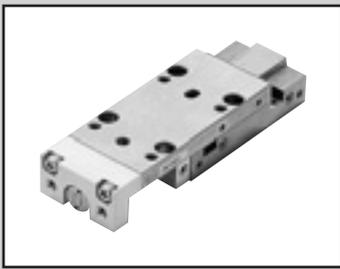


SCPD3
SCM
SSD2
MDC2
SMG
LCM
LCR
LCG
LCX
STM
STG
STR2
MRL2
GRC
Cylinder switch
MN3E
MN4E
4GA/B
M4GA/B
MN4GA/B
F.R (module unit)
Clean F.R
Precision R
Press gauge
Diff. press gauge
Electro-pneumatic R
Speed controller
Auxiliary valve
Fitting/tube
Clean air unit
Pressure sensor
Flow rate sensor
Valve for air blow
Ending



Linear slide cylinder Double acting/single rod Clean room specifications

LCM Series

● Bore size: $\varnothing 4.5/\varnothing 6/\varnothing 8$



Structure and material restriction

	Structure	Model No.
P7 Series	Vacuum treatment	P73

Specifications

Descriptions	LCM -P73		
	$\varnothing 4.5$	$\varnothing 6$	$\varnothing 8$
Bore size mm	$\varnothing 4.5$	$\varnothing 6$	$\varnothing 8$
Actuation	Double acting		
Working fluid	Compressed air		
Max. working pressure MPa	0.7		
Min. working pressure MPa	0.2		0.15
Proof pressure MPa	1.05		
Ambient temperature °C	0 to 60		
Port size	M3		
Stroke tolerance mm	+1.0 0		
Working piston speed mm/s	30 to 300		
Cushion	None	With rubber cushion	
Lubrication	Not available		
Allowable energy absorption J	Refer to the table on page 103.		

Stroke length

Bore size (mm)	Standard stroke (mm)	Min. stroke with switch (mm)
$\varnothing 4.5$	5/10	5
$\varnothing 6$	5/10/15/20/30	
$\varnothing 8$	5/10/15/20/30	

*1: Other than standard stroke length is not available.

Switch specifications

Descriptions	Proximity 2-wire	Proximity 3-wire	Proximity 2-wire		Proximity 3-wire		
	F2S	F3S	F2H/F2V	F2YH/F2YV	F3H/F3V	F3PH/F3PV (custom order)	F3YH/F3YV
Applications	Programmable controller	Programmable controller, relay	Programmable controller		Programmable controller, relay		
Output method	-	NPN output	-		NPN output	PNP output	NPN output
Power supply voltage	-	10 to 28 VDC	-		10 to 28 VDC	4.5 to 28 VDC	10 to 28 VDC
Load voltage	10 to 30 VDC	30 VDC or less	10 to 30 VDC	24 VDC $\pm 10\%$	30 VDC or less		
Load current	5 to 20 mA	50 mA or less	5 to 20 mA (*2)		100 mA or less	50 mA or less	
Indicator lamp	Red LED (Lit when ON)		LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)	Yellow LED (Lit when ON)	Red/green LED (Lit when ON)
Leakage current	1 mA or less	10 μ A or less	1 mA or less		10 μ A or less		
Weight g	1 m: 10 3 m: 29						

*1: Refer to page 309 for detailed switch specifications and dimensions.

*2: Max. load current: 20mA at 25°C. The current is lower than 25 mA if the operating ambient temperature around the switch is higher than 20°C. (60 to 5 mA at 10°C)

*3: The F type switch uses a bend-resistant lead wire.

Cylinder weight

Unit: g

Stroke length (mm)	5		10		15		20		30		Additional weight
	Without magnet + switch rail	With magnet + switch rail	Without magnet + switch rail	With magnet + switch rail	Without magnet + switch rail	With magnet + switch rail	Without magnet + switch rail	With magnet + switch rail	Without magnet + switch rail	With magnet + switch rail	Weight per switch
ø4.5	45	49	45	49	-	-	-	-	-	-	Refer to weight information provided in the switch specifications.
ø6	61	66	61	66	69	75	77	83	93	100	
ø8	87	92	87	92	108	114	108	114	129	136	

Theoretical thrust table

Unit: N

Bore size (mm)	Operating direction	Working pressure MPa					
		0.2	0.3	0.4	0.5	0.6	0.7
ø4.5	Push	3.2	4.8	6.4	8.0	9.5	11.1
	Pull	2.6	3.8	5.1	6.4	7.7	8.9
ø6	Push	5.7	8.5	11.3	14.1	17.0	19.8
	Pull	4.2	6.4	8.5	10.6	12.7	14.8
ø8	Push	10.1	15.1	20.1	25.1	30.2	35.2
	Pull	8.6	13.0	17.3	21.6	25.9	30.2

SCPD3
SCM
SSD2
MDC2
SMG
LCM
LCR
LCG
LCX
STM
STG
STR2
MRL2
GRC
Cylinder Switch
MN3E MN4E
4GA/B
M4GA/B
MN4GA/B
F.R. (module unit)
Clean F.R
Precision R
Press gauge Diff. press gauge
Electro- pneumatic R
Speed controller
Auxiliary valve
Fitting/ tube
Clean air unit
Pressure sensor
Flow rate sensor
Valve for air blow
Ending

How to order

● Without switch (No magnet for switch)

LCM - 6 - 10 - R ————— **J2 P73**

● With switch (Magnet for switch incorporated)

LCM - 6 - 10 - R - F2H - R - J2 P73

A Bore size

B Stroke length

C Piping direction

D Switch model No.

E Switch quantity

F Option

G Clean room specifications

Code	Content
A Bore size (mm)	
4.5	ø4.5
6	ø6
8	ø8

		Bore size		
		ø4.5	ø6	ø8
B	Stroke length (mm)			
5	5	●	●	●
10	10	●	●	●
15	15	-	●	●
20	20	-	●	●
30	30	-	●	●

C Piping direction	
R	Right from rod end
L	Left from rod end

D Switch model No.						
Lead wire straight	Lead wire L-shaped	Contact	Voltage		Display	Lead wire
			AC	DC		
—	F2S*	Proximity		●	1-color display	2 wires
F2H*	F2V*			●		
—	F3S*			●	1-color display (PNP output) (custom order)	3 wires
F3H*	F3V*			●		
F3PH*	F3PV*			●		
F2YH*	F2YV*			●	2-color display	2 wires
F3YH*	F3YV*		●		3 wires	

* Lead wire length	
Blank	1 m (standard)
3	3 m (option)

E Switch quantity	
R	1 (on rod end)
H	1 (on head end)
D	2

F Option		
M	*1	With magnet
F1	*1, 2	With magnet + switch rail (one switch groove)
F2	*1	With magnet + switch rail (two switch grooves)
J*		With positioning pin (*... the number of pins)

G Clean room specifications	
P73	Vacuum treatment

⚠ Precautions for model No. selection

*1: Can be omitted if the switch model No. is specified.

*2: Available only for ø4.5.

[Example of model No.]

LCM-6-10-R-F2H-R-J2P73

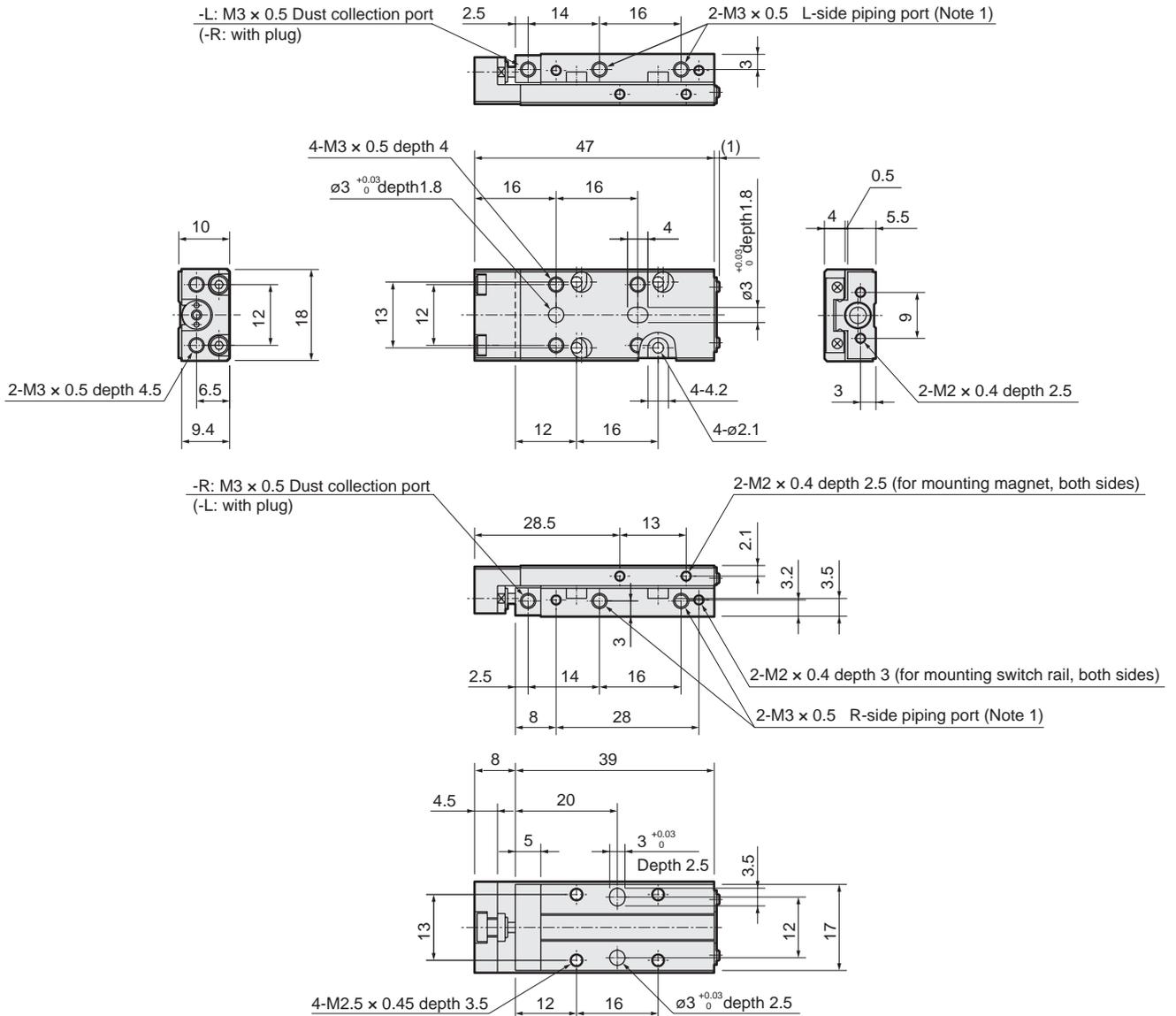
Model No.: Linear slide cylinder, double acting

- A** Bore size : ø6 mm
- B** Stroke length : 10 mm
- C** Piping direction : Right when viewed from rod end
- D** Switch model No. : Proximity F2H switch, lead wire 1 m
- E** Switch quantity : 1 (on rod end)
- F** Option : With two positioning pins
- G** Clean room specifications : Vacuum treatment

Dimensions

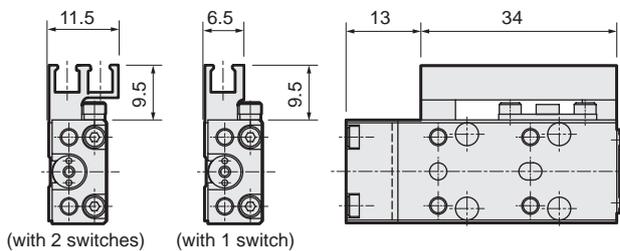


● LCM-4.5-P73

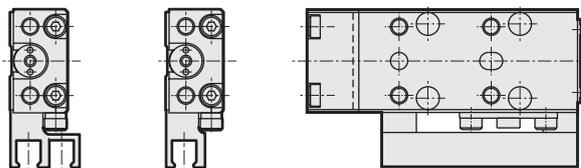


(Note 1) A plug is attached to the opposite side to the piping port specified with the model No.

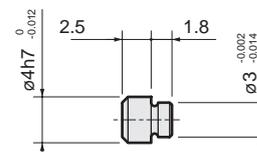
- With magnet/cylinder switch (piping direction: -R)



- With magnet/cylinder switch (piping direction: -L)



- Positioning pin (-J)



Note: Refer to page 100 for switch mounting position dimensions.

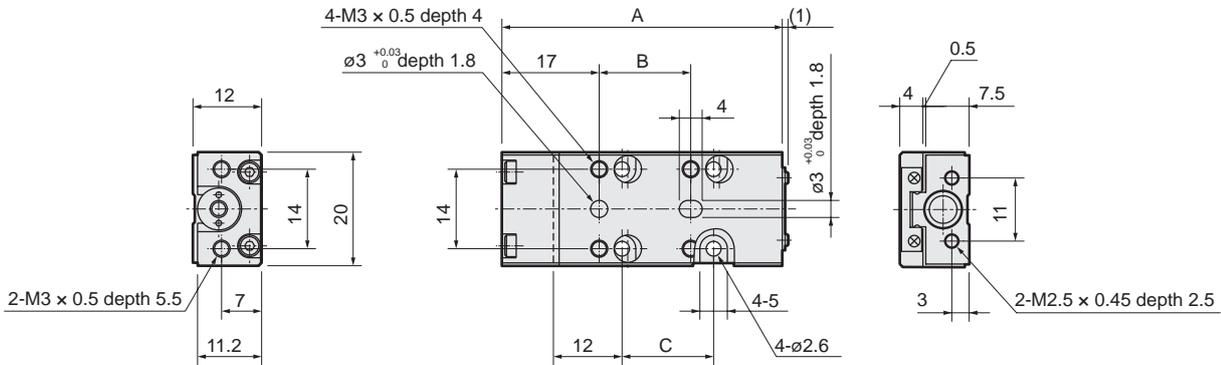
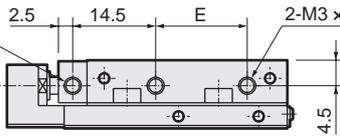
SCPD3
SCM
SSD2
MDC2
SMG
LCM
LCR
LCG
LCX
STM
STG
STR2
MRL2
GRC
Cylinder Switch
MN3E MN4E
4GA/B
M4GA/B
MN4GA/B
F.R. (module unit)
Clean F.R
Precision R
Press gauge Diff. press gauge
Electro-pneumatic R
Speed controller
Auxiliary valve
Fitting/tube
Clean air unit
Pressure sensor
Flow rate sensor
Valve for air blow
Ending



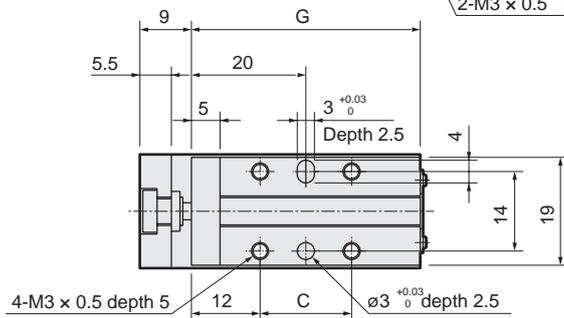
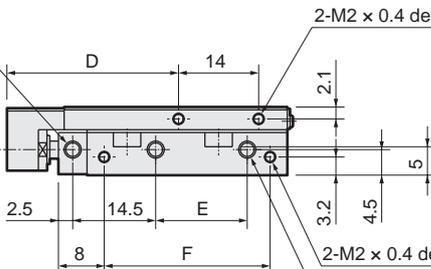
Dimensions

● LCM-6-P73

-L: M3 x 0.5 Dust collection port
 (-R: with plug)

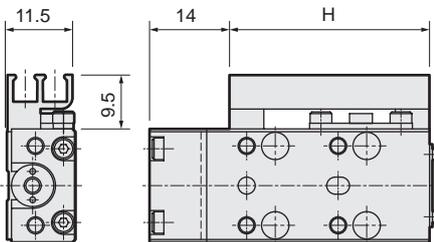


-R: M3 x 0.5 Dust collection port
 (-L: with plug)

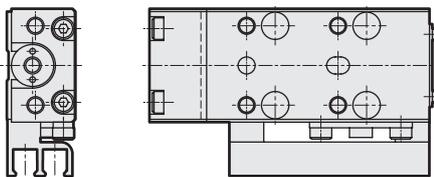


(Note 1) A plug is attached to the opposite side to the piping port specified with the model No.

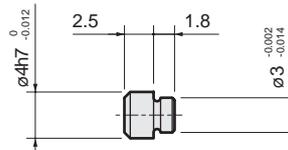
● With magnet/cylinder switch (piping direction: -R)



● With magnet/cylinder switch (piping direction: -L)



● Positioning pin (-J)



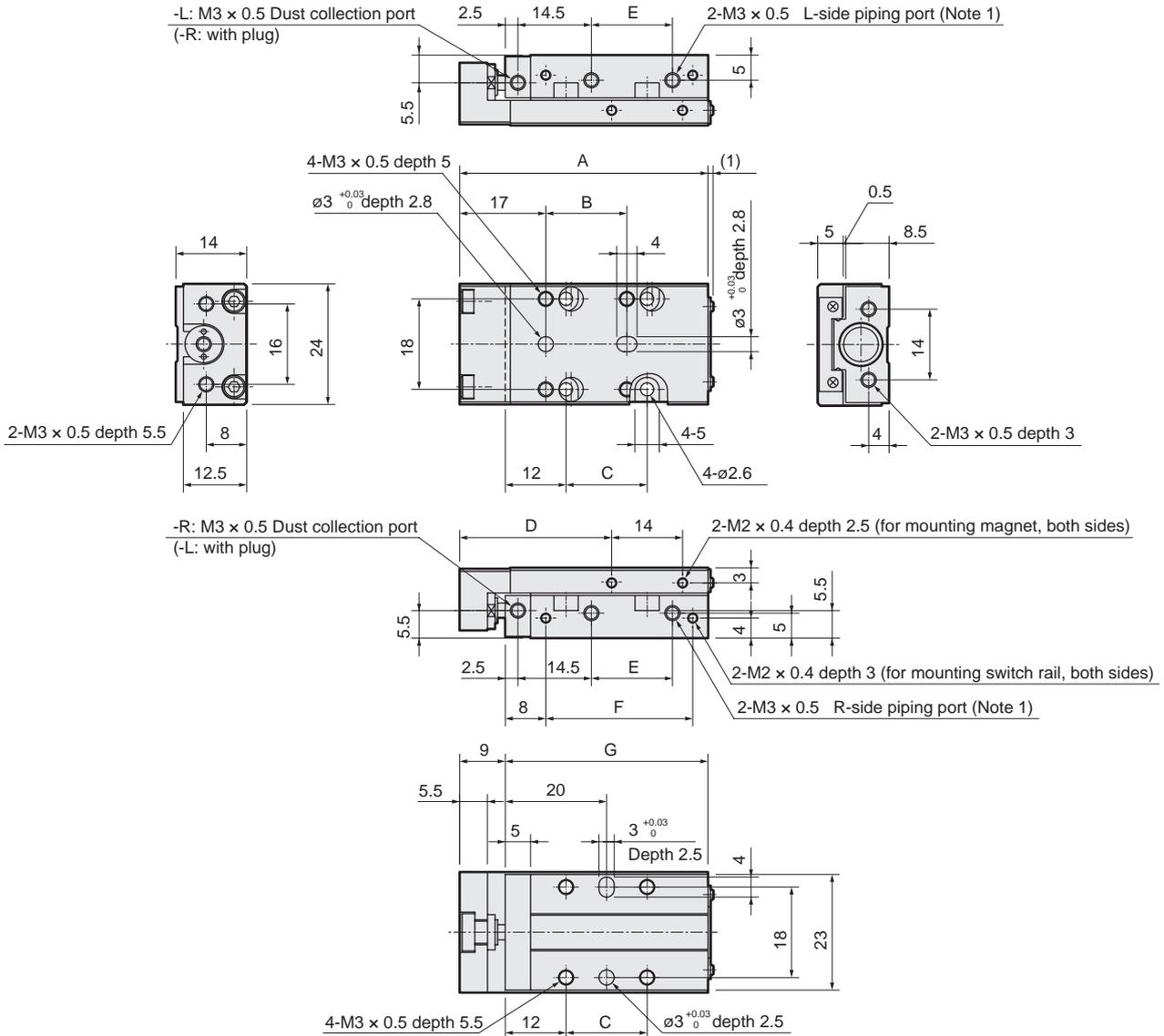
Stroke	A	B	C	D	E	F	G	H
5	49	16	16	30	16	29	40	35
10	49	16	16	30	16	29	40	35
15	54	21	21	35	21	34	45	40
20	59	26	26	40	26	39	50	45
30	69	36	36	50	36	49	60	55

Note: Refer to page 100 for switch mounting position dimensions.

Dimensions

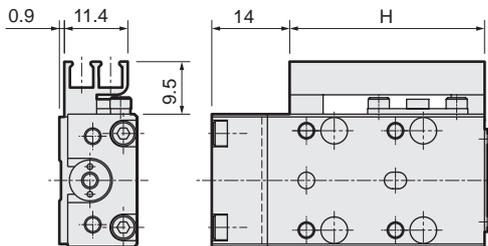


● LCM-8-P73

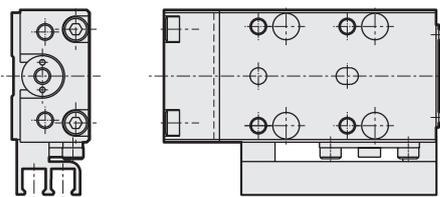


(Note 1) A plug is attached to the opposite side to the piping port specified with the model No.

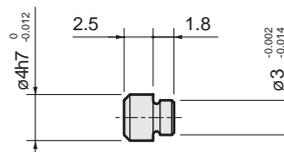
• With magnet/cylinder switch (piping direction: -R)



• With magnet/cylinder switch (piping direction: -L)



• Positioning pin (-J)



Stroke length	A	B	C	D	E	F	G	H
5	49	16	16	30	16	29	40	35
10	49	16	16	30	16	29	40	35
15	59	26	26	40	26	39	50	45
20	59	26	26	40	26	39	50	45
30	69	36	36	50	36	49	60	55

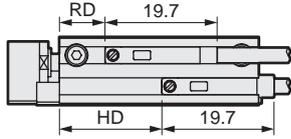
Note: Refer to page 100 for switch mounting position dimensions.

SCPD3
SCM
SSD2
MDC2
SMG
LCM
LCR
LCG
LCX
STM
STG
STR2
MRL2
GRC
Cylinder Switch
MN3E MN4E
4GA/B
M4GA/B
MN4GA/B
F.R. (module unit)
Clean F.R
Precision R
Press gauge Diff. press gauge
Electro-pneumatic R
Speed controller
Auxiliary valve
Fitting/tube
Clean air unit
Pressure sensor
Flow rate sensor
Valve for air blow
Ending

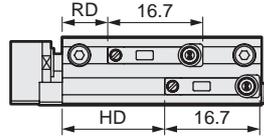
LCM Series Common projection dimensions with switch

● Lead wire hole on the rear side

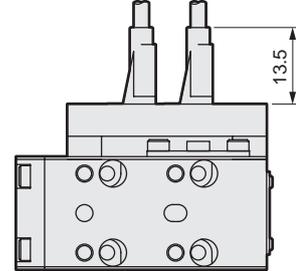
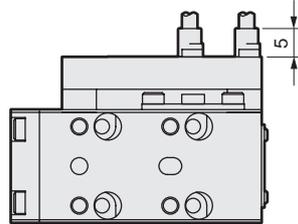
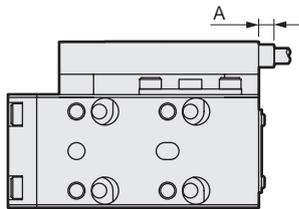
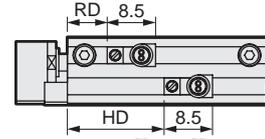
• F*H



• F*V



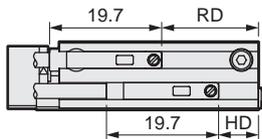
• F*S



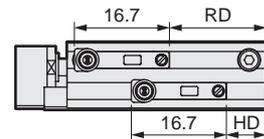
Bore size (mm)	Stroke length	RD			HD			A	
		F*H	F*V	F*S	F*H	F*V	F*S	1-color display	2-color display
ø4.5	5	12	12	11	17	17	2.7	7.2	
	10	7	7	6	17	17			
ø6	5	13	13	12	18	18			
	10	8	8	7	18	18			
	15	8	8	7	23	23			
	20	8	8	7	28	28			
	30	8	8	7	38	38			
ø8	5	13	13	12	18	18			
	10	8	8	7	18	18			
	15	13	13	12	28	28			
	20	8	8	7	28	28			
	30	8	8	7	38	38			

● Lead wire hole on the front side

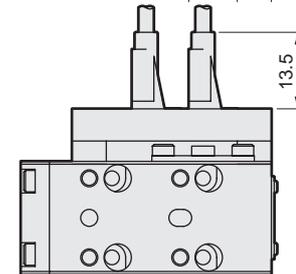
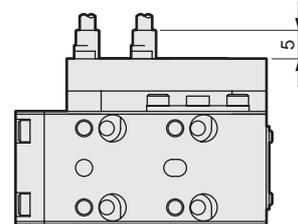
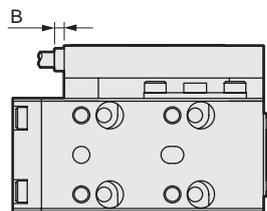
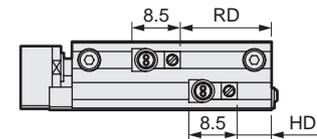
• F*H



• F*V



• F*S



Bore size (mm)	Stroke length	RD			HD			B	
		F*H	F*V	F*S	F*H	F*V	F*S	1-color display	2-color display
ø4.5	5	12	12	11	7	7	6	—	—
	10	17	17	16				1.7	6.2
ø6	5	12	12	11	7	7	6	—	—
	10	17	17	16				1.7	6.2
	15	22	22	21				1.7	6.2
	20	28	27	26				1.7	6.2
	30	37	37	36				1.7	6.2
ø8	5	12	12	11	7	7	6	—	—
	10	17	17	16				1.7	6.2
	15	22	22	21				—	—
	20	27	27	26				1.7	6.2
	30	37	37	36	1.7	6.2			