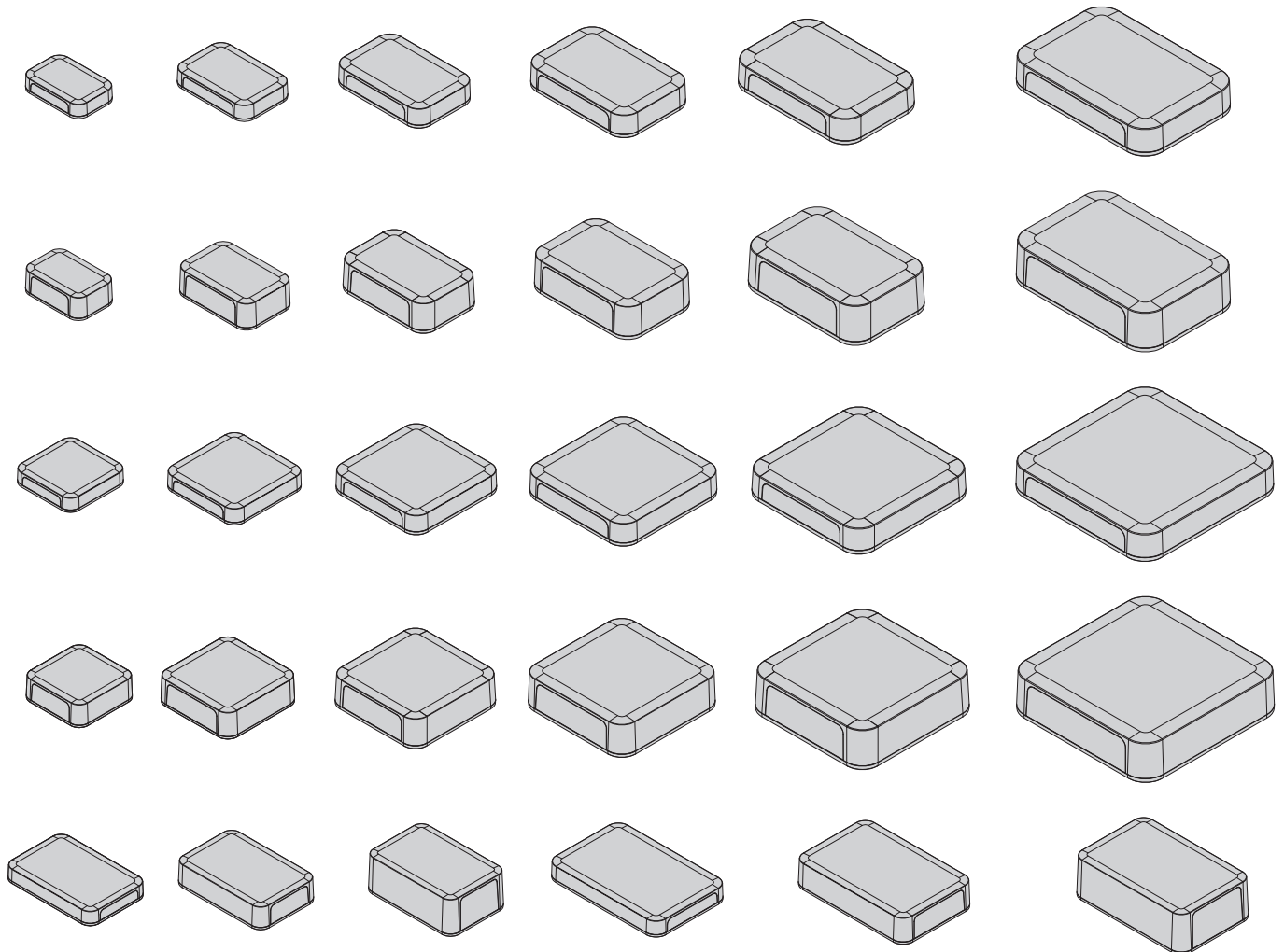


# PF SERIES FLAT NETWORK CASE

**Huge selection, 36 different sizes are now available.**

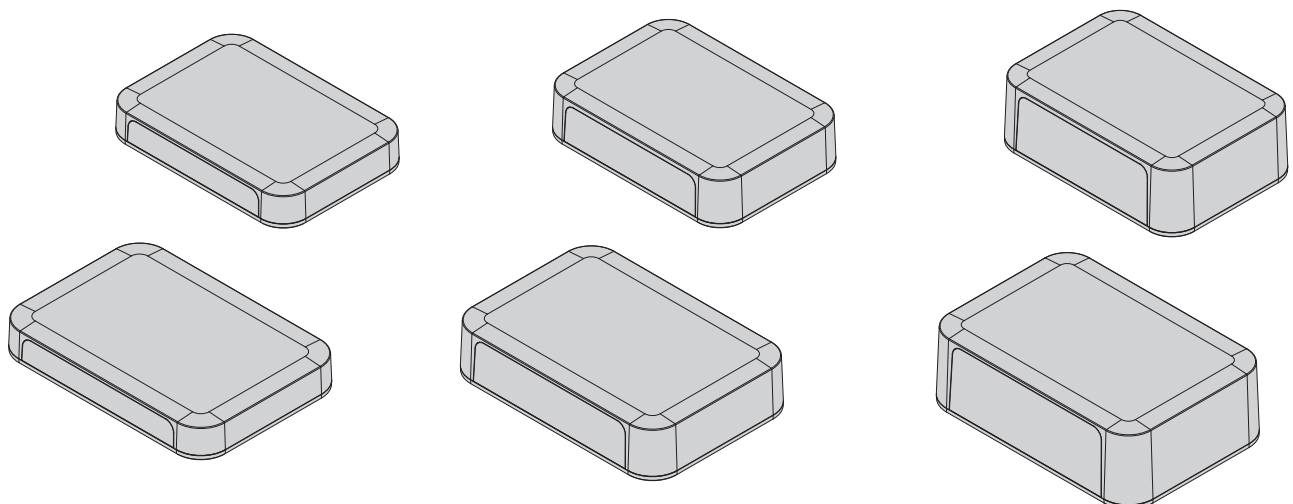
**Suitable for IOT device, Data transmitter and receiver, access point.**

From 100 x 67 x 22.5 to 320 x 225 x 100mm.



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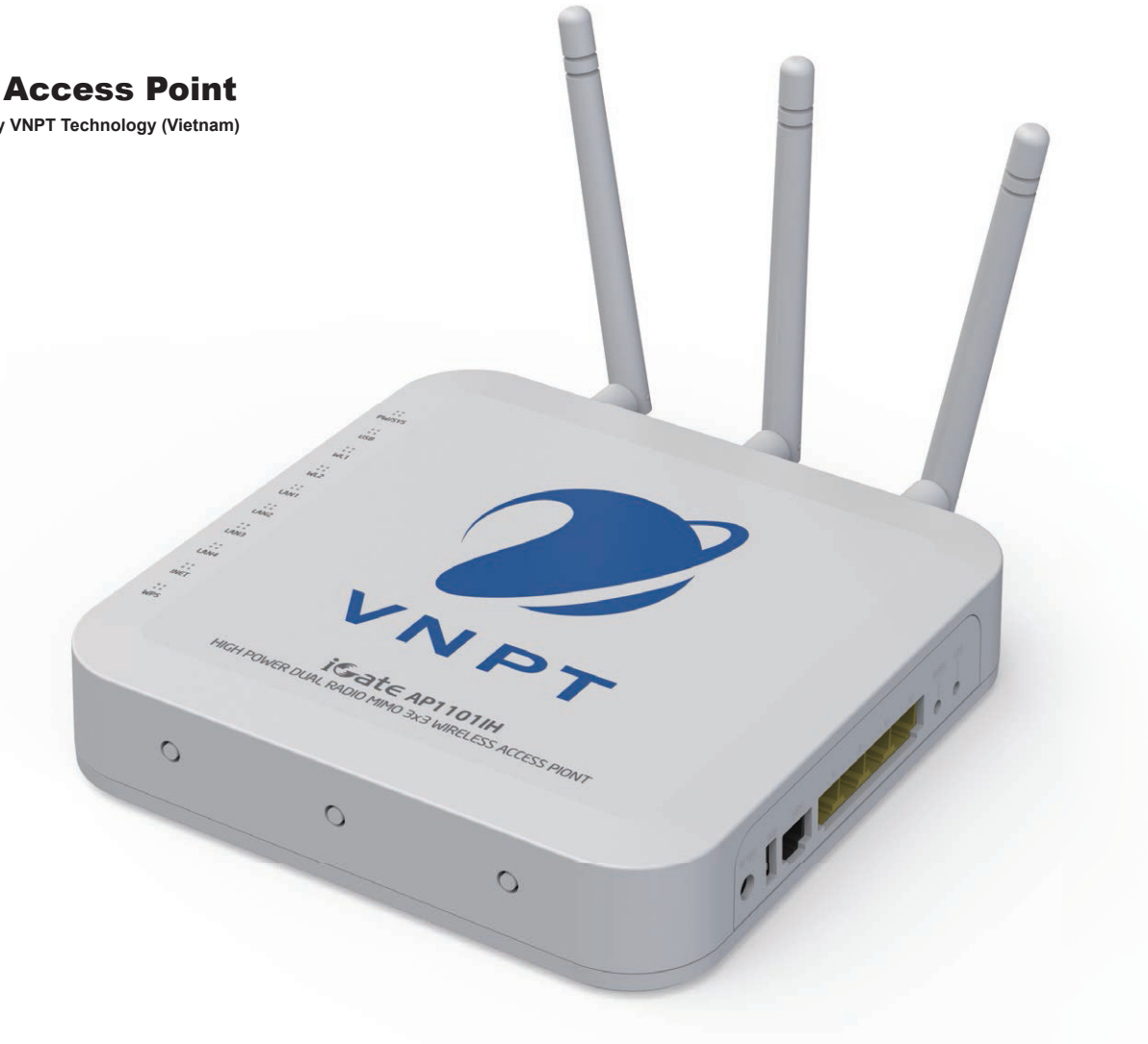
## New sizes



# APPLICATION EXAMPLE

## WiFi Access Point

Product by VNPT Technology (Vietnam)



## USB Power Charging Hub + Data Hub

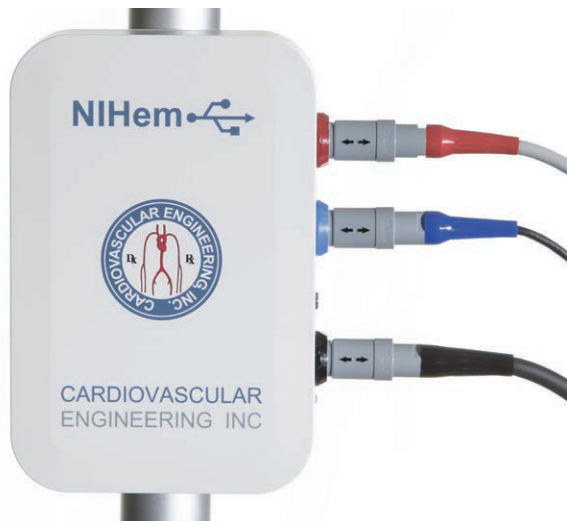
Product by MtT-planning (Japan)



Possible to power charging while transferring data.

## USB HEMODYNAMIC RESEARCH DEVICE

Product by Cardiovascular Engineering (USA)



## WIRELESS HOME ELECTRONICS CONTROLLER

Product by AR SMART (Colombia)



## GSM MODULE

Product by Elmar Electronic (Croatia)



## ADVANCED TRIGGER STATION

Product by BrainTrends (Italy)



## G4 FLIGHT TRACKER

Product by Guardian Mobility (Canada)



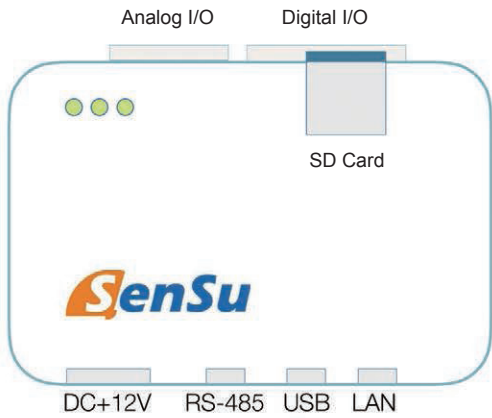
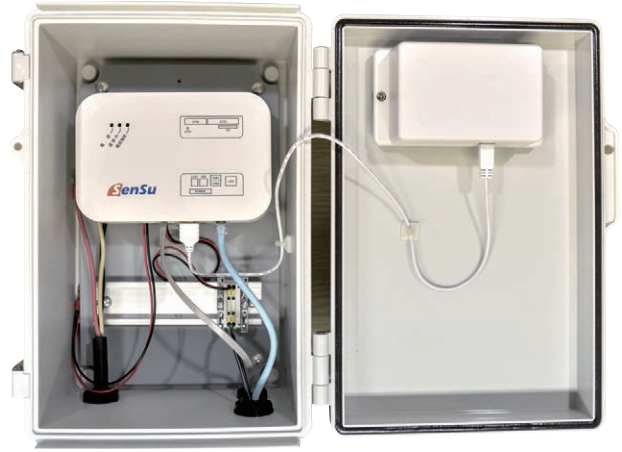
## iCONSE-T IOT and SENSOR NETWORK TRAINING SYSTEM

Product by Benchmark Electronic Systems (India)

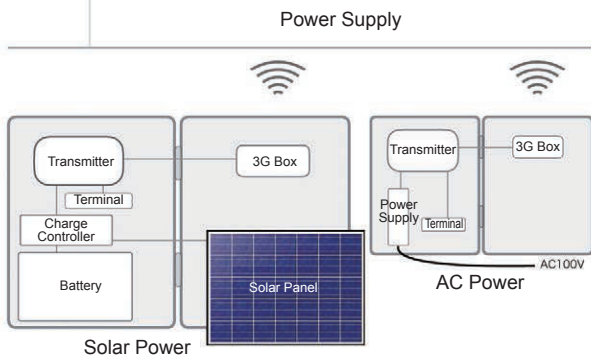


# "SenSu" COMMUNICATION UNIT with SENSOR

Product by DATA TECHNOLOGY (Japan)



Application Example for Agriculture  
Outdoor application with BCPC series Polycarbonate box.



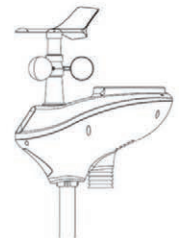
Exclusive Interface



USB



LAN

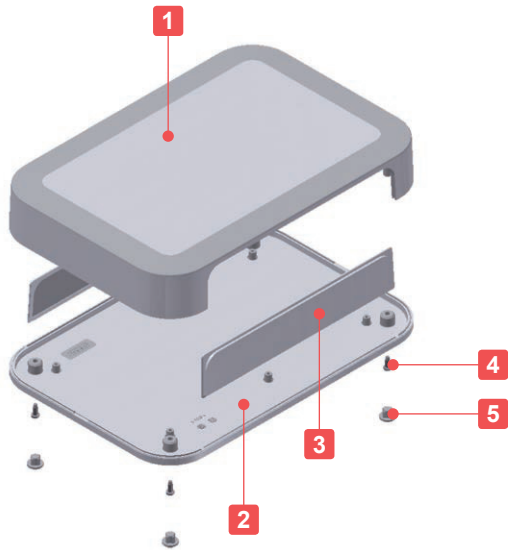


RS-485

# WIRELESS NETWORK DATA LOGGER

Product by SensingWinTech (Japan)





Technical Data
Protection class: IP40
Operating temperature: -10°C ~ +60°C

- Flat designed plastic case with detachable panels.
- Made of flame-resistant ABS UL94V-0, and available in off-white and dark gray color.
- 6 new sizes added for a total of 36 different sizes available for selection.
- Equipped with built-in bosses for PCB mounting.
- Suitable for Wi-Fi access point, measuring equipment, controller or various other applications for desktop, wall mounting use and so on.

Components

No.	Part name	Pcs	Material	Color / Finish
1	Top cover	1	ABS UL94V-0	Off-white • Dark gray
2	Bottom base	1	ABS UL94V-0	Off-white • Dark gray
3	Panel	2	ABS UL94V-0	Off-white • Dark gray
4	Self-tapping screw	4	Steel	Nickel plated
5	Rubber feet	4	Elastomer	Dark gray

Accessories (Optional parts)



Tapping standoff TPS series  
See page TPS · MT-1



PCB mounting screw EM series  
See page EM · MR-1



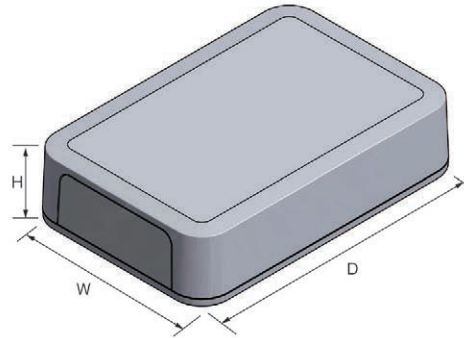
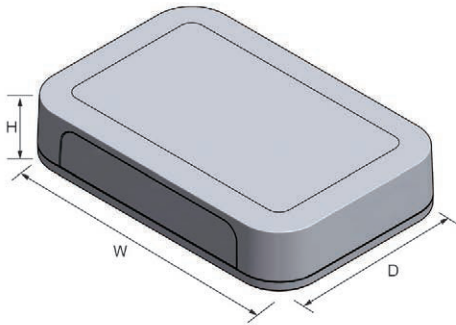
TORX screw MR series  
See page EM · MR-1



Suspension bracket WM series  
See page WM-1



Neodymium magnet NMG series  
See page NMG-1



Tilt leg TLW series  
See page TLW-1

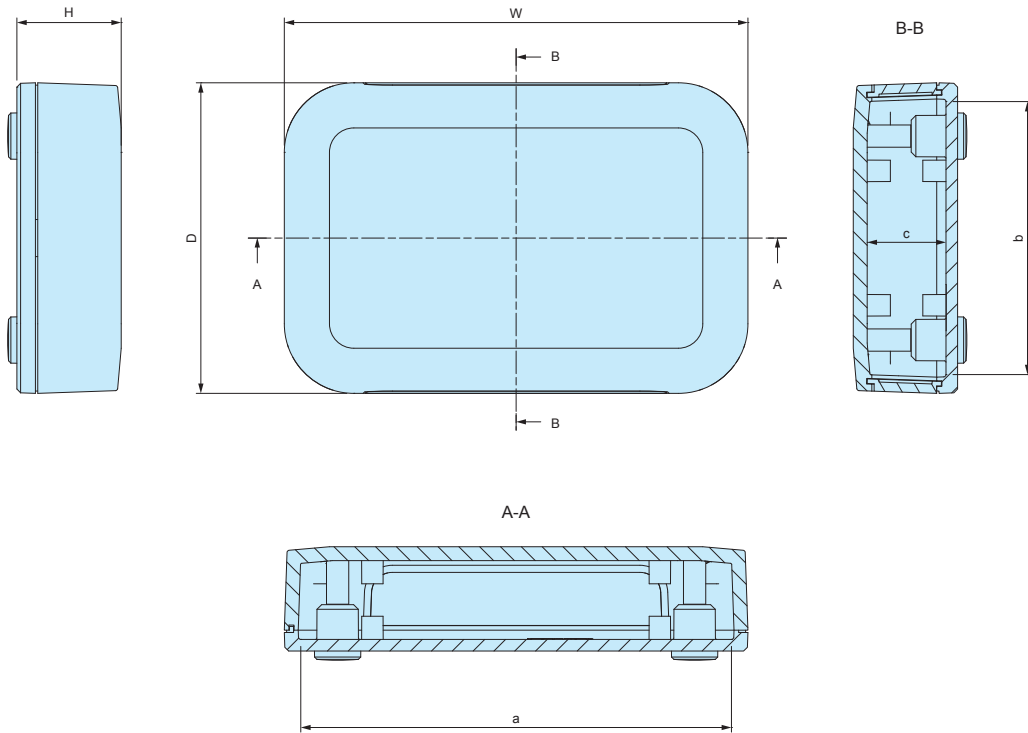
Product no. / Dimensions

※ H dimension is not inclusive of rubber feet. (Rubber feet height = 2mm)

Product no.		Dimensions			Screw	Weight (g)
● Off-white	● Dark gray	W	H	D		
PF10- 2- 7W	PF10- 2- 7D	100	22.5	67	M2.5-8 x 4 pcs	60
PF10- 2-10W	PF10- 2-10D	100	22.5	100	M2.5-8 x 4 pcs	82.9
PF10- 2-15W	PF10- 2-15D	100	22.5	150	M2.5-8 x 4 pcs	120.2
PF10- 4- 7W	PF10- 4- 7D	100	35	67	M2.5-8 x 4 pcs	65
PF10- 4-10W	PF10- 4-10D	100	35	100	M2.5-8 x 4 pcs	97.1
PF10- 4-15W	PF10- 4-15D	100	35	150	M2.5-8 x 4 pcs	132.6
PF10- 6-15W	PF10- 6-15D	100	55	150	M2.5-8 x 4 pcs	169.1
PF13- 3- 9W	PF13- 3- 9D	125	25	85	M2.5-8 x 4 pcs	90.8
PF13- 3-13W	PF13- 3-13D	125	25	125	M2.5-8 x 4 pcs	127.5
PF13- 3-19W	PF13- 3-19D	125	25	190	M2.5-8 x 4 pcs	186.8
PF13- 4- 9W	PF13- 4- 9D	125	40	85	M2.5-8 x 4 pcs	108.4
PF13- 4-13W	PF13- 4-13D	125	40	125	M2.5-8 x 4 pcs	151.4
PF13- 4-19W	PF13- 4-19D	125	40	190	M2.5-8 x 4 pcs	214.9
PF13- 6-19W	PF13- 6-19D	125	60	190	M2.5-8 x 4 pcs	250.4
PF15- 3-10W	PF15- 3-10D	150	30	100	M2.5-8 x 4 pcs	145.5
PF15- 3-15W	PF15- 3-15D	150	30	150	M2.5-8 x 4 pcs	207.5
PF15- 5-10W	PF15- 5-10D	150	45	100	M2.5-8 x 4 pcs	166
PF15- 5-15W	PF15- 5-15D	150	45	150	M2.5-8 x 4 pcs	233.5
PF18- 4-12W	PF18- 4-12D	175	35	120	M2.5-8 x 4 pcs	188.7
PF18- 4-18W	PF18- 4-18D	175	35	175	M2.5-8 x 4 pcs	266.8
PF18- 5-12W	PF18- 5-12D	175	50	120	M2.5-8 x 4 pcs	213.6
PF18- 5-18W	PF18- 5-18D	175	50	175	M2.5-8 x 4 pcs	302.1
PF20- 4-13W	PF20- 4-13D	200	40	135	M3-8 x 4 pcs	264
PF20- 4-20W	PF20- 4-20D	200	40	200	M3-8 x 4 pcs	368.5
PF20- 6-13W	PF20- 6-13D	200	60	135	M3-8 x 4 pcs	302.5
PF20- 6-20W	PF20- 6-20D	200	60	200	M3-8 x 4 pcs	417
PF24- 4-17W	PF24- 4-17D	240	42.5	165	M3-8 x 4 pcs	370.4
PF24- 4-24W	PF24- 4-24D	240	42.5	240	M3-8 x 4 pcs	521.4
PF24- 6-17W	PF24- 6-17D	240	60	165	M3-8 x 4 pcs	408.8
PF24- 6-24W	PF24- 6-24D	240	60	240	M3-8 x 4 pcs	568.7
<b>NEW</b> PF28- 5-20W	<b>NEW</b> PF28- 5-20D	280	45	200	M3-8 x 4 pcs	564.1
<b>NEW</b> PF28- 7-20W	<b>NEW</b> PF28- 7-20D	280	65	200	M3-8 x 4 pcs	618.4
<b>NEW</b> PF28- 9-20W	<b>NEW</b> PF28- 9-20D	280	90	200	M3-8 x 4 pcs	709.2
<b>NEW</b> PF32- 5-23W	<b>NEW</b> PF32- 5-23D	320	45	225	M3-8 x 4 pcs	697.1
<b>NEW</b> PF32- 7-23W	<b>NEW</b> PF32- 7-23D	320	70	225	M3-8 x 4 pcs	782.1
<b>NEW</b> PF32-10-23W	<b>NEW</b> PF32-10-23D	320	100	225	M3-8 x 4 pcs	899.8

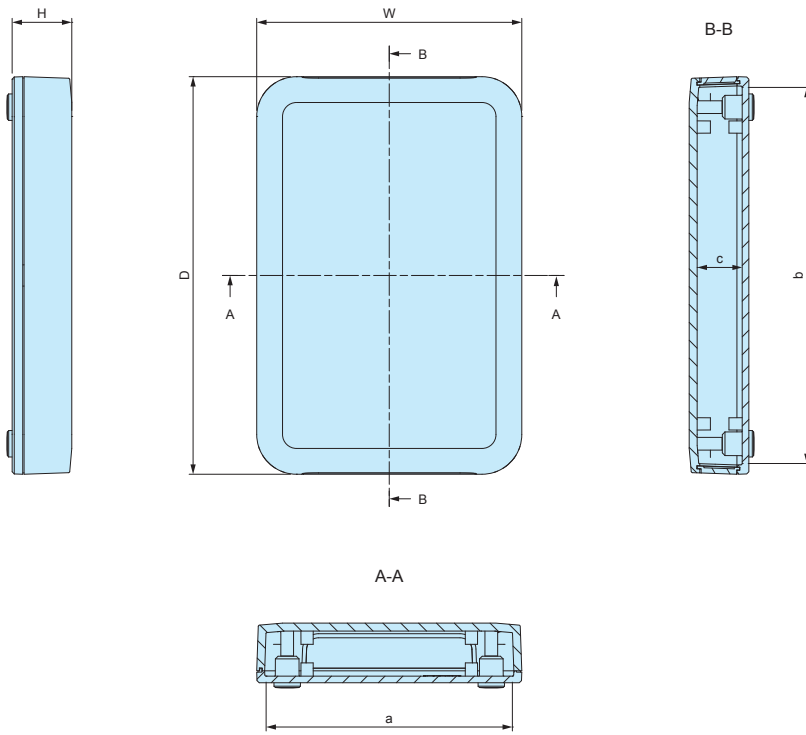
**PF dimensions**

■ Drawings below are reference examples only.  
DXF/DWG/PDF drawings available on our website.



※Refer to DXF/DWG/PDF drawings for the numbers of PCB bosses on each size of enclosures.

Product no.	W	H	D	a	b	c
PF10- 2- 7□	100	22.5	67	92	58	17
PF10- 2-10□	100	22.5	100	92	91	17
PF10- 4- 7□	100	35	67	91	57	29.5
PF10- 4-10□	100	35	100	91	90	29.5
PF13- 3- 9□	125	25	85	117	76	19.5
PF13- 3-13□	125	25	125	117	116	19.5
PF13- 4- 9□	125	40	85	116	75	34.5
PF13- 4-13□	125	40	125	116	115	34.5
PF15- 3-10□	150	30	100	142	90	24
PF15- 3-15□	150	30	150	142	140	24
PF15- 5-10□	150	45	100	141	89	39
PF15- 5-15□	150	45	150	141	139	39
PF18- 4-12□	175	35	120	166	110	29
PF18- 4-18□	175	35	175	166	165	29
PF18- 5-12□	175	50	120	165	109	44
PF18- 5-18□	175	50	175	165	164	44
PF20- 4-13□	200	40	135	191.5	124.5	34
PF20- 4-20□	200	40	200	191.5	189.5	34
PF20- 6-13□	200	60	135	190	123	54
PF20- 6-20□	200	60	200	190	188	54
PF24- 4-17□	240	42.5	165	230	154	36.5
PF24- 4-24□	240	42.5	240	230	229	36.5
PF24- 6-17□	240	60	165	229	153	54
PF24- 6-24□	240	60	240	229	228	54
PF28- 5-20□	280	45	200	269.5	189	38.5
PF28- 7-20□	280	65	200	268.5	187.5	58.5
PF28- 9-20□	280	90	200	266.5	185.5	83.5
PF32- 5-23□	320	45	225	309.5	214	38.5
PF32- 7-23□	320	70	225	308	212	63.5
PF32-10-23□	320	100	225	306	210	93.5

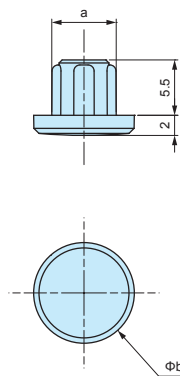


Product no.	W	H	D	a	b	c
PF10-2-15□	100	22.5	150	92	141	17
PF10-4-15□	100	35	150	91	140	29.5
PF10-6-15□	100	55	150	90	139	49.5
PF13-3-19□	125	25	190	117	181	19.5
PF13-4-19□	125	40	190	116	180	34.5
PF13-6-19□	125	60	190	115	179	54.5

**PFRF SERIES RUBBER FEET for PF**



- Rubber feet for PF series.
- Inserted into the screw holes on the underside of box.
- Elastomer material is resistant against color migration.



**Product no. / Dimensions**

Product no.	Dimensions		Suitable box	Material	Color	Pack of
	a	b				
PFRF-M2.5D	6.4	10	PF10-2-7,10-2-10,10-2-15,10-4-7,10-4-10,10-4-15 PF10-6-15,13-3-9,13-3-13,13-3-19,13-4-9,13-4-13 PF13-4-19,13-6-19,15-3-10,15-3-15,15-5-10,15-5-15 PF18-4-12,18-4-18,18-5-12,18-5-18	Elastomer	Dark gray	4
PFRF-M3D	7.2	11	PF20-4-13,20-4-20,20-6-13,20-6-20,24-4-17 PF24-4-24,24-6-17,24-6-24,28-5-20,28-7-20 PF28-9-20,32-5-23,32-7-23,32-10-23	Elastomer	Dark gray	4

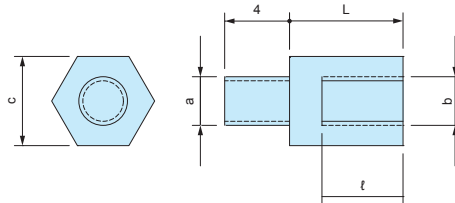


TPS SERIES

TAPPING STANDOFF



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



Product no. / Dimensions

■ Material / Finish : Brass / Unfinished

Product no.	Screw size (a)	Screw size (b)	c	L	ℓ	Pack of	Recommended enclosure models	
TPS-M2.3-4	M2.3	M2.3	5	4	3	4	WH series • PFE series LC • LCE • LCS • LCT series PF • PFF series (M2.3 boss models) TW • TWN • TWF series (M2.3 boss models) WP series (M2.3 boss models)	
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		PF • PFF series (M2.6 boss models) WP series (M2.6 boss models)
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		
TPS-M2.6-12	M2.6	M2.6	5	12	6	4	SU • OP series TWS • TW • TWN • TWF series (M3 boss models)	
TPS-M3-4	M3	M3	5.5	4	3	4		
TPS-M3-5	M3	M3	5.5	5	3	4		
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		



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



MT SERIES

PCB MOUNTING SCREWS for TPS



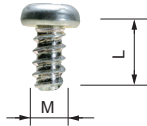
- PCB mounting Screws for TPS tapping standoffs.

Product no. / Dimensions

Product no.	M	L	Head style	Material	Finish	Pack of
<b>NEW</b> MT2.3-4	2.3	4	Pan	Steel	Trivalent chromate	20
<b>NEW</b> MT2.3-6	2.3	6		Steel	Trivalent chromate	20
<b>NEW</b> MT2.6-4	2.6	4		Steel	Trivalent chromate	20
MT3-4	3	4		Steel	Trivalent chromate	20

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

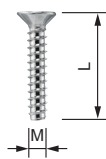
Product no.	M	L	Material	Finish	Suitable enclosures	Pack of
EM-1.6	1.6	4	Steel	Trivalent chromate	WC • CSS • CS • PS (M1.6 size)	50
EM-2	2	5	Steel	Trivalent chromate	PS • TW • TWN • TWF • WP (M2 size)	50
EM-2.3	2.3	6	Steel	Trivalent chromate	WH • LC • LCT • LCS • LCE • PFE WSC (Top cover bosses) PF • PFF (M2.3 size) TW • TWN • TWF (M2.3 size) WP (M2.3 size)	50
<b>NEW</b> EM-2.3-8	2.3	8	Steel	Trivalent chromate	WSC (Bottom base bosses)	50
EM-2.6	2.6	6	Steel	Trivalent chromate	PF • PFF • WP (M2.6 size)	50
EM-3	3	5	Steel	Trivalent chromate	SU TWS • TW • TWN • TWF (M3 sizes)	50
EM-3-6	3	6	Steel	Trivalent chromate		50

MR SERIES

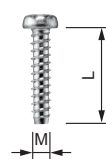
TORX SCREW



Countersunk head



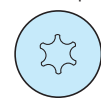
Pan head



With pin



★ Without pin



★ : MR1.6-6S, MR-2S, MR2.6-10□, and MR3-14□ are without pin.

Product no. / Dimensions

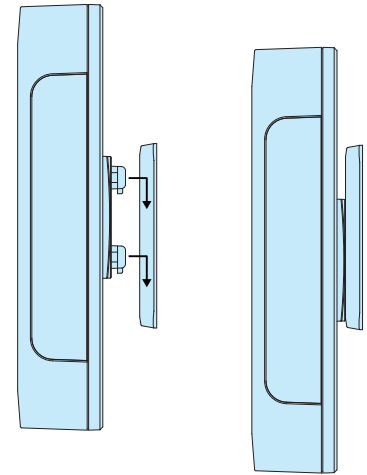
★Mark = Without pin

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 • PFE • PFF (M2.5 size)	20
MR2.6-10S★	2.6	10	T8	Countersunk	Steel	Nickel plated	TW • TWN (M2.6 models) TWF (M2.6 models)	20
MR2.6-10B★	2.6	10	T8	Countersunk	Steel	Black trivalent chromate	MX • MXA • MXB • MXF (M2.6 models)	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-N / F2 / F3 LCT • LCS • LC145S-F6 / 145S-N LCE115-N TW • TWN7-2-11 / 7-4-11 / 7-5-11 TWF7-2-11 / 7-4-11 / 7-5-11 / 8-2-8 / 8-4-8	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 LCE115H-N • LCE135-N • LCE145H-N • LCE165H-N	20
MR3-8PS	3	8	T10	Pan	Steel	Nickel plated	PF • PFE • PFF (M3 size)	20
MR3-14S★	3	14	T10	Countersunk	Steel	Nickel plated	TW • TWN (M3 models)	20
MR3-14B★	3	14	T10	Countersunk	Steel	Black trivalent chromate	TWF (M3 models) MX • MXA • MXB • MXF (M3 models)	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

WM SERIES

SUSPENSION BRACKET

How to install

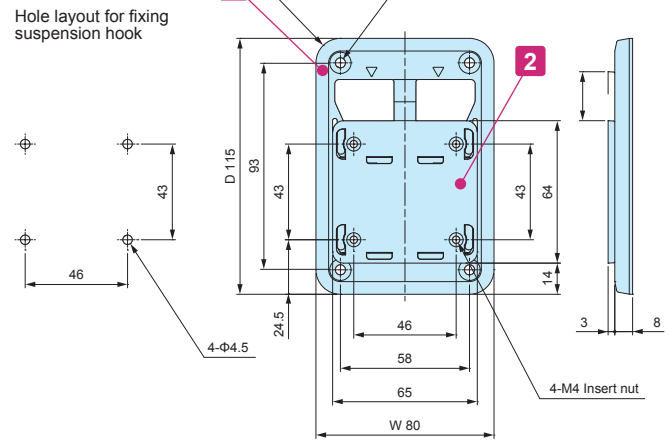
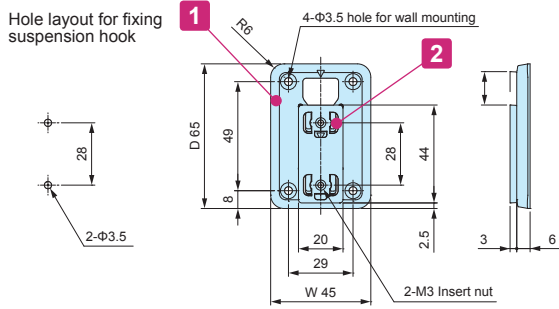


- Plastic wall mounting bracket. Easy attachment and removal.
- Large and small brackets are available.
- Applicable not only for the PF series, but also other plastic/metal enclosures with a panel thickness of 0.8 ~ 3.5mm.
- To attach the suspension hook onto the enclosure, hole milling is required.
- The max load values listed are static load values only. Use caution when handling.
- Please be aware of the insertion direction of the suspension hook against the mounting base when attaching.

Technical Data
Max load : 2 kg - WM-1 5 kg - WM-2

WM-1

WM-2



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

Components

No.	Part name	Pcs	Material	Color / Finish
1	Mounting base	1	PC + ABS UL94HB	Off-white • Dark gray
2	Suspension hook	1	PC + ABS UL94HB	Off-white • Dark gray
-	Insert nut	2 / 4	Brass	Unfinished
-	Screw	2	M3-8 Steel binding = WM-1	Nickel plated
-	Screw	4	M4-8 Steel binding = WM-2	Nickel plated

Product no. / Dimensions

Product no.		Dimensions		Mountable thickness	Weight (g)
● Off-white	● Dark gray	W	D		
WM-1W	WM-1D	45	65	t0.8 ~ t3.5	11.5
WM-2W	WM-2D	80	115	t0.8 ~ t3.5	48

NMG SERIES

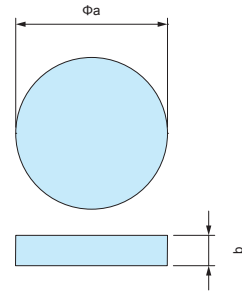
NEODYMIUM MAGNET



Round magnet



- Material / Finish: Neodymium / Nickel plated
- Please attach using a strong adhesive.



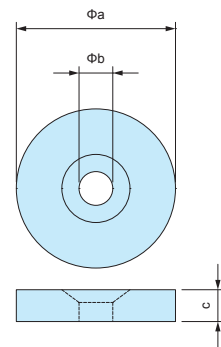
Components

Product no.	a	b	Weight (g)	Flus Density	Adsorption
NMG3-15N	15	3	4	214.4 mT	2.44 kgf
NMG3-20N	20	3	7.1	170.7 mT	3.26 kgf
NMG5-22N	22	5	11.4	247.2 mT	5.91 kgf
NMG5-25N	25	5	18.4	221.9 mT	6.89 kgf

Round magnet with countersunk hole



- Please fasten with a screw.



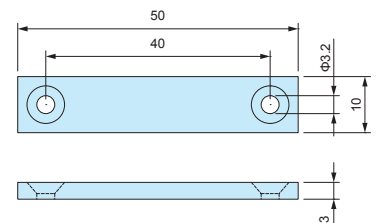
Components

Product no.	a	b	c	Countersunk size	Weight (g)	Flus Density	Adsorption
NMG3-15M3	15	3.2	3	M3	3.8	214.3 mT	2.33 kgf
NMG3-20M3	20	3.2	3	M3	6.9	170.6 mT	3.17 kgf
NMG5-22M4	22	4.3	5	M4	13.7	247.2 mT	5.68 kgf
NMG5-25M5	25	5.3	5	M5	17.6	221.9 mT	6.58 kgf

Rectangular magnet with countersunk holes



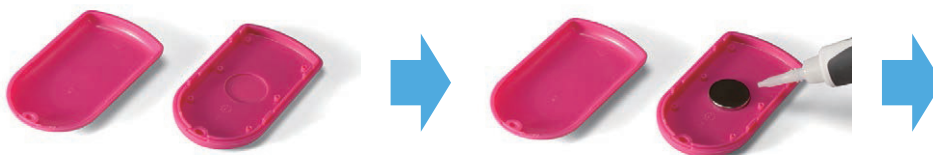
- Please fasten with a screw.



Components

Product no.	a	b	c	Countersunk size	Weight (g)	Flus Density	Adsorption
NMG3-50M3	50	10	3	M3	11.3	210.0 mT	9.1 kgf

Example 1 The magnetic force remains strong even through plastic.



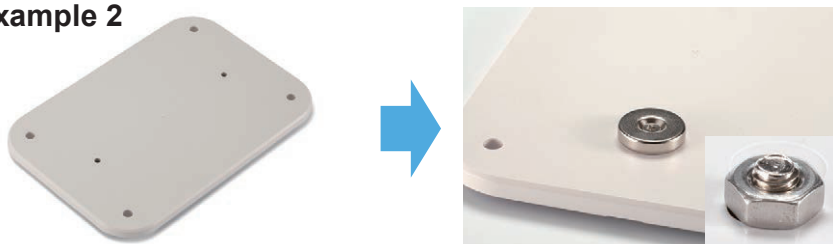
Make recessed pocket on the inside wall.

Glue on.



Attach onto a metallic surface.

Example 2



Make holes

Fasten with a screw and nut.



Attach onto a metallic surface.

**CAUTION: Handle with care to avoid personal injury or damage to the magnet.**



# TLW SERIES TILT LEG



Application Example

- Double shot injection molded feet with soft and well-designed rounded shape.
- Non-slip design with Elastomer (TPE) pad.
- Available in 3 different color combinations on TLW-46 models, and 2 different color combinations on TLW-70 models.

Technical Data
Max load : 7kg

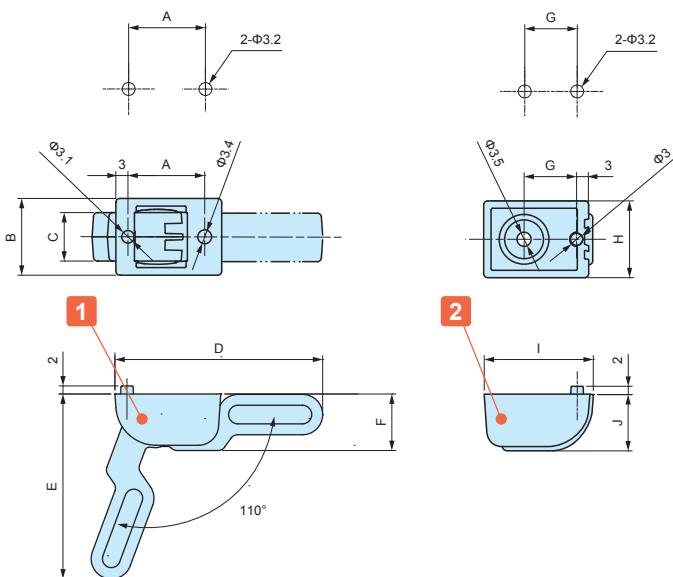
### Components

No.	Part name	Pcs	Material	Color / Finish
1	Front feet	2	PC+ABS UL94V-0, TPE	Black & Black • Navy & Gray • Light gray & Gray
2	Rear Feet	2	PC+ABS UL94V-0, TPE	Black & Black • Navy & Gray • Light gray & Gray
-	Washer head screw	4	Steel M3-6	Black Trivalent chromate
-	Nut	4	Steel M3	Black Trivalent chromate

- Drawings below are reference examples only.  
DXF/DWG/PDF drawings available on our website.

Mounting hole (Front)

Mounting Hole (Rear)



- Possible to be installed on both plastic and aluminum enclosures.



### Product no. / Dimensions

Product no.	A	B	C	D	E	F	G	H	I	J	Color (plastic)	Color (TPE)	Weight (g)
TLW-46BB	19	19	12	51.2	45.9	14	13	19	27	14	Black	Black	23
TLW-46NG	19	19	12	51.2	45.9	14	13	19	27	14	Navy	Gray	23
TLW-46LG	19	19	12	51.2	45.9	14	13	19	27	14	Light gray	Gray	23
<b>NEW</b> TLW-70BB	30	25	16	75.4	69	21.5	20	25	39	21.5	Black	Black	59
<b>NEW</b> TLW-70LG	30	25	16	75.4	69	21.5	20	25	39	21.5	Light gray	Gray	59