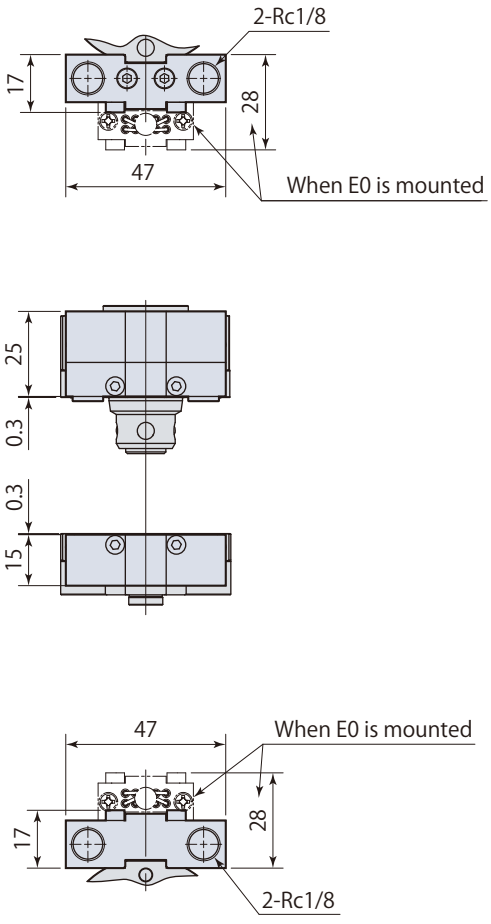
Air connector addition

Specifications

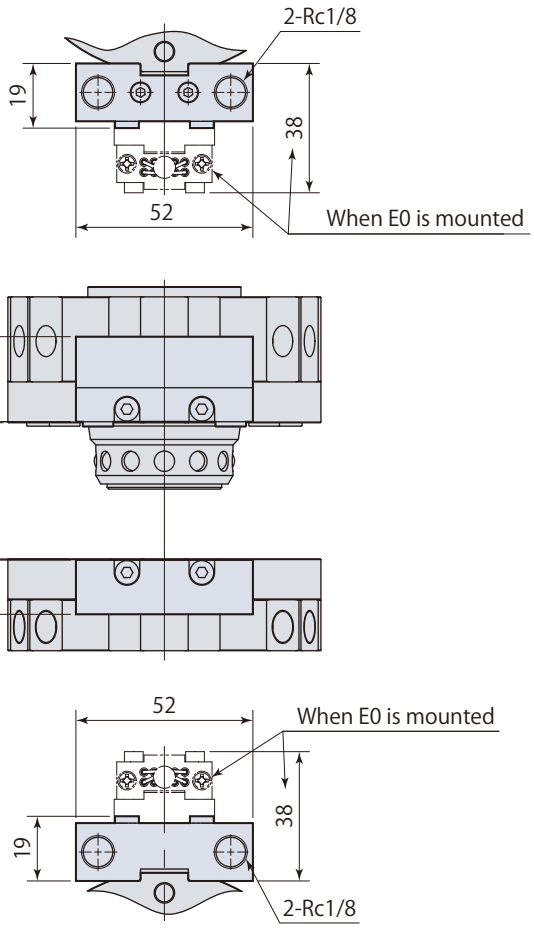
Number of ports (Size)		2 (Rc1/8)
Working pressure		-0.09 ～ 1 MPa
Mass	Master plate side	48g*1 / 63g*2
	Tool plate side	42g*1 / 36g*2

∗1：RHA/RHB010
∗2：RHA/RHB020～230
Connector E0 is mountable.

RHA010
RHB010



RHA020/040/080/160/230
RHB020



Sensor for connecting/disconnecting Detects lock/unlock

Specifications

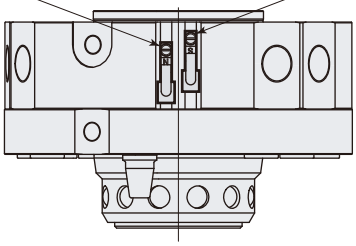
Symbol	SN	SP
Power-supply voltage	DC 5 ～ 24V	
Output specifications	NPN	PNP
Output current	MAX. 15 mA	MAX. 80 mA
Current consumption	MAX. 4 mA	MAX. 12 mA
Cable	Lock：Black Length 1 m	
	Unlock：Gray Length 1 m	

Locking confirmation sensor

Made by ASA Electronics
Symbol SN：ACH02LN(NPN)
Symbol SP：ACH02LPN(PNP)

Unlocking confirmation sensor

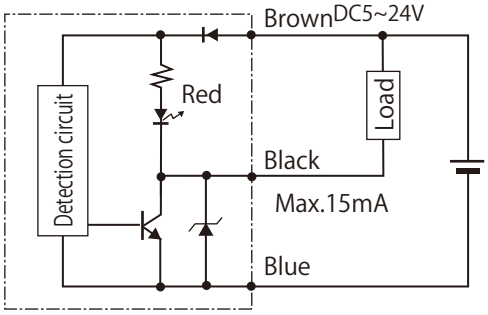
Made by ASA Electronics
Symbol SN：ACH02LS(NPN)
Symbol SP：ACH02LPS(PNP)



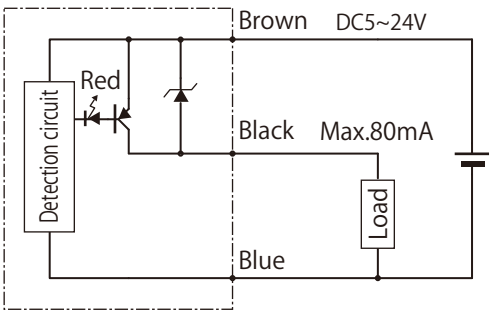
Sensor signal

Status	Unlock	Lock	Full stroke
Lock sensor	OFF	ON	ON
Unlock sensor	ON	ON	OFF

Symbol：SN(NPN)



Symbol：SP(PNP)



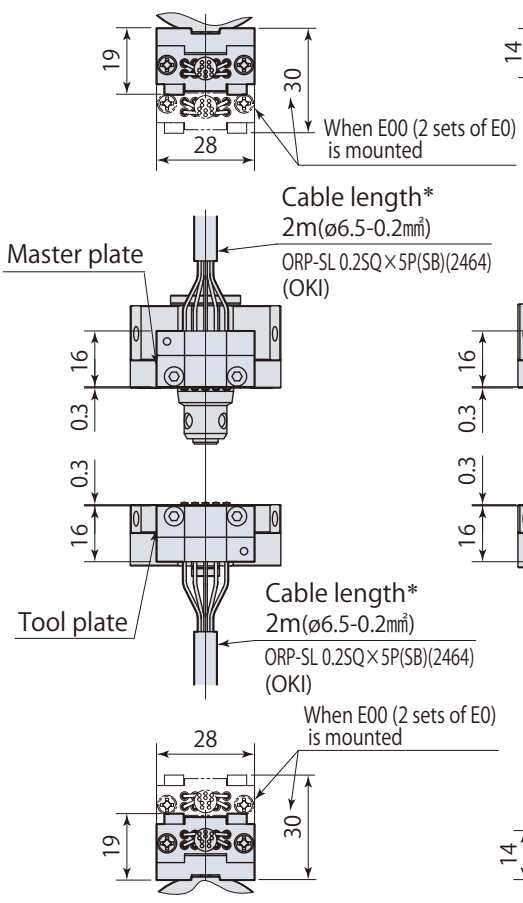
Electric connector 3A×10 points (with cable)

Specifications

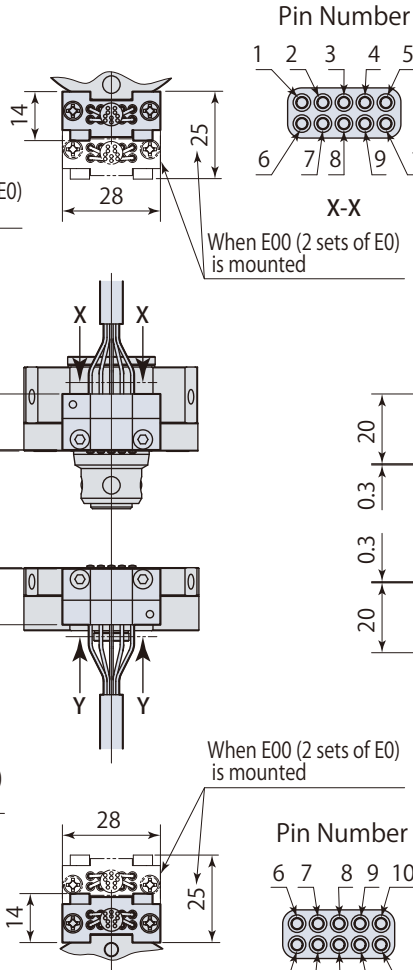
Rating (per 1 piece)		3A DC 24V
Number of contact points		10
Total volume		9A
Mass	Master plate	145g*1 / 135g*2 / 150g*3
	Tool plate	145g*1 / 135g*2 / 150g*3

*1 : RHA005. Including bracket and cable.
*2 : RHA010. Including cable.
*3 : RHA020～230. Including bracket and cable.

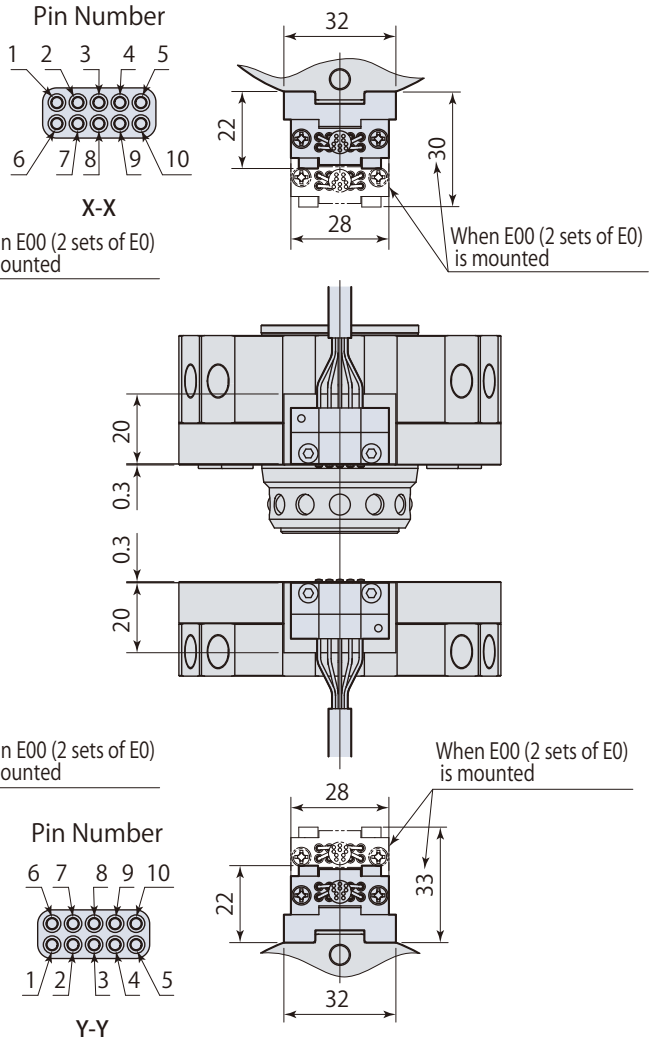
RHA005



RHA010
RHB010



RHA020/040/080/160/230
RHB020



Pin number	1	2	3	4	5	6	7	8	9	10
Wire color	BU	WH	YE	BN	GN	BK	RD	GY	VT	OG

*: Cable bending radius Fixed wiring: 4 times of cable diameter. Movable part wiring: 8 times of cable diameter.

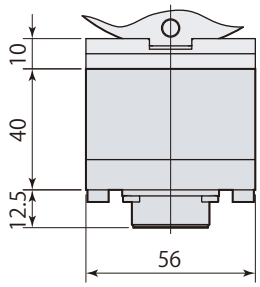
Circular electric connector 5A×14 points

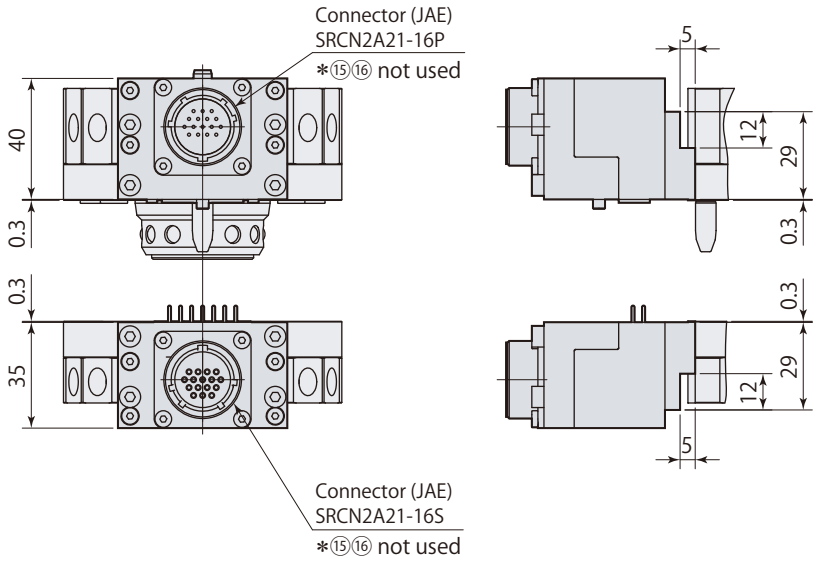
Specifications

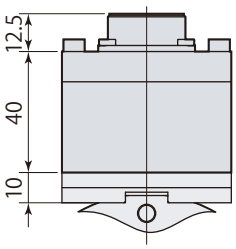
Rating (per 1 piece)		5A AC/DC 200V
Number of contact points		14
Total volume		30 A
Mass*	Master plate	245 g
	Tool plate	230 g

*: Including bracket.

Connect/Disconnect operations must be performed with the power shut-off. Failure to follow this instruction may cause the malfunction.







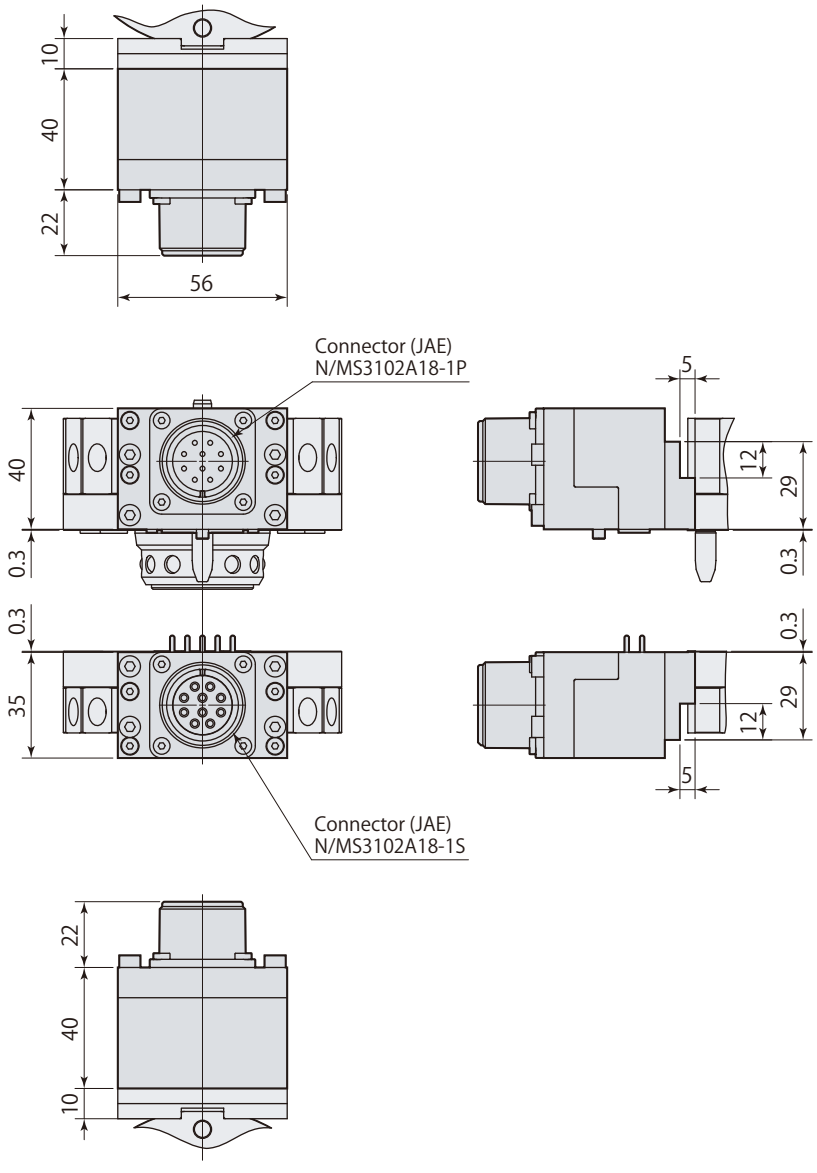
Circular electric connector 13A×10 points

Specifications

Rating (per 1 piece)		13A AC/DC 200V
Number of contact points		10
Total volume		57 A
Mass*	Master plate	255 g
	Tool plate	240 g

*: Including bracket.

Connect/Disconnect operations must be performed with the power shut-off. Failure to follow this instruction may cause the malfunction.



Remote sensor 12 points (with cable)

Specifications*1

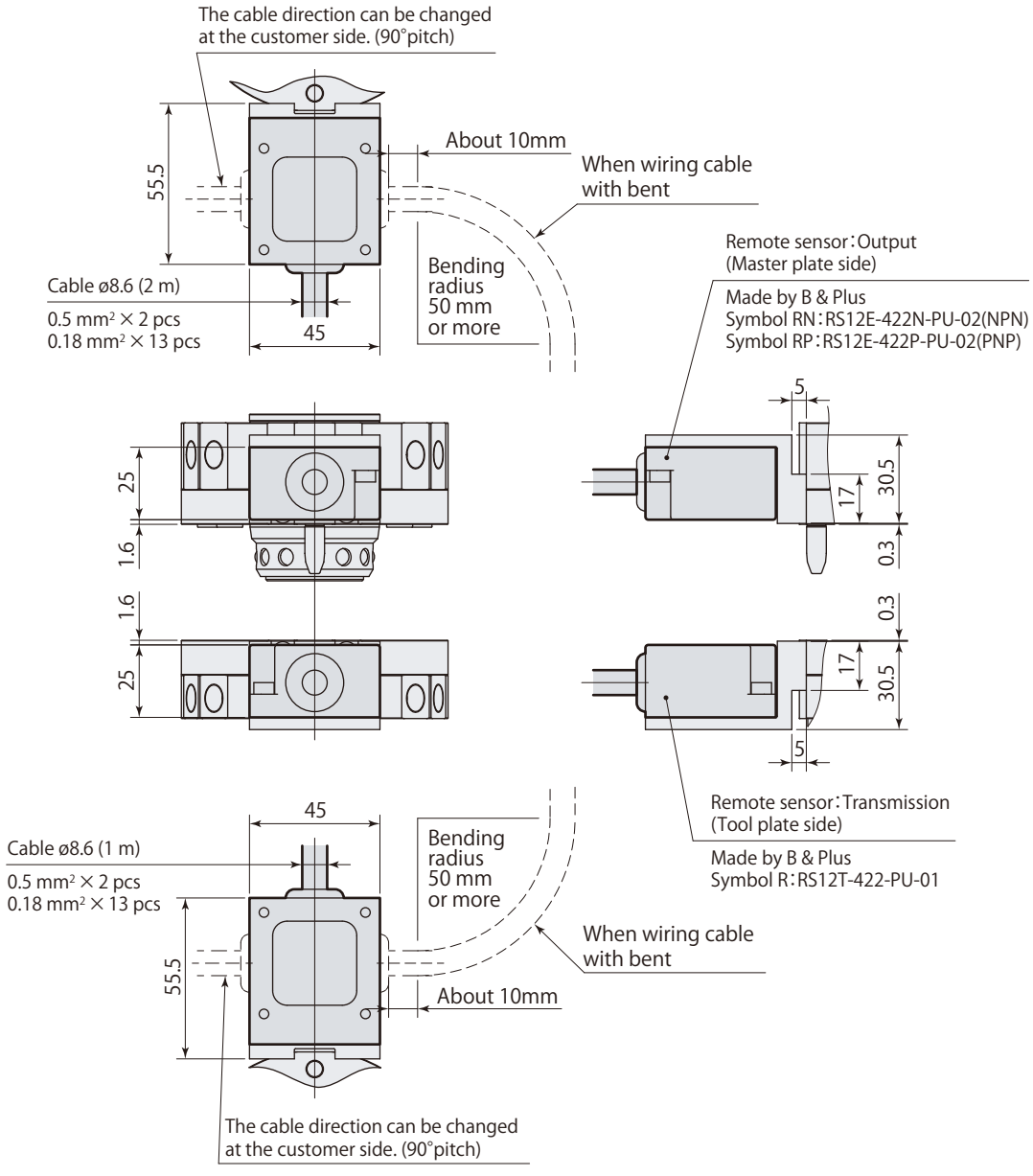
Tool plate side	
Symbol	R
Drive voltage	12V±1.5V DC
Total drive current	≦ 230mA
No. of input signals	12
Mass*2	230 g

Master plate side		
Symbol	RN	RP
Output specifications	NPN	PNP
Supply voltage	24V DC±10% (Including ripple)	
Current consumption	≦ 600mA	
No. of output signals	12 + 1 (Inzone)	
Load current	≦ 50mA/1 Output	
Mass*2	340 g	

*1 : Refer to the web site of the company named B & Plus for details about the remote sensor.
*2 : Includes bracket and cable.

Applicable sensor

Supply voltage : 12V±1.5V DC	Total current consumption : ≦ 230mA	Residual voltage : ≦ 3.5V



Wiring color

RS12T-422-PU-			
+12 V output	WH		
0 V output	Pale BU		
Polarity switching POL	BK		
Input 1 (SI1)	BN	Input 7 (SI7)	VT
Input 2 (SI2)	RD	Input 8 (SI8)	GY
Input 3 (SI3)	OG	Input 9 (SI9)	BN＊■■
Input 4 (SI4)	YE	Input 10 (SI10)	RD＊■■
Input 5 (SI5)	GN	Input 11 (SI11)	OG＊■■
Input 6 (SI5)	BU	Input 12 (SI12)	YE＊■■

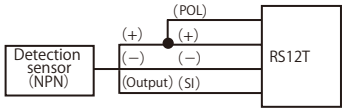
RS12E-422N/P-PU-			
+24 V input	WH		
0 V input	Pale BU		
In zone	BK		
Output 1 (SO1)	BN	Output 7 (SO7)	VT
Output 2 (SO2)	RD	Output 8 (SO8)	GY
Output 3 (SO3)	OG	Output 9 (SO9)	BN＊■■
Output 4 (SO4)	YE	Output 10 (SO10)	RD＊■■
Output 5 (SO5)	GN	Output 11 (SO11)	OG＊■■
Output 6 (SO5)	BU	Output 12 (SO12)	YE＊■■

Polarity switching POL is wiring for switching the polarity (NPN / PNP) of the sensor connected to the transmission section.
Check the wiring diagram and wire according to the sensor to be connected. If it is not wired, no signal will be detected.

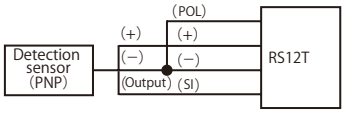
At the time of shipment from the factory, the unused core wire of the cable is cut. If the cable is shortened due to wiring reasons, the unused core wire will be exposed, so be careful not to short-circuit it.
The unused lines are GN＊, BU＊, and VT＊.(＊ is the line with ■■ printed on the core wire of each color)

Wiring diagram

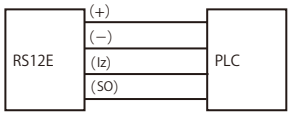
3-wire NPN type detection sensor connection



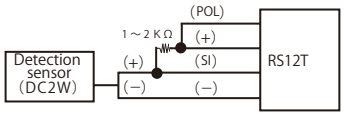
3-wire PNP type detection sensor connection



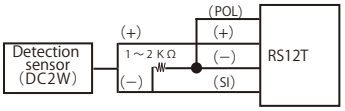
Connection to external PLC



2-wire NPN type detection sensor connection



2-wire PNP type detection sensor connection

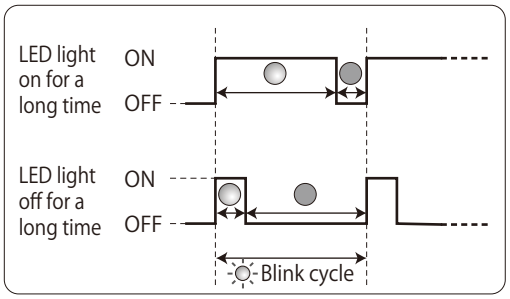


When wiring the power supply and signal lines, carefully check the wiring diagram and wire correctly.
When connecting a DC 2-wire sensor, wire a resistor of about 1 to 2 KΩ.

LED indication

Status LED (Green)

LED	Blinking	Pattern	Meaning
On ●	—	—	Power is supplied.
Off ○	—	—	Power is not supplied.
Blink ☼	Slow (1.5 sec.)	LED light off for a long time	Anomalous temperature.
Blink ☼		LED light on for a long time	Oscillation circuit overcurrent.
Blink ☼	Mid speed (0.6 sec.)	LED light off for a long time	Supply voltage is high.
Blink ☼		LED light on for a long time	Supply voltage is low.
Blink ☼	High (0.2 sec.)	The LED flashes at the same interval	Short circuit protection.

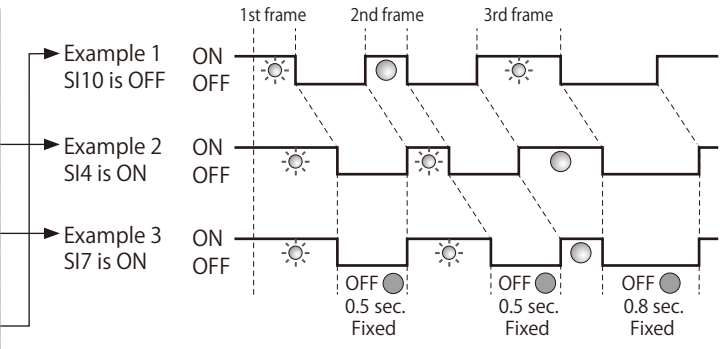


Inzone LED (Orange)

When the master plate and tool plate are on opposing sides, the inzone LED is lit to signal this.
When the output signal from each sensor and flash accordingly.

Output	1st frame
ON	Blinking ☼ 0.6 sec.
OFF	Blinking ☼ 0.3 sec.

Signal	2nd frame	3rd frame	
1	Blinking ☼ 0.3 sec.	Blink ☼	0.3 sec.
2			0.6 sec.
3		ON ●	0.3 sec.
4			0.6 sec.
5	Blinking ☼ 0.8 sec.	Blink ☼	0.3 sec.
6			0.6 sec.
7		ON ●	0.3 sec.
8			0.6 sec.
9	Lighting ● 0.3 sec.	Blink ☼	0.3 sec.
10			0.6 sec.
11		ON ●	0.3 sec.
12			0.6 sec.



Remote sensor 4 points (with cable)

Specifications*1

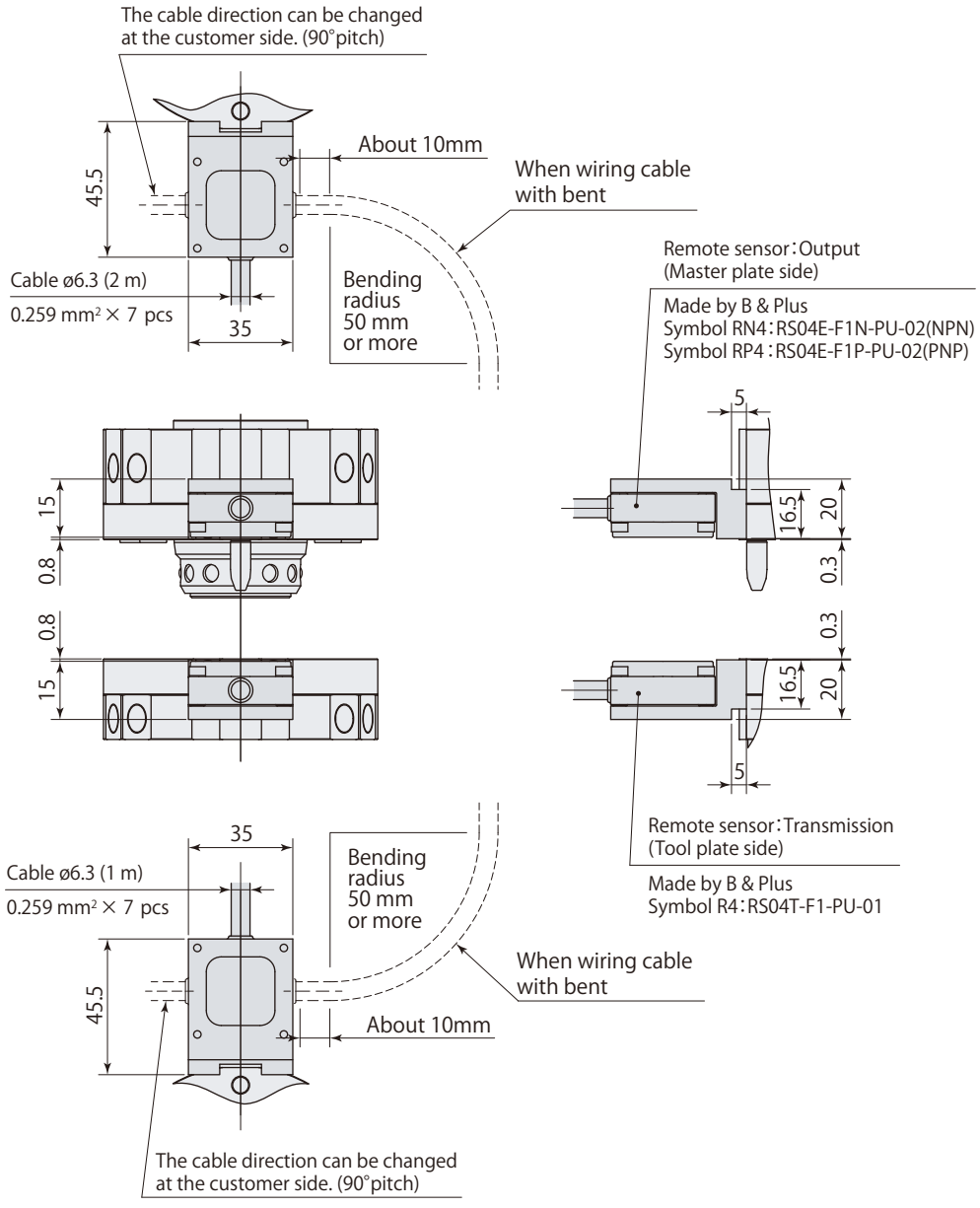
Tool plate side	
Symbol	R
Drive voltage	12V±1.5V DC
Total drive current	≦ 60mA
No. of input signals	4
Mass*2	120 g

Master plate side		
Symbol	RN	RP
Output specifications	NPN	PNP
Supply voltage	24V DC±10% (Including ripple)	
Current consumption	≦ 200mA	
No. of output signals	4 + 1 (Inzone)	
Load current	≦ 50mA/1 Output	
Mass*2	180 g	

*1：Refer to the web site of the company named B & Plus for details about the remote sensor.
*2：Includes bracket and cable.

Applicable sensor

Supply voltage：12V±1.5V DC	Total current consumption：≦ 60mA	Residual voltage：≦ 3.5V



Wire color

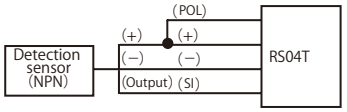
RS04T-F1-PU-	
+12 V output	White
0 V output	Blue
Polarity switching POL	Black
Input 1 (SI1)	Brown
Input 2 (SI2)	Red
Input 3 (SI3)	Yellow
Input 4 (SI4)	Green

RS04E-F1N/P-PU-	
+24 V input	White
0 V input	Blue
In zone	Black
Output 1 (SO1)	Brown
Output 2 (SO2)	Red
Output 3 (SO3)	Yellow
Output 4 (SO4)	Green

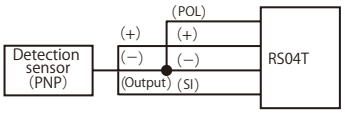
Polarity switching POL is wiring for switching the polarity (NPN / PNP) of the sensor connected to the transmission section.
Check the wiring diagram and wire according to the sensor to be connected. If it is not wired, no signal will be detected.

Wiring diagram

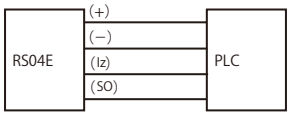
3-wire NPN type detection sensor connection



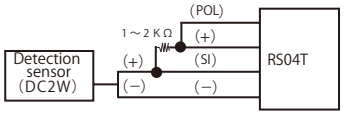
3-wire PNP type detection sensor connection



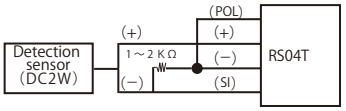
Connection to external PLC



2-wire NPN type detection sensor connection



2-wire PNP type detection sensor connection

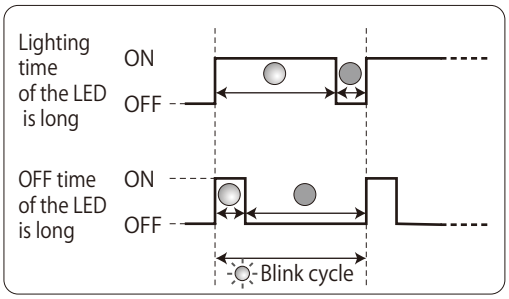


When wiring the power supply and signal lines, carefully check the wiring diagram and wire correctly.
When connecting a DC 2-wire sensor, wire a resistor of about 1 to 2 KΩ.

LED indication

Status LED (Green)

LED	Blinking	Pattern	Meaning
On	—	—	Power is supplied.
Off	—	—	Power is not supplied.
Blink	Slow (1.5 sec.)	LED light off for a long time	Anomalous temperature.
Blink	Mid speed (0.6 sec.)	LED light off for a long time	Supply voltage is high.
Blink		LED light on for a long time	Supply voltage is low.
Blink	High (0.2 sec.)	The LED flashes at the same interval	Short circuit protection.



Inzone LED (Orange)

When the master plate and tool plate are on opposing sides, the inzone LED is lit to signal this.