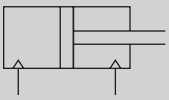


Guided cylinder, double acting/single rod

STM-M/B Series

● Bore size: ø6, ø10

JIS symbol



Specifications

Item	STM-M/B	
Bore size mm	ø6	ø10
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)	
Proof pressure MPa	1.05 (≈150 psi, 10.5 bar)	
Ambient temperature °C	-10 (14°F) to 60 (140°F) (no freezing)	
Port size	M3	
Stroke tolerance mm	+1.5 0	
Working piston speed mm/s	50 to 500	
Cushion	With rubber cushion	
Lubrication	Not required (use turbine oil class 1 ISO VG32 if necessary for lubrication)	
Allowable absorbed energy J	0.008	0.054

Stroke

Bore size	Standard stroke (mm)	Max. stroke (mm)	Min. stroke	Min. stroke with switch
ø6	5/10/15	15	5	5
ø10	5/10/15/20	20		

Note: Products other than standard stroke are made-to-order products.

Switch specifications

Item	Proximity 2-wire	Proximity 3-wire	Proximity 2-wire		Proximity 3-wire		
	F2S	F3S	F2H/F2V	F2YH/F2YV	F3H/F3V	F3PH/F3PV (Made to order)	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	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 ±10%	30 VDC or less		
Load current	5 to 20mA	50 mA or less	5 to 20 mA (*3)		100 mA or less	50 mA or less	
Indicator lamp	LED (Lit when ON)		Yellow LED (Lit when ON)	Red/green LED (Lit when ON)	Yellow 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 m: 10 3 m: 29		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-switch uses a bend-resistant lead wire.

Cylinder weight

Unit: g

Model No.	Stroke (mm) / Bore size (mm)	5	10	15	20	Switch weight
STM-M	ø6	45.1	52.5	59.9	-	Refer to the weight in the switch specifications.
	ø10	73.7	84.6	95.4	106.3	
STM-B	ø6	41.9	48.1	54.3	-	
	ø10	67.1	75.5	84.0	92.5	

Theoretical thrust table

Unit: N

Bore size (mm)	Operating direction	0.15	0.2	0.3	0.4	0.5	0.6	0.7
ø6	Push	4.24	5.65	8.48	11.3	14.1	17.0	19.8
	Pull	3.18	4.24	6.36	8.48	10.6	12.7	14.8
ø10	Push	11.8	15.7	23.6	31.4	39.3	47.1	55.0
	Pull	9.90	13.2	19.8	26.4	33.0	39.6	46.2