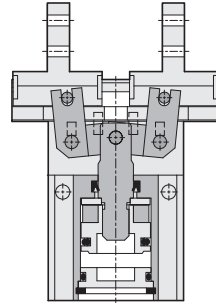
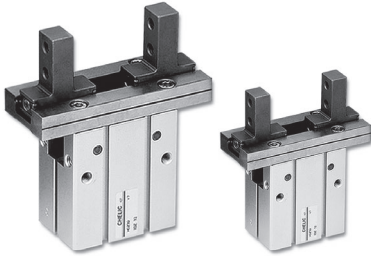


HDZL series - Parallel gripper (Long stroke type)

Operation specification and Ordering expression

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Internal structure



Specification

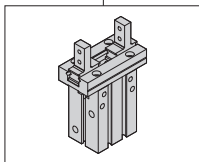
Item	Model	HDZL-10	HDZL-16	HDZL-20	HDZL-25
Bore size		Ø10	Ø16	Ø20	Ø25
Fluid		Air			
Type of operation		Double acting			
Pressure range	kgf/cm ² (kpa)	2 ~ 7 (200 ~ 700)	1 ~ 7(100 ~ 700)		
Ambient and fluid temperature	°C	0 ~ 60°			
Max. operating frequency	min	100			
Finger open/close accuracy		± 0.01 mm			
Finger open/close stroke		8	12	18	22
Lubricated		Not required			

How to order

HDZL

Model

Model



HDZL series :
Parallel gripper

16

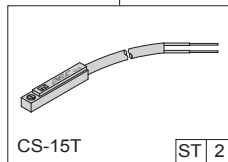
Bore size

10 - Ø 10 mm
16 - Ø 16 mm
20 - Ø 20 mm
25 - Ø 25 mm

ST

2

Sensor switch



CS-15T ST 2

None : Without sensor switch

ST : Sensor switch code (CS-15T)

SB : Sensor switch code (CS-15B)

STN : Sensor switch code (CS-15TN)

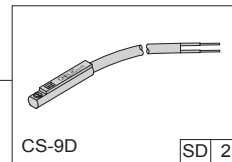
STP : Sensor switch code (CS-15TP)

2 : Number of sensor switch

1 = 1 PCS

2 = 2 PCS

**HDZL Ø10 works with
15T(B) sensor switch**



CS-9D SD 2

None : Without sensor switch

SD : Sensor switch code (CS-9D)

SB : Sensor switch code (CS-9B)

SH : Sensor switch code (CS-9H)

SDN : Sensor switch code (CS-9DN)

SDP : Sensor switch code (CS-9DP)

SG : Sensor switch code (CS-8G)

SGN : Sensor switch code (CS-8GN)

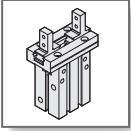
SGP : Sensor switch code (CS-8GP)

※ CS-9H use for voltage AC / DC 5 ~ 240V

2 : Number of sensor switch

1 = 1 PCS

2 = 2 PCS

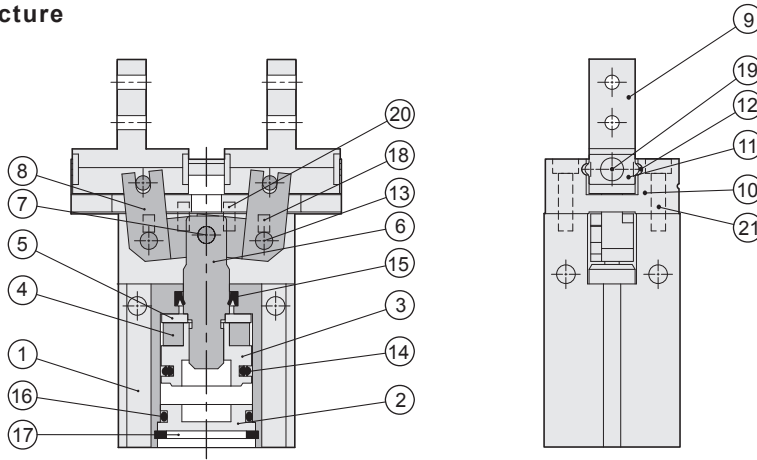


HDZL series - Parallel gripper (Long stroke type)

Components and Material list

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Internal structure



Components and Material list

No.	Item	Material	No.	Item	Material
01	Body	Aluminum alloy	12	Ball bearing	Bearing steel
02	Rear cover	Aluminum alloy	13	Action lever pin	Bearing steel
03	Piston	Copper Alloy	14	Piston Packing	NBR
04	Magnet	Magnet	15	Shaft packing	NBR
05	Magnet cap	Copper Alloy	16	Rear cover O-ring	NBR
06	Shaft	Stainless steel	17	Clip	Alloy steel
07	Shaft pin	Bearing steel	18	Plug	Alloy steel
08	Action lever	Stainless steel(SUS440)	19	Counter sunk screw	Alloy steel
09	Gripper fingers	Stainless steel(SUS440)	20	Pin	Bearing steel
10	Action lever	Stainless steel(SUS440)	21	Tension bolt	Alloy steel
11	Roller block	Stainless steel			

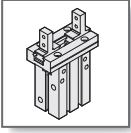
Packing and O-ring

Item		Rear cover O-ring	Piston O-ring	Shaft packing
Bore size	Number	1	1	1
HDZL - 10	mm	∅ 10 X ∅ 1	COP-10	DYR-6
HDZL - 16		∅13.2 X ∅1.5	COP-16	DYR-8K
HDZL - 20		∅17.5 X ∅1.5	COP-20	DYR-10
HDZL - 25		∅22.5 X ∅1.5	COP-25	DYR-12

Type

Operating type	Model	Bore size mm	Gripping force		Close stroke mm	Weight kg
			Outer gripping force	Inner gripping force		
Double acting	HDZL-10	10	11	17	8	0.06
	HDZL-16	16	34	45	12	0.14
	HDZL-20	20	42	66	18	0.27
	HDZL-25	25	65	104	22	0.49

Note 1. L: Gripping point length= 20 mm, P: Pressure= 5 Kgf/cm².

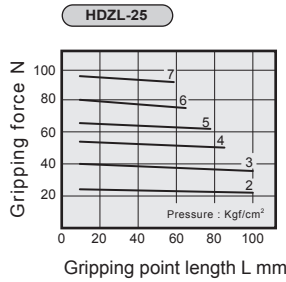
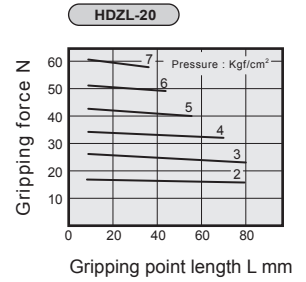
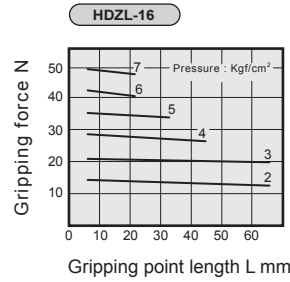
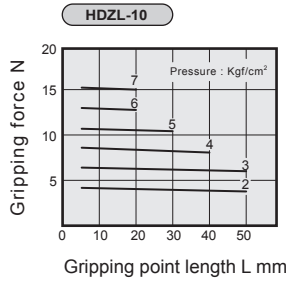
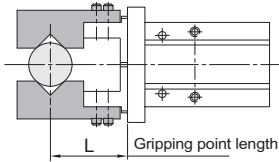


HDZL series - Parallel gripper (Long stroke type)

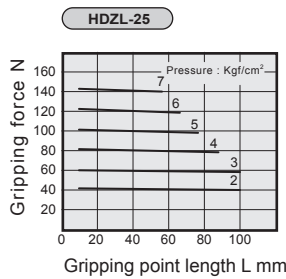
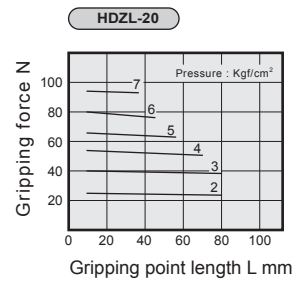
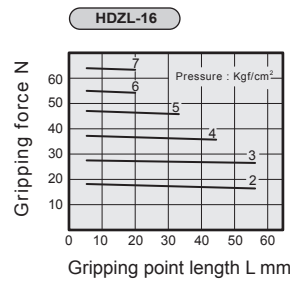
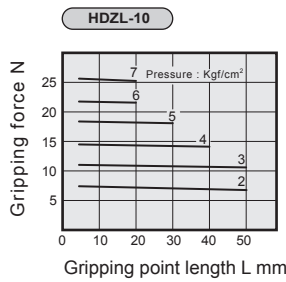
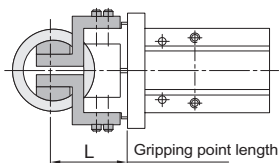
Gripping force characteristic

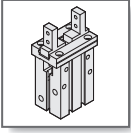
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Outer gripping force characteristic



Inner gripping force characteristic



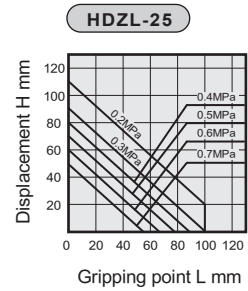
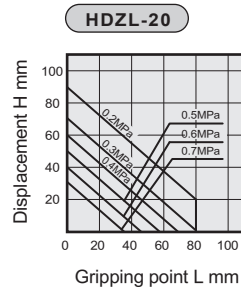
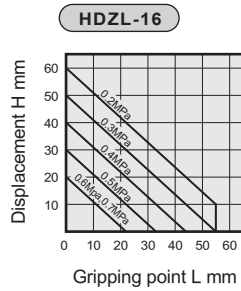
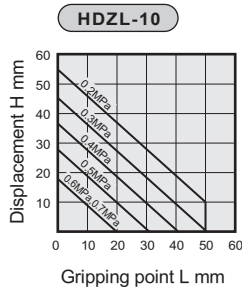
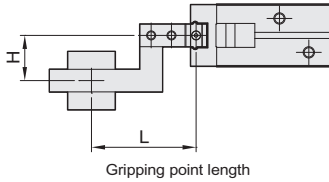


HDZL series - Parallel gripper (Long stroke type)

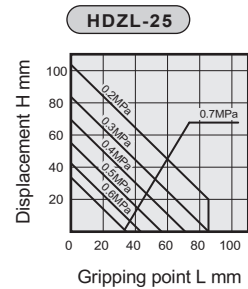
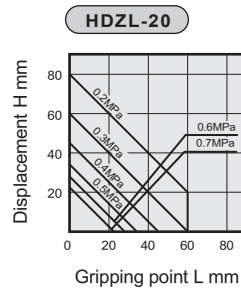
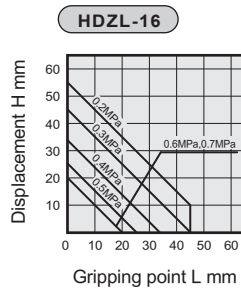
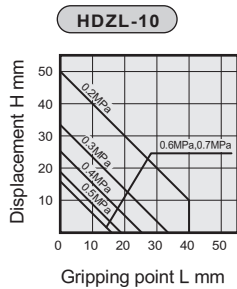
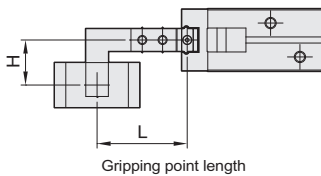
Gripper maximum allowable displacement

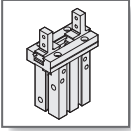
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- Gripper maximum allowable displacement - External gripping force**
 The workpiece shall be applied within allowance, otherwise will cause gripper performance.



- Gripper maximum allowable displacement - External gripping force**
 The workpiece shall be applied within allowance, otherwise will cause gripper performance.






HDZL series - Parallel gripper (Long stroke type)

Operating type, data and mounting type

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Operating type and data

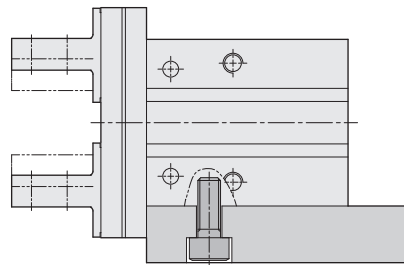
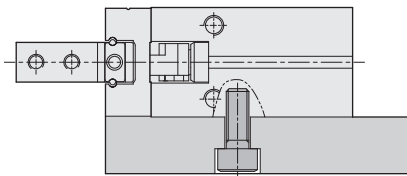
Operating type	Model	Bore size (mm)	The smallest operating pressure (Mpa)	Thread port (mm)	Effective gripping force	
					Kgf(N)	
Double acting	HDZL - 10	10	0.22	4 - M3 x 0.5	Open	1.7 (17)
					Close	1.1 (11)
	HDZL - 16	16	0.1	4 - M3 x 0.5	Open	4.5 (45)
					Close	3.4 (34)
	HDZL - 20	20	0.1	4 - M4 x 0.7	Open	6.7 (66)
					Close	4.2 (42)
	HDZL - 25	25	0.1	4 - M5 x 0.8	Open	10.6 (104)
					Close	6.6 (65)

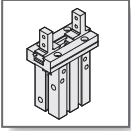
 Note: The gripping force is the force of open and close gripper which in the length of gripping point is 30mm and acting pressure is 0.5Mpa.

Mounting type

1. Apply the screw from bottom thread hole.

2. Apply the through-holes in the side of body.





HDZL series - Parallel gripper (Long stroke type)

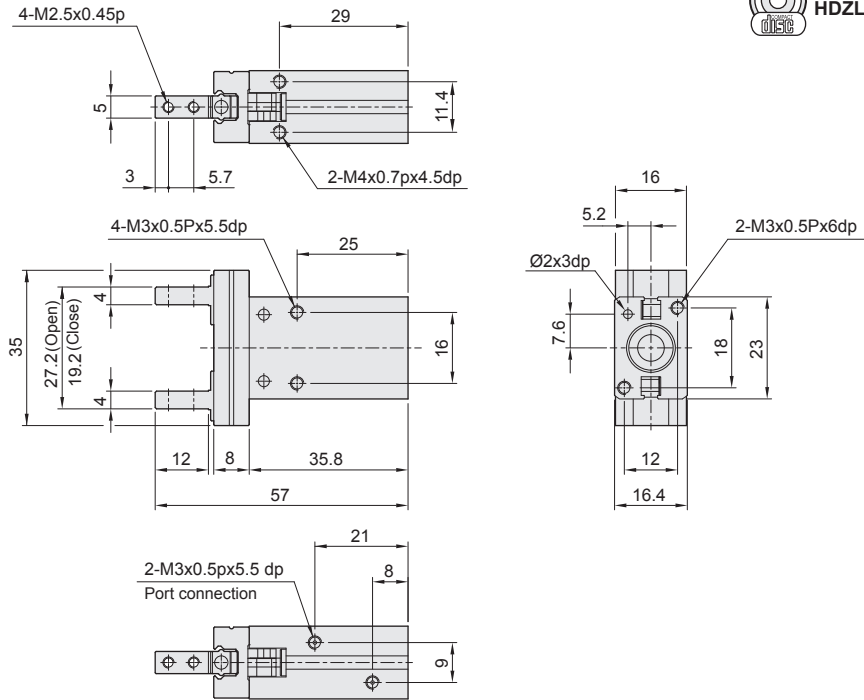
External dimensions

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HDZL - 10



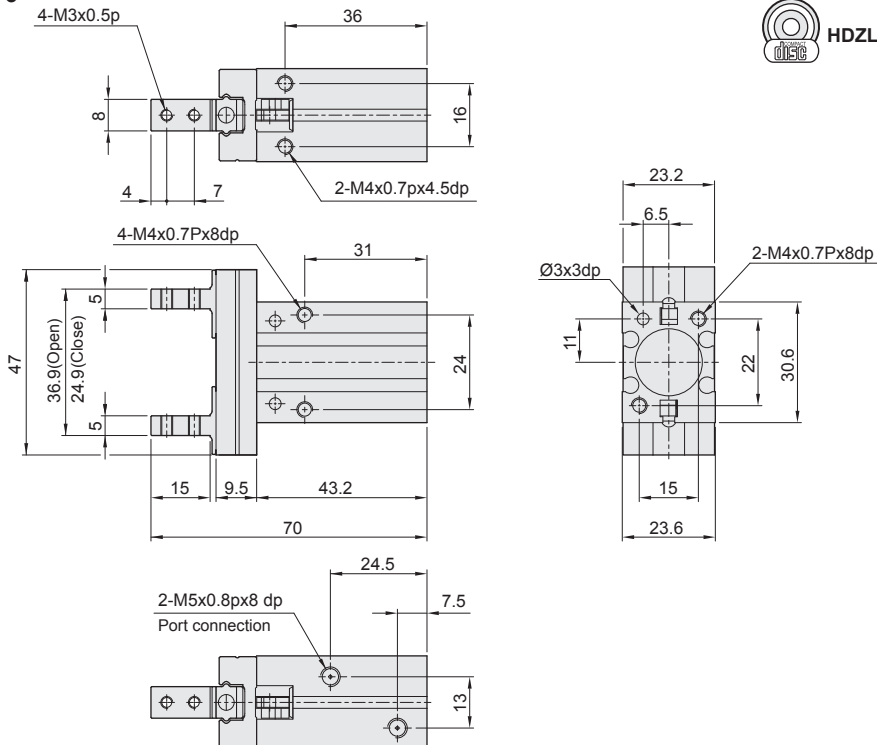
HDZL 10 MST

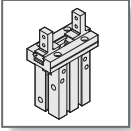


HDZL - 16



HDZL 16 MST





HDZL series - Parallel gripper (Long stroke type)

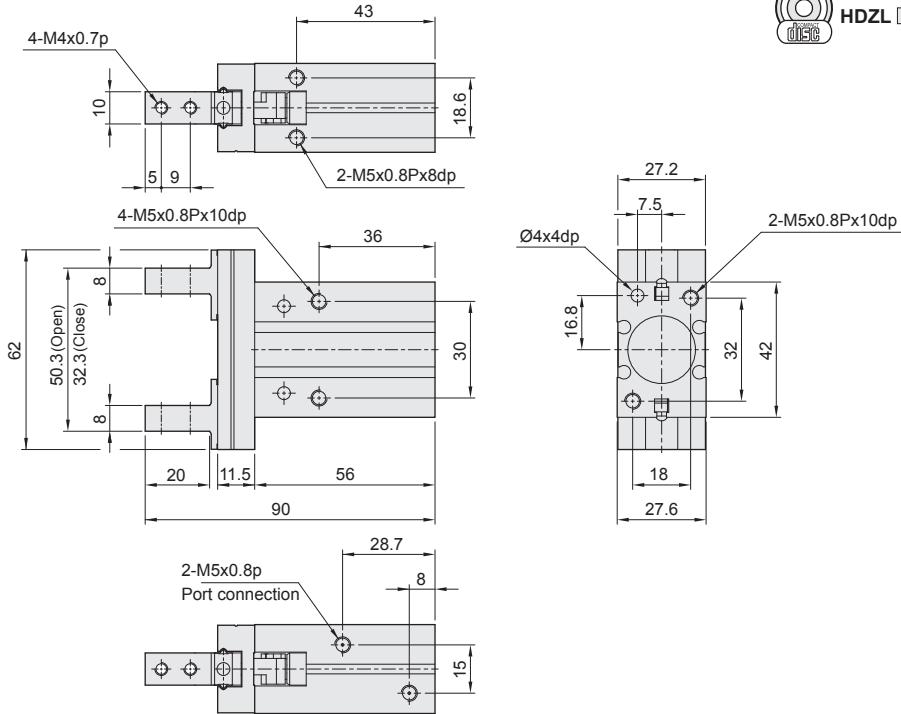
External dimensions

CHELIC

HDZL - 20



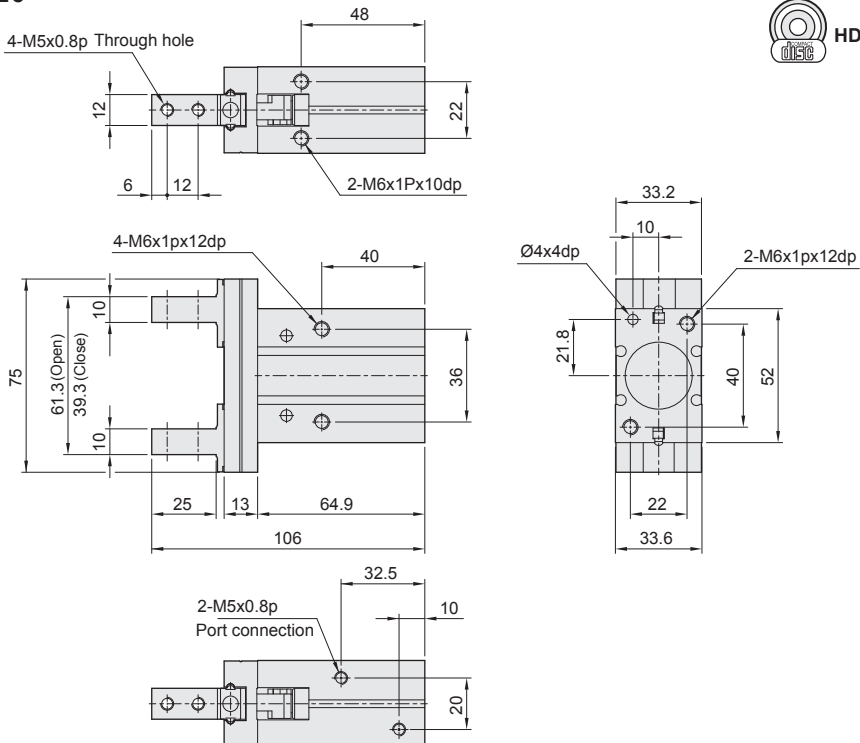
HDZL 20 MST

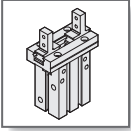


HDZL - 25



HDZL 25 MST



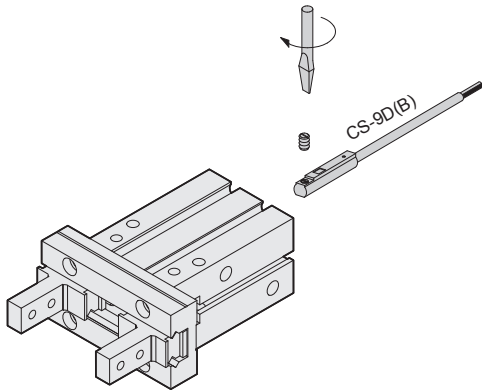


HDZL series - Parallel gripper (Long stroke type)

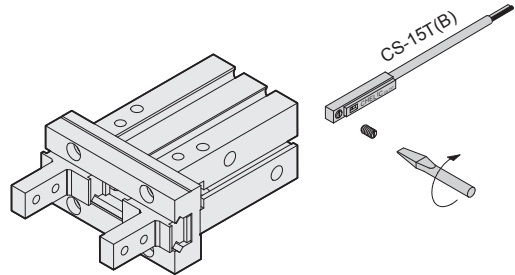
Sensing setting and Installation

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◀ Sensing setting and Installation



- CS-9D(B)
(Please refer to P.7-2.15 Sensor switch standard)
- CS-15T(B)
(Please refer to P.7-2.20 Sensor switch standard)



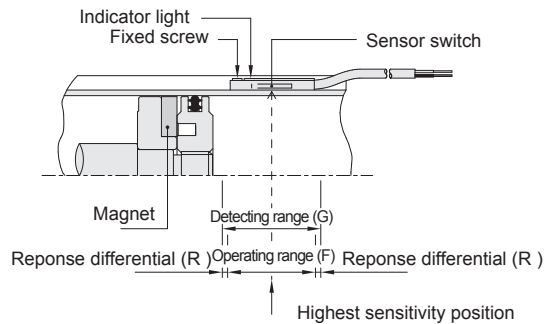
◀ Detecting range

Sensor switch is fixed on the cylinder body. The magnetic piston head will activate the sensor switch when it enters the operating range. It has 0.5mm differential.

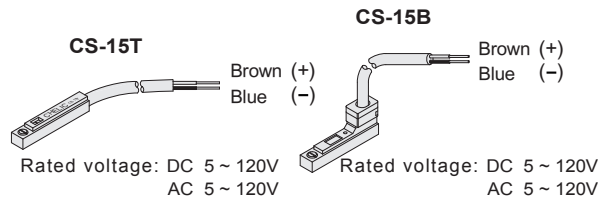
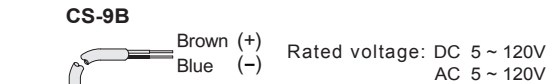
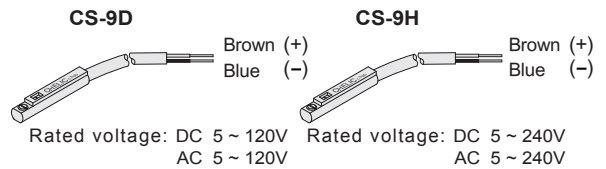
◀ Operating range

When piston moves the switch setting and adjustment will be based on the responding range generated by the magnetic field and the switch. (Please refer to the below or right table)

◀ Response differential and position adjustment



◀ Sensor switch introduction



Unit: mm

Item	CS-9D(B)	
	Operating range (F)	Reponse differentia (R)
10	—	—
16	5	1
20	8	1
25	8	1

※ CS 9D (B) shall be inserted on the front slot (the wide side of gripper)

Unit: mm

Item	CS-15T(B)	
	Operating range (F)	Reponse differentia (R)
10	5	1
16	11.5	1
20	10	1
25	12	1

※ CS 15T (B) shall be inserted on the side slot (the short side of gripper)