Magnetically Coupled Rodless Cylinder Slider Type: Slide Bearing **CY1S Series** ø6, ø10, ø15, ø20, ø25, ø32, ø40 (RoHS)

How to Order



Applicable Auto Switches/Refer to pages 1575 to 1701 for further information on auto switches

		Electrical 5 Wining		Load voltage		Auto switch model		Lead wire length (m)			Dro wirod							
Туре	Special function	entry	Indicator	(Output)	C)C	AC	Perpendicular	In-line	0.5 (Nil)	1 (M)	3 (L)	5 (Z)	connector	Applicable load			
÷				3-wire (NPN)		5 V 10 V		M9NV	M9N	•	•	٠	0	0				
Ę				3-wire (PNP)		5 V, 12 V		M9PV	M9P	•	•	٠	0	0	IC CIRCUIT			
s				2-wire		12 V		M9BV	M9B	•	•	٠	0	0	—			
욕	Diagnostic indication (2-color indicator) Gro	ion r) Grommet Ye		1		3-wire (NPN)		5 V 40 V		M9NWV	M9NW	•	•	٠	0	0		
ate aı			Yes	3-wire (PNP)	24 V	5 V, 12 V	<u>v</u> –	M9PWV	M9PW	•	•	٠	0	0		Relay,		
				2-wire		12 V			M9BWV	M9BW	•	•	٠	0	0	—	FLO	
1st		1		3-wire (NPN)	(NPN) (PNP) 5 V,12 V M9NAV*1 M9NA* M9PAV*1 M9PA*	5 V 40 V			M9NAV*1	M9NA*1	0	0	٠	0	0			
∺	(2 color indicator)			3-wire (PNP)		M9PA*1	0	0	٠	0	0	IC CIRCUIT						
Ň	(2-color indicator)	(2-color indicator)	nor indicator)		2-wire		12 V		M9BAV*1	M9BA*1	0	0	٠	0	0	—		
Reed Iuto switch		Crommet	Yes	3-wire (NPN equivalent)	-	5 V		A96V	A96	•	_	•	-	_	IC circuit	_		
		Grommet		2 wire	24.1	10.1/	100 V	A93V*2	A93	•	•	٠	•	—	_	Relay,		
			No	2-wire	24 V	12 V	100 V or less	A90V	Δ <u>90</u>		_	•	_	_	IC circuit	PLC		

*1 Water resistant type auto switches can be mounted on the above models, but in such case SMC cannot guarantee water resistance.

Please consult with SMC regarding water resistant types with the above model numbers.

*2 1 m type lead wire is only applicable to D-A93.

- * Lead wire length symbols: 0.5 m Nil (Example) M9NW
 - 1 m M (Example) M9NWM
 - 3 m L (Example) M9NWL
 - 5 m Z (Example) M9NWZ
- * There are other applicable auto switches other than listed above. For details, refer to page 1506.
- * For details about auto switches with pre-wired connector, refer to pages 1648 and 1649.
- * Auto switches are shipped together, (but not assembled).

1500



* Solid state auto switches marked with "O" are produced upon receipt of order.

Magnetically Coupled Rodless Cylinder Slider Type: Slide Bearing CY1S Series





Made to Order: Individual Specifications (For details, refer to pages 1507 and 1508.)

Specifications
Air-hydro
Helical insert thread
Non-lubricated exterior (without dust seal)
Outside of cylinder tube with hard chrome plated
Non-lubricated exterior (with dust seal)
Switch rails on both sides (with 2 pcs.)
Mounting surface tapped hole type

Made to Order

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Symbol Specifications						
-XB9	Low speed (15 to 50 mm/s)					
-XB13	Ultra low speed (7 to 50 mm/s)					

Specifications

Bore size (mm)	6	10	15	20	25	32	40			
Fluid	Air									
Proof pressure	1.05 MPa									
Maximum operating pressure	0.7 MPa									
Minimum operating pressure	0.18 MPa									
Ambient and fluid temperature	-10 to 60°C (No freezing)									
Piston speed*	50 to 400 mm/s									
Cushion	Rubber bumper/Shock absorber									
Lubrication	Non-lube									
Stroke length tolerance (mm)	0 to 250 st: ^{+1.0} / ₀ , 251 to 1000 st: ^{+1.4} / ₀ , 1001st or longer: ^{+1.8} / ₀									
Magnetic holding force (N)	19.6	53.9	137	231	363	588	922			

 In the case of setting an auto switch at the intermediate position, the maximum piston speed is subject to restrict for detection upon the response time of a load (relays, sequence controller, etc.).

Standard Strokes

Bore size (mm)	(mm) Standard stroke (mm)			
6	50, 100, 150, 200	300		
10	50, 100, 150, 200, 250, 300	500		
15	50, 100, 150, 200, 250, 300, 350, 400, 450, 500	750		
20		1000		
25	100, 150, 200, 250, 300, 350, 400, 450, 500, 600, 700, 800	1500		
32	,,,	1500		
40	100, 150, 200, 250, 300, 350, 400, 450, 500, 600, 700, 800, 900, 1000	1500		

Note 1) Intermediate stroke is available in 1 mm increments. (Produced upon receipt of order) Note 2) Minimum stroke available without auto switch or with one auto switch is 15 mm and minimum 25 mm for with 2 auto switches.

Note 3) For 2 or more auto switches with stroke less than 25 mm (minimum 15 mm), consider "-X431" (2 switch rails).

Weights

								(kg)	
	6	10	15	20	25	32	40		
CY1S	Basic weight	0.231	0.428	0.743	1.317	1.641	2.870	4.508	
	Additional weight for 50 stroke	0.053	0.082	0.111	0.184	0.186	0.284	0.430	
CY1SG□	Basic weight	0.236	0.435	0.743	1.331	1.662	2.903	4.534	
	Additional weight for 50 stroke	0.050	0.079	0.108	0.176	0.178	0.273	0.411	
Calculation: (Example) CY1SG25-500Z									

Basic weight (At 0 stroke) ... 1.662 kg Additional weight for 50 stroke ... 0.178 kg Cylinder stroke ... 500 st

1.662 + 0.178 x 500 ÷ 50 = 3.442 kg

Shock Absorber Specifications

Applicable cylinder	CY1S⊡6	CY1S□10	CY1S□15	CY1S□20	CY1S□25	CY1S⊟32	CY1S□40	
Shock absorber model	RJ0604	RJ0806H	RJ0806L	RJ1007L	RJ1412L	RJ2015H	RJ2015L	
Max. absorbed energy (J)	0.5	1		3	10	3	0	
Stroke absorption (mm)	4	6 7 12		12	15			
Collision speed (m/s)	0.05 to 1	0.05 to 2	0.05 to 1	0.05 to 1	0.05 to 1	0.05 to 2	0.05 to 1	
Max. operating frequency (cycle/min)	80	80		70	45	2	5	
Max. allowable thrust (N)	150	24	15	422	814	19	61	
Ambient temperature (°C)	-10 to 60°C (No freezing)							

Note) The maximum absorbed energy and maximum operating frequency was measured at ordinary temperature (approximately 20 to 25°C.)

D-🗆 -X□ Technical Data

1501 ®