

# Foot Switched For medical beauty product

HRF Series



## Part Number Description

**HRF** - ① ② ③

① <b>Type</b>	M : Medium Duty Type	H : Heavy Duty Type	
② <b>Material</b>	No mark : Plastic	D : Die-Casting	X : Rolled Steel ( Only 1, 8 )
③ <b>Safety Cover (H type only)</b>	N : top LX : top + side + safety kick lever	NX : top + side	NS : top + side + front

**HRF** - MD5 ① - ② ③ ④

① <b>Pedal</b>	None : 1 Pedal	2 : 2 Pedal (on-demand, to be released)	3 : 3 Pedal(on-demand, to be released)
② <b>Color</b>	None : Black	A : Amber (to be released)	
③ <b>Contact Form</b>	None : 1a + 1b		
④ <b>Cable outlet</b>	None : 18AWG(0.75 CWG) x 2m		

**HRF-M5** ① - L ② - ③ - ④

① <b>Pedal</b>	None : 1 Pedal	2 : 2 Pedal	3 : 3 Pedal
② <b>Pedal Color (Body Color : Milk White)</b>	None : Standard(Pastel yellow)* R : Pastel red	Y : Pastel yellow W : White	B : Pastel blue
③ <b>Connection method</b>	None : Standard	J : Round	
④ <b>Cable outlet</b>	None : Standard	U : USB(on-demand)*	

\* Pedal Color : When ordering the basic color, it is available in pastel yellow.

※ Example :

- HRF-M5-LR: 1 Pedal / Body Color Milky / Pedal Color Pastel Tone Red)
- HRF-M52-LBR: 2 Pedal / Body Color Milky / Pedal Color Pastel Tone Blue + Pastel Tone Red
- HRF-M53-LYBW: 3 Pedal / Body Color Milky / Pedal Color Pastel Tone Yellow + Pastel Tone Blue + White
- HRF-M53-L: 3 Pedal / Body Color Milky / Pedal Color Pastel Tone Yellow

\* USB type are custom-made. For detailed specifications, please contact our sales department.

## General Specification

M type						
	M1	M2	M6	M7C	M8	MX1
<b>Contact Form</b>	1a	1a+1b	1a x 2ea	1a		1a+1b
<b>Material</b>	Plastic				Rolled Steel	
<b>Rated Current</b>	16A 250VAC RES. (KC criterion)				5A 250VAC	16A 250VAC RES. (KC criterion)
<b>Built-in Switch</b>	V type Micro Switch (UL, CUL, VDE, CE, KC, CQC certified) + 24k gold plate				KMS-F	V type Micro Switch (UL, CUL, VDE, CE, KC, CQC certified) + 24k gold plate

MD type						
	MD2	MD2S	MD23 (Maintained)	MD3	MD4	MD5
<b>Contact Form</b>	1a+1b				1a+1b	
<b>Material</b>	Aluminum Die-casting					
<b>Rated Current</b>	16A 250VAC RES. (KC criterion)				15A 250VAC RES. (KC criterion)	
<b>Built-in Switch</b>	V type Micro Switch (UL, CUL, VDE, CE, KC, CQC certified) + 24k gold plate				Z type Micro Switch (CE, UL, CUL, CCC, KC certified)	

M5 type								
	M5	M52	M53	M5-L	M52-L	M53-L	M52-L-J	M53-L-J
<b>Contact Form</b>	1a	1a x 2ea	1a x 3ea	1a	1a x 2ea	1a x 3ea	1a x 2ea	1a x 3ea
<b>Material</b>	Plastic							
<b>Rated Current</b>	16A 250VAC RES. (KC criterion)							
<b>Built-in Switch</b>	V type Micro Switch (UL, CUL, VDE, CE, KC, CQC certified) + 24k gold plate							

\* Option : USB type

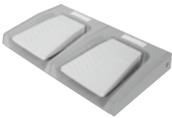
\* M5 ~ M8 : Molding type Micro Switch

H type									
	HD3	HD3N	HD3NX	HD3NS	HD3LX	HD5NX	HD5NS	HD202P	HD301P
<b>Contact Form</b>	1a+1b					(1a+1b) x 2ea		(1a+1b) x 3ea	
<b>Rated Current</b>	15A 250VAC RES. (KC criterion)								
<b>Built-in Switch</b>	Z type Micro Switch (CE, UL, CUL, CCC, KC certified)								
<b>Material</b>	Aluminum Die-casting								
<b>Cable Outlet</b>	By using PF 1/2 Inch Tap, the flexible cable can be attached (Zn connector 10 ~ 16)								

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## Product Selection

	Contact Form	Rated Load	Built-in Switch	Certification	Material	Cable outlet	Degree of Protection	Part Number
	1a	16A 250VAC RES. (KC criterion)	V15F-01C (UL, CUL, VDE, CE, KC, CQC certified) + 24k gold plat	 (Built-in Switch)	plastic	VFF 0.75mm <sup>2</sup> × 2Line Cable × 1.5m	IP54	HRF-M1
	1a+1b	16A 250VAC RES. (KC criterion)	V15F-01C (UL, CUL, VDE, CE, KC, CQC certified) + 24k gold plat	 (Built-in Switch)	plastic	0.5mm <sup>2</sup> × 3Line Cable × 2m	IP54	HRF-M2
	1a	16A 250VAC RES. (KC criterion)	VV15F-01C (UL, CUL, VDE, CE, KC, CQC certified) + 24k gold plat	 (Built-in Switch)	plastic	0.5mm <sup>2</sup> × 2Line Cable × 2m	IP68	HRF-M5
	1a x 2ea	16A 250VAC RES. (KC criterion)	VV15F-01C (UL, CUL, VDE, CE, KC, CQC certified) + 24k gold plat	 (Built-in Switch)	plastic	0.5mm <sup>2</sup> × 4Line Cable × 2m	IP68	HRF-M52
	1a x 3ea	16A 250VAC RES. (KC criterion)	VV15F-01C (UL, CUL, VDE, CE, KC, CQC certified) + 24k gold plat	 (Built-in Switch)	plastic	0.5mm <sup>2</sup> × 6Line cable X 2m	IP68	HRF-M53

※ Please refer to 65p for additional specifications of V15F-01C, VV15F-01C.

## Product Selection

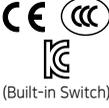
	Contact Form	Rated Load	Built-in Switch	Certification	Material	Cable outlet	Degree of Protection	Part Number
	1a	16A 250VAC RES. (KC criterion)	VV15F-01C (UL, CUL, VDE, CE, KC, CQC certified) + 24k gold plat	 (Built-in Switch)	플라스틱	0.5mm <sup>2</sup> × 2Line Cable × 2m	IP68	HRF-M5-L
	1a x 2ea	16A 250VAC RES. (KC criterion)	VV15F-01C (UL, CUL, VDE, CE, KC, CQC certified) + 24k gold plat	 (Built-in Switch)	플라스틱	0.5mm <sup>2</sup> × 4Line Cable × 2m	IP68	HRF-M52-L
	1a x 3ea	16A 250VAC RES. (KC criterion)	VV15F-01C (UL, CUL, VDE, CE, KC, CQC certified) + 24k gold plat	 (Built-in Switch)	플라스틱	0.5mm <sup>2</sup> X 6Line cable X 2m	IP68	HRF-M53-L
	1a x 2ea	16A 250VAC RES. (KC criterion)	VV15F-01C (UL, CUL, VDE, CE, KC, CQC certified) + 24k gold plat	 (Built-in Switch)	플라스틱	0.5mm <sup>2</sup> × 4Line Cable × 2m	IP68	HRF-M52-L-J
	1a x 3ea	16A 250VAC RES. (KC criterion)	VV15F-01C (UL, CUL, VDE, CE, KC, CQC certified) + 24k gold plat	 (Built-in Switch)	플라스틱	0.5mm <sup>2</sup> X 6Line cable X 2m	IP68	HRF-M53-L-L
	1a x 2ea	16A 250VAC RES. (KC criterion)	VV15F-01C (UL, CUL, VDE, CE, KC, CQC certified) + 24k gold plat	 (Built-in Switch)	plastic	0.5mm <sup>2</sup> × 4Line Cable × 2m	IP65	HRF-M6

※ Please refer to 65p for additional specifications of VV15F-01C, VV15F-01C.

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## Product Selection

	Contact Form	Rated Load	Built-in Switch	Certification	Material	Cable outlet	Degree of Protection	Part Number
	1a	16A 250VAC RES. (KC criterion)	V15F-01C (UL, CUL, VDE, CE, KC, CQC certified) + 24k gold plat	 (Built-in Switch)	plastic	VFF 0.75mm <sup>2</sup> × 2Line Cable × 1.5m	IP54	HRF-M7C
	1a	5A 250VAC	KMS-F Molding type		plastic	0.5mm <sup>2</sup> × 2Line Cable × 2m	IP68	HRF-M8
	1a+1b	16A 250VAC RES. (KC criterion)	V15F-01C (UL, CUL, VDE, CE, KC, CQC certified) + 24k gold plat	 (Built-in Switch)	rolled steel sheets	0.5mm <sup>2</sup> × 3Line Cable × 2m	IP54	HRF-MX1
	1a+1b	16A 250VAC RES. (KC criterion)	V15F-01C (UL, CUL, VDE, CE, KC, CQC certified) + 24k gold plat	 (Built-in Switch)	aluminum die-casting	0.5mm <sup>2</sup> × 3Line Cable × 2m	IP54	HRF-MD2
	1a+1b	16A 250VAC RES. (KC criterion)	VV15F-01C (UL, CUL, VDE, CE, KC, CQC certified) + 24k gold plat	 (Built-in Switch)	aluminum die-casting	0.5mm <sup>2</sup> × 3Line Cable × 2m	IP54	HRF-MD23 (Maintained)
	1a+1b	16A 250VAC RES. (KC criterion)	V15F-01C (UL, CUL, VDE, CE, KC, CQC certified) + 24k gold plat	 (Built-in Switch)	aluminum die-casting	0.5mm <sup>2</sup> × 3Line Cable × 2m	IP54	HRF-MD2S
	1a+1b	16A 250VAC RES. (KC criterion)	V15F-01C (UL, CUL, VDE, CE, KC, CQC certified) + 24k gold plat	 (Built-in Switch)	aluminum die-casting	0.5mm <sup>2</sup> × 3Line Cable × 2m	IP54	HRF-MD3
	1a+1b	16A 250VAC RES. (KC criterion)	V15F-01C (UL, CUL, VDE, CE, KC, CQC certified) + 24k gold plat	 (Built-in Switch)	aluminum die-casting	0.5mm <sup>2</sup> × 3Line Cable × 2m	IP54	HRF-MD4
	1a+1b	15A 250VAC RES. (KC criterion)	Z15G-10B (CE, UL, CUL, CCC, KC certified)	 (Built-in Switch)	aluminum die-casting	18AWG(0.75 CWG) × 2m	IP67	HRF-MD5

※ Please refer to 65p for additional specifications of V15F-01C, VV15F-01C.

※ Please refer to 53p for additional specifications of Z15G-10B.

## Product Selection

	Contact Form	Rated Load	Built-in Switch	Certification	Material	Cable outlet	Degree of Protection	Part Number
	1a+1b	15A 250VAC RES. (KC criterion)	Z15G-10B (CE, UL, CUL, CCC, KC certified)		aluminum die-casting	1/2 Inch Tap, the flexible cable can be attached (zinc connector 10 ~ 16)	IP65	HRF-HD3
	1a+1b 2a+2b	15A 250VAC RES. (KC criterion)	Z15G-10B (CE, UL, CUL, CCC, KC certified)		aluminum die-casting	1/2 Inch Tap, the flexible cable can be attached (zinc connector 10 ~ 16)	IP65	HRF-HD3N
	1a+1b 2a+2b	15A 250VAC RES. (KC criterion)	Z15G-10B (CE, UL, CUL, CCC, KC certified)		aluminum die-casting	1/2 Inch Tap, the flexible cable can be attached (zinc connector 10 ~ 16)	IP54	HRF-HD3NX
	1a+1b 2a+2b	15A 250VAC RES. (KC criterion)	Z15G-10B (CE, UL, CUL, CCC, KC certified)		aluminum die-casting	1/2 Inch Tap, the flexible cable can be attached (zinc connector 10 ~ 16)	IP54	HRF-HD3NS
	1a+1b 2a+2b	15A 250VAC RES. (KC criterion)	Z15G-10B (CE, UL, CUL, CCC, KC certified)		aluminum die-casting	1/2 Inch Tap, the flexible cable can be attached (zinc connector 10 ~ 16)	IP54	HRF-HD3LX

※ Please refer to 53p for additional specifications of Z15G-10B.

☞ For HRF-HD3 and HD5 series, 2 built-in switches can be installed per 1 pedal.

Order example) When HRF-HD3 requires 1A1B -> HRF-HD3

When HRF-HD3 requires 2A2B -> HRF-HD3(2A2B)

When HRF-HD5NX if you need this 2A2B -> HRF-HD5NX(2A2B)

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	Contact Form	Rated Load	Built-in Switch	Certification	Material	Cable outlet	Degree of Protection	Part Number
	(1a+1b) x 2ea	15A 250VAC RES. (KC criterion)	Z15G-10B (CE, UL, CUL, CCC, KC certified)		aluminum die-casting	1/2 Inch Tap, the flexible cable can be attached (zinc connector 10 ~ 16)	IP54	HRF-HD5NX
	(1a+1b) x 2ea	15A 250VAC RES. (KC criterion)	Z15G-10B (CE, UL, CUL, CCC, KC certified)		aluminum die-casting	1/2 Inch Tap, the flexible cable can be attached (zinc connector 10 ~ 16)	IP54	HRF-HD5NS
	(1a+1b) x 2ea (2a+2b) x 2ea	15A 250VAC RES. (KC criterion)	Z15G-10B (CE, UL, CUL, CCC, KC certified)		aluminum die-casting	1/2 Inch Tap, the flexible cable can be attached (zinc connector 10 ~ 16)	IP54	HRF-HD202P
	(1a+1b) x 3ea (2a+2b) x 3ea	15A 250VAC RES. (KC criterion)	Z15G-10B (CE, UL, CUL, CCC, KC certified)		aluminum die-casting	1/2 Inch Tap, the flexible cable can be attached (zinc connector 10 ~ 16)	IP54	HRF-HD301P

※ Please refer to 53p for additional specifications of Z15G-10B.

☞ For HRF-HD3 and HD5 series, 2 built-in switches can be installed per 1 pedal.

Order example) When HRF-HD3 requires 1A1B -> HRF-HD3

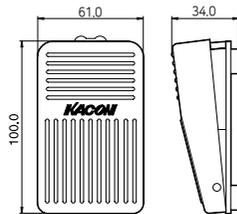
When HRF-HD3 requires 2A2B -> HRF-HD3(2A2B)

When HRF-HD5NX if you need this 2A2B -> HRF-HD5NX(2A2B)

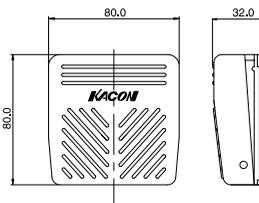
# Dimension

Unit : mm

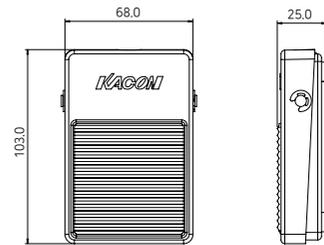
HRF-M1



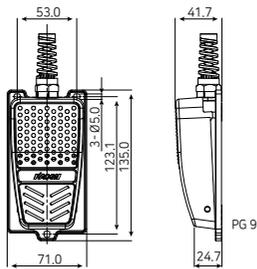
HRF-M2



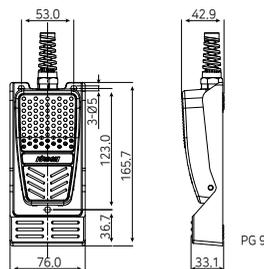
HRF-MX1



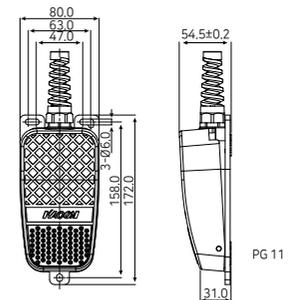
HRF-MD2



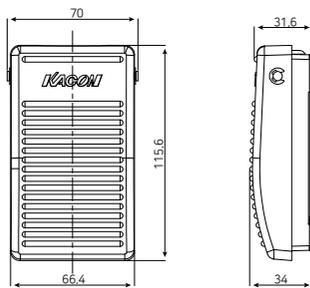
HRF-MD2S



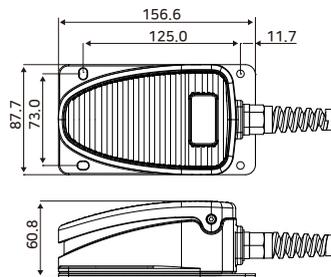
HRF-MD3



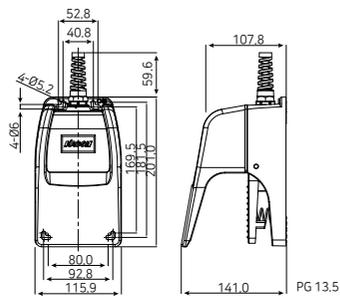
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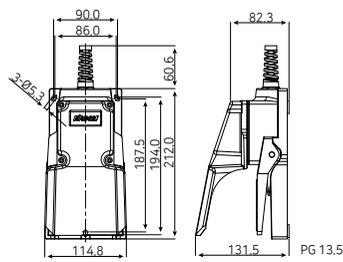
HRF-MD5



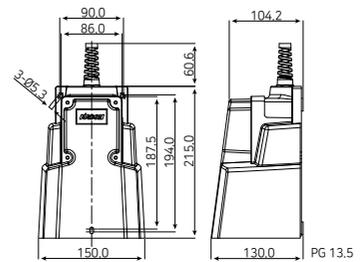
HRF-HD3



HRF-HD3N



HRF-HD3NX



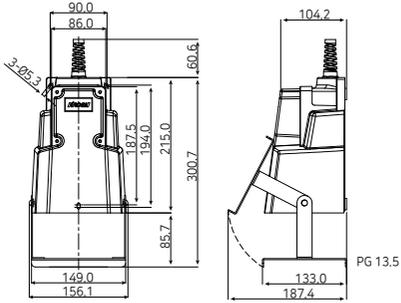
# Foot Switched For medical beauty product

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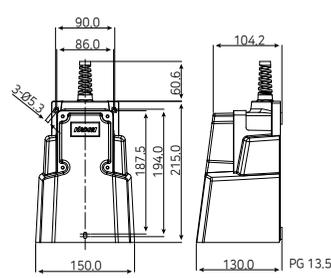
## Dimension

Unit : mm

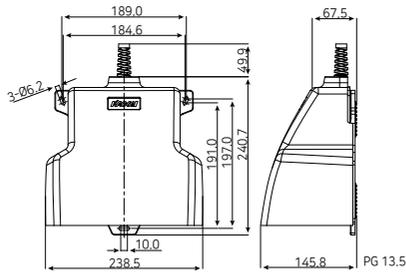
HRF-HD3NS



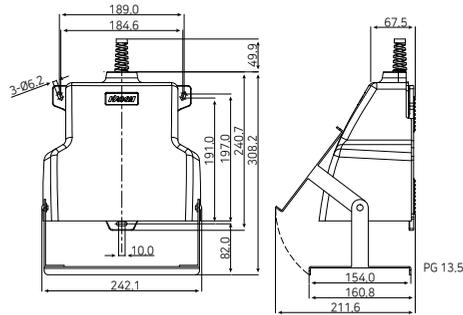
HRF-HD3LX



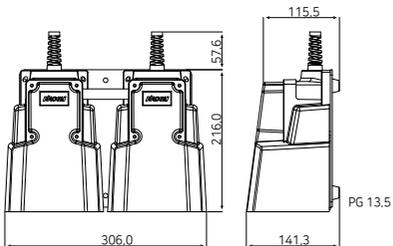
HRF-HD5NX



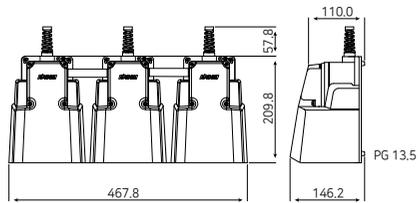
HRF-HD5NS



HRF-HD202P



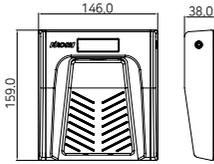
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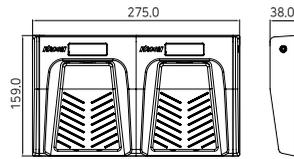
# Dimension

Unit : mm

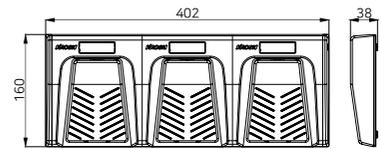
HRF-M5 / HRF-M5-L



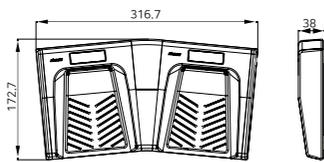
HRF-M52 / HRF-M52-L



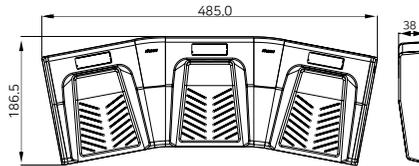
HRF-M53 / HRF-M53-L



HRF-M52-L-J



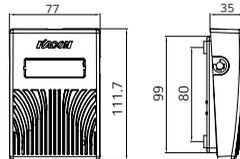
HRF-M53-L-J



HRF-M6



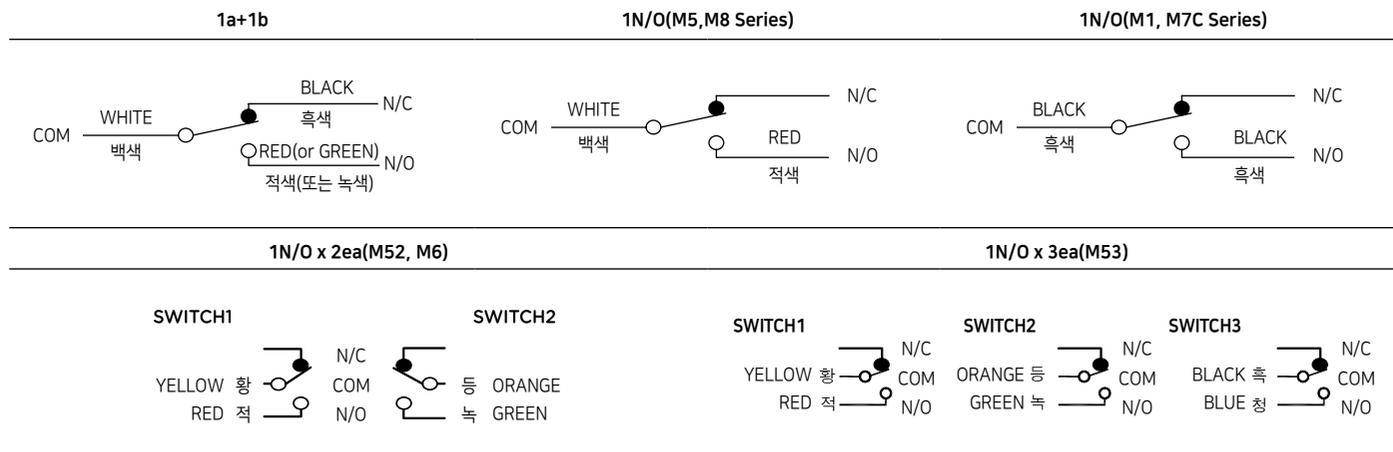
HRF-M8



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## Circuit Drawing (Bottom View)



## Caution

- Use the large current breaker for the large current above the rating considering the load type.
- Use caution for short or open circuits when the product is transported or moved.
- Consider the ambient environment, e.g., water, oil and dirt.
- Severe impact or falling matters may cause operating errors.

## Caution

☞ Be sure to observe the safety precautions to prevent accidents and risks by using the product safely and properly.

☞ Precautions are classified into three categories: danger, warning, and caution.  
**⚠ Danger** : Failure to observe this instruction may lead to an urgent situation including serious injury or significant damage.

**⚠ Warning** : Failure to observe this instruction may lead to serious injury or death.

**⚠ Caution** : Failure to observe this instruction may lead to light injury or damage to the product.

☞ The meaning of the symbol in the product and user's guide are as follows.

⚠ is the symbol that a specific condition may generate a danger, which must be avoided.

### ⚠ Danger

Be sure to attach double safety lock to the product when using it for the devices that significantly influence human lives or properties (nuclear, control, healthcare, burning, processing and transport). Otherwise, it may lead to fire, injury and damage to properties.

### ⚠ Warning

1. Do not connect the wire when the power is on  
It may cause an electric shock.
2. Only the KACON's technician can modify the product.  
It may cause electric shock or fire.

3. Do not use it as a safety device.  
It may cause injury or damage to the product.

### ⚠ Caution

1. Do not use the product outdoors.  
It may be the cause of reduced life and lead to an electric shock.
2. Do not use the product in the flammable or explosive environment  
It may lead to fire and explosion.
3. Use the product at the rated voltage.  
Failure to use the rated voltage may lead to a reduced product life.
4. Do not use the product outside the operating voltage range nor apply AC power to the DC power product.  
It may lead to the damage to the product.
5. Do not miswire (e.g., polarity)  
It may lead to the damage to the product.
6. Do not use the product in the vibration environment.  
It may lead to fire.
7. Do not use organic solvent for cleaning.  
It may lead to electric shock and fire.
8. Do not short the load.  
It may lead to the damage to the product.
9. For the disposal of this product, classify the product as industrial.