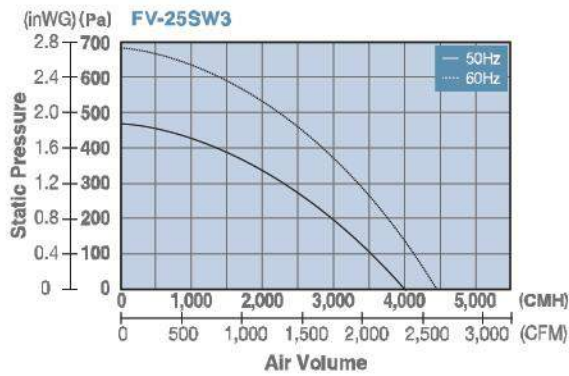
FV-28NX3 Three Phase Series



Dimension
Unit: mm



- Long life condenser motor with thermal cut-off
- Twin flow fan (sirocco fan)
- Fan Casing with tapered scroll
- Embedded terminal box
- Noise absorption material adopted
- Compact size



Model No.	A	B	C	D	E	F	G	H	I
FV-25SW3	809	496	1,010	1,052	942	246	185	370	766
FV-25SM3	809	696	1,010	1,052	942	246	185	370	766

Model No.	A	B	C	D	E	F	G	H	I
FV-28NX3	554	510	557	601	342	171	240	255	85

Specification

Model No.	Phase	Hz	Consumption [W]	R.P.M. [min ⁻¹]	Air Volume		Noise [dB(A)]	Weight [kg]	Duct Size [mm]	Impeller Diameter [mm]
					[CMH]	[CFM]				
FV-25SW3	3	50	940	1,375	4,000	2,354	43	60	250 X 500	250
		60	1,450	1,530	4,500	2,649	45			
FV-25SM3	3	50	1,180	1,345	5,200	3,061	45	60	250 X 700	250
		60	1,750	1,470	5,500	3,237	46			

Note: The value in Specification tables are representative characteristic value at 380V, 50/60Hz. R.P.M. data is for reference only, values may vary subject to different conditions.

Specification

Model No.	Phase	Hz	Consumption [W]	R.P.M. [min ⁻¹]	Air Volume		Noise [dB(A)]	Weight [kg]	Duct Size [mm]	Impeller Diameter [mm]
					[CMH]	[CFM]				
FV-28NX3	3	50	600	1,295	2,600	1,530	44	28	Ø250	280
		60	840	1,380	2,650	1,560	45			

Note: The value in Specification tables are representative characteristic value at 380V, 50/60Hz. R.P.M. data is for reference only, values may vary subject to different conditions.

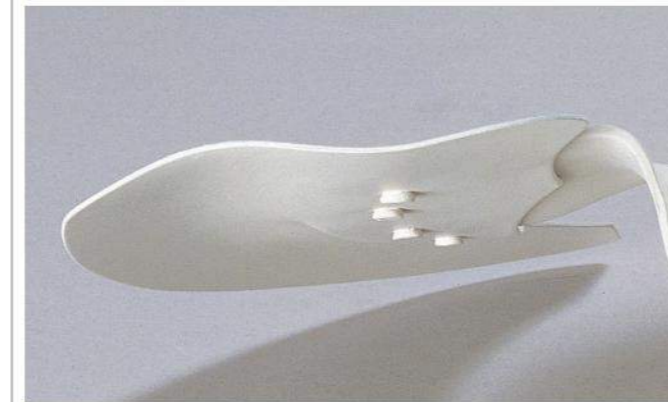


INDUSTRIAL TYPE VENTILATING FAN

Features of High Pressure Series

1 High Static Pressure, Low Power Consumption

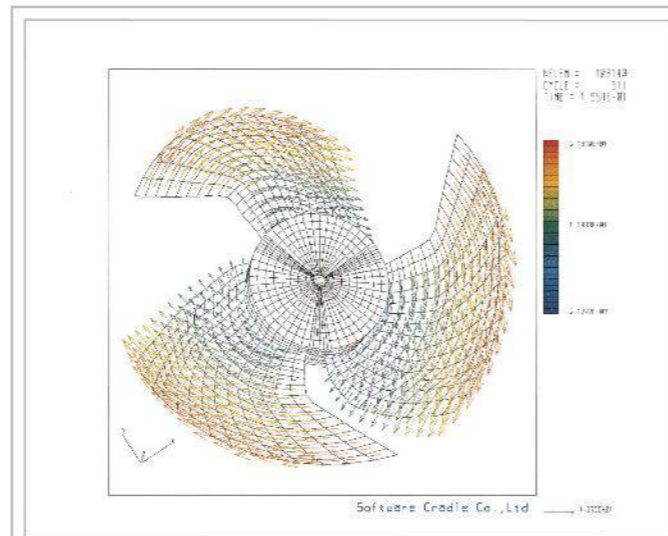
The unique design of wave-shaped blade and bellmouth construction enable better performance in high static pressure and low power consumption.



Fans with 3-dimensional wave-shaped cross section blade

3 Improved Durability

Pressure is distributed more uniformly over the surface of the blade, making it more durable. A special polyester resin powder coating give a beautiful color and a highly rust-resistant finishing.

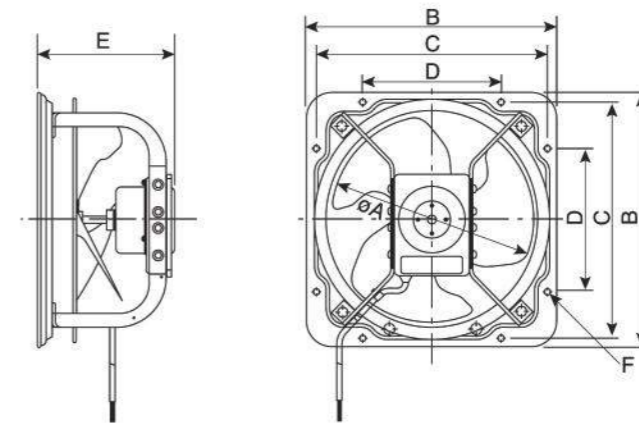


Surface Velocity Vector Diagram

FV-25GS4/ FV-30GS4 High Pressure Series



Dimension
Unit: mm



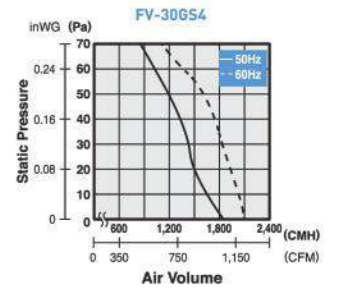
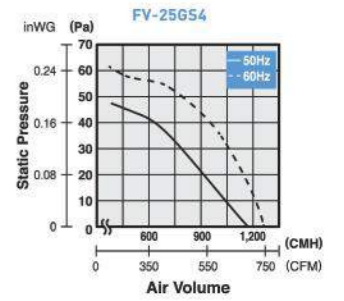
Model No.	A	B	C	D	E	F
FV-25GS4	250	327	298	165	171	10
FV-30GS4	300	378	349	210	200	10

Specification

Model No.	Hz	Consumption [W]	R.P.M. [min ⁻¹]	Air Volume		Noise [dB(A)]	Weight [kg]
				[CMH]	[CFM]		
FV-25GS4	50	39	1,360	1100	647	34	4.4
FV-30GS4	50	59	1,360	1800	1059	38	6.1

Note: The value in Specification table are representative characteristics value at 220V, 50Hz. R.P.M. data is for reference only, values may vary subject to different conditions.

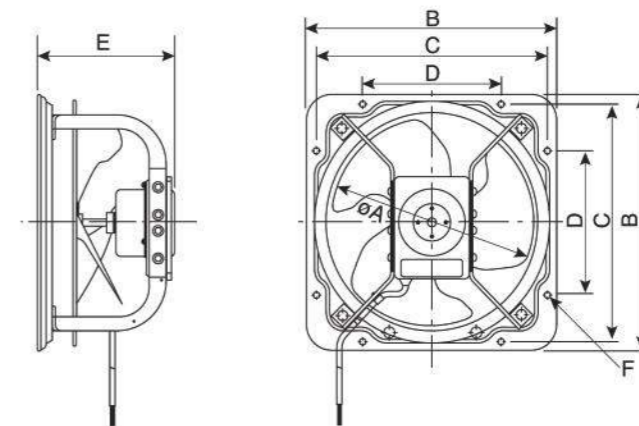
Performance Data
(220V 50Hz)



FV-35GS4 High Pressure Series



Dimension
Unit: mm



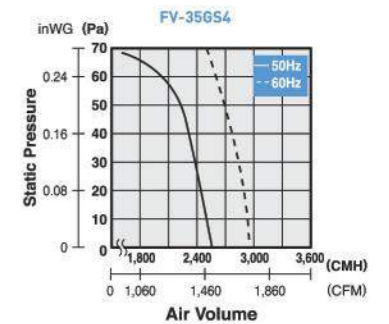
Model No.	A	B	C	D	E	F
FV-35GS4	350	467	434	250	236	12

Specification

Model No.	Hz	Consumption [W]	R.P.M. [min ⁻¹]	Air Volume		Noise [dB(A)]	Weight [kg]
				[CMH]	[CFM]		
FV-35GS4	50	88	1,420	2670	1571	44	10.5

Note: The value in Specification table are representative characteristics value at 220V, 50Hz. R.P.M. data is for reference only, values may vary subject to different conditions.

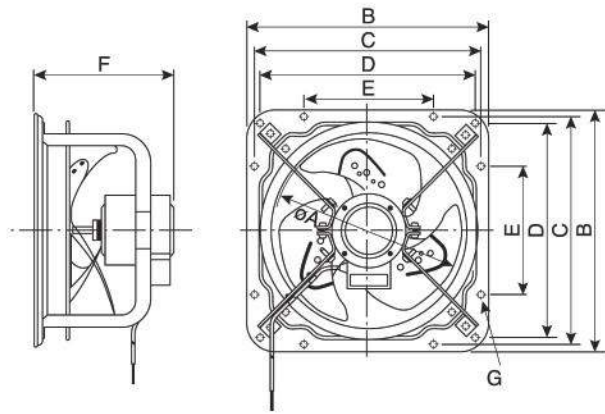
Performance Data
(220V 50Hz)



FV-40GS4/ 45GS4 High Pressure Series



Dimension Unit: mm



Model No.	A	B	C	D	E	F	G
FV-40GS4	400	518	485	460	280	274	12
FV-45GS4	450	570	540	460	320	297	12

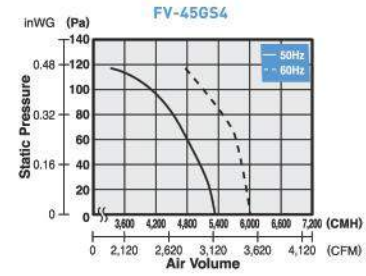
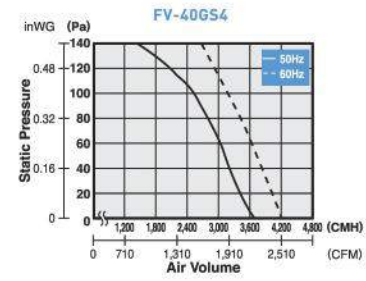
Specification

Model No.	Hz	Consumption [W]	R.P.M. [min ⁻¹]	Air Volume		Noise [dB(A)]	Weight [kg]
				[CMH]	[CFM]		
FV-40GS4	50	161	1,450	3780	2224	47	19
FV-45GS4	50	277	1,410	5400	3176	51	19

Note: The value in Specification table are representative characteristics value at 220V, 50Hz. R.P.M. data is for reference only, values may vary subject to different conditions.

- Single Phase
- Reversible by adjusting wiring and blade
- Bellmouth construction with distinctive wave-shaped blade
- Durable powder coating
- High performance motor with thermal cut-off
- Able to be used over an ambient temperature range from -10°C to +50°C
- Possible to install horizontally or vertically
- Optional guard and shutter available

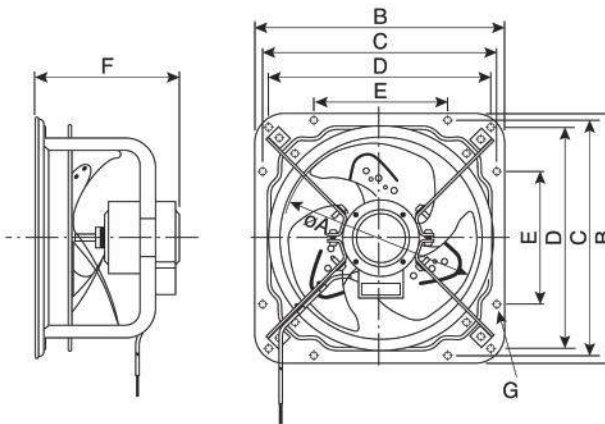
Performance Data (220V 50Hz)



FV-50GS4/ 60GS4 High Pressure Series



Dimension Unit: mm



Model No.	A	B	C	D	E	F	G
FV-50GS4	500	659	620	560	355	315	15
FV-60GS4	620	760	720	650	400	320	15

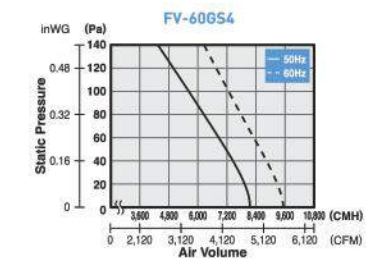
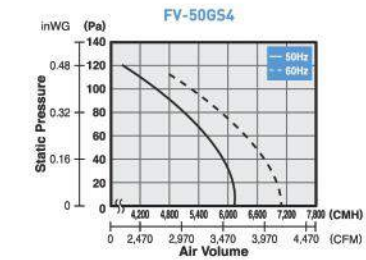
Specification

Model No.	Hz	Consumption [W]	R.P.M. [min ⁻¹]	Air Volume		Noise [dB(A)]	Weight [kg]
				[CMH]	[CFM]		
FV-50GS4	50	249	960	6,130	3,608	47	22.5
FV-60GS4	50	245	970	8,040	4,732	50	34

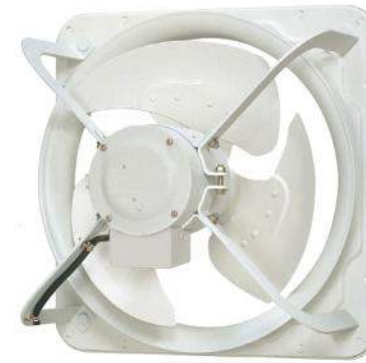
Note: The value in Specification table are representative characteristics value at 220V, 50Hz. R.P.M. data is for reference only, values may vary subject to different conditions.

- Single Phase
- Reversible by adjusting wiring and blade
- Bellmouth construction with distinctive wave-shaped blade
- Durable powder coating
- High performance motor with thermal cut-off
- Able to be used over an ambient temperature range from -10°C to +50°C
- Possible to install horizontally or vertically
- Optional guard and shutter available

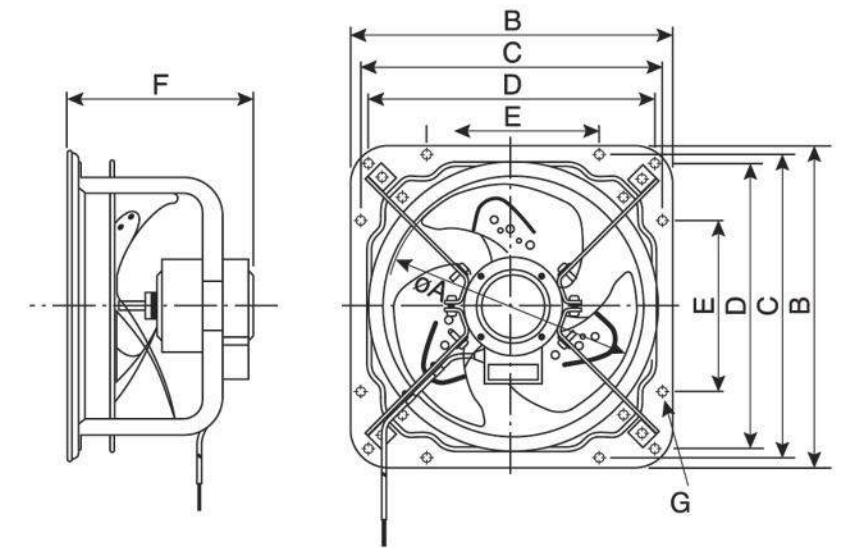
Performance Data (220V 50Hz)



FV-45GT4/ FV-50GT4/ FV-60GT4 High Pressure Series



Dimension Unit: mm



Model No.	A	B	C	D	E	F	G
FV-45GT4	450	570	540	-	320	297	12
FV-50GT4	500	659	620	560	355	304	15
FV-60GT4	620	760	720	650	400	320	15

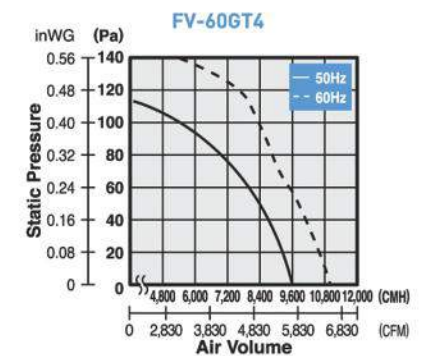
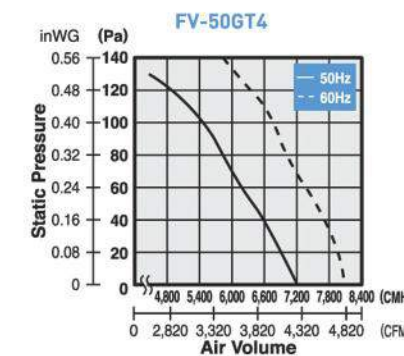
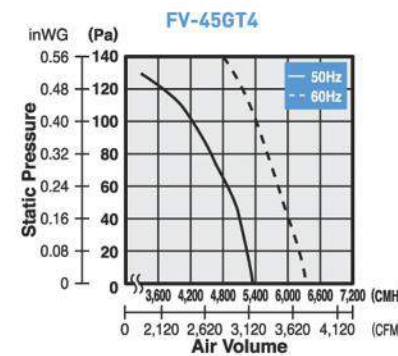
Specification

Model No.	Hz	Consumption [W]	R.P.M. [min ⁻¹]	Air Volume		Noise [dB(A)]	Weight [kg]
				[CMH]	[CFM]		
FV-45GT4	50	220	1,450	5,520	3,249	52	18.5
FV-50GT4	50	320	1,400	6,960	4,097	54	28.5
FV-60GT4	50	310	940	9,420	5,544	49	34

Note: The value in Specification table are representative characteristics value at 220V, 50Hz. R.P.M. data is for reference only, values may vary subject to different conditions.

- Three Phase
- Reversible by adjusting wiring and blade
- Bellmouth construction with distinctive wave-shaped blade
- Durable powder coating
- High performance motor with thermal cut-off
- Able to be used over an ambient temperature range from -10°C to +50°C
- Possible to install horizontally or vertically
- Optional guard and shutter available

Performance Data (220V 50Hz)





WALL MOUNT TYPE VENTILATING FAN

General Features



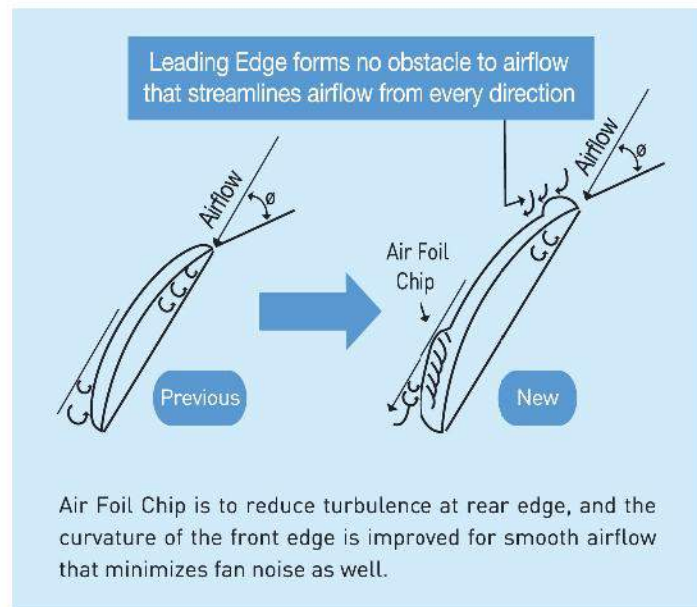
Advanced Blade Design

New blade design applies advanced aerodynamic principle that minimizes any obstacles against the airflow.



Leading Edge

Air Foil Chip



HP (Half-Pitch) Motor & Bearing

Compared with previous models, new models adopt high performance condenser motor and long life bearing that prolong the product durability, from average 30,000 hours life time to 60,000 hours.

They also enable energy saving by reducing power consumption down to average 13%.



"HP motor" and "Bearing" are used

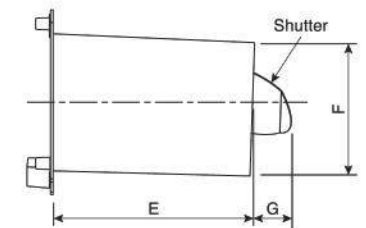
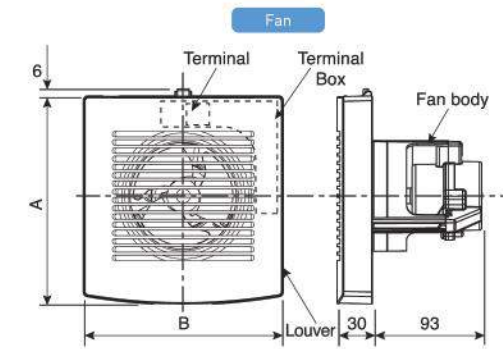
Bearing

FV-10EGS1/ FV-15EGS1 Bathroom Series



- Shutter Series (for Vertical Shaft)
- Powerful exhaust of moisture and smell
- Compact and stylish design
- Back draft shutter
- All accessories are included for most convenience
- Easy installation

Dimension
Unit: mm

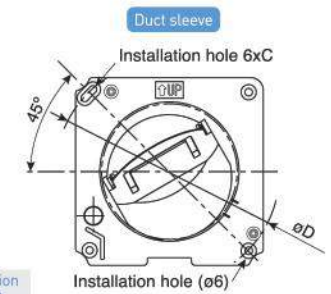


Model No.	A	B	C	D	E	F	G
FV-10EGS1	176	170	9.3	177	160	115	40
FV-15EGS1	230	220	11.5	230	160	160	80

Specification

Model No.	Hz	Consumption [W]	R.P.M. [min ⁻¹]	Air Volume		Noise	Weight [kg]	Installation Space [mm]
				[CMH]	[CFM]			
FV-10EGS1	50	5.5	2,706	75	44	33	0.9	Ø120 - Ø125
FV-15EGS1	50	6.2	2,329	150	88	36	1.1	Ø165 - Ø170

Note: The value in Specification table are representative characteristics value at 220V, 50Hz. R.P.M. data is for reference only, values may vary subject to different conditions. This specifications are specified with duct sleeve, duct spinner and pipe hood.

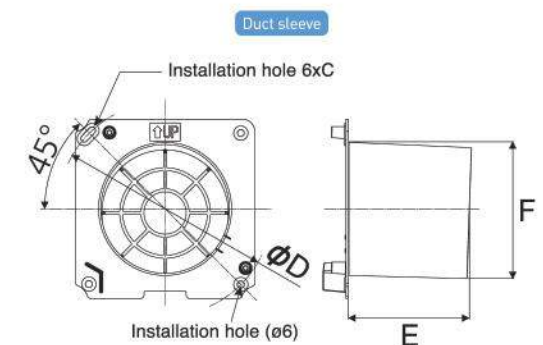
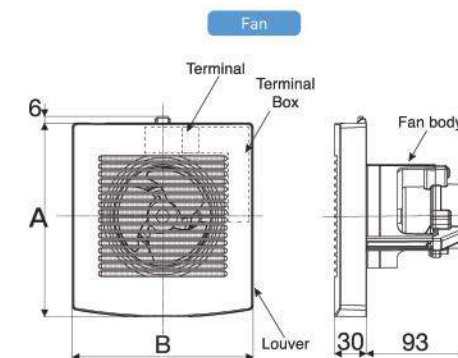


FV-10EGF1/ FV-15EGF1 Bathroom Series



- Very low noise
- Insect screening net equipped
- Slim design (Outside hood)
- Water resistance for safe operation

Dimension
Unit: mm



Model No.	A	B	C	D	E	F
FV-10EGF1	176	170	9.3	177	100	113
FV-15EGF1	230	220	12	230	100	158

Specification

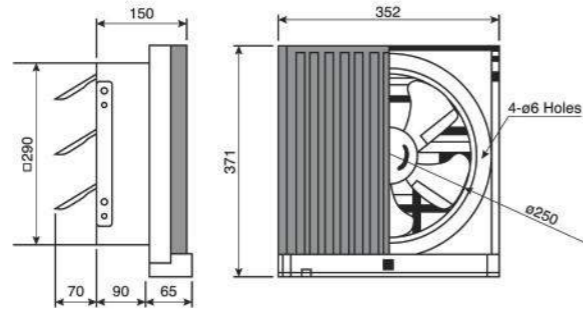
Model No.	Hz	Consumption [W]	R.P.M. [min ⁻¹]	Air Volume		Noise	Weight [kg]	Installation Space [mm]
				[CMH]	[CFM]			
FV-10EGK1	50	5.5	2,706	75	44	31	0.9	Ø135 ± 5
FV-15EGK1	50	6.2	2,369	155	91	33	1.1	Ø180 ± 5

Note: The value in Specification table are representative characteristics value at 220V, 50Hz. R.P.M. data is for reference only, values may vary subject to different conditions. This specifications are specified with duct sleeve.

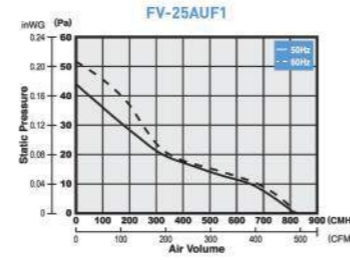
FV-25AUF1 Filter Series



Dimension Unit: mm



Performance Data (220V 50Hz)



Specification

Model No.	Hz	Consumption [W]	R.P.M. [min ⁻¹]	Air Volume		Noise [dB(A)]	Weight [kg]	Installation Space [mm]
				[CMH]	[CFM]			
FV-25AUF1	50	34	1,100	835	491	42	2.8	300 x 300

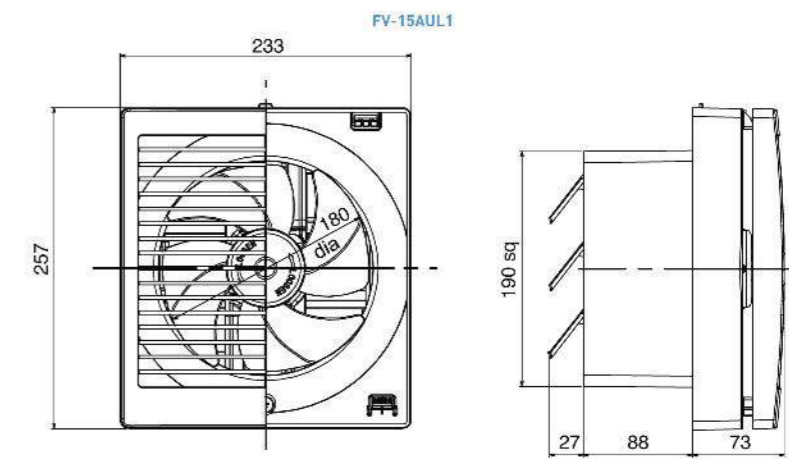
Note: The value in Specification table are representative characteristics value at 220V, 50Hz. R.P.M. data is for reference only, values may vary subject to different conditions.

- Recommend to use in kitchen
- Automatic Shutter
- Perforated aluminum filter with hydrophobic coating
- Large capacity oil cup
- Oil Indicator on oil cup
- High exhaust air volume under actual usage condition (20Pa)

FV-15AUL1 Automatic Shutter Series



Dimension Unit: mm



- Condenser motor with thermal cut-off
- Well lubricated ball bearing for long life operation
- Plastic frame and backcraft shutter
- Detachable front louver

Specification

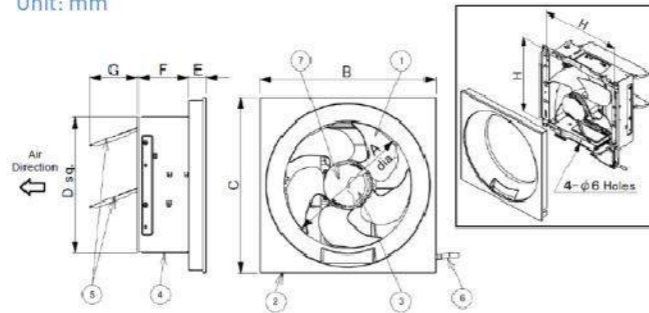
Model No.	Hz	Consumption [W]	R.P.M. [min ⁻¹]	Air Volume		Noise [dB(A)]	Weight [kg]	Installation Space [mm]
				[CMH]	[CFM]			
FV-15AUL1	50	12.5	1,450	255	150	36	1.2	200 x 200

Note: The value in Specification table are representative characteristics value at 220V, 50Hz. R.P.M. data is for reference only, values may vary subject to different conditions.

FV-20AU1/FV-25AU1/FV-30AU1 Automatic Shutter Series



Dimension Unit: mm



Model No.	A	B	C	D	E	F	G	H
FV-20AU1	223	310	310	240	30	90	85	260
FV-25AU1	273	360	360	290	32	90	67	310
FV-30AU1	317	410	410	340	32	90	83	360

Specification

Model No.	Hz	Consumption [W]	R.P.M. [min ⁻¹]	Air Volume		Noise [dB(A)]	Weight [kg]	Installation Space [mm]
				[CMH]	[CFM]			
FV-20AU1	50	18	1250	590	590	36	1.9	250x250
FV-25AU1	50	25	1200	950	950	38	2.3	300x300
FV-30AU1	50	28	880	1200	1200	37	2.6	350x350

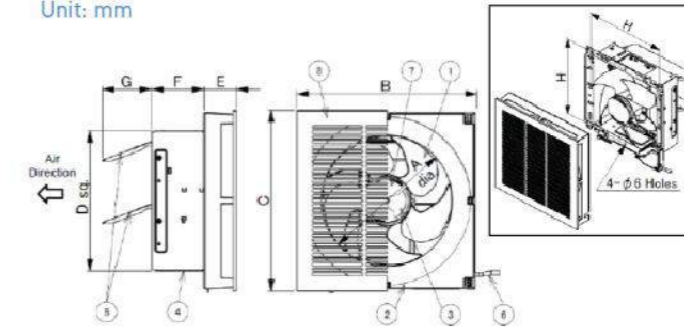
Note
*The value of power consumption, air volume and noise are specified at static pressure of 0 Pa.
*The value of noise level is measured at 1m apart from the left, the right and the directly below of product, then get the average of three values.

- Low Noise by Silent Stream Fan
- Long Life Ball Bearing Motor with thermal cut-off
- Steel Frame and Shutter
- Motor Insulation Class: B
- Cut-off safety switch equipped
- Water Resistance: IPX4 (Outside)

FV-20AL1/FV-25AL1/FV-30AL1 Automatic Shutter Series



Dimension Unit: mm



Model No.	A	B	C	D	E	F	G	H
FV-20AL1	223	310	310	240	56	90	85	260
FV-25AL1	273	360	360	290	58	90	67	310
FV-30AL1	317	410	410	340	58	90	83	360

Specification

Model No.	Hz	Consumption [W]	R.P.M. [min ⁻¹]	Air Volume		Noise [dB(A)]	Weight [kg]	Installation Space [mm]
				[CMH]	[CFM]			
FV-20AL1	50	18	1250	550	550	38.0	12.09	250x250
FV-25AL1	50	25	1160	840	840	40.5	2.5	300x300
FV-30AL1	50	28	840	1000	1000	39.0	2.8	350x350

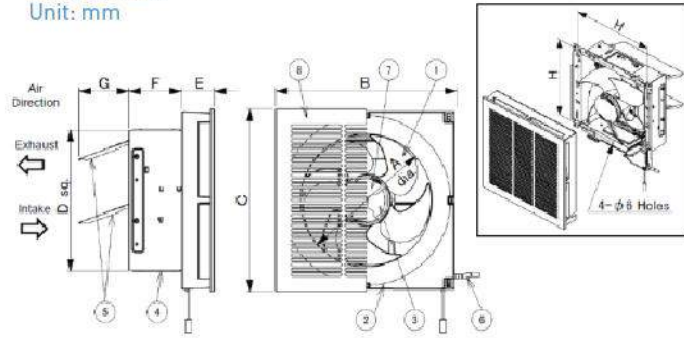
Note
*The value of power consumption, air volume and noise are specified at static pressure of 0 Pa.
*The value of noise level is measured at 1m apart from the left, the right and the directly below of product, then get the average of three values.

- Low Noise by Silent Stream Fan
- Long Life Ball Bearing Motor with thermal cut-off
- Steel Frame and Shutter
- Motor Insulation Class: B
- Water Resistance: IPX4 (Outside)



- Low Noise by Silent Stream Fan
- Long Life Ball Bearing Motor with thermal cut-off
- Steel Frame and Shutter
- Motor Insulation Class: B
- Water Resistance: IPX4 (Outside)
- Operation by pull cord

Dimension
Unit: mm



Model No.	A	B	C	D	E	F	G	H
FV-20RL1	223	310	310	240	56	90	85	260
FV-25RL1	273	360	360	290	58	90	67	310
FV-30RL1	317	410	410	340	58	90	83	360

Specification

Model No.		Hz	Consumption [W]	R.P.M [min ⁻¹]	Air Volume		Noise [dB(A)]	Weight [kg]	Installation Space [mm]
					[CMH]	[CFM]			
FV-20RL1	Exhaust	50	17.0	1240	550	550	38.0	2.1	250x250
	Intake	50	12.0	1150	430	430	45.0		
FV-25RL1	Exhaust	50	25.0	1180	840	840	40.5	2.5	300x300
	Intake	50	16.5	1000	600	600	43.0		
FV-30RL1	Exhaust	50	27.5	860	1000	1000	39.0	2.8	350x350
	Intake	50	18.0	800	750	750	42.0		

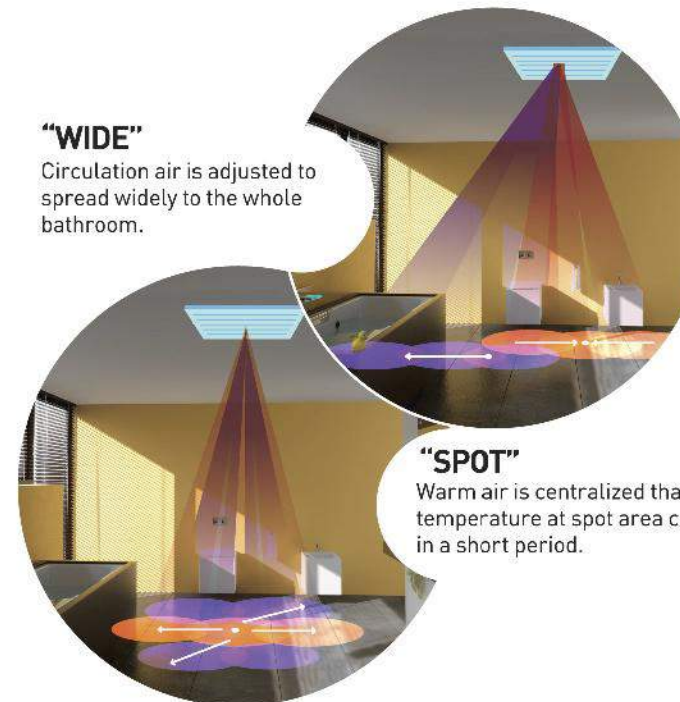
Note
 -The value of power consumption, air volume and noise are mentioned "Exhaust / Supply".
 -The value of power consumption, air volume and noise are specified at static pressure of 0 Pa.
 -The value of noise level is measured at 1m apart from the left, the right and the directly below of product, then get the average of three values.



BATHROOM DRYER

Adjustable Air Direction

You may select 'Spot' or 'Wide' and air direction by adjusting the air grilles during installation.



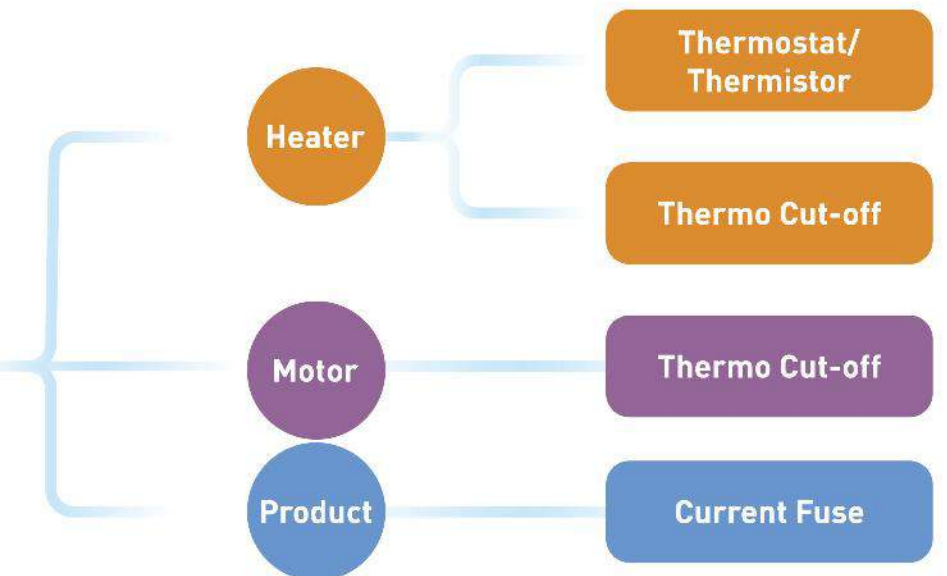
"WIDE"
Circulation air is adjusted to spread widely to the whole bathroom.

"SPOT"
Warm air is centralized that desired temperature at spot area can reach in a short period.

Both left and right grilles have 20~30° against vertical. It can be installed at 4 directions.

- Heating**
 With PTC (Positive Temperature Coefficient) heater, Panasonic Thermo Ventilator can warm your bathroom instantly and provide a comfortable bathing experience for you.
- Clothes Drying**
 Just simply hang your clothes under the Thermo Ventilator and switch it on, circulated airflow will dry your clothes thoroughly.
- Ventilation**
 The Panasonic Thermo Ventilator can exhaust uncomfortable odor from the bathroom effectively. It can also restrict the growth of mold, mildew and mite by continued operation of ventilation function.
- Circulation**
 With low noise design, Panasonic Thermo Ventilator can act as an electric fan and let you feel cool in summer.

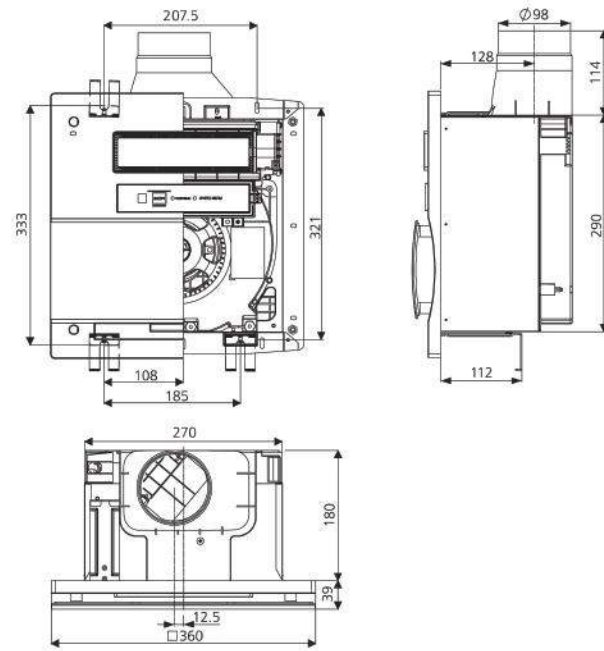
Multi Level Safety Protection





- Multifunction
- Multi Level Safety Protection
- Ceiling Mount Installation
- Air Direction (Auto Swing / Manual)
- Allergo-buster Filter
- Wireless Remote Control
- Off Timer function

Dimension
Unit: mm



Specification

Model No.	Hz	Power Consumption [W]	Air Volume		Current [A]	Noise [dB(A)]	Weight [kg]	Installation Space [mm]	Duct Size [mm]
			[CMH]	[CFM]					
FV-30BG3	Ventilating	28	170	100	13	39	5	300 x 300	Ø 100
	Heating	1500	170	100	46				

AIR CURTAIN



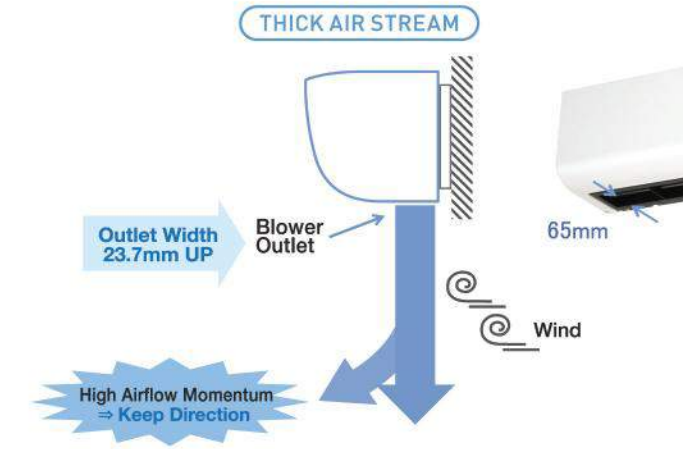
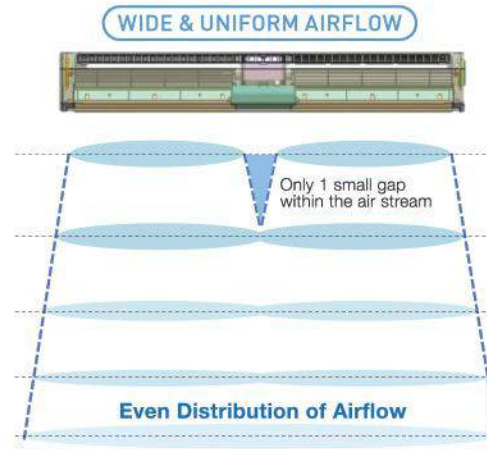
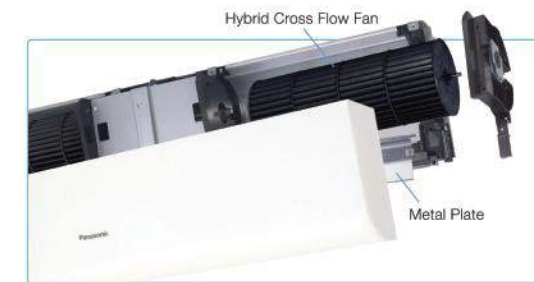
Effects of Air Curtain

Doors of a shop need to be opened frequently to let people pass through. However, opening door allows air leaks to outside that increases energy consumption of air conditioning. By using Air Curtain, an invisible air screen will build up to minimize air exchange between the air outdoor and indoor.

Features highlight

Effective Barrier Effect

- Cross Flow Fan is adopted that airflow distribution is more even within the air stream while the air volume output can be maintained with low noise level.
- Unique Auxiliary Air Inlet allows more air intake at lower front that enhances airflow output.



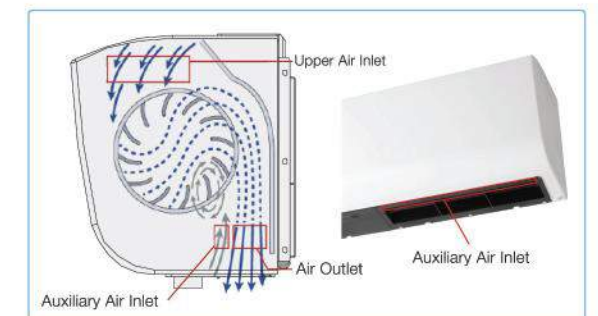
Highly Durable

- Resin with glass fiber material is used in the Hybrid Cross Flow Fan incorporated with the metal bosh, the durability is prolonged significantly.



Easy Maintenance

- The Cross Flow Fan can generate air current between the fan and front cover forming movement of dust that reduces accumulation of dust on the fan blade.
- Simple structure allows convenient cleaning of the fan - just detach the front cover to clean the fan blade.

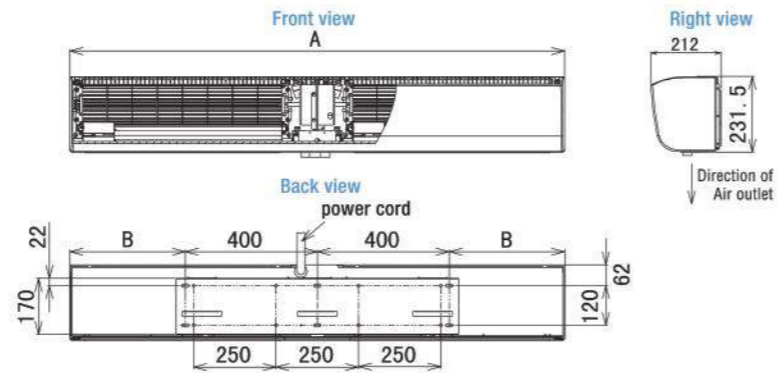


FY-3509U1/ FY-4009U1 Standard Type - 900mm



- Cross flow fan for wide and uniform airflow
- Unique auxiliary air inlet enhances airflow output
- Thick air stream provides high airflow momentum
- Resin with glass fiber adopted for fan blade
- Metal blade bush for high durability
- Simple structure for easy maintenance
- Air deflection plate for airflow direction adjustment
- Main air inlet at top allows neat image

Dimension Unit: mm



Model No.	A	B
FY-3509U1	900	50
FY-4009U1	900	50

Specification

Model No.	Hz		Consumption [W]	Air Volume		Current [A]	Outlet Velocity [m/s]	Noise [dB(A)]	Weight [kg]
				[CMH]	[CFM]				
FY-3509U1	50	Hi	95	1150	676	0.41	11.0	51.0	12
		Lo	85	1000	588	0.39	9.0	49.0	
FY-4009U1	50	Hi	110	1340	788	0.50	12.0	54.5	12.5
		Lo	94	1190	700	0.43	10.0	51.0	

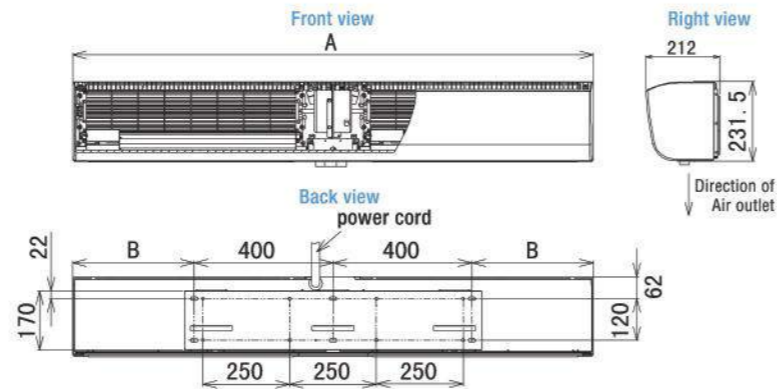
Note: The Value In Specification tables are representative characteristic value at 220V, 50Hz

FY-3512U1/ FY-4012U1 Extra Type - 1200mm



- Cross flow fan for wide and uniform airflow
- Unique auxiliary air inlet enhances airflow output
- Thick air stream provides high airflow momentum
- Resin with glass fiber adopted for fan blade
- Metal blade bush for high durability
- Simple structure for easy maintenance
- Air deflection plate for airflow direction adjustment
- Main air inlet at top allows neat image

Dimension Unit: mm



Model No.	A	B
FY-3512U1	1200	200
FY-4012U1	1200	200

Specification

Model No.	Hz		Consumption [W]	Air Volume		Current [A]	Outlet Velocity [m/s]	Noise [dB(A)]	Weight [kg]
				[CMH]	[CFM]				
FY-3512U1	50	Hi	114	1550	912	0.49	10.5	49.0	14.5
		Lo	100	1300	765	0.46	8.5	46.0	
FY-4012U1	50	Hi	126	1700	1000	0.59	12.0	52.5	15.5
		Lo	105	1530	900	0.49	10.0	48.5	

Note: The Value In Specification tables are representative characteristic value at 220V, 50Hz

HAND DRYER



Power Dry hand dryer provides a comfortable and speedy hand drying experience by removing moistures on hands with warm and high velocity airflow. In addition, environment protection and cost saving are achieved by comparing with using paper towel.

New Features of FJ-T09A3/ FJ-T09B3

Safe Operation

- Power Dry will stop after 60 seconds of continuous operation.
- "Check" indicator will light up when the unit detects overheated.

Quick Response Sensor

- Automatic sensor operation, no physical contact is required to activate the unit.

Heater ON/OFF Switch

- Heater can be switched off for energy saving in hot season.

Full Tank Indicator (FJ-T09A3 only)

- Remind you for cleaning up the water tank when it is full.

Easy Installation

- Metallic bracket for wall hanging attached.
- Stylish and streamline design fits most interior.

Anti-bacteria Material

- The product body is adopted with anti-bacteria material to prevent the growth of bacteria and germs in the warm and humid environment of washroom.

Drain Pan (FJ-T09A3 only)

- Drain pan can reduce water dripping on floor to avoid slippery.



Super alleru-buster Filter

- The filter is equipped to ensure the air blow to your hand is clean.

Quick Drying with 3 way Airflow

Wide Nozzle

Blow off water droplets on the whole palm with wide airflow.

Spot Nozzle

Dry fine water droplets by rubbing hands with spot airflow.

2 kinds of nozzle, wide nozzle and spot nozzle, are equipped at front and rear of drying chamber respectively for efficient drying. The new structure realizes quick drying in only 4-9 seconds.



What is Super alleru-buster?

Super alleru-buster can inhibit up to several types of allergen.



Testing Organization: The Osaka Municipal Technical Research Institute.
Testing Method: to measure the level of reduction in cat's dandruff by Enzyme-linked Immuno Sorbent Assay.

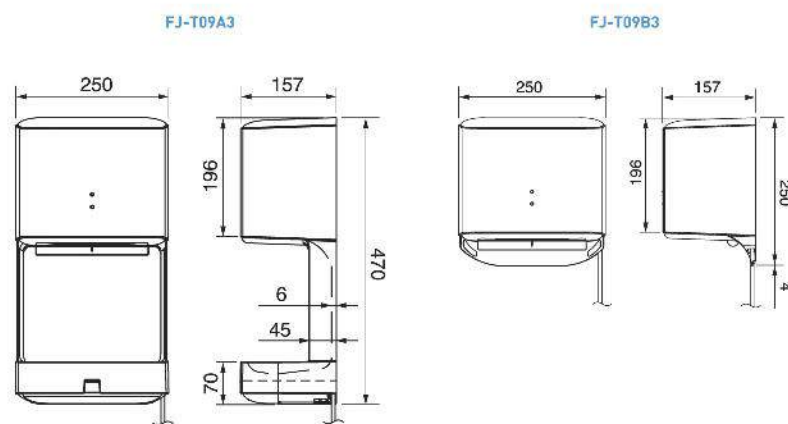


FJ-T09A3
With Drain Pan



FJ-T09B3
Without Drain Pan

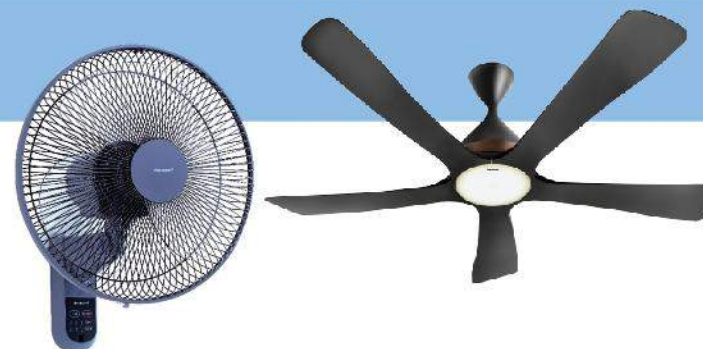
- Powerful air velocity enables drying time in few seconds
- Automatic operation by infra-red motion sensor
- Super-allergo buster filter equipped
- Anti-bacteria material adopted
- Heater ON/OFF switch for energy saving
- Safety check light function terminate the operation in case overload
- Drain pan and water tray equipped (FJ-T09A3 only)



Specification

Model No.	Power Consumption [W]		Air Velocity [m/s]	Noise [dB(A)]	Drain Pan	Weight [kg]
	Heater ON	Heater OFF				
FJ-T09A3	1,020	650	90-110	62	Yes	4
FJ-T09B3	1,020	650	90-110	62	No	3.5

Note: The value in Specification table are representative characteristics value at 220V, 50Hz.



CEILING FAN
ELECTRIC FAN

Safety Features for Ceiling Fan

1 Cut-off Safety Switch

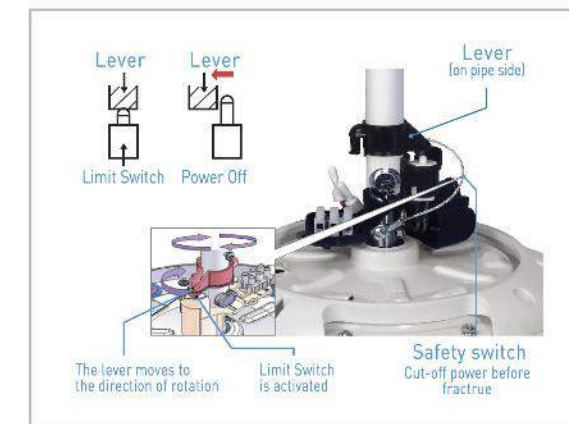
Patents registration in Japan, The United States, China, Malaysia and Vietnam

Problem

In case there is any wear at either the shaft or the bolt, abnormal wobbling of fan will occur as it runs. The wear will be further enlarged if the fan continues to operate, and the part or fastener will break eventually.

Our solution

Cut-off safety switch is equipped to cut off power supply while dangerous wear and tear of the shaft or bolt are detected. As abnormal wobbling occurs, the lever will detach from the switch and the fan will stop. It will prevent further wear to the damaged part. It can minimize the fracture of the part that reduces the possibility of falling of fan.



2 Safety Plate

- Patents are being applied in The United States, China, Malaysia, Vietnam and India
- The application number for Safety Plate is P50072

Problem

Blade fins may fall from the fan motor in case fatigue of material occurs.

Our solution

An exclusively designed fall prevention plate is installed on the blade. This mechanism secures against falling of blades caused by damaging wearing.



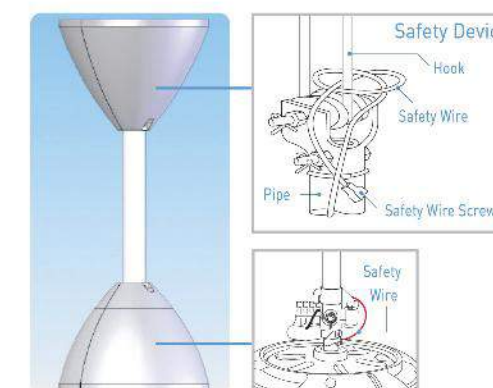
3 Safety Wire

Problem

Fan motor may fall from the pipe rod accidentally whatever any factors, such as wearing of shaft bolt, etc.

Our solution

Safety wire is adopted to secure the fan motor with the ceiling hook that prevents falling of the motor when detaching of the fan motor from the pipe rod occurs.



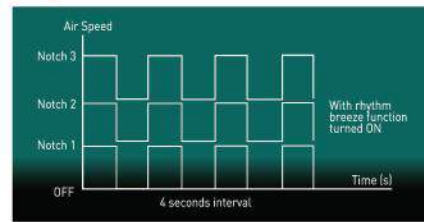
Other Features

1 1/f Yuragi (Natural Breeze) *1/f yuragi*

These fans are equipped with 1/f Yuragi function which is a fluctuated pattern acting a gentle breeze. By this sophisticated formula, in varying air velocity and controlling wind force, these new ceiling fans present you a peaceful and comfortable feeling.

Current function rhythm breeze

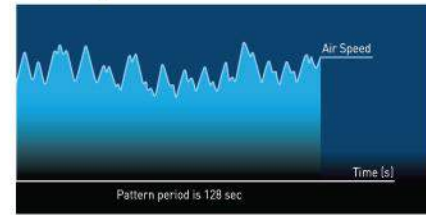
Speed notch toggles by 4 seconds regularly.



This regular pattern makes body temperature falling after a period of time. After that, you may feel anxious and uncomfortable when the wind velocity changes.

New function 1/f Yuragi

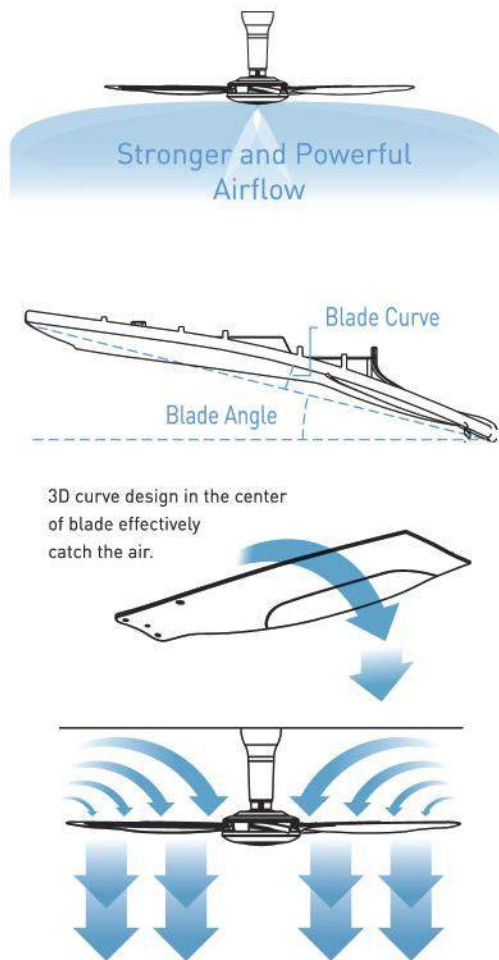
Speed notch toggles based on Yuragi pattern.



Incorporated with this human-concerned technology, this kind of rhythm maintains your external body temperature by giving you a feeling of natural wind when there is a change of wind velocity.

2 3D Blade (Powerful Airflow)

With the exclusive and unique 3D blade design, it provides a smooth and strong air flow while maintaining operating noise in low level.



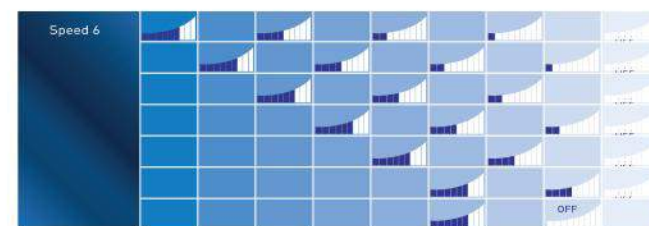
3 ON Timer

On Timer can be incorporated with air conditioner to realize economy and comfortable operation. It can minimize excessive cold feeling and save power consumption during your sleep.



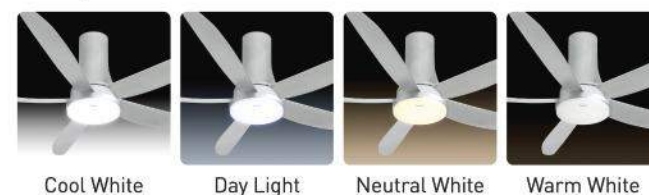
4 Sleep Mode

The fan is equipped with Sleep Mode, by which fan speed and timer will gradually go down until the fan is off. The function not only creates an optimal sleeping environment, but also enhances energy saving as well.



5 LED Lamp

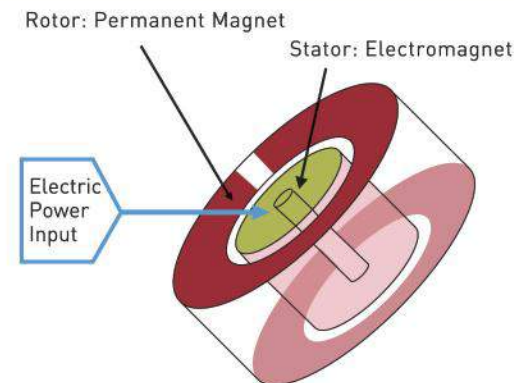
The embedded LED illumination lamp has 4 selections of color: Cool White, Day Light, Neutral White or Warm White. Incorporated with contemporary interior, they can foster a charming atmosphere to the room.



6 Direct Current Motor (F-60UFN, F-60TAN, F-60TDN)

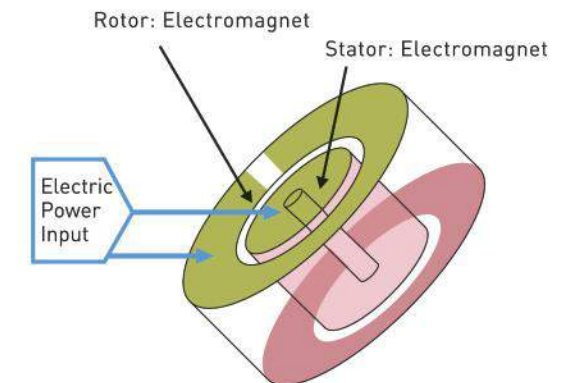
Newly developed direct current (DC) motor are adopted in these fans. Power consumption is reduced as compared with alternative current (AC) motor that energy saving is achieved. DC motor has lighter weight compared with conventional AC motor, that allows easy handling for DC ceiling fan.

Direct Current (DC) Motor



Electric power input is required for stator only

Alternating current (AC) Motor



Electric power input is required for both rotor and stator

7 Auto Mode with ECONAVI Function

F-60TAN is equipped with temperature sensor. Incorporated with ECONAVI function, the innovative Auto Mode function is enhanced. This function controls the fan to generate the most comfortable air velocity to human body subject to the change of room temperature.

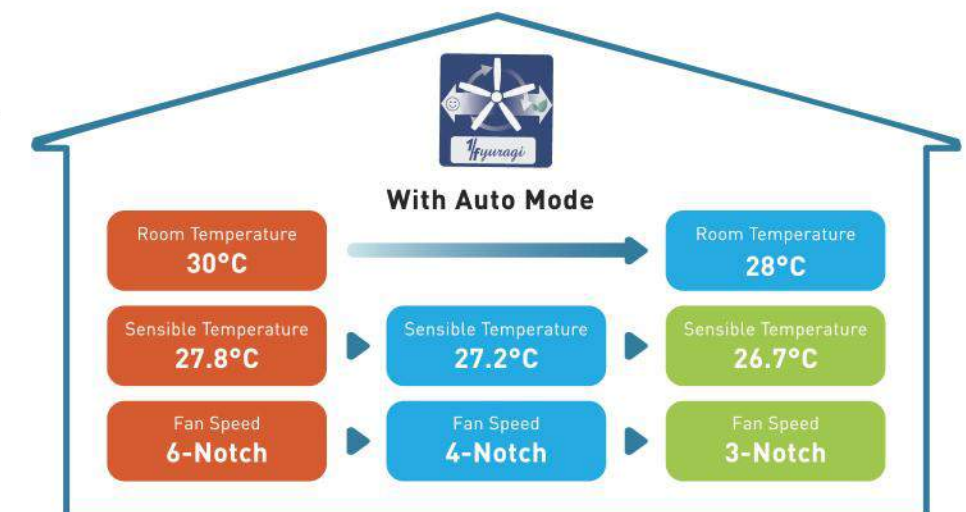
The sensor monitors the surrounding temperature change and air velocity will vary automatically in accordance with below table.

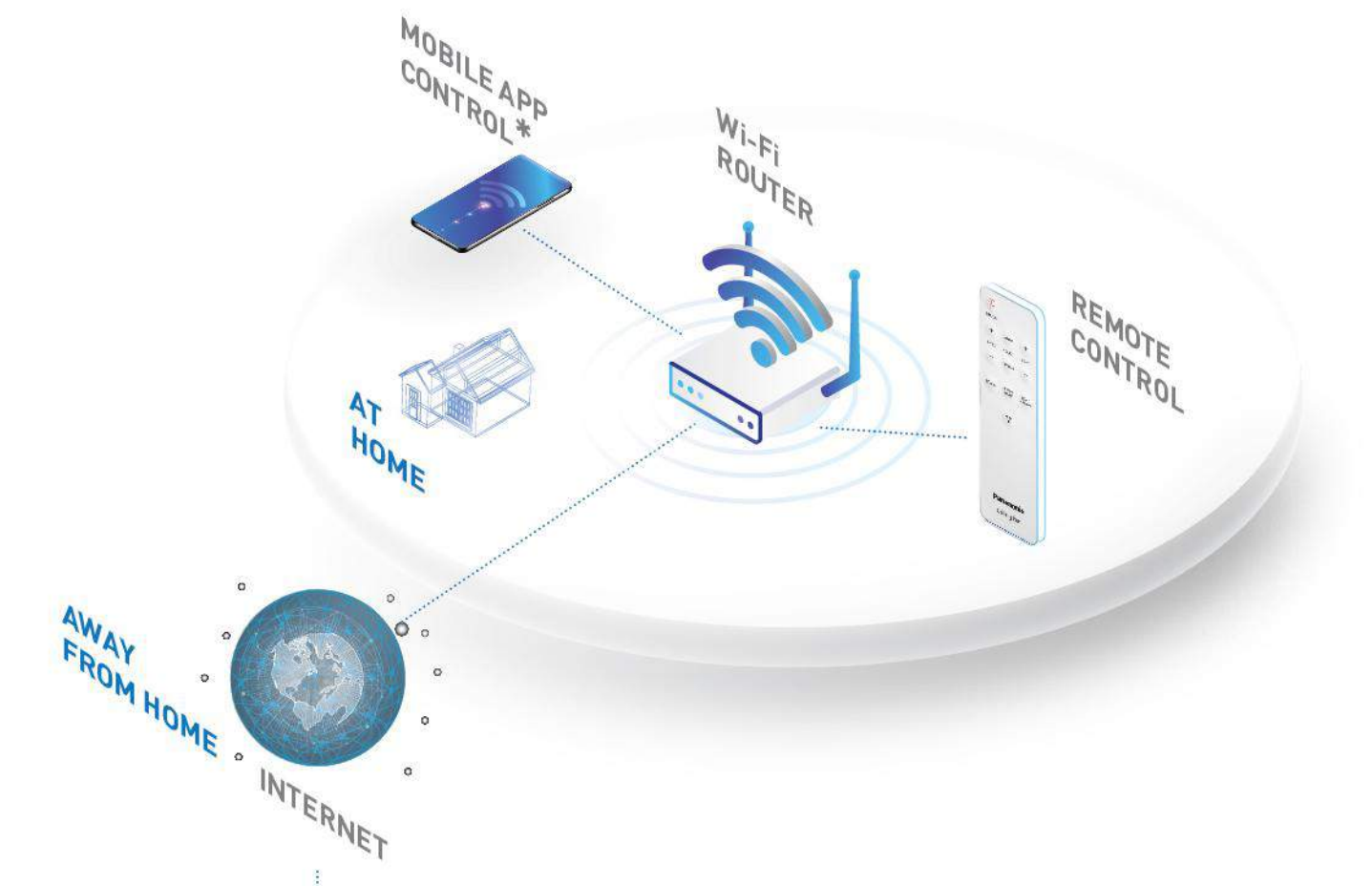
Range of Room Temperature	Change of Room Temperature		Change of Speed F-60TAN	
	-1°C	+1°C	-	+
Above 30°C	Blue bar	Red bar	Blue bar	Red bar
30°C - 29°C	Blue bar	Red bar	Blue bar	Red bar
29°C - 24°C	Blue bar	Red bar	Blue bar	Red bar
Below 24°C	Blue bar	Red bar	No Change	No Change

Speed change for ECONAVI is among speed 1 to speed 9

8 Comfort Eco (F-60TAN)

The figure illustrates the effect of using air conditioner and ceiling fan with 'Auto Mode'. The fan speed is adjusted according to room temperature monitored by the thermal sensor. Room temperature decreases to 28°C over a period, while the sensible temperature could be maintained to 26.7°C, which is said to be most comfortable to human body.





REMOTELY CONTROL AWAY FROM HOME *

- *One user account can only control up to 8 Wi-Fi ceiling fans
- *One Wi-Fi ceiling fan can only be registered by 4 user accounts

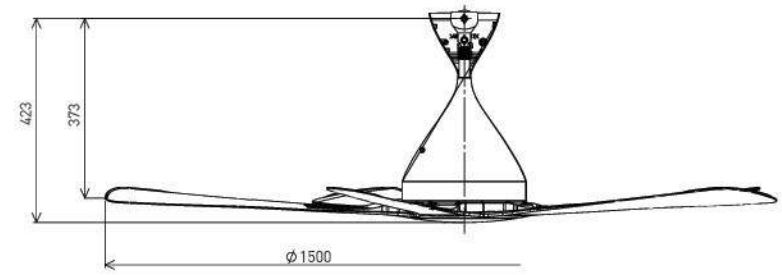


F-60DGN Ceiling Fan - Wireless Connection Deluxe Series



- Direct function: Fan and Light
- New generation DC motor
- Wireless 2.4 GHz
- Mobile application control (iOS/Android)
- LED lighting with brightness for daily life
- 1/2 Yuragi Function
- Reverse function to operate with Air conditioner
- ABS-GF blade material for durability
- 24 hours On & Off timer
- Equipped with safety device
- Color: Black

Dimension
Unit: mm



Specification

Model No.	Voltage		Consumption		Air Velocity		Air Delivery		Weight [kg]
	[V]	[Hz]	Fan	Fan+Light	[m/min]	[ft/min]	[m³/min]	[ft³/min]	
F-60DGN	220	50	54	73	160	656	300	8,299	7.3

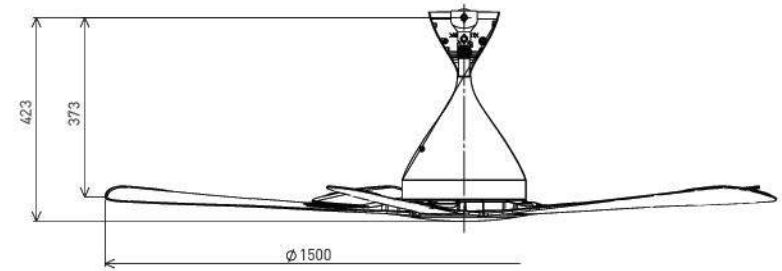
Note: The value in Specification table are representative characteristics value at 220V, 50Hz. R.P.M. data is for reference only, values may vary subject to different conditions.

F-60DHN Ceiling Fan - Wireless Connection Deluxe Series



- New generation DC motor
- Wireless 2.4 GHz
- Mobile application control (iOS/Android)
- 1/2 Yuragi Function
- Reverse function to operate with Air conditioner
- ABS-GF blade material for durability
- 24 hours On & Off timer
- Equipped with safety device
- Color: Black

Dimension
Unit: mm



Specification

Model No.	[V]	*	Consumption [W]	R.P.M. [min ⁻¹]	Air Velocity [m³/min]	Air Delivery [m³/min]	Weight [kg]
F-60DHN	220	Hi	54	245	160	300	7.0
		Lo	4	80			

* Hi - Notch 9 / Lo - Notch 1
Note: The value in Specification table are representative characteristics value at 220V, 50Hz. R.P.M. data is for reference only, values may vary subject to different conditions.

WiFi
CERTIFIED

Download on the
AppStore

ANDROID APP ON
Google Play

Mobile Application Control

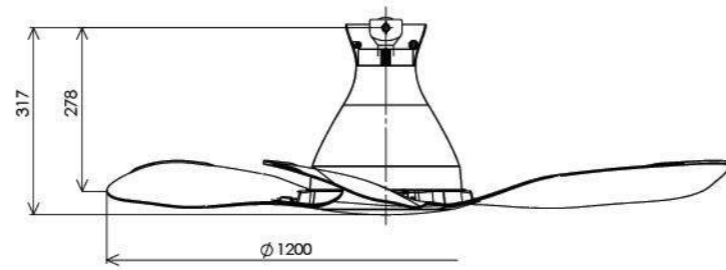
App-enabled* ceiling fan that connects to your Wi-Fi network and allows user to control their fans using mobile devices.

*Requires Android 6 and above or iOS 12 and above for the app to work.

F-48DGL Ceiling Fan - Wireless Connection Deluxe Series



Dimension
Unit: mm



Specification

Model No.	Voltage		Consumption		Air Velocity		Air Delivery		Weight [kg]
	[V]	[Hz]	Fan	Fan+Light	[m/min]	[ft/min]	[m³/min]	[ft³/min]	
F-48DGL	220	50	31	50	185	656	200	8,299	5.2

Note: The value in Specification table are representative characteristics value at 220V, 50Hz. R.P.M. data is for reference only, values may vary subject to different conditions.

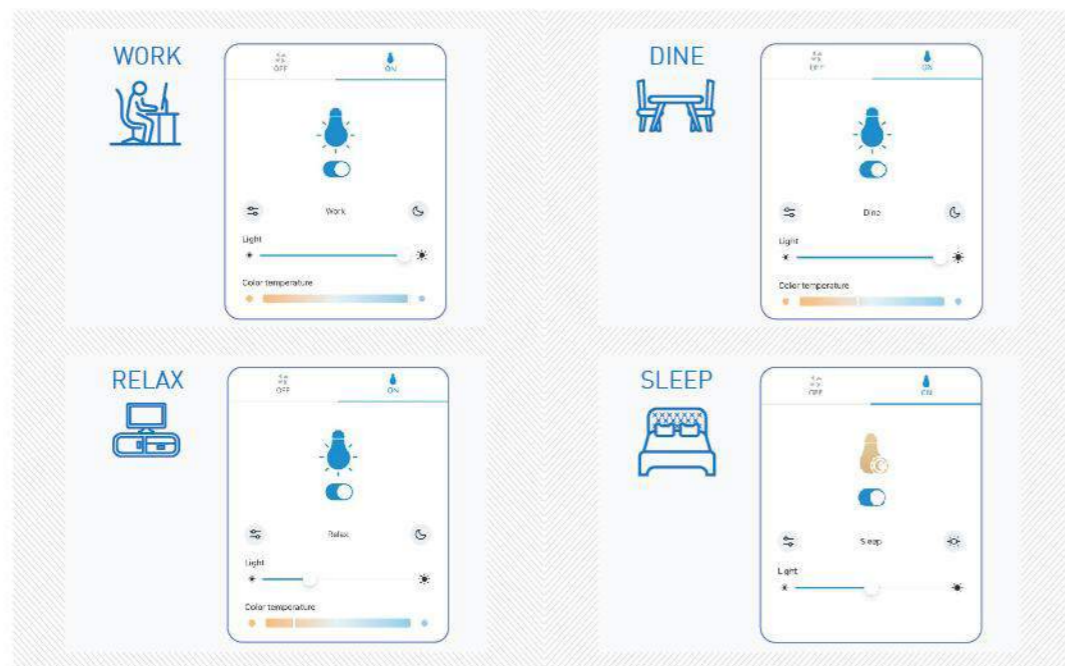
- Direct function: Fan and Light
- New generation DC motor
- Wireless 2.4 GHz
- Mobile application control (iOS/Android)
- LED lighting with brightness for daily life
- 1/f Yuragi Function
- Reverse function to operate with Air conditioner
- ABS-GF blade material for durability
- 24 hours On & Off timer
- Equipped with safety device
- Color: Black

LIGHTING SCENE SETTING

[Applicable for F-60DGN & F-48DGL]

Preset with 4 light setting for 4 common daily activities.

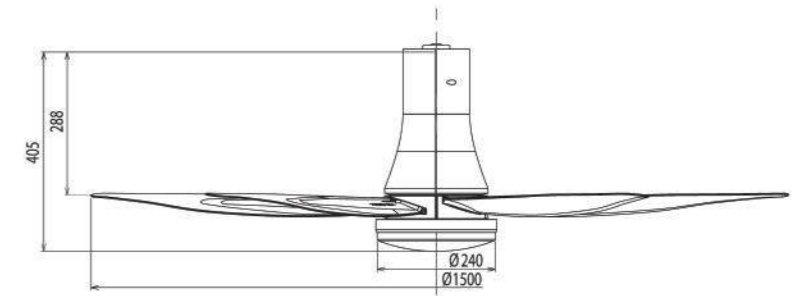
The preset scene can also be overwritten by adjusting the light setting according to your preferred comfort level and save the setting for easy 1-Touch access.



F-60UFN Ceiling Fan - Super Deluxe Series



Dimension
Unit: mm

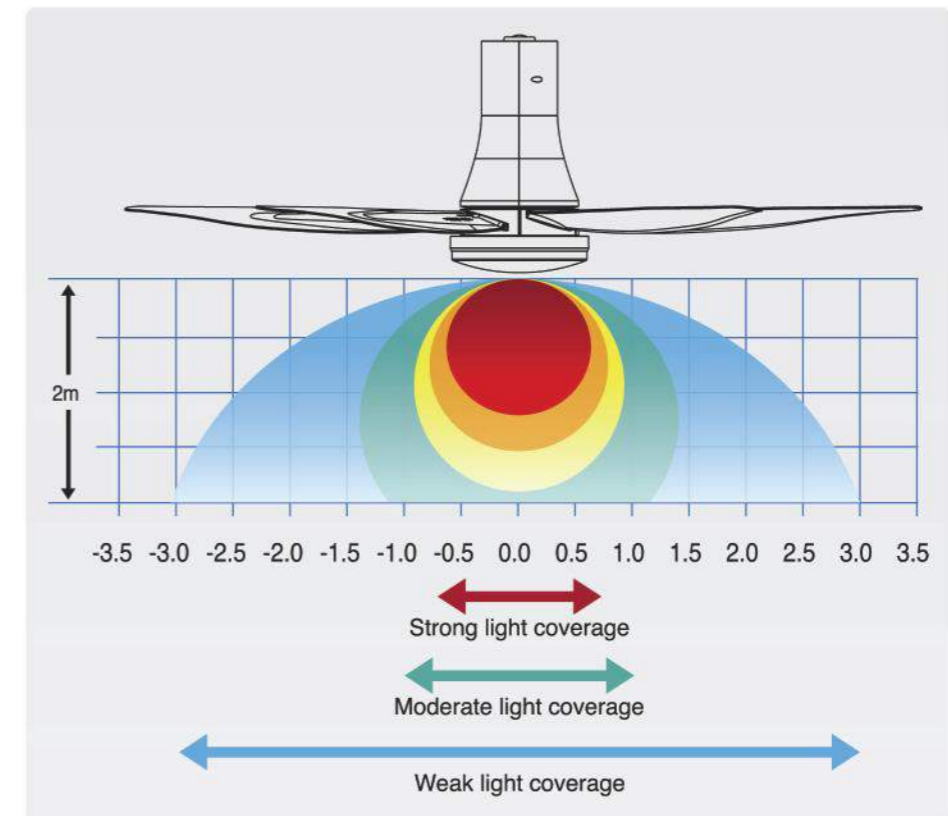


Specification

Model No.	Voltage		Consumption		Air Velocity		Air Delivery		Weight [kg]
	[V]	[Hz]	Fan	Fan+Light	[m/min]	[ft/min]	[m³/min]	[ft³/min]	
F-60UFN	220	50	37	59	200	656	235	8,299	6.2

Note: The value in Specification table are representative characteristics value at 220V, 50Hz. R.P.M. data is for reference only, values may vary subject to different conditions.

- Dual function: Fan and Light
- Direct Current (DC) motor adopted
- LED lighting with brightness for daily life
- Selectable light color (White/Daylight/Warm)
- 5-PPG Blade material for durability
- 1/f Yuragi Function
- LCD wireless remote control
- Equipped with safety device
- 1-8 hours On & Off timer
- 2-8 hours Sleep mode
- Color: Silver

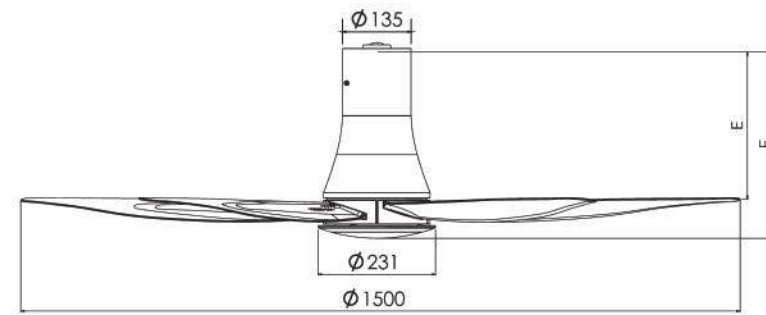


F-60TDN Ceiling Fan- Deluxe Series



- Direct current (DC) motor adopted
- 1/f Yuragi function
- 3D blade delivers smooth and strong airflow
- PPG blade material for durability
- LCD wireless remote control
- 9-speed control
- Sleep mode with On timer & Off timer
- Equipped with safety device
- Blade safety plate and safety wire attached

Dimension Unit: mm



Pipe Type	Short	Long
E	212	288
F	290	366

Specification

Model No.	[V]	*	Consumption [W]	R.P.M. [min ⁻¹]	Air Velocity [m/min]	Air Delivery [m ³ /min]	Weight [kg]
F-60TDN	220	Hi	37	228	200	235	5.3
		Lo	3	80			

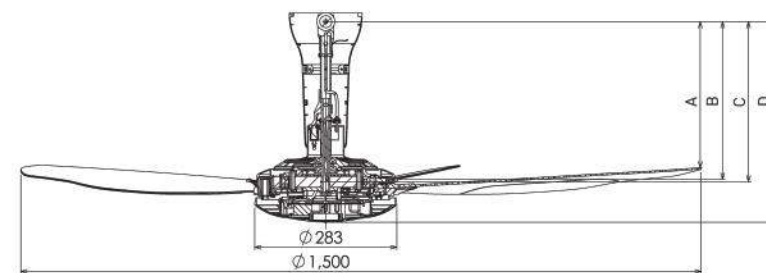
* Hi - Notch 9 / Lo - Notch 1
Note: The value in Specification table are representative characteristics value at 220V, 50Hz. R.P.M. data is for reference only, values may vary subject to different conditions.

F-60WWK Ceiling Fan- Deluxe Series



- 1/f Yuragi function
- 3D blade delivers smooth and strong airflow
- PPG blade material for durability
- LCD wireless remote controller
- 7 speed control
- Sleep mode
- 8-hour off timer
- Equipped with cut-off safety device
- Blade safety plate attached
- Safety wire adopted

Dimension Unit: mm



Pipe Type	Short	Long
A Blade	196	291
B Deco Cover	219	315
C Stator Center	224	320
D PCB Cover	304	400

Specification

Model No.	[V]	*	Consumption [W]	R.P.M. [min ⁻¹]	Air Velocity [m/min]	Air Delivery [m ³ /min]	Weight [kg]
F-60WWK	220	Hi	76	183	191	220	8
		Lo	22	83			

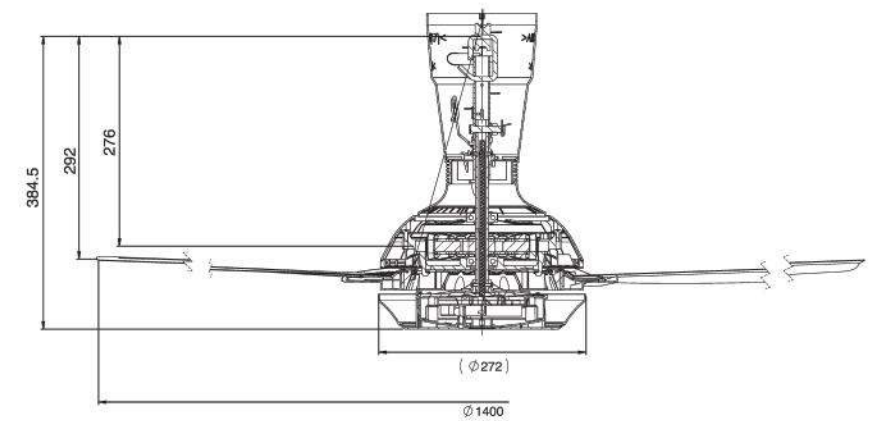
* Hi - Notch 9 / Lo - Notch 1
Note: The value in Specification table are representative characteristics value at 220V, 50Hz. R.P.M. data is for reference only, values may vary subject to different conditions.

F-56XPG Ceiling Fan - Wireless Remote Control Series



- 3-speed selection
- Wireless remote control
- Off timer with LED indicator (1, 3, 6 hours)
- Sleep mode
- Thermal cutoff prevent overheating
- Current fuse secure against power surge
- Safety wire provided
- Wobbling reduction mechanism prevent fan falling
- Fall prevention of blade adopted
- Permanently lubricated ball bearing equipped
- Painted steel blades
- Color: Black or White

Dimension Unit: mm



Specification

Model No.	[V]	*	Consumption [W]	R.P.M. [min ⁻¹]	Air Velocity [m/min]	Air Delivery [m ³ /min]	Weight [kg]
F56XPG	220	Hi	59	170	142	191	6.7
		Lo	16	87			

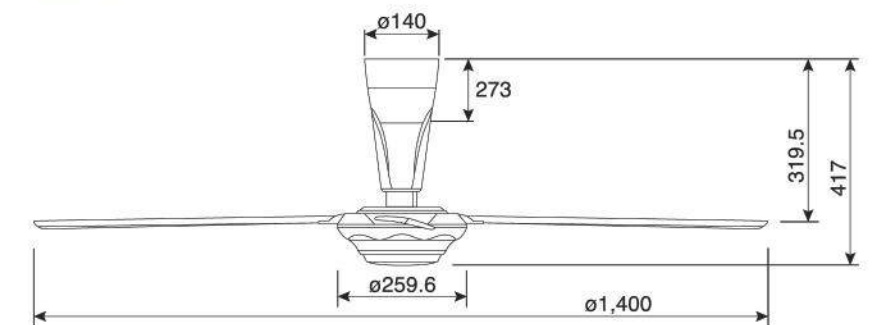
* Hi - Notch 9 / Lo - Notch 1
Note: The value in Specification table are representative characteristics value at 220V, 50Hz. R.P.M. data is for reference only, values may vary subject to different conditions.

F-56MPG Ceiling Fan - Wireless Remote Control Series



- Wireless remote controller
- 3-speed selection
- 1, 3, 6 hours timer
- Sleep mode
- Thermal fuse prevent overheating or power surge
- Safety wire provided
- Cut-off safety switch equipped
- Fall prevention of blade adopted
- Permanently lubricated ball-bearing assembly
- Color: Gold or Silver

Dimension Unit: mm



Specification

Model No.	[V]	*	Consumption [W]	R.P.M. [min ⁻¹]	Air Velocity [m/min]	Air Delivery [m ³ /min]	Weight [kg]
F56MPG	220	Hi	64	92	150	180	7
		Lo	59	88			

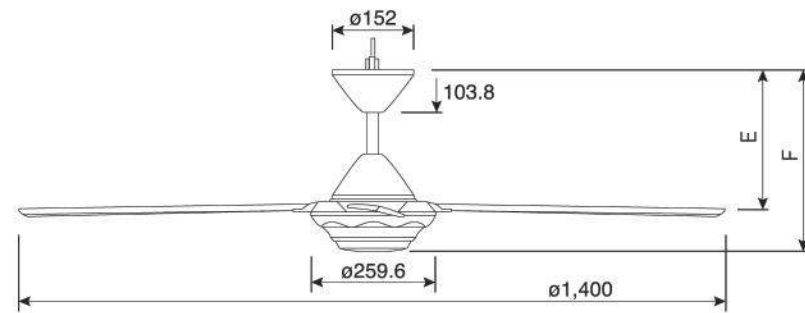
* Hi - Notch 9 / Lo - Notch 1
Note: The value in Specification table are representative characteristics value at 220V, 50Hz. R.P.M. data is for reference only, values may vary subject to different conditions.

F-56MZG Ceiling Fan - Wireless Remote Control Series



- Wireless remote controller
- 3-speed selection
- 1, 3, 6 hours timer
- Sleep mode
- Thermal fuse prevent overheating or power surge
- Safety wire provided
- Cut-off safety switch equipped
- Fall prevention of blade adopted
- Permanently lubricated ball-bearing assembly
- Color: Gold or Silver

Dimension Unit: mm



Pipe Type	9 inch	12 inch	16 inch	16 inch	22 inch
Pipe Length	229	305	406	457	559
E	332.5	408.5	509.5	560.5	662.5
F	430.0	506.0	607.0	658.0	760.0

Specification

Model No.	[V]	*	Consumption [W]	R.P.M. [min ⁻¹]	Air Velocity [m/min]	Air Delivery [m ³ /min]	Weight [kg]
F56MZG	220	Hi	64	92	150	180	6.9
		Lo	59	88			

* Hi - Notch 9 / Lo - Notch 1

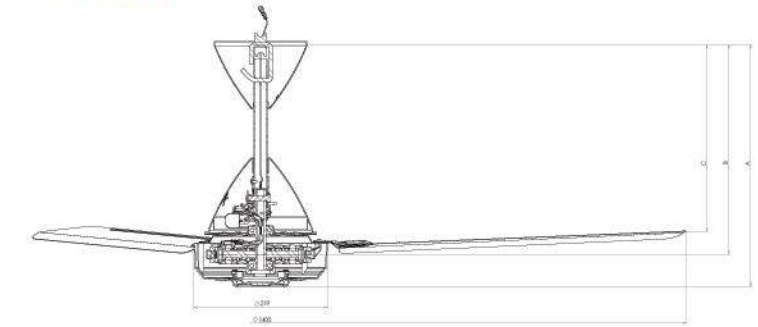
Note: The value in Specification table are representative characteristics value at 220V, 50Hz. R.P.M. data is for reference only, values may vary subject to different conditions.

F-56NCL Ceiling Fan - Classic Series



- Compact size condenser controlled regulator
- 5-speed selection
- Thermal fuse prevent overheating or power surge
- Safety wire provided
- Cut-off safety switch equipped
- Fall prevention of blade adopted
- Permanently lubricated ball bearing assembly
- Color: Brown

Dimension Unit: mm



Pipe Type	12 inch	18 inch
A	513	665
B	466	618
C	366	518

Specification

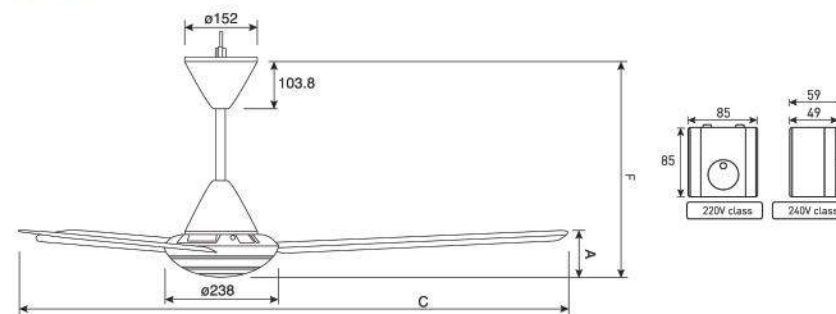
Model No.	[V]	*	Consumption [W]	R.P.M. [min ⁻¹]	Air Velocity [m/min]	Air Delivery [m ³ /min]	Weight [kg]
F-56NCL	220	Hi	70	268	165	220	5.2
		Lo	14	103			

F-60MZ2 Ceiling Fan - Regulator Control Series



- Compact size condenser controlled regulator
- 5-speed selection
- Thermal fuse prevent overheating or power surge
- Safety wire provided
- Cut-off safety switch equipped
- Fall prevention of blade adopted
- Permanently lubricated ball-bearing assembly
- Color: Black or White

Dimension Unit: mm



Pipe Type	9 inch	12 inch	16 inch	18 inch	22 inch	Model No.	A	C
Pipe Length	229	305	406	457	559	F-60MZ2	84.2	1,500
F	375.7	451.7	552.7	603.7	705.7			

Specification

Model No.	[V]	*	Consumption [W]	R.P.M. [min ⁻¹]	Air Velocity [m/min]	Air Delivery [m ³ /min]	Weight [kg]
F60MZ2	220	Hi	66	225	150	215	5.7
		Lo	15	94			

* Hi - Notch 9 / Lo - Notch 1

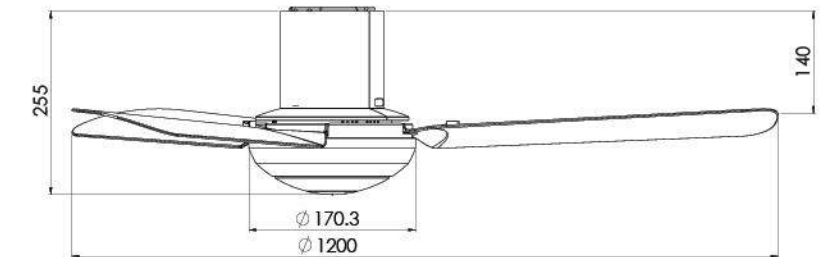
Note: The value in Specification table are representative characteristics value at 220V, 50Hz. R.P.M. data is for reference only, values may vary subject to different conditions.

F-48CZL Ceiling Fan - Bedroom Series



- Wireless remote controller
- 3-speed selection
- Sleep mode
- 1,3,6 hours timer
- Thermal fuse prevent over heating or power surge
- Safety wire provided
- Cut-off safety switch equipped
- Fall prevention ff blade adopted
- Permanently lubricated ball bearing equipped
- Color: Silver

Dimension Unit: mm



Specification

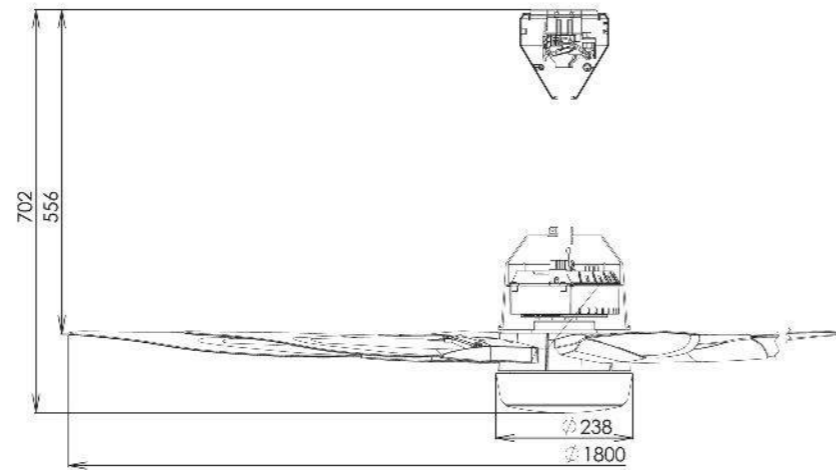
Model No.	[V]	*	Consumption [W]	R.P.M. [min ⁻¹]	Air Velocity [m/min]	Air Delivery [m ³ /min]	Weight [kg]
F-48CZL	220	Hi	55	209	150	160	5.5
		Lo		171			

F-70ZBP Ceiling Fan – Mid Fan Series



- Twin direct current (DC) motor technology
- Motion sensor equipped
- Big size fan blades for higher air delivery
- LCD wireless remote control with 9 speed selection
- 1/2 Yuragi function
- PPG blade material with aluminum blade extension
- Sleep mode and 8-hour on/off timer
- Thermal cutoff prevent overheating
- Current fuse secure against power surge
- Safety wire provided
- Cut-off safety switch equipped
- Fall prevention of blade adopted
- Permanently lubricated ball bearing equipped
- Color: Black or White

Dimension Unit: mm



Specification

Model No.	[V]	*	Consumption [W]	R.P.M. [min ⁻¹]	Air Velocity [m/min]		Air Delivery [m ³ /min]	Weight [kg]
F-70ZBP	220	Hi	51	185	185	310		11.9
		Lo	5	80				

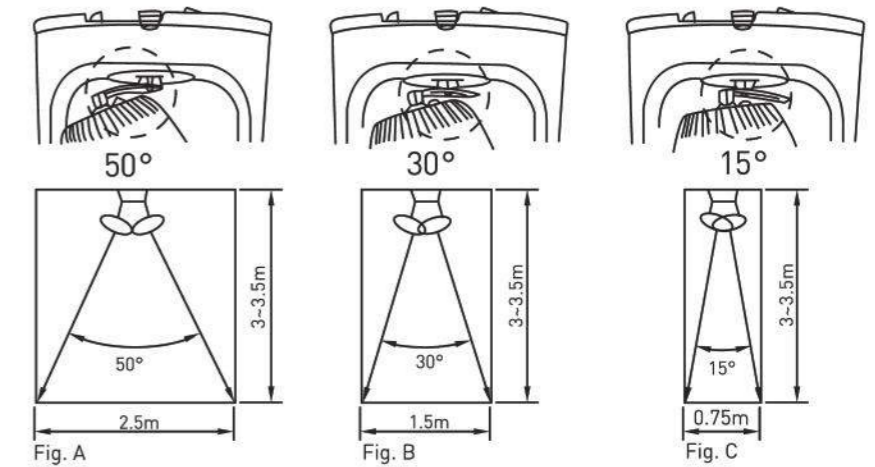
F-409Q Cycle Fan



- Oscillation over 360°
- 5-speed and on/off by wired regulator
- Easy angle adjustment
- Metal blade
- Color: Blue or Gold

Adjustment of Circulating Angle

The oscillation angle can be adjusted to 15,30 or 50 degrees.



Specification

Model No.	[V]	*	Consumption [W]	R.P.M. [min ⁻¹]	Air Velocity		Air Delivery		Weight [kg]
					[m/min]	[ft/min]	[m ³ /min]	[ft ³ /min]	
F-409Q	220	Hi	46.8 - 57.2	1,080 - 1,320	256	840	79	2,790	4.3
		Lo	22.5 - 27.5	690 - 850					

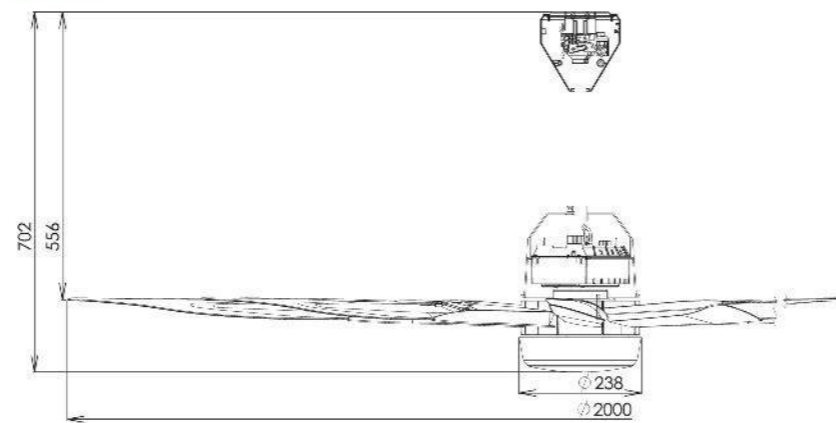
Note: The value in Specification table are representative characteristics value at 220V, 50Hz. R.P.M. data is for reference only, values may vary subject to different conditions.

F-80ZBR Ceiling Fan – Mid Fan Series



- Twin direct current (DC) motor technology
- Motion sensor equipped
- Big size fan blades for higher air delivery
- LCD wireless remote control with 9 speed selection
- 1/2 Yuragi function
- PPG blade material with aluminum blade extension
- Sleep mode and 8-hour on/off timer
- Thermal cutoff prevent overheating
- Current fuse secure against power surge
- Safety wire provided
- Cut-off safety switch equipped
- Fall prevention of blade adopted
- Permanently lubricated ball bearing equipped
- Color: Black or White

Dimension Unit: mm



Specification

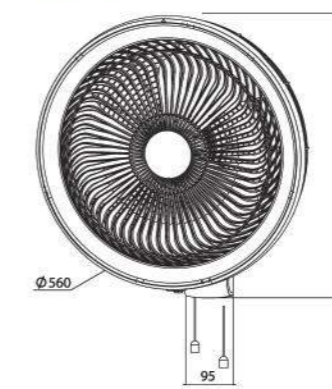
Model No.	[V]	*	Consumption [W]	R.P.M. [min ⁻¹]	Air Velocity [m/min]		Air Delivery [m ³ /min]	Weight [kg]
F-80ZBR	220	Hi	57	150	165	345		13.5
		Lo	4	50				

F-50YUZ Wall Fan – Cord Operated Type



- Guide Vane design generates strong and focus air flow up to 10 metre distance
- Aluminium blade for stronger air flow and durability
- Added angle adjust bolt for extra stability on the fan's knee joint
- Full automatic oscillation
- 3 speed ON/OFF pull switch
- New and modern Front Guard design
- Suitable for installation at various places with sleek outlook

Dimension Unit: mm



Specification

Model No.	[V]	*	Consumption [W]	R.P.M. [min ⁻¹]	Air Velocity [m/min]		Air Delivery [m ³ /min]	Weight [kg]
F-50YUZ	220	Hi	63	1230	300	110		6
		Lo	53	850				

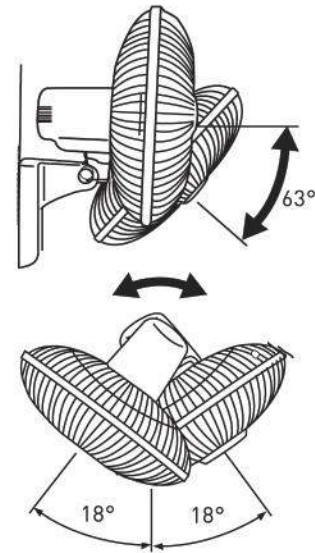
F-409U Wall Fan - Cord Operated Type



- Oscillation control
- 3-speed and on/off by pull switch
- Easy angle adjustment
- Blade - Metallic material
- Color: Blue or Gold

Adjustment of Circulation Angle "One-touch" adjustment of tilt

The air flow can be adjusted upward or downward by simply moving the guard up or down as shown in the figure. Adjust the angle of the fan only after first confirming that it has stopped rotating.



Double oscillation

To change the direction of the air flow, push the edge of the guard to the desired position.

Specification

Model No.	[V]	•	Consumption [W]	R.P.M. [min ⁻¹]	Air Velocity		Air Delivery		Weight [kg]
					[m/min]	[ft/min]	[m ³ /min]	[ft ³ /min]	
F-409U	50	Hi	42.8 - 51.2	1058 - 1293	226	741	63	2,225	4.4
		Lo	33.6 - 41.1	764 - 933					

Note: The value in Specification table are representative characteristics value at 220V, 50Hz. R.P.M. data is for reference only, values may vary subject to different conditions.

F-409K 40cm [16"]



- Wireless remote control
- 3-speed and off electronic switch
- Rhythm breeze function
- Height adjustable: 128cm - 143cm [50" - 56"]
- Transparent plastic blade
- Color: Blue or Beige or Red (Vietnam only)

Specification

Model No.	[V]	•	Consumption [W]	R.P.M. [min ⁻¹]	Air Velocity		Air Delivery		Weight [kg]
					[m/min]	[ft/min]	[m ³ /min]	[ft ³ /min]	
F-409K	50	Hi	45.9 - 56.1	999 - 1221	228	748	63	2,225	9.3
		Lo	35.0 - 42.8	716 - 875					

Note: The value in Specification table are representative characteristics value at 220V, 50Hz. R.P.M. data is for reference only, values may vary subject to different conditions.

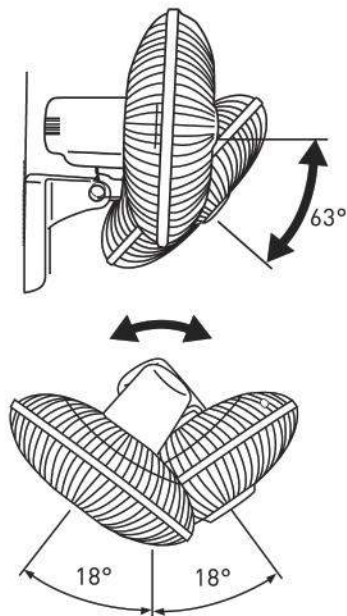
F-409M Wall Fan - Remote Control Type



- Wireless remote controller
- Oscillation control
- Easy angle adjustment
- 3-speed and off electronic switch
- Transparent plastic blade
- Color: Blue or Grey

Adjustment of Circulation Angle "One-touch" adjustment of tilt

The air flow can be adjusted upward or downward by simply moving the guard up or down as shown in the figure. Adjust the angle of the fan only after first confirming that it has stopped rotating.



Double oscillation

To change the direction of the air flow, push the edge of the guard to the desired position.

Specification

Model No.	[V]	•	Consumption [W]	R.P.M. [min ⁻¹]	Air Velocity		Air Delivery		Weight [kg]
					[m/min]	[ft/min]	[m ³ /min]	[ft ³ /min]	
F-409M	50	Hi	45.8 - 56.1	1059 - 1294	228	748	63	2,225	4.4
		Lo	33.8 - 41.4	765 - 935					

Note: The value in Specification table are representative characteristics value at 220V, 50Hz. R.P.M. data is for reference only, values may vary subject to different conditions.

F-407W 40cm [16"]



- 3-speed and off push-button switch
- Attractive twin lamps
- Height adjustable: 134cm - 157cm [52^{3/4}" - 61^{3/4}"]
- Metal blade
- Color: Blue or Gold

Specification

Model No.	[V]	•	Consumption [W]	R.P.M. [min ⁻¹]	Air Velocity		Air Delivery		Weight [kg]
					[m/min]	[ft/min]	[m ³ /min]	[ft ³ /min]	
F-407W	50	Hi	48.2 - 58.8	1058 - 1293	226	741	63	2,225	9.5
		Lo	40.0 - 48.8	764 - 933					

Note: The value in Specification table are representative characteristics value at 220V, 50Hz. R.P.M. data is for reference only, values may vary subject to different conditions.

F-308NH/F-307KH 30cm (12")



- 1/f Yuragi function
- 3-speed and electronic ON/OFF switch
- Slim and compact motor design
- 4-hour electronic timer
- Height adjustable: 91cm - 105cm (36" - 41")
- Wireless remote control
- Transparent plastic blade
- Color: Baby Pink or Pastel Blue



Remote Control

Specification

Model No.	Hz	*	Consumption [W]	R.P.M. [min ⁻¹]	Air Velocity [m/min]	Air Delivery		Weight [kg]
						[m ³ /min]	CFM	
F-308NH	50	Hi	34-42	935-1,140	181	40	1,412	4.8
		Lo	19-25	630-800				

Note: All values in specification table are at 220V



- 1/f Yuragi function
- The attached air filter combines Super alleru-buster, Green Tea Catechin and Anti-bacteria Enzyme functions
- 3-speed and electronic ON/OFF switch
- Wireless remote control
- Height adjustable: 66cm - 85cm (26" - 33")
- 4-hour electronic timer
- Transparent plastic blade
- Color: Metallic Green or Silver



Remote Control

Specification

Model No.	Hz	*	Consumption [W]	R.P.M. [min ⁻¹]	Air Velocity [m/min]	Air Delivery		Weight [kg]
						[m ³ /min]	CFM	
F-307KH	50	Hi	44	968-1232	201	51	1,412	4.8
		Lo	25	711-940				

Note: All values in specification table are at 220V

F-400C 40cm (16")



Beige gray

- 3-speed and push-button switch
- Transparent plastic blade
- Color: Ivory or Beige Gray

Specification

Model No.	[V]	*	Consumption [W]	R.P.M. [min ⁻¹]	Air Velocity		Air Delivery		Weight [kg]
					[m/min]	[ft/min]	[m ³ /min]	[ft ³ /min]	
F-400C	50	Hi	44.0-53.8	1,094-1,337	237	778	65	2,295	4.8
		Lo	54.0-66.0	625-763					

Note: The value in Specification table are representative characteristics value at 220V, 50Hz. R.P.M. data is for reference only, values may vary subject to different conditions.

VENTILATION PRODUCT SPECIFICATION

	Model No.	Phase		Power Consumption [W]	R.P.M [min ⁻¹]	Air Volume		Noise [dB(A)]	Weight [kg]	Duct Size [mm]
						50Hz				
						[CMH]	[CFM]			
Ceiling Mount Type Ventilating Fan	FV-24JR2	1	-	8	-	160	94	31	2.9	Ø100
	FV-24JA2	1	-	8	-	160	94	31	2.9	Ø100
	FV-24CUR1	1	-	11	-	140	82	25	2.8	Ø100
	FV-24CHR1	1	-	17	-	200	118	32	2.8	Ø100
	FV-24CURV1	1	-	11	-	140	82	25	2.9	Ø100
	FV-24CHR1V1	1	-	17	-	200	118	32	2.9	Ø100
	FV-17CU8	1	-	7.5	-	85	50	23	1.7	Ø100
	FV-24CU8	1	-	10.5	-	140	82	25	2.7	Ø100
	FV-24CD8	1	-	13.5	-	170	100	28.5	2.7	Ø100
	FV-24CH8	1	-	16.5	-	200	118	32	2.7	Ø100
	FV-27CH9	1	Hi	28	570	330	194	34	4.4	Ø150
		1	Lo	23	480	260	153	30		
	FV-32CD9	1	Hi	42	590	430	253	36	5.2	Ø150
		1	Lo	32	460	300	177	28		
	FV-32CH9	1	Hi	55	710	530	312	41	5.6	Ø150
		1	Lo	45	570	400	235	34		
	FV-38CD8	1	Hi	90	645	640	377	44	9.7	Ø150
		1	Lo	66	456	430	253	35		
	FV-38CH8	1	Hi	122	790	800	471	50	10.4	Ø150
		1	Lo	89	540	525	309	40		
FV-20CUT1	1	-	22.6	1153	438	258	40.5	1.8	-	
FV-15TGU1	1	-	10	1330	240	141	35	1.2	-	
FV-25TGU5	1	-	26.5	970	612	360	39	1.4	-	
Low Noise Type Cabinet Fan (In-line Fan)	FV-12NS3	1	Hi	18	1265	180	106	21	5.5	Ø100
		1	Lo	17	1020	145	85	17		
	FV-15NS3	1	Hi	33	1270	340	200	25	6.5	Ø150
		1	Lo	29.5	1100	275	162	22		
	FV-18NS3	1	Hi	60	1250	500	294	29	8.5	Ø150
		1	Lo	55	1100	405	238	27		
	FV-18NF3	1	Hi	91	1190	770	453	31	10	Ø200
		1	Lo	80	1000	620	365	29		
	FV-20NS3	1	Hi	120	1195	920	541	32	14	Ø200
		1	Lo	113	1000	720	424	29		
	FV-23NL3	1	Hi	230	1245	1200	706	40	18	Ø200
		1	Lo	170	985	900	530	34		
	FV-25NS3	1	Hi	345	1125	1700	1001	41	24	Ø250
		1	Lo	265	950	1380	812	38		
	FV-25NF3	1	Hi	390	1225	1900	1118	43	24	Ø250
		1	Lo	325	1070	1600	942	40		

VENTILATION PRODUCT SPECIFICATION

INSTALLATION METHOD

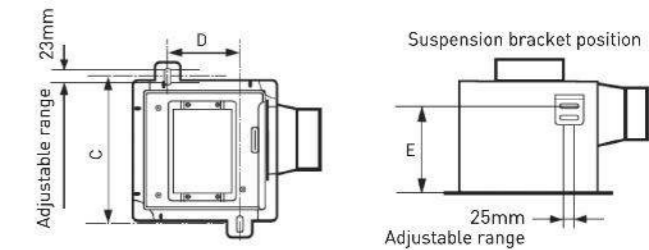
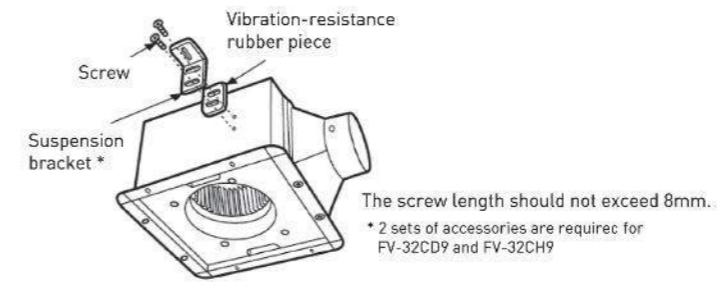
	Model No.	Phase		Power Consumption [W]	R.P.M [min ⁻¹]	Air Volume		Noise [dB(A)]	Weight [kg]	Duct Size [mm]
						50Hz				
						[CMH]	[CFM]			
Industrial Type Ventilating Fan	FV-25GS4	1	-	39	1360	1100	647	34	4.4	-
	FV-30GS4	1	-	59	1360	1800	1059	38	6.1	-
	FV-35GS4	1	-	88	1420	2670	1571	44	10.5	-
	FV-40GS4	1	-	161	1450	3780	2224	47	19	-
	FV-45GS4	3	-	227	1410	5400	3176	51	19	-
	FV-50GS4	3	-	249	960	6130	3608	47	22.5	-
	FV-60GS4	3	-	245	970	8040	4732	50	34	-
	FV-45GT4	1	-	220	1450	5520	3249	52	18.5	-
	FV-50GT4	1	-	320	1400	6960	4097	54	28.5	-
	FV-60GT4	1	-	310	940	9420	5544	49	34	-
Wall Mount Ventilating Fan	FV-10EGS1	1	-	5.5	2706	75	44	33	0.9	Ø120 - Ø125
	FV-15EGS1	1	-	6.2	2329	150	88	36	1.1	Ø165 - Ø170
	FV-10EGF1	1	-	5.5	2706	75	44	31	0.9	Ø135 ± 5
	FV-15EGF1	1	-	6.2	2369	155	91	33	1.1	Ø180 ± 5
	FV-25AUF1	1	-	34	1100	835	491	42	2.8	-
	FV-20AU9	1	-	20	1190	546	321	40	2.2	-
	FV-25AU9	1	-	27	1060	835	491	43	2.7	-
	FV-30AU9	1	-	31	880	1150	676	43	3.1	-
	FV-20AL9	1	-	20	1190	546	321	40	2.2	-
	FV-25AL9	1	-	27	1060	835	491	43	2.7	-
	FV-30AL7	1	-	31	880	930	547	43	3.1	-
	FV-20RL7	1	Exhaust	20	1240	546	321	39	2.4	-
		1	Intake	15	1190	370	218	46		-
	FV-25RL7	1	Exhaust	29	1100	840	494	43	2.7	-
		1	Intake	21	1035	580	341	45		-
	FV-30RL6	1	Exhaust	31	890	990	583	44	3.1	-
1		Intake	25	770	600	353	43	-		
FV-15AUL1	1	-	12.5	1450	255	150	36	1.2	-	
FV-10BAT1	1	-	15	1250	80	47	40	1.7	-	

Ceiling Mount Type Ventilating Fan - Applicable Models:

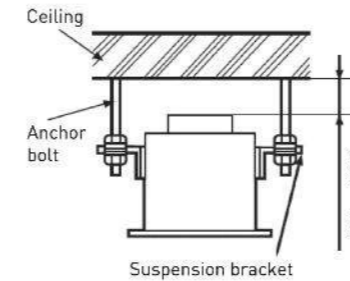
FV-24CUR1 / FV-24CHR1 / FV-24CURV1 / FV-24CHR1 / FV-17CU8 / FV-24CU8 / FV-24CD8 / FV-24CH8 / FV-27CH9 / FV-32CD9 / FV-32CH9

1A Installation with anchor bolts

1. Secure the 1 set of suspension bracket (optional accessory) with screws.



2. Mount the fan body enclosure on the anchor bolts (M8-M10, not supplied).



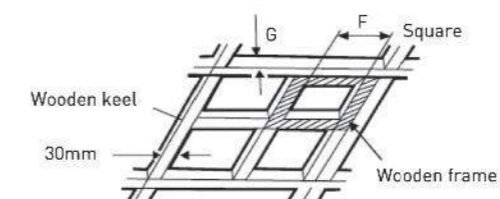
Model No.	C	D	E
FV-24CUR1/FV-24CHR1	266mm	131mm	112mm
FV-24CURV1/FV-24CHR1	266mm	131mm	112mm
FV-17CU8	206mm	89mm	103mm
FV-24CU8/ FV-24CD8/ FV-24CH8	266mm	131mm	112mm
FV-27CH9	296mm	160mm	158.5mm
FV-32CD9/ FV-32CH9	346mm	200mm	158.5mm

1B Installation of adaptor assembly first

1. First remove the hexagon screw attaching the adaptor assembly to the fan body.



2. Build a wooden frame horizontally from the keel. Note that the distance between the top of the fan body and the ceiling should be at least 20mm.

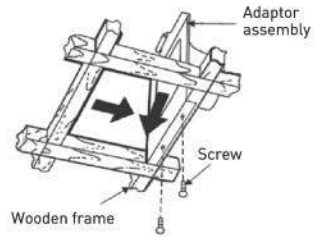


Model No.	F	G
FV-24CUR1/FV-24CHR1	240 ± 2	25-30mm
FV-24CURV1/FV-24CHR1	240 ± 2	25-30mm
FV-17CU8	177 ± 2	25-30mm
FV-24CU8/ FV-24CD8/ FV-24CH8	240 ± 2	25-30mm
FV-27CH9	270 ± 2	25-30mm
FV-32CD9/ FV-32CH9	320 ± 2	25-30mm

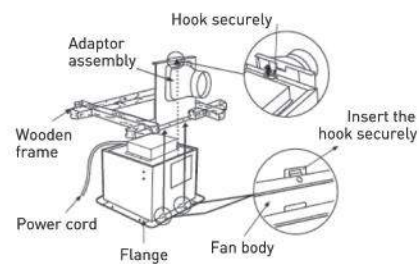
* Ceiling joist must be subject to static load more than 5 times of the product weight.

Ceiling Mount Type Ventilating Fan - Applicable Models

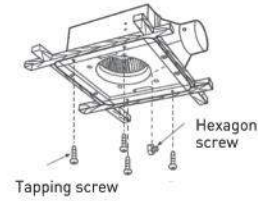
3. Attach the adaptor assembly to the wooden frame as shown in the figure.



4. Insert the fan body in the wooden frame, and connect it to the adaptor assembly.



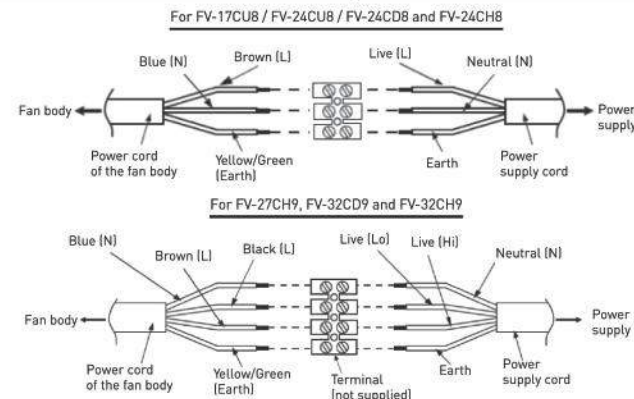
5. Firmly secure the fan body with four tapping screws and a hexagon screw.



2 Power cord connection

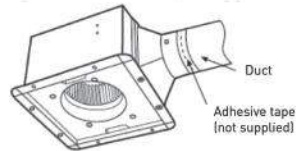
Connect the power cord to the power supply line according to the wiring diagram and the local electrical wiring rules of fixed wiring.

Make sure all connections are fastened firmly after wiring is finished.

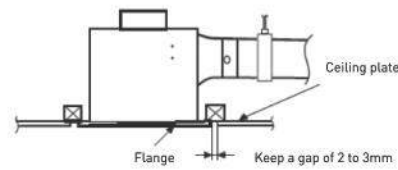


3 Duct connection and ceiling plate installation

1. Insert the duct into the adaptor assembly, and tighten it with adhesive tape (not supplied). (Suspend the duct from the ceiling to prevent any external force onto the fan body)



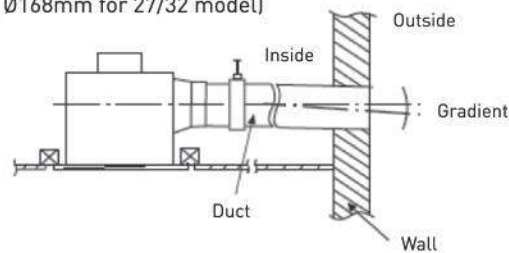
2. Install the ceiling plate. Note that the gap between the flange and the ceiling plate should be 2 to 3mm.



3. Install the pipe hood or vent cap (optional accessories) on the outer wall.

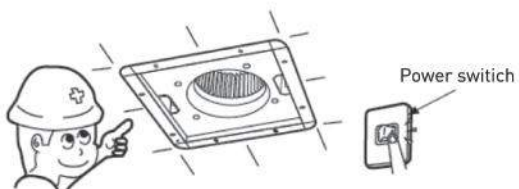
	Pipe Hood	Vent Cap
FV-17CU8 / FV-24CU8 / FV-24CD8 / FV-24CH8	FV-MCX100P	FV-VCX100P
FV-27CH9 / FV-32CD9 / FV-32CH9	FV-MCX150P	FV-VCX150P

Slope the duct downward and guide it through the wall to the outside. Be sure to prevent rainwater from falling in the duct from its outlet. (The minimum size of the hole opening on the wall is: Ø116mm for 17/24 models, Ø168mm for 27/32 model)

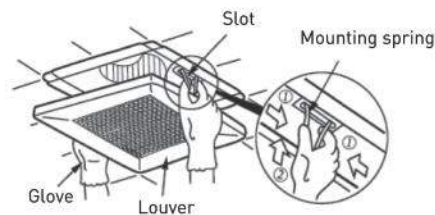


4 Test run and louver installation

1. When the power is turned on, check for malfunctions as follow:
Does the fan rotate correctly?
Does the fan rotate anti-clockwise?
Is there any abnormal sound or vibration?

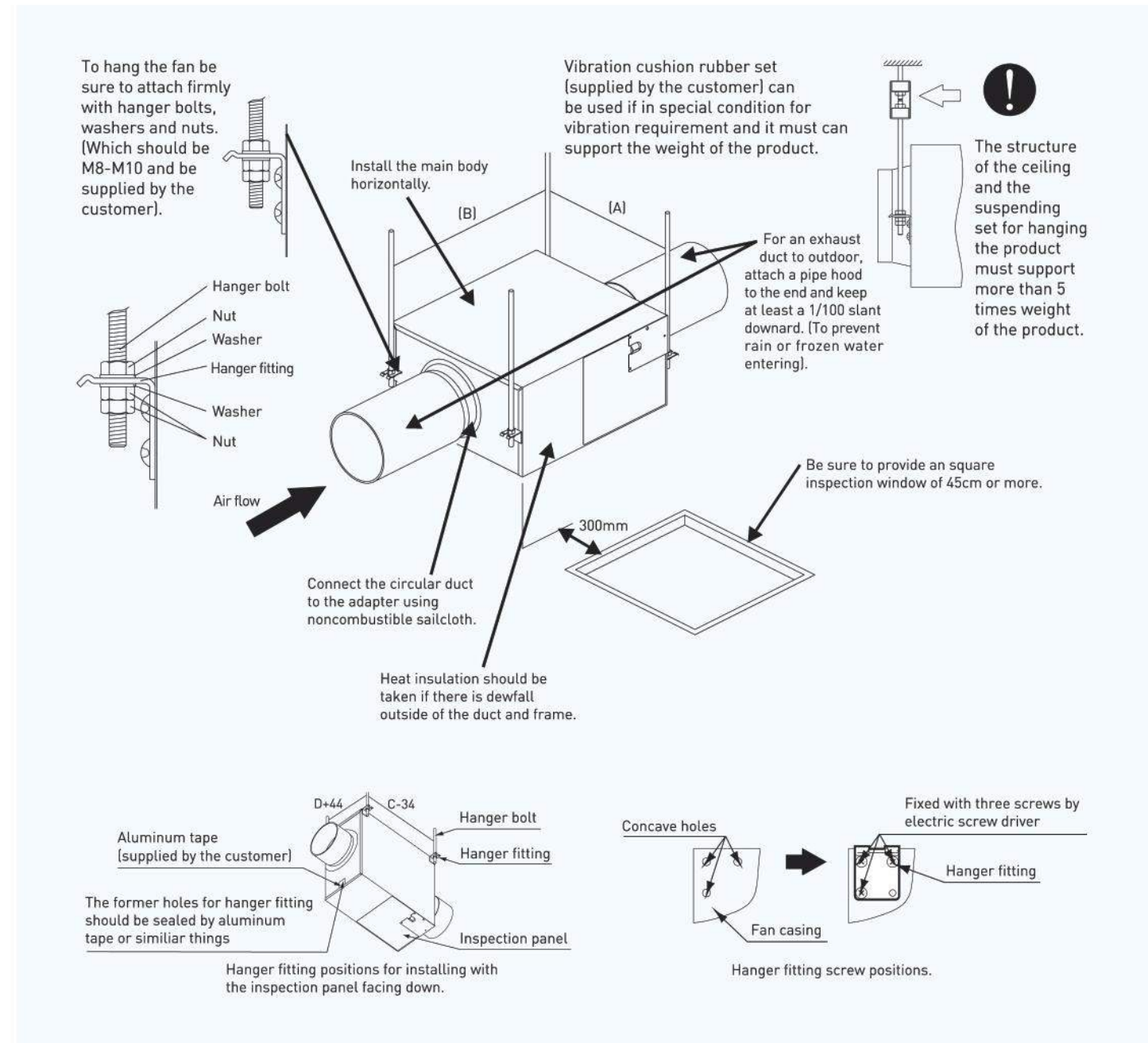


2. Insert the mounting spring into the slots and mount the louver to the fan body. (Please wear gloves during installation)



Low Noise Type Cabinet Fan (In-line Fan)

Applicable Models - FV-12NS3 / FV-15NS3 / FV-18NS3 / FV-18NF3 / FV-20NS3
FV-23NL3 / FV-25NS3 / FV-25NF3



Notes:

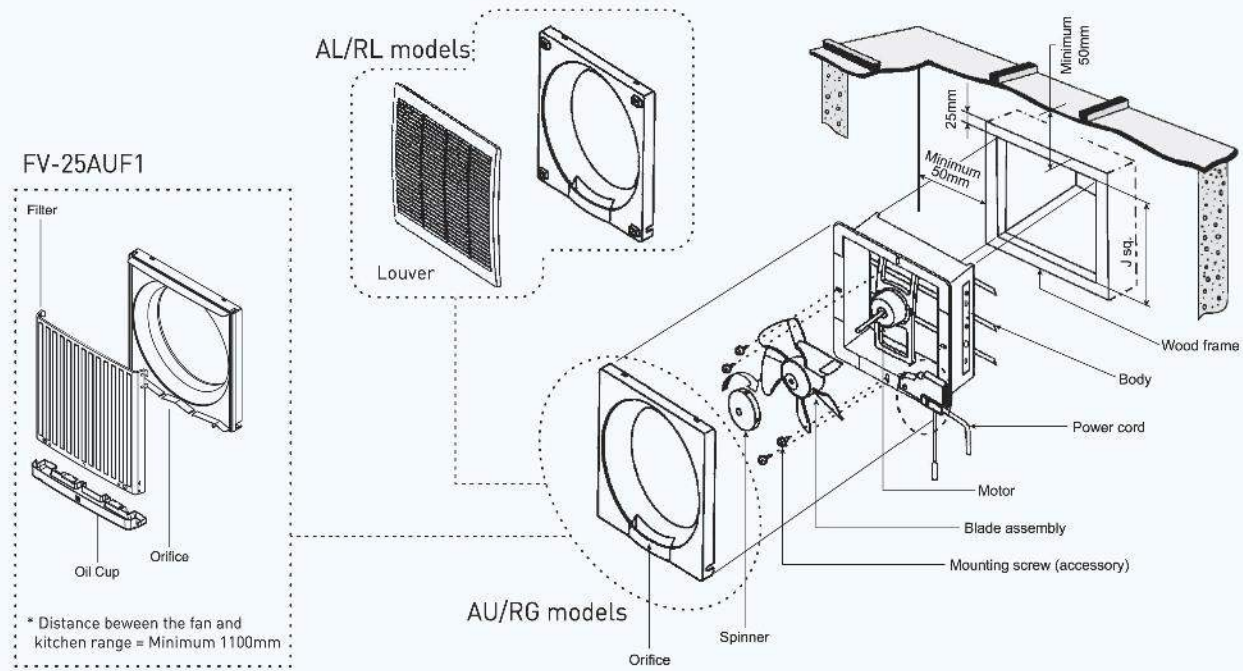
To install the fan with the inspection panel facing down, remove the attached four hanger fittings and re-attach them in the holes on the top and bottom surfaces (use the screws you just removed). The former holes for installing the hanger fitting need to be sealed.

Model No.	A	B	C	D
FV-12NS3	250	335	291	184
FV-15NS3	250	346	302	206
FV-18NS3	276	382	338	232
FV-18NF3	336	441	397	254
FV-20NS3	376	485	441	272
FV-23NL3	424	513	469	298
FV-25NS3	450	549	505	334
FV-25NF3	450	549	505	334

Unit: mm

Wall Mount Type Ventilating Fan

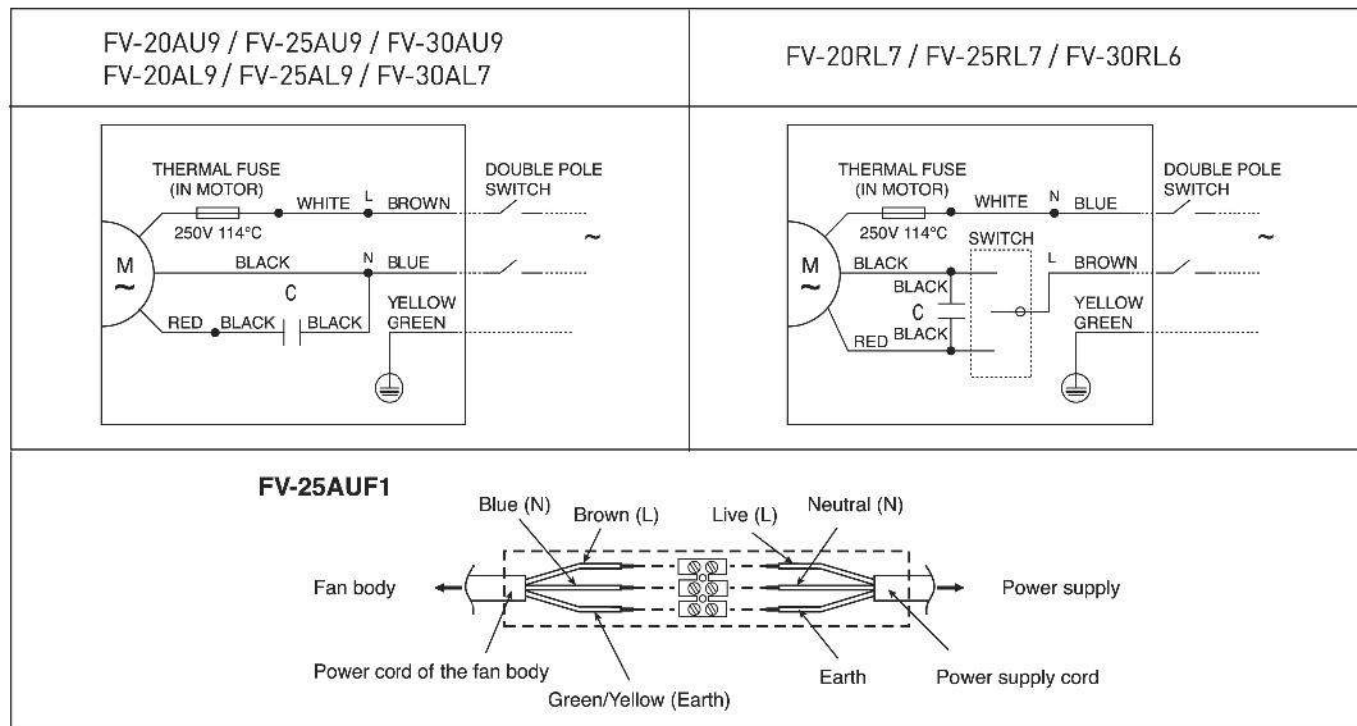
Applicable Models - FV-20AU9 / FV-25AU9 / FV-30AU9 / FV-20AL9 / FV-25AL9 / FV-30AL7
FV-20RL7 / FV-25RL7 / FV-30RL6



Wiring Diagram

Connect the power cord to the power supply line according to the wiring diagram and the local electrical wiring rules of fixed wiring.

- Make sure all connections are fastened firmly after wiring is finished.
- It is required to use terminal [not included] that complies IEC 60998.



Ceiling Fan

Applicable Models - F-60WWK

- Remove the supplied bolt, nut, cotter pin and pulley at the top. Place the pulley onto the ceiling hook.
- Remove the spring washer and safety wire screw from the pipe. Arrange and tie the safety wire as shown.
- Firmly screw the safety wire onto the pipe.
- Connect the wires to the house supply line according to diagram shown. Pull the wires after fixing to ensure the wires are tighten firmly.
- Before proceed to Step A, remove the screws from the canopy.

Step A : Take the canopy (2pcs) and press (until "click" sound is heard) it as shown.

Step B : Fix the screws into the canopy and tighten it.

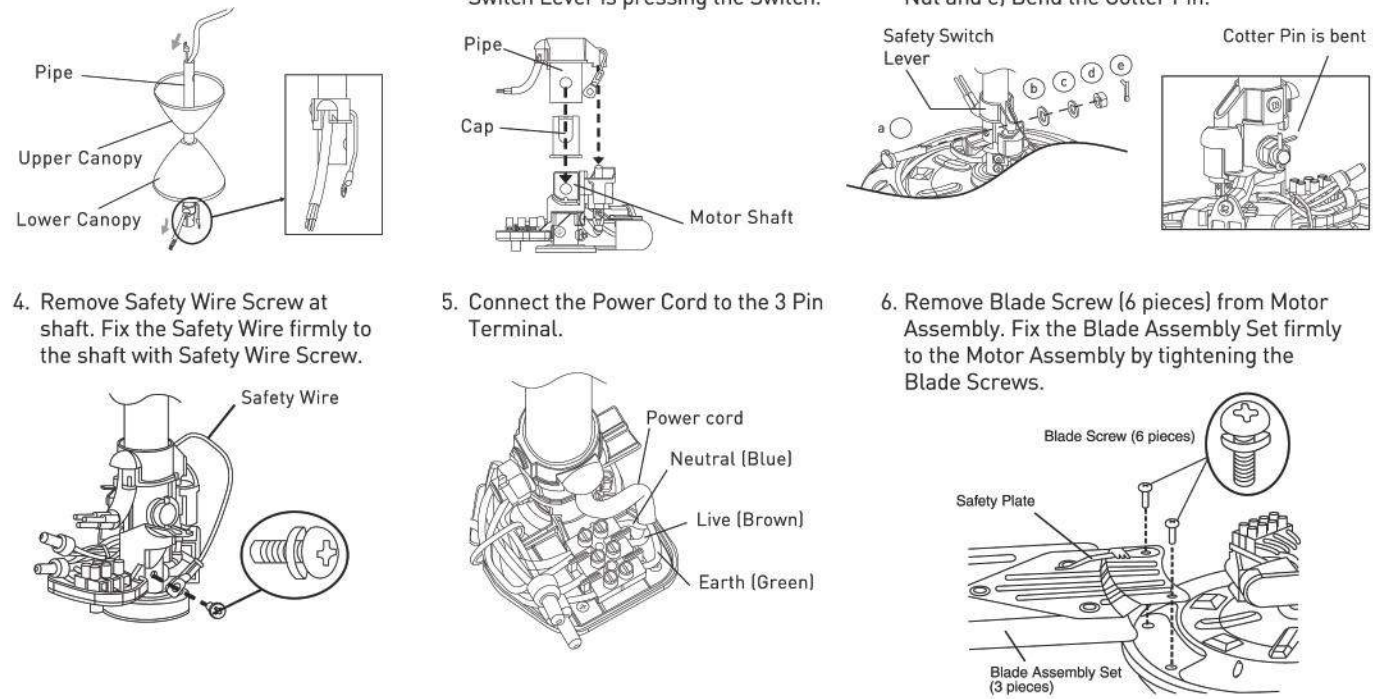
Step C : Separate the canopy plate set as shown in picture.

Step D : Take the canopy plate (2pcs) and clip it as shown.
- Hook the blades on the motor and tighten with the blade screws.
- Fix the decoration cap at the motor.

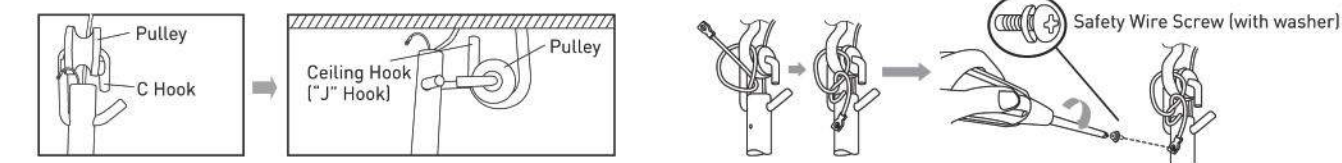
Ceiling Fan

Applicable Models - Regulator Control Series

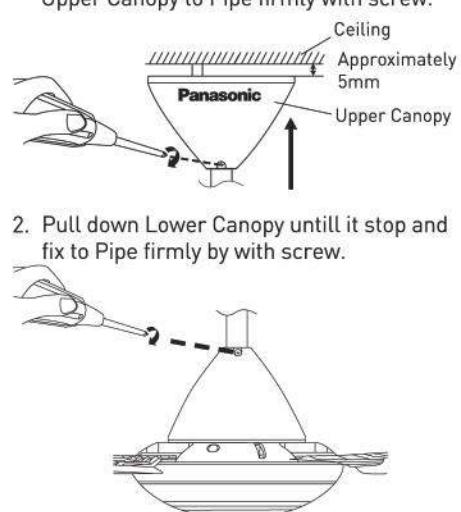
A Assemble Pipe To Motor Assembly

1. Pull power cord (from power supply) and insert into the Pipe hole.
 2. Insert the Cap to the Motor Shaft, fix the Pipe to Motor Shaft and ensure the Switch Lever is pressing the Switch.
 3. Fix the Pipe and Motor Assembly with a) Ellipse Bolt, b) P-R Washer, c) Spring Washer, d) Hexa Nut and e) Bend the Cotter Pin.
 4. Remove Safety Wire Screw at shaft. Fix the Safety Wire firmly to the shaft with Safety Wire Screw.
 5. Connect the Power Cord to the 3 Pin Terminal.
 6. Remove Blade Screw (6 pieces) from Motor Assembly. Fix the Blade Assembly Set firmly to the Motor Assembly by tightening the Blade Screws.
- 

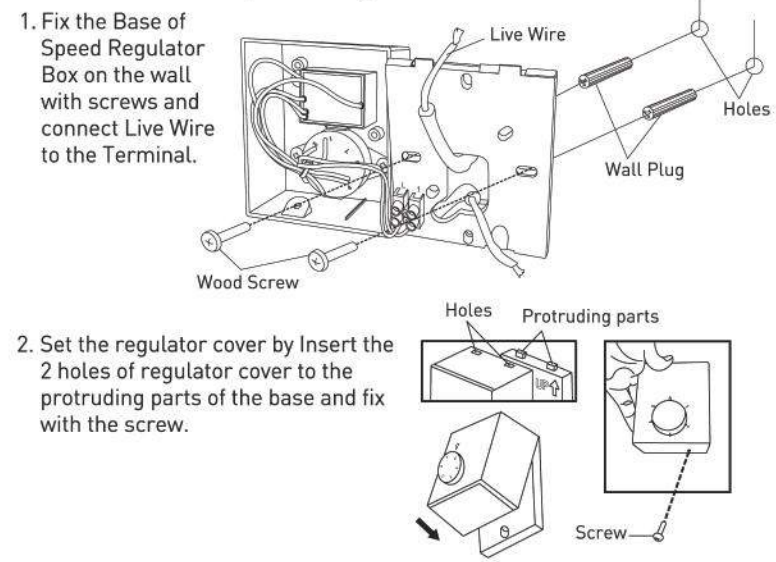
B Installation to Ceiling

1. Cross C Hook of Pulley Set to the Pipe and place the Pulley on Ceiling Hook.
 2. Loop the Safety Wire to the Ceiling Hook and screw it to the Pipe with Safety Wire Screw.
- 

C Fix the Canopy

1. Adjust Upper Canopy position and fix Upper Canopy to Pipe firmly with screw.
 2. Pull down Lower Canopy until it stop and fix to Pipe firmly by with screw.
- 

D Installation of Speed Regulator

1. Fix the Base of Speed Regulator Box on the wall with screws and connect Live Wire to the Terminal.
 2. Set the regulator cover by Insert the 2 holes of regulator cover to the protruding parts of the base and fix with the screw.
- 



AIR PURIFIER

Air Purifier Provide Clean And Fresh Air For You And Your Family

1. **nanoe™**
Provide your healthy and maintenance your beauty with the unique technology
2. **ECONAVI**
Eco operation mode that runs only as it is necessary
3. **HEPA Composite Filter**
Anti-bacteria Enzyme, Green tea Catechin, Super alleru-buster
HEPA Composite Filter not only can remove 0.3um particles, it also consists of 3 kinds of technology, Super alleru-buster, Green tea Catechin and Anti- bacteria enzyme. It can inhabit 17 kinds of virus, bacteria and allergen up to 99%

Specification

	F-PXM55A	F-PXM35A	F-PXJ30A	F-P15EHA
Style				
Color	Gold	Silver and Blue	White	White
Applicable area	42	26	20	13
Air Purifying				
Air Volume (Hi / Mid / Low)	5.3 / 2.0 / 0.9	3.5 / 2.0 / 1.0	2.8 / 1.8 / 0.8	1.6 / 1.2 / 0.8
Power Consumption (Hi / Mid / Low)	49 / 11 / 7	24 / 9 / 6	30 / 22 / 15	29 / 22 / 18
Noise (Hi / Mid / Low)	52 / 32 / 18	44 / 32 / 18	44 / 35 / 21	44 / 40 / 32
Dust Filter (Lifetime)	HEPA Composite Filter	HEPA Composite Filter	Composite Filter	HEPA Dust Collection Filter
Deodorizing Filter (Lifetime)	(10Y)	(3Y)	(2Y)	(2Y)
Filter Replace Indicator/ Filter Life Check	•	•	•	•
Motor Type	DC	DC	AC	AC
3D Circulation Airflow	•	•	•	•
ECONAVI	•	-	-	-
Auto Mode	•	•	•	-
Turbo Mode	PM2.5	•	•	-
Sleep Mode (8 hours)	•	•	•	-
Spot Air Mode	-	-	-	-
Sensor	Dirt/Odor/Light	Odor	Odor	-
Clean Sign	•	•	•	-
PM2.5 Indicator	•	-	-	-
Child Lock	•	-	-	•
Brightness Control	-	-	-	-
Dimension (H x W x D)	580 x 300 x 205	520 x 300 x 189	540 x 311 x 210	385 x 310 x 185
Weight (Kg)	5.8	4.8	4.3	3.5
Air Purifying & Humidity				
Humidity Capacity	-	-	-	-
Air Volume (Hi / Mid / Low)	-	-	-	-
Power Consumption (Hi / Mid / Low)	-	-	-	-
Noise (Hi / Mid / Low)	-	-	-	-
Humidity Filter (Lifetime)	-	-	-	-

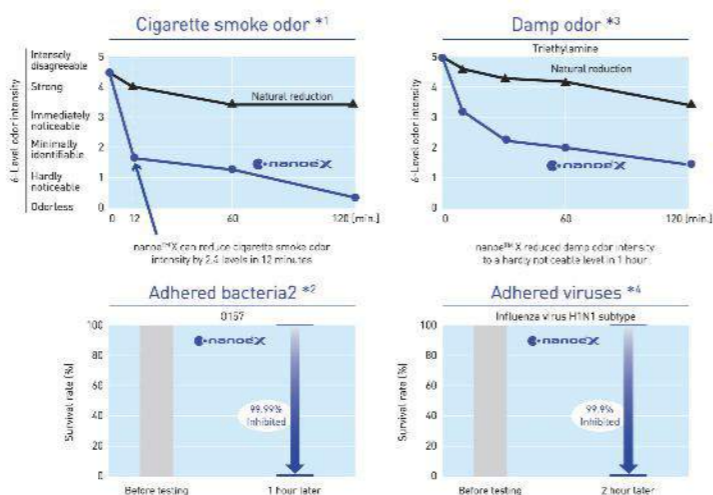
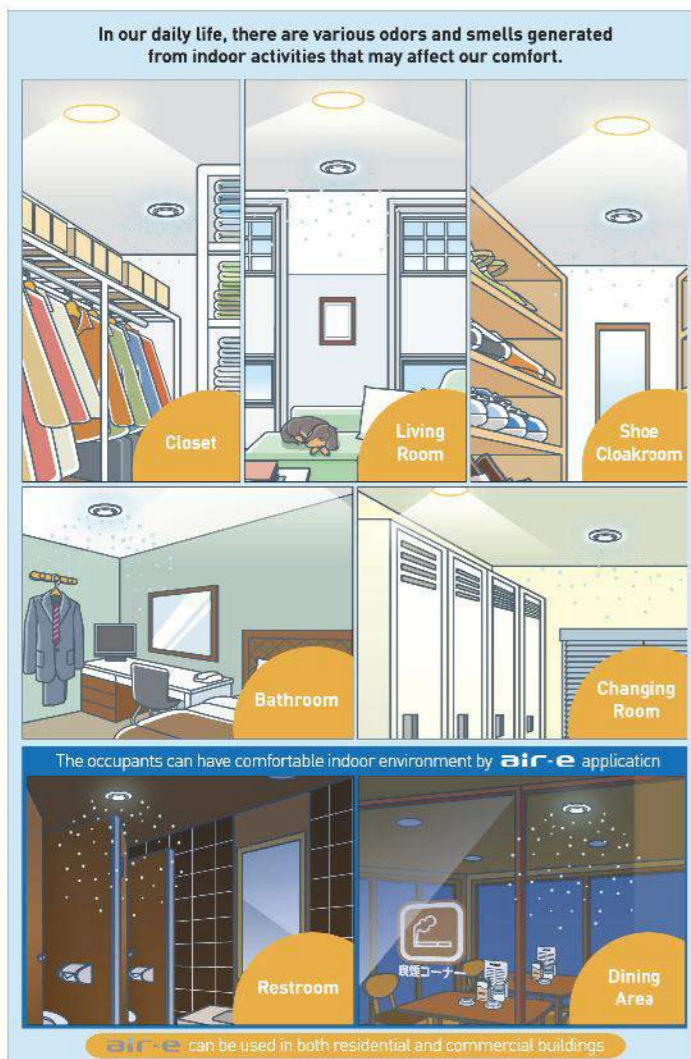
PURIFYING INDOOR AIR

air-e ceiling mount nanoe™ generator



Deodorize

Inhibits Bacteria, Viruses, Mold & Allergens



(*1) (Testing organization) Panasonic Product Analysis Center (Testing method) Verified using the six-level odor intensity scale method in an approximately 23m² sized test room. (Deodorization method) nanoe™ released (Test substance) Surface-attached cigarette smoke odor (Test result) Odor intensity reduced by 2.4 levels in 12mins. (AA33-1604'5-N04).

(*2) (Adhered bacteria) (0157) (Testing organization) Japan Food Research Laboratories (Testing method) Measured the number of bacteria adhered to a cloth in an approximately 45L sized airtight test room (Inhibition method) nanoe™ released (Test substance) Adhered bacteria (Test result) Inhibited by at least 99.99% in 1 hour (208120880_001).

(*3) (Testing organization) Panasonic Product Analysis Center (Testing method) Verified using the six-level odor intensity scale method in an approximately 23m² sized test room. (Deodorization method) nanoe™ released (Test substance) Surface-attached damp odor (Test result) Odor intensity reduced by 1.7 levels in 0.5 hours (Y16RA002).

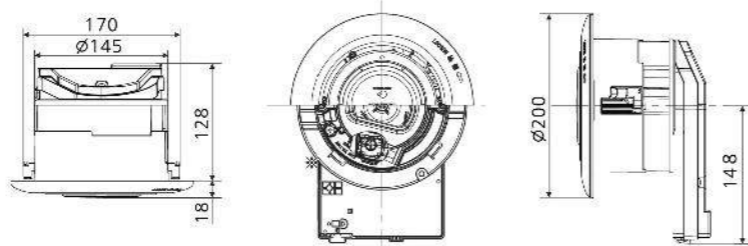
(*4) (Adhered virus) (Influenza virus H1N1 subtype) (Testing organization) Kitazato Research Center for Environmental Science (Testing method) Measured the number of virus adhered to a cloth in an approximately 1m² sized airtight test room (Inhibition method) nanoe™ released (Test substance) Adhered virus (Test result) Inhibited by at least 99.99% in 2 hours (21_0084_1).

Disclaimer: Data provided regarding the effectiveness of nanoe™ X and nanoe™ have been obtained through experiments under special conditions using devices which generate electrostatic atomized water, and have not been tested through commercial products with the devices incorporated in them.

Deodorization effect varies according to the environment (temperature and humidity), operation time, odor, and fabric types. It does not eliminate toxic substances in cigarettes (carbon monoxide, etc.). Odors that are continuously generated (e.g. building material odors and pet odors) are not completely eliminated. Results may vary based on usage, and seasonal/ environmental variables (temperature and humidity). nanoe™ X and nanoe™ inhibit activity or growth of viruses, but do not prevent infection.

Individual results may vary based on usage, and environmental variables (temperature and humidity).

● Main Dimension (Unit: mm)



Model No	Rated Voltage [V]	Rated Frequency [Hz]	Power Consumption [W]	Air Volume [m ³ /min]	Noise [dB]	Net Weight [kg]
FV-15CSD1	220	50	4	15	23.5	1.1

1. The value of air volume, power consumption and noise are specified at the static pressure of 0Pa.
 2. The value of air volume is the mean value and a tolerance of ± 10% is allowed.
 3. The value of noise level is A weight average sound pressure level, the mean value is measured by our company. A tolerance of +3dB/-7dB is allowed. The noise is measured at 1m apart from the left, the front and the below of the product.

F-PXU70A



Air Purification

- nanoe™
- HEPA Composite Filter
- Super Nano-technology Deodorizing Filter
- De-Formaldehyde Function

Indicator

- LCD Indication Panel
- PM2.5 Concentration Digital Indicator
- Odor Level Indicator
- Filter Replacement Indicator

Other Features

- PM2.5 / Odor Sensor
- Brightness Sensor
- Child Lock

Specifications

Setting	Air Purification		
	High	Mid	Low
Power Consumption [W]	36	10.5	6.5
Air Volume [m ³ /min.]	7	3.1	1.1
Noise [dB(A)]	48	32	18

Applicable Area	Weight
52 m ² (560 ft ²)	8 kg
Dimension	
H 560 x W 362 x D 280 mm	

F-PXV50A



Air Purification

- nanoe™ technology
- 2 in 1 HEPA composite and deodorizing filter

Special Feature

- Manual brightness adjustment
- Direct Current (DC) motor
- Seamless drive
- Auto mode

Smart Sensing

- Dirt sensor equipped

Air Flow

- Direct front suction
- House dust catcher
- 3D circulation airflow

Indication

- Clean sign
- PM2.5 Indicator
- Filter replace indicator

Specifications

	Air Purifying		
	High	Medium	Low
Air Volume [m ³ /min]	5.0	2.5	1.1
Power Consumption [W]	29	10	6.0
Noise [dB(A)]	47	33	19

Applicable Area	Weight
36 m ² (388 ft ²)	16.2 kg
Dimension	
H 550 x W 340 x D 208 mm	

F-VXV70A



Air Purification

- nanoe™X
- HEPA Composite Filter
- Super Nano-technology deodorizing Filter
- Large particle pre-filter

Special Feature

- Twin airflow louver
- Spot air mode
- 3-level humidity setting
- Direct Current (DC) motor
- Seamless drive
- Child lock
- Tank stand
- Caster lock

Smart Sensing

- Dirt / Odor / Humidity sensor equipped
- Human activity sensor
- Light sensor

Air Flow

- Direct front suction
- Mega catcher
- 3D circulation airflow

Indication

- Clean sign
- 5-level humidity indicator
- Filter replace indicator

Specifications

	Air Purifying			Air Purifying & Humidifying		
	High	Medium	Low	High	Medium	Low
Humidifying Capacity [mL/h]	-	-	-	700	400	250
Air Volume [m³/min]	6.7	2.7	1.1	6.3	3.1	1.9
Power Consumption [W]	66	11	6.0	58	15	10
Noise [dB(A)]	54	33	18	53	36	25

Applicable Area	Tank Capacity
52 m ² (560 ft ²)	3.5L
Dimension	Weight
H 636 x W 398 x D 265 mm	10.2 kg

F-GPT01A



Convenient Connection

nanoe™X Generator can be used conveniently with USB charging ports, laptops, computers and power bank

Portable & Lightweight

Comes in the compact size of a coffee tumbler, nanoe™X Generator makes it perfect for various environment without taking up much space. With the weight of only 0.4kg, it is easy to carry around.

Easy Operation

Clean air on your fingertips. nanoe™X will be released by simply pressing the power button on top of nanoe™X Generator.

Specification

Model	Estimated Applicable Volume*9	Air Volume	Noise	Consumption	Power Cord	Voltage	Dimension	Weight	Color
F-GPT01A	3m ³	0.07m ³ /min	34dB	3.5W	1.5m Type C USB	DC 5V (Adaptor 1.5A above)	170 x 90 x 66 mm (H) (Top) (Base)	0.4kg	Black/Red

DEHUMIDIFIER



Auto mode

Humidity sensor detects the ambient level of humidity and keeps indoor humidity at the most suitable level for the human body.



Cont./Laundry mode

The machine works with a high capacity to quickly reduce the humidity. This mode is especially useful in drying clothes, making laundry in the rainy season no longer a worry.



Fan mode

The machine works with a small capacity, help to remove dust in the air and minimize tobacco smoke.



Model No.	F-YCT10V	FYCT14V	F-YCT17V
Usable area (m ²)	25	35	42
Dehumidification capacity (L/day)	10	14	17
Tank volume (L)	2.5	2.5	4.8
Power consumption (W)	220	230	285
4 in 1 filter	-	0	0
Auto mode	0	0	0
Continuous dehumidification mode	0	0	0
Fan mode	-	0	0
Humidity sensor	0	0	0
Timer	-	0	0
Dimension (L x W x H)(mm)	530X293X230	580X300X215	605X360X260
Weight (kg)	13	11.5	14

ziaino™ Air Treatment Unit

F-JPU70A

- 3-speed selection
- 3 level of electrolysis intensity
- Safety lock / indicator
- Brightness Off/On button
- Salt input confirm button to avoid negligence
- Clear status indicator at front display
- Alert indicator (door, water refill, drain, salt input)
- Dimension: 730 (H) x 510 (W) x 307 (L)
- Weight: 17 Kg



Specifications

Model		Air Volume		Consumption	Noise	Continuous Operation Time with Full Water
		[m/min]	[CFM]			
F-JPU70A	Hi	7.0	247	72	49	9.6
	Med	4.0	141	31	37	14
	Lo	2.0	70	20	20	22.6



Compact and Energy Efficient

- Pump cover with smooth curve for elegant outlook.
- Brass-made casing cover and impeller are resistant to friction and high temperature that allow smoother water stream.

Reliable and Safe

- Equipped with Thermal Protector (130°C) enhances security against burning by turning off the pump directly as temperature exceeds the limit.
- Double stator protection being resistant to abrasion reduce the danger of short circuit.

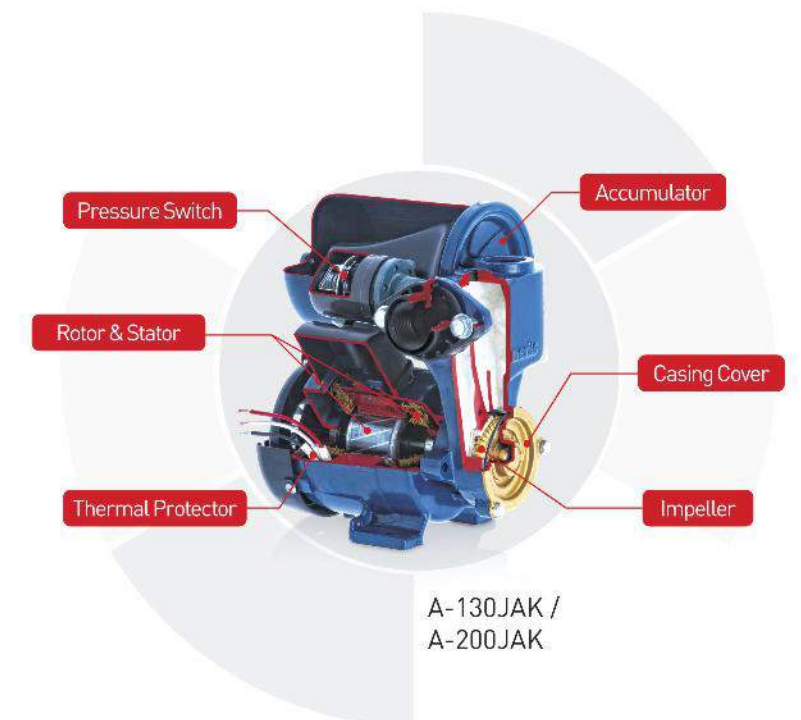
Durable

- High accurate rotor with anti-rust layer allows operation up to 8,000 hours without stopping.
- Stainless aluminum motor body and brass casing cover allow high durability.

Structure (For Auto Series) (*)

- Accumulator is a compression space containing Nitrogen Gas which has characteristics of elasticity. The gas content will never deplete that always stay stable and optimum.
- Rubber Bladder is made of Butyl that is stainless and anti-leakage. It functions as water separator with the Nitrogen compression room.
- Automatic Switch equipped with a protector made of fire-retardant material and a Platinum-made Switch that is long-lasting. It functions to break the stream if the water stream is closed.

(*) Except A-130JTX



Flow Switch Booster (Shallow Well Type)



GA-125FAK

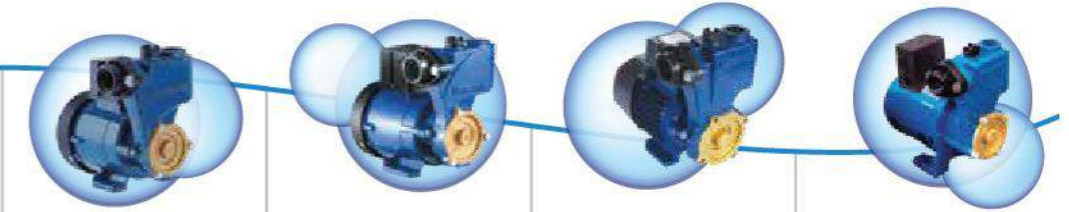
Specification

Model No.	GA-125FAK
Power consumption (W)	125
Capacity (L/min)	30
Suction Head (m)	-
TTL Head (m)	27
Switch On Pressure (kgf/cm ²)	-
Switch Off Pressure (kgf/cm ²)	-
Suction pipe [inch (mm)]	1 (25)
Push pipe [inch (mm)]	1 (25)
Dimension [(L x W x H) (mm)]	202 x 150 x 198
Weight (kg)	4.8

Non-Auto Series (Shallow Well Type)



Compact-size and high performance of Non-auto Series allow easy installation and maintenance in different applications.



Model No.	GP-129JXK	GP-200JXK	GP-250JXK	GP-350JA
Power consumption (W)	125	200	250	350
Capacity (L/min)	30	45	50	45
Suction Head (m)	9	9	9	9
TTL Head (m)	30	30	38	45
Switch On Pressure (kgf/cm ²)	-	-	-	-
Switch Off Pressure (kgf/cm ²)	-	-	-	-
Suction pipe [inch (mm)]	1 (25)	1 (25)	1 (25)	1 (25)
Push pipe [inch (mm)]	1 (25)	1 (25)	1 (25)	1 (25)
Dimension [(L x W x H) (mm)]	206 x 152 x 212	225 x 182 x 215	233 x 168 x 236	253 x 170 x 258
Weight (kg)	5.4	7.0	8.0	13.5

Auto Series (Shallow Well Type)



With Auto Series water pump, flow of water can be controlled by the automatic switch associated with water tap operation, that provides greater convenience.



Model No.	A-130JTX	A-130JACK	A-130JAK	A-200JAK
Power consumption (W)	125	125	125	200
Capacity (L/min)	30	30	32	45
Suction Head (m)	9	9	9	9
TTL Head (m)	25	27	27	27
Switch On Pressure (kgf/cm ²)	1.0	1.1	1.1	1.1
Switch Off Pressure (kgf/cm ²)	1.6	1.8	1.8	1.8
Suction pipe [inch (mm)]	3/4 (19)	1 (25)	1 (25)	1 (25)
Push pipe [inch (mm)]	3/4 (19)	1 (25)	1 (25)	1 (25)
Dimension [(L x W x H) (mm)]	Ø300 x 425	330 x 255 x 340	246 x 225 x 240	257 x 238 x 245
Weight (kg)	13	8.8	6.4	7.8

Centrifugal Type (Shallow Well Type)



Model No.	GP-10HCN1SVN	GP-15HCN1SVN	GP-20HCN1SVN
Maximum Capacity (L/min)	10-99	30-145	30-154
Suction Head (m)	9	9	9
TTL Head (m)	34-25	38.7-22	46.2-26
Input power (kW)	1.16	1.66	2.22
Output power (kW)	0.75	1.1	1.5
IP Rating	IP54	IP54	IP54
Suction pipe [inch (mm)]	1 (25)	1-1/4 (32)	1-1/4 (32)
Push pipe [inch (mm)]	1 (25)	1 (25)	1 (25)
Dimension [(L x W x H) (mm)]	299 x 196 x 246	336 x 210 x 258	363 x 242 x 290
Weight (kg)	15	20	25

ELECTRICAL CONSTRUCTION MATERIALS

WIRING DEVICES

Item No.	Page
EBG	
EBG888	29,34,43
EGG	
EGG331	29,34,43
EGG335	29,34,43
NR	
NR3170W-8	49
NRV	
NRV3160W	49
WA	
WA1215	54
WA1219	54
WA1220	54
WA1229	54
WA1315	54
WA1319	54
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