

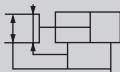


Linear Slide Hand double acting / single acting

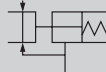
LSH-A Series

● Operating stroke length: 4, 6, 10, 14, 22 mm

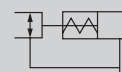
Double acting



Single acting (normally open)



Single acting (normally closed)



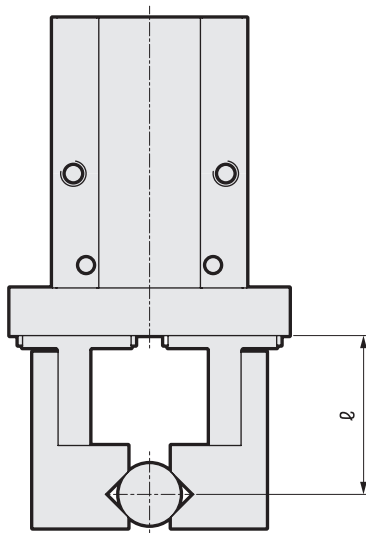
RoHS

Specifications

Item			LSH-A							
Bore size			mm	ø6	ø10	ø16	ø20	ø25	ø32	
Actuation				Double acting / single acting (normally open / normally closed)						
Working fluid				Compressed air						
Max. working pressure				MPa						
Min. working pressure				MPa		0.7				
				Double acting	0.15	0.2	0.1			
				Single acting	0.3	0.35	0.25			
Port size				M3			M5			
Ambient temperature				°C						
				-10 to 60 (no freezing)						
Operating stroke length				mm		4	6	10	14	22
Repeatability				mm						
				±0.01						
Weight Double acting type (Single acting)		kg		Finger OP: 1, 2, 3	0.032	0.06	0.135	0.275 (0.28)	0.49 (0.495)	0.73 (0.78)
		Finger OP: 4					0.14	0.28 (0.285)	0.495 (0.5)	0.76 (0.81)
Lubrication				Not required						

Gripping power

Unit: N



Bore size (mm)	Double acting	
	Open side	Closed side
ø6	6.1	3.3
ø10	17	11
ø16	45	34
ø20	66	42
ø25	104	65
ø32	193	158
Bore size (mm)	Single acting (normally open)	
		Closed side
ø6	-	1.9
ø10		7.1
ø16		27
ø20		33
ø25		45
ø32		131
Bore size (mm)	Single acting (normally closed)	
	Open side	
ø6	3.7	-
ø10	13	
ø16	38	
ø20	57	
ø25	83	
ø32	161	

* At supply pressure of 0.5 MPa, ℓ = 20 mm, stroke center

Switch specifications

Item	Proximity 2-wire	Proximity 3-wire	Proximity 2-wire	Proximity 3-wire	
	F2S	F3S	F2H/F2V	F3H/F3V	F3PH/F3PV
Applications	Programmable Controller dedicated	Programmable For controller, relay	Programmable Controller dedicated	Programmable For controller, relay	
Output method	–	NPN output	–	NPN output	PNP output
Power supply voltage	–	10 to 28 VDC	–	10 to 28 VDC	4.5 to 28 VDC
Load voltage/ current	10 to 30 VDC 5 to 20 mA	30 VDC, 50 mA or less	10 to 30 VDC 5 to 20 mA	30 VDC, 50 mA or less	
Indicator light	LED (Lit when ON)		Yellow LED (Lit when ON)		
Leakage current	1 mA or less	10 μA or less	1 mA or less	10 μA or less	
Shock resistance	980 m/s ²				
Weight	g 1 m:10 3 m:29				

*1: The F type switch uses a bend-resistant lead wire by default.

Item	Proximity 2-wire		Proximity 3-wire	
	T2H/T2V	T2HR3/T2VR3 (Lead wire, a bend-resistant type)	T3H/T3V	T3PH/T3PV
Applications	Programmable Controller dedicated		Programmable For controller, relay	
Output method	－	－	NPN output	PNP output
Power supply voltage	－	－	DC10 to 28V	
Load voltage/ current	10 to 30 VDC 5 to 20 mA	10 to 30 VDC 5 to 20 mA	30 VDC or less 100 mA or less	
Display lamp	Red LED (Lit when ON)	Red LED (Lit when ON)	Red LED (Lit when ON)	Yellow LED (Lit when ON)
Leakage current	1 mA or less	1 mA or less	10 μA or less	
Impact resistance	980 m/s ²			
Weight	g 1 m: 18 g 3 m: 49 g			

LSH-A	LSH-G	LSH-F	LSHL-A	LSHL-G	LSHL-F	LSHMA	LSHM-G	LSHM-F	Model selection	Technical data	Cylinder switch precautions	Safety precautions	Related products
HP1 Series						HP2 Series							

How to order

Without switch (built-in magnet for switch)

LSH - A 06 D 1 R ————— HP1

With switch (built-in magnet for switch)

LSH - A 06 D 1 R - F2H - D - HP1

A Rubber cover

B Bore size

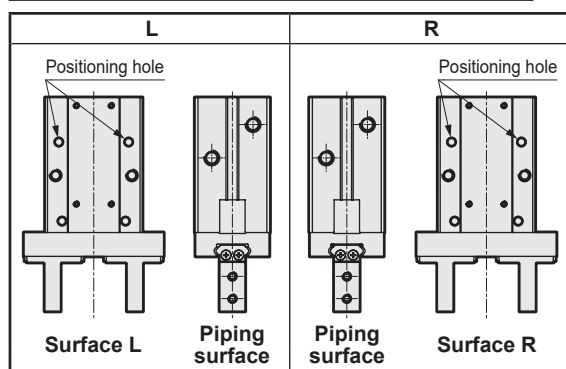
C Actuation

D Finger

E Grip center reference, high precision positioning hole

F Switch model No.

Grip center reference, high precision positioning hole position diagram



Refer to the Dimensions (pages 5 to 10) and page 60 for details.

G Switch quantity

How to order switch

SW - F2H*

Switch model No.
(Item F above)

[Example of model No.]

LSH-A06D1R-F2H-D-HP1

Model: Linear Slide Hand

- A Rubber cover : Without rubber cover
- B Bore size : $\phi 6$
- C Actuation : Double acting
- D Finger : Basic
- E Grip center reference, high precision positioning hole : R
- F Switch model No. : Proximity F2H, lead wire 1 m
- G Switch quantity : 2

Code	Description					
A Rubber cover						
A	Without rubber cover					
B Bore size (mm)						
06	ø6					
10	ø10					
16	ø16					
20	ø20					
25	ø25					
32	ø32					
C Actuation						
D	Double acting					
S	Single acting / normally open					
C	Single acting / normally closed					
D Finger * Refer to the Dimensions for details.						
1	Basic					
2	Side tap					
3	Through hole					
4	Flat					
E Grip center reference, high precision positioning hole						
N	None					
L	Refer to the figure at left.					
R						
F Switch model No.						
Blank	No switch, with F type switch rail					
N	No switch, no switch rail					
A	No switch, with T type switch rail (ø32 only)					
Axial lead wire	Radial lead wire	Contact	Voltage		Display	Lead wire
			AC	DC		
-	F2S*	Proximity		●	1-color display	2-wire
-	F3S*			●		3-wire
F2H*	F2V*			●		2-wire
F3H*	F3V*			●		3-wire
F3PH*	F3PV*			●		3-wire
T2H*	T2V*			●		2-wire
T2HR3	T2VR3			●		2-wire
T3H*	T3V*			●		3-wire
T3PH*	T3PV*			●		3-wire
* Lead wire length						
Blank	1 m (standard)					
3	3 m (option)					
G Switch quantity						
R	1 on open side					
H	1 on closed side					
D	2					

*1: If the one with the switch is selected, the product comes with a rail plate corresponding to the switch.

*2: Only $\phi 32$ can be selected with the T switch.

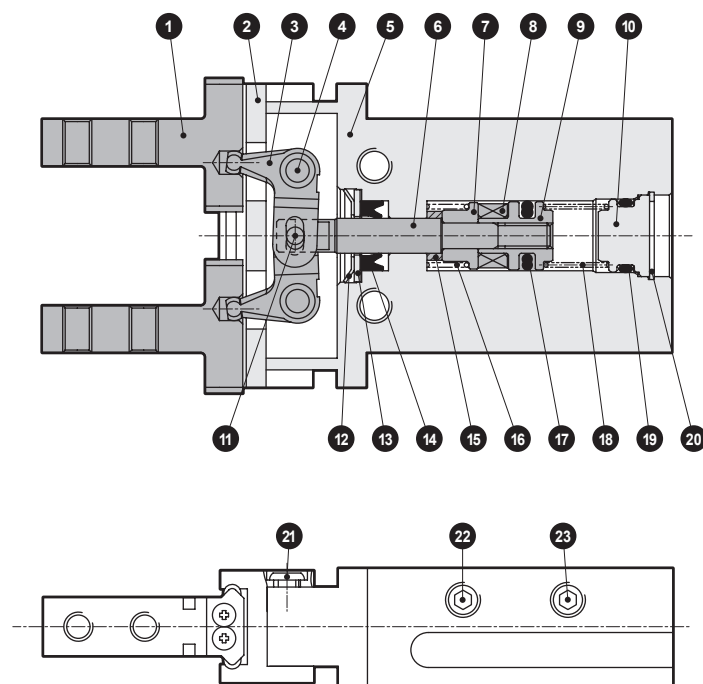
*3: Refer to page 65 for cylinder switch precautions.

Switch mounting availability table

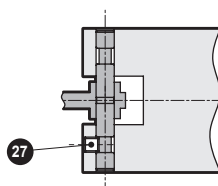
Model No.	Switch model No.	Side mounting	Rail mounting
LSH-A06	F2/3□	●	-
	F2/3S	-	●
LSH-A10	F2/3□	●	●
	F2/3S	●	●
LSH-A16	F2/3□	●	●
	F2/3S	●	●
LSH-A20	F2/3□	●	●
	F2/3S	●	●
LSH-A25	F2/3H·PH	-	●
	F2/3V·PV	●	●
	F2/3S	●	●
LSH-A32	F2/3□	●	●
	F2/3S	●	●
	T2/3□	-	●

Internal structure and parts list

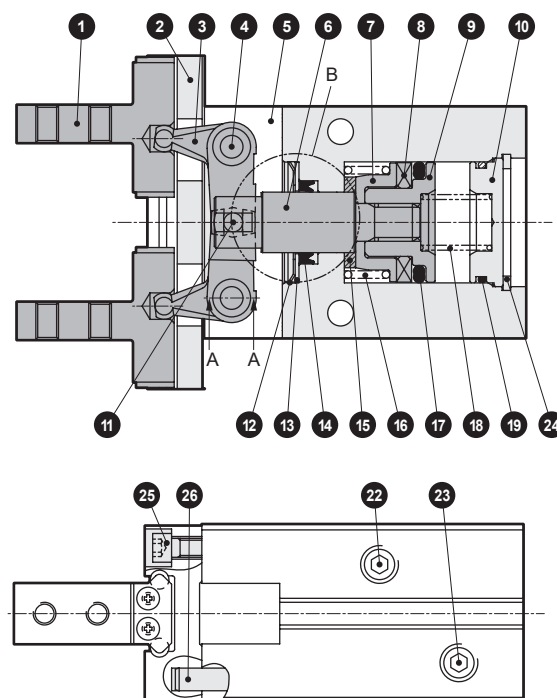
● LSH-A06



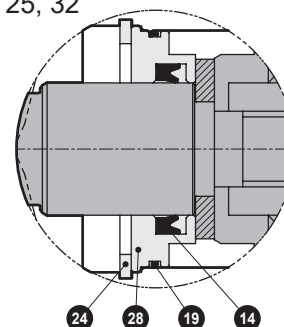
Cross-section A-A



● LSH-A10 to 16



B part ø20, 25, 32



Parts list

No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Finger	Stainless steel		15	Cushion rubber	Urethane rubber	
2	Linear guide	Stainless steel		16	Coil spring	Piano wire	Single acting C
3	Lever	Stainless steel		17	Piston packing	Nitrile rubber	
4	Fulcrum axis	Steel		18	Coil spring	Piano wire	Single acting S
5	Body	Aluminum alloy		19	O-ring	Nitrile rubber	
6	Piston rod	Stainless steel		20	C-snap ring	Steel	
7	Spring bracket	Aluminum alloy		21	Pan head machine screw	Stainless steel	
8	Magnet			22	Plug	Stainless steel	Single acting C
9	Piston	Aluminum alloy		23	Plug	Stainless steel	Single acting S
10	Head cover	Aluminum alloy		24	C-snap ring	Stainless steel	
11	Operation shaft	Steel alloy		25	Hexagon socket head cap screw	Stainless steel	ø32 is steel
12	CR ring	Stainless steel		26	Pin	Steel	
13	Cap	Stainless steel		27	Hexagon socket set screw	Stainless steel	
14	Rod packing	Nitrile rubber		28	Rod metal	Aluminum alloy	

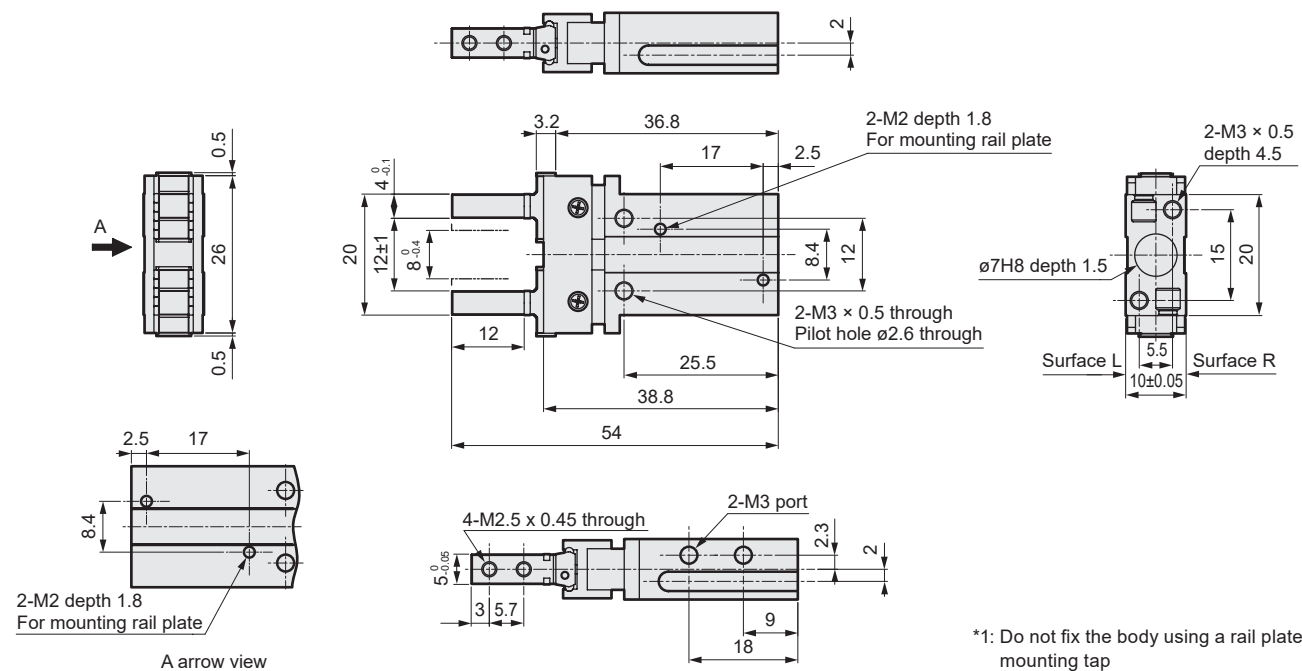
Repair parts list

Bore size (mm)	Kit No.	Repair part No.	Rail plate kit No.		Description
			For F type switch	For T type switch	
ø6	Cannot be disassembled	-	LSH-RPF-06-HP	-	Rail plate small screw
ø10	LSH-10K-HP	12 14 17 19	LSH-RPF-10-HP	-	
ø16	LSH-16K-HP		LSH-RPF-16-HP	-	
ø20	LSH-20K-HP		LSH-RPF-20-HP	-	
ø25	LSH-25K-HP	14 17 19	LSH-RPF-25-HP	-	
ø32	LSH-32K-HP		LSH-RPF-32-HP	LSH-RPT-32-HP	

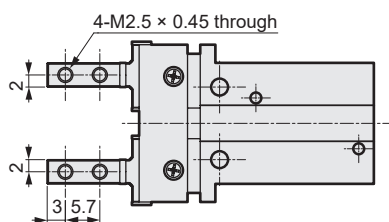
HP1 Series	LSH-A	LSH-G	LSH-F	LSHL-A	LSHL-G	LSHL-F
	LSHMA-A	LSHMA-G	LSHMA-F	LSHMA-A	LSHMA-G	LSHMA-F
	LSHMA-A	LSHMA-G	LSHMA-F	LSHMA-A	LSHMA-G	LSHMA-F
Model selection						
Technical data						
Cylinder switch precautions						
Safety precautions						
Related products						

Dimensions (bore size: $\phi 6$)

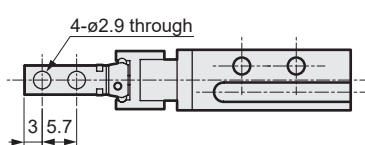
● LSH-A06*1N



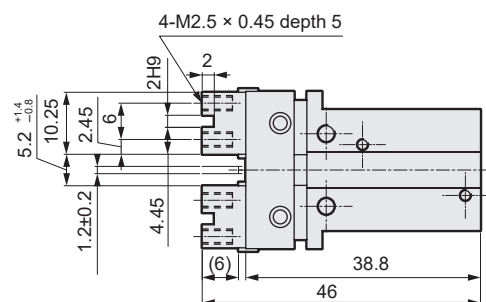
● LSH-A06*2N



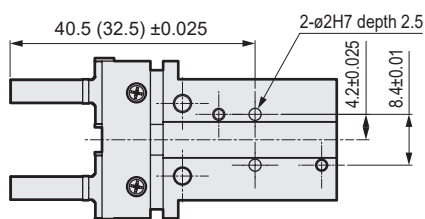
● LSH-A06*3N



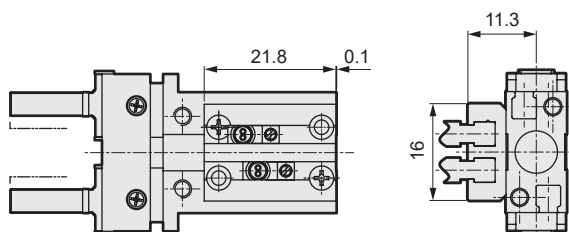
● LSH-A06*4N



● LSH-A06**R / L

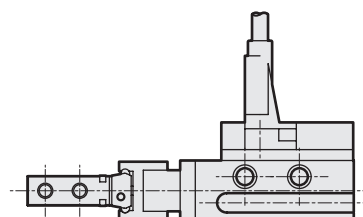


● With switch, rail assembly



*2: Positioning holes are machined on surface R for LSH-A06**R and surface L for LSH-A06**L. Refer to page 60 for the base line.

*3: The dimensions in parentheses are the dimensions for LSH-A06*4.

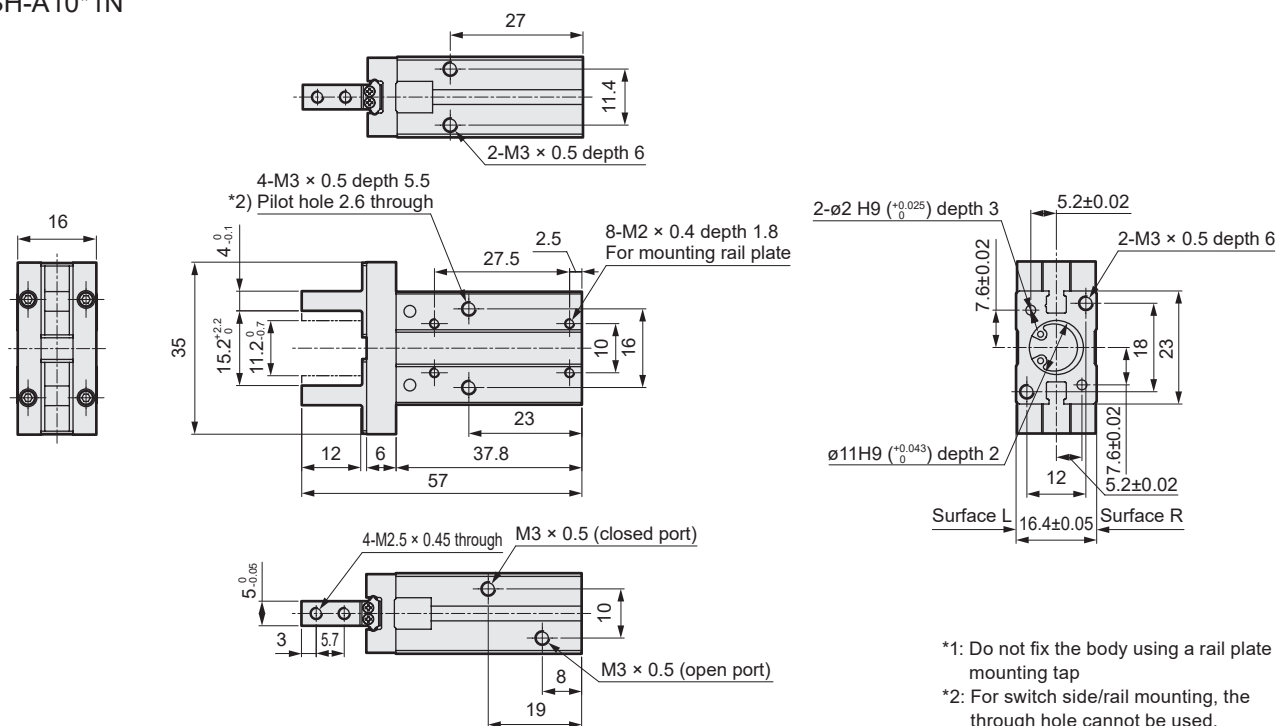


*4: Refer to Page 69 for cylinder switch precautions.

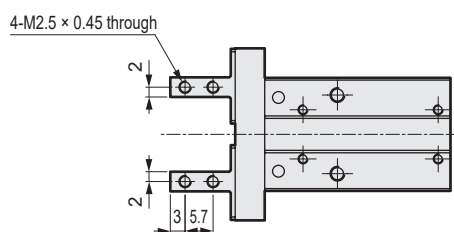
*5: Use fittings with an outer diameter of $\phi 9$ or less to prevent them from interfering with each other.

Dimensions (bore size: $\phi 10$)

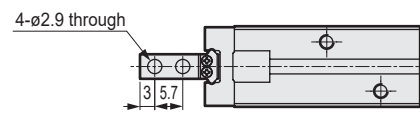
● LSH-A10*1N



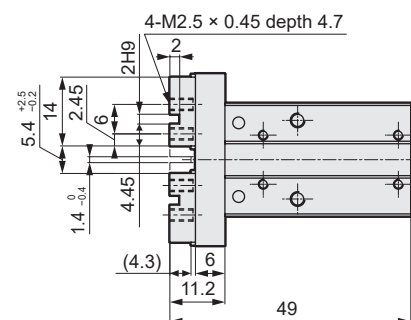
● LSH-A10*2N



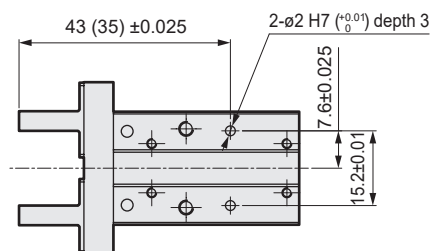
● LSH-A10*3N



● LSH-A10*4N

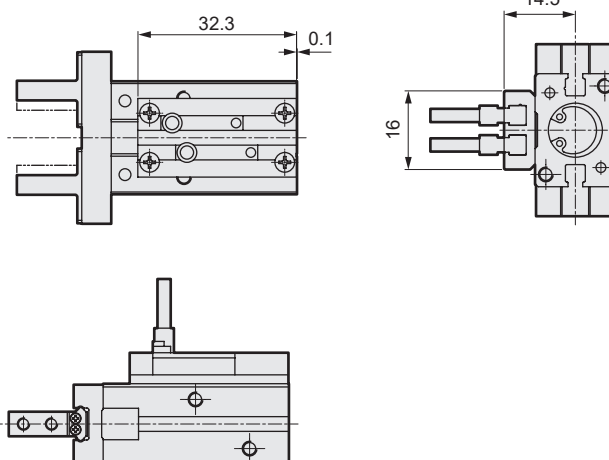


● LSH-A10**R / L



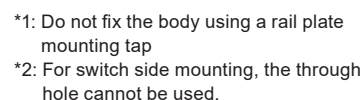
- *3: Positioning holes are machined on surface R for LSH-A10**R and surface L for LSH-A10**L. Refer to page 60 for the base line.
*4: The dimensions in parentheses are the dimensions for LSH-A10*4.

● With switch, rail assembly

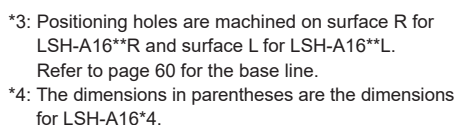


*5: Refer to Page 69 for cylinder switch precautions.

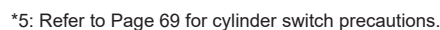
LSH-A	LSH-G	LSH-F	LSH-A	LSH-G	LSH-F	LSH-A	LSH-G	LSH-F	Model selection	Technical data	Cylinder switch precautions	Safety precautions	Related products
HP1 Series	HP2 Series	HP2 Series	HP2 Series	HP2 Series	HP2 Series	HP2 Series	HP2 Series	HP2 Series	Model selection	Technical data	Cylinder switch precautions	Safety precautions	Related products



● LSH-A16*4N

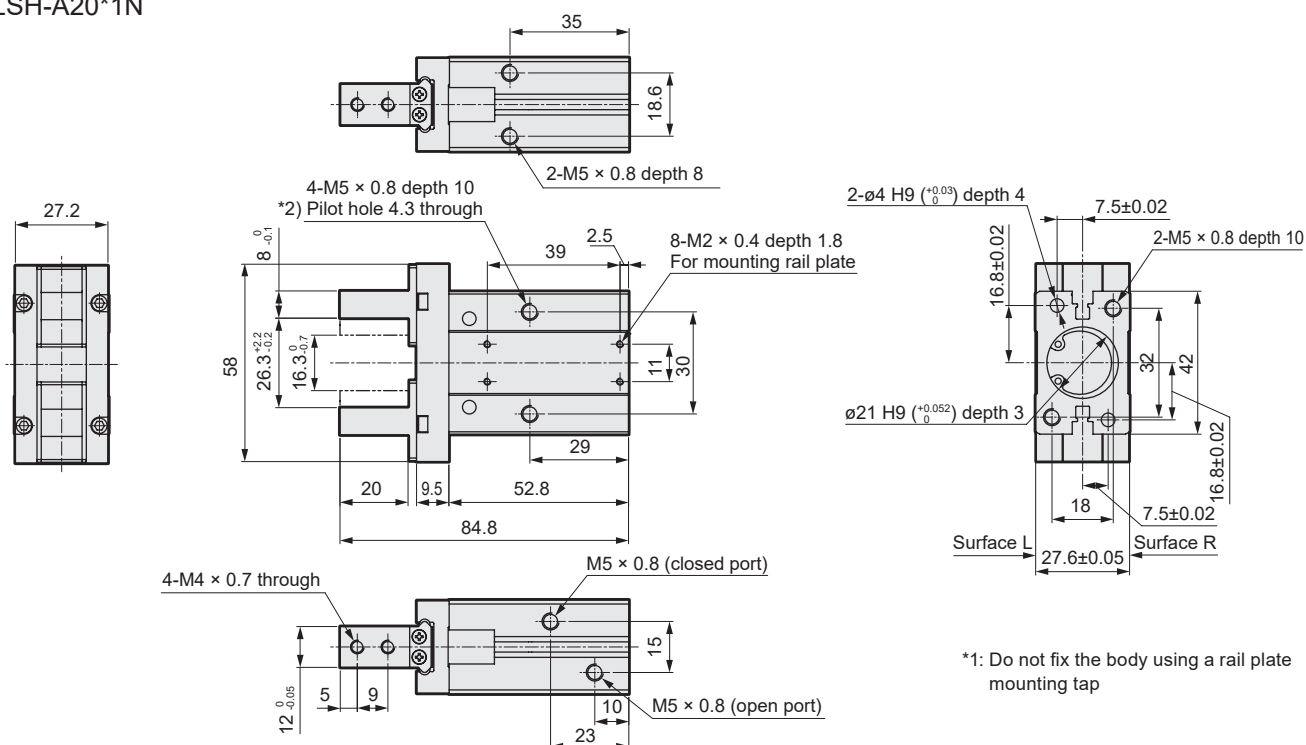


- With switch, rail assembly

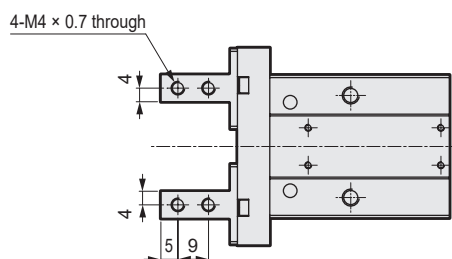


Dimensions (bore size: ø20)

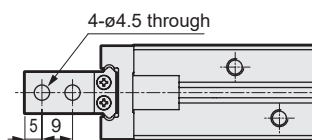
● LSH-A20*1N



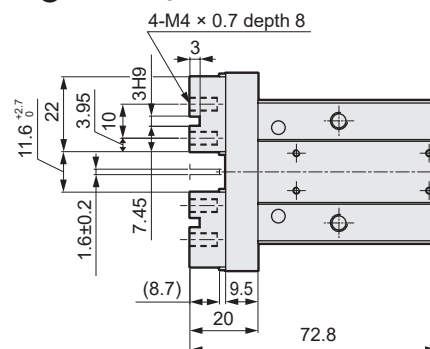
● LSH-A20*2N



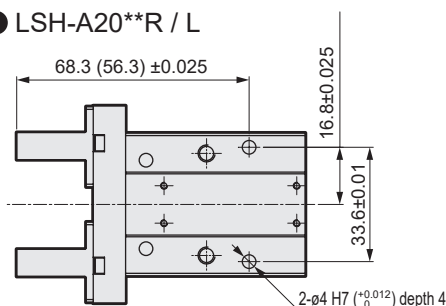
● LSH-A20*3N



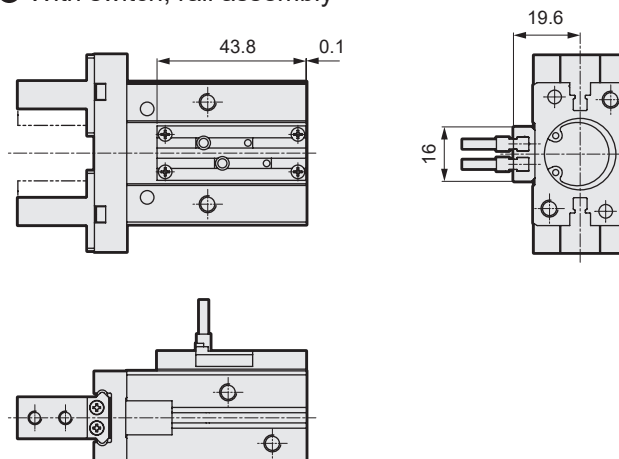
● LSH-A20*4N



● LSH-A20**R / L



● With switch, rail assembly



*3: Positioning holes are machined on surface R for LSH-A20**R and surface L for LSH-A20**L.
Refer to page 60 for the base line.

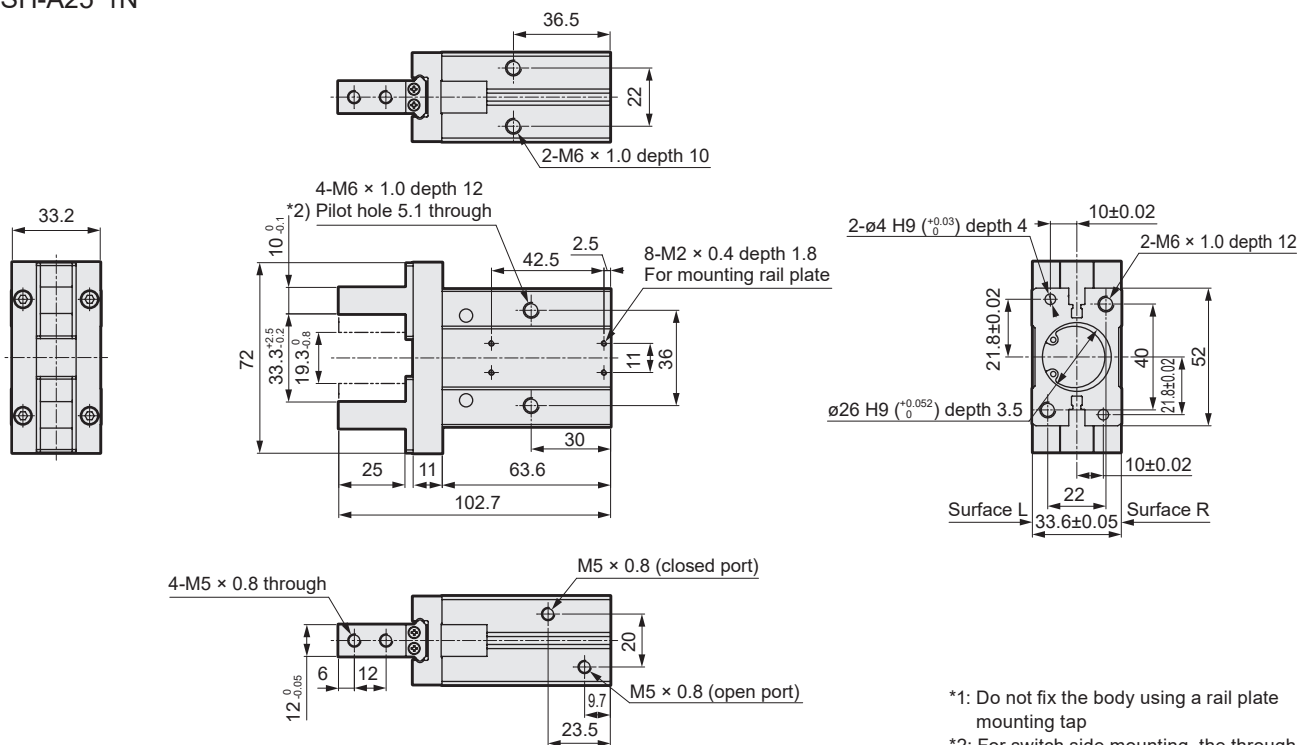
*4: The dimensions in parentheses are the dimensions for LSH-A20*4.

*5: Refer to Page 69 for cylinder switch precautions.

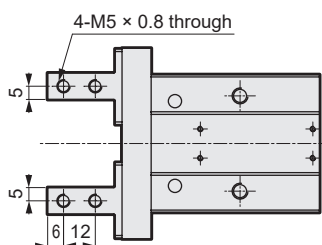
LSH-A	LSH-G	LSHL-A	LSHL-G	LSHL-F	LSHMA	LSHM-G	LSHM-F	Model selection	Technical data	Cylinder switch precautions	Safety precautions	Related products
	LSH-F											
HP1 Series												
HP2 Series												

Dimensions (bore size: $\varnothing 25$)

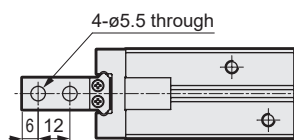
● LSH-A25*1N



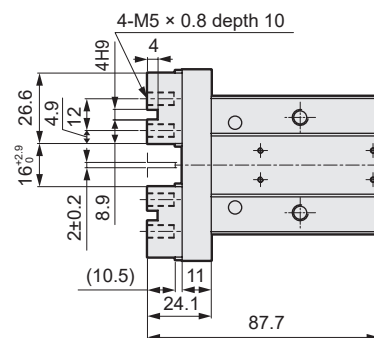
● LSH-A25*2N



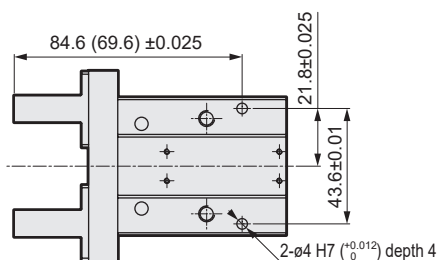
● LSH-A25*3N



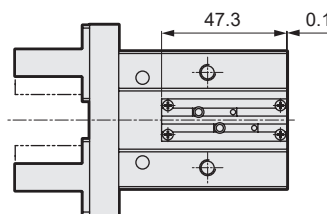
● LSH-A25*4N



● LSH-A25**R / L

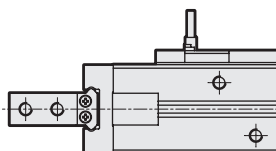


● With switch, rail assembly



*3: Positioning holes are machined on surface R for LSH-A25**R and surface L for LSH-A25**L. Refer to page 60 for the base line.

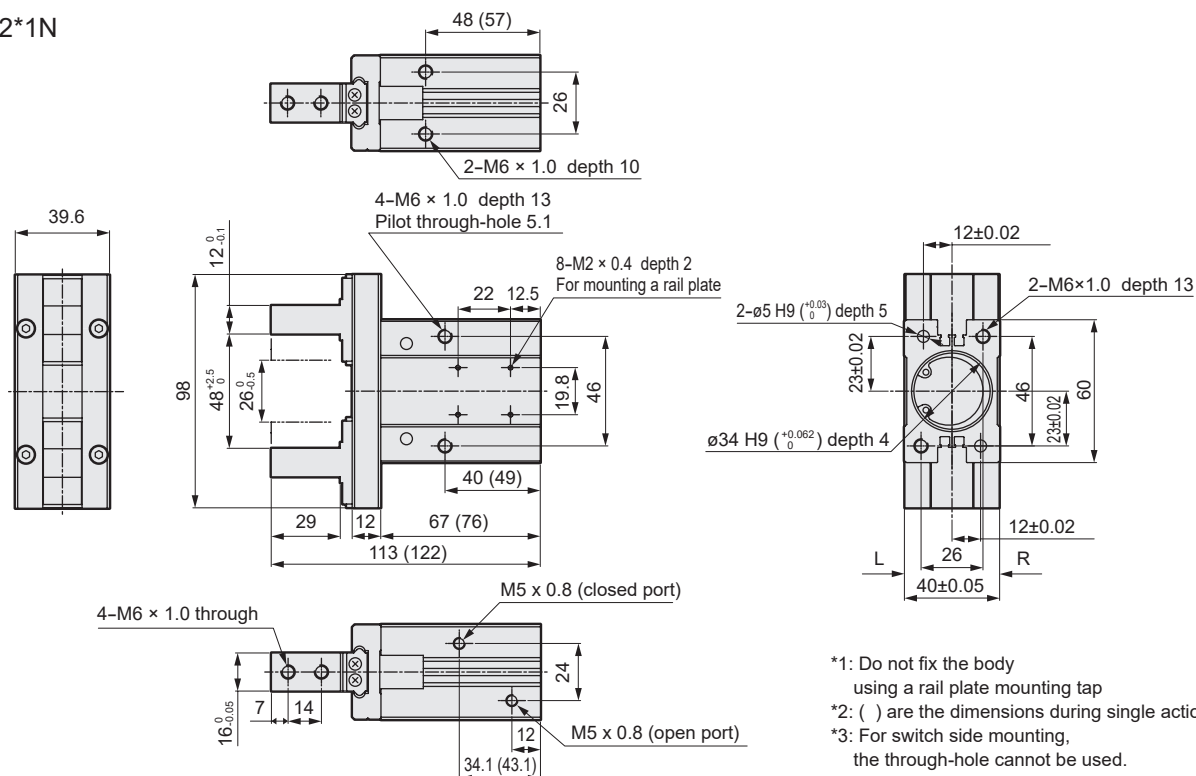
*4: The dimensions in parentheses are the dimensions for LSH-A25*4.



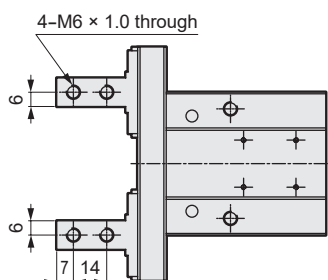
*5: Refer to Page 69 for cylinder switch precautions.

Dimensions (bore size: $\phi 32$)

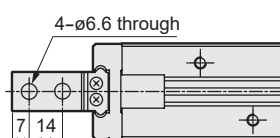
● LSH-A32*1N



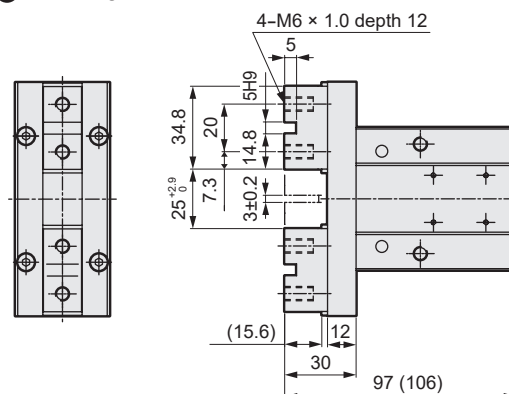
● LSH-A32*2N



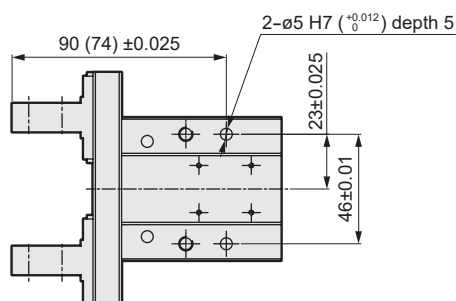
● LSH-A32*3N



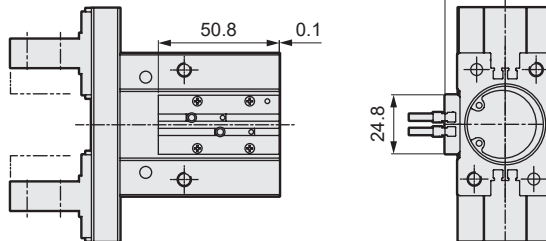
● LSH-A32*4N



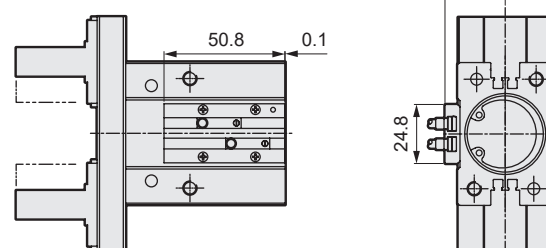
● LSH-A32*1/2/3R/L



● With F type switch, rail mounting



● With T type switch, rail mounting

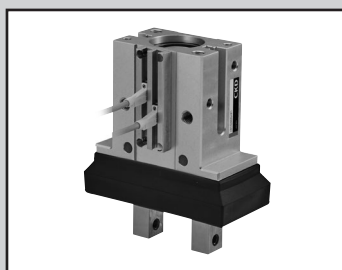


*4: Positioning holes are machined on surface R for LSH-A32**R and L for LSH-A32**L. Refer to page 60 for the base line.

*5: The dimensions in parentheses are the dimensions for LSH-A32*4.

*6: Refer to page 69 for cylinder switch precautions.

LSH-A	LSH-G LSH-F	LSHL-A	LSHL-G LSHL-F	LSHMA	LSHM-G LSHM-F	Model selection	Technical data	Cylinder switch precautions	Safety precautions	Related products
	HP1 Series			HP2 Series						

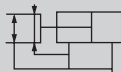


Linear Slide Hand double acting / single acting with rubber cover

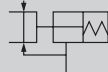
LSH-G / LSH-F Series

● Operating stroke length: 4, 6, 10, 14, 22 mm

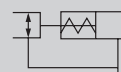
Double acting



Single acting (normally open)



Single acting (normally closed)



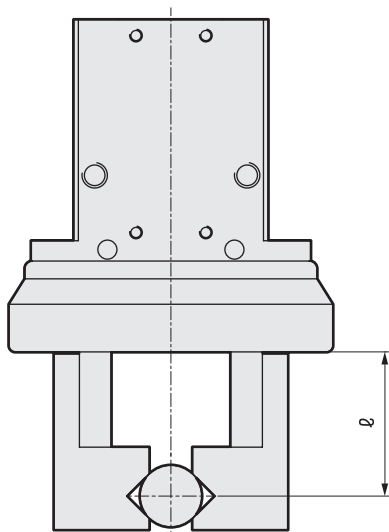
RoHS

Specifications

Item		LSH-G, F					
Bore size mm		ø6	ø10	ø16	ø20	ø25	ø32
Actuation		Double acting / single acting (normally open / normally closed)					
Working fluid		Compressed air					
Max. working pressure MPa		0.7					
Min. working pressure MPa	Double acting	0.15	0.2	0.1			
	Single acting	0.3	0.35	0.25			–
Port size		M3		M5			
Ambient temperature °C		-10 to 60°C (no freezing)					
Operating stroke length mm		4		6	10	14	22
Repeatability mm		±0.01					
Weight Double acting (single acting) kg		0.033	0.07	0.15	0.3 (0.35)	0.53 (0.535)	0.81
Lubrication		Not required					

Gripping power

Unit: N



Bore size (mm)	Double acting	
	Open side	Closed side
ø6	6.1	3.3
ø10	17	9.8
ø16	40	30
ø20	66	42
ø25	104	65
ø32	193	158
Bore size (mm)	Single acting (normally open)	
		Closed side
ø6	-	1.9
ø10		6.3
ø16		24
ø20		28
ø25		45
Bore size (mm)	Single acting (normally closed)	
	Open side	
ø6	3.7	-
ø10	12	
ø16	31	
ø20	56	
ø25	83	

* At supply pressure of 0.5 MPa, ℓ = 20 mm, stroke center

Switch specifications

Item	Proximity 2-wire	Proximity 3-wire	Proximity 2-wire	Proximity 3-wire	
	F2S	F3S	F2H/F2V	F3H/F3V	F3PH/F3PV
Applications	Programmable Controller dedicated	Programmable For controller, relay	Programmable Controller dedicated	Programmable For controller, relay	
Output method	–	NPN output	–	NPN output	PNP output
Power supply voltage	–	10 to 28 VDC	–	10 to 28 VDC	4.5 to 28 VDC
Load voltage/ current	10 to 30 VDC 5 to 20 mA	30 VDC, 50 mA or less	10 to 30 VDC 5 to 20 mA	30 VDC, 50 mA or less	
Indicator light	LED (Lit when ON)		Yellow LED (Lit when ON)		
Leakage current	1 mA or less	10 μA or less	1 mA or less	10 μA or less	
Shock resistance	980 m/s ²				
Weight	g 1 m:10 3 m:29				

*1: The F type switch uses a bend-resistant lead wire by default.

Item	Proximity 2-wire		Proximity 3-wire	
	T2H/T2V	T2HR3/T2VR3 (Lead wire, a bend-resistant type)	T3H/T3V	T3PH/T3PV
Applications	Programmable Controller dedicated		Programmable For controller, relay	
Output method	－	－	NPN output	PNP output
Power supply voltage	－	－	DC10 to 28V	
Load voltage/ current	10 to 30 VDC 5 to 20 mA	10 to 30 VDC 5 to 20 mA	30 VDC or less 100 mA or less	
Indicator light	Red LED (Lit when ON)	Red LED (Lit when ON)	Red LED (Lit when ON)	Yellow LED (Lit when ON)
Leakage current	1 mA or less	1 mA or less	10 μA or less	
Shock resistance	980 m/s ²			
Weight	g 1 m: 18 g 3 m: 49 g			

LSH-A	LSH-G	LSH-A	LSH-G	LSHMA	LSHM-G	Model selection	Technical data	Cylinder switch precautions	Safety precautions	Related products
LSH-F	LSH-F	LSH-A	LSH-F	LSHMA	LSHM-G					
HP1 Series				HP2 Series						

LSH-G / LSH-F Series

How to order

Without switch (built-in magnet for switch)

LSH - G 06 D 1 R ————— HP1

With switch (built-in magnet for switch)

LSH - G 06 D 1 R - F2H - D - HP1

A Rubber cover

C Actuation

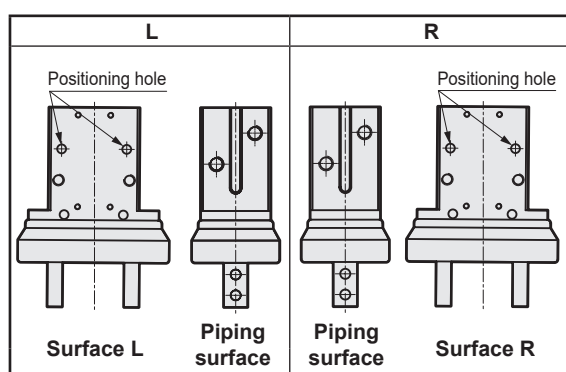
B Bore size

D Finger

E Grip center reference, high precision positioning hole

F Switch model No.

Grip center reference, high precision positioning hole position diagram



Refer to the Dimensions (pages 15 to 20) and page 60 for details.

G Switch quantity

How to order switch

SW - F2H*

Switch model No.
(Item F above)

[Example of model No.]

LSH-G06D1R-F2H-D-HP1

Model: Linear Slide Hand

A Rubber cover : Chloroprene rubber

B Bore size : ø6

C Actuation : Double acting

D Finger : Basic

E Grip center reference, high precision positioning hole : R

F Switch model No. : Proximity F2H, lead wire 1 m

G Switch quantity : 2

Code	Description
A Rubber cover	
G	Chloroprene rubber
F	Fluoro rubber

B Bore size (mm)	
06	ø6
10	ø10
16	ø16
20	ø20
25	ø25
32	ø32

C Actuation	
D	Double acting
S	Single acting / normally open (ø32 cannot be selected)
C	Single acting / normally closed (ø32 cannot be selected)

D Finger	
1	Basic

E Grip center reference, high precision positioning hole	
N	None
L	Refer to the figure at left.
R	

F Switch model No.						
Blank		No switch, with F type switch rail				
N		No switch, no switch rail				
A		No switch, with T type switch rail (ø32 only)				
Axial lead wire	Radial lead wire	Contact	Voltage		Display	Lead wire
			AC	DC		
-	F2S*	Proximity		●	1-color display	2-wire
-	F3S*			●		3-wire
F2H*	F2V*			●		2-wire
F3H*	F3V*			●		3-wire
F3PH*	F3PV*			●		3-wire
T2H*	T2V*			●		2-wire
T2HR3	T2VR3			●		2-wire
T3H*	T3V*			●		3-wire
T3PH*	T3PV*			●		3-wire

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

G Switch quantity	
R	1 on open side
H	1 on closed side
D	2

*1: If the one with the switch is selected, the product comes with a rail plate corresponding to the switch.

*2: Only ø32 can be selected with the T switch.

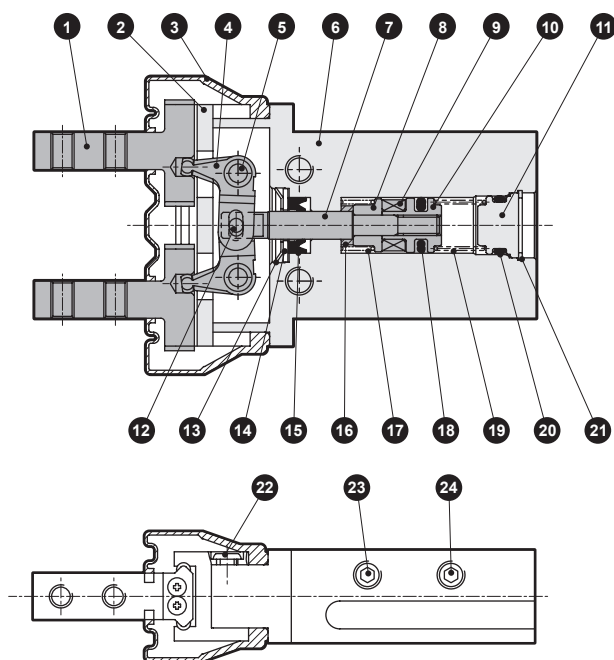
*3: Refer to page 70 for cylinder switch precautions.

Switch mounting availability table

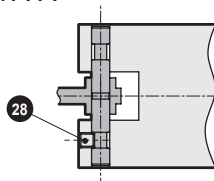
Model No.	Switch model No.	Side mounting	Rail mounting
LSH-G/F06	F2/3□	●	-
	F2/3S	-	●
LSH-G/F10	F2/3□	●	●
	F2/3S	●	●
LSH-G/F16	F2/3□	●	●
	F2/3S	●	●
LSH-G/F20	F2/3□	●	●
	F2/3S	●	●
LSH-G/F25	F2/3H·PH·PV	-	●
	F2/3V	●	●
	F2/3S	●	●
LSH-G/F32	F2/3□	●	●
	F2/3S	●	●
	T2/3□	-	●

Internal structure and parts list

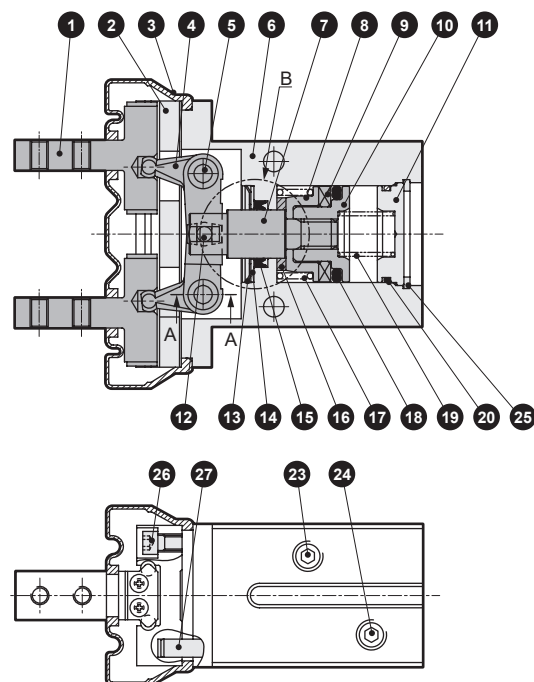
● LSH-G06 / LSH-F06



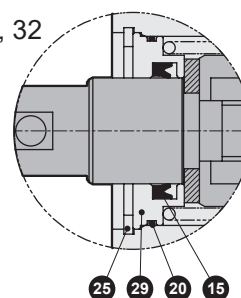
Cross-section A-A



● LSH-G10 to G25 / LSH-F10 to F25



B part ø20, 25, 32



Parts list

No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Finger	Stainless steel		16	Cushion rubber	Urethane rubber	
2	Linear guide	Stainless steel		17	Coil spring	Piano wire	Single acting C
3	Rubber cover	LSH-G : Chloroprene LSH-F : Fluorine		18	Piston packing	Nitrile rubber	
4	Lever	Stainless steel		19	Coil spring	Piano wire	Single acting S
5	Fulcrum axis	Steel		20	O-ring	Nitrile rubber	
6	Body	Aluminum alloy		21	C-snap ring	Steel	
7	Piston rod	Stainless steel		22	Pan head machine screw	Stainless steel	
8	Spring bracket	Aluminum alloy		23	Plug	Stainless steel	Single acting C
9	Magnet			24	Plug	Stainless steel	Single acting S
10	Piston	Aluminum alloy		25	C-snap ring	Stainless steel	
11	Head cover	Aluminum alloy		26	Hexagon socket head cap screw	Stainless steel	ø32 is steel
12	Operation shaft	Steel alloy		27	Pin	Steel	
13	CR ring	Stainless steel		28	Hexagon socket set screw	Stainless steel	
14	Cap	Stainless steel		29	Rod metal	Aluminum alloy	
15	Rod packing	Nitrile rubber					

Repair parts list

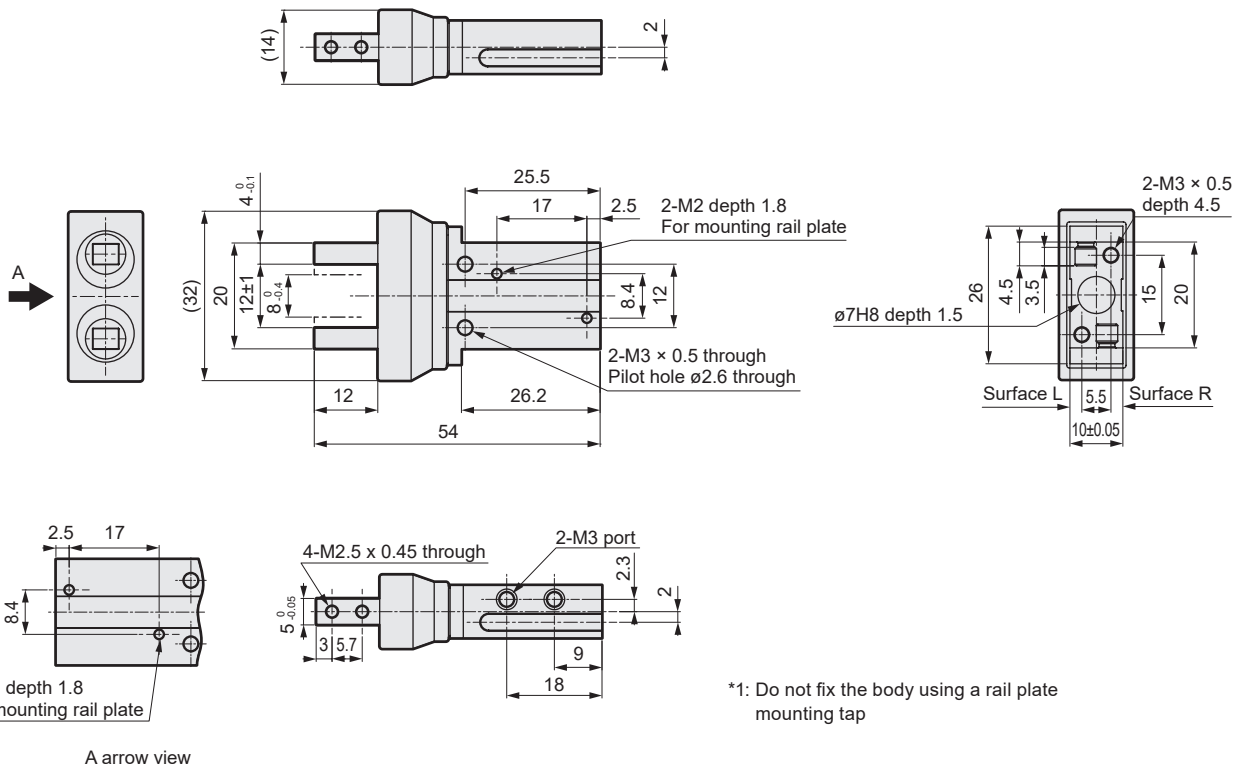
Bore size	Kit No.	Repair part No.	Rubber cover (part No. 3)		Rail plate kit No.		Description
			LSH-G Chloroprene	LSH-F Fluorine	For F type switch	For T type switch	
ø6	Cannot be disassembled	—	LSH-G06K	LSH-F06K	LSH-RPF-06-HP	—	Rail plate small screw
ø10	LSH-10K-HP	13 15 18 20	LSH-G10K	LSH-F10K	LSH-RPF-10-HP	—	
ø16	LSH-16K-HP		LSH-G16K	LSH-F16K	LSH-RPF-16-HP	—	
ø20	LSH-20K-HP	15 18 20	LSH-G20K	LSH-F20K	LSH-RPF-20-HP	—	
ø25	LSH-25K-HP		LSH-G25K	LSH-F25K	LSH-RPF-25-HP	—	
ø32	LSH-32K-HP		LSH-G32K	LSH-F32K	LSH-RPF-32-HP	LSH-RPT-32-HP	

LSH-G / LSH-F Series

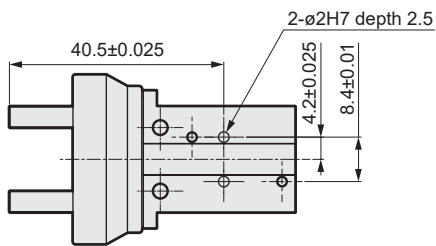
Dimensions (bore size: ø6)

● LSH-G06, LSH-F06

Related products	Safety precautions	Cylinder switch precautions	Technical data	Model selection	LSHM-G LSHM-F		LSHM-A	LSHL-G LSHL-F		LSHL-A	LSH-G LSH-F		LSH-A		
					HP2 Series									HP1 Series	

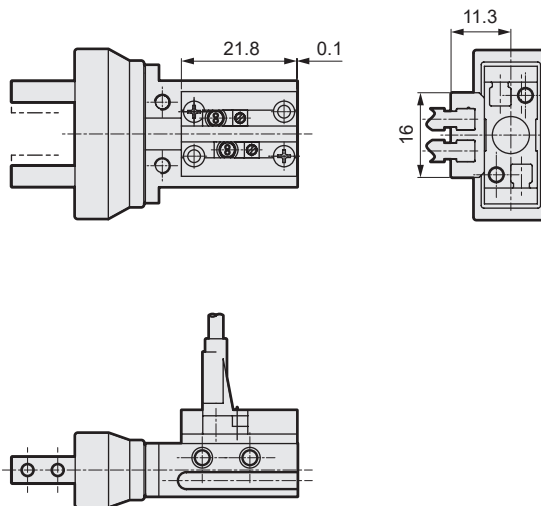


● LSH-G06*1R / L, LSH-F06*1R / L



*2: Pin holes are machined on surface R for LSH-G06*1R and L for LSH-G06*1L.
Refer to page 60 for the base line.

● With switch, rail assembly

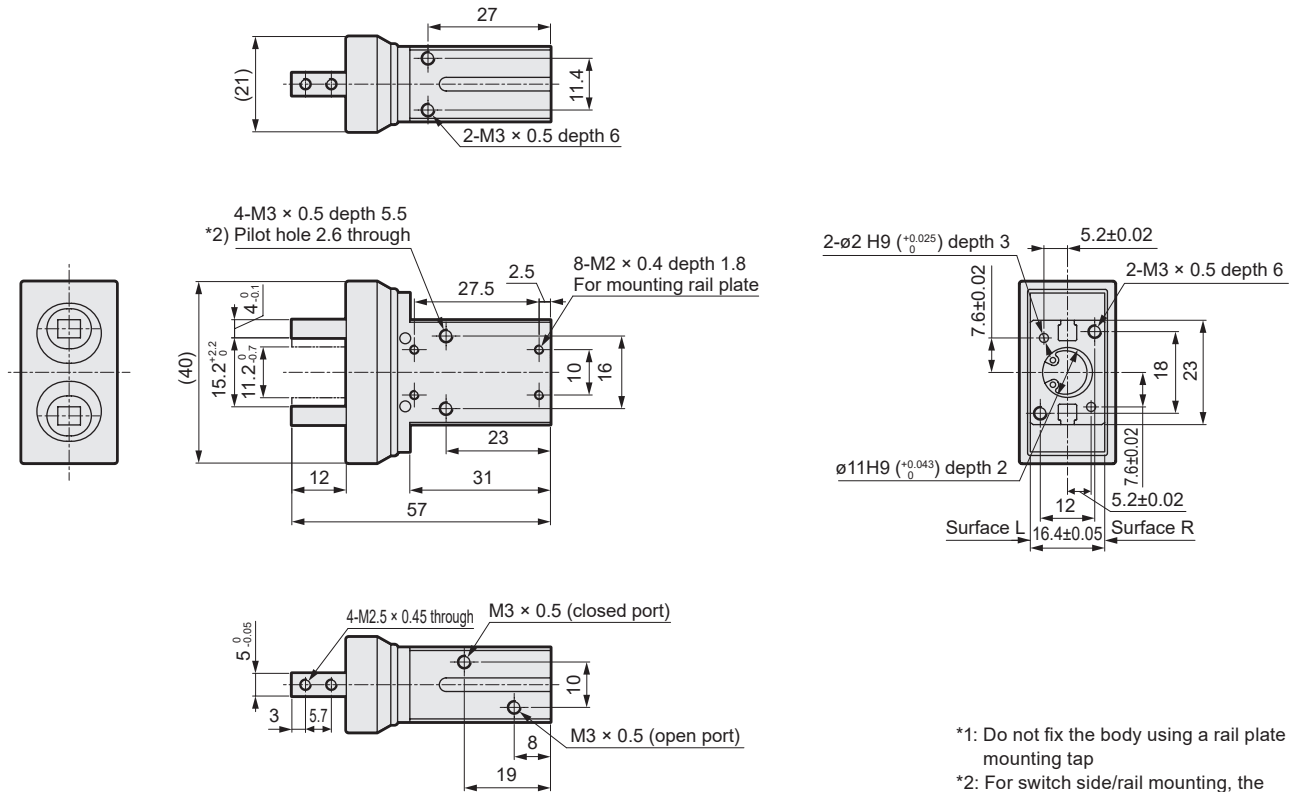


*3: Refer to Page 70 for cylinder switch precautions.

*4: Use fittings with an outer diameter of $\varnothing 9$ or less to prevent them from interfering with each other.

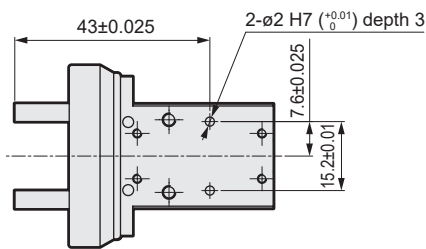
Dimensions (bore size: $\phi 10$)

● LSH-G10, LSH-F10



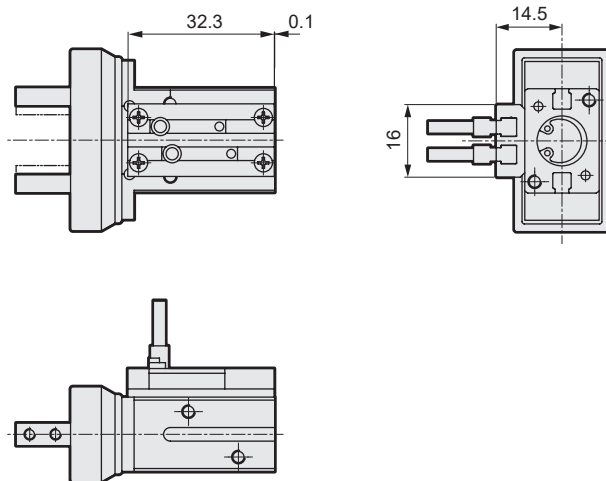
*1: Do not fix the body using a rail plate mounting tap
 *2: For switch side/rail mounting, the through hole cannot be used.

● LSH-G10*1R / L, LSH-F10*1R / L



*3: Pin holes are machined on surface R for LSH-G10*1R and L for LSH-G10*1L. Refer to page 60 for the base line.

● With switch, rail assembly



*4: Refer to Page 70 for cylinder switch precautions.

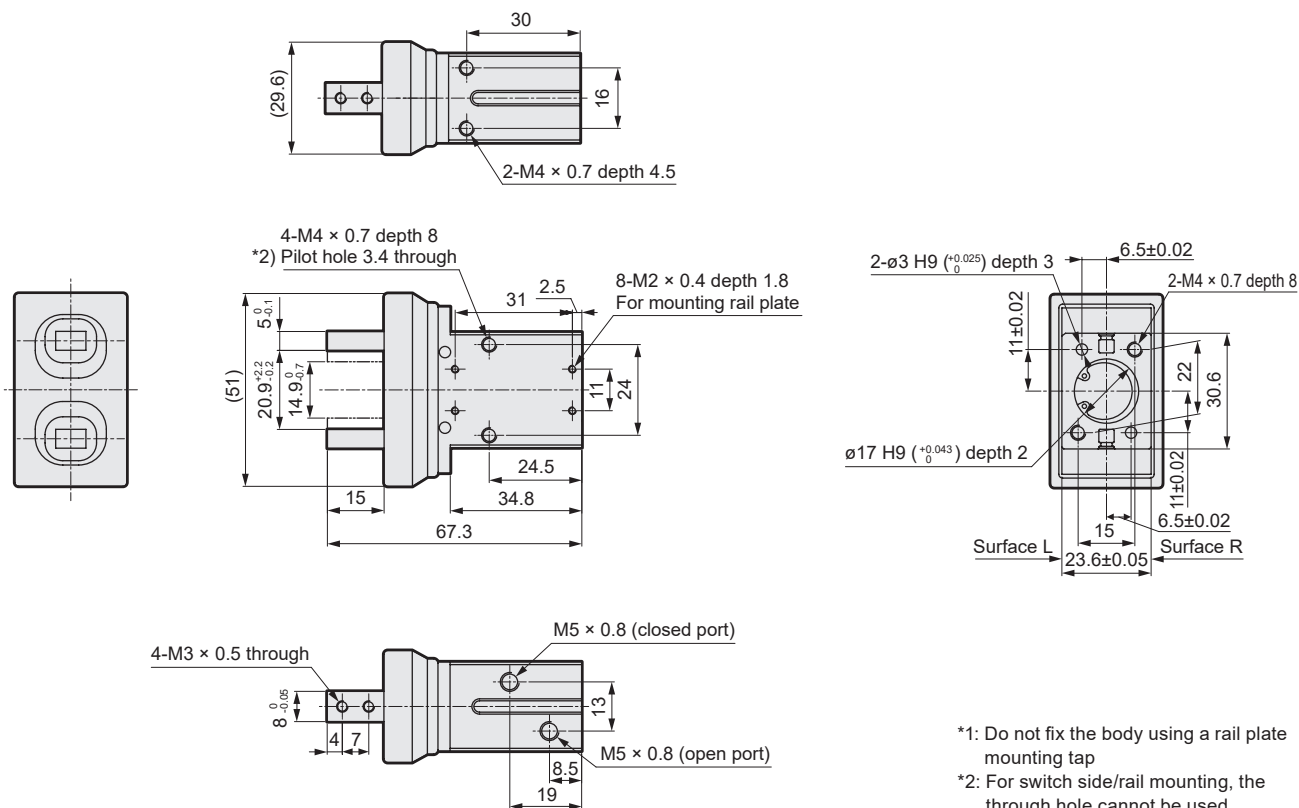
Model selection	Technical data	Cylinder switch precautions	Safety precautions	Related products
LSH-A	LSH-G	LSHMA-A	LSHM-G	
LSH-F	LSH-L-A	LSHM-F	LSHM-L	
HP1 Series	HP2 Series			

LSH-G / LSH-F Series

Dimensions (bore size: $\phi 16$)

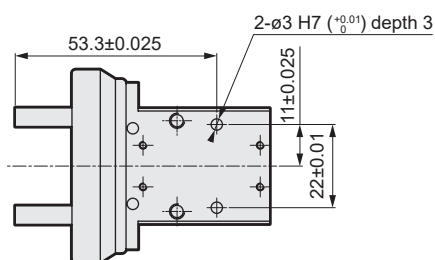
● LSH-G16, LSH-F16

Related products	Safety precautions	Cylinder switch precautions	Technical data	Model selection	HP2 Series			HP1 Series	
					LSHM-G LSHM-F	LSHM-A	LSHL-G LSHL-F	LSHL-A	LSH-G LSH-F

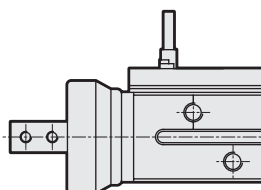
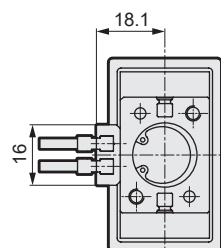
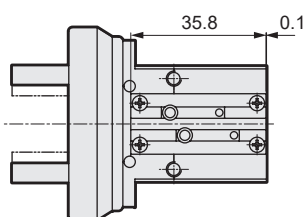


● LSH-G16*1R / L, LSH-F16*1R / L

● With switch, rail assembly



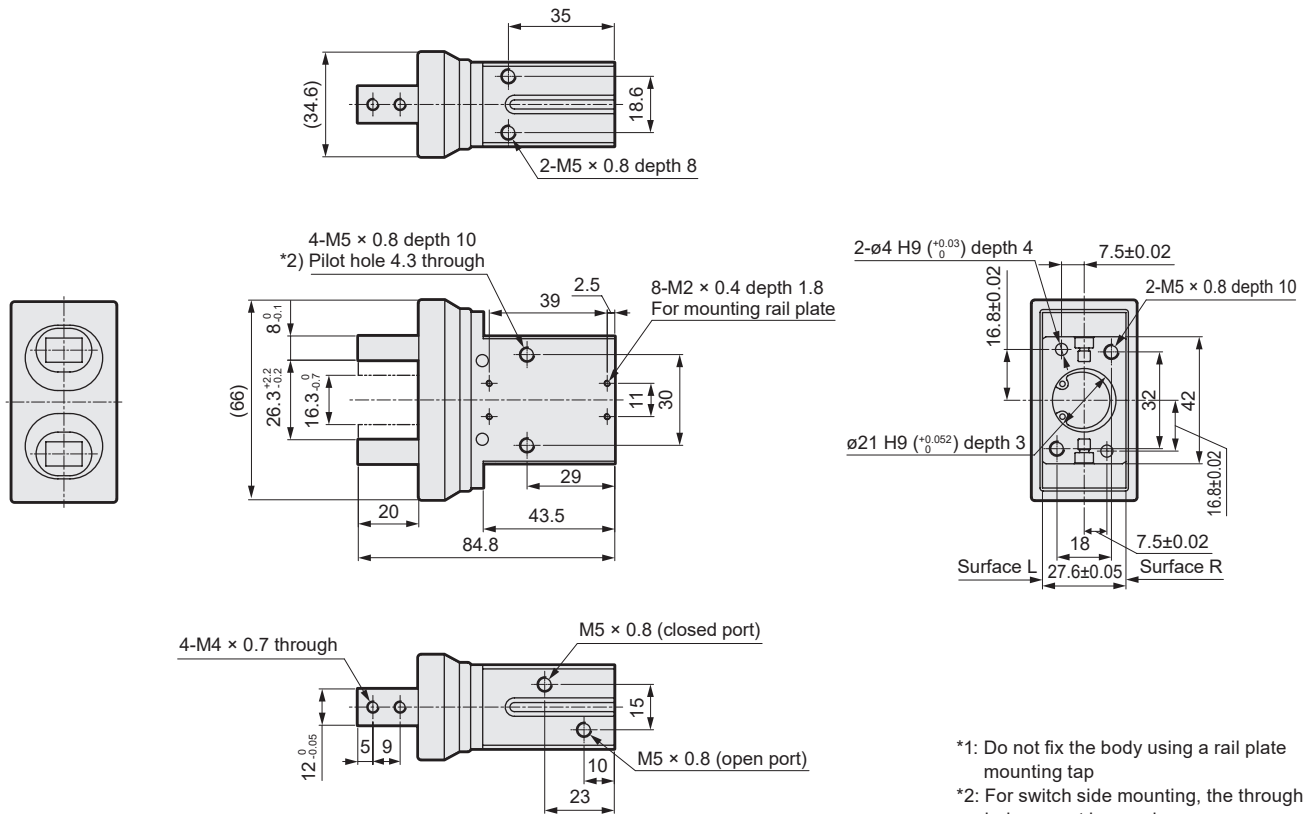
*3: Pin holes are machined on surface R for LSH-G16*1R and L for LSH-G16*1L. Refer to page 60 for the base line.



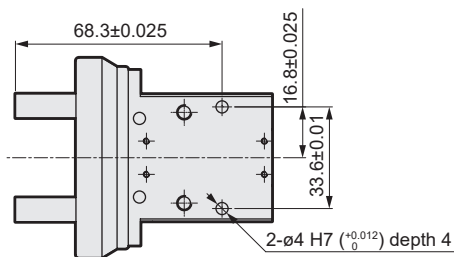
*4: Refer to Page 70 for cylinder switch precautions.

Dimensions (bore size: $\varnothing 20$)

● LSH-G20, LSH-F20

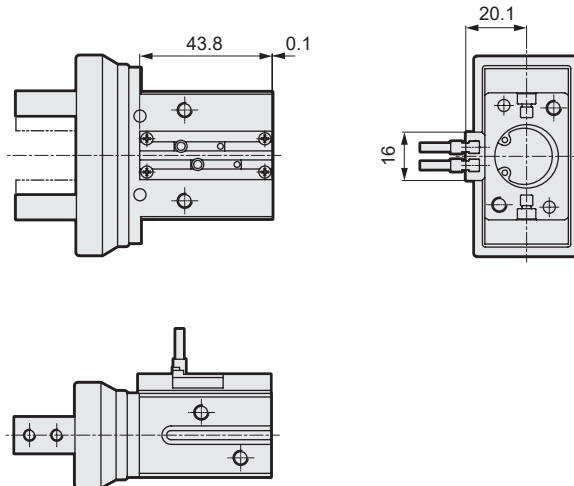


● LSH-G20*1R / L, LSH-F20*1R / L



*3: Pin holes are machined on surface R for LSH-G20*1R and L for LSH-G20*1L. Refer to page 60 for the base line.

● With switch, rail assembly



*4: Refer to Page 70 for cylinder switch precautions.

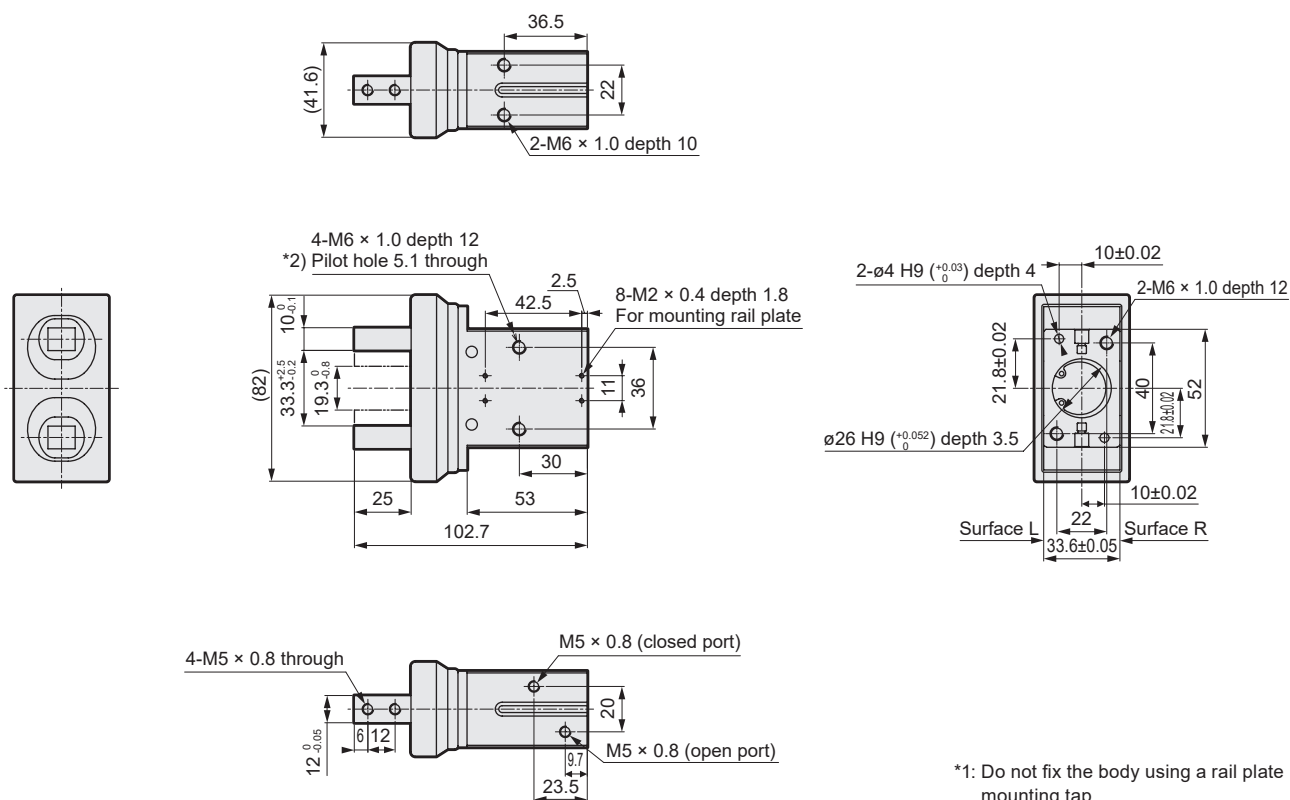
LSH-A	LSH-G	LSH-L-A	LSH-M-A	Model selection	Technical data	Cylinder switch precautions	Safety precautions	Related products
LSH-F	LSH-F	LSH-L-F	LSH-M-F	HP1 Series	HP2 Series			

LSH-G / LSH-F Series

Dimensions (bore size: $\varnothing 25$)

● LSH-G25, LSH-F25

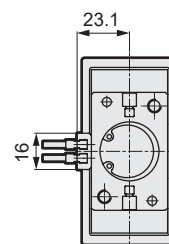
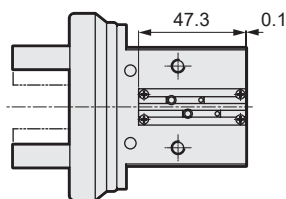
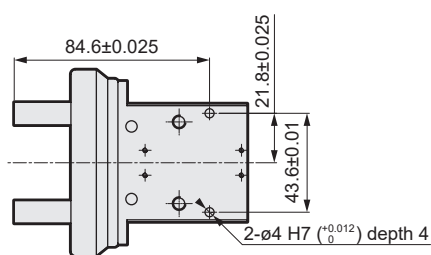
LSH-A	LSH-G LSH-F	LSH-A	LSH-G LSH-F	LSH-A	LSH-G LSH-F	Model selection
HP1 Series						Technical data
HP2 Series						Cylinder switch precautions
Safety precautions						Related products



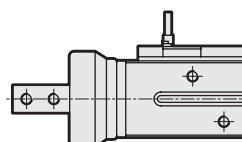
- *1: Do not fix the body using a rail plate mounting tap
 *2: For switch side mounting, the through hole cannot be used.

● LSH-G25*1R / L, LSH-F25*1R / L

● With switch, rail assembly



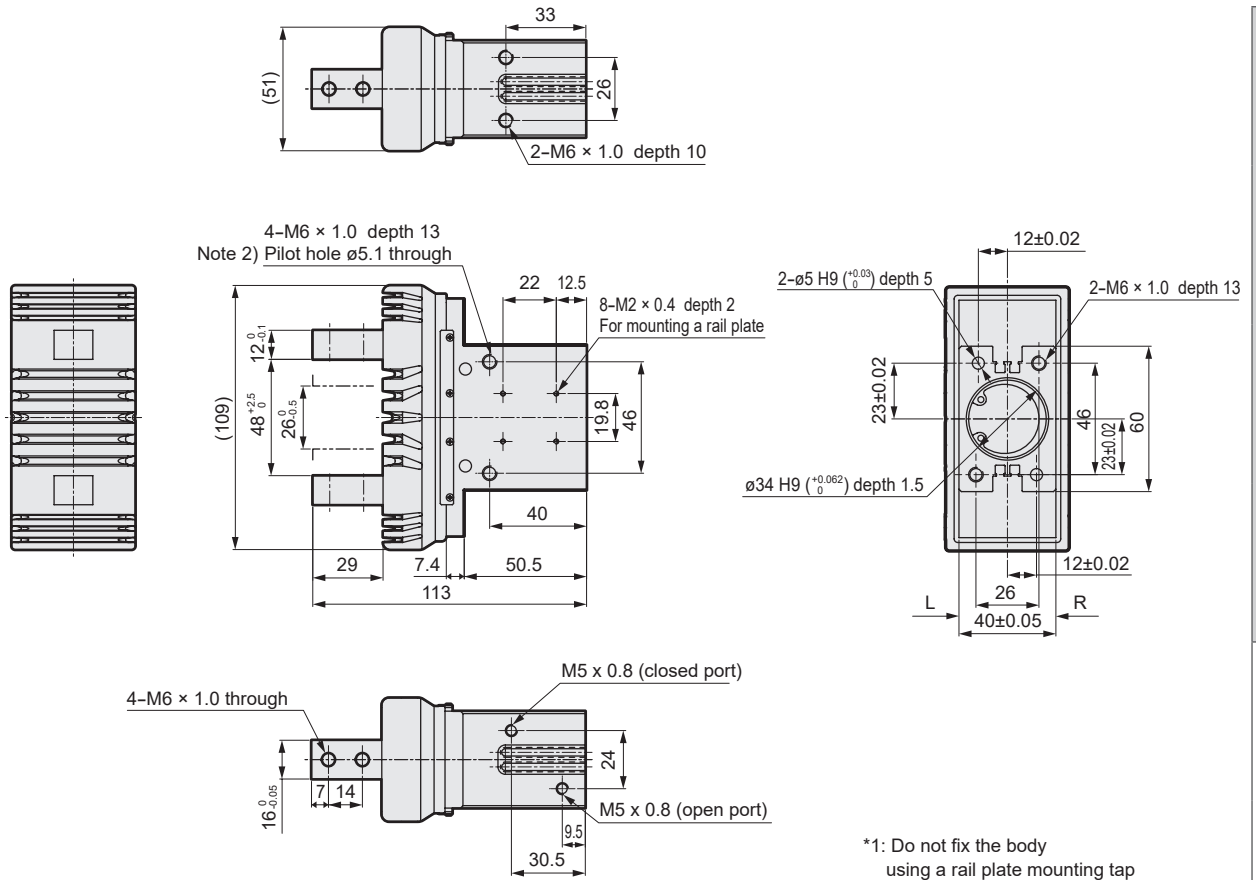
- *3: Positioning holes are machined on surface R for LSH-G25*1R and L for LSH-G25*1L. Refer to page 60 for the base line.



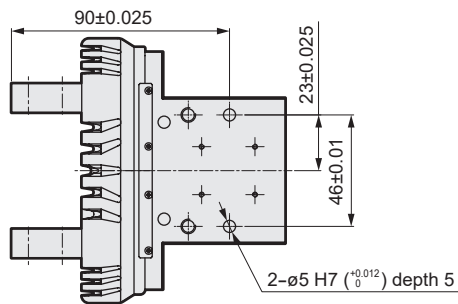
- *4: Refer to Page 70 for cylinder switch precautions.

Dimensions (bore size: $\phi 32$)

● LSH-G32, LSH-F32

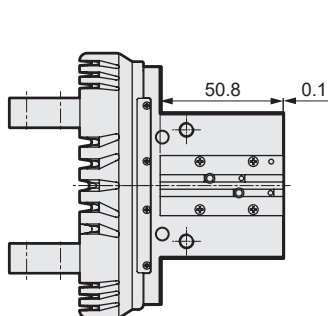


● LSH-G32D1R/L, LSH-F32D1R/L

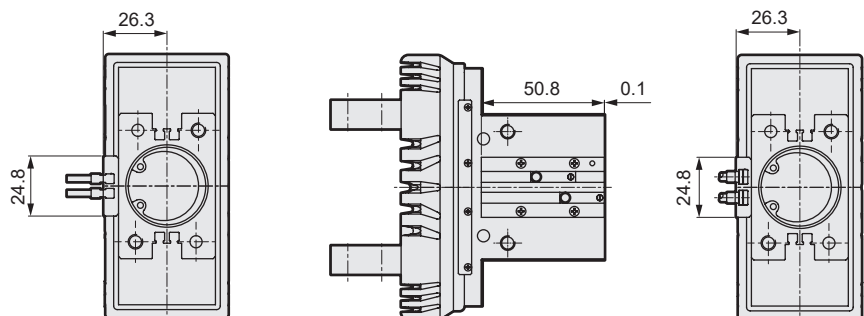


*2: Positioning holes are machined on surface R for LSH-G32D1R and L for LSH-G32D1L. Refer to page 60 for the base line.

● With F type switch, rail mounting



● With T type switch, rail mounting



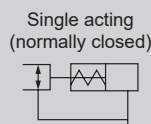
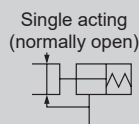
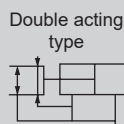
*3: Refer to page 70 for cylinder switch precautions.



Linear Slide Hand long stroke Double acting/single acting

LSHL-A Series

● Operating stroke length: 8, 12, 18, 22 mm



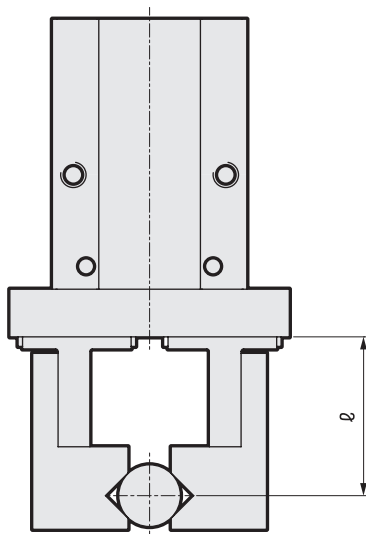
RoHS

Specifications

Item		LSHL-A			
Bore size mm		ø10	ø16	ø20	ø25
Actuation		Double acting			
Working fluid		Compressed air			
Max. working pressure MPa		0.7			
Min. working pressure MPa	Double acting type	0.2	0.1		
	Single acting	0.35	0.25		
Port size		M3	M5		
Ambient temperature °C		-10 to 60 (no freezing)			
Operating stroke length mm		8	12	18	22
Repeatability mm		±0.01			
Weight Double acting type (Single acting) kg	Finger OP: 1, 2, 3	0.065 (0.075)	0.155 (0.165)	0.315 (0.335)	0.54 (0.585)
	Finger OP: 4		0.16 (0.17)	0.32 (0.34)	0.545 (0.59)
Lubrication		Not required			

Gripping power

Unit: N



Bore size (mm)	Double acting	
	Open side	Closed side
ø10	17	11
ø16	45	34
ø20	66	42
ø25	104	65
Bore size (mm)	Single acting (normally open)	
		Closed side
ø10	—	7.1
ø16		27
ø20		33
ø25		50
Bore size (mm)	Single acting (normally closed)	
	Open side	
ø10	13	—
ø16	38	
ø20	57	
ø25	85	

* At supply pressure of 0.5 MPa, $l = 20$ mm, stroke center

Switch specifications

Item	Proximity 2-wire	Proximity 3-wire	Proximity 2-wire	Proximity 3-wire	
	F2S	F3S	F2H / F2V	F3H / F3V	F3PH / F3PV
Applications	Dedicated for programmable controller	For programmable controller, relay	Dedicated for programmable controller	For programmable controller, relay	
Output method	-	NPN output	-	NPN output	PNP output
Power supply voltage	-	10 to 28 VDC	-	10 to 28 VDC	4.5 to 28 VDC
Load voltage / current	10 to 30 VDC 5 to 20 mA	30 VDC, 50 mA or less	10 to 30 VDC 5 to 20 mA	30 VDC, 50 mA or less	
Display lamp	LED (Lit when ON)		Yellow LED (Lit when ON)		
Leakage current	1 mA or less	10 µA or less	1 mA or less	10 µA or less	
Impact resistance	980 m / s ²				
Weight	g 1 m:10 3 m:29				

*1: The F type switch uses a bend-resistant lead wire by default.

How to order

Without switch (built-in magnet for switch)

LSHL - A 10 D 1 R ————— **HP1**

With switch (built-in magnet for switch)

LSHL - A 10 D 1 R - F2H - D - **HP1**

A Rubber cover

B Bore size

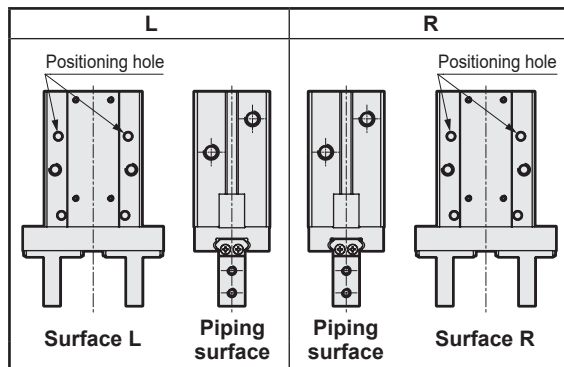
C Actuation

D Finger

E Grip center reference, high precision positioning hole

F Switch model No.

Grip center reference, high precision positioning hole position diagram



Refer to the Dimensions (page 24 to 27) and page 60 for details.

How to order switch

SW - F2H*

Switch model No.
(Item **F** above)

[Example of model No.]

LSHL-A10D1R-N-HP1

Model: Linear Slide Hand, long stroke

- A** Rubber cover : Without rubber cover
- B** Bore size : $\phi 10$
- C** Actuation : Double acting
- D** Finger : Basic
- E** Grip center reference, high precision positioning hole : R
- F** Switch model No. : Without switch or rail plate

Code		Description				
A Rubber cover						
A		Without rubber cover				
B Bore size (mm)						
10		ø10				
16		ø16				
20		ø20				
25		ø25				
C Actuation						
D		Double acting				
S		Single acting/normally open				
C		Single acting/normally closed				
D Finger						
1		Basic				
2		Side tap				
3		Through hole				
4		Flat				
E Grip center reference, high precision positioning hole						
N		None				
L		Refer to the figure at left.				
R						
F Switch model No.						
Blank		Without switch, rail plate attached				
N		Without switch or rail plate				
Axial lead wire	Radial lead wire	Contact	Voltage		Display	Lead wire
-	F2S*	Proximity	AC	DC	1-color display	2-wire
-	F3S*					3-wire
F2H*	F2V*					2-wire
F3H*	F3V*					3-wire
F3PH*	F3PV*					3-wire
* Lead wire length						
Blank		1 m (standard)				
3		3 m (option)				
G Switch quantity						
R		1 on open side				
H		1 on closed side				
D		2				

*1: When selecting "With switch", a rail plate is attached.

*2: Refer to page 67 for cylinder switch precautions.

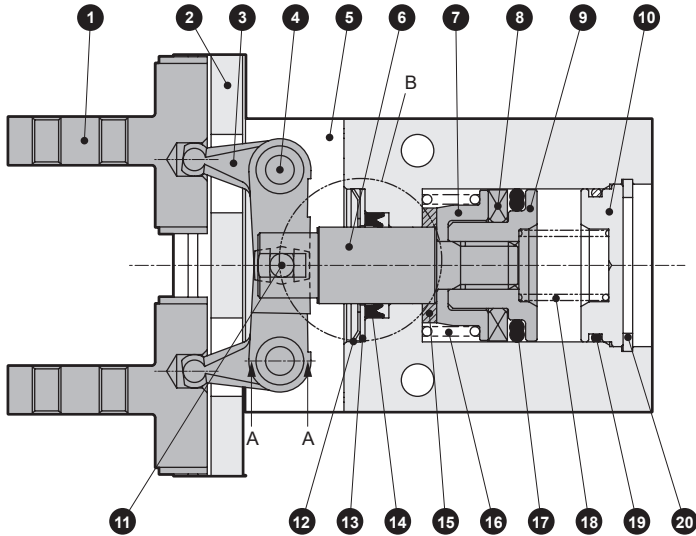
Switch mounting availability table

Model No.	Switch model No.	Side mounting	Rail mounting
LSHL-A10	F2/3□	●	●
	F2/3S	●	●
LSHL-A16	F2/3□	●	●
	F2/3S	●	●
LSHL-A20	F2/3□	●	●
	F2/3S	●	●
LSHL-A25	F2/3□	●	●
	F2/3S	●	●

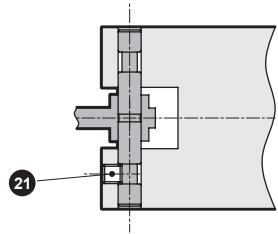
Internal structure and parts list

● LSHL-A10 to 25

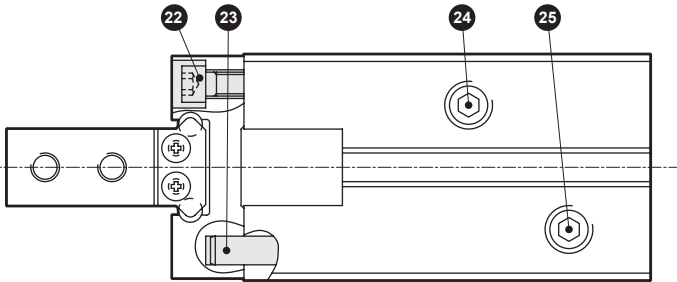
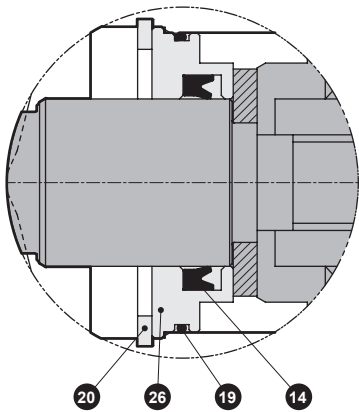
LSH-A	HP1 Series
LSH-G LSH-F	
LSHL-A	
LSHL-G LSHL-F	
LSHM-A	HP2 Series
LSHM-G LSHM-F	



Cross-section A-A



B part ø20, 25



Parts list

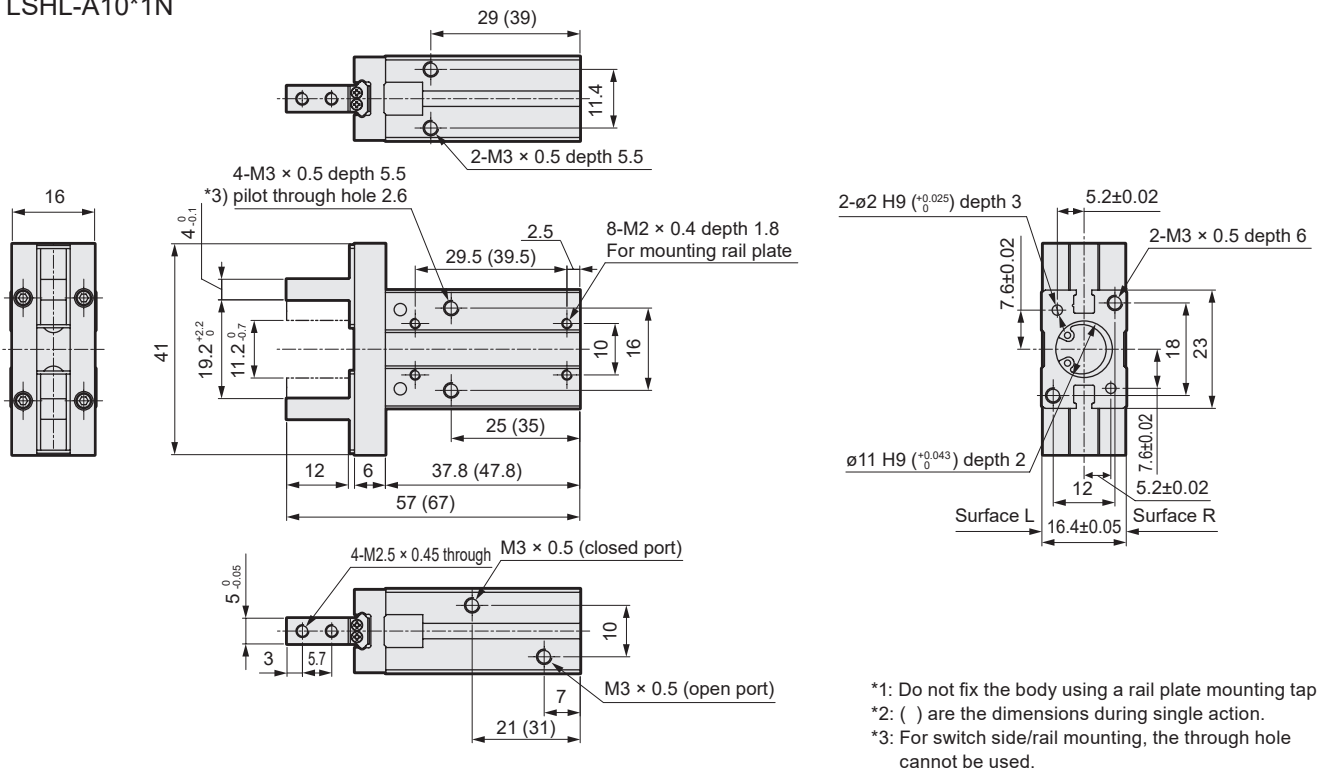
No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Finger	Stainless steel		14	Rod packing	Nitrile rubber	
2	Linear guide	Stainless steel		15	Cushion rubber	Urethane rubber	
3	Lever	Stainless steel		16	Cylindrical spring	Piano wire	Single acting C
4	Fulcrum axis	Steel		17	Piston packing	Nitrile rubber	
5	Body	Aluminum alloy		18	Cylindrical spring	Piano wire	Single acting S
6	Piston rod	Stainless steel		19	O-ring	Nitrile rubber	
7	Spring bracket	Aluminum alloy		20	C-snap ring	Stainless steel	
8	Magnet			21	Hexagon socket set screw	Stainless steel	
9	Piston	Aluminum alloy		22	Hexagon socket head cap screw	Stainless steel	
10	Head cover	Aluminum alloy		23	Pin	Steel	
11	Operation shaft	Steel alloy		24	Plug	Stainless steel	Single acting C
12	CR ring	Stainless steel		25	Plug	Stainless steel	Single acting S
13	Cap	Stainless steel		26	Rod metal	Aluminum alloy	

Repair parts list

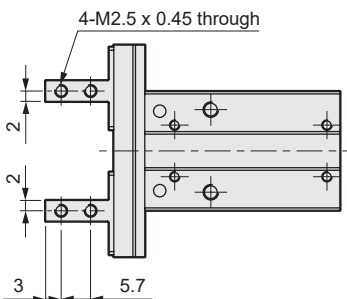
Bore size	Kit No.	Repair part No.	Rail plate kit No.		
			For double acting	For single acting	Description
ø10	LSHL-10K-HP	12 14 17 19	LSHL-RPF-10-HP	LSHL-RPF2-10-HP	Rail plate small screw
ø16	LSHL-16K-HP		LSHL-RPF-16-HP		
ø20	LSH-20K-HP	14 17 19	LSHL-RPF-20-HP		
ø25	LSH-25K-HP		LSHL-RPF-25-HP		

Dimensions (bore size: ø10)

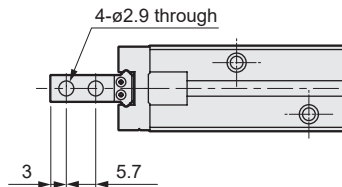
● LSHL-A10*1N



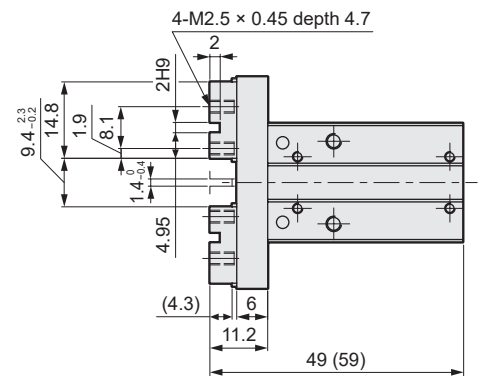
● LSHL-A10*2N



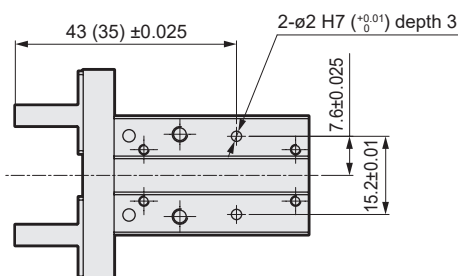
● LSHL-A10*3N



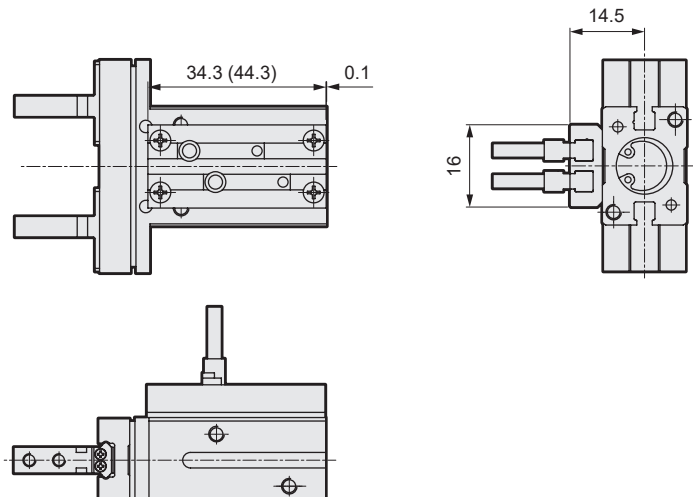
● LSHL-A10*4N



● LSHL-A10**R / L



- With switch, rail assembly



*4: Pin holes are machined on surface R for LSHL-A10D1R and L for LSHL-A10D1L. Refer to page 60 for the base line.

*5: The dimensions in parentheses are the dimensions for LSHL-A10*4.

*6: () are the dimensions during single action.

*7: Refer to Page 71 for cylinder switch precautions.

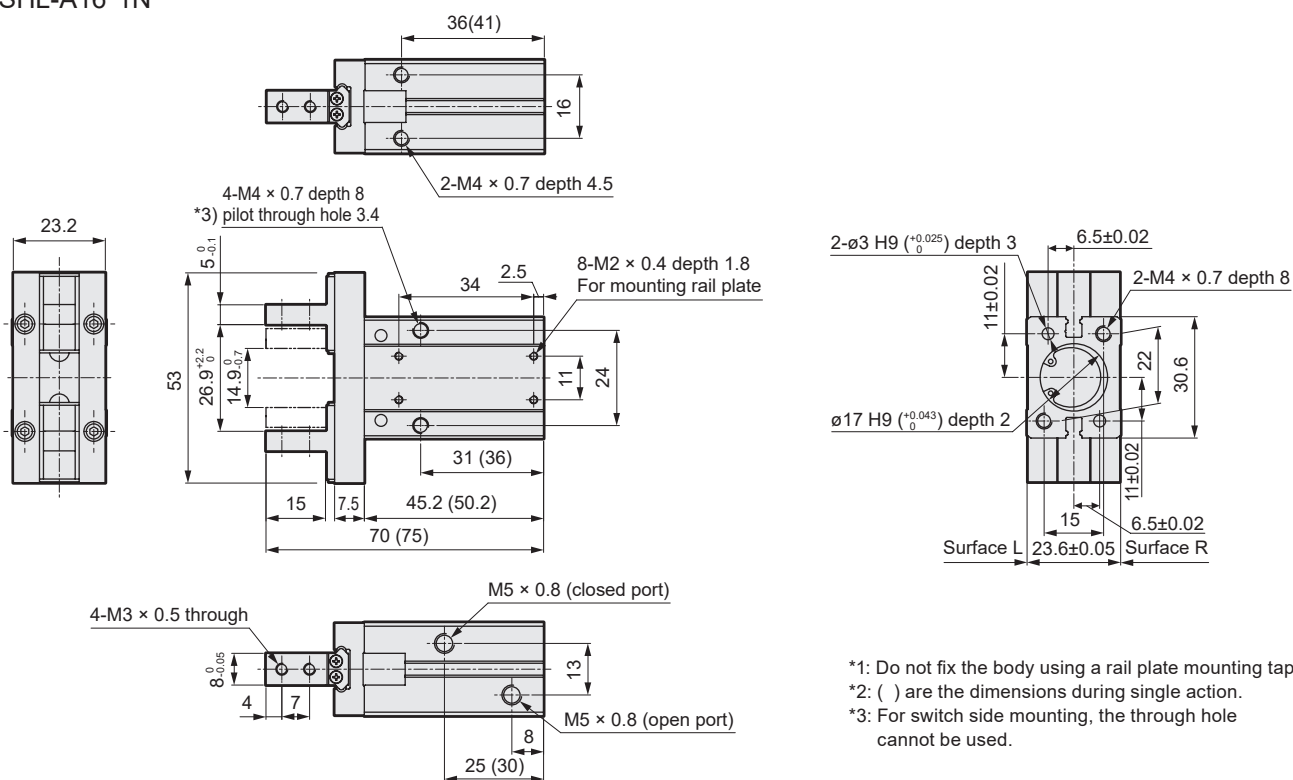
		HP1 Series		HP2 Series		Model selection	Technical data	Cylinder switch precautions	Safety precautions	Related products
LSH-A	LSH-G LSH-F	LSHL-A	LSHL-G LSHL-F	LSHM-A	LSHM-G LSHM-F					

LSHL-A Series

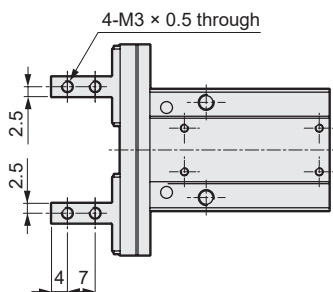
Dimensions (bore size: $\varnothing 16$)

● LSHL-A16*1N

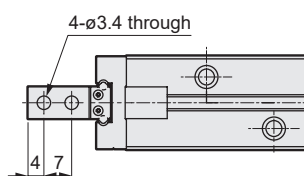
Related products	Safety precautions	Cylinder switch precautions	Technical data	Model selection	HP1 Series					
					HP2 Series					
					LSHM-G LSHM-F		LSHL-G LSHL-F		LSHL-A LSH-F	
					LSHM-A					
									LSH-A	



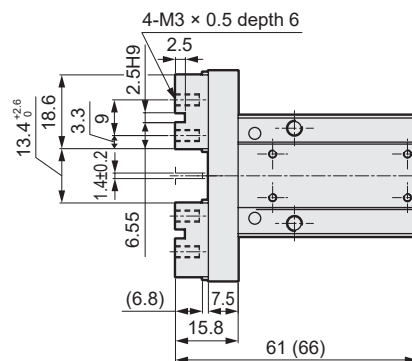
● LSHL-A16*2N



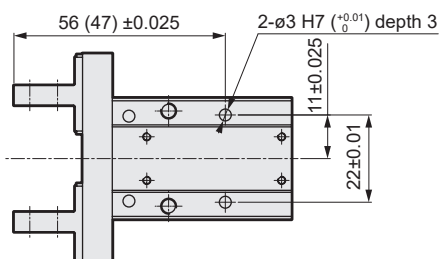
● LSHL-A16*3N



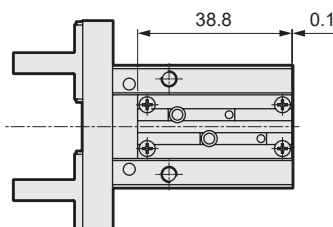
● LSHL-A16*4N



● LSHL-A16**R / L

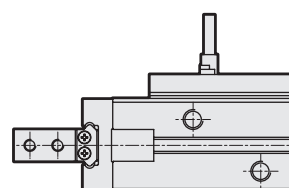


● With switch, rail assembly



*4: Pin holes are machined on surface R for LSHL-A16D1R and L for LSHL-A16D1L. Refer to page 60 for the base line.

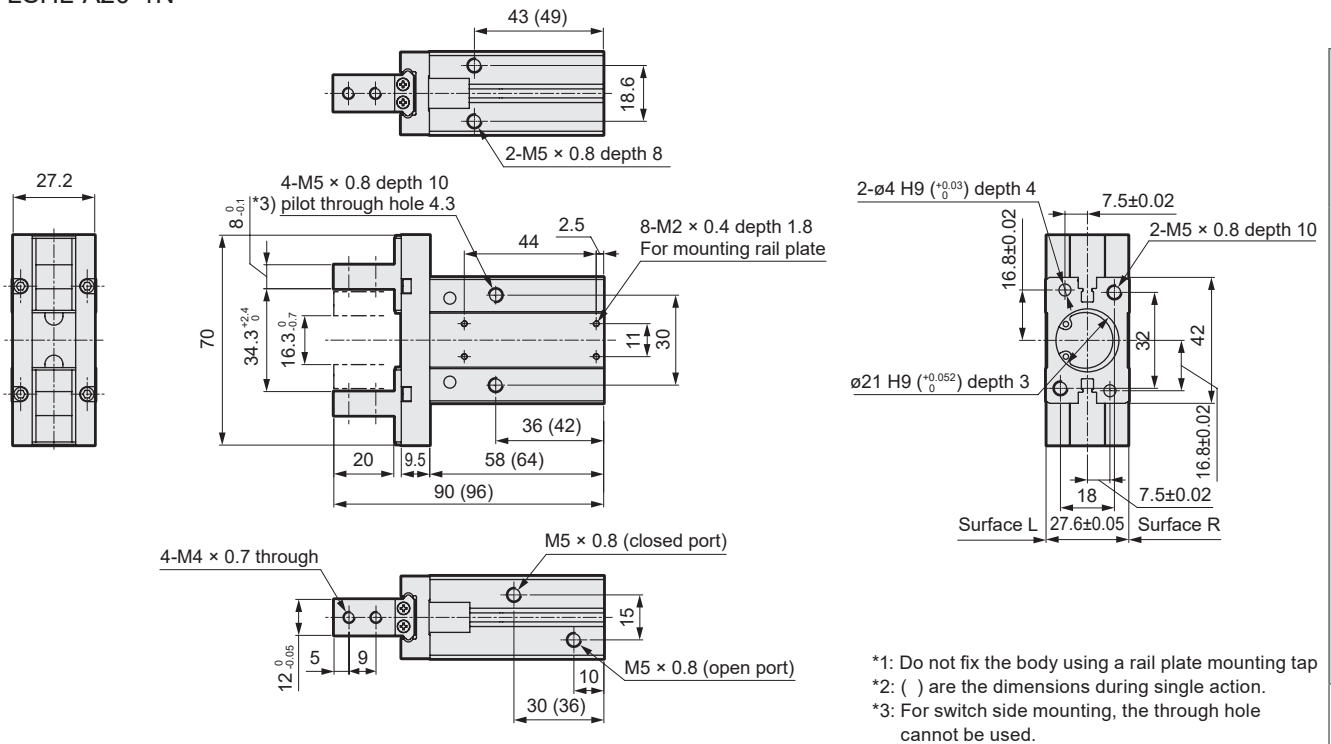
*5: The dimensions in parentheses are the dimensions for LSHL-A16*4.



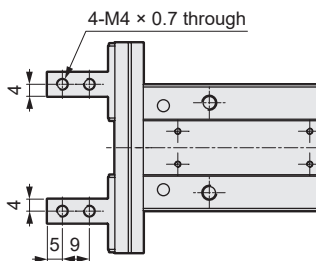
*6: Refer to Page 71 for cylinder switch precautions.

Dimensions (bore size: $\varnothing 20$)

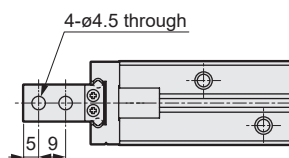
● LSHL-A20*1N



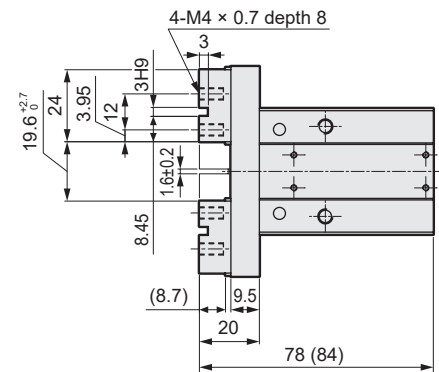
● LSHL-A20*2N



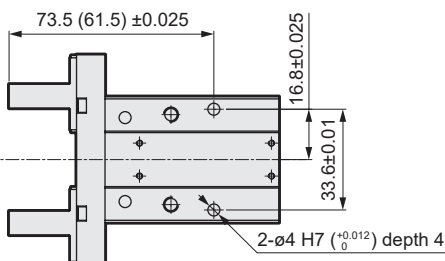
● LSHL-A20*3N



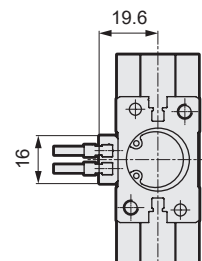
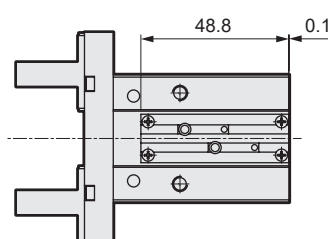
● LSHL-A20*4N



● LSHL-A20**R / L

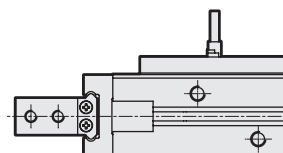


● With switch, rail assembly



*4: Pin holes are machined on surface R for LSHL-A20D1R and L for LSHL-A20D1L. Refer to page 60 for the base line.

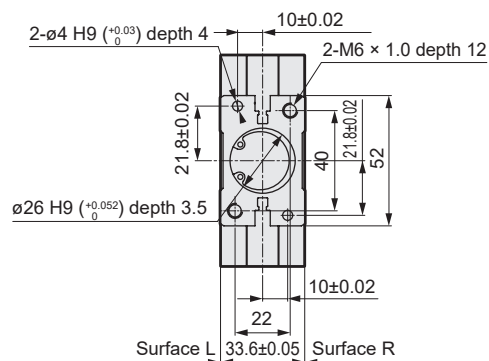
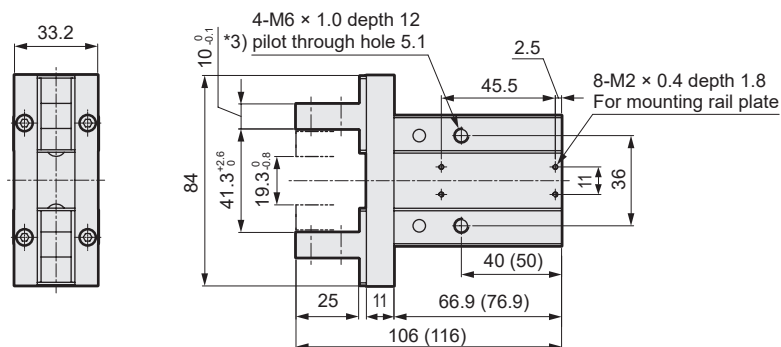
*5: The dimensions in parentheses are the dimensions for LSHL-A20*4.



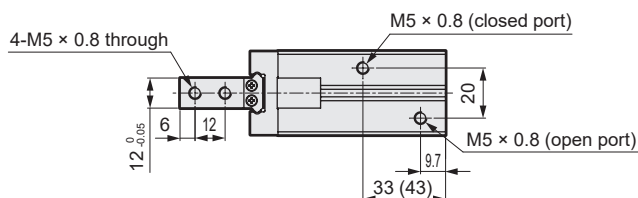
*6: Refer to Page 71 for cylinder switch precautions.

LSH-A	LSH-G	LSH-A	LSH-G	LSHMA-A	LSHM-G	Model selection	Technical data	Cylinder switch precautions	Safety precautions	Related products
	LSH-F		LSH-F		LSHM-F					
HP1 Series						HP2 Series				

Dimensions (bore size: ø25)

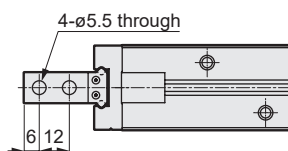
[illegible]

- *1: Do not fix the body using a rail plate mounting tap
- *2: () are the dimensions during single action.
- *3: For switch side mounting, the through hole cannot be used.



● LSHL-A25*2N

Technical drawing of the LSHL-A25*2N bracket. The drawing shows a side view of the bracket with a vertical mounting plate and a horizontal base plate. The mounting plate has two mounting holes, each with a diameter of 5 mm. The base plate has two mounting holes, each with a diameter of 5 mm. The distance between the centers of the mounting holes on the mounting plate is 6 mm, and the distance between the centers of the mounting holes on the base plate is 12 mm. The mounting plate is 4 mm thick. The base plate is 12 mm thick. The mounting plate is attached to the base plate with two screws, each with a diameter of 4 mm and a length of 0.8 mm. The mounting plate is also attached to the base plate with two screws, each with a diameter of 4 mm and a length of 0.8 mm. The mounting plate is also attached to the base plate with two screws, each with a diameter of 4 mm and a length of 0.8 mm.



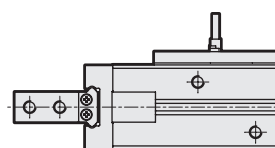
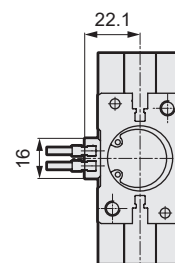
Technical drawing of a mechanical part, likely a bracket or support, showing dimensions and specifications. The part has a base plate with a central slot and a vertical support structure. Dimensions include overall width 91 (101), base thickness 11, and various internal features like holes and slots. A note specifies "4-M5 x 0.8 depth 10" for the mounting holes.

Technical drawing of a shaft and key assembly. The shaft has a diameter of 21.8 ± 0.025 mm. The keyway has a width of $87.9 (72.9) \pm 0.025$ mm. The key has a height of 43.6 ± 0.01 mm. The key is a 2-ø4 H7 ($+0.012/0$) depth 4 mm.

*4: Positioning holes are machined on surface R for LSHL-A25D1R and L for LSHL-A25D1L.
Refer to page 60 for the base line.

*5: The dimensions in parentheses are the dimensions for LSHL-A25*4.

Technical drawing of a shaft-hub assembly. The shaft has a diameter of 50.3 mm. The hub has a diameter of 0.1 mm. The drawing shows the shaft with a keyway and the hub with a keyway. The shaft is labeled with a diameter of 50.3 and the hub with a diameter of 0.1. The drawing also shows the keyway in the shaft and the keyway in the hub.



*6: Refer to Page 71 for cylinder switch precautions.

LSH-A	LSH-G LSH-F	LSHL-A	LSHL-G LSHL-F	HP1 Series		LSHM-A	LSHM-G LSHM-F	Model selection	Technical data	Cylinder switch precautions	Safety precautions	Related products
				HP2 Series								

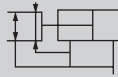


Linear Slide Hand, long stroke double acting with rubber cover

LSHL-G / LSHL-F Series

- Operating stroke length: 8, 12, 18 mm

Double acting

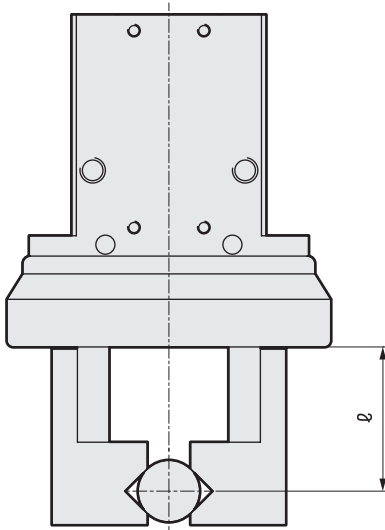


RoHS

Specifications

Item		LSHL-G, F		
Bore size	mm	ø10	ø16	ø20
Actuation		Double acting		
Working fluid		Compressed air		
Max. working pressure	MPa	0.7		
Min. working pressure	MPa	0.2	0.1	
Port size		M3	M5	
Ambient temperature	°C	-10 to 60°C (no freezing)		
Operating stroke length	mm	8	12	18
Repeatability	mm	±0.01		
Weight	kg	0.09	0.18	0.39
Lubrication		Not required		

Gripping power



Unit: N

Bore size (mm)	Double acting	
	Open side	Closed side
ø10	17	11
ø16	45	34
ø20	66	42

* At supply pressure of 0.5 MPa, $\ell = 20$ mm, stroke center

Switch specifications

Item	Proximity 2-wire	Proximity 3-wire	Proximity 2-wire	Proximity 3-wire	
	F2S	F3S	F2H / F2V	F3H/F3V	F3PH / F3PV
Applications	Dedicated for programmable controller	For programmable controller, relay	Dedicated for programmable controller	For programmable controller, relay	
Output method	-	NPN output	-	NPN output	PNP output
Power supply voltage	-	10 to 28 VDC	-	10 to 28 VDC	4.5 to 28 VDC
Load voltage / current	10 to 30 VDC 5 to 20 mA	30 VDC, 50 mA or less	10 to 30 VDC 5 to 20 mA	30 VDC, 50 mA or less	
Display lamp	LED (Lit when ON)		Yellow LED (Lit when ON)		
Leakage current	1 mA or less	10 μA or less	1 mA or less	10 μA or less	
Impact resistance	980 m / s ²				
Weight	g 1 m:10 3 m:29				

*1: The F type switch uses a bend-resistant lead wire by default.

How to order

Without switch (built-in magnet for switch)

LSHL - G 10 D 1 R ————— **HP1**

With switch (built-in magnet for switch)

LSHL - G 10 D 1 R - F2H - D - **HP1**

A Rubber cover

B Bore size

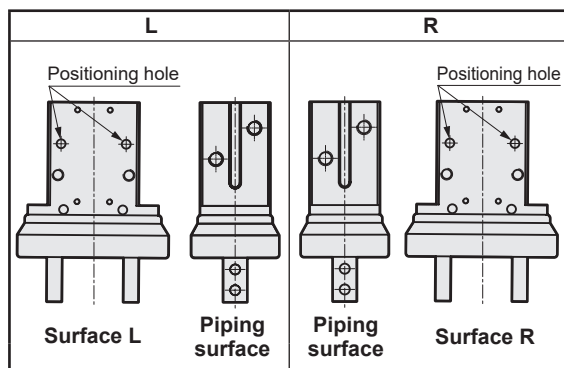
C Actuation

D Finger

E Grip center reference, high precision positioning hole

F Switch model No.

Grip center reference, high precision positioning hole position diagram



Refer to the Dimensions (pages 32 to 34) and page 60 for details.

G Switch quantity

Code		Description				
A Rubber cover						
G		Chloroprene rubber				
F		Fluoro rubber				
B Bore size (mm)						
10		ø10				
16		ø16				
20		ø20				
C Actuation						
D		Double acting				
D Finger						
1		Basic				
E Grip center reference, high precision positioning hole						
N		None				
L		Refer to the figure at left.				
R						
F Switch model No.						
Blank		Without switch, rail plate attached				
N		Without switch or rail plate				
Axial lead wire	Radial lead wire	Contact	Voltage		Display	Lead wire
			AC	DC		
F2S*	F2S*	Proximity		●	1-color display	2-wire
F3S*	F3S*			●		3-wire
F2H*	F2V*			●		2-wire
F3H*	F3V*			●		3-wire
F3PH*	F3PV*			●		3-wire
* Lead wire length						
Blank		1 m (standard)				
3		3 m (option)				
G Switch quantity						
R		1 on open side				
H		1 on closed side				
D		2				

*1: When selecting "With switch", a rail plate is attached.

*2: Refer to page 72 for cylinder switch precautions.

How to order switch

SW - F2H*

Switch model No.
(Item **F** above)

[Example of model No.]

LSHL-G10D1R-F2H-D-HP1

Model: Linear Slide Hand, long stroke

A Rubber cover : Chloroprene rubber

B Bore size : ø10

C Actuation : Double acting

D Finger : Basic

E Grip center reference, high : R
precision positioning hole

F Switch model No. : Proximity F2H, lead wire 1 m

G Switch quantity : 2

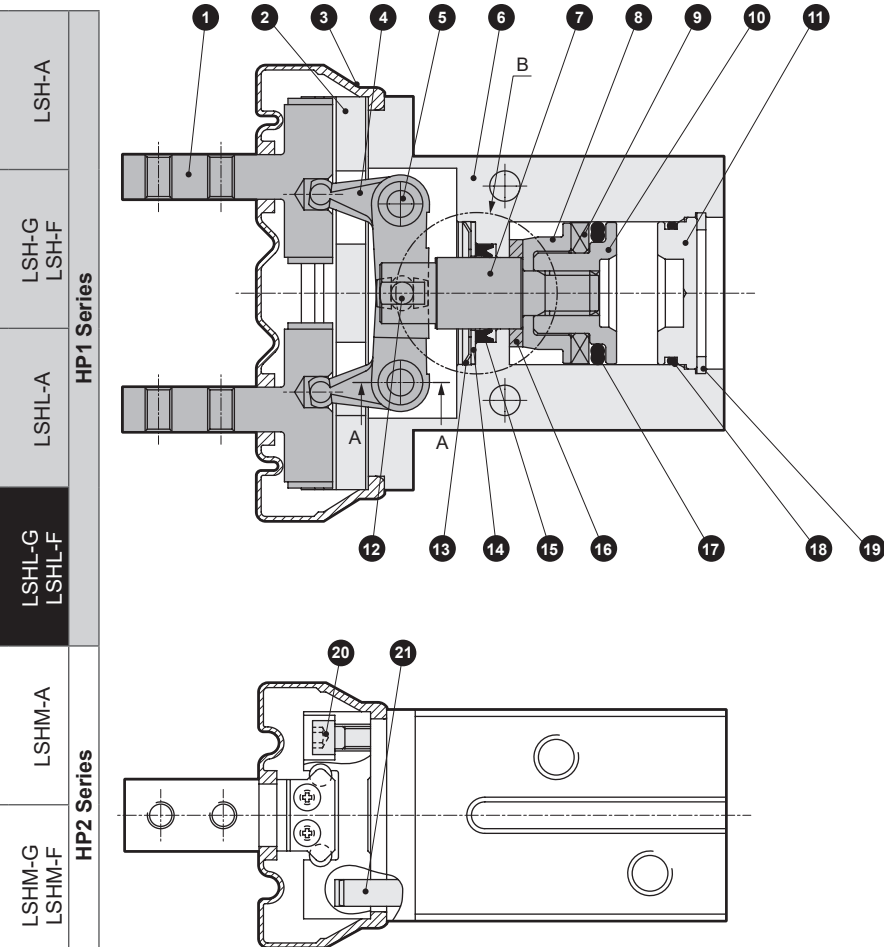
Switch mounting availability table

Model No.	Switch model No.	Side mounting	Side mounting
LSHL-G/F10	F2/3□	●	●
	F2/3S	●	●
LSHL-G/F16	F2/3□	●	●
	F2/3S	●	●
LSHL-G/F20	F2/3□	●	●
	F2/3S	●	●

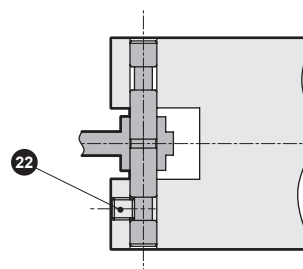
LSHL-G / LSHL-F Series

Internal structure and parts list

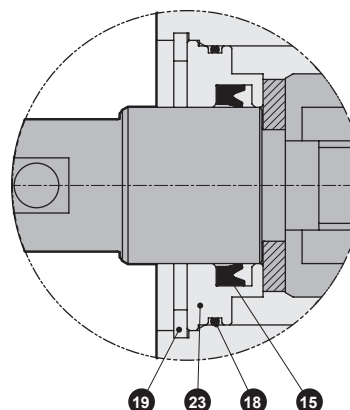
● LSHL-G10 to G20 / LSHL-F10 to F20



Cross-section A-A



B part ø20



Parts list

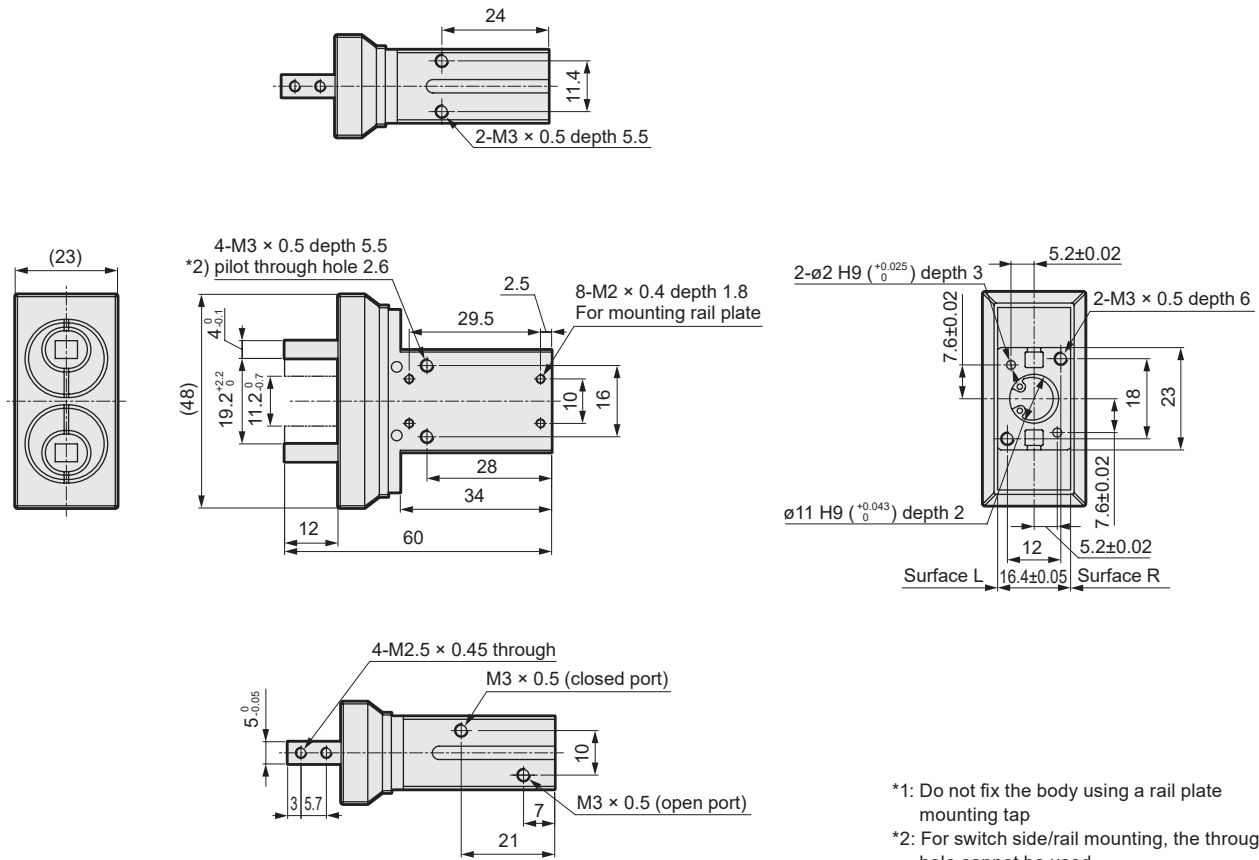
No.	Part name	Material	Remarks	No.	Part name	Material	Remarks
1	Finger	Stainless steel		13	CR ring	Stainless steel	
2	Linear guide	Stainless steel		14	Cap	Stainless steel	
3	Rubber cover	LSHL-G : Chloroprene LSHL-F : Fluorine		15	Rod packing	Nitrile rubber	
4	Lever	Stainless steel		16	Cushion rubber	Urethane rubber	
5	Fulcrum axis	Steel		17	Piston packing	Nitrile rubber	
6	Body	Aluminum alloy		18	O-ring	Nitrile rubber	
7	Piston rod	Stainless steel		19	C-snap ring	Stainless steel	
8	Spring bracket	Aluminum alloy		20	Hexagon socket head cap screw	Stainless steel	
9	Magnet			21	Pin	Steel	
10	Piston	Aluminum alloy		22	Hexagon socket set screw	Stainless steel	
11	Head cover	Aluminum alloy		23	Rod metal	Aluminum alloy	
12	Operation shaft	Steel alloy					

Repair parts list

Bore size (mm)	Kit No.	Repair part No.	Rubber cover (part No. 3)		Rail plate kit No.	Description
			LSHL-G Chloroprene	LSHL-F Fluorine		
ø10	LSHL-10K-HP	13 15 17 18	LSHL-G10K	LSHL-F10K	LSHL-RPF-10-HP	Rail plate small screw
ø16	LSHL-16K-HP	13 15 17 18	LSHL-G16K	LSHL-F16K	LSHL-RPF-16-HP	
ø20	LSH-20K-HP	15 17 18	LSHL-G20K	LSHL-F20K	LSHL-RPF-20-HP	

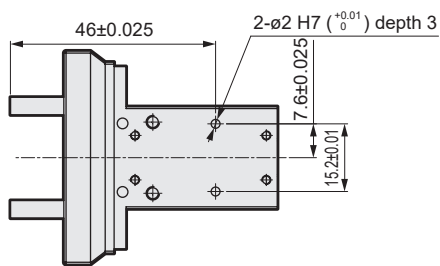
Dimensions (bore size: $\varnothing 10$)

● LSHL-G10D1N, LSHL-F10D1N



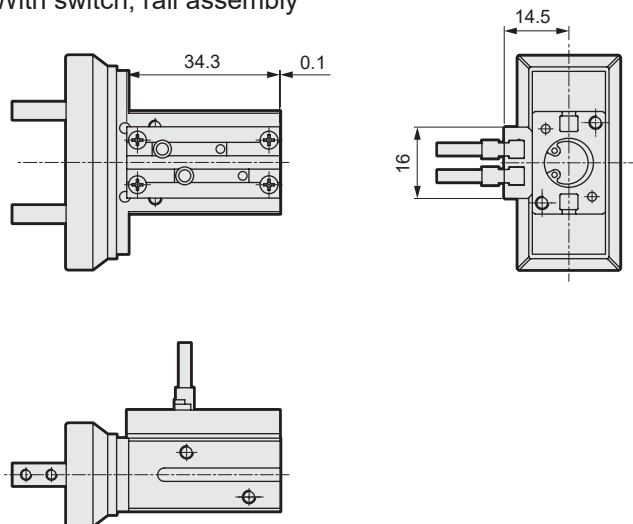
*1: Do not fix the body using a rail plate mounting tap
*2: For switch side/rail mounting, the through hole cannot be used.

● LSHL-G10D1R / L, LSHL-F10D1R / L



*3: Pin holes are machined on surface R for LSHL-G10D1R and L for LSHL-G10D1L. Refer to page 60 for the base line.

● With switch, rail assembly



*4: Refer to Page 72 for cylinder switch precautions.

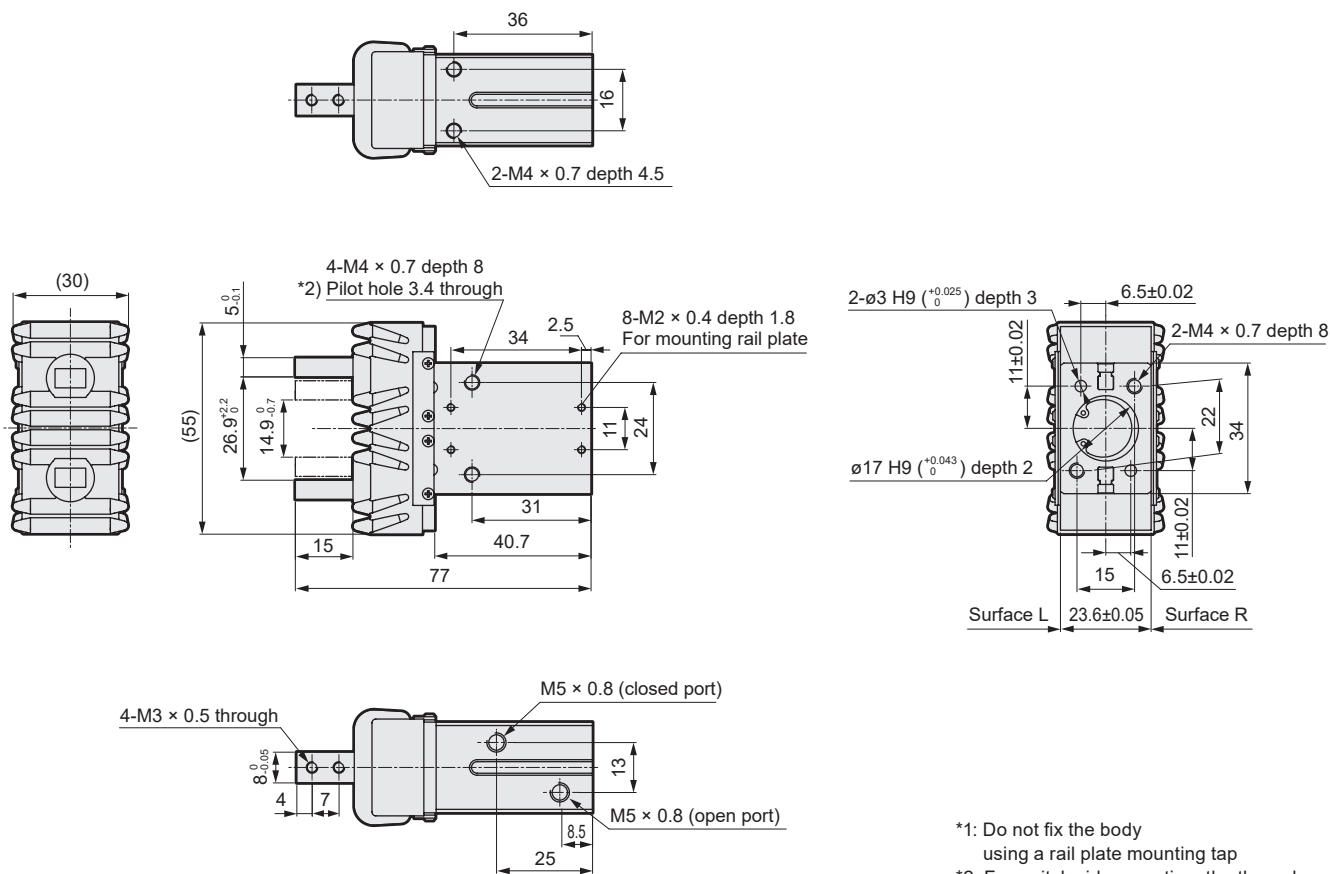
LSH-A	LSH-G LSH-F	LSHL-A	LSHL-G LSHL-F	LSHM-A	LSHM-G LSHM-F	Model selection	Technical data	Cylinder switch precautions	Safety precautions	Related products
HP1 Series				HP2 Series						

LSHL-G / LSHL-F Series

Dimensions (bore size: $\varnothing 16$)

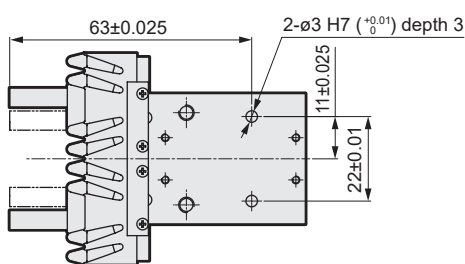
● LSHL-G16D1N, LSHL-F16D1N

Model selection	HP1 Series			
	LSH-A	LSH-G LSH-F	LSH-A	LSH-G LSH-F
	HP2 Series			
	LSHM-A	LSHM-G LSHM-F	LSHM-A	LSHM-G LSHM-F
Technical data	Model selection			
Cylinder switch precautions				
Safety precautions				
Related products				



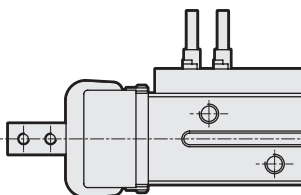
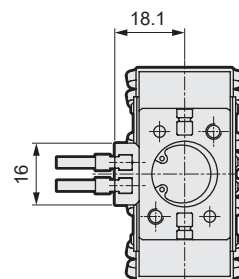
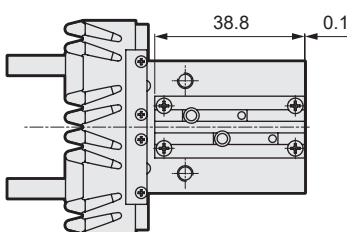
- *1: Do not fix the body using a rail plate mounting tap
- *2: For switch side mounting, the through hole cannot be used.

● LSHL-G16D1R / L, LSHL-F16D1R / L



- *3: Pin holes are machined on surface R for LSHL-G16D1R and L for LSHL-G16D1L. Refer to page 60 for the base line.

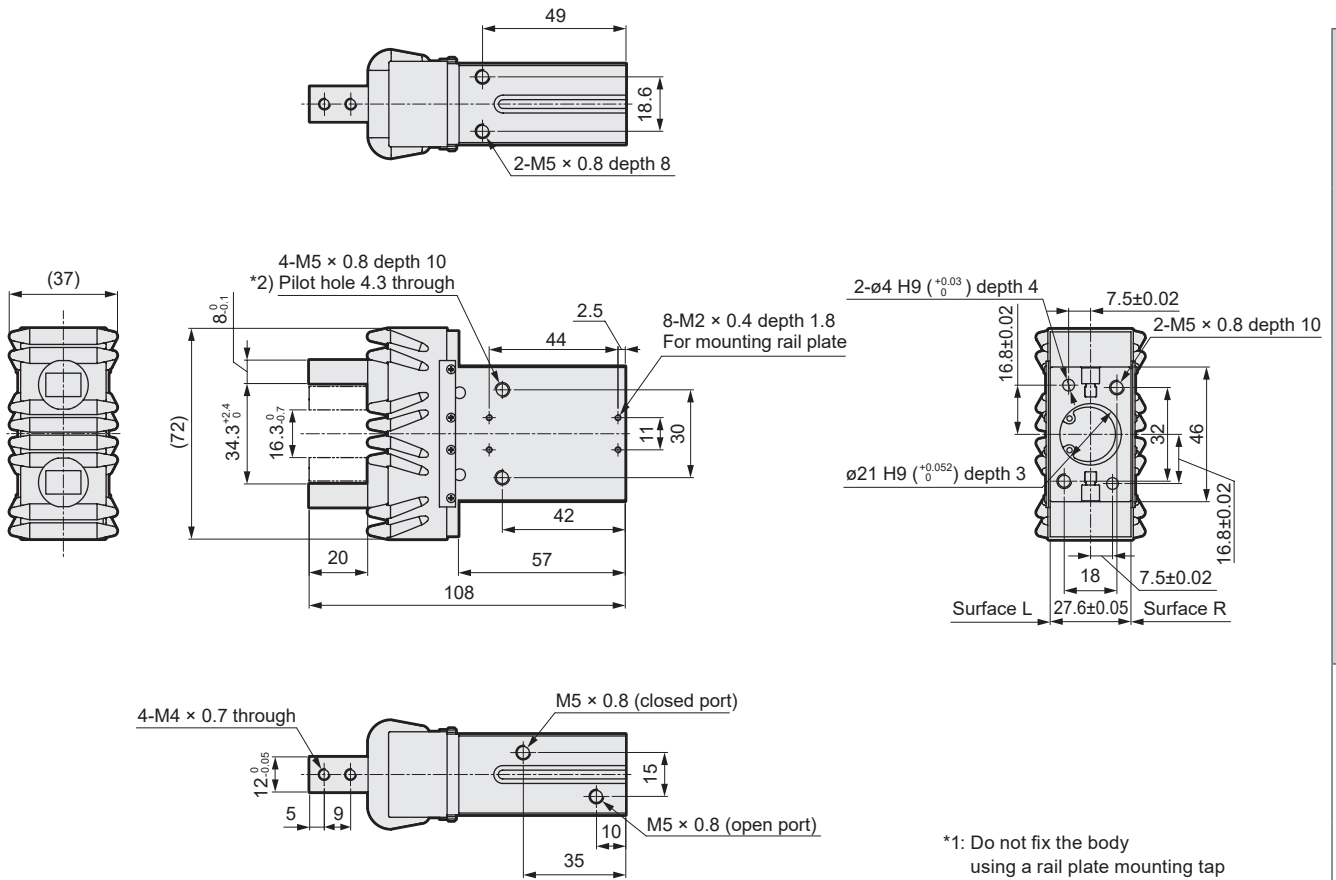
● With switch, rail assembly



- *4: Refer to Page 72 for cylinder switch precautions.

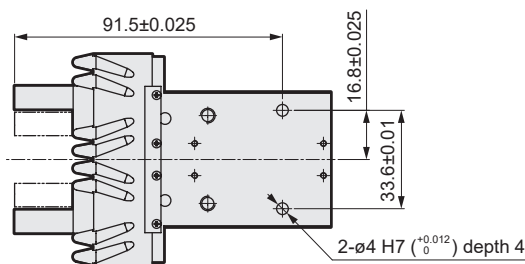
Dimensions (bore size: $\varnothing 20$)

● LSHL-G20D1N, LSHL-F20D1N



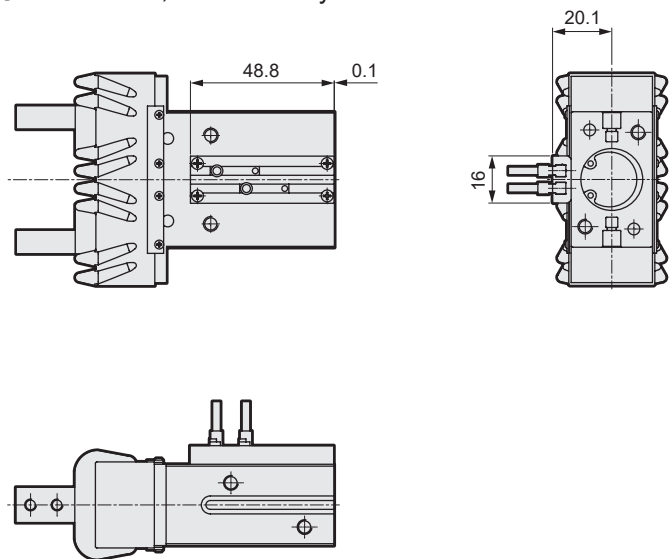
*1: Do not fix the body using a rail plate mounting tap
*2: For switch side mounting, the through hole cannot be used.

● LSHL-G20D1R / L, LSHL-F20D1R/L



*3: Pin holes are machined on surface R for LSHL-G20D1R and L for LSHL-G20D1L. Refer to page 60 for the base line.

● With switch, rail assembly



*4: Refer to Page 72 for cylinder switch precautions.

LSH-A	LSH-G	LSH-F	LSHL-A	LSHL-G	LSHL-F	LSHM-A	LSHM-G	LSHM-F	Model selection	Technical data	Cylinder switch precautions	Safety precautions	Related products