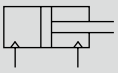


Linear slide cylinder Double acting/single rod

LCW Series

●Bore size: ø12/ø16/ø20

JIS symbol 

RoHS CAD

Specifications

Item		LCW		
Bore size	mm	ø12	ø16	ø20
Actuation		Double acting		
Working fluid		Compressed air		
Max. working pressure	MPa	0.7 (≈100 psi, 7 bar)		
Min. working pressure	MPa	0.15 (≈22 psi, 1.5 bar) (*1)		
Proof pressure	MPa	1.05 (≈150 psi, 10.5 bar)		
Ambient temperature	°C	-10 (14°F) to 60 (140°F) (no freezing) (*2)		
Port size		M5		
Working piston speed	mm/s	50 to 500 (*3)		
Cushion		Rubber cushion		
Lubrication		Not required (use turbine oil class 1 ISO VG32 if necessary for lubrication)		
Allowable absorbed energy	J	* Refer to Table 3 on page 243.		

*1: Use at a pressure of 0.4 MPa and over when using a metal stopper with rubber cushion in order to allow metal contact at the end of the stroke.
*2: Operate at -5 to 60°C when using a shock absorber stopper.
*3: Keep within 50 to 200 mm/s when using a metal stopper with rubber cushion.

Stroke length

Bore size (mm)	Standard stroke length (mm)
ø12	30/50/75
ø16	
ø20	

Note: Products with stroke lengths other than the above are not available.

Adjustable stroke range

(Unit: mm)

Bore size (mm)	Standard rubber cushion				Metal with rubber cushion				Shock absorber	
	Standard stroke length		Custom stroke compatible (S)		Standard stroke length (M)		Custom stroke compatible (MS)		Standard stroke length (A)	
	PUSH	PULL	PUSH	PULL	PUSH	PULL	PUSH	PULL	PUSH	PULL
ø12	10	10	28	10	9	11.5	28	11.5	4	6.5
ø16	7.5	7.5	25	7.5	6	8.5	25	8.5	1.5	3.5
ø20	8	8	25	8	7.5	12	25	12	12.5	17

Theoretical thrust table

(Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa						
		0.15	0.2	0.3	0.4	0.5	0.6	0.7
ø12	PUSH	17	23	34	45	57	68	79
	PULL	13	17	25	34	42	51	59
ø16	PUSH	30	40	60	80	101	121	141
	PULL	26	35	52	69	86	104	121
ø20	PUSH	47	63	94	126	157	188	220
	PULL	40	53	79	106	132	158	185

Switch specifications

Item	Reed 2-wire				Proximity 2-wire		Proximity 3-wire	
	T0H/T0V		T5H/T5V		T2H/T2V	T2WH/T2WV	T3H/T3V	T3WH/T3WV
Applications	For programmable controller, relay		For programmable controller, relay, IC circuit (without indicator lamp), serial connection		Dedicated for programmable controller		For programmable controller, relay	
Output method	-		-		-		NPN output	
Power supply voltage	-		-		-		10 to 28 VDC	
Load voltage	12/24 VDC	110 VAC	5/12/24 VDC	110 VAC	10 to 30 VDC	24 VDC ±10%	30 VDC or less	
Load current	5 to 50 mA	7 to 20 mA	50 mA or less	20 mA or less	5 to 20 mA		100 mA or less	50 mA or less
Indicator lamp	LED (Lit when ON)		Without indicator lamp		LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)	Red/green LED (Lit when ON)
Leakage current	0 mA				1 mA or less		10 µA or less	
Weight g	1 m:18 3 m:49 5 m:80							

Item	Proximity 2-wire	Proximity 3-wire	Proximity 2-wire		Proximity 3-wire	
	F2S	F3S	F2H/F2V	F2YH/F2YV	F3H/F3V	F3YH/F3YV
Applications	Dedicated for programmable controller	For programmable controller, relay	Dedicated for programmable controller		For programmable controller, relay	
Output method	-	NPN output	-		NPN output	
Power supply voltage	-	10 to 28 VDC	-		10 to 28 VDC	
Load voltage	10 to 30 VDC	30 VDC or less	10 to 30 VDC	24 VDC ±10%	30 VDC or less	
Load current	5 to 20 mA	50 mA or less	5 to 20 mA		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)	Red/green LED (Lit when ON)
Leakage current	1 mA or less	10 µA or less	1 mA or less		10 µA or less	
Weight g	1 m:10 3 m:29					

*1 : Refer to Ending Page 1 for detailed switch specifications and dimensions.
*2 : Switches other than the above models, such as switches with connectors, are also available. Refer to Ending Page 1.
*3 : The max. load current is 20 mA at 25°C. The current is lower than 20 mA if the operating ambient temperature around the switch is higher than 25°C. (5 to 10 mA at 60°C)
*4 : The F type switch uses a bend-resistant lead wire.

Cylinder weight

● Basic (Unit: g)

Bore size (mm)	Stroke length (mm)		
	30	50	75
ø12	240	370	380
ø16	380	390	600
ø20	690	720	1070

● Stopper additional part (Unit: g)

Bore size (mm)	Stopper code		
	S	MS	A
ø12	3	3	0
ø16	3	3	0
ø20	5	5	14

For stopper code M, the weight is the same as the basic.

How to order

● Without switch (built-in magnet for switch)

LCW - 16 - 30 - R — A

● With switch (built-in magnet for switch)

LCW - 16 - 30 - R - T2H - R - A

Ⓐ Bore size

Ⓑ Stroke length

Ⓒ Piping direction

Ⓓ Switch model No.

Ⓔ Switch quantity

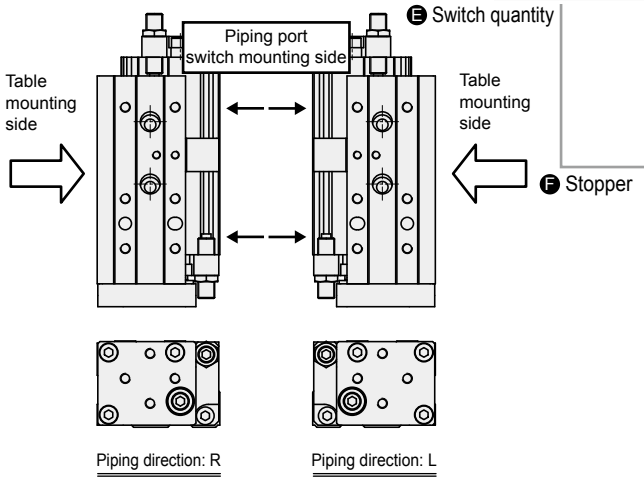
Ⓕ Stopper

[Example of model No.]

LCW-16-30-R-T2H-D-A

Model: Linear slide cylinder

Ⓐ Bore size : ø16
Ⓑ Stroke length : 30 mm
Ⓒ Piping direction : Right from rod side
Ⓓ Switch model No. : Proximity switch T2H, lead wire 1 m
Ⓔ Switch quantity : 2
Ⓕ Stopper : Shock absorber



Code	Description
Ⓐ Bore size (mm)	
12	ø12
16	ø16
20	ø20

Ⓑ Stroke length (mm)	
30	30
50	50
75	75

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

Ⓓ Switch model No.

Axial lead wire	Radial lead wire	Contact	Voltage AC	Voltage DC	Display	Lead wire	Bore size ø12	Bore size ø16	Bore size ø20
-	**F2S***	Proximity		●	1-color display	2-wire	●		
-	**F3S***			●		3-wire			
F2H*	**F2V***			●		2-wire			
F3H*	**F3V***			●		3-wire			
F2YH*	**F2YV***			●	2-color display	2-wire			
F3YH*	**F3YV***			●		3-wire			
T0H*	**T0V***	Reed	●	●	1-color display	2-wire		●	●
T5H*	**T5V***		●	●	Without indicator lamp				
T2H*	**T2V***	Proximity		●	1-color display	2-wire			
T3H*	**T3V***			●		3-wire			
T2WH*	**T2WV***			●	2-color display	2-wire			
T3WH*	**T3WV***			●		3-wire			

*** Lead wire length**			
Blank	1 m (standard)	●	
3	3 m (option)	●	
5	5 m (option)		●

Ⓔ Switch quantity	
R	1 on rod side
H	1 on head side
D	2

Ⓕ Stopper	
Blank	Cushion stopper
S	Rubber cushion long stopper (custom stroke compatible)
M	Metal stopper with rubber cushion
MS	Long metal stopper with rubber cushion (custom stroke compatible)
A	Shock absorber stopper