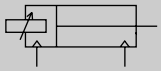
Round shaped medium bore size cylinder
Double acting stroke adjustable type (retract)

SCM-R Series

● Bore size: ϕ 20, ϕ 25, ϕ 32, ϕ 40, ϕ 50, ϕ 63

JIS symbol



RoHS CAD

Specifications

Descriptions		SCM-R					
Bore size	mm	ϕ20	ϕ25	ϕ32	ϕ40	ϕ50	ϕ63
Actuation		Double acting stroke adjustable type (retracted)					
Working fluid		Compressed air					
Max. working pressure	MPa	1.0					
Min. working pressure	MPa	0.1				0.05	
Withstanding pressure	MPa	1.6					
Ambient temperature	℃	-10 to 60 (no freezing)					
Port size		Rc1/8				Rc1/4	
Stroke tolerance	mm	$^{+1.4}_{0}$ (up to 1000)			$^{+1.4}_{0}$ (up to 1500)	$^{+2.3}_{0}$ (up to 1000),	$^{+2.7}_{0}$ (up to 1500)
Working piston speed	mm/s	30 to 1000 (Use within the allowable energy absorption.)					
Cushion		Rubber cushion					
Lubrication		Not required (when lubricating, use turbine oil ISO VG32.)					
Adjustable stroke range	mm	25, 50					
Allowable energy absorption	J	0.1	0.2	0.5	0.9	1.6	1.6

Stroke length

Bore size (mm)	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)
ϕ20	25, 50, 75, 100, 125, 150, 200, 250, 300	1000	10
ϕ25			
ϕ32			
ϕ40		1500	
ϕ50			
ϕ63			

Note 1: Custom stroke length is available per 1 mm increment.
Note 2: Strokes exceeding 600 mm are available as custom order parts. Contact CKD for details.

Switch quantity and min. stroke length (mm)

● Switch installation method: Rail method

Switch quantity	1		2		3		4		5	
Bore size (mm)	Proximity	Reed	Proximity	Reed	Proximity	Reed	Proximity	Reed	Proximity	Reed
ϕ20	10		25		40	50	55		75	85
ϕ25	10		25		40	50	55		75	85
ϕ32	10		25		40	50	55		75	85
ϕ40	10		25		40	50	55		75	85
ϕ50	10		25		40	50	55		75	85
ϕ63	10		25		40	50	55		75	85

● Switch installation method: Band method

Switch quantity	1			2			3			4			5		
Bore size (mm)	Proximity		Reed	Proximity		Reed	Proximity		Reed	Proximity		Reed	Proximity		Reed
	T2, T3	T*Y*		T2, T3	T*Y*		T2, T3	T*Y*		T2, T3	T*Y*		T2, T3	T*Y*	
ϕ20	10			25	35	25	50	55	50	75	80	70	95	100	95
ϕ25	10			25	35	25	50	55	50	75	80	70	95	100	95
ϕ32	10			25	35	25	50	55	50	75	80	70	95	100	95
ϕ40	10			25	35	25	50	55	50	75	80	70	95	100	95
ϕ50	10			25	35	25	50	55	50	75	80	70	95	100	95
ϕ63	10			25	35	25	50	55	50	75	80	70	95	100	95

Note 1: Trunion mounting is not available when installing one switch with a stroke of 10 mm or more, less than 25 mm, since the switch rail mounting position will change. Refer to page 333 for installation position.

Switch specifications

* The T0/T5 switch can be used with 220 VAC. Contact CKD for working conditions.

●1 color/2 color indicator

Descriptions	Proximity 2-wire			Proximity 3-wire			Reed 2-wire						
	T1H/T1V	T2H/T2V/ T2JH/T2JV	T2YH/T2YV	T3H/T3V	T3PH/T3PV (Custom order)	T3YH/T3YV	T0H/T0V	T5H/T5V		T8H/T8V			
Applications	Programmable controller, relay, small solenoid valve	Programmable controller dedicated		Programmable controller, relay			Programmable controller, relay	Programmable controller, relay IC circuit (w/o light), serial connection		Programmable controller, relay			
Output method	-			NPN output	PNP output	NPN output	-						
Power voltage	-			10 to 28 VDC			-						
Load voltage	85 to 265 VAC	10 to 30 VDC		30 VDC or less			12/24 VDC	110 VAC	5/12/24 VDC	110 VAC	12/24 VDC	110 VAC	220 VAC
Load current	5 to 100 mA	5 to 20 mA (Note 1)		100 mA or less		50 mA or less	5 to 50 mA	7 to 20 mA	50 mA or less	20 mA or less	5 to 50 mA	7 to 20 mA	7 to 10 mA
Light	LED (ON lighting)	LED (ON lighting)	Red/Green LED (ON lighting)	LED (ON lighting)	Green LED (ON lighting)	Red/green LED (ON lighting)	LED (ON lighting)	without light		LED (ON lighting)			
Leakage current	1 mA or less with 100 VAC 2 mA or less with 200 VAC	1 mA or less		10 μA or less			0 mA						

●With preventive maintenance output

Descriptions		Proximity 3-wire	Proximity 4-wire	Proximity 3-wire	Proximity 4-wire
		T2YFH/V	T3YFH/V	T2YMH/V	T3YMH/V
Applications		Programmable controller dedicated	Programmable controller, relay	Programmable controller dedicated	Programmable controller, relay
Output method		NPN output			
Light	Installation position adjustment section	Red/Green LED (ON lighting)			
	Preventive maintenance output	-		Yellow LED (ON lighting)	
Regular output	Power voltage	-	10 to 28 VDC	-	10 to 28 VDC
	Load voltage	10 to 30 VDC	30 VDC or less	10 to 30 VDC	30 VDC or less
	Load current	5 to 20 mA	50 mA or less	5 to 20 mA	50 mA or less
	Leakage current	1 mA or less	10 μA or less	1.2 mA or less	10 μA or less
Preventive maintenance output	Load voltage	30 VDC or less			
	Load current	20 mA or less	50 mA or less	5 to 20 mA or less	50 mA or less
	Leakage current	10 μA or less			

Note 1: Refer to Ending 1 for other switch specifications.
Note 2: Max. load current above: 20 mA at 25 ℃. The current will be lower than 20 mA if ambient temperature around switch is higher than 25 ℃. (5 to 10mA at 60 ℃)

Cylinder weight

(Unit: kg)

Descriptions/mounting style / Bore size (mm)	Stroke length Adjusting range	Product weight when stroke length (S) = 0 mm Basic type	Axial foot type	Flange type	Trunnion type	Switch weight Grommet	Additional weight per S = 10 mm	Additional weight per S = 10 mm (with rail)	Band weight per 1 switch
ϕ20	25	0.14	0.25	0.17	0.15	0.018	0.010	0.012	0.007
	50	0.15	0.25	0.18	0.16				
ϕ25	25	0.25	0.36	0.29	0.27	0.018	0.014	0.016	0.007
	50	0.26	0.37	0.30	0.28				
ϕ32	25	0.37	0.52	0.43	0.40	0.018	0.018	0.020	0.007
	50	0.38	0.52	0.44	0.41				
ϕ40	25	0.70	0.89	0.78	0.75	0.018	0.030	0.032	0.007
	50	0.72	0.91	0.80	0.77				
ϕ50	25	1.30	1.71	1.64	1.44	0.018	0.044	0.046	0.008
	50	1.33	1.75	1.67	1.47				
ϕ63	25	1.83	2.45	2.33	1.97	0.018	0.052	0.054	0.009
	50	1.86	2.48	2.36	2.00				

(Eg.) Product weight of SCM-R-LB-40D-100-25-T2H-D

- Product weight when S = 0 mm ····· 0.89 kg
- Additional weight when S = 100 mm ····· 0.032 x $\frac{100}{10}$ = 0.32 kg
- Weight of 2 switches ····· 0.036 kg
- Product weight ····· 0.89 kg + 0.32kg + 0.036 kg = 1.246 kg

How to order

Without switch

SCM-R - LB - 40 ( ) D - 100 - 25 ——— J I

With switch

SCM-R - LB - 40 ( ) D - 100 - 25 - T0H - D - ( ) J I

Ⓑ Bore size

Ⓐ Mounting style Note 1

Ⓒ Port thread type

Ⓓ Cushion

Ⓔ Stroke length

Ⓕ Adjustable stroke range

Ⓖ Switch model no. Note 3

Ⓗ Switch quantity

Ⓘ Switch installation method

Ⓙ Option Note 4 Note 6

Ⓚ Accessory Note 7

Symbol	Descriptions
Ⓐ Mounting style	
00	Basic type
LB	Axial foot type
FA	Rod end flange type
TA	Rod end trunnion type
TB	Head end trunnion type

Ⓑ Bore size (mm)	
20	ϕ20
25	ϕ25
32	ϕ32
40	ϕ40
50	ϕ50
63	ϕ63

Ⓒ Port thread type	
Blank	Rc thread
N	NPT thread (custom order)
G	G thread (custom order)

Ⓓ Cushion	
D	Both sides rubber cushioned

Ⓔ Stroke length (mm)

Bore size	Stroke length Note 2	Custom stroke length
ϕ20 to ϕ32	**10 to 1000**	**Per 1 mm**
ϕ40 to ϕ63	**10 to 1500**	

Ⓕ Adjustable stroke range (mm)	
25	25
50	50

Ⓖ Switch model no.

Axial lead wire	Radial lead wire	Contact	Indicator	Lead wire
T0H*	**T0V***	Reed	1 color indicator type	2-wire
T5H*	**T5V***		without light	
T8H*	**T8V***		1 color indicator type	
T1H*	**T1V***	Proximity	1 color indicator type	2-wire
T2H*	**T2V***			
T3H*	**T3V***			3-wire
T3PH*	**T3PV***		1 color indicator type (custom order)	
T2YH*	**T2YV***		2 color indicator type	2-wire
T3YH*	**T3YV***			3-wire
T2YFH*	**T2YFV***		2 color indicator type (W/o light for preventive maintenance output)	3-wire
T3YFH*	**T3YFV***			4-wire
T2YMH*	**T2YMV***		2 color indicator type (W/ light for preventive maintenance output (1 color))	3-wire
T3YMH*	**T3YMV***			4-wire
T2YD*	**-**		Strong magnetic field proof switch	2-wire
T2YDT*	**-**			
T2JH*	**T2JV***		Off-delay type	2-wire

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

Ⓗ Switch quantity	
R	One on rod end
H	One on head end
D	Two
T	Three
4	4 switches (When more than 4 switches, indicate switch quantity.)

Ⓘ Switch installation method	
Blank	Rail method
Z	Band method

Ⓙ Option

		Max. ambient	Max. instantaneous
J	Bellows	60 ℃	100℃
K	Bellows	100℃	200℃
L	Bellows	250℃	400℃
Q	Switch rail attached at shipment		
M	Piston rod material (stainless steel)		
P6	Copper and PTFE free		

Ⓚ Accessory	
I	Rod eye
Y	Rod clevis (pin and snap ring attached)
B2	Clevis bracket

⚠Note on model no. selection

Note 1: The mounting bracket LB is shipped with the product.
FA/TA/TB is shipped with the product.
Note 2: Refer to page 262 for switch quantity and min. stroke length.
Note 3: Switches other than switch model no. "G" are available. (Custom order)
Refer to Ending 1 for details.
Note 4: Instantaneous maximum temperature is the temperature when spark and spatter etc. instantaneously contacts to bellows.
Note 5: Refer to Ending 89 for custom specifications of rod end form
Note 6: When the switch mounting type "Z" is selected, the switch rail enclosed shipment "Q" cannot be selected.
Note 7: "I" and "Y" can not be selected at the same time.

<Example of model number>

SCM-R-LB-40D-100-25-T0H-D-JI

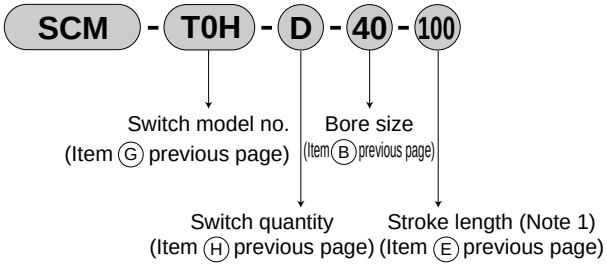
Model: Round shaped cylinder double acting stroke adjustment type (retracted)

Ⓐ Mounting style : Axial foot type
Ⓑ Bore size : ϕ 40 mm
Ⓒ Port thread type : Rc thread
Ⓓ Cushion : Both sides rubber cushioned
Ⓔ Stroke length : 100 mm
Ⓕ Adjustable stroke range : 25 mm
Ⓖ Switch model no. : Reed T0H switch, lead wire 1 m
Ⓗ Switch quantity : 2
Ⓘ Switch installation method : Rail method
Ⓙ Option : Bellows material / max. ambient temperature 60 ℃
Ⓚ Accessory : Rod eye

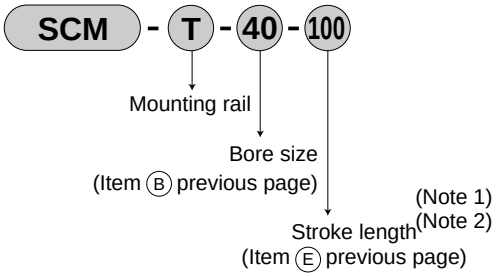
How to order switch

(switch installation method: rail method)

● Switch body + mounting rail set

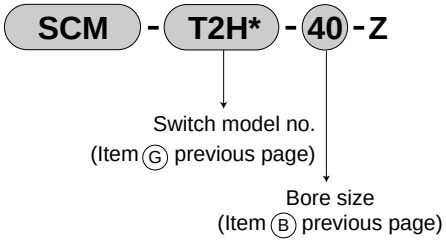


● Only mounting rail

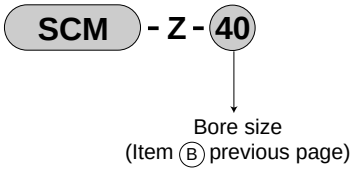


(switch installation method: band method)

● Switch body + mounting rail + band

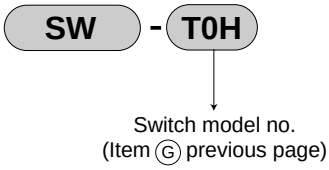


● Mounting rail + band



Note 1:When more than 300 mm stroke, indicate "X".
When more than 300 mm stroke, a short rail
(100 mm switch adjustment distance) is provided per switch.
Note 2:When X is indicated only with the mounting rail,
order the same number of rails as the number of switches being used.

(only switch body)



How to order mounting bracket

Bore size (mm) / Mounting bracket	ϕ20	ϕ25	ϕ32	ϕ40	ϕ50	ϕ63
Foot (LB)	SCM-LB-20	SCM-LB-25	SCM-LB-32	SCM-LB-40	SCM-LB-50	SCM-LB-63
Flange (FA/FB)	SCM-FA-20	SCM-FA-25	SCM-FA-32	SCM-FA-40	SCM-FA-50	SCM-FA-63
Trunnion (TA/TB)	SCM-TA-20	SCM-TA-25	SCM-TA-32	SCM-TA-40	SCM-TA-50	SCM-TA-63

Note 1: Mounting bolts are attached to each mounting bracket.
Note 2: 2 piece/set is applied for a foot type mounting bracket.