

WP SERIES

IP67 UV-PROTECT NETWORK PLASTIC BOX



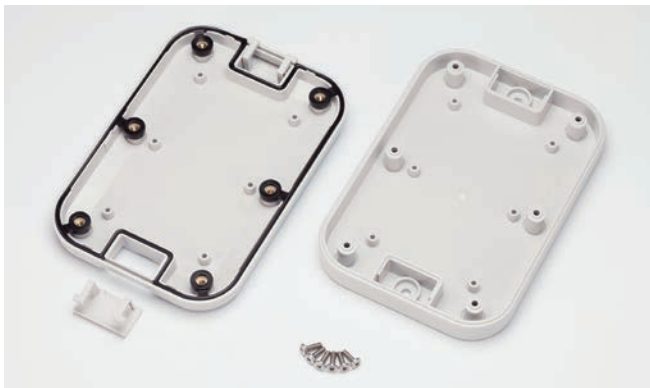
● IEC60529 standard is a system for classifying the degrees of protection provided by the enclosures of electrical equipment, such as against dust and water.

IP6x : No ingress of dust; complete protection against contact (dust tight).
IPx7 : No ingress of water when submerged up to a depth of 1 meter for 30 minutes

Waterproofing ability by using silicone gasket

Highly elastic and durable silicone gasket allows for high waterproof ability.

The use of insert nuts allows the unit to retain its waterproofing ability even after multiple opening and closing.



Weather-resistant ASA material

The white gray "G" type utilizes a UV resistant, durable ASA material. Recommended for outdoors usage as a communication device type equipment.



Easy installation on walls and brackets

Easy mounting onto walls and brackets by opening the blind lids. A clean and sleek appearance can be maintained as screws are hidden away by the blind lids.



Easy installation on electrical poles

By using a pole mount bracket accessory, it can be attached to poles with ease.



APPLICATION EXAMPLE

WP series are used in products such as communication devices, controllers, measurement instruments, and so on.



How to make waterproof buttons and switches

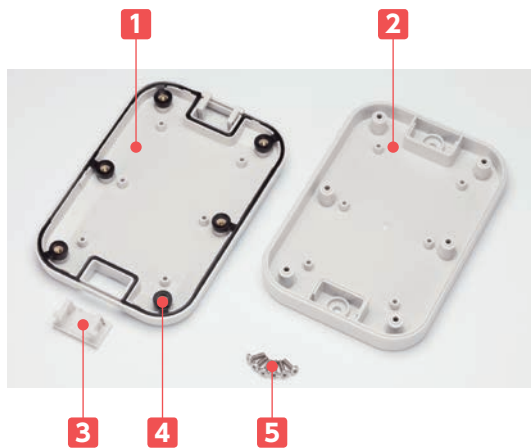
Please utilize a waterproof membrane keypad or membrane switch.
 Note that the waterproof performance will be lost by drilling/milling holes or cutouts for buttons or switches on waterproof enclosures.



How to make waterproof cable hole

Please utilize a cable gland from our available range of cable gland accessories.
 Refer to page 308 ~ 314 for more information.





Technical Data	
Protection class:	IP67
Operating temperature:	ASA* -30°C ~ +60°C ABS -10°C ~ +50°C
Recommended torque:	0.25N · m ~ 0.35N · m

*May become brittle and break under impact when temperature is lowered close to -30°C.

- IP67 protection class allows the unit to be used outdoors while protecting the internal components from dust and water.
- Available in 2 types: UV resistant ASA white gray color, and flame-resistant ABS charcoal gray color.
- Addition of 10 new sizes for a total of 16 different selectable sizes.
- Mount on walls or brackets by simply opening the blind lids.
- Pole mounting is possible via an optional pole mounting bracket accessory.

Components

No.	Part name	Pcs	Material / Color
1	Top cover	1	ASA UL94HB / White gray : Flame-resistant ABS UL94V-0 / Charcoal gray
2	Bottom base	1	ASA UL94HB / White gray : Flame-resistant ABS UL94V-0 / Charcoal gray
3	Blind lids	2	ASA UL94HB / White gray : Flame-resistant ABS UL94V-0 / Charcoal gray
4	Gasket	1	Silicone / Black
5	Screw	4~6	Stainless steel binding head screw / Unfinished

Accessories (Optional parts)



Pole mount bracket
WPMB series
See page 75



PCB mounting screw
EM series
See page 135



TORX screws
MR series
See page 76, 135



Cable gland
See page 308 ~ 314



Protective vent
PMF series
See page 301 ~ 302

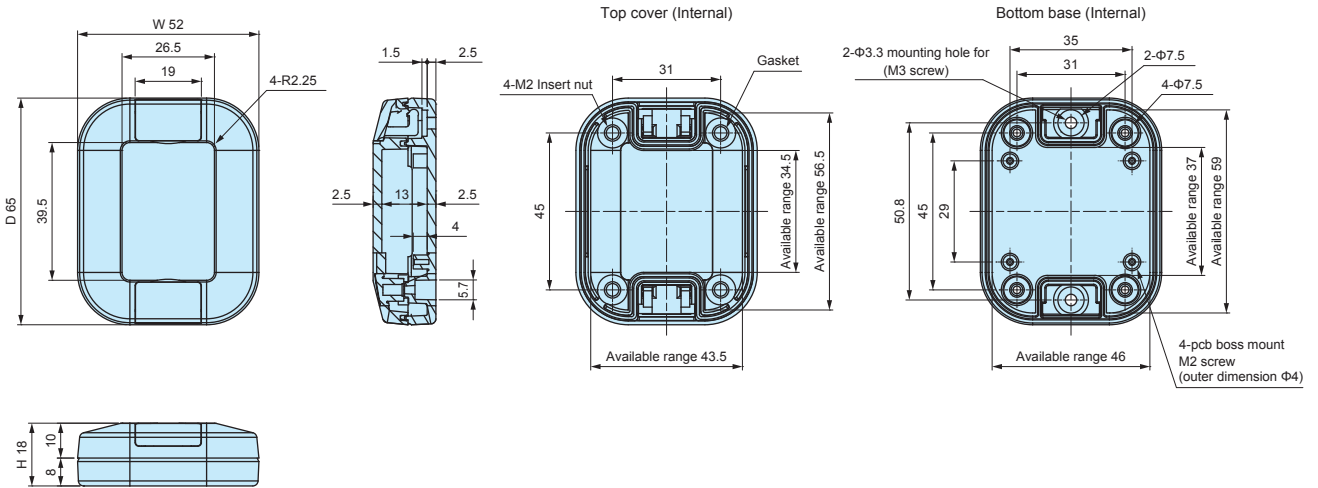
Product no. / Dimensions

Product no.		Dimensions			Screw	Weight (g)		
● White gray (ASA)	● Charcoal gray (ABS)	W	D	H				
NEW	WP 5- 7-2G	NEW	WP 5- 7-2C	52	65	18	M2-8 × 4pcs	31.5
NEW	WP 5- 7-3G	NEW	WP 5- 7-3C	52	65	27	M2-8 × 4pcs	39.5
NEW	WP 6- 8-2G	NEW	WP 6- 8-2C	60	80	20	M2-8 × 4pcs	41.5
NEW	WP 6- 8-3G	NEW	WP 6- 8-3C	60	80	30	M2-8 × 4pcs	49
NEW	WP 8- 8-2G	NEW	WP 8- 8-2C	75	75	22	M2.5-8 × 4pcs	57.5
NEW	WP 8- 8-4G	NEW	WP 8- 8-4C	75	75	35	M2.5-16 × 4pcs	88.5
NEW	WP 8-10-2G	NEW	WP 8-10-2C	75	100	22	M2.5-8 × 4pcs	74
NEW	WP 8-10-4G	NEW	WP 8-10-4C	75	100	35	M2.5-16 × 4pcs	95
	WP 9-13-3G		WP 9-13-3C	90	130	25	M2.5-8 × 6pcs	113
	WP 9-13-4G		WP 9-13-4C	90	130	40	M2.5-16 × 6pcs	141
	WP10-10-3G		WP10-10-3C	100	100	25	M2.5-8 × 4pcs	96
	WP10-10-4G		WP10-10-4C	100	100	40	M2.5-16 × 4pcs	121
	WP11-15-3G		WP11-15-3C	110	150	27	M2.5-8 × 6pcs	153
	WP11-15-4G		WP11-15-4C	110	150	40	M2.5-16 × 6pcs	181
NEW	WP13-18-3G	NEW	WP13-18-3C	130	175	30	M2.5-8 × 6pcs	225
NEW	WP13-18-5G	NEW	WP13-18-5C	130	175	45	M2.5-16 × 6pcs	266

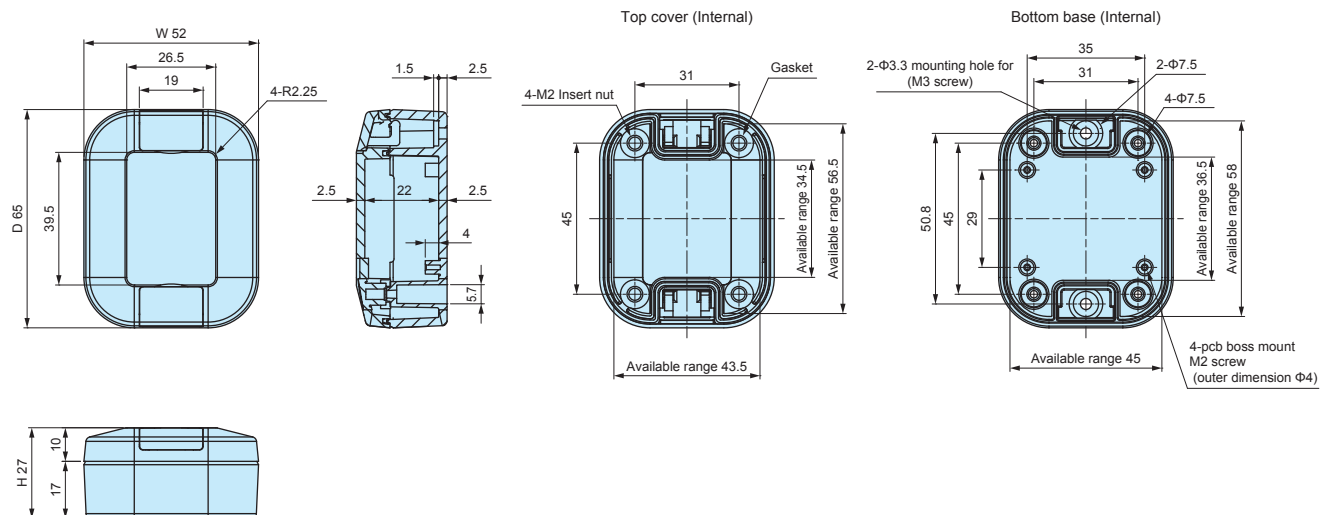
WP dimensions

■ DXF/DWG/PDF drawings available on our website.

WP5-7-2



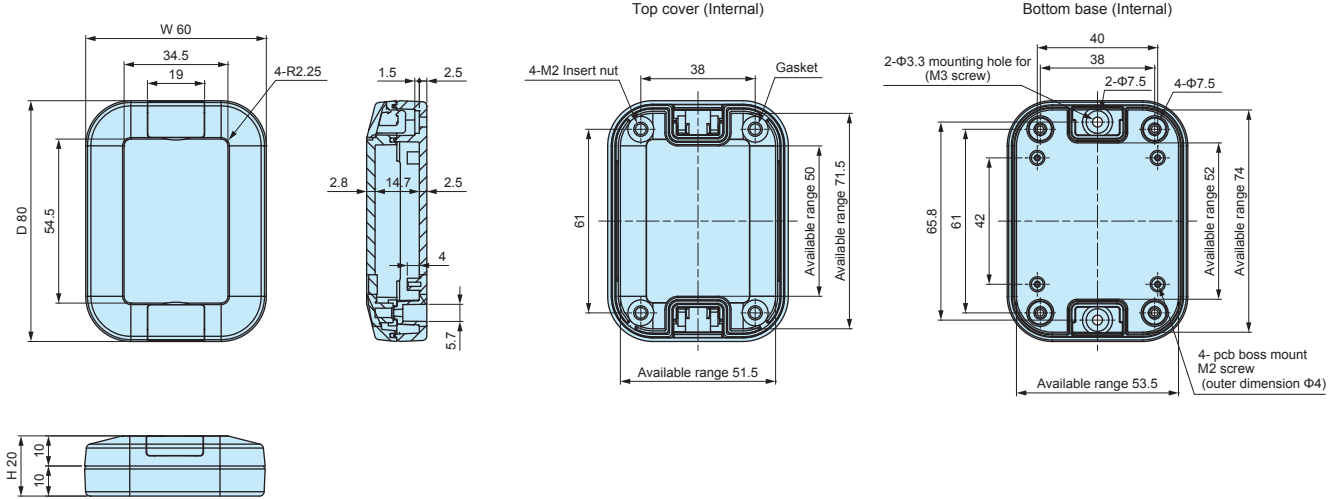
WP5-7-3



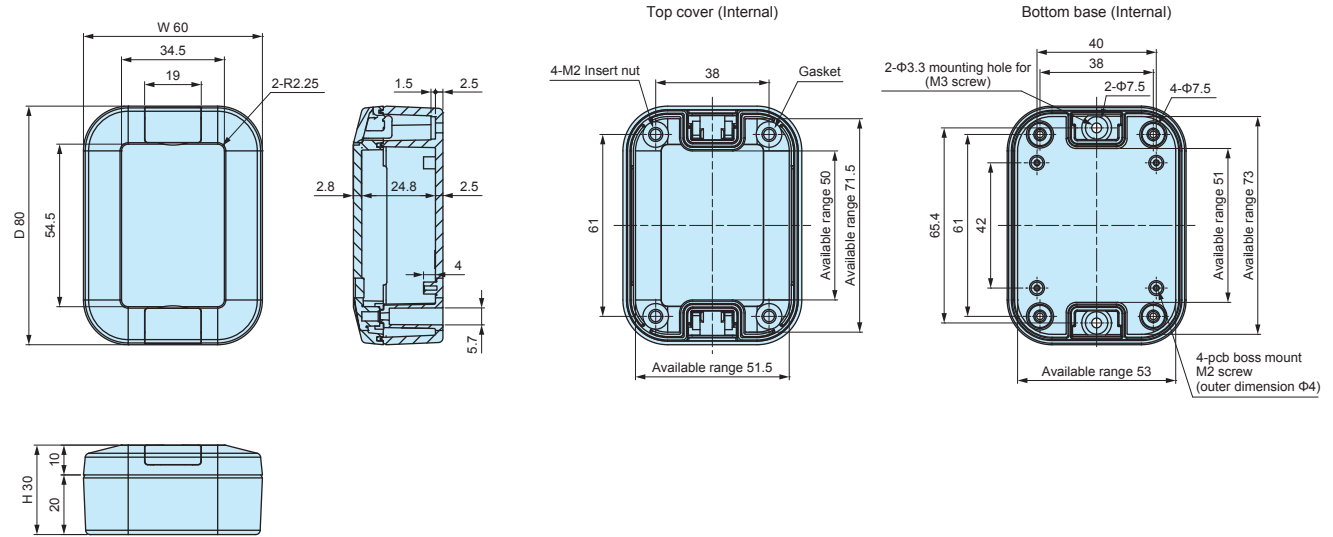
WP dimensions

■ DXF/DWG/PDF drawings available on our website.

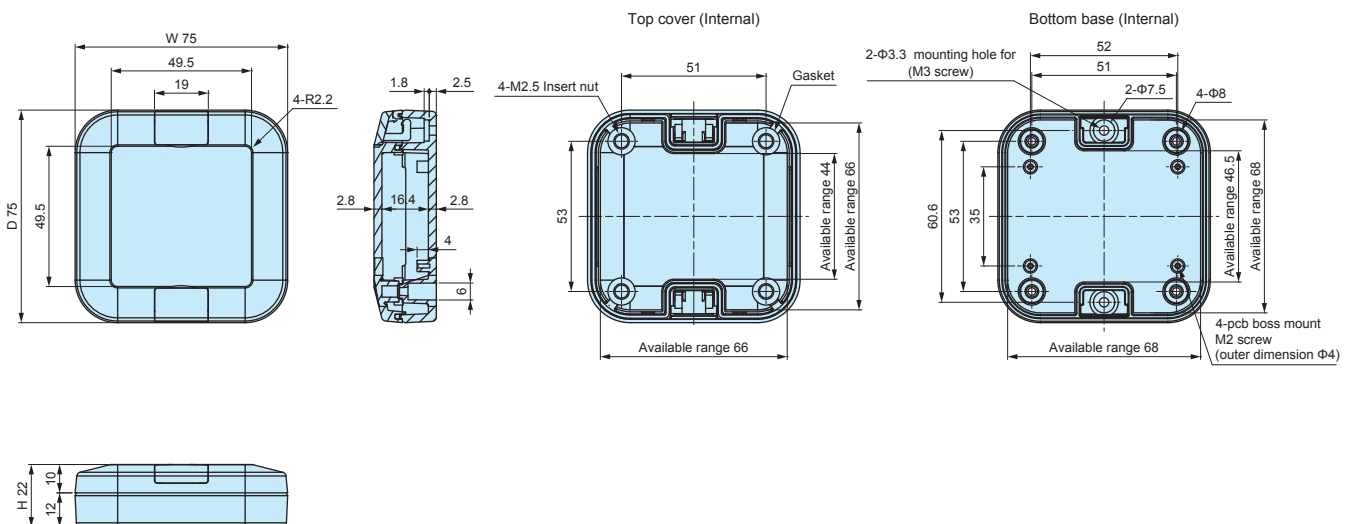
WP6-8-2



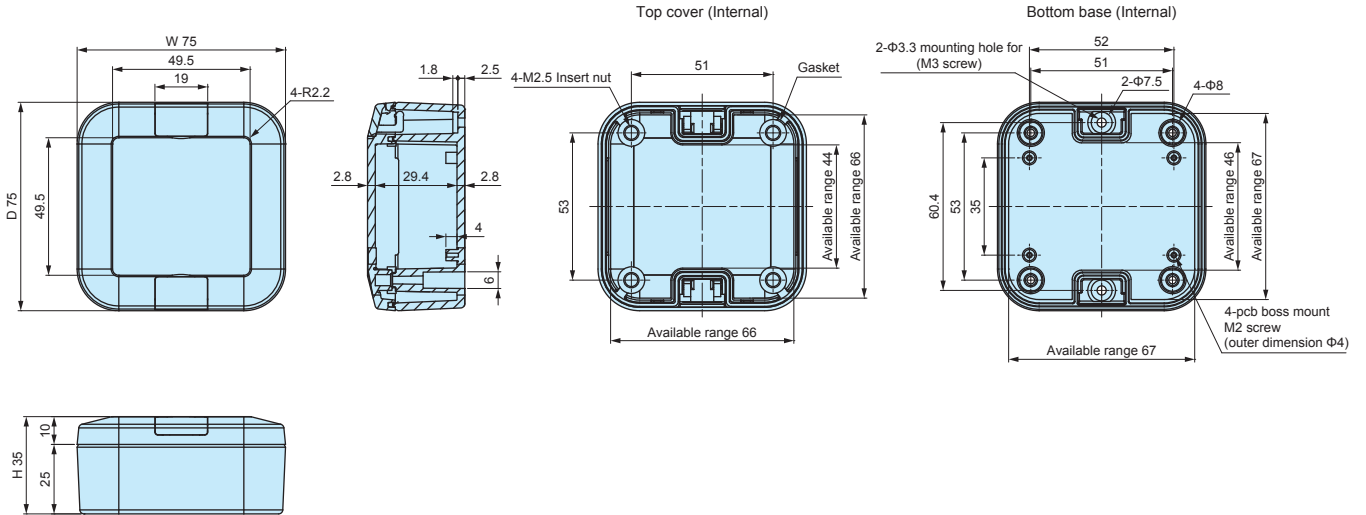
WP6-8-3



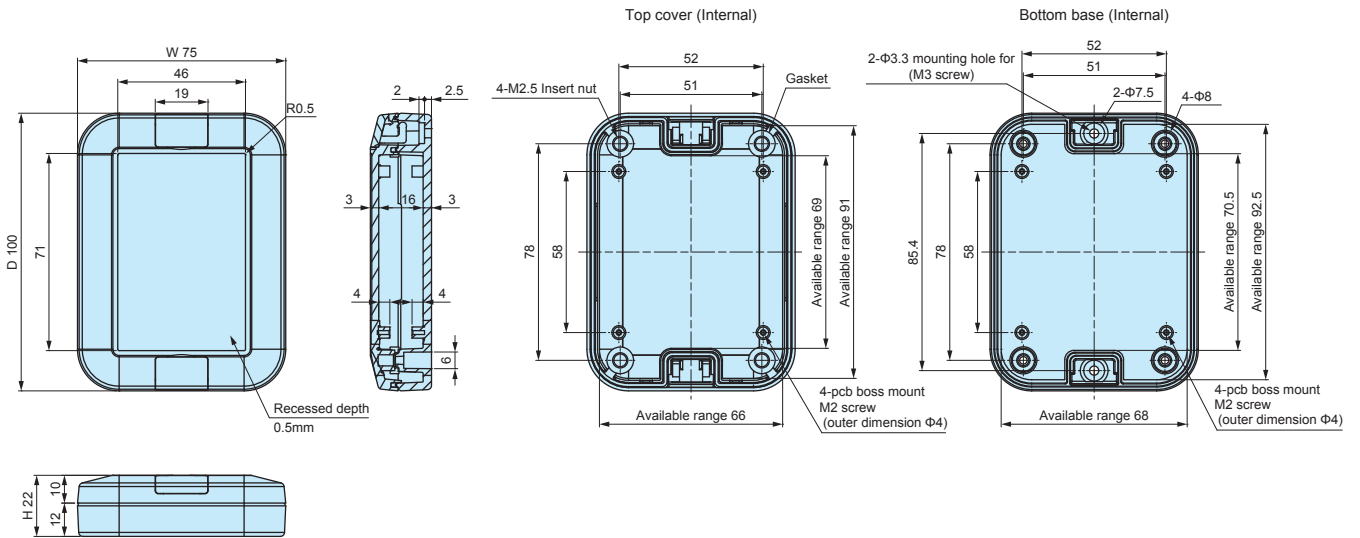
WP8-8-2



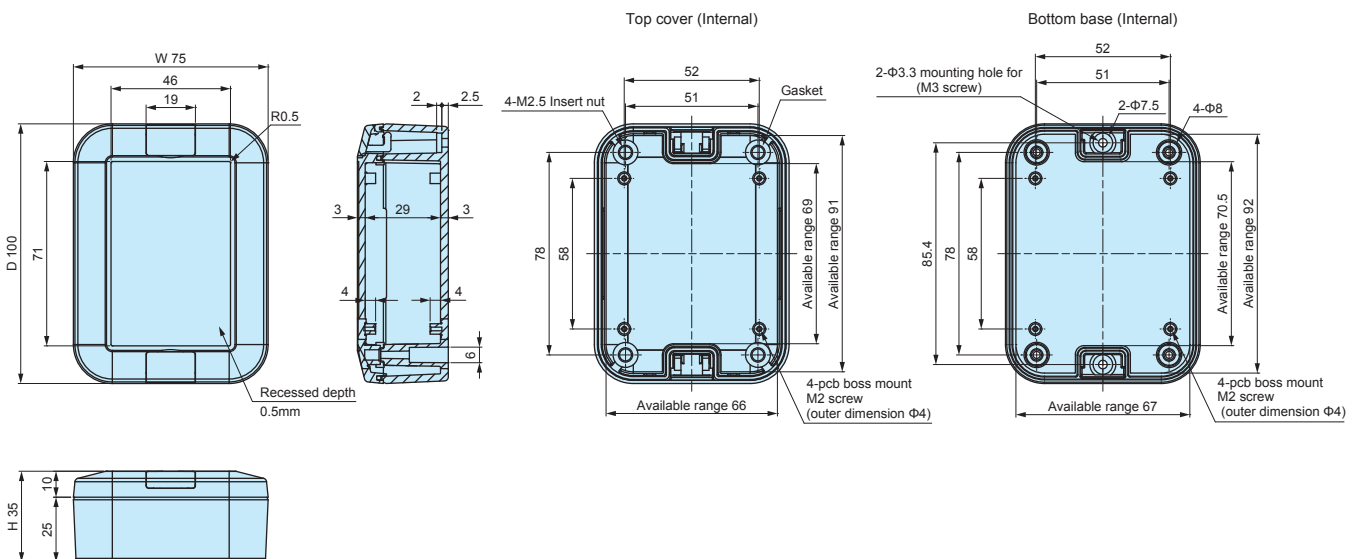
WP8-8-4



WP8-10-2



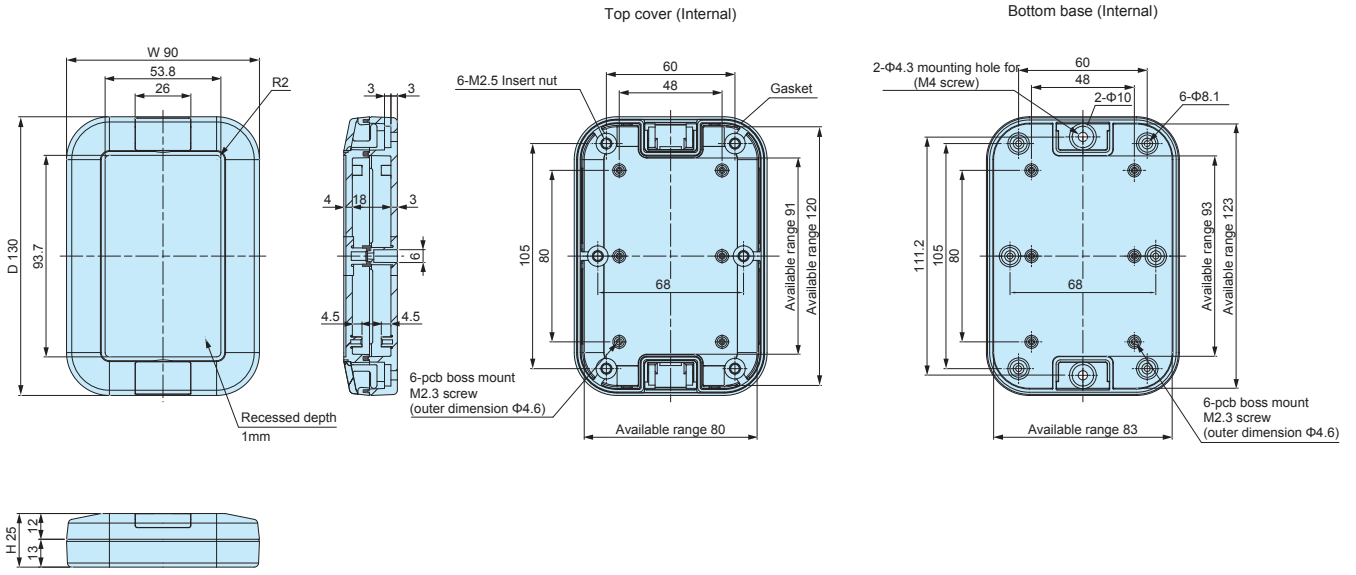
WP8-10-4



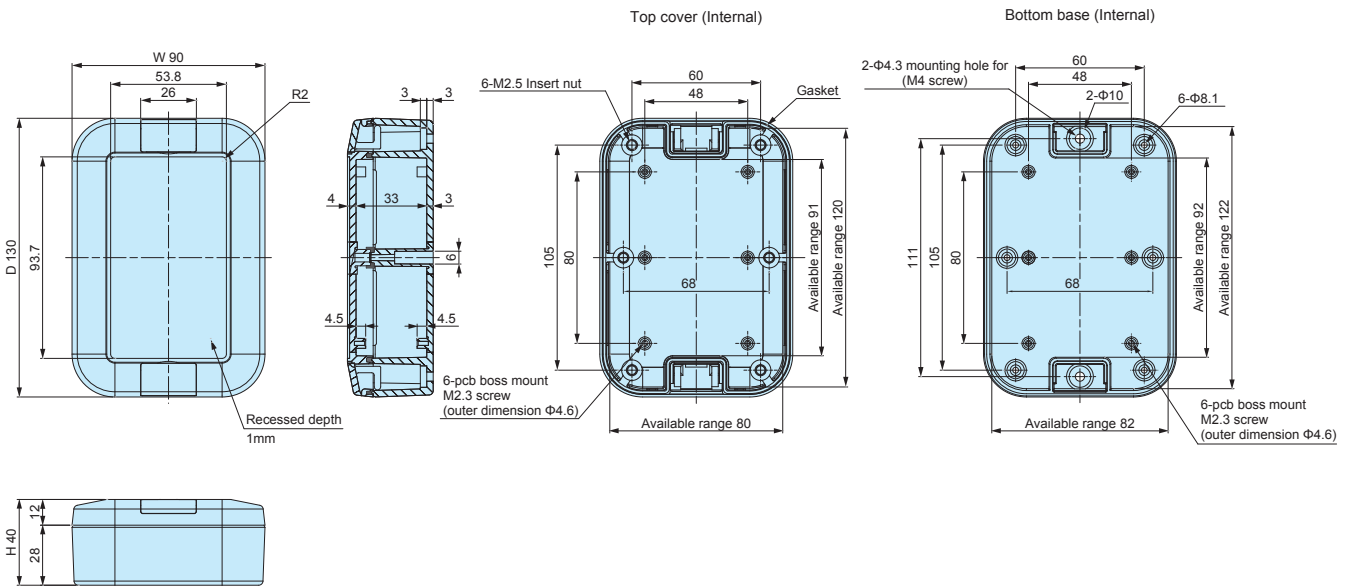
WP dimensions

DXF/DWG/PDF drawings available on our website.

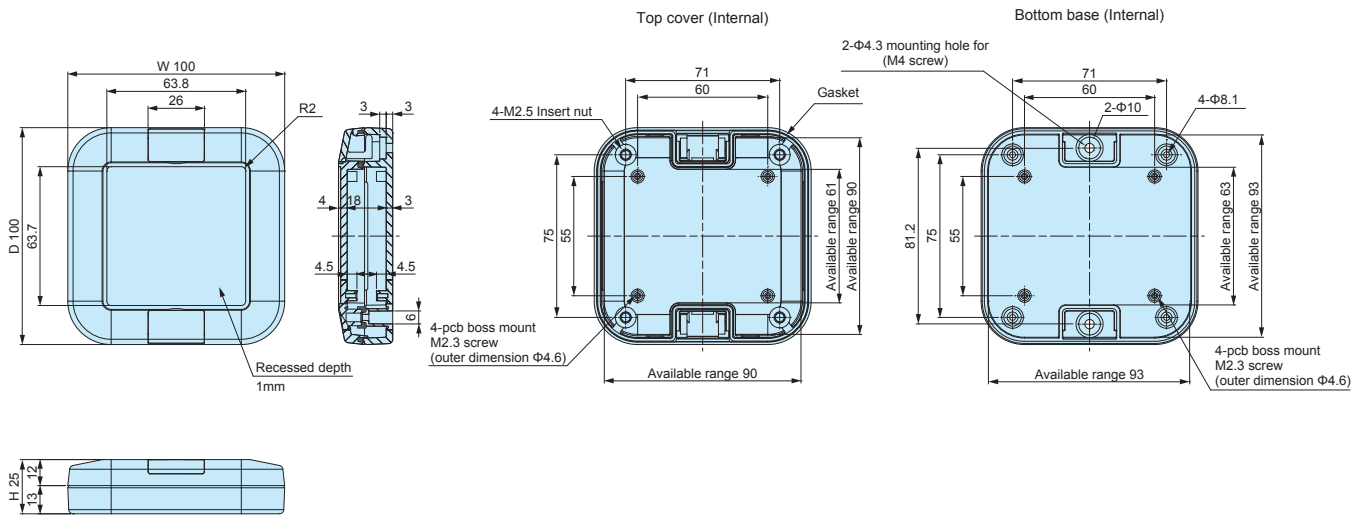
WP9-13-3



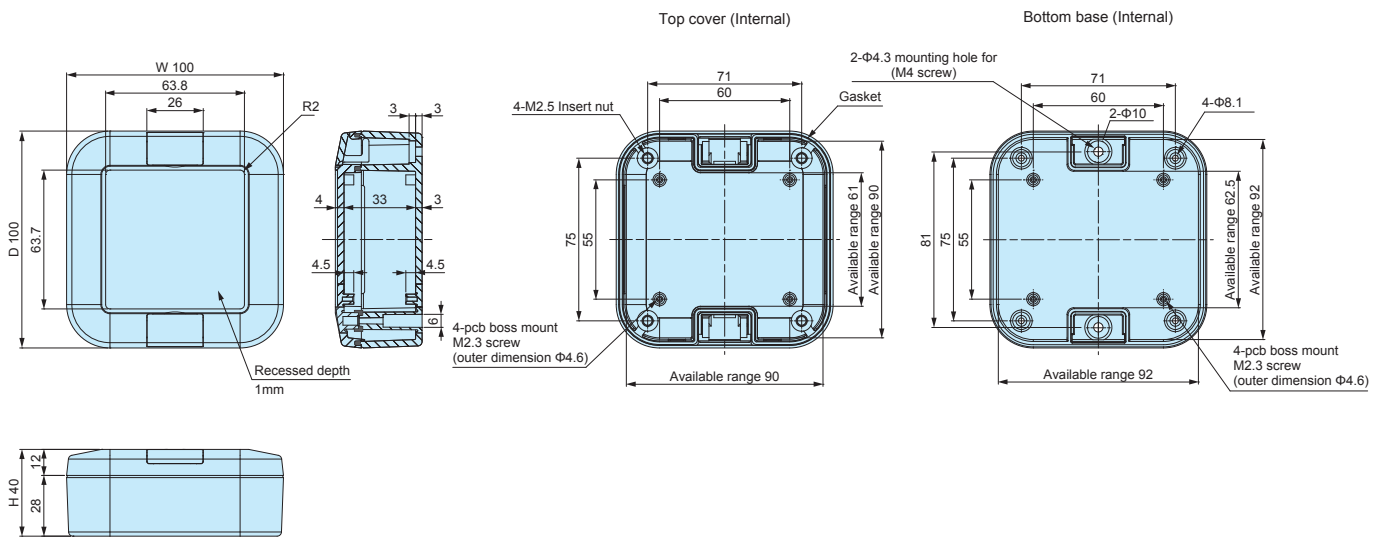
WP9-13-4



WP10-10-3



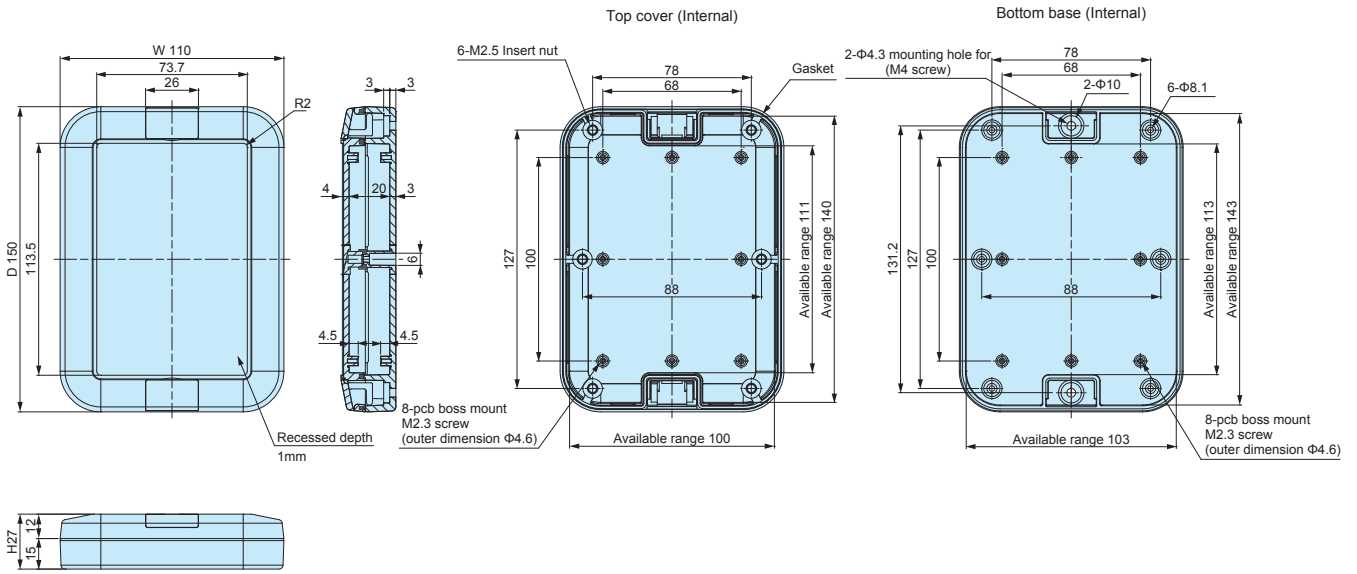
WP10-10-4



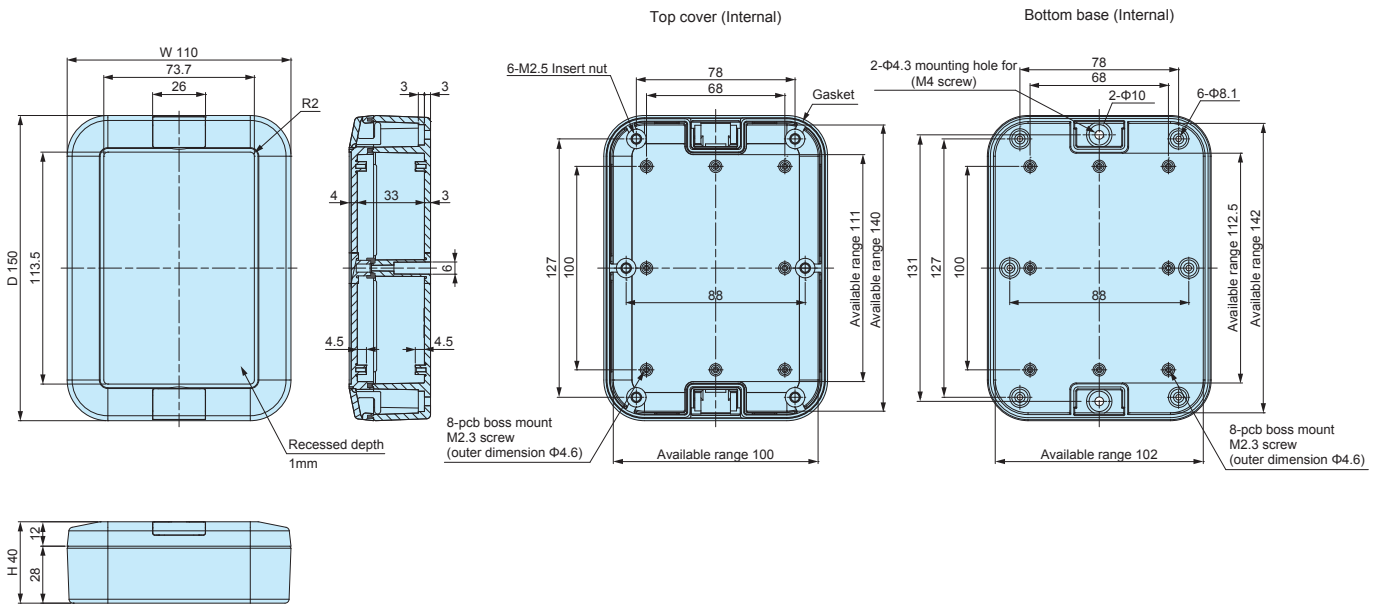
WP dimensions

DXF/DWG/PDF drawings available on our website.

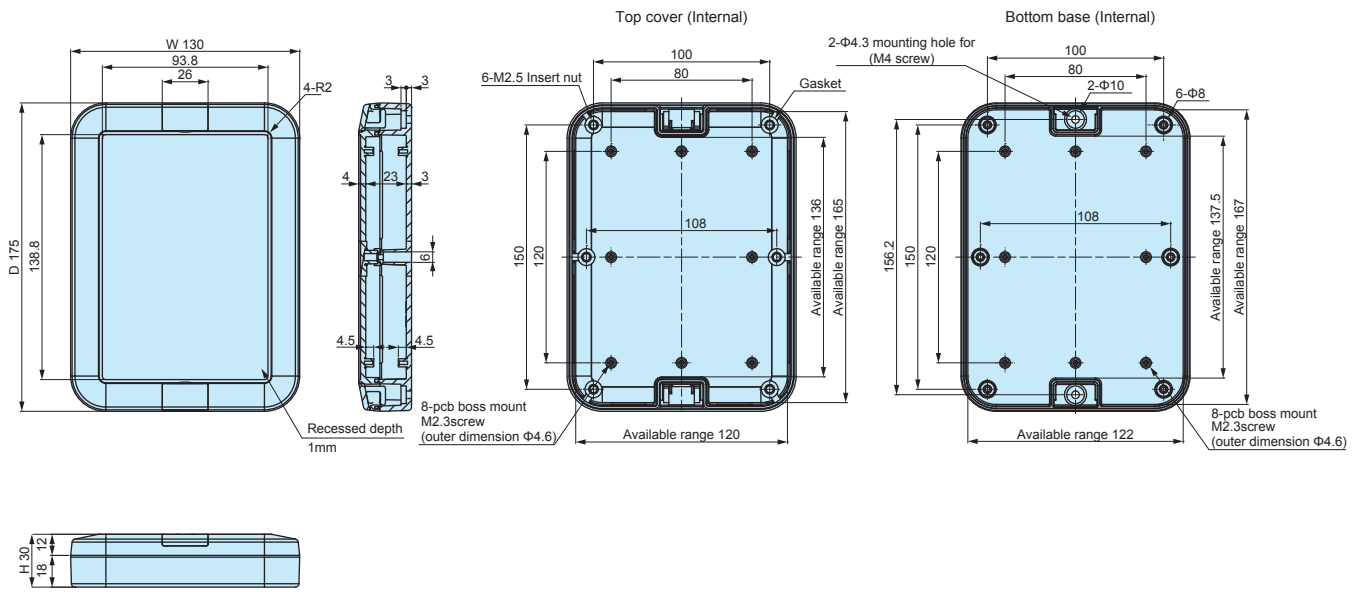
WP11-15-3



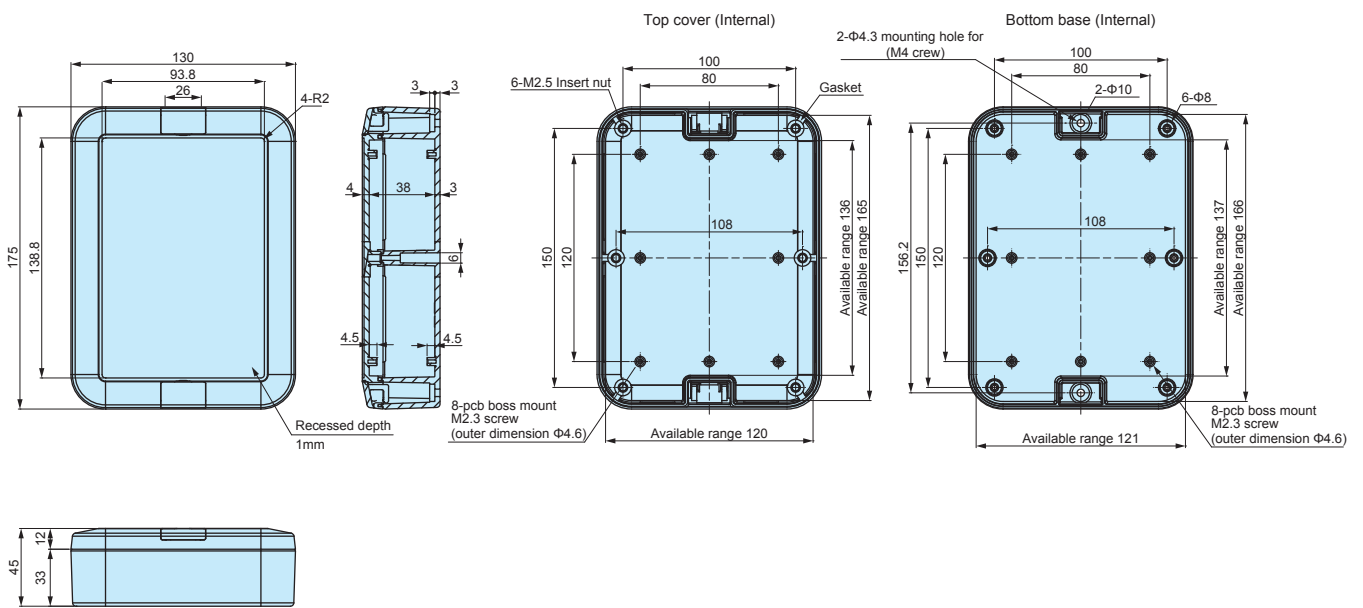
WP11-15-4



WP13-18-3



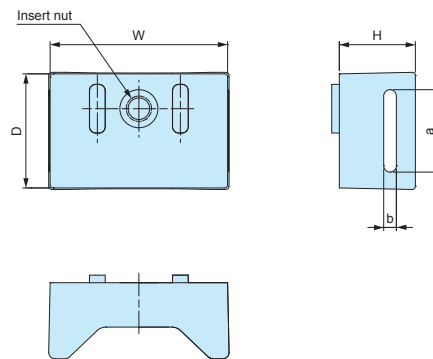
WP13-18-5



WPMB SERIES

POLE MOUNT BRACKET

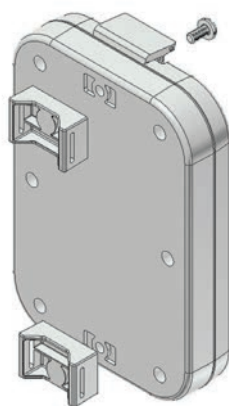
← NEW SIZE →



- Pole mount bracket made from weather-resistant ASA material.
- Hole milling is not required when installing the mount bracket, thus allowing the enclosure to maintain its IP67 rating.
- Together with the WPMB series, the PKB series mounting belt enables the unit to be mounted onto the pole.
- DXF/DWG/PDF drawings available on our website.

Product no. / Dimensions

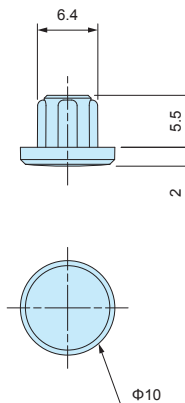
Product no.		Dimensions					Pack of	Material	Weight (g)	Screw
● White gray	● Dark gray	W	D	H	a	b				
NEW WPMB-M3G	WPMB-M3D	18	14	9.5	11	1.5	2 (pair)	ASA UL94HB	3	Stainless Steel M3-6
WPMB-M4G	WPMB-M4D	28	18	12	13	2	2 (pair)	ASA UL94HB	10	Stainless Steel M3-6



PFRF-M2.5D

RUBBER FEET

★ ★ NEW



- Recommended to be used with the WP series as a desktop flat-type unit.
- No additional hole milling required as the rubber feet fits snugly into the screw holes.
- Made from elastomer material.
- Unavailable for use with WP5-7-2, 5-7-3, 6-8-2, and 6-8-3 models.

Product no. / Dimensions

Product no.	Pack of	Material	Color
PFRF-M2.5D	4	Elastomer UL94HB	Dark gray

MR SERIES

TORX SCREW for WP



Head type (with pin)



pin

- Recommended to be used for tamper resistance, or for an elegant look and feel.
- Requires the use of a specialized screwdriver.
- Unavailable for use with WP5-7-2, 5-7-3, 6-8-2, and 6-8-3 models.

Product no. / Dimensions

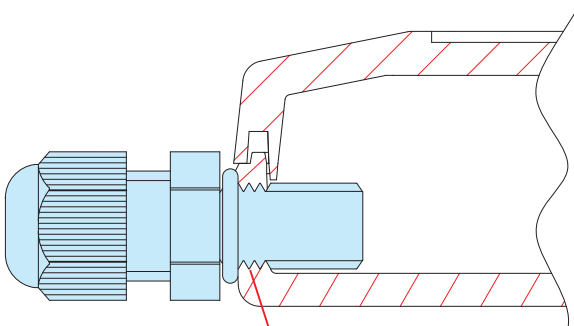
Product no.	Dimensions		TORX head no.	Pack of	Material	Finish	Suitable enclosures
	M	L					
MR2.5-8ST	2.5	8	T8 (with pin)	20	Stainless steel	Unfinished	WP8-8-2 • 8-10-2 • 9-13-3 • 10-10-3 • 11-15-3 • 13-18-3
MR2.5-16ST	2.5	16	T8 (with pin)	20	Stainless steel	Unfinished	WP8-8-4 • 8-10-4 • 9-13-4 • 10-10-4 • 11-15-4 • 13-18-5

Instructions on installation of cable glands

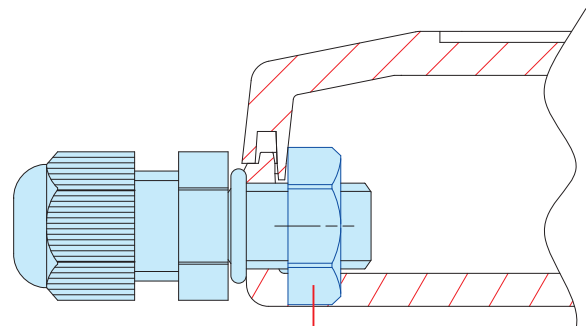


- Please note that certain cable glands are unable to be affixed on properly due to the lack of surface area for installation, causing the nut to not be able to be secured properly.

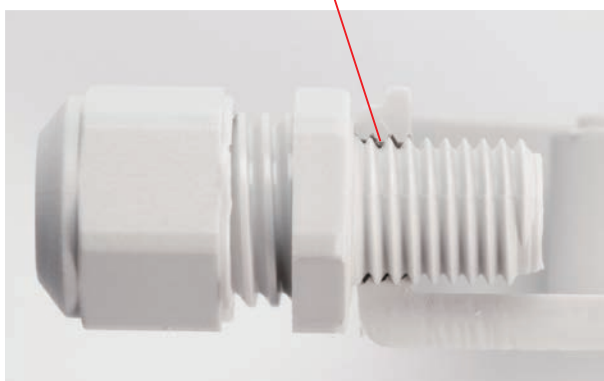
In these instances, a thread-hole should be drilled with the cable gland directly screwed into it without utilizing the nut.



Cross-section



Obstruction

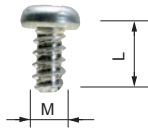


- Thread-hole milling from M6~M32, PG7~21 sizes can be performed as per your requirements.



EM SERIES

PCB MOUNTING SCREW



- Self-tapping screws for mounting PCB on bosses or standoffs.
- EM-3-6 self-tapping screws are suitable for mounting 1.6mm or thicker PCB.

Product no. / Dimensions

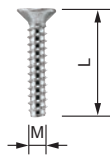
Product no.	M	L	Material	Finish	Suitable enclosures	Pack of
EM-1.6	1.6	4	Steel	Trivalent chromate	CSS • CS • PS • WC	50
EM-2	2	5	Steel	Trivalent chromate	TW • TWN • TWF • WP (M2 size)	50
EM-2.3	2.3	6	Steel	Trivalent chromate	LCT • LCS • LC • WH PF • PFF (M2.3 size) TW • TWN • TWF (M2.3 size) WP (M2.3 size)	50
NEW EM-2.6	2.6	6	Steel	Trivalent chromate	PF • PFF (M2.6 size)	50
EM-3	3	5	Steel	Trivalent chromate	TW • TWN • TWF (M3 size) • SU	50
EM-3-6	3	6	Steel	Trivalent chromate		50

MR SERIES

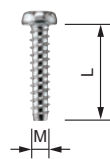
TORX SCREW



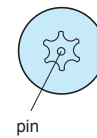
Countersunk head



Pan head



With pin



★ Without pin



★ : MR2.6-10□, MR3-14□, and MR1.6-6S are without pin.

Product no. / Dimensions

★Mark = Without pin

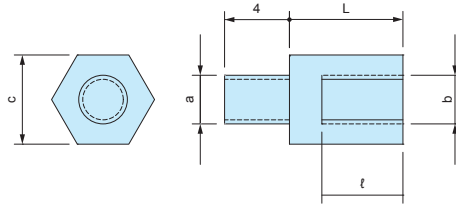
Product no.	M	L	head no.	Head style	Material	Finish	Suitable enclosures	Pack of
MR1.6-6S★	1.6	6	T3	Pan	Steel	Nickel plated	CS • CSS	20
MR2.5-8PS	2.5	8	T8	Pan	Steel	Nickel plated	PF • PFF (M2.5 size)	20
MR2.6-10S★	2.6	10	T8	Countersunk	Steel	Nickel plated	TW5-2-5 / 5-3-5	20
MR2.6-10B★	2.6	10	T8	Countersunk	Steel	Black trivalent chromate	TW • TWN4-2-5 / 4-2-6 / 4-2-8 / 5-2-7 TW • TWN5-3-7 / 5-4-7 / 8-2-8 / 8-4-8 TWF5-2-7 / 5-3-7 / 5-4-7	20
MR2.6-12PS	2.6	12	T8	Pan	Steel	Nickel plated	LCT • LCS • LC115-F2 / F3 LCT • LCS • LC145S-F6	20
MR2.6-14PS	2.6	14	T8	Pan	Steel	Nickel plated	LCT • LCS • LC115H-F2 / F3 / M2 / 9V LCT • LCS • LC135-F4 / M2 / M3 / 9V LCT • LCS • LC135H-F4 / M2 / M3 / 9V LCT • LCS • LC145-F6 / M2 / M4 LCT • LCS • LC145H-F6 / M2 / M4 LCT • LCS • LC165-M4 LCT • LCS • LC165H-M4	20
MR2.6-14S	2.6	14	T8	Countersunk	Steel	Nickel plated	LCT • LCS • LC115-F2 / F3 LCT • LCS • LC145S-F6 TW • TWN7-2-11 / 7-4-11 / 7-5-11	20
MR2.6-18S	2.6	18	T8	Countersunk	Steel	Nickel plated	LCT • LCS • LC115H-N / F2 / F3 / M2 / 9V LCT • LCS • LC135-N / F4 / M2 / M3 / 9V LCT • LCS • LC135H-N / F4 / M2 / M3 / 9V LCT • LCS • LC145-N / F6 / M2 / M4 LCT • LCS • LC145H-N / F6 / M2 / M4 LCT • LCS • LC165-N / M4 LCT • LCS • LC165H-N / M4	20
MR3-8PS	3	8	T10	Pan	Steel	Nickel plated	PF • PFF (M3 size)	20
MR3-14S★	3	14	T10	Countersunk	Steel	Nickel plated	TW5-3-10	20
MR3-14B★	3	14	T10	Countersunk	Steel	Black trivalent chromate	TW • TWN5-3-9 / 7-3-13 / 7-5-13 / 9-4-17 / 9-6-17 TWF7-3-13 / 7-5-13 / 9-4-17 / 9-6-17	20
MR-1S	3	5	T10	Countersunk	Steel	Nickel plated	UC	20
MR-1B	3	5	T10	Countersunk	Steel	Black trivalent chromate	UC • UCY • US	20
MR-2S	3	10	T10	Countersunk	Steel	Nickel plated	HEN	20

TPS SERIES

TAPPING STANDOFF



- Tapping screw head allows for easy installation onto existing enclosure boss mount.
- 4 different sizes available: M2, M2.3, M2.6 and M3 size.



Product no. / Dimensions

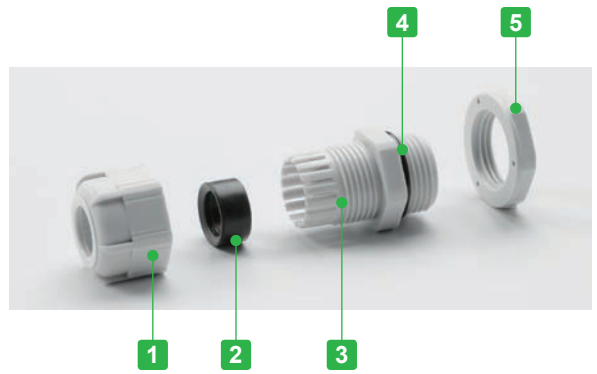
■ Material / Finish: Brass / Unfinished

Product no.	Screw size (a)	Screw size (b)	c	L	φ	Pack of	Recommended enclosure models	
TPS-M2.3-4	M2.3	M2.3	5	4	3	4	WH series • WP series (M2.3 only) LC • LCS • LCT series PF10-2-7 / 10-2-10 / 10-2-15 / 10-4-7 / 10-4-10 / 10-4-15 10-6-15 / 13-3-9 / 13-3-13 / 13-3-19 / 13-4-9 / 13-4-13 13-4-19 / 13-6-19 / 15-3-10 / 15-5-10 / 15-3-15 15-5-15 / 18-4-12 / 18-4-18 / 18-5-12 / 18-5-18 20-4-13 / 20-6-13 / 20-4-20 / 20-6-20 TW • TWN • TWF5-3-9 / 7-2-11 / 7-4-11 / 7-5-11 TW5-3-10 • TW • TWN • TWF8-2-8 / 8-4-8	
TPS-M2.3-5	M2.3	M2.3	5	5	3	4		
TPS-M2.3-6	M2.3	M2.3	5	6	4	4		
TPS-M2.3-7	M2.3	M2.3	5	7	5	4		
TPS-M2.3-8	M2.3	M2.3	5	8	6	4		
TPS-M2.3-10	M2.3	M2.3	5	10	6	4		
TPS-M2.3-12	M2.3	M2.3	5	12	6	4		
TPS-M2.6-4	M2.6	M2.6	5	4	3	4		
TPS-M2.6-5	M2.6	M2.6	5	5	3	4		
TPS-M2.6-7	M2.6	M2.6	5	7	5	4		
TPS-M2.6-10	M2.6	M2.6	5	10	6	4	PF24-4-17 / 24-4-24 / 24-6-17 / 24-6-24	
TPS-M2.6-12	M2.6	M2.6	5	12	6	4		
TPS-M3-4	M3	M3	5.5	4	3	4		
TPS-M3-5	M3	M3	5.5	5	3	4	TW • TWN • TWF7-3-13 / 7-5-13 / 9-4-17 / 9-6-17 / 11-5-22 11-8-22 / 13-3-13 / 13-5-13 / 13-3-18 / 13-5-18 / 13-7-18	
TPS-M3-6	M3	M3	5.5	6	4	4		
TPS-M3-7	M3	M3	5.5	7	5	4		
TPS-M3-8	M3	M3	5.5	8	5	4		
TPS-M3-10	M3	M3	5.5	10	6	4		
TPS-M3-12	M3	M3	5.5	12	6	4		
								SU series • OP series • PW series



- Please use a suitably sized driver to both secure and loosen the tapping standoff.

RM SERIES POLYAMIDE CABLE GLAND



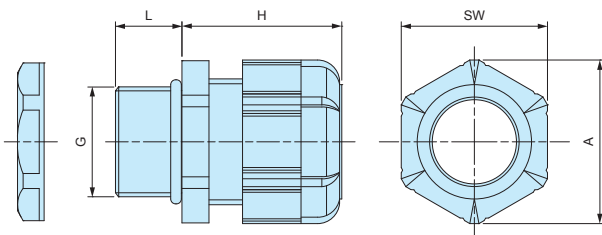
- Low cost cable glands made from polyamide material.
- Wide selection, for M8 ~ M63, suitable for $\Phi 1\text{mm} \sim \Phi 44\text{ mm}$ cable.
- High oil resistant NBR rubber sealing and O-ring.
- IP67 protection class.

Components

■ PA = Polyamide

No.	Part name	Material
1	Cap	PA66 UL94V-2
2	Sealing insert	NBR
3	Connector	PA66 UL94V-2
4	O-ring	NBR
5	Lock nut	PA66 UL94V-2

RM dimensions



Technical Data
Protection class: IP67
Operating temperature: $-20^{\circ}\text{C} \sim +80^{\circ}\text{C}$

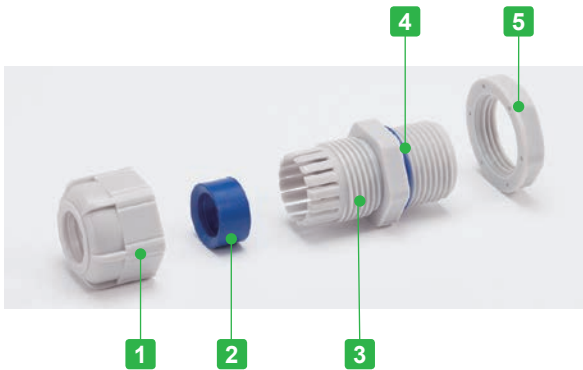
- DXF/DWG/PDF drawings available on our website.
- Lock nut is not included for RM8S-2.5, 8S-4, and 10S-6 models.
Please drill a proper thread hole into the enclosure for installation.

Product no. / Dimensions

Product no.		G		Cable range		L	H Max	SW	A	Pack of
● Black	● Light gray	Thread size	Mounting hole	Min	Max					
RM8S-2.5B	RM8S-2.5S	M8×1.25	—	1	2.5	7.5	19.5	11.8	13.5	1
RM8L-2.5B	RM8L-2.5S	M8×1.25	$\Phi 8.2$	1	2.5	13	19.5	11.8	13.5	1
RM8S-4B	RM8S-4S	M8×1.25	—	2.5	4	7.5	19.5	11.8	13.5	1
RM8L-4B	RM8L-4S	M8×1.25	$\Phi 8.2$	2.5	4	13	19.5	11.8	13.5	1
RM10S-6B	RM10S-6S	M10×1.5	—	3	6	8	20.5	13	14.4	1
RM10L-6B	RM10L-6S	M10×1.5	$\Phi 10.2$	3	6	13	20.5	13	14.4	1
RM12S-7B	RM12S-7S	M12×1.5	$\Phi 12.2$	3.5	7	9	20.5	16	17.6	1
RM12L-7B	RM12L-7S	M12×1.5	$\Phi 12.2$	3.5	7	14.5	20.5	16	17.7	1
RM16S-8B	RM16S-8S	M16×1.5	$\Phi 16.2$	4	8	9	23.5	19	21	1
RM16L-8B	RM16L-8S	M16×1.5	$\Phi 16.2$	4	8	15	24	19	21	1
RM20S-12B	RM20S-12S	M20×1.5	$\Phi 20.2$	6	12	10	29	24	26.2	1
RM20L-12B	RM20L-12S	M20×1.5	$\Phi 20.2$	6	12	15	28.5	24	26.2	1
RM25L-17B	RM25L-17S	M25×1.5	$\Phi 25.2$	11	17	15	35	33	36.2	1
RM32L-21B	RM32L-21S	M32×1.5	$\Phi 32.3$	13	21	15	38	36	39.5	1
RM40L-27B	RM40L-27S	M40×1.5	$\Phi 40.3$	18	27	18	43.5	45.7	50.5	1
RM50L-38B	RM50L-38S	M50×1.5	$\Phi 50.4$	27	38	20	50.5	60	66.5	1
RM63L-44B	RM63L-44S	M63×1.5	$\Phi 63.4$	37	44	20	53	68	75.5	1
RM8L-2.5B-P	RM8L-2.5S-P	M8×1.25	$\Phi 8.2$	1	2.5	13	19.5	11.8	13.5	100
RM8L-4B-P	RM8L-4S-P	M8×1.25	$\Phi 8.2$	2.5	4	13	19.5	11.8	13.5	100
RM10L-6B-P	RM10L-6S-P	M10×1.5	$\Phi 10.2$	3	6	13	20.5	13	14.4	100
RM12S-7B-P	RM12S-7S-P	M12×1.5	$\Phi 12.2$	3.5	7	9	20.5	16	17.6	100
RM12L-7B-P	RM12L-7S-P	M12×1.5	$\Phi 12.2$	3.5	7	14.5	20.5	16	17.7	100
RM16S-8B-P	RM16S-8S-P	M16×1.5	$\Phi 16.2$	4	8	9	23.5	19	21	100
RM16L-8B-P	RM16L-8S-P	M16×1.5	$\Phi 16.2$	4	8	15	24	19	21	100
RM20S-12B-P	RM20S-12S-P	M20×1.5	$\Phi 20.2$	6	12	10	29	24	26.2	100
RM20L-12B-P	RM20L-12S-P	M20×1.5	$\Phi 20.2$	6	12	15	28.5	24	26.2	100
RM25L-17B-P	RM25L-17S-P	M25×1.5	$\Phi 25.2$	11	17	15	35	33	36.2	100



- Weatherproof cable gland equipped with high ultraviolet and degradation resistant silicone sealing insert and O-ring.
- Recommended to use outdoors where waterproofing is critical.

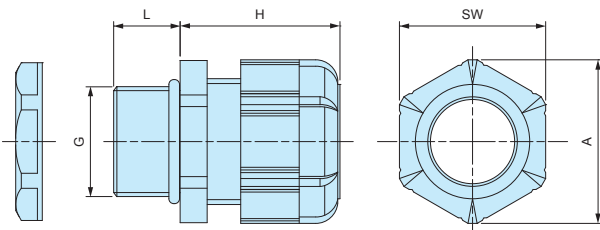


Components

■ PA = Polyamide

No.	Part name	Material
1	Cap	PA66 UL94V-2
2	Sealing insert	Silicone
3	Connector	PA66 UL94V-2
4	O-ring	Silicone
5	Nut	PA66 UL94V-2

RMW dimensions



Technical Data

Protection class: IP67
Operating temperature: -20°C ~ +80°C

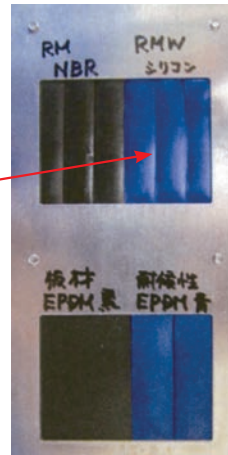
- DXF/DWG/PDF drawings available on our website.
- Lock nut is not included for RMW10S-6.
Please drill a proper thread hole into the enclosure for installation.

Product no. / Dimensions

Product no.		G		Cable range		L	H Max	SW	A	Pack of
● Black	● Light gray	Thread size	Mounting hole	Min	Max					
RMW8L-2.5B	RMW8L-2.5S	M8×1.25	Φ8.2	1	2.5	13	19.5	11.8	13.5	1
RMW8L-4B	RMW8L-4S	M8×1.25	Φ8.2	2.5	4	13	19.5	11.8	13.5	1
RMW10S-6B	RMW10S-6S	M10×1.5	—	3	6	8	20.5	13	14.4	1
RMW10L-6B	RMW10L-6S	M10×1.5	Φ10.2	3	6	13	20.5	13	14.4	1
RMW12S-7B	RMW12S-7S	M12×1.5	Φ12.2	3.5	7	9	20.5	16	17.6	1
RMW12L-7B	RMW12L-7S	M12×1.5	Φ12.2	3.5	7	14.5	20.5	16	17.7	1
RMW16S-8B	RMW16S-8S	M16×1.5	Φ16.2	4	8	9	23.5	19	21	1
RMW16L-8B	RMW16L-8S	M16×1.5	Φ16.2	4	8	15	24	19	21	1
RMW20S-12B	RMW20S-12S	M20×1.5	Φ20.2	6	12	10	29	24	26.2	1
RMW20L-12B	RMW20L-12S	M20×1.5	Φ20.2	6	12	15	28.5	24	26.2	1
RMW25L-17B	RMW25L-17S	M25×1.5	Φ25.2	11	17	15	35	33	36.2	1
RMW32L-21B	RMW32L-21S	M32×1.5	Φ32.3	13	21	15	38	36	39.5	1
RMW40L-27B	RMW40L-27S	M40×1.5	Φ40.3	18	27	18	43.5	45.7	50.5	1
RMW50L-38B	RMW50L-38S	M50×1.5	Φ50.4	27	38	20	50.5	60	66.5	1
RMW8L-2.5B-P	RMW8L-2.5S-P	M8×1.25	Φ 8.2	1	2.5	13	19.5	11.8	13.5	100
RMW8L-4B-P	RMW8L-4S-P	M8×1.25	Φ 8.2	2.5	4	13	19.5	11.8	13.5	100
RMW10L-6B-P	RMW10L-6S-P	M10×1.5	Φ10.2	3	6	13	20.5	13	14.4	100
RMW12S-7B-P	RMW12S-7S-P	M12×1.5	Φ12.2	3.5	7	9	20.5	16	17.6	100
RMW12L-7B-P	RMW12L-7S-P	M12×1.5	Φ12.2	3.5	7	14.5	20.5	16	17.7	100
RMW16S-8B-P	RMW16S-8S-P	M16×1.5	Φ16.2	4	8	9	23.5	19	21	100
RMW16L-8B-P	RMW16L-8S-P	M16×1.5	Φ16.2	4	8	15	24	19	21	100
RMW20S-12B-P	RMW20S-12S-P	M20×1.5	Φ20.2	6	12	10	29	24	26.2	100
RMW20L-12B-P	RMW20L-12S-P	M20×1.5	Φ20.2	6	12	15	28.5	24	26.2	100
RMW25L-17B-P	RMW25L-17S-P	M25×1.5	Φ25.2	11	17	15	35	33	36.2	100

RMW series silicone sealing insert weatherproof test report

Object: Cut into a piece of the silicone sealing insert from RMW series and attach it onto an aluminium plate.
 For comparison, NBR sealing insert from our RM and EPDM sealing insert from another manufacturer is also attached for comparison purposes.



Before



After

Testing conditions

Equipment : 7.5kW Super Xenon Weather Meter SX75 (Suga Test Instruments Co., Ltd.- <http://www.sugatest.co.jp/english/>)
Conditions : JIS B7754 : 1991
 Testing with an authorized Xenon arc lamp weathering test equipment under the conditions denoted below.
 Irradiance : 180W/m² at 300-400nm
 Black Panel Temperature : 63±3°C Humidity Range : 50±10%
 Cycle Conditions : 120 minutes cycle (18 minutes irradiation + water spray - 102 minutes irradiation)
Time period : 2,000 hours (equivalent to a period of 4 years under natural conditions)
Total radiant exposure : 1296MJ/m²

Test result (visual / touch inspection)

Silicone sealing insert material : No cracks, no gloss transition, no powder - no appearance change at all. Flexibility remains unchanged.

Before



After



NBR material from our RM series : Lost glossiness on the surface and material is stiffened.

Before

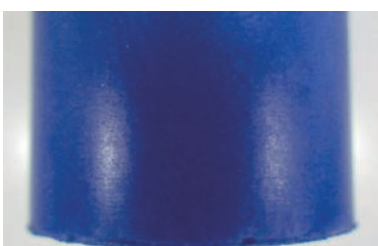


After

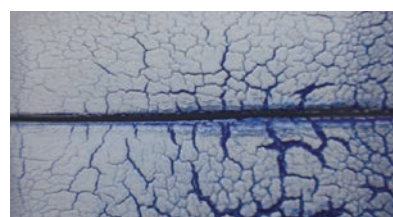


EPDM material from weatherproof cable gland of another manufacturer : Cracked, color drastically faded and powder appeared on the surface.

Before



After



AG SERIES

HIGH WATER PROTECTION CABLE GLAND

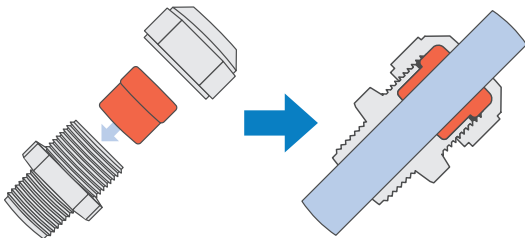


- High water protection IP68 (1bar / 30min) polyamide cable gland.
- Wide selection, for M8 ~ M50, suitable for $\Phi 2.5\text{mm} \sim \Phi 42\text{ mm}$ cable.
- Super tough and superior heat resistant PA6GF (glass fiber filled PA6) material on cap and connector.
- Safer halogen free, eco-friendly product.

Technical Data
Protection class: IP68 1bar / 30min
Operating temperature: -20°C ~ +100°C
Compliant with EN50262 Ver. A

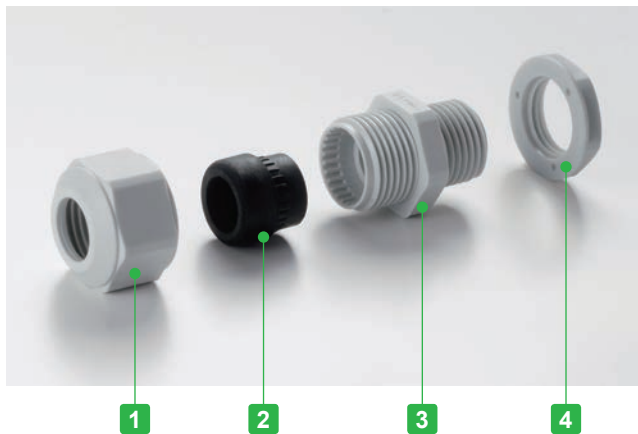
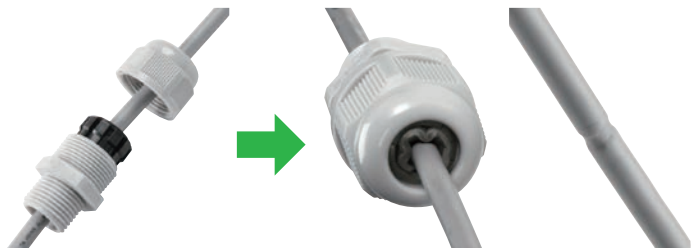
AG Series

Thicker sealing insert evenly hold a cable by having a larger holding area.
Remains durable even after repeated tightening / loosening.



Lamellar insert type

If over-tightened, it can cause the rubber bush or cable to deform, which can allow water to seep in.



Components

■ PA = Polyamide

No.	Part name	Material
1	Cap	PA6GF
2	Sealing insert	TPE
3	Connector	PA6GF
4	Lock nut	PA6

■ Lock nut is not included for M8 and M10 sizes.
Please drill a proper thread hole into the enclosure for installation.

- Proper tightening torque varies by each cable diameter.
Tighten the cap until top of the sealing insert forms a small bead between the cap and the cable.

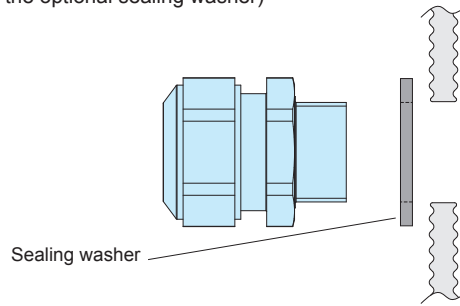


■ No optional sealing washer is required when installing on an even surface because of the built-in waterproof rib.

Waterproof rib

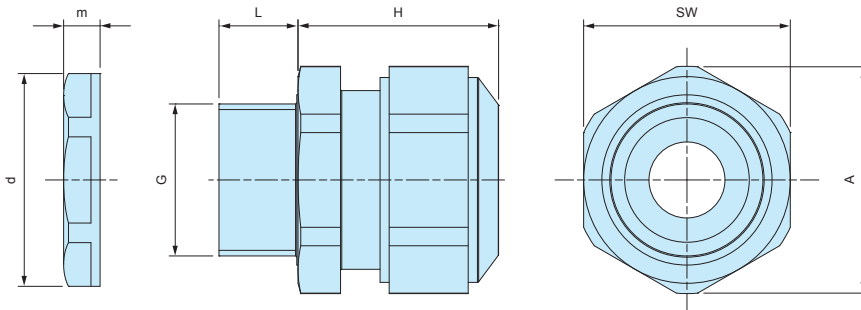


■ An optional sealing washer is required when installing on an uneven surface. (See website for more information on the optional sealing washer)



AG dimensions

■ DXF/DWG/PDF drawings available on our website.



■ Lock nut is not included for M8 and M10 sizes. Please drill a proper thread hole into the enclosure for installation.

Product no. / Dimensions

Product no.		G		Cable range		L	H Max	SW	A	d	m	Pack of
● Black	● Light gray	Thread size	Mounting hole	Min	Max							
AG8-3.5B	AG8-3.5S	M8×1.0	—	2.5	3.5	10	17	12	13.2	—	—	1
AG8-5B	AG8-5S	M8×1.0	—	3.5	4.7	10	17	12	13.2	—	—	1
AG10-6B	AG10-6S	M10×1.0	—	4	6	10	19	15	16.5	—	—	1
AG12-5B	AG12-5S	M12×1.5	Φ12.2	3.5	4.7	12	23.5	17	18.7	18.8	5	1
AG12-6.5B	AG12-6.5S	M12×1.5	Φ12.2	5	6.5	12	23	17	18.7	18.8	5	1
AG12-8B	AG12-8S	M12×1.5	Φ12.2	6.5	7.8	12	23	17	18.7	18.8	5	1
AG16-10B	AG16-10S	M16×1.5	Φ16.2	8	10	12	26	21	23.1	24.3	5	1
AG20-15B	AG20-15S	M20×1.5	Φ20.2	11	15	13	27	27	29.7	29	6	1
AG25-16B	AG25-16S	M25×1.5	Φ25.2	12.5	16	13	34	34	37.4	36	6.7	1
AG25-20B	AG25-20S	M25×1.5	Φ25.2	16	20	13	34	34	37.4	36	6.7	1
AG32-25.5B	AG32-25.5S	M32×1.5	Φ32.3	21	25.5	15	36	41	45.6	46	8	1
AG40-28.5B	AG40-28.5S	M40×1.5	Φ40.3	24	28.5	15	41	50	55.4	53.5	9	1
AG40-33B	AG40-33S	M40×1.5	Φ40.3	28.5	33	15	41	50	55.4	53.5	9	1
AG50-37B	AG50-37S	M50×1.5	Φ50.4	33	37	16	45	60	65.5	66	9.6	1
AG50-42B	AG50-42S	M50×1.5	Φ50.4	37	42	16	45	60	65.5	66	9.6	1
AG8-3.5B-P	AG8-3.5S-P	M8×1.0	—	2.5	3.5	10	17	12	13.2	—	—	50
AG8-5B-P	AG8-5S-P	M8×1.0	—	3.5	4.7	10	17	12	13.2	—	—	50
AG10-6B-P	AG10-6S-P	M10×1.0	—	4	6	10	19	15	16.5	—	—	50
AG12-5B-P	AG12-5S-P	M12×1.5	Φ12.2	3.5	4.7	12	23.5	17	18.7	18.8	5	50
AG12-6.5B-P	AG12-6.5S-P	M12×1.5	Φ12.2	5	6.5	12	23	17	18.7	18.8	5	50
AG12-8B-P	AG12-8S-P	M12×1.5	Φ12.2	6.5	7.8	12	23	17	18.7	18.8	5	50
AG16-10B-P	AG16-10S-P	M16×1.5	Φ16.2	8	10	12	26	21	23.1	24.3	5	50
AG20-15B-P	AG20-15S-P	M20×1.5	Φ20.2	11	15	13	27	27	29.7	29	6	50
AG25-16B-P	AG25-16S-P	M25×1.5	Φ25.2	12.5	16	13	34	34	37.4	36	6.7	25
AG25-20B-P	AG25-20S-P	M25×1.5	Φ25.2	16	20	13	34	34	37.4	36	6.7	25

DIGITAL PRINTED OVERLAY



3 reasons for low initial costs

Reason 1



Cutting process



Avoiding the cost for cutting die manufacturing via our in-house cutting plotter.

Reason 2



Printing process



Saving the cost for print plates via utilization of our in-house digital inkjet printer.

Reason 3



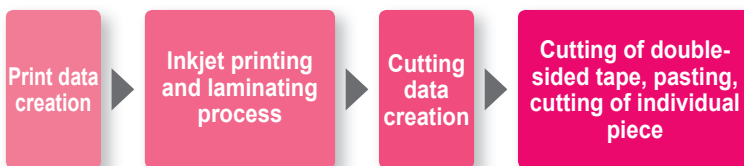
Embossing process



Reducing the cost for the embossing die via our new die manufacturing process.

Comparison of current and previous manufacturing methods

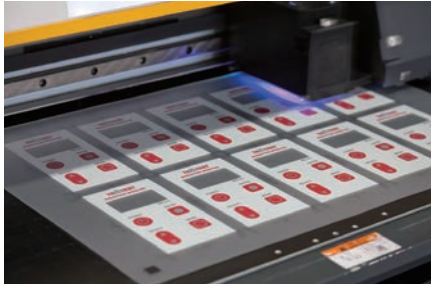
Current



Previous



PRODUCTION PROCESS



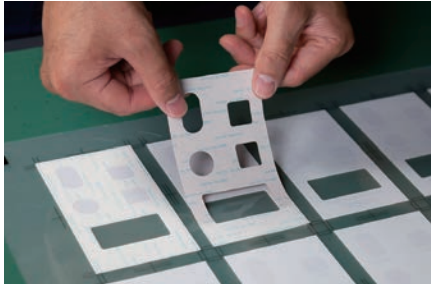
1. Inkjet printing on film



2. Laminating



3. Cutting double-sided tape



4. Sticking double-sided tape on printed film



5. Cutting the sheet to size



6. Embossing



7. Machining on enclosure



8. Sticking overlay sheet onto enclosure



9. Complete

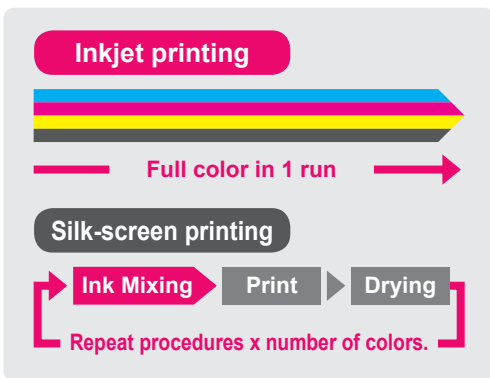
CUSTOMIZATION EXAMPLE



INKJET PRINTING



Full color digitally designed image can be printed in 1 run.
No cost difference regardless of the number of colors used.



Low printing cost
Full color print possible
in small quantities

Inkjet printing 1 run only for full color print

Printing cost
Full color

Silk-screen printing Printing cost x number of colors

Printing cost Color 1	Printing cost Color 2	Printing cost Color 3	Printing cost Color 4
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High quality printing of photo image and color gradation.

Print photo images in maximum 1,800 x 1,800 dpi quality.

Pictures, logos and unique designs with color gradation can be recreated in a high quality print.



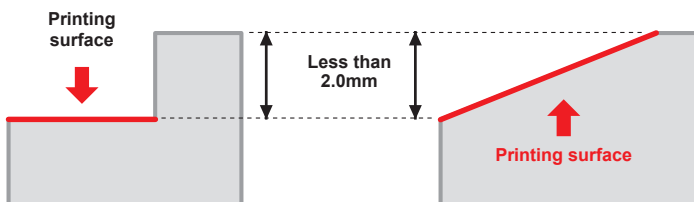
Maximum printable enclosure size



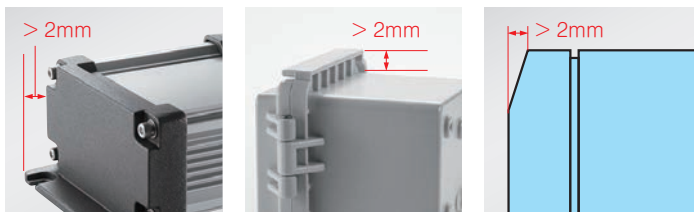
Printable on surfaces with height differential

Printing is possible on recessed, sloped and rounded sections.

Gap difference is less than 2.0mm.



*Not suitable if height difference is more than 2.0mm.



Printed example



CNC MACHINING

CNC milling is a form of computer controlled machining. Similar in operation to drilling and cutting, it is able to create various hole styles and shapes by using a rotating cutting tool to bore into the object.



- Mainly used for plastic, aluminium die-cast, and aluminium extrusion material types.
- Able to perform milling for various shapes and sizes.
- Recommended for small quantity customization.

