

# IP67 PORTABLE CASE WC SERIES



● 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**

## High waterproof performance with both TPE and silicone gasket

ABS and TPE double-shot molded top & bottom covers allows for a good waterproof seal.

The durable silicone gasket maintains the battery lid seal.

Insert nut and screw allow the battery compartment to remain durable even after repeated opening/closing.



## Great protection by TPE sides

Side grips in TPE material provides a comfortable grip and protection against drop impact.



## 3 color combinations available



# APPLICATION EXAMPLE

Best for outdoor use as a remote control, RFID tag, compact GPS, wireless device, simplified measurement gadget and so on.

## Structure AI Inspection Noise Detector System

Product by AIST (Japan)  
Website : [aist.go.jp](http://aist.go.jp)



## Emergency Call Receiver / Transmitter

Product by Knop Elektronik A/S (Denmark)  
Website : [knop.dk](http://knop.dk)



## GPS Transmit Trigger

Product by Tokyo Denki Gijyutsu Co., Ltd. (Japan)  
Website : [tdg-net.co.jp/](http://tdg-net.co.jp/)



## LPWA (Low Power, Wide Area) Transmitter



## We are able to manufacture embossed or standard overlay sheets with low initial costs.

Waterproof performance may be lost by drilling/milling holes or cut-outs for buttons or switches on waterproof enclosures.  
Use an IP rated overlay sheet, or membrane keypad in order to allow the milled area to remain waterproof.



### Advantage 1

Reduce initial cost with digital inkjet printing.

### Advantage 2

Reduce initial tooling cost for cutting die with digital cutting plotter.

### Advantage 3

Reduce initial tooling cost for embossing with in-house mold processing.

### Advantage 4

Shorter lead time made possible by having all production be in-house.

## WC SERIES

## IP67 PORTABLE PLASTIC CASE


  
IP67

- TPE side grip provides not only a comfortable grip, but also protects from drop impact.
- Suitable to be used as a remote controller, key fob, wireless device, RFID tag, and so on.
- Case with a CR2032 coin battery, and no battery compartment types are available.
- Available in 4 different sizes, 7 model types, and 3 color variations.
- See page WC-4 for coin battery contact installation step.

## Technical Data

Protection class : IP67
Operating temperature : -10 ~ +50°C
Recommended torque : 0.06 ~ 0.08N · m

None battery compartment type



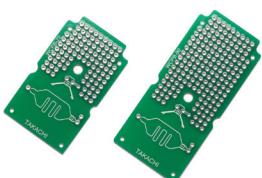
Battery compartment type



## Components

No.	Part name	Pcs	Material	Color / Finish
1	Top cover	1	ABS UL94HB : Elastomer	Black & Black • Black & Marine • White & Light gray
2	Bottom cover	1	ABS UL94HB : Elastomer	Black & Black • Black & Marine • White & Light gray
3	Battery lid	1	ABS UL94HB	Black • White
4	Battery contact	1 set	Stainless steel SUS304	Nickel plated
5	O-ring	1	Silicone	Black
6	Screw	7	Stainless steel SUS304	Unfinished

## Accessories (Optional parts)



Exclusive PCB  
WCPB series  
See page 20



Strap  
STPS series  
See page 21

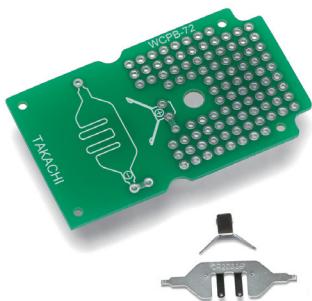


PCB mounting screw  
EM-1.6  
See page 22

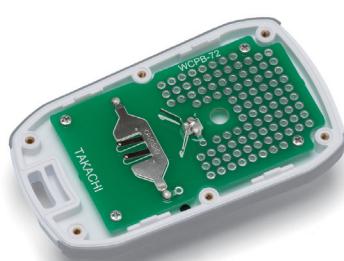


Neodymium magnet  
NMG series  
See page 22

# Coin battery contact installation step



Solder the contacts onto the PCB



Install the PCB in the top cover

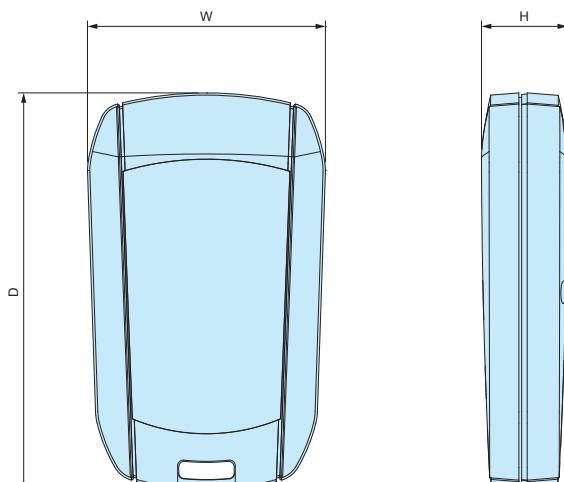
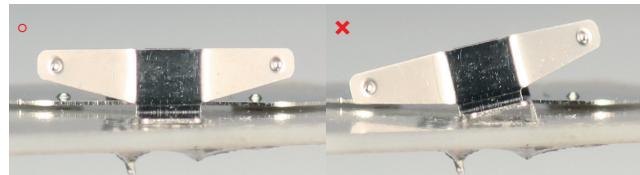


All set!



■ Battery direction is incused on the inner side of the battery lid.

**CAUTION** Use caution when mounting battery contacts.



## Battery Compartment Types

Type	N	C
Battery Compartment	None	CR2032 x 1

## Color Type

Code	B B	B M	W L
Body	Black	Black	White
Grip	Black	Marine	Light gray
Color			

## Product no. / Dimensions

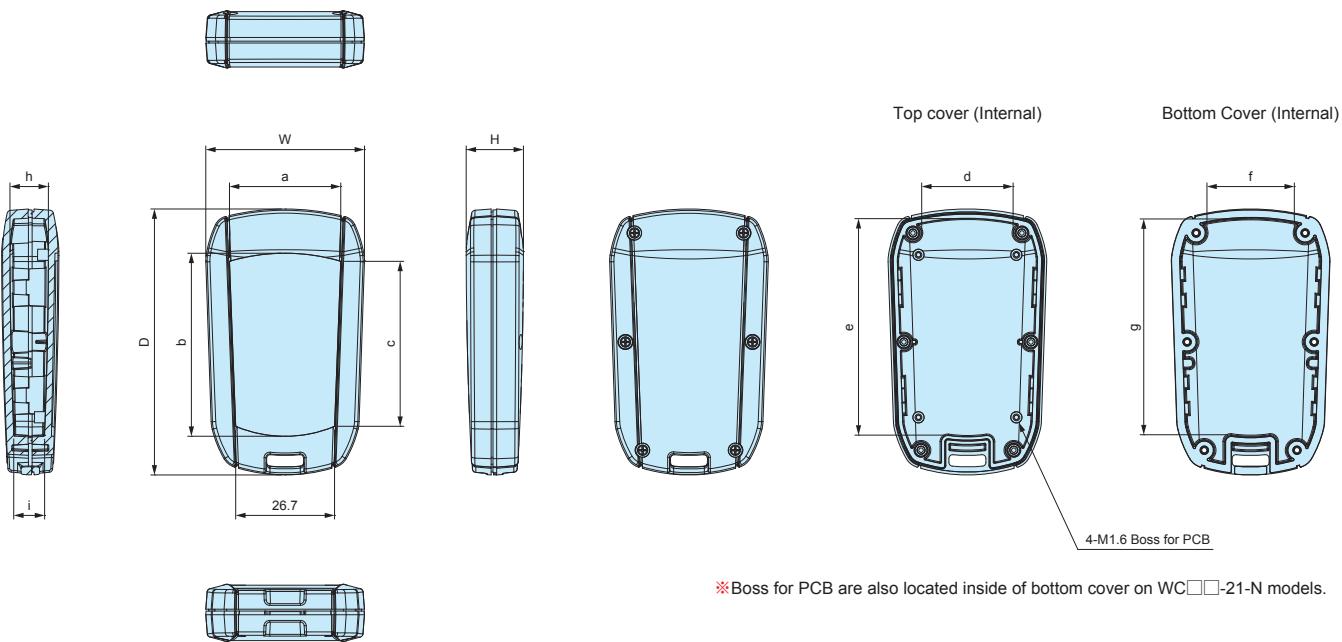
■ Please suffix color code at the end of the product number.

Product no.	W	H	D	Battery Compartment	Weight (g)
WC72-15-N-□□	43	15.5	72	None	18.5
WC72-15-C-□□	43	15.5	72	CR2032	22
<b>NEW</b> WC72-21-N-□□	43	21.5	72	None	22
<b>NEW</b> WC72-21-C-□□	43	21.5	72	CR2032	25.5
WC90-15-N-□□	44.2	15.7	90	None	23
WC90-15-C-□□	44.2	15.7	90	CR2032	26.5
<b>NEW</b> WC90-21-N-□□	44.2	21.7	90	None	27

## WC dimensions

WC72-15-N / WC72-21-N  
WC90-15-N / WC90-21-N

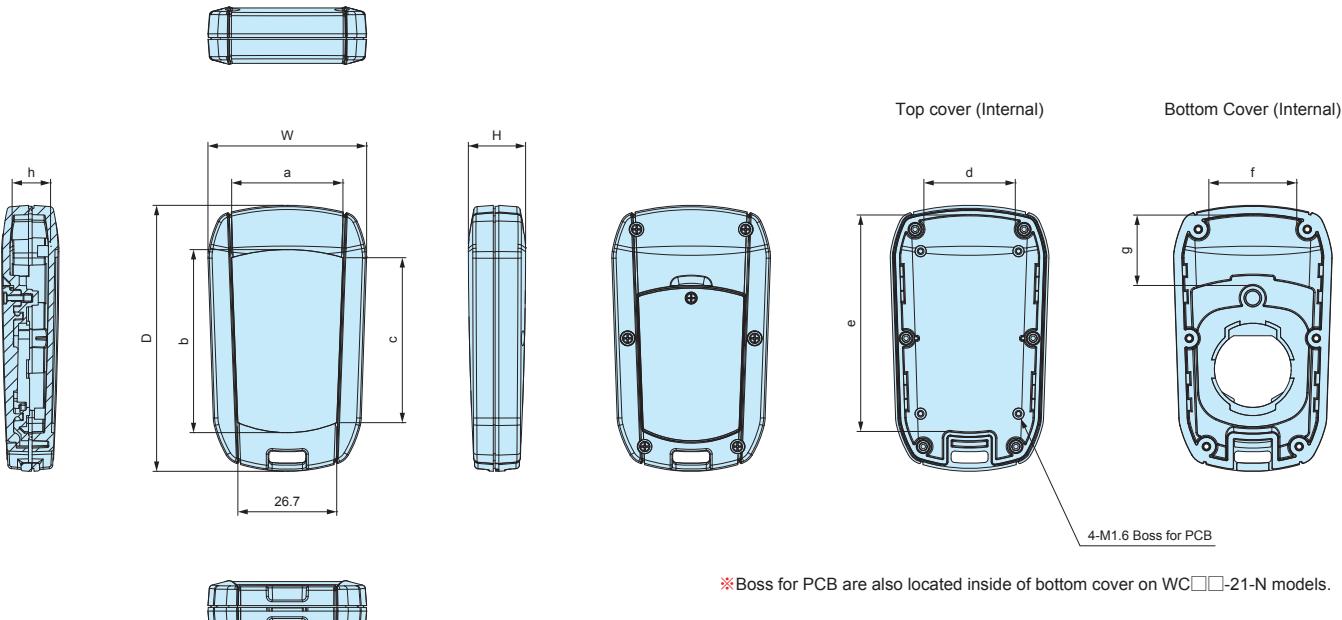
■ Drawings below are reference examples only.  
DXF/DWG/PDF drawings available on our website.



※Boss for PCB are also located inside of bottom cover on WC□□-21-N models.

Product no.	W	H	D	a	b	c	d	e	f	g	h	i
WC72-15-N-□□	43	15.5	72	30.1	49.5	44.7	24.7	58.6	23.6	58.4	10.4	8.3
WC72-21-N-□□	43	21.5	72	30.1	49.5	44.7	24.7	58.6	23	56.3	16.3	14.3
WC90-15-N-□□	44.2	15.7	90	31.4	67.5	62.7	26.1	76.6	25	76.4	10.4	8.3
WC90-21-N-□□	44.2	21.7	90	31.4	67.5	62.7	26.1	76.6	24.4	74.3	16.4	14.3

WC72-15-C / WC72-21-C  
WC90-15-C



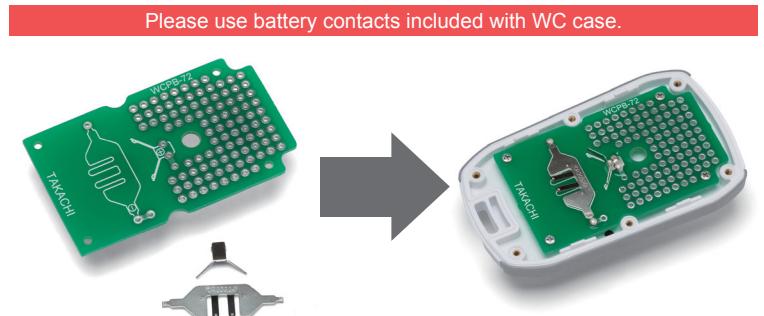
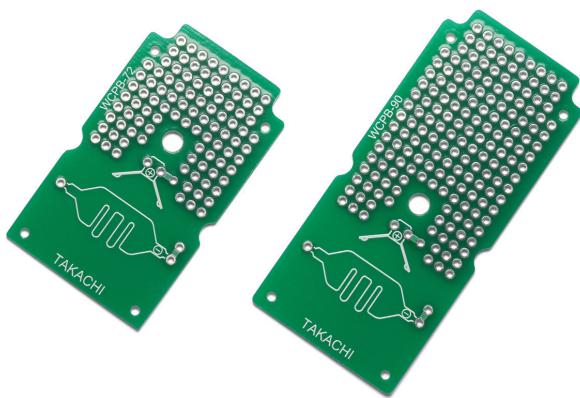
※Boss for PCB are also located inside of bottom cover on WC□□-21-N models.

Product no.	W	H	D	a	b	c	d	e	f	g	h
WC72-15-C-□□	43	15.5	72	30.1	49.5	44.7	24.7	58.6	23.8	19	10.4
WC72-21-C-□□	43	21.5	72	30.1	49.5	44.7	24.7	58.6	23	17.3	16.3
WC90-15-C-□□	44.2	15.7	90	31.4	67.5	62.7	26.1	76.6	25	36.9	10.4

## WCPB SERIES

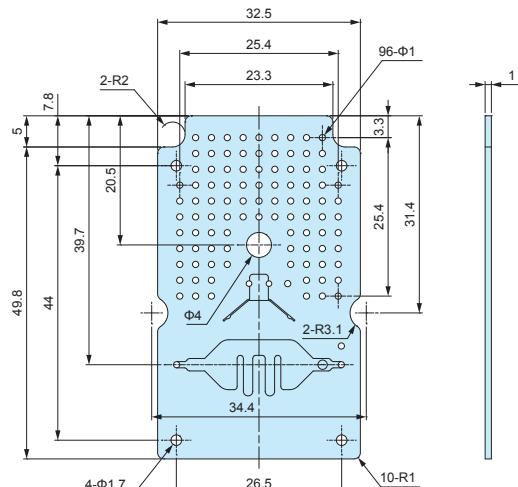
## EXCLUSIVE PCB for WC

- Exclusive PCB for WC series.
- Glass epoxy board (FR-4), through-holes on both sides, 2.54mm hole pitch.
- Designed with a battery contact hole. Battery contact position and direction are printed onto the pcb.

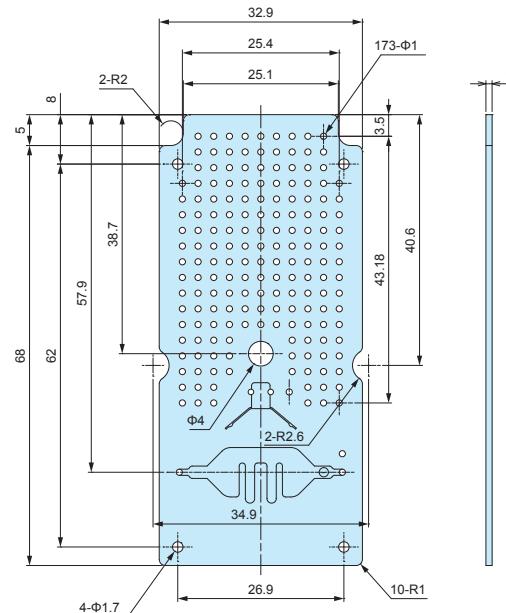


- DXF/DWG/PDF drawings available on our website.

WCPB-72



WCPB-90

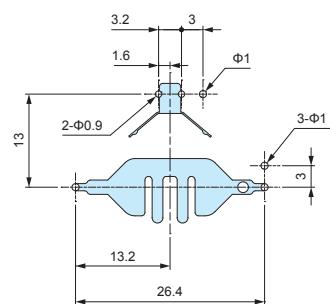


Note : Holes (4-Φ1.7) for PCB mounting bosses are un-soldered.

## Components

Part name	Pcs	Material	Color / Finish
PCB	1	Glass epoxy (FR-4) t=1.0	Through-hole • Lead-free solder • Solder resist
Screw	4	Steel M1.6	Trivalent chromate

## Battery contact position details



## Product no. / Dimensions

Product no.	Suitable case
WCPB- 72	WC72-15-C WC72-21-C
WCPB- 90	WC90-15-C

## STPS SERIES

## STRAP



Wrist strap (STPS-140P)



Neck strap (STPS-450Y)



- Colorful and sturdy straps best used with CSS, CS and PS series.
- Wrist and Neck straps are available in 6 unique colors.
- Neck strap comes with a quick-release joint, making removal or attachment quick and easy.

## Color Type

Code	P  Pink	Y  Yellow	G  Green	C  Cyan	L  Light gray	B  Black
Color						

Quick-release joint  
(Neck strap only)

## Components

No.	Part name	Material	Color
1	String	Polyester	Black
2	Strap	Polyester	Pink • Yellow • Green • Cyan • Light gray • Black
3	Cap (wrist strap only)	Nylon	Black
4	Clamp (neck strap only)	Elastomer	Black
5	Joint (neck strap only)	Polyacetal	Black

## Product no. / Dimensions

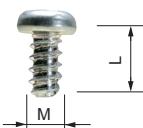
Product no.						Strap width	Strap length
Pink	Yellow	Green	Cyan	Light gray	Black		
STPS-140P	STPS-140Y	STPS-140G	STPS-140C	STPS-140L	STPS-140B	8	140
STPS-450P	STPS-450Y	STPS-450G	STPS-450C	STPS-450L	STPS-450B	10	450

## Accessories (Optional parts)

## EM SERIES

## PCB MOUNTING SCREW

NEW SIZE



- 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 (M1.6 size) • WC	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	LCT • LCS • LC • WH PF • PFF (M2.3 size) TW • TWN • TWF (M2.3 size) WP (M2.3 size)	50
EM2.3-8	2.3	8	Steel	Trivalent chromate	WSC (for bottom base only)	50
EM-2.6	2.6	6	Steel	Trivalent chromate	PF • PFF • WP (M2.6 size)	50
EM-3	3	5	Steel	Trivalent chromate	TWS • TWN • TWF (M3 size) • SU	50
EM-3-6	3	6	Steel	Trivalent chromate		50

## NMG SERIES

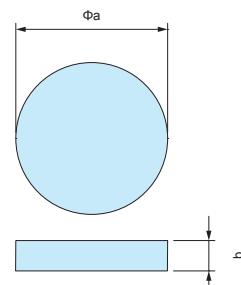
## NEODYMIUM MAGNET

★★ NEW

## Round magnet



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



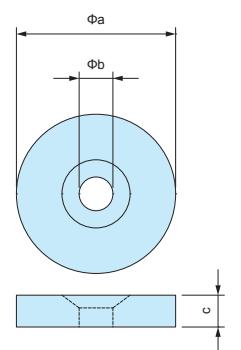
## Components

Product no.	a	b	Weight (g)
NMG3-15N	15	3	4
NMG3-20N	20	3	7.1
NMG5-22N	22	5	11.4
NMG5-25N	25	5	18.4

## Round magnet with countersunk hole



- Please fasten with a screw.



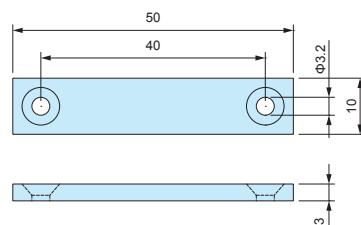
## Components

Product no.	a	b	c	Countersunk size	Weight (g)
NMG3-15M3	15	3.2	3	M3	3.8
NMG3-20M3	20	3.2	3	M3	6.9
NMG5-22M4	22	4.3	5	M4	13.7
NMG5-25M5	25	5.3	5	M5	17.6

## Rectangular magnet with countersunk holes



- Please fasten with screws.



## Components

Product no.	a	b	c	Countersunk size	Weight (g)
NMG3-50M3	50	10	3	M3	11.3

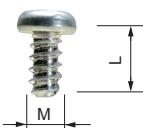
**CAUTION:** Handle with care to avoid personal injury or damage to the magnet.

## Accessories (Optional parts)

## EM SERIES

## PCB MOUNTING SCREW

NEW SIZE



- 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 (M1.6 size) • WC	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	LCT • LCS • LC • WH PF • PFF (M2.3 size) TW • TWN • TWF (M2.3 size) WP (M2.3 size)	50
EM2.3-8	2.3	8	Steel	Trivalent chromate	WSC (for bottom base only)	50
EM-2.6	2.6	6	Steel	Trivalent chromate	PF • PFF • WP (M2.6 size)	50
EM-3	3	5	Steel	Trivalent chromate	TWS • TWN • TWF (M3 size) • SU	50
EM-3-6	3	6	Steel	Trivalent chromate		50

## NMG SERIES

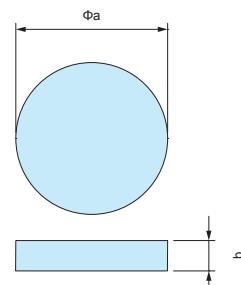
## NEODYMIUM MAGNET

★★ NEW

## Round magnet



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



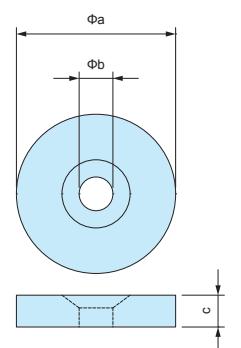
## Components

Product no.	a	b	Weight (g)
NMG3-15N	15	3	4
NMG3-20N	20	3	7.1
NMG5-22N	22	5	11.4
NMG5-25N	25	5	18.4

## Round magnet with countersunk hole



- Please fasten with a screw.



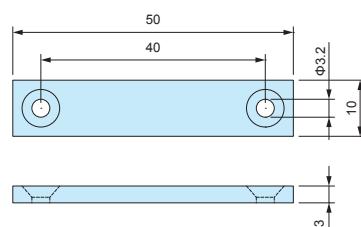
## Components

Product no.	a	b	c	Countersunk size	Weight (g)
NMG3-15M3	15	3.2	3	M3	3.8
NMG3-20M3	20	3.2	3	M3	6.9
NMG5-22M4	22	4.3	5	M4	13.7
NMG5-25M5	25	5.3	5	M5	17.6

## Rectangular magnet with countersunk holes



- Please fasten with screws.



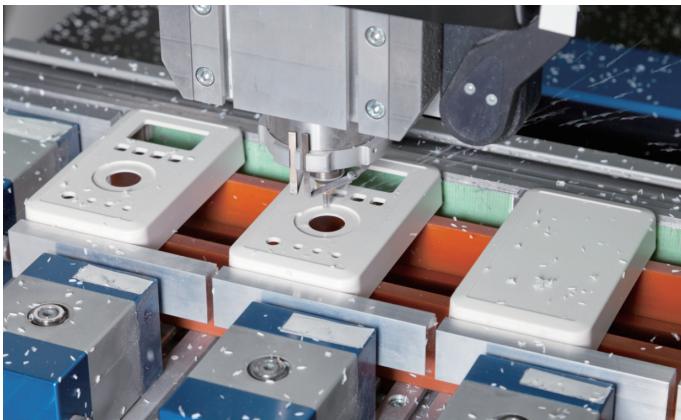
## Components

Product no.	a	b	c	Countersunk size	Weight (g)
NMG3-50M3	50	10	3	M3	11.3

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

# Customization on Plastic Enclosures

## High Speed Machining



## Full Color Digital Inkjet Printing



## Overlay Sheet Manufacturing



[www.takachi-enclosure.com](http://www.takachi-enclosure.com)

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● All products are EU RoHS 6 compliant.