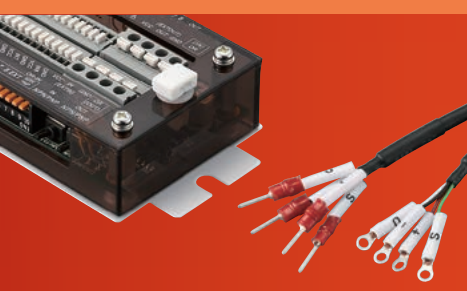


Tubing / Sensors



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Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Buffer Material

Suction

Suction Cups

Suction Stem

Pad in Pad

Air Ejector / Filter / Check Valve

Micro Mold E.O.A.T

Cut

Mini Air Nippers

Air Nippers

Frame/Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

Tubing/Sensors

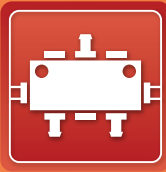
Tubing

Sensors

Other Products

Others

Information



Manifold



Air circuit can be branched to two or more.

6-3

Cable Ties/Cable Tie Mount/Tube Cutter



Use for arranging chuck piping.

6-10

Light Weight Plastic Manifold



Air circuit can be branched to two or more.

6-4

Regulator/Manual Air Valve Push Button/Manual Air Valve Push Slide Button



Used for air pressure regulations and switches.

6-11

Fitting



Used for connection of chuck device and air tube.

6-5

Flow Control



Speed of air cylinder can be adjusted.

6-12

Gasket/Air Coupler/Micro Coupler



Used for pipe connection of chuck device.

6-8

Quick Exhaust Valve/Finger Valve



Used to control air flow.

6-13

Tube/Sleeve



Used for pipe connection of chuck device. The product is flexible and can follow hard action of robot.

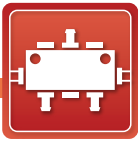
6-9

Mini Pressure Regulator



Grips work piece gently by decreasing gripping force.

6-14



Manifold

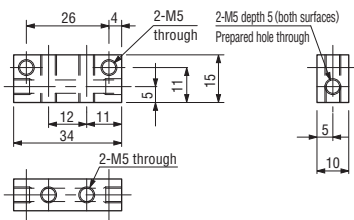
Air circuit is branched off in two or more directions.



Manifold • mini

Order code No.	122034
Standard	MM-6P

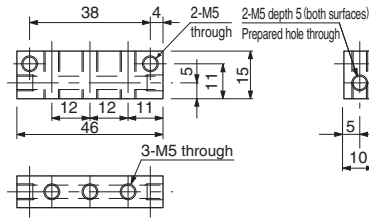
- Weight : 10g
- Mounting : M5/P26



Manifold • mini

Order code No.	122035
Standard	MM-8P

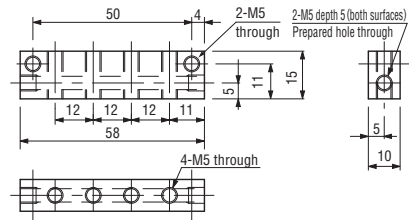
- Weight : 14g
- Mounting : M5/P38



Manifold • mini

Order code No.	122036
Standard	MM-10P

- Weight : 17g
- Mounting : M5/P50



Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Buffer Material

Suction

Suction Cups

Suction Stem

Pad in Pad

Air Ejector/Filter/Check Valve

Micro Mold E.O.A.T

Cut

Mini Air Nippers

Air Nippers

Frame/Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

Tubing/Sensors

Tubing

Sensors

Other Products

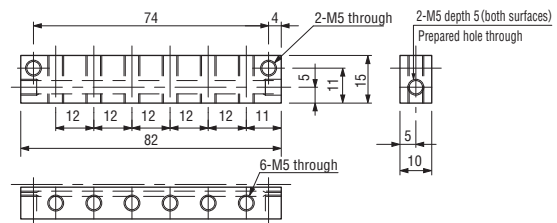
Others

Information

Manifold • mini

Order code No.	122037
Standard	MM-14P

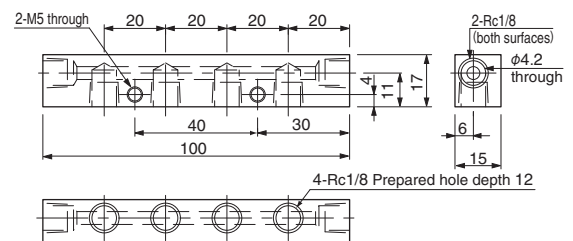
- Weight : 25g
- Mounting : M5/P74



Manifold • small

Order code No.	122040
Standard	MS-6P (1/8)

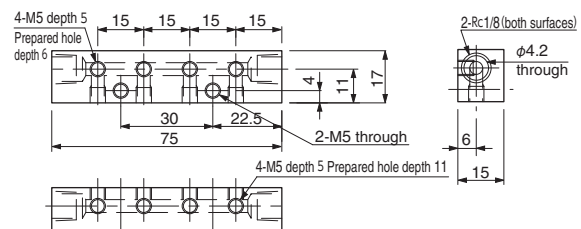
- Weight : 52g
- Mounting : M5/P40



Manifold • small

Order code No.	122038
Standard	MS-10P

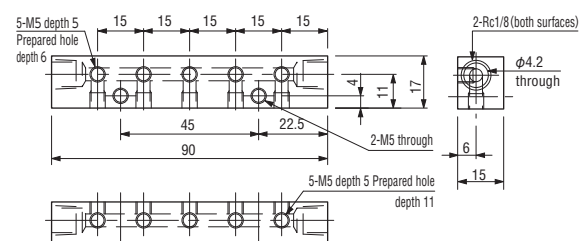
- Weight : 41g
- Mounting : M5/P30

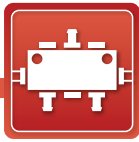


Manifold • small

Order code No.	122039
Standard	MS-12P

- Weight : 50g
- Mounting : M5/P45





Light Weight Plastic Manifold

The air circuit can be branched to multiple units.

- Stop up the port not used by air tube and cap (blind).



Light weight plastic manifold • BF5

Order code No.	123195
Standard	MP-10P-BF5

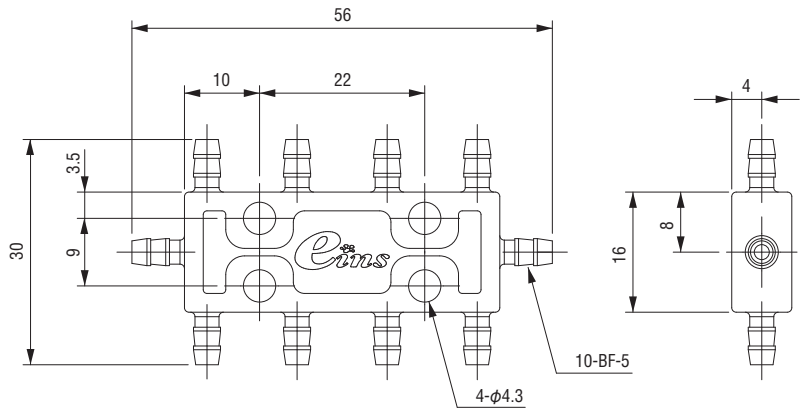
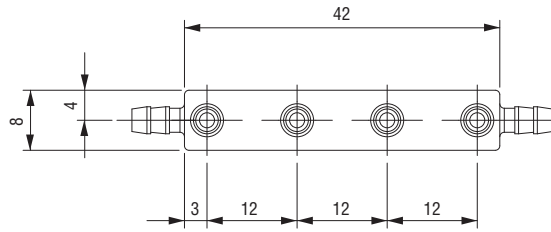
● Weight : 5g



Cap for resin manifold • BF5

Order code No.	010585
Standard	BF5-CAP

● Weight : 1g



Light weight plastic manifold • BF6

Order code No.	123196
Standard	MP-10P-BF6

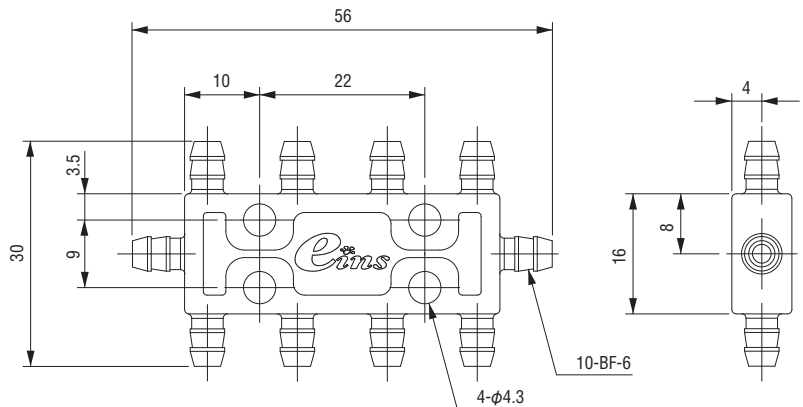
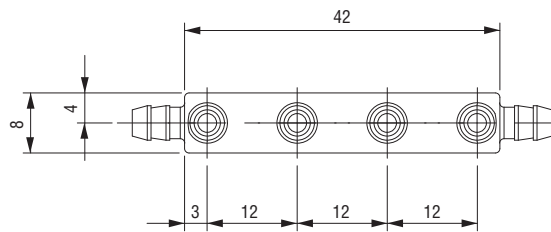
● Weight : 5g

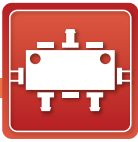


Cap for resin manifold • BF6

Order code No.	010586
Standard	BF6-CAP

● Weight : 1g







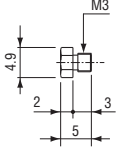
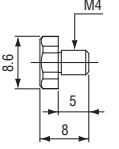
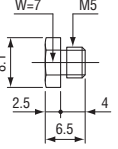
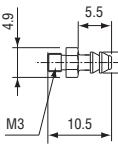
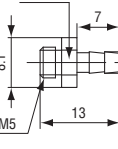
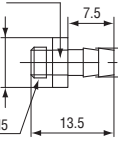








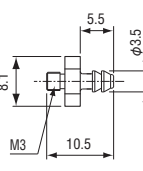
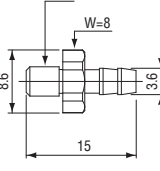
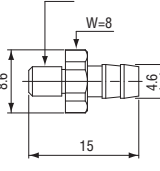
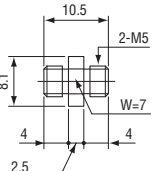
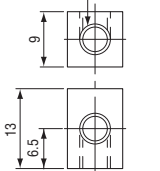
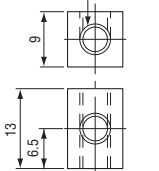







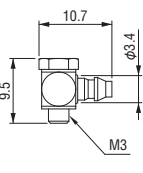
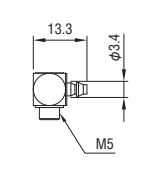
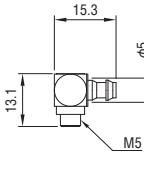
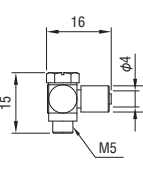
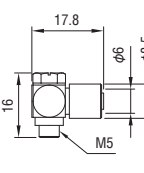
Fitting

Used for connection of chuck device and air tube.

• Use urethane tube or soft polyurethane tube for connection.

Fitting	For micro-mini cylinder			For micro-mini cylinder		
						
Drawing						
Order code No.	010474	151349	190106	010473	190109	190108
Standard	PF-3	PF-M4	PF	BF-3	BF-5	BF-6
Weight	0.5g	0.2g	1.2g	0.7g	1.4g	1.5g
Connection	M3	M4	M5	M3	M5	M5
Tube Size	—	—	—	φ4	φ4、φ4.5	φ6

Fitting	For micro-mini cylinder					
						
Drawing						
Order code No.	010416	010482	010481	190107	190110	190111
Standard	BF-5-M3	BF-5-M4	BF-6-M4	NF	EF	TF
Weight	1.2g	0.2g	0.2g	1.4g	7.0g	6.6g
Connection	M3	M4	M4	M5	M5	M5
Tube Size	φ4、φ4.5	φ4、φ4.5	φ6	—	—	—

Fitting	Barb elbow for soft tubing			Hose elbow	
	For micro-mini cylinder				
					
Drawing					
Order code No.	120543	120692	122892	120500	122832
Standard	M-3ALU-4	M-5ALU-4	M-5ALU-6	MS-5HLH-4	MS-5HLH-6
Weight	0.7g	4.1g	4.5g	4.2g	6.2g
Connection	M3	M5	M5	M5	M5
Tube Size	φ4	φ4	φ6	φ4	φ6

Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

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Buffer Material

Suction

Suction Cups

Suction Stem

Pad in Pad

Air Ejector / Filter / Check Valve

Micro Mold E.O.A.T

Cut

Mini Air Nippers

Air Nippers

Frame/Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

Tubing/Sensors

Tubing

Sensors





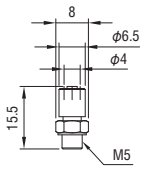
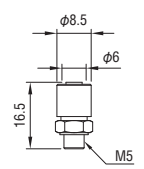
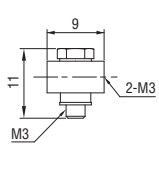
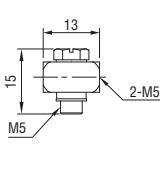
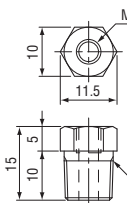
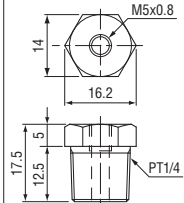
Other Products







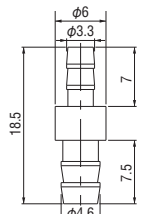
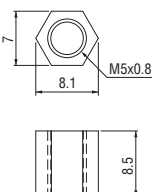
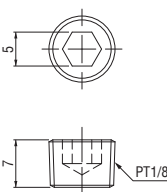
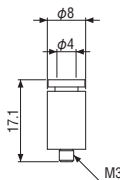
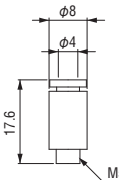
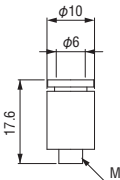
Others







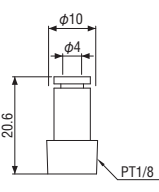
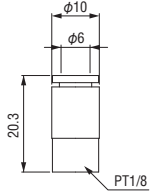
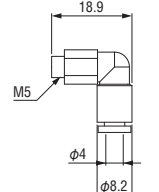
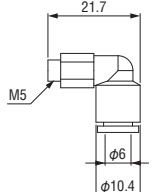
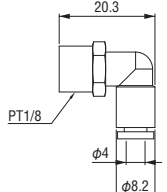
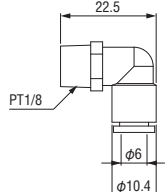
Information







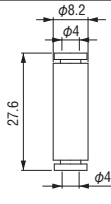
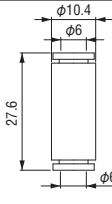
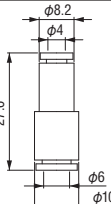
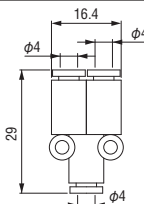
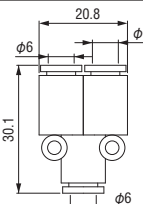
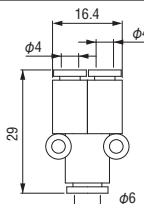
Fitting

● Use urethane tube or soft polyurethane tube for connection.

Fitting	Hose nipple		Universal tee		RBF	RBF-1
						
Drawing						
Order code No.	122831	122049	123471	120607	190112	190113
Standard	MS-5H-4	MS-5H-6	M-3UT	M-5UT	RBF	RBF-1
Weight	2.5g	3.7g	1.4g	4.8g	7.1g	17.6g
Connection	M5	M5	M3	M5	PT1/8, M5	PT1/4, M5
Tube Size	φ4	φ6	—	—	—	—

Fitting	Reducer nipple	Joint	Socket plug (trivalent chromate white)	Male connector		
						
Drawing						
Order code No.	300385	022667	271714	101749	101467	101466
Standard	4-S-6	CF	1/8	KQ2S04-M3G	KQ2S04-M5N	KQ2S06-M5N
Weight	1.2g	1.75g	2.5g	2.0g	3.0g	4.1g
Connection	—	M5	1/8	M3	M5	M5
Tube Size	φ4, φ4.5, φ6	—	—	φ4	φ4	φ6

Fitting	Male connector		Male elbow union			
						
Drawing						
Order code No.	101746	101468	101462	101464	101710	101463
Standard	KQ2S04-01NS	KQ2S06-01NS	KQ2L04-M5N	KQ2L06-M5N	KQ2L04-01NS	KQ2L06-01NS
Weight	8.0g	6.5g	3.1g	3.2g	4.0g	5.2g
Connection	1/8	PT1/8	M5	M5	PT1/8	PT1/8
Tube Size	φ4	φ6	φ4	φ6	φ4	φ6

Fitting	Straight union		Straight reducer union	Union Y		Reducer union Y
						
Drawing						
Order code No.	101469	101470	101471	101472	101465	101473
Standard	KQ2H04-00A	KQ2H06-00A	KQ2H04-06A	KQ2U04-00A	KQ2U06-00A	KQ2U04-06A
Weight	1.6g	2.1g	2.0g	2.9g	4.1g	3.3g
Connection	—	—	—	—	—	—
Tube Size	φ4	φ6	φ4、φ6	φ4	φ6	φ4、φ6

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Sliding Chuck

Tubing/Sensors

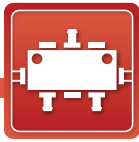
Tubing

Sensors

Other Products

Others

Information



Gasket / Air Coupler / Micro Coupler

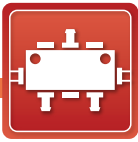
Used for pipe connection of chuck device.

● Use urethane tube or soft polyurethane tube for connection.

Gasket			
Drawing			
Order code No.	122889	122890	122891
Standard	M3-G	M4-G	M5-G
Weight	-	-	-
Connection	-	-	-
Tube Size	-	-	-


Air Coupler				
Drawing				
Order code No.	280018	322948	122893	122894
Standard	20PF	60PC	MC-04PC	MC-06PC
Weight	29.0g	24.0g	5.0g	3.0g
Connection	Rc1/4	-	-	-
Tube Size	-	φ6	φ4	φ6


Micro coupler			
Drawing			
Order code No.	120170	120120	120121
Standard	MC-04PH	MC-05PM	MC-05SM
Weight	1.5g	2.0g	7.0g
Connection	-	M5	M5
Tube Size	φ6	-	-





Tube / Sleeve

Used for pipe connection of chuck device. The product is flexible and can follow hard action of robot.

Polyurethane tube (flexible)					
	Order code No.	196516	196277	193564	196513
	Standard	TU0425W-20	TU0425B-20	TU0425BU-20	TU0425R-20
	Color	White	Black	Blue	Red
	Length	20m			
	Outside × Inside diameter	φ4 × φ2.5			
Order code No.	196514	196515	196520	196278	
Standard	TU0425Y-20	TU0425G-20	TU0604W-20	TU0604B-20	
Color	Yellow	Green	White	Black	
Length	20m				
Outside × Inside diameter	φ4 × φ2.5		φ6 × φ4		
Order code No.	193566	196517	196518	196519	
Standard	TU0604BU-20	TU0604R-20	TU0604Y-20	TU0604G-20	
Color	Blue	Red	Yellow	Green	
Length	20m				
Outside × Inside diameter	φ6 × φ4				

Soft polyurethane tube (more flexible)			
	Order code No.	196530	196531
	Standard	TUS0425W-20	TUS0604W-20
	Color	White	
	Length	20m	
	Outside × Inside diameter	φ4 × φ2.5	φ6 × φ4

Urethane tube (flexible)					
	Order code No.	200039	200113	200040	200112
	Standard	UF4.5 * 2.7 (5M)	UF4.5 * 2.7 (20M)	UF6 * 4 (5M)	UF6 * 4 (20M)
	Color	Light blue			
	Length	5m	20m	5m	20m
	Outside × Inside diameter	φ4.5 × φ2.7		φ6 × φ4	

Silicone tube (super flexible)			
	Order code No.	300514	322194
	Standard	4 * 2 (5M)	6 * 3 (5M)
	Color	White	
	Length	5m	
	Outside × Inside diameter	φ4 × φ2	φ6 × φ3

Sleeve		Order code No.	300001
		Standard	BS-06
*For pullout prevention		Weight	0.2g

Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Buffer Material

Suction

Suction Cups

Suction Stem

Pad in Pad

Air Ejector / Filter / Check Valve

Micro Mold E.O.A.T

Cut

Mini Air Nippers

Air Nippers

Frame/Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

Tubing/Sensors

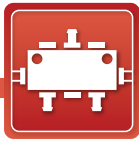
Tubing

Sensors

Other Products

Others

Information



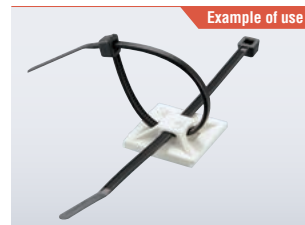
Cable Ties / Cable Tie Mount / Tube Cutter

Use for arranging chuck piping.

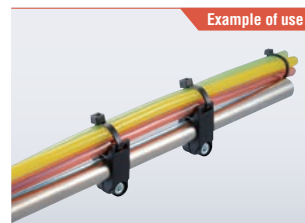
Cable ties						
	Order code No.	001920	001921	001922	001923	001924
	Standard	AB100-W	AB150-W	AB200-W	AB300-W	AB350-W
	Length	100mm	152mm	202mm	301mm	382mm
	Per bag	1,000pcs.	100pcs.			50pcs.

Tie wrap w / tag		
	Order code No.	152324
	Standard	PLF1M-C
	Length	109mm
	Per bag	100pcs.

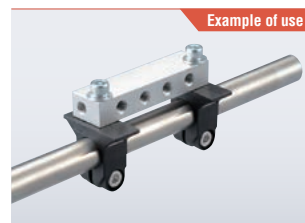
Cable tie mount			
	Order code No.	183222	183223
	Standard	SKM-20	SKM-30
	Length	20×20×5.3	30×30×6
	Per bag	100pcs.	



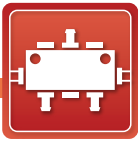
Tie wrap base			
	Order code No.	171210	171211
	Standard	RCA12	RCA20
	Weight	0.2g	
	Per bag	φ 12	φ 20



Tie wrap base (M4)			
	Order code No.	171212	171213
	Standard	RCB12	RCB20
	Weight	0.2g	
	Per bag	φ 12	φ 20



Tube cutter		※ Do not use for cutting metal such as electric wire.	
	Order code No.	190508	
	Standard	TK-1	
	Weight	140g	
	Applied tube material	Nylon, soft nylon, polyurethane, other non-rigid plastic tubes	
	Applied tube outside diameter	13mm or less	



Regulator / Manual Air Valve Push Button / Manual Air Valve Push Slide Button

Used for air pressure regulations and switches.

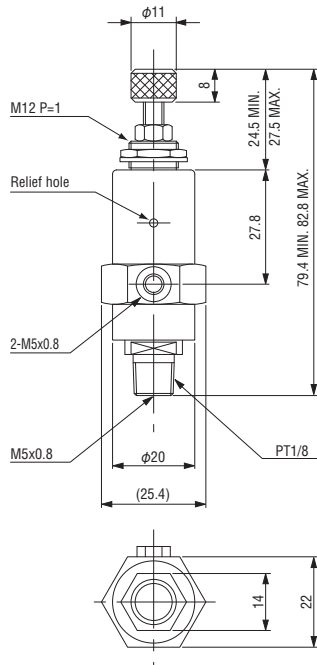
- ▶ Grip strength of components such as mini cylinder is adjusted by regulating pressure.



Regulator

Order code No.	190009
Standard	RSR

- Weight : 108g



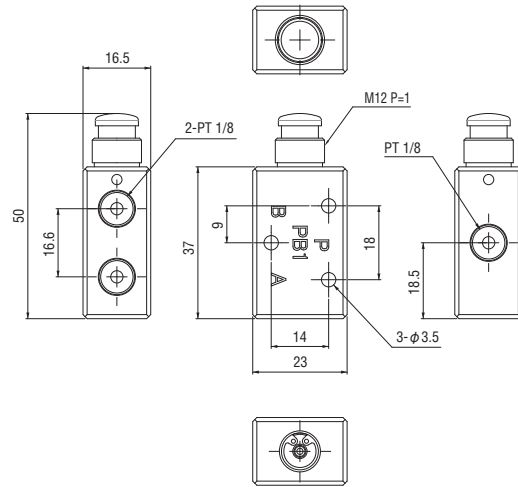
- ▶ Used to switch port of air (A/B).



Manual air valve push button

Order code No.	152308
Standard	PB1-E

- Weight : 65g
- Fixing bolt and nut are separately sold.



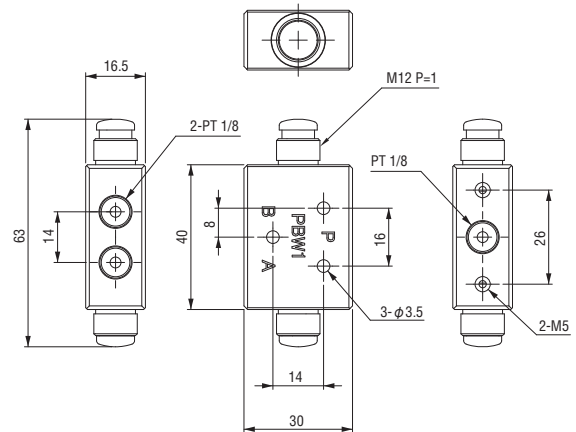
- ▶ Used to switch port of air (A/B).



Manual air valve push slide button

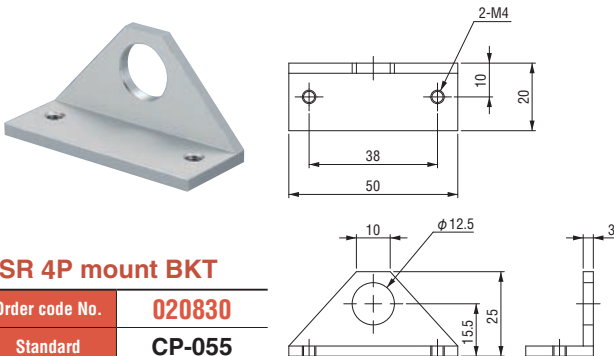
Order code No.	152306
Standard	PBW1-E

- Weight : 75g
- Fixing bolt and nut are separately sold.



Mountable on RSR, PB1-E, and PBE1-E.
 "120483 → 3-30" is separately required for installation to PB1-E, PBW1-E.

- ▶ Mounting bracket for push button and regulator.

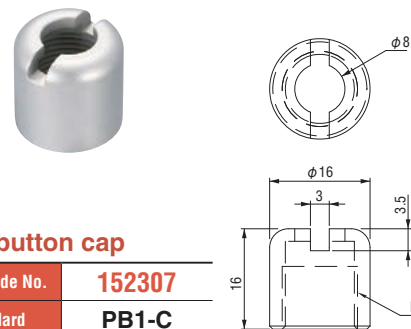


RSR 4P mount BKT

Order code No.	020830
Standard	CP-055

- Weight : 2g

- ▶ Installation to PB1-E and PBW1-E is possible.



Push button cap

Order code No.	152307
Standard	PB1-C

- Weight : 5g
- With spring washer

Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

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Container Cylinders

Accessories for Container Cylinder

Grippers

Buffer Material

Suction

Suction Cups

Suction Stem

Pad in Pad

Air Ejector / Filter / Check Valve

Micro Mold E.O.A.T

Cut

Mini Air Nippers

Air Nippers

Frame/Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

Tubing/Sensors

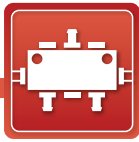
Tubing

Sensors

Other Products

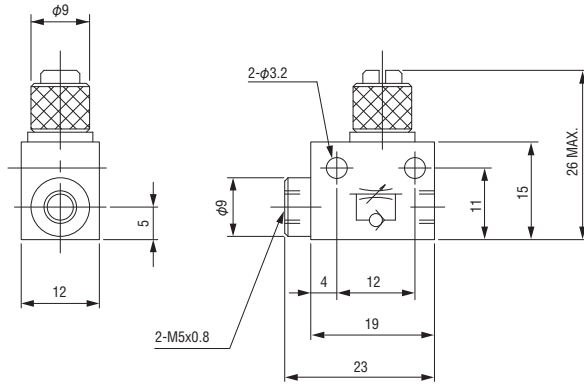
Others

Information



Flow Control

Speed of air cylinder can be adjusted.

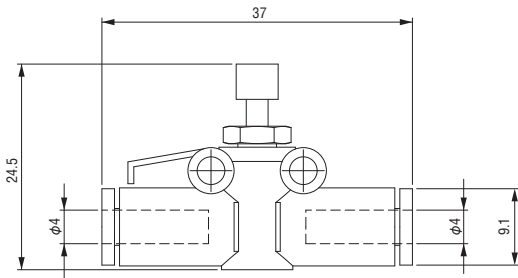


Order code No.	190002
Standard	SCO

- Weight : 29g
- Directional

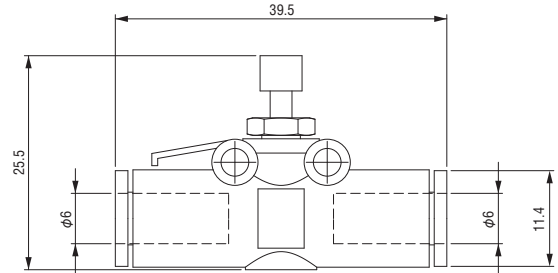
Order code No.	002199
Standard	AS1002F-04

- Weight : 5.5g
- Directional



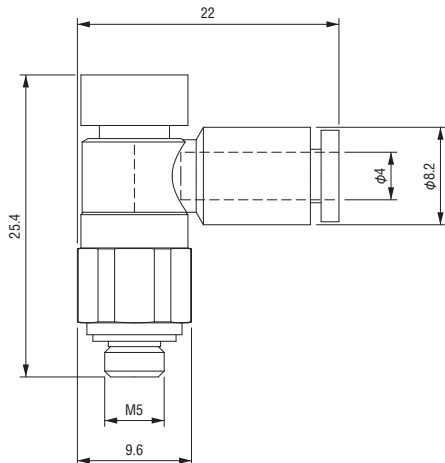
Order code No.	002200
Standard	AS1002F-06

- Weight : 6.5g
- Directional



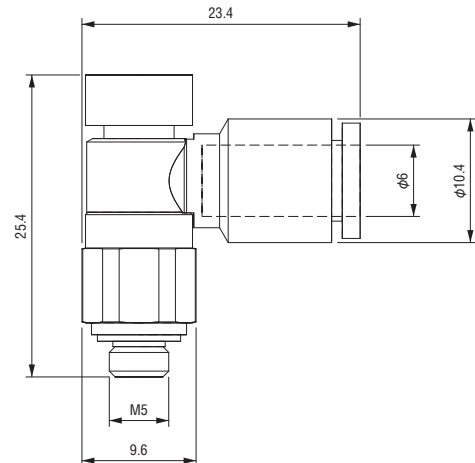
Order code No.	002239
Standard	AS-1201F-M5-04A

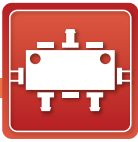
- Weight : 5g



Order code No.	002288
Standard	AS-1201F-M5-06A

- Weight : 6g





Quick Exhaust Valve / Finger Valve

Used to control air flow.

▶ Quick exhaust valve with one-touch pipe joint.



Quick exhaust valve

Order code No.	002216
Standard	AQ240F-04-00

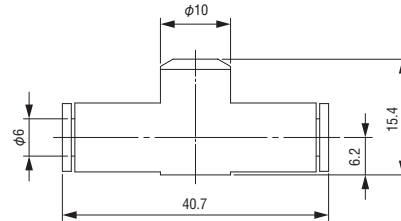
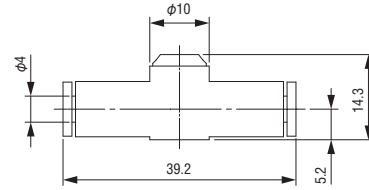
- Weight : 5g
- Silencer is included.
- Directional



Quick exhaust valve

Order code No.	002217
Standard	AQ240F-06-00

- Weight : 6g
- Silencer is included.
- Directional



▶ One-touch pipe joint which allows visual inspection of valve open/close with the orientation of the knob.



2-port valve

Finger valve

Order code No.	210935
Standard	VHK2-04F-04FL

- Weight : 15g
- Applicable tube size : $\phi 4$
- Directional

Finger valve

Order code No.	210936
Standard	VHK2-06F-06FL

- Weight : 16g
- Applicable tube size : $\phi 6$
- Directional



3-port valve

Finger valve

Order code No.	210937
Standard	VHK3-04F-04FL

- Weight : 15g
- Applicable tube size : $\phi 4$
- Directional

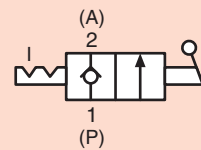
Finger valve

Order code No.	210938
Standard	VHK3-06F-06FL

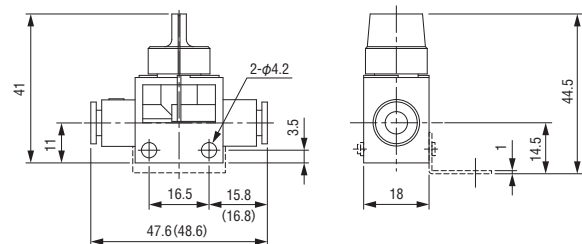
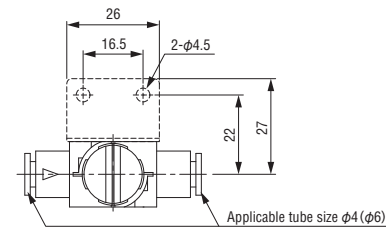
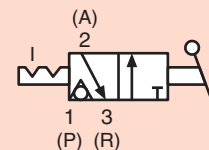
- Weight : 16g
- Applicable tube size : $\phi 6$
- Directional

Structural drawing

2-port valve



3-port valve



* Size in () shows the size of the component for 06F.

Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Buffer Material

Suction

Suction Cups

Suction Stem

Pad in Pad

Air Ejector / Filter / Check Valve

Micro Mold E.O.A.T

Cut

Mini Air Nippers

Air Nippers

Frame/Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

Tubing/Sensors

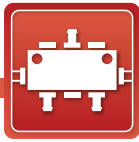
Tubing

Sensors

Other Products

Others

Information



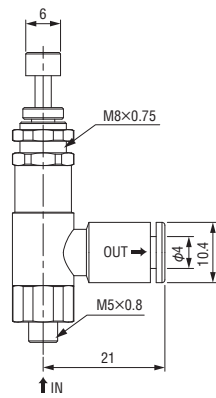
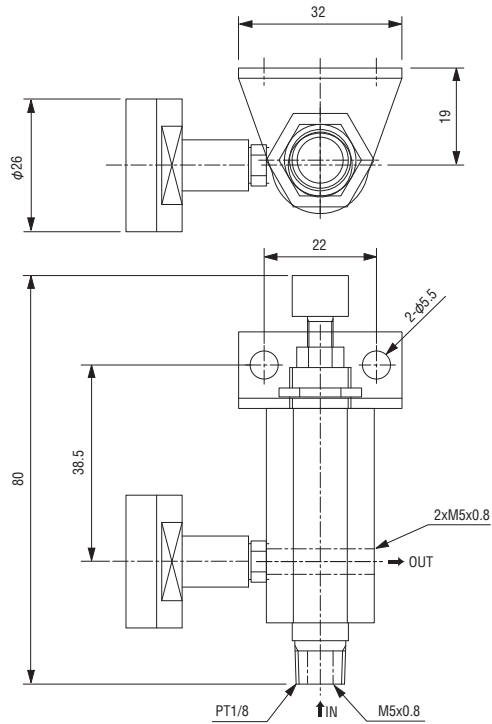
Mini Pressure Regulator

Grips work piece gently by decreasing gripping force.



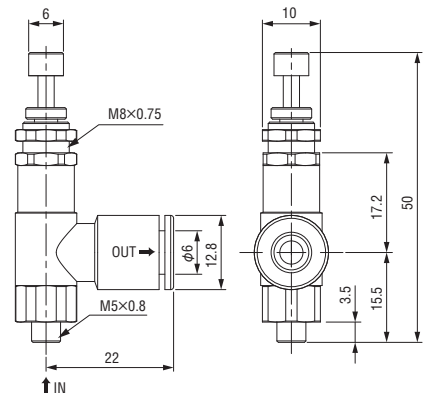
Order code No.	001312
Standard	ARJ210-M5BG

● Weight : 60g



Order code No.	001382
Standard	ARJ1020F-M5-04

● Weight : 16g



Order code No.	001447
Standard	ARJ1020F-M5-06

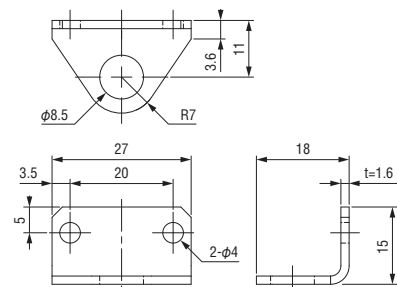
● Weight : 16g



ARJ1 Regulator Bracket

Order code No.	110655
Standard	LX0109-102

● Weight : 8g



MEMO

A series of horizontal dashed lines for writing.



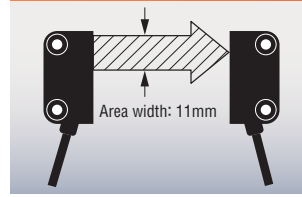
Star Sensor



Reed switch adopted to inside to improve durability. Easy two-wire connection.

6-17

Photo Area Sensor



Can be used for passing fine workpieces. Space-saving reflection type can be provided as a special-order product.

6-24

Limit Switch



Adequate for product confirmation in chuck with large molded product.

6-18

Fiber Units



Minute workpiece is detected by using optical amplifier E3 series together.

6-25

Limit Switch Micro / Limit Switch



Easy-to-use small limit switches.

6-19

Fiber Amplifier Unit



Amplifier for optical fiber.

6-26

Limit Switch Mounting Bracket



Use to mount a limit switch, allowing a proper position for product confirmation to be secured.

6-20

Proximity Sensor Runner Confirm



Check sensor for Eins function chuck.

6-30

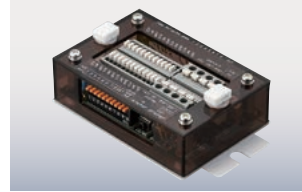
Auto Switch (Reed · Contactless)



Can be used for container cylinder and mini cylinder.

6-21

Multi AND Board



Many sensor inputs are integrated in the board. And it is output from a point to the robot.

6-32

Photo Sensor



No amplifier is required ! Special-purpose mounting brackets are also provided for Jungle Gym and Let's Joint.

6-22



Star Sensor

Reed switch adopted to inside to improve durability. Easy two-wire connection.

- ▶ Silicone rubber is adopted at the tip to prevent damage to the product.
- ▶ Lightweight (14g) and compact design.



Star sensor

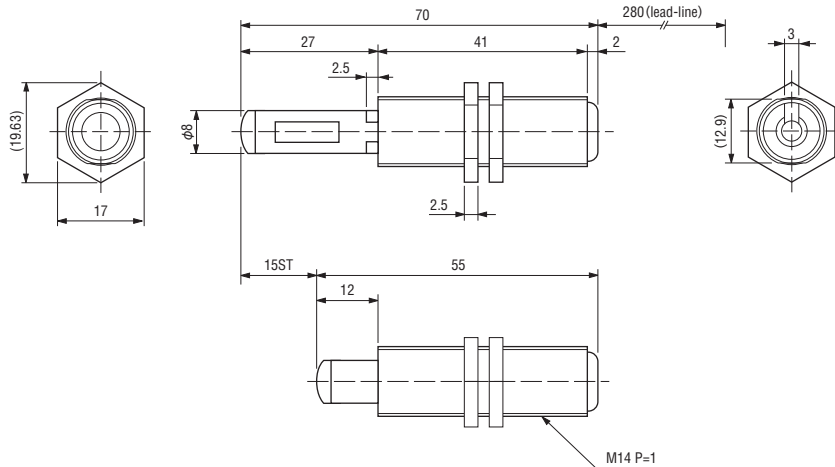
Order code No.	181139
Standard	SSW-15

- Weight : 14g
- With 280mm lead line.

Replacement rubber head for SSW-15

Order code No.	270449
Standard	14103301 (SSW-15)

- (One set/5 pcs)



* Sensing-stroke range : 2.5mm-15mm

Electrical specification

	Standard	SSW-15
Contact point	Contact point type	1A
	Contact position	Off center gap
	Maximum contact capacity	20W
	Maximum open/close voltage	200VDC
	Maximum open/close electric current	0.5A
Electrical characteristics	Turn-on value* ¹	15-50A* ¹
	Detecting stroke	2.5mm-15mm
	Open value* ¹	5A (min)
	Withstand voltage* ²	250VDC
Others	Operation temperature	- 2-80°C
	Useful life	1 × 10 ⁸ times / DC10mV-10μA
		1 × 10 ⁷ times / DC10V-4mA
		250 × 10 ⁴ times / DC20V-0.5A
Connection method	Code drawing type (280mm)	

*1 Crossing in shipment : ±2A

*2 Voltage withstanding standard: turn-on value 25A or more.

Body specification

	Standard	SSW-15
Weight		20g
Material	Main body	PA
	Shaft	PA
	Rubber head	Silicon
Accessories	Hex nut M14 × P1 (2 pcs)	

* Do not put a strong shock from the outside.

Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Buffer Material

Suction

Suction Cups

Suction Stem

Pad in Pad

Air Ejector / Filter / Check Valve

Micro Mold E.O.A.T

Cut

Mini Air Nippers

Air Nippers

Frame/Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

Tubing/Sensors

Tubing

Sensors

Other Products

Others

Information



Limit Switch

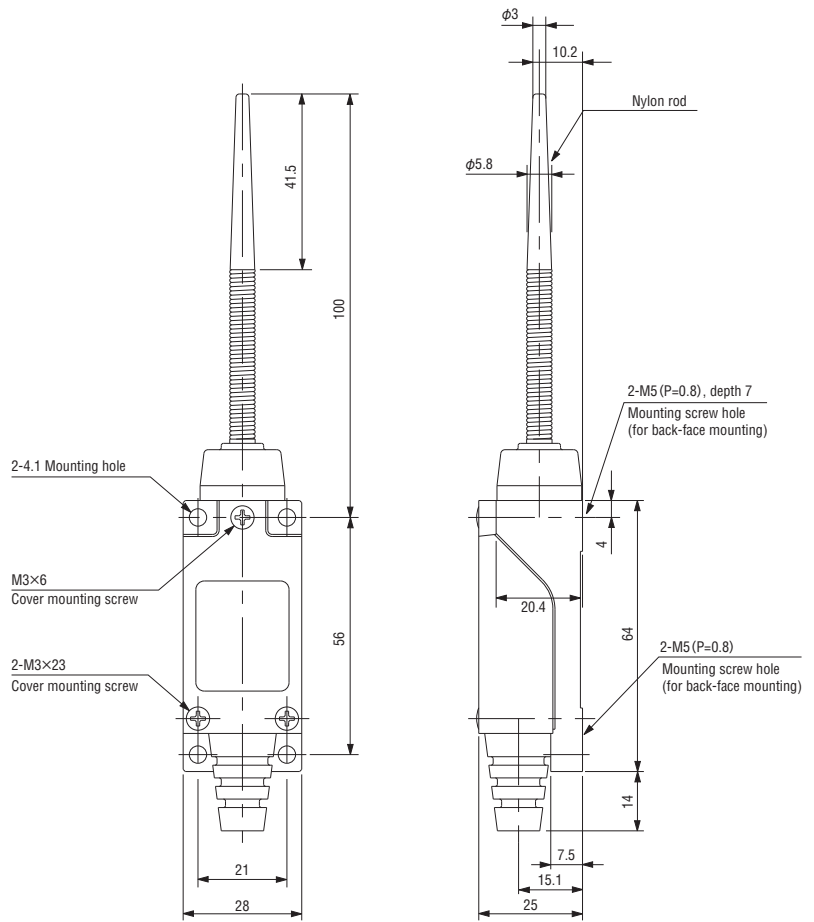
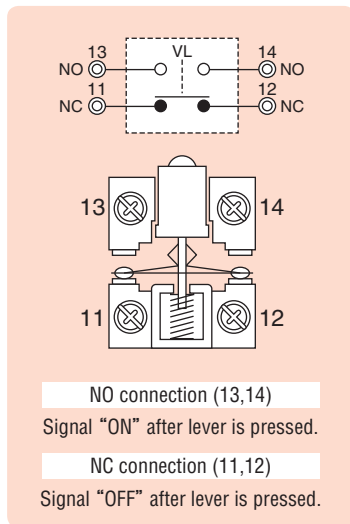
Adequate for product confirmation in chuck with large molded product.



Limit switch

Order code No.	000012
Standard	AZ8166

● Weight : 111g





Limit Switch Micro / Limit Switch

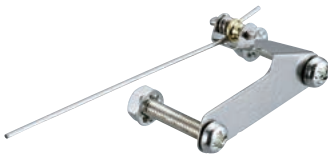
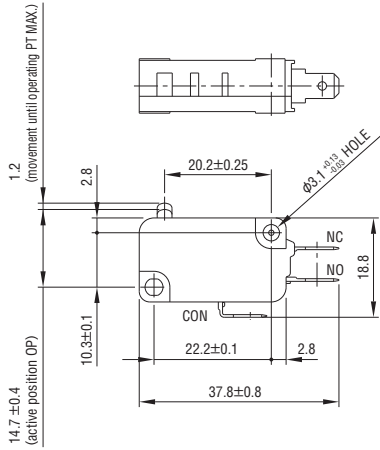
User-friendly small limit switch.



Limit switch micro

Order code No.	210843
Standard	VX-5-1A2

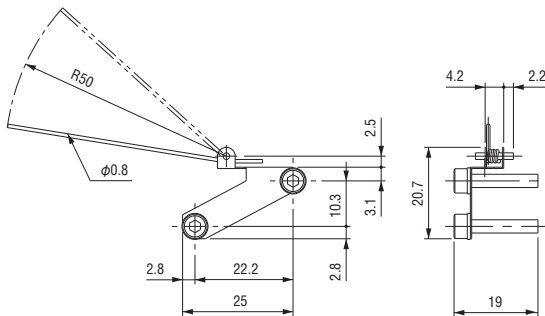
● Weight : 6g



Limit switch hinge lever

Order code No.	210414
Standard	VAV-5

● Weight : 5g



Connection terminal

Order code No.	196749
Standard	TMEDN480509FA

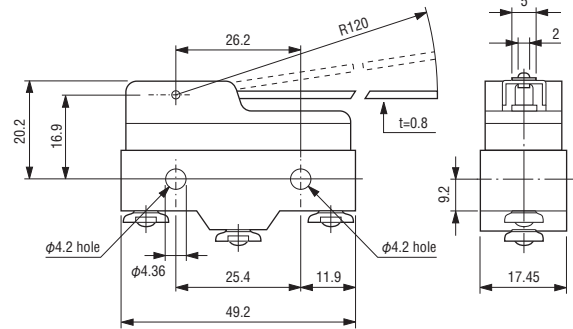
● Weight : 0.8g



Limit switch

Order code No.	250012
Standard	Z-15HW24-B

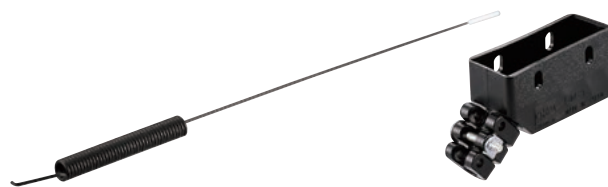
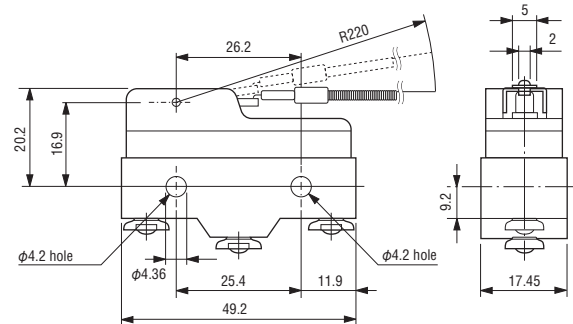
● Weight : 36g ● Stainless steel lever
● Can be attached to sensor bracket (N01915-201).



Limit switch hinge lever type

Order code No.	250017
Standard	Z-15GW55-B

● Weight : 42g
● Can be attached to sensor bracket (N01915-201).



Limit switch spring

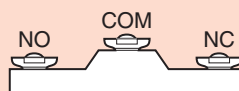
Order code No.	250018
Standard	Z-15GW55-B spring

● Weight : 8g

Limit switch micro case

Order code No.	140039
Standard	OM-1

● Weight : 19g
● Mounting screws are not included.



COM+NO Signal "ON" after lever is pressed.
COM+NC Signal "OFF" after lever is pressed.

Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

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Mini Cylinder

Accessories for Mini Cylinder

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Accessories for Container Cylinder

Grippers

Buffer Material

Suction

Suction Cups

Suction Stem

Pad in Pad

Air Ejector/Filter/Check Valve

Micro Mold E.O.A.T

Cut

Mini Air Nippers

Air Nippers

Frame/Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

Tubing/Sensors

Tubing

Sensors

Other Products

Others

Information



Limit Switch Mounting Bracket

Use to mount a limit switch, allowing a proper position for product confirmation to be secured.



Order code No.	020837
Standard	CP-059-A

● Weight : 9g



Order code No.	020838
Standard	CP-059-B

● Weight : 10g



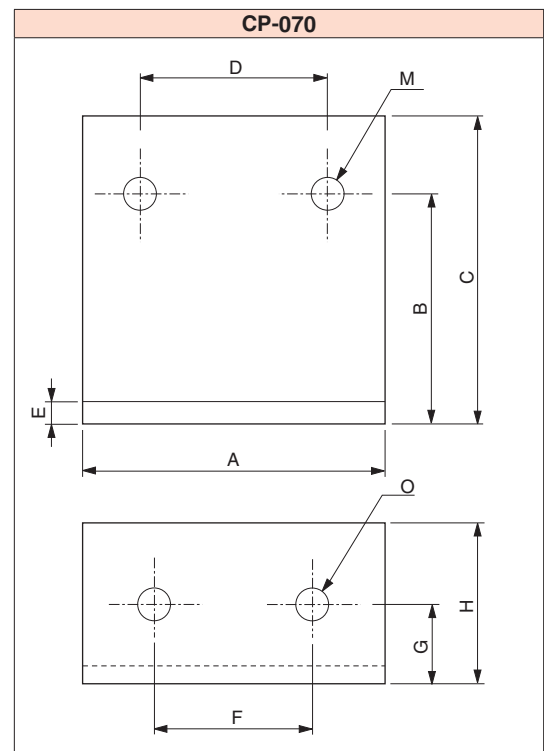
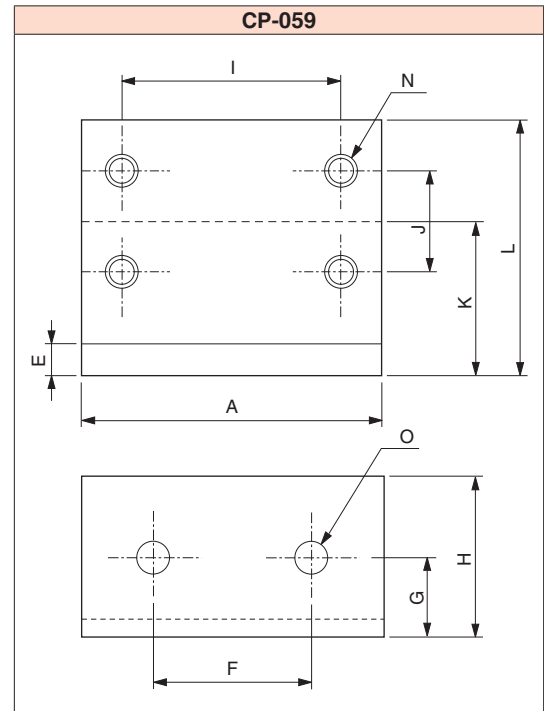
Order code No.	020839
Standard	CP-059-C

● Weight : 11g



Order code No.	021009
Standard	CP-070

● Weight : 17g



Dimensions

(mm)

Standard	CP-059-A	CP-059-B	CP-059-C	CP-070
A		30		40
B		—		30
C		—		40
D		—		25.5
E		3		3
F		20		20
G		10		10
H		20		20
I		22		—
J		10		—
K	15	20	25	—
L	25	30	35	—
M		—		M4
N		M3		—
O		M4		M4
Remarks	For VX-5-1A2			For Z-15HW24-B For Z-15GW55-B



Auto Switch (Reed·Contactless)

Can be attached to container cylinder series and resin mini cylinder.

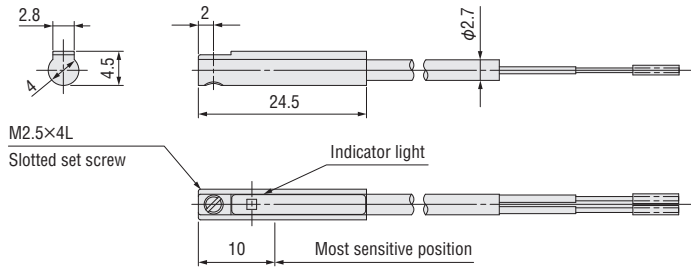


Auto switch (reed SW)

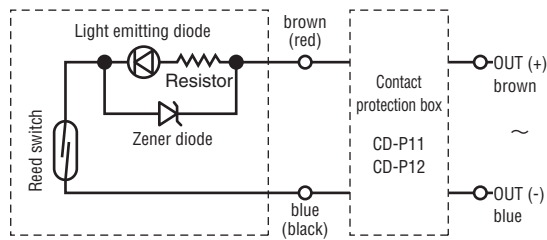
Order code No. **030282**

Standard **D-A93**

● Weight : 6g



Internal circuit diagram



■ Specification

Standard	D-A93 (w/indicator lamp)
Applicable load	relay, PLC
Load voltage	DC24V
Load current range	5mA ~ 40mA
Contact protection circuit	none
Internal voltage drop	2.4V or Less (~20mA) / 3V or Less (~40mA)
Indicator light	Red LED lights when ON
Standard	CE marking
Wiring	0.5M brown (+) blue (-)

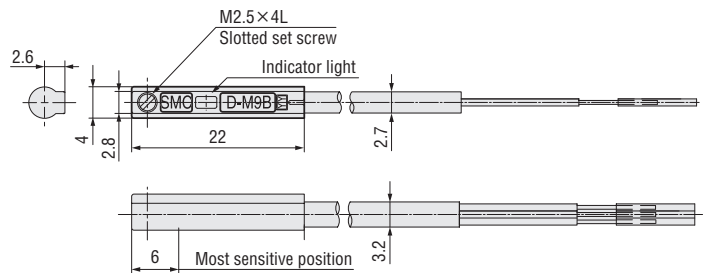


Auto switch (contactless)

Order code No. **030425**

Standard **D-M9N**

● Weight : 8g

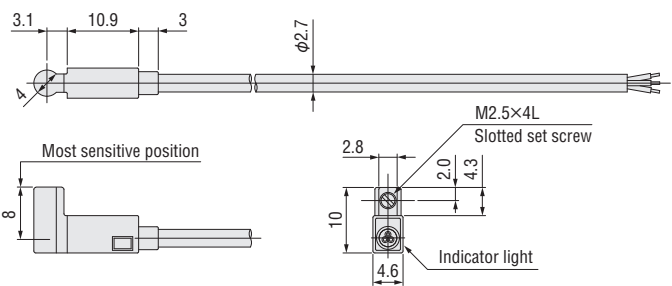


Auto switch (contactless)

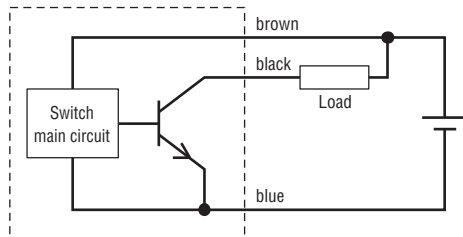
Order code No. **030500**

Standard **D-F8N**

● Weight : 7g



Internal circuit diagram



■ Specification

Standard	D-F8N · D-M9N
Output system	NPN type
Applicable load	IC circuit, DC24V relay, PLC
Power supply voltage	DC5 · 12 · 24V (DC4.5 ~ 28V)
Current consumption	10mA or less
Load voltage	DC28V or lower
Load current	40mA or less
Internal drop voltage	1.5V or less (0.8V or less with load electric current 10mA)
Leakage current	100 μA or less with DC24V
When indicator lamp ON	Red light emitting diode lighting
Standard	CE marking, RoHS
Wiring	0.5M +V (brown), Load (black), 0V (blue)

Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Buffer Material

Suction

Suction Cups

Suction Stem

Pad in Pad

Air Ejector/Filter/Check Valve

Micro Mold E.O.A.T

Cut

Mini Air Nippers

Air Nippers

Frame/Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

Tubing/Sensors

Tubing

Sensors

Other Products

Others

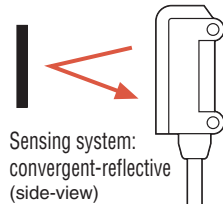
Information



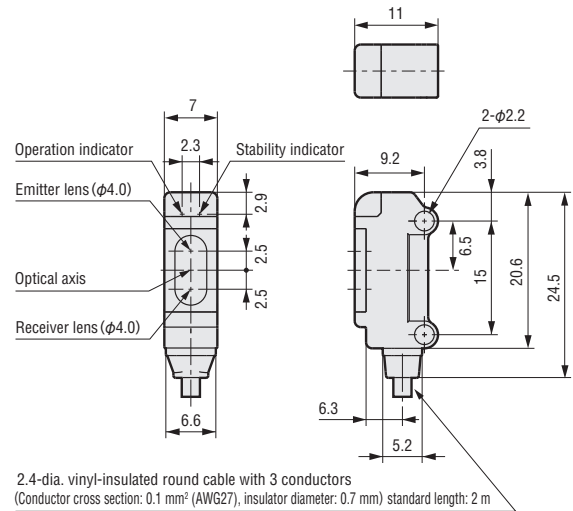
Photo Sensor

No amplifier is required ! Special-purpose mounting brackets are also provided for jungle gym and let's joint.

► Can be used with AND board.



Order code No.	041412
Standard	E3T-SL21R (NPN)
Order code No.	041649
Standard	E3T-SL23R (PNP)



■ Specification

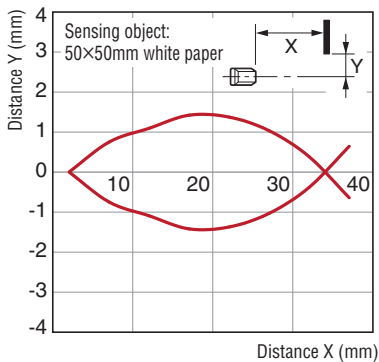
Standard	E3T-SL21R (NPN)	E3T-SL23R (PNP)
Sensing system	Convergent-reflective (side-view)	
Output system	NPN output	PNP output
Sensing distance	5 to 30mm (50×50mm white paper)	
Minimum detectable object (typical)	0.15-mm dia. (sensing distance of 10mm)	
Hysteresis (white paper)	6mm max.	
Light source (wavelength)	Red LED ("pin-point" LED) λ = 650nm	
Power supply voltage	12 to 24 VDC ± 10%, ripple (p-p) 10% max.	
Current consumption	20mA max.	
Control output	Load power supply voltage 26.4VDC max.	
	Load current: 50mA max. (residual voltage : 2V max. for load current of 10 to 50mA, 1V max. for load current of less than 10mA)	
	Open-collector output	
Protection circuits	Power supply and control output reverse polarity protection, output short-circuit protection, mutual interference prevention	
Response time	Operate or reset 1ms max.	
Ambient illumination	Incandescent lamp 5,000lx max., sunlight 10,000lx max.	
Ambient temperature range	Operating - 25 to 55°C, storage : - 40 to 70°C (with no icing or condensation)	
Ambient humidity range	Operating 35% to 85%, storage: 35% to 95% (with no condensation)	
Insulation resistance	20MΩ min. at 500 VDC	
Dielectric strength	1,000VAC, 50/60Hz for 1min	
Vibration resistance	Destruction 10 to 2,000Hz, 1.5-mm double amplitude or 300m/s ² for 0.5 hrs each in X, Y, and Z directions	
Shock resistance	destruction 1,000 m/s ² , 3times each in X, Y, and Z directions	
Degree of protection	IP67 (IEC60529)	
Connection method	Pre-wired (standard length : 2m)	
Weight	About 20g	
Materials	case	PBT (polybutylene terephthalate)
	Display window	Denatured polyarylate
	Lens	Denatured polyarylate
Accessories	Instruction manual, installation Phillips screws (side-view models : M2×14, flat : M2×8), nuts, spring washers, flat washers	

Input/output stage circuit diagram

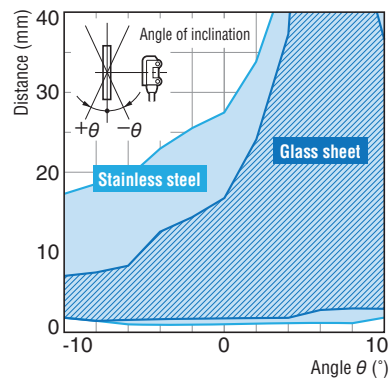
Standard	Operation mode	Time chart	Output circuit
SE3T-SL21R (NPN output)	Light-ON	<p>Incident light No incident light</p> <p>Operation indicator (orange) ON OFF</p> <p>Output transistor ON OFF</p> <p>Load (relay) Operate Reset (Between brown (1) and black (4) leads)</p>	
SE3T-SL23R (PNP output)	Light-ON	<p>Incident light No incident light</p> <p>Operation indicator (orange) ON OFF</p> <p>Output transistor ON OFF</p> <p>Load (relay) Operate Reset (Between blue (3) and black (4) leads)</p>	

Technical characteristics

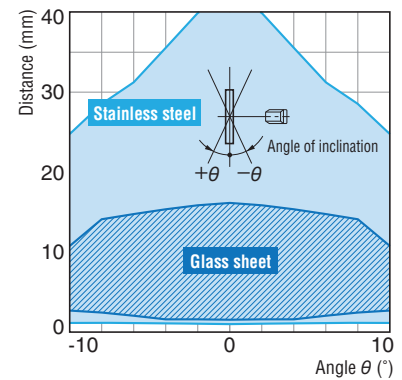
Operation area characteristics



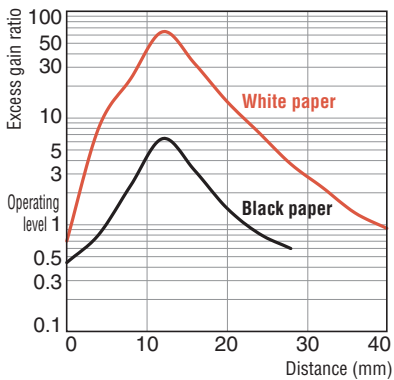
Angle detection area characteristics (vertical direction)



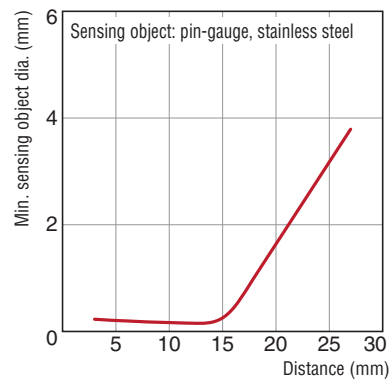
Angle detection area characteristics (horizontal direction)



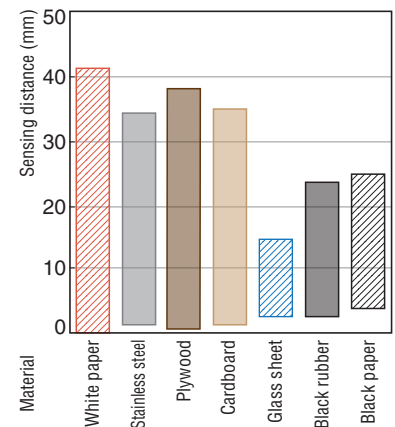
Detected object size – Distance characteristics



Light-receiving output – Distance characteristics



Detection distance – Material characteristics



Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

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Container Cylinders

Accessories for Container Cylinder

Grippers

Buffer Material

Suction

Suction Cups

Suction Stem

Pad in Pad

Air Ejector/Filter/Check Valve

Micro Mold E.O.A.T

Cut

Mini Air Nippers

Air Nippers

Frame/Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

Tubing/Sensors

Tubing

Sensors

Other Products

Others

Information



Photo Area Sensor

Can be used for passing fine workpieces. Space-saving reflection type can be provided as a special-order product.

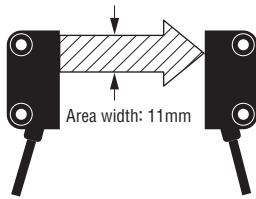
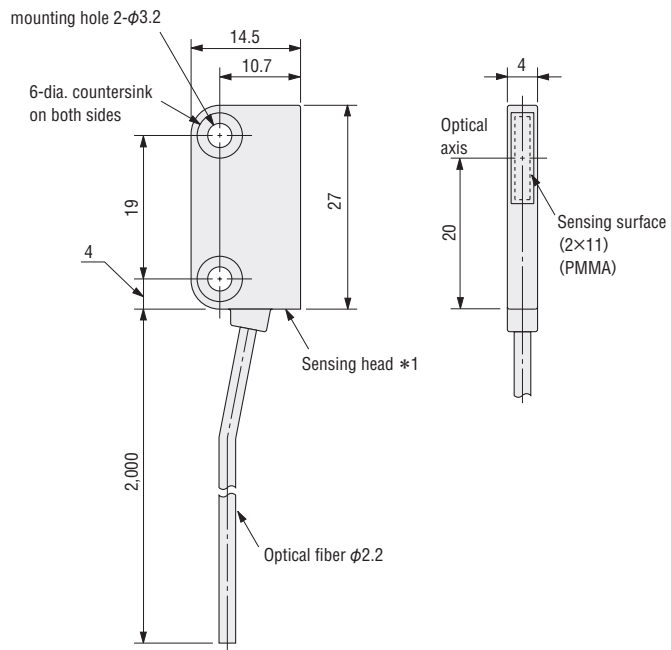


Photo area sensor

Order code No.	041415
Standard	E32-T16PR

● Use the product with the optical amplifier sold separately.



* 1 Material: heat-resistant ABS (sensing surface: PMMA)
 * 2 Provided with stickers with slits of width 0.5 and 1mm (2 of each).

Specification

Fiber unit	E32-T16PR			
Sensing system	area-sensing			
Sensing distance (mm)	1,100	840	560	220
Ambient temperature range* ²	- 40 to + 70°C			
Ambient humidity range* ²	35-85% RH			
Fiber material	Plastic (vinyl chloride coated)			
Degree of protection	IP50 (IEC)			

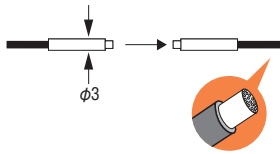
* 1 High-resolution mode (dark red) Standard mode (orange) High-speed mode (light orange) Super-high-speed mode (pale orange) (When used in combination with the E3X-DA-S amplifier unit (general-purpose).)
 * 2 No freezing or no dew condensation shall occur under the operating ambient temperature and humidity.



Fiber Units

Micro workpiece can be detected with optical amplifier E3 series.

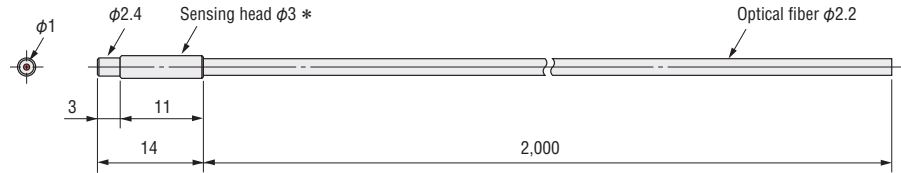
• It is possible to install it in jungle gym $\phi 8$ by using splicing fittings (N01867-201).



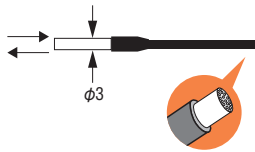
Fiber unit • $\phi 3$ mm through beam

Order code No.	041413
Standard	E32-T12R

• Use the product with the optical amplifier sold separately.



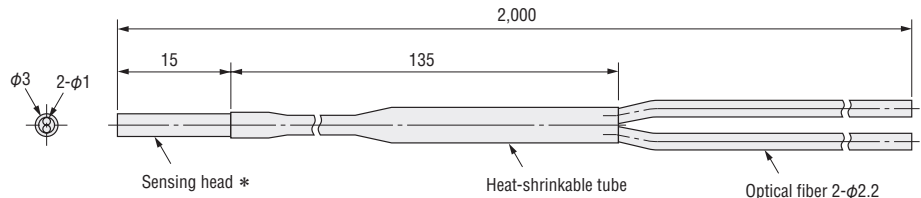
* Material : Brass/nickel plating



Fiber unit • $\phi 3$ mm reflect

Order code No.	041414
Standard	E32-D12R

• Use the product with the optical amplifier sold separately.



* Material : stainless steel (SS304)

■ Specification

Fiber unit	E32-T12R	E32-D12R																
Sensing system	Through-beam fiber units	Fiber units with reflective sensors																
Sensing distance (mm)	<table border="1"> <tr> <td>High-resolution mode</td> <td>700</td> <td>Standard mode</td> <td>530</td> </tr> <tr> <td>High-speed mode</td> <td>350</td> <td>Super-high-speed mode</td> <td>140</td> </tr> </table>	High-resolution mode	700	Standard mode	530	High-speed mode	350	Super-high-speed mode	140	<table border="1"> <tr> <td>High-resolution mode</td> <td>300</td> <td>Standard mode</td> <td>170</td> </tr> <tr> <td>High-speed mode</td> <td>120</td> <td>Super-high-speed mode</td> <td>50</td> </tr> </table>	High-resolution mode	300	Standard mode	170	High-speed mode	120	Super-high-speed mode	50
High-resolution mode	700	Standard mode	530															
High-speed mode	350	Super-high-speed mode	140															
High-resolution mode	300	Standard mode	170															
High-speed mode	120	Super-high-speed mode	50															
Ambient temperature range* ²	- 40 to + 70°C																	
Ambient humidity range* ²	35-85% RH																	
Fiber material	Plastic (vinyl chloride coated)																	
Degree of protection	IP67 (IEC)																	

* 1 High-resolution mode Standard mode High-speed mode Super-high-speed mode(When used in combination with the E3X-DA-S amplifier unit (general-purpose).)

* 2 No freezing or no dew condensation shall occur under the operating ambient temperature and humidity.

Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Buffer Material

Suction

Suction Cups

Suction Stem

Pad in Pad

Air Ejector/Filter/Check Valve

Micro Mold E.O.A.T

Cut

Mini Air Nippers

Air Nippers

Frame/Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

Tubing/Sensors

Tubing

Sensors

Other Products

Others

Information



Fiber Amplifier Unit

Amplifier for optical fiber.

Order code No. **041954**

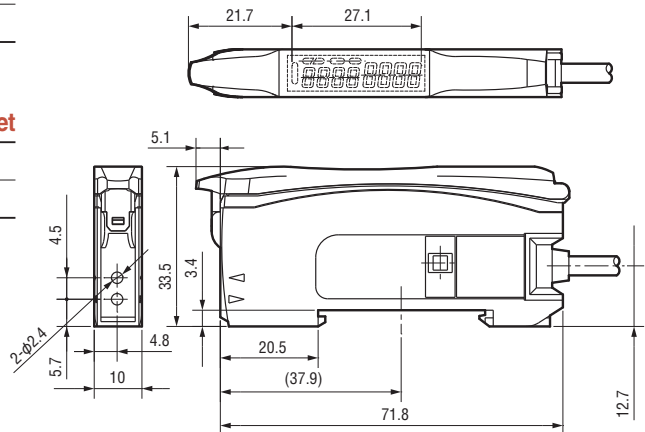
Standard **E3X-HD11 (NPN)**

● Function : AND/OR output

Fiber amplifier mounting bracket

Order code No. **041697**

Standard **E39-L143**



Input / output stage circuit diagram

Standard	Operation mode	Time chart	Operation selector	Output circuit
E3X-HD11 (NPN)	Light -ON	ch1/ ch2 Incident light No incident light Operation indicator (orange) ON OFF Output transistor ON OFF Load (relay) Operate Reset (Between brown and black leads)	L·ON (LIGHT ON)	
	Dark -ON	ch1/ ch2 Incident light No incident light Operation indicator (orange) ON OFF Output transistor ON OFF Load (relay) Operate Reset (Between brown and black leads)	D·ON (DARK ON)	

Part names

L/D indication lamp

Displays the setting condition with light incident ON (L) / light shade ON (D).

OUT indication lamp

Light up with output ON.

DPC indication lamp

Illuminates when dynamic power control function is effective.

ST indication lamp

Illuminates during smart tuning.

△L/D button

Switching of ON with light incident (L)/ON with light shade (D)

STUNE button

Automatic setting of light power / setting value.

Threshold value
green digital

Light receive amount
red digital

MODE button

Switching of detection mode / setting mode

+-UP/DOWN button

Fine adjustment of threshold value and change of set parameter



■ Specification

Standard		E3X-HD11 (NPN)
Light source (wavelength)		Red 4 element light emitting diode (625nm)
Power supply voltage		DC12-24V±10% ripple (p-p) 10% or less
Power consumption		0mW or less (power supply voltage 24V, current consumption 30mA or less / power supply voltage 12V, current consumption 60mA or less)
Control output	Load power supply voltage	DC26.4V or less, open collector output type
	Load electric current	1-3 devices : 100mA or less, more than 4 devices : 20mA or less
	Residual voltage	Load electric current less than 10mA : 1V or less, load electric current 10-100mA : 2V or less
	OFF state current	0.1 mA or less
Protection circuits		Reverse connection protection of power supply, output short circuit protection, output reverse connection protection
Response time	Super-highspeed mode*	NPN output : action/return : 50 μs each
	High-speed mode	Action : return : 250 μs each (default setting)
	Standard mode	Operate or reset : 1ms
	Giga power mode	Operate or reset : 16ms
No. of interference prevent devices		10 (optical communication synchronous)*
Automatic power control		Always effective
Other functions		"Power tuning, differential function, DPC function, timer (off delay/on delay/one shot), zero reset, setting reset, eco mode"
Ambient illumination (Receiver side)		Illumination of light receiving face Incandescent lamp : 20,000 lux max. Sunlight : 30,000 lux max.
Ambient temperature range		Operating : Groups of 1 to 2 Amplifiers : -25°C to 55°C , Groups of 3 to 10 Amplifiers : -25°C to 50°C , Groups of 11 to 16 Amplifiers : -25°C to 45°C Storage : -30 to 70°C (with no icing or condensation)
Ambient humidity range		In operation/in storage : 35 ~ 85%RH for each (without condensation)
Insulation resistance		More than 20M Ω (DC500V mega)
Dielectric strength		AC1,000V 50/60Hz 1min
Vibration resistance		Destruction : 10 to 55 Hz, 1.5-mm double amplitude for 2 hours each in X, Y, and Z directions
Shock resistance		500m/s ² 3times each in X, Y, and Z directions
Degree of protection		IEC standards IP50 (w/protective cover)
Mass(packaging condition/only main body)		About 105g/about 65g
Materials	case	Polycarbonate (PC)
	cover	Polycarbonate (PC)
	cable	PVC
Accessories		Instruction manual

* Communication function is disabled if the fastest mode is selected to the detecting function. Mutual interference prevention function and communication function cannot be used.
Six interference prevent devices can be used if power tuning which includes E3X-DA-S is connected.
And five interference prevent devices can be used if power tuning which includes E3X-MDA is connected.

■ For correct use

⚠ Warning



This product cannot be used for detecting directly or indirectly the human body for the purpose of safety. Do not use this product as a detecting device for protection of human body.

Notes on use

Do not use this product under ambient atmosphere and environment exceeding the rating.

● For design (operation at power on)

The sensor becomes detectable within 200 ms after the power is turned on. If the load and the sensor are connected to separate power supply units, be sure to turn on the sensor power supply first.

Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Buffer Material

Suction

Suction Cups

Suction Stem

Pad in Pad

Air Ejector / Filter / Check Valve

Micro Mold E.O.A.T

Cut

Mini Air Nippers

Air Nippers

Frame/Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

Tubing/Sensors

Tubing

Sensors

Other Products

Others

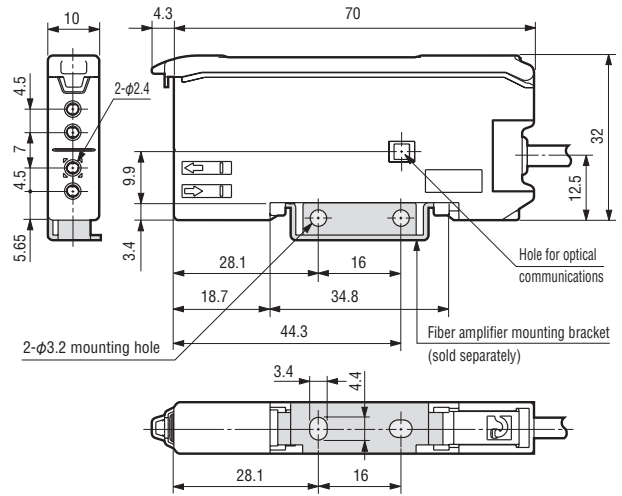
Information

Information

Fiber Amplifier Unit



Order code No.	041696
Standard	E3X-MDA11 (NPN)
● Function : AND/OR output ● Two channel type	
Fiber amplifier mounting bracket	
Order code No.	041697
Standard	E39-L143



Input / output stage circuit diagram

Standard	Operation mode	Time chart	Operation selector	Output circuit
E3X-MDA11 (NPN)	Light -ON	<p>ch1/ ch2 Incident light No incident light</p> <p>Operation indicator (orange) ON OFF</p> <p>Output transistor ON OFF</p> <p>Load (relay) Operate Reset (Between brown and black leads)</p>	L·ON (LIGHT ON)	
	Dark -ON	<p>ch1/ ch2 Incident light No incident light</p> <p>Operation indicator (orange) ON OFF</p> <p>Output transistor ON OFF</p> <p>Load (relay) Operate Reset (Between brown and black leads)</p>	D·ON (DARK ON)	

Part names

Main digital (red display)

Light receiving amount or description of function is displayed.

Sub digital (green display)

A threshold value or a set value of function is displayed.

Lock lever

For detaching / attaching fiber

Operation key

Function setting operation

- UP
- DOWN
- MODE

Operation indicator (ch1)

Orange lit...Output ON
Not lit...Output OFF

Operation indicator (ch2)

Orange lit...Output ON
Not lit...Output OFF

Channel change-over switch

A channel for display or setting is selected.

SET/RUN change-over switch

Switching of SET/RUN mode



■ Specification

Standard		E3X-MDA11 (NPN)
Light source (wavelength)		Red LED (635nm)
Power supply voltage		12 to 24 VDC ± 10%, ripple (p-p) 10% max.
Power consumption		1,080mW max. (current consumption: 45mA max. at power supply voltage of 24VDC)
Control output	Load power supply voltage	26.4 VDC ; NPN/PNP open collector *1
	Load current	50mA max.; residual voltage : 1V max.
Protection circuits		Reverse polarity for power supply connection, output short-circuit
Response time	Super-highspeed mode*2	Operate or reset : 130 μs*2*3
	High-speed mode	Operate or reset : 450 μs
	Standard mode	Operate or reset : 1ms
	High-resolution mode	Operate or reset : 4ms
Sensitivity setting		Teaching or manual method
Functions	Power tuning	Light emission power and reception gain, digital control method
	Timer function	Select from OFF-delay, ON-delay, or one-shot timer. 1ms to 5s(1 to 20ms set in 1-ms increments, 20 to 200ms set in 10-ms increments, 200ms to 1s set in 100-ms increments, and 1 to 5 s set in 1 s-increments)
	Automatic power control	High-speed control method for emission current
	Zero-reset	Negative values can be displayed. (Threshold value is shifted.)
	Initial reset	Settings can be returned to defaults as required
	Mutual interference prevention	Possible for up to 9 units (18 channels) **
Display		Operation indicator for channel 1 (orange), Operation indicator for channel 2 (orange)
Digital display		Select from incident level for channel 1 + incident level for channel 2 or other 7patterns
Display orientation		Switching between normal/reversed display is possible
Ambient illumination(Receiver side)		Incandescent lamp : 10,000 lux max. Sunlight : 20,000 lux max.
Ambient temperature range		Operating : Groups of 1 to 2 Amplifiers : - 25°C to 55°C, Groups of 3 to 10 Amplifiers : - 25°C to 55°C, Groups of 11 to 16 Amplifiers : - 25°C to 45°C Storage : - 30°C to 70°C (with no icing or condensation)
Ambient humidity range		Operating and storage : 35% to 85% (with no condensation)
Insulation resistance		20MΩ min. (at 500VDC)
Dielectric strength/Vibration resistance /Shock resistance		1,000VAC at 50/60 Hz for 1minute/Destruction : 10 to 55Hz with a 1.5-mm double amplitude for 2hrs each in X, Y and Z directions/Destruction : 500 m/s ² , for 3 times each in X, Y and Z directions
Degree of protection		IEC 60529 IP50 (with protective cover attached)
Connection method		Pre-wired or amplifier unit connector
Weight (packed state)		Pre-wired model : Approx. 100g, Amplifier unit connector model : Approx. 55g
Materials		Case : Polybutylene terephthalate (PBT), Cover: Polycarbonate (PC)
Accessories		Instruction manual

*1 Depends on the NPN/PNP output system.

*2 Communications are disabled if the detection mode is selected during super-high-speed mode, and the communications functions for mutual interference prevention and the Mobile Console will not function.

*3 When differential output is selected for the output setting, the second channel output is 200 μs for operation and reset respectively.

*4 Mutual interference prevention can be used for up to 5 units (10 channels) if power tuning is enabled.

■ For correct use

⚠ Warning



This product cannot be used for detecting directly or indirectly the human body for the purpose of safety. Do not use this product as a detecting device for protection of human body.

Notes on use

Do not use this product under ambient atmosphere and environment exceeding the rating.

● For design (operation at power on)

The sensor becomes detectable within 200 ms after the power is turned on. If the load and the sensor are connected to separate power supply units, be sure to turn on the sensor power supply first.

Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

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Suction

Suction Cups

Suction Stem

Pad in Pad

Air Ejector / Filter / Check Valve

Micro Mold E.O.A.T

Cut

Mini Air Nippers

Air Nippers

Frame/Module

Jungle Gym

Let's Joint

Rectangular Tube

Base Aluminum Material

Sliding Chuck

Tubing/Sensors

Tubing

Sensors

Other Products

Others

Information



Proximity Sensor Runner Confirm

Confirmation sensor for Eins function chuck.



Order code No.	041417
Standard	E2S-W13 (NPN)

● DC 3-wire system

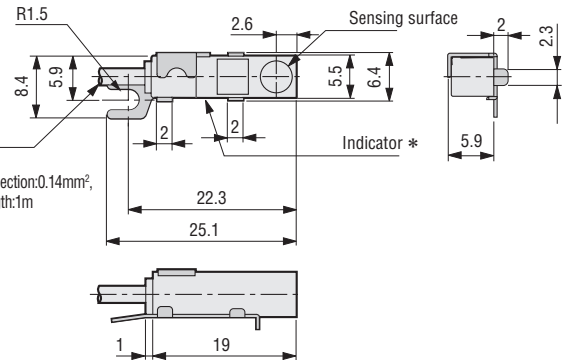
Order code No.	041640
Standard	E2S-W15 (PNP)

With mounting bracket attached

Vinyl insulation round type cord
 $\phi 2.9$ vinyl-insulated round cable
 with 2 / 3 conductors (conductor cross section:0.14mm²,
 insulator diameter:0.9mm), standard length:1m



Shape:unsealed



* Operation indicator (orange)

* Wiring : brown (+V), black (load), blue (0V)

Specification

Standard	E2S-W13 (NPN)	E2S-W15 (PNP)
Sensing surface	Top	
Sensing distance	1.6mm \pm 15%	
Set distance	0-1.2mm	
Differential travel	10% max. of sensing distance	
Detectable object	Ferrous metal (The sensing distance decreases with non-ferrous metal.)	
Standard sensing object	Steel, 12 \times 12 \times 1mm	
Response frequency*1	1kHz min.	
Power supply voltage (operating voltage range)	12 to 24 VDC (10 to 30 VDC), ripple (p-p) : 10% max.	
Current consumption	13mA max. at 24VDC (no-load)	
Control output	Load current	NPN open-collector output, 50mA max. (30VDC max.) PNP open-collector output, 50mA max. (30VDC max.)
	Residual voltage	1.0V max. (under load current of 50mA with cable length of 1m)
Indicators	Operation indicator (orange)	
Operation mode (with sensing object approaching)	NO	
Protection circuits	Reverse polarity protection, surge suppressor	
Ambient temperature range	Operating : - 25 to 70°C (with no icing or condensation), Storage : - 40 to 85°C (with no icing or condensation)	
Ambient humidity range	Operating : 35% to 90% (with no condensation), Storage : 35% to 95% (with no condensation)	
Temperature influence	\pm 15% max. of sensing distance at 23°C in the temperature range of - 25 to 70°C	
Voltage influence	\pm 2.5% max. of sensing distance at rated voltage in rated voltage \pm 10% range	
Insulation resistance	50M Ω min. (at 500VDC) between current-carrying parts and case	
Dielectric strength	1,000VAC for 1min between current-carrying parts and case	
Vibration resistance	Destruction : 10 to 55Hz, 1.5-mm double amplitude for 2 hours each in X, Y, and Z directions	
Shock resistance	Destruction : 500m/s ² 3times each in X, Y, and Z directions	
Degree of protection	IEC 60529 IP67	
Connection method	Pre-wired (standard length : 1m)	
Weight (packed state)	About 10g	
Materials (case)	Polyarylate resin	
Accessories	Mounting brackets*2	

* 1 The response frequency is an average value. Measurement conditions are as follows: standard sensing object, a distance of twice the standard sensing object, and a set distance of half the sensing distance.

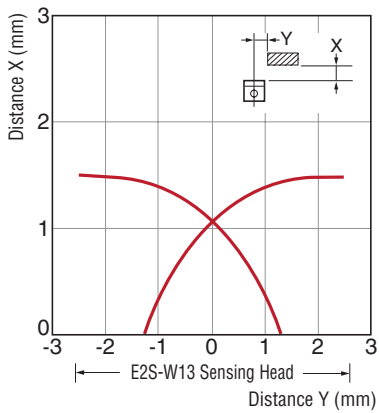
* 2 Not for runner chuck. See page [2-29,31](#) for runner chuck.

Input/output stage circuit diagram

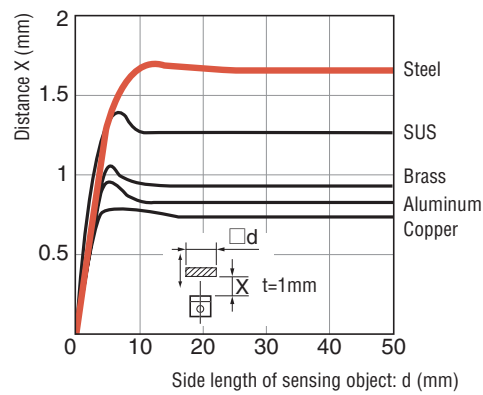
Standard	Operation mode	Output system	Time chart	Output circuit
E2S-W13 (NPN)	NO	NPN	<p>Sensing object Present Not present</p> <p>Output transistor (load) ON OFF</p> <p>Operation indicator (orange) ON OFF</p>	<p>*Load current: 50mA max.</p>
E2S-W15 (PNP)	NO	PNP	<p>Sensing object Present Not present</p> <p>Output transistor (load) ON OFF</p> <p>Operation indicator (orange) ON OFF</p>	<p>*Load current: 50mA max.</p>

Technical characteristics (typical example)

Detection area



Influence of detected object size and material



Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

Grippers

Buffer Material

Suction

Suction Cups

Suction Stem

Pad in Pad

Air Ejector/Filter/Check Valve

Micro Mold E.O.A.T

Cut

Mini Air Nippers

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Frame/Module

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Base Aluminum Material

Sliding Chuck

Tubing/Sensors

Tubing

Sensors

Other Products

Others

Information



Multi AND Board

Many sensor inputs are integrated in the board. And it is output from a point to the robot.



Eight-point specification

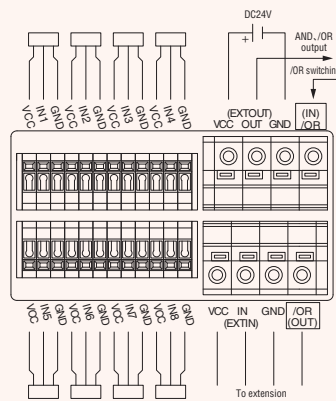
Multi AND board

Order code No.	002161
Standard	AND/OR-EU

● Weight : 115g

- ▶ Just connect a sensor. The easy design allows minimum wiring and space saving.
- ▶ Switching AND and /OR outputs is easy and quick. Just slide the select switch at the unit.
- ▶ The protective circuit prevents problems with overloads.

Wiring specification



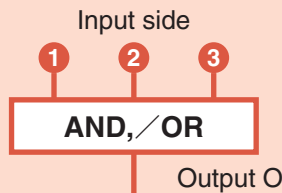
Connection method

- ① Push down the button with tools such as minus driver.
 - ② Put the stripped electric wire into the wire insert hole of the terminal block.
 - ③ Release the button. And connection completed.
- * Be sure to insert a wire into the hole.

Diameter of electric wire

Sensor input terminal AWG28-AWG22
Power supply input, signal output terminal/extension AWG26-AWG22
* Stripped wire length of each terminal is 10mm.

About "AND" and "/OR"



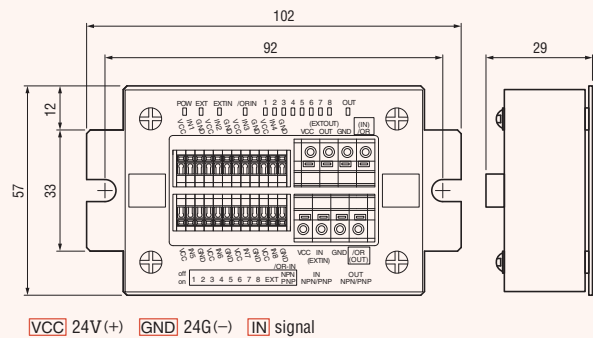
AND

Output O is turned on when all the inputs (1 2 3) are ON.

/OR

Output O is turned on when all the inputs (1 2 3) are OFF.

Outside dimension / Mounting dimension



- * 2-φ6 (mounting hole) : M4-M5
- * Use the mounting washer (φ10 mm or less) for M5.

Specification

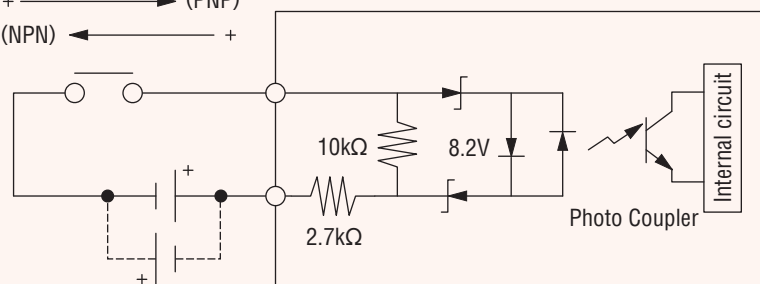
Max. number of connection sensors	Power supply voltage (V)	Internal consumption current (mA)	Sensor input current (mA)	Operating ambient humidity (%)	Operating ambient temperature (°C)	Operation condition
8	DC24 (±10%)	100 or less (DC24V)	10 or less/one point	35-80 (non-condensing)	0-40	No particulate and corrosive gas

* Can be extended to 32 points.

Sensor input OR switching input circuit configuration (8-point, 4-point common)

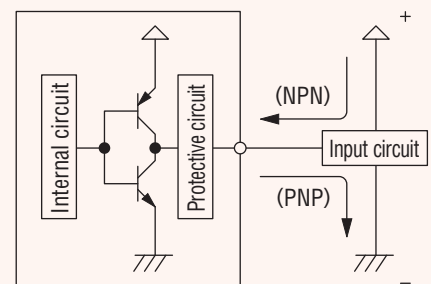
Sensor input/OR switching

+ (PNP)
(NPN) ← +



- * Select the input setting with the switch as illustrated according to the output circuit specification of the customer's sensor.
- * Select the input with the DIP switch as illustrated according to the output circuit specification of the customer.

Configuration of output circuit (8-point, 4-point common)



- * Select NPN/PNP as illustrated above according to the input circuit specification of the customer.



Please read the QR code (right) using a mobile device such as a smartphone. You can watch our product video.



Four-point specification

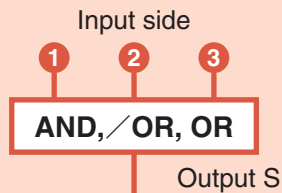
Multi AND board 4P

Order code No.	002237
Standard	AND/OR-EU-4P

● Weight : 58g

- ▶ Just connect a sensor. The easy design allows minimum wiring and space saving.
- ▶ Product hold condition check and product release condition check can be switched by switching AND output, /OR output, and OR output. Product hold condition and product release condition can be checked by one unit.
- ▶ The protective circuit prevents problems with overloads.

About "AND", "/OR", and "OR"



AND

Output S is turned on when all the inputs (1 2 3) are ON.

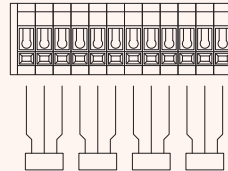
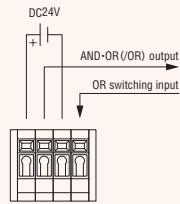
/OR

Output S is turned on when all the inputs (1 2 3) are OFF.

OR

Output S turns on when one of the inputs (1 2 3) is ON.

Wiring specification



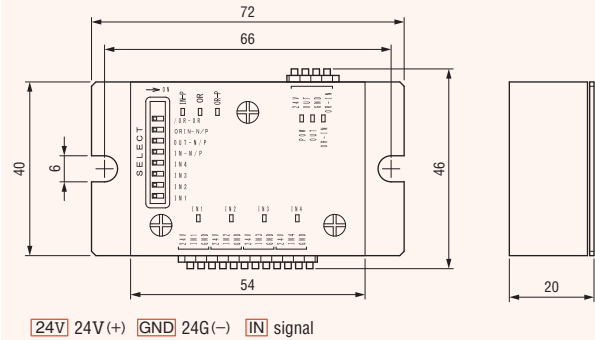
Connection method

- ① Push down the button with tools such as minus driver.
 - ② Put the stripped electric wire into the wire insert hole of the terminal block.
 - ③ Release the button. And connection completed.
- * Be sure to insert a wire into the hole.

Diameter of electric wire

Sensor input terminal AWG28-AWG22
Power supply input, signal output terminal/extension AWG26-AWG22
* Stripped wire length of each terminal is 10mm.

Outside dimension / Mounting dimension



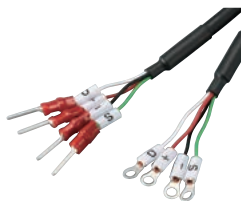
* 2-φ6 (mounting hole) : M4-M5

* Use the mounting washer (φ10 mm or less) for M5.

■ Specification

Max. number of connection sensors	Power supply voltage (V)	Internal consumption current (mA)	Sensor input current (mA)	Operating ambient humidity (%)	Operating ambient temperature (°C)	Operation condition
4	DC24 (±10%)	50 or less (DC24V)	10 or less/one point	35-80 (non-condensing)	0-40	No particulate and corrosive gas

▶ Connecting cable for Eins Multi AND Board



for eight-point specification

Connection harness • for multi AND boards

Order code No.	123106
Standard	MAND-EH05 • 500MM

● Overall length : 500mm

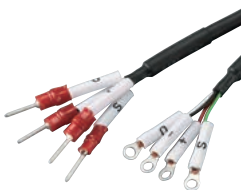


for eight-point specification

Connection harness • for multi AND boards

Order code No.	123105
Standard	MAND-EH02 • 200MM

● Overall length : 200mm



for eight-point specification

Connection harness • for multi AND boards

Order code No.	123107
Standard	MAND-EH10 • 1000MM

● Overall length : 1,000mm



Triplex cable (5m)

Order code No.	171292
Standard	RMCV-0 0.3SQ*3C 5M

● Overall length : 5,000mm

Quick Chuck Change

Quick Chuck Change (Manual)

Tool Changer

Automated Chuck Exchange System

Grip

Mini Cylinder

Accessories for Mini Cylinder

Container Cylinders

Accessories for Container Cylinder

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Tubing

Sensors

Other Products

Others

Information

MEMO

A series of horizontal dashed lines for writing.