

## NOTICE

### **UNIVERSAL ALUMINIUM PROJECT BOX CU-N · HU-N series Changes to Screw, Washer Material and Washer Thickness**

- Affected series / models : See chart below.

Product Name	Series
UNIVERSAL ALUMINUM PROJECT BOX	CU-N series
UNIVERSAL ALUMINUM PROJECT BOX	HU-N Series

- Changes : Material of M3-5 Truss Head Screw  
Material and Thickness of M3 Flat Washer

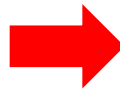
#### Current (Old)

#### New

Material : Brass · Finish : Nickel plated

Material : Steel · Finish : Nickel plated

Washer Thickness : 0.3mm



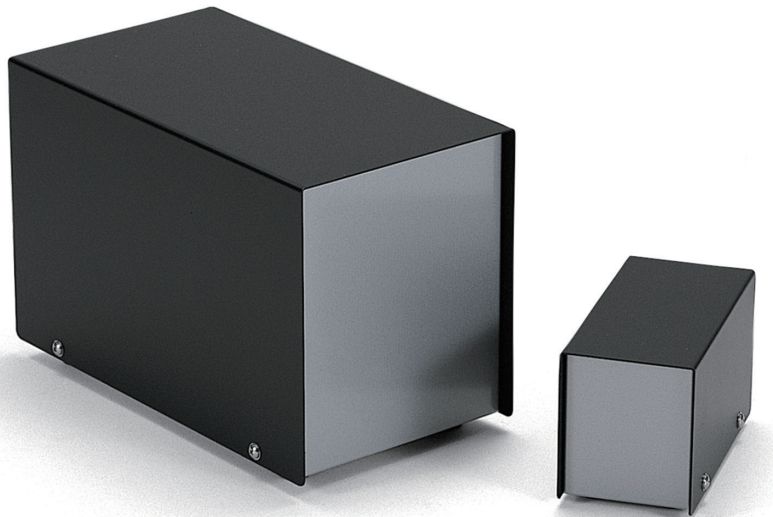
Washer Thickness : 0.5mm

- Purpose: To ensure consistent quality throughout via streamlined supply chain and materials.
- Effective date : Once present inventory has run out / been depleted.
- Note 1: No changes to product's dimensions and surface finish.
- Note 2: No changes to recommended tightening torque.
- Note 3: No changes to item product number or pricing.

Thank you for your understanding.  
For more information, kindly contact us at: [sales@takachi-el.co.jp](mailto:sales@takachi-el.co.jp)

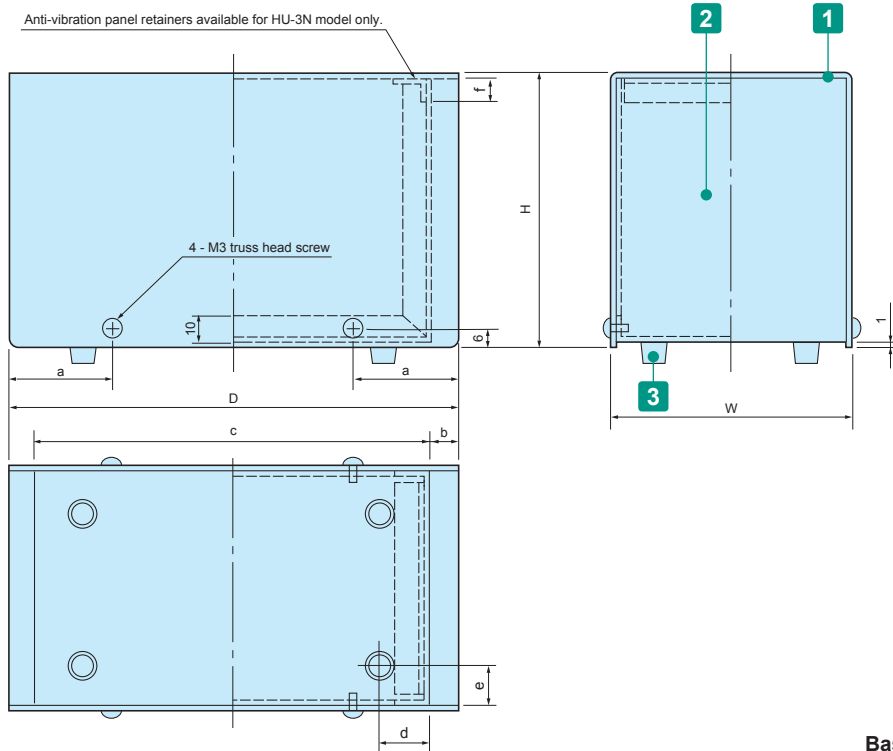
# HU-N SERIES

## UNIVERSAL PROJECT BOX



### HU-N dimensions

■ Detailed DXF/DWG drawings available online.



■ The internal surface is unfinished, making conductive and grounding possible.

Included screws:  
 Truss head M3-5, Nickel plated x 4 pcs (all models)  
 M3 flat washer, Nickel plated x 4 pcs (all models)  
 Pan head M3-10, Trivalent chromate x 4 pcs (HU-3N model only)  
 Pan head M3-8, Trivalent chromate x 4 pcs (HU-2N model only)

#### Base height

Product no.	H dimension
HU-1N	68
HU-2N	103
HU-3N	138

#### Components

No.	Part name	Pcs	Material	Color / Finish
1	Cover	1	Steel SPCC t=1.0	Black / Painted
2	Base	1	Aluminium A1100P	Metallic silver / Painted : Unfinished internal surface
3	Rubber feet	4	Synthetic rubber	Black

#### Product no. / Dimensions

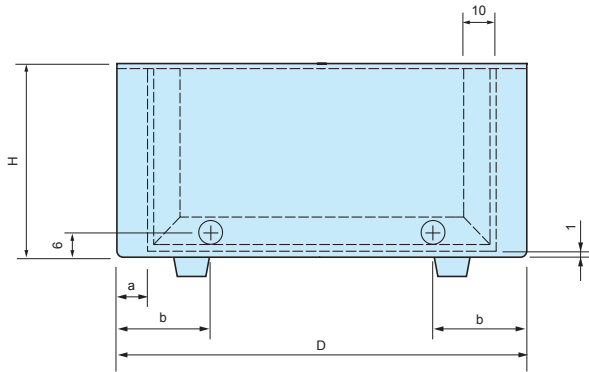
Product no.	W	H	D	a	b	c	d	e	f	Weight (g)
HU-1N	60	70	120	25	5	110	15	12	-	240
HU-2N	85	105	170	30	5	160	15	12	-	505
HU-3N	120	140	220	35	7.5	205	20	15	7	905

# CU-N SERIES

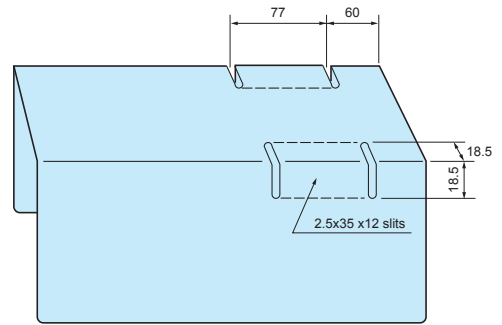
# UNIVERSAL PROJECT BOX



■ The internal surface is unfinished, making conductive and grounding possible.



Side view for CU-2N, 12N, 13N and 21N



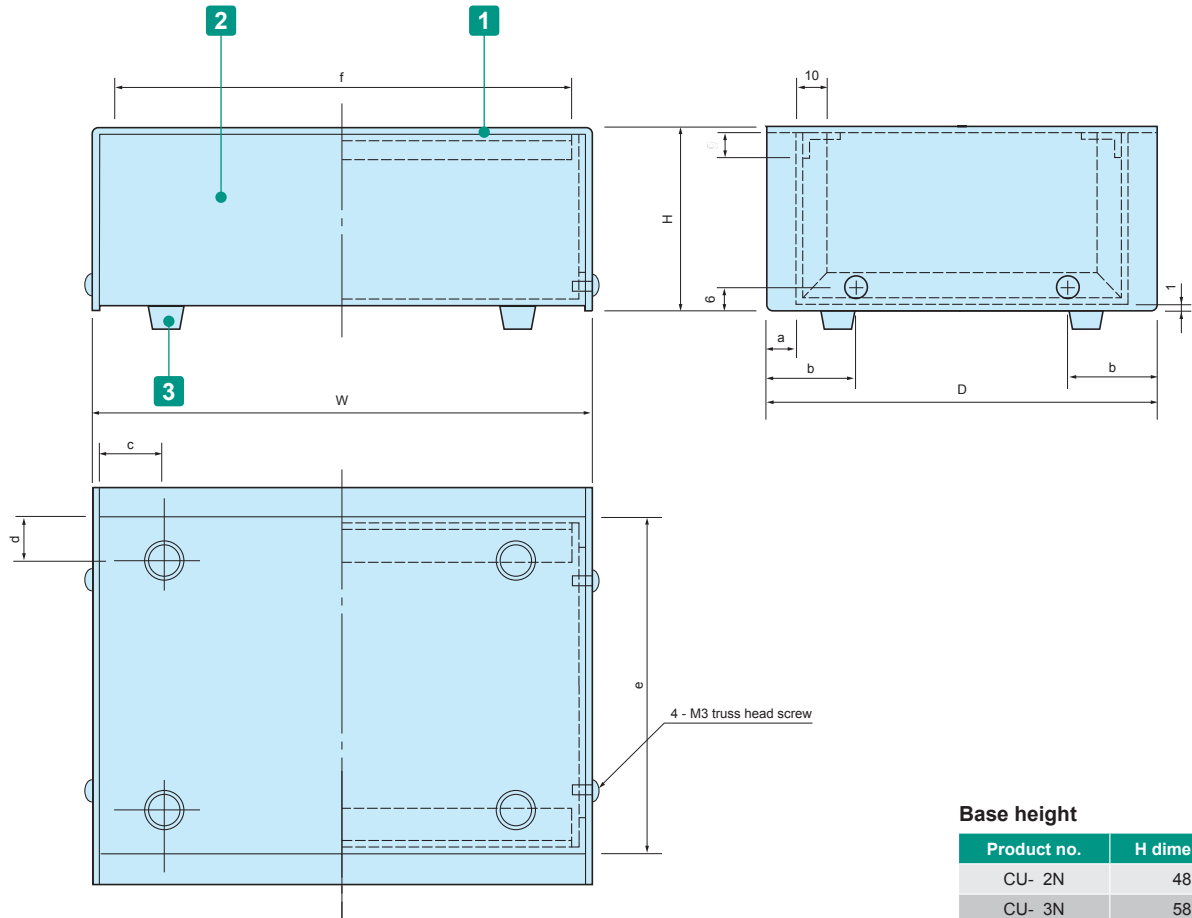
Ventilation slits on CU-23N only

### Components

No.	Part name	Pcs	Material	Color / Finish
1	Cover	1	Steel SPCC t=1.0	Black / Painted
2	Base	1	Aluminium A1100P	Metallic silver / Painted : Unfinished internal surface
3	Rubber feet	4	Synthetic rubber	Black

CU-N dimensions

■ Detailed DXF/DWG drawings available online.



- Included screws :
- Truss head M3-5, Nickel plated x 4 pcs (all models)
  - M3 flat washer, Nickel plated x 4 pcs (all models)
  - Pan head M3-8, Trivalent chromate x 4 pcs (CU-2N, 12N, 13N, and 21N)
  - Pan head M3-10, Trivalent chromate x 4 pcs (CU-3N, 4N, 14N, 15N, and 22N)
  - Pan head with washer M3-10, Trivalent chromate x 4 pcs (CU-5N, 6N, 16N, 17N, 23N, and 33N)

Base height

Product no.	H dimension
CU- 2N	48
CU- 3N	58
CU- 4N	68
CU- 5N	83
CU- 6N	97.8
CU-12N	58
CU-13N	73
CU-14N	88
CU-15N	98
CU-16N	118
CU-17N	148
CU-21N	83
CU-22N	88
CU-23N	117.8
CU-33N	77.8

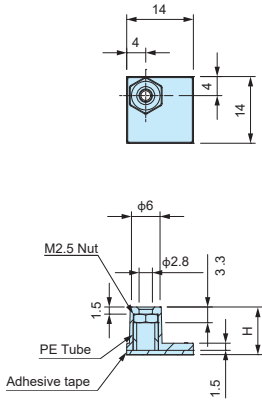
Product no. / Dimensions

Product no.	W	H	D	a	b	c	d	e	f	g	Thickness	Weight (g)
CU- 2N	160	50	150	7.5	25	15	15	135	-	-	1.0	415
CU- 3N	200	60	170	7.5	30	20	20	155	190	7	1.0	635
CU- 4N	250	70	200	10	35	20	20	180	240	7	1.0	905
CU- 5N	300	85	220	10	35	25	25	200	290	7	1.2	1,250
CU- 6N	350	100	240	10	40	25	25	220	340	7	1.2	1,620
CU-12N	90	60	110	5	20	12	12	100	-	-	1.0	250
CU-13N	120	75	140	5	25	15	15	130	-	-	1.0	400
CU-14N	160	90	150	7.5	25	15	15	135	150	7	1.0	600
CU-15N	200	100	170	7.5	30	20	20	155	190	7	1.0	785
CU-16N	250	120	200	10	35	25	25	180	240	7	1.2	1,200
CU-17N	300	150	225	10	35	25	25	205	290	7	1.2	1,620
CU-21N	100	85	165	5	30	12	15	155	-	-	1.0	450
CU-22N	150	90	220	7.5	35	15	20	205	140	7	1.0	775
CU-23N	180	120	250	10	40	20	25	230	170	7	1.2	1,160
CU-33N	400	80	265	10	45	30	30	245	390	7	1.2	1,820

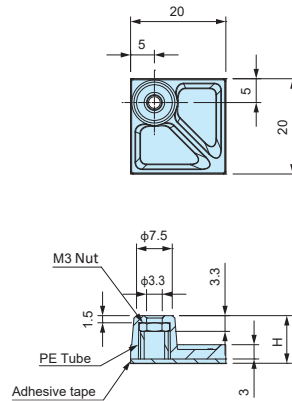


- Double -sided adhesive tape allows the standoff to be mounted quickly and easily; allows PCB mounting in non-boss enclosures.
- Convenient for installing PCBs into enclosures without the need for customization.
- Please ensure that surface is cleaned and grease-free before adhering.
- Once removed, it cannot be adhered on again.

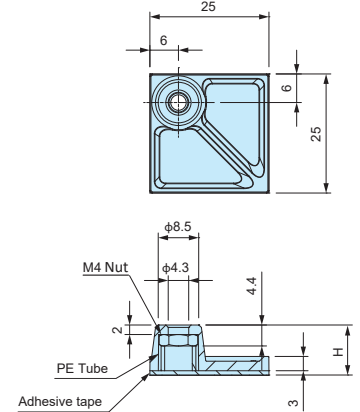
AST2.5-□



AST3-□



AST4-□



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

Product no. / Dimensions

- Base material / color : Nylon 66 (UL94V-2) / Black
- Nut • screw material / finish : Steel / Trivalent chromate

Product no.	H dimension	Included screw	Recommended PCB Thickness (mm)	Recommended torque (N • m)	Weight (g)	Pack of
AST2.5-5B	5	M2.5-5 panhead	1.0~2.0	0.3	0.6	4
AST2.5-10B	10	M2.5-5 panhead	1.0~2.0	0.3	0.8	4
AST3-6B	6	M3-6 panhead	1.0~3.0	0.4	1.5	4
AST3-10B	10	M3-6 panhead	1.0~3.0	0.4	1.6	4
AST3-15B	15	M3-6 panhead	1.0~3.0	0.4	1.8	4
AST3-20B	20	M3-6 panhead	1.0~3.0	0.4	2.1	4
AST4-10.5B	10.5	M4-8 panhead	1.0~3.5	0.8	2.6	4
AST4-20B	20	M4-8 panhead	1.0~3.5	0.8	3.2	4
AST2.5-5B-P	5	None	—	0.3	0.6	100
AST2.5-10B-P	10	None	—	0.3	0.8	100
AST3-6B-P	6	None	—	0.4	1.5	100
AST3-10B-P	10	None	—	0.4	1.6	100
AST3-15B-P	15	None	—	0.4	1.8	100
AST3-20B-P	20	None	—	0.4	2.1	100
AST4-10.5B-P	10.5	None	—	0.8	2.6	50
AST4-20B-P	20	None	—	0.8	3.2	50

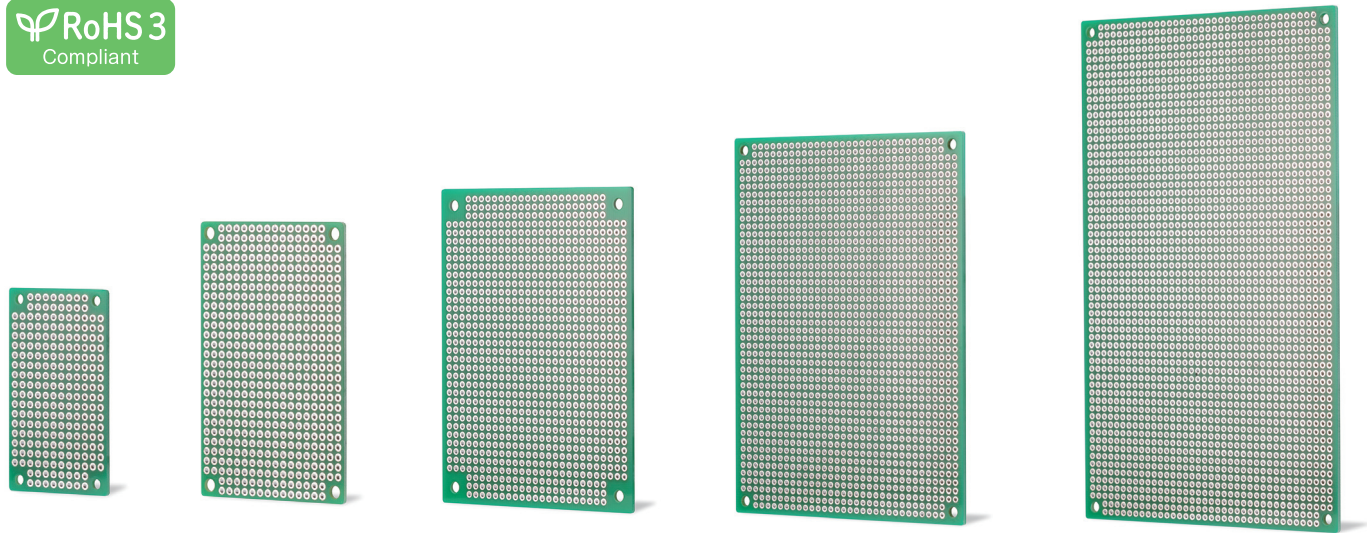
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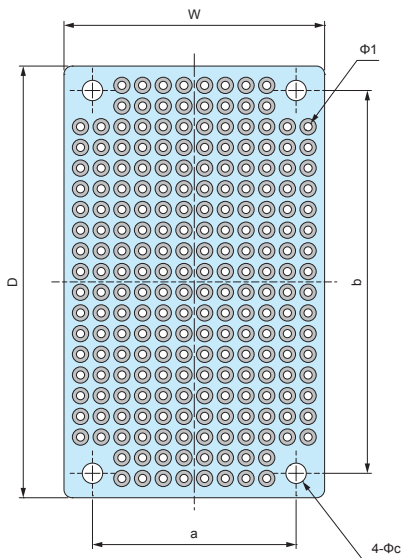
● All items listed in this catalogue are compliant with EU RoHS 10 standard.

NEW PRODUCT Vol.1 2020.7



■ Detailed DXF/DWG/PDF drawings available online.

- Plated Through Holes (PTH) type PCB with a 2.54mm hole-to-hole pitch. Inexpensive and economical PCB made using robust, heat-resistant and non-conductive glass epoxy.
- Easily mounted onto bosses or standoffs via the mounting holes at each corner.
- Environmentally friendly lead-free solder. RoHS3 compliant.
- 5 different sizes available, with PCB100-160 being of Eurocard (3U) format size.



Accessories (Optional parts)



Adhesive standoff AST series  
See page AST-1



Adhesive standoff ASR series  
See page ASR-1

Material / Finish : Glass epoxy (FR-4) / Through-hole - Lead-free solder resist

Product no. / Dimensions

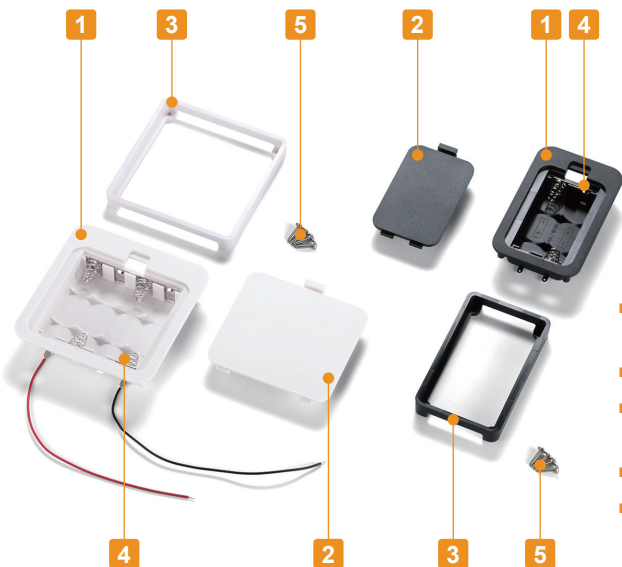
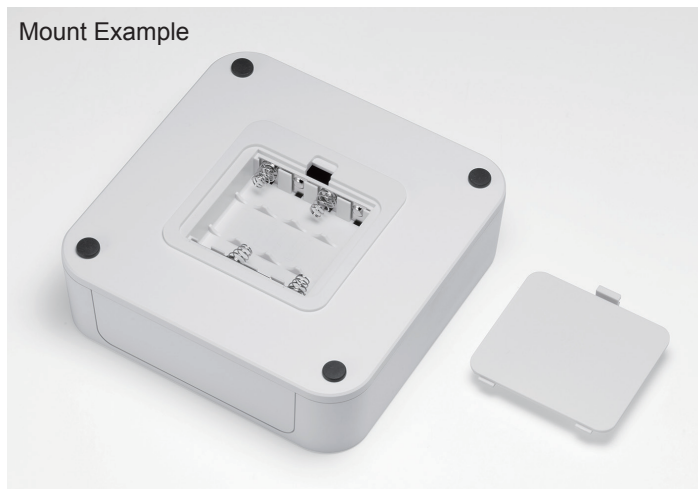
Product no.	W	D	a	b	c	t	Mounting screw	Pack of
PCB 32- 53	32	53	25	47	2.5	1.2	M2 or M2.5	1
PCB 47- 72	47	72	41	66	3.2	1.2	M3	1
PCB 72- 95	72	95	62	85	3.2	1.2	M3	1
PCB 90-120	90	120	82	112	3.2	1.6	M3	1
PCB100-160	100	160	92	152	3.2	1.6	M3	1



Technical Data

Operating temperature: -10°C ~ +60°C

Mount Example



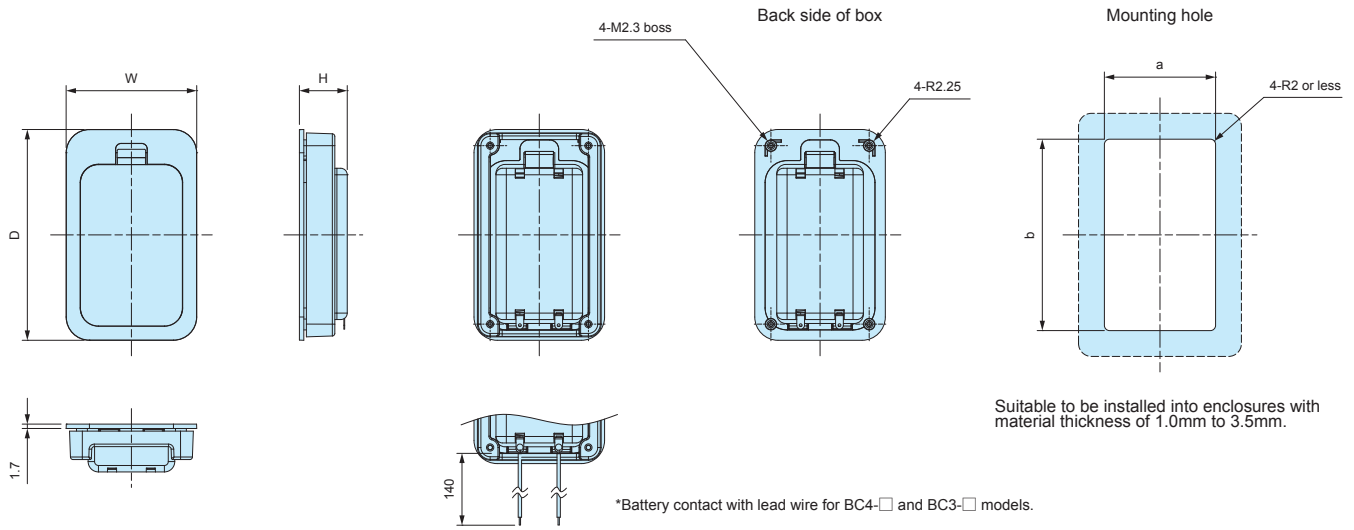
- Suitable to be installed into enclosures with material thickness of 1.0mm to 3.5mm.
- Cover can be opened/closed without any tool for easy battery replacement.
- 5 different battery layouts are available as AA x 2, AA x 3, AA x 4, AAA x 2 and AAA x 4. Each layout comes in 2 models: with lead-wire, and without lead-wire.
- ⊕ ⊖ markings prevents incorrect placement of battery.
- The dimensions of alkaline or manganese batteries may vary depending on country and brand. Use optional battery cushion sponge to preventing rattling.

Components

No.	Part name	Pcs	Material	Color / Finish
1	Box	1	ABS UL94V-0	Black • Off-white
2	Cover	1	ABS UL94V-0	Black • Off-white
3	Frame	1	ABS UL94V-0	Black • Off-white
4	Battery contact Lead wire (BC-L models)	1 set	Battery contact : Brass & steel wire Lead wire : PVC + Copper wire (UL1007 AWG26)	Nickel plated Black • Red
5	Self tapping screw	4	Steel	Nickel plated

## BC dimensions

- Detailed DXF/DWG/PDF drawings available online.
- The shape and position of battery contacts vary by models.



## Type: Without Lead Wire

### Product no. / Dimensions

Product no.		Dimensions					Battery layout	Weight (g)
● Black	● Off-white	W	H	D	a	b		
BC4-2-B	BC4-2-W	40	14.8	78.5	32.5	71	*AAA x 2	24.5
BC4-4-B	BC4-4-W	62	14.8	78.5	54.5	71	*AAA x 4	34.5
BC3-2-B	BC3-2-W	50.5	18.5	81.5	43	74	*AA x 2	31.5
BC3-3-B	BC3-3-W	65.5	18.5	81.5	58	74	*AA x 3	39
BC3-4-B	BC3-4-W	80.5	18.5	81.5	73	74	*AA x 4	46

\*Alkaline or manganese batteries

## Type: With Lead Wire

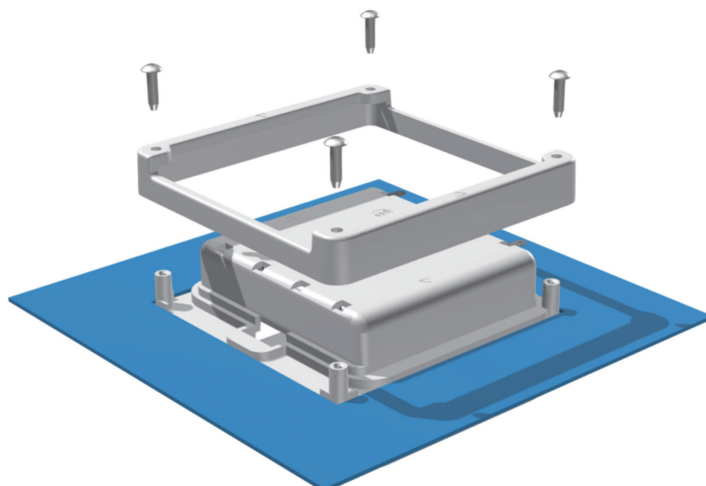
### Product no. / Dimensions

Product no.		Dimensions					Battery layout	Weight (g)
● Black	● Off-white	W	H	D	a	b		
BC4-2L-B	BC4-2L-W	40	14.8	78.5	32.5	71	*AAA x 2	25.5
BC4-4L-B	BC4-4L-W	62	14.8	78.5	54.5	71	*AAA x 4	35.5
BC3-2L-B	BC3-2L-W	50.5	18.5	81.5	43	74	*AA x 2	32.5
BC3-3L-B	BC3-3L-W	65.5	18.5	81.5	58	74	*AA x 3	40
BC3-4L-B	BC3-4L-W	80.5	18.5	81.5	73	74	*AA x 4	47

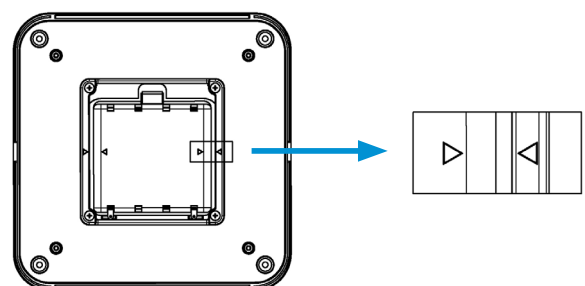
\*Alkaline or manganese batteries

## How to mount on the enclosures

- Insert battery box into the milled hole first, and fit the frame on the back side. Once mounted, secure the frame with screws.



- For BC3-4□ models, ▷ markings are shown on the frame. Install by matching the markings.

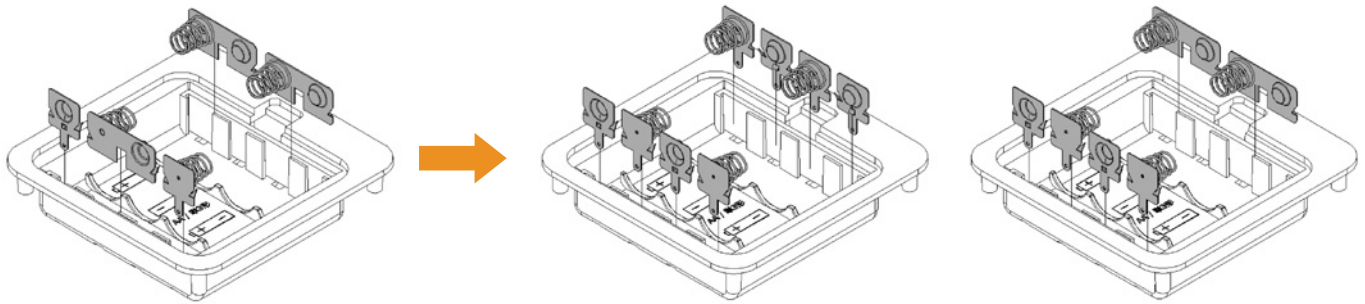




# Parallel connection on BC series battery box

- BC-3 □ models can be modified into a parallel connection setting. See below illustration for further details.
- IT-3 series optional battery contacts are available for modification. (See website for more information)
- Use caution when installing or replacing the terminals to avoid the damage to the plastic.
- Parallel connection modification is available as a customization order.

## Modification Example

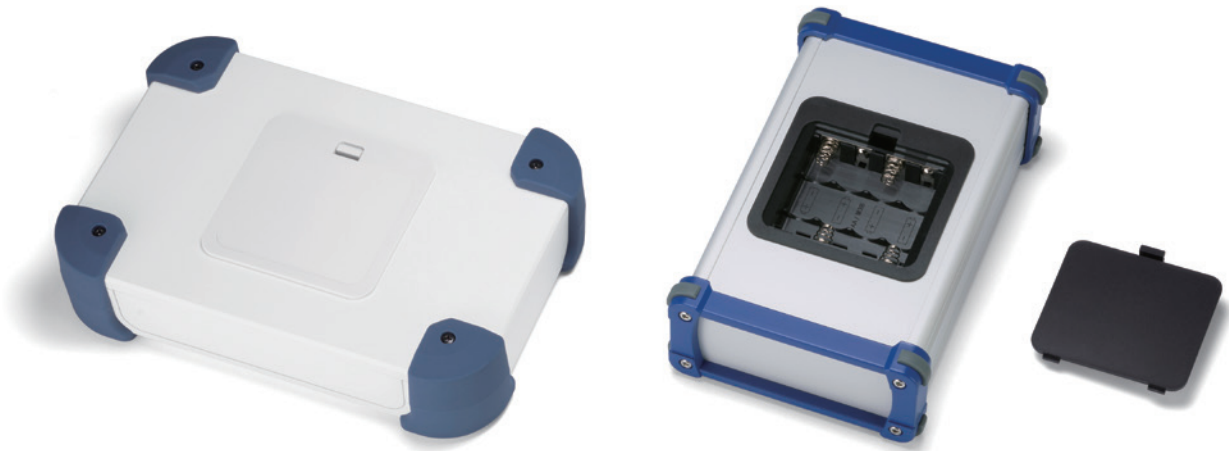


Series Connection (Standard)

Parallel Connection (4 batteries)

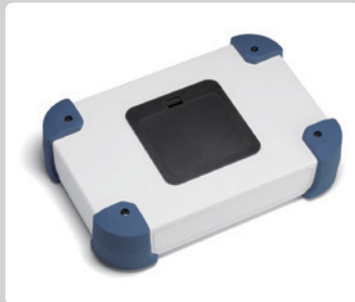
Parallel Connection (2 batteries x 2)

## Mount Example



- BC battery boxes can also be mounted on aluminum enclosures.

## Customization Available



For more information, contact us here:

Online form: [https://www.takachi-enclosure.com/custom/form\\_custom](https://www.takachi-enclosure.com/custom/form_custom)  
E-mail : [sales@takachi-el.co.jp](mailto:sales@takachi-el.co.jp)

