

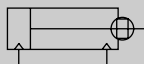


Round shaped medium bore size cylinder
Double acting non-rotating type

SCM-M Series

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

JIS symbol



Specifications

Descriptions		SCM-M					
Bore size	mm	φ 20	φ 25	φ 32	φ 40	φ 50	φ 63
Actuation		Double acting non-rotating type					
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				+2.3 0	
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.)					
Revolvable angle tolerance	Degree	± 1					
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)
ϕ 20	25, 50, 75, 100, 125, 150, 200, 250, 300	600	10
ϕ 25			
ϕ 32			
ϕ 40			
ϕ 50			
ϕ 63			

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
ϕ 20	10		25		40	50	55		75	85
ϕ 25	10		25		40	50	55		75	85
ϕ 32	10		25		40	50	55		75	85
ϕ 40	10		25		40	50	55		75	85
ϕ 50	10		25		40	50	55		75	85
ϕ 63	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*	
ϕ 20	10			25	35	25	50	55	50	75	80	70	95	100	95
ϕ 25	10			25	35	25	50	55	50	75	80	70	95	100	95
ϕ 32	10			25	35	25	50	55	50	75	80	70	95	100	95
ϕ 40	10			25	35	25	50	55	50	75	80	70	95	100	95
ϕ 50	10			25	35	25	50	55	50	75	80	70	95	100	95
ϕ 63	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

● 1 color/2 color indicator

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

Descriptions	Proximity 2-wire			Proximity 3-wire			Reed 2-wire						
	T1H/T1 V	T2H/T2V/ T2JH/T2JV	T2YH/T2YV	T3H/T3V	T3PH/T3PV (Custom order)	T3YH/T3YV	TOH/TOV	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	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 μ A or less	1.2 mA or less	10 μ A 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 μ A or less			

Note 1: Refer to Ending 1 for other switch specifications.

Note 2: Max. load current above: 20 mA at 25 °C. The current will be lower than 20 mA if ambient temperature around switch is higher than 25 °C.
(5 to 10mA at 60 °C)

Cylinder weight

(Unit: kg)

Descriptions/mounting style	Product weight when stroke length (S) = 0 mm					Switch weight	Additional weight	Additional weight	Band weight per
	Basic type	Axial foot type	Flange type	Clevis type	Trunnion type	Grommet	per S = 10 mm	per S = 10 mm (with rail)	1 switch
Port size									
φ 20	0.10	0.21	0.13	0.15	0.11	0.018	0.010	0.012	0.007
φ 25	0.18	0.31	0.22	0.26	0.20	0.018	0.014	0.016	0.007
φ 32	0.27	0.43	0.33	0.42	0.30	0.018	0.018	0.020	0.007
φ 40	0.44	0.66	0.52	0.67	0.49	0.018	0.030	0.032	0.007
φ 50	0.85	1.33	1.19	1.25	0.99	0.018	0.044	0.046	0.008
φ 63	1.15	1.87	1.65	1.83	1.29	0.018	0.052	0.054	0.009
(Eg.) Product weight of SCM-M-LB-40D-100-T2H-D <div> Product weight when S = 0 mm 0.66 kg Additional weight when S = 100 mm $0.032 \times \frac{100}{10} = 0.32$ kg Weight of 2 switches 0.036 kg Product weight 0.66 kg + 0.32 kg + 0.036 kg = 1.016 kg </div>									

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS/L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL2
SRG
SRM
SRT
MRL2
MRG2
SM-25
CAC3
UCAC
RCC2
MFC
SHC
GLC
Ending

Round shaped cylinder
Standard type

How to order

Without switch

SCM-M - LB - 40 - D - 100 - J - I

With switch

SCM-M - LB - 40 - D - 100 - T0H - D - J - I

A Mounting style
Note 1

B Bore size

C Port thread type

D Cushion

E Stroke length

F Switch model no.
Note 3

G Switch quantity

H Switch installation method

I Option
Note 4, Note 6

J Accessory
Note 7

Note on model no. selection

Note 1: The mounting bracket is shipped with the product.

Note 2: Refer to page 322 for switch quantity and min. stroke length.

Note 3: Switches other than switch model no. "F" 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 about 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-M-LB-40D-100-T0H-D-JI

Model: Round shaped cylinder double acting non-rotating type

A Mounting style : Axial foot type

B Bore size : ϕ 40 mm

C Port thread type : Rc thread

D Cushion : Both sides rubber cushioned

E Stroke length : 100 mm

F Switch model no. : Reed T0H switch, lead wire 1 m

G Switch quantity : 2

H Switch installation method : Rail method

I Option : Bellows material / max. ambient temperature 60 °C

J Accessory : Rod eye

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

B Bore size (mm)	
20	ϕ 20
25	ϕ 25
32	ϕ 32
40	ϕ 40
50	ϕ 50
63	ϕ 63

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

D Cushion	
D	Both sides rubber cushioned

E Stroke length (mm)		
Bore size	Stroke length Note 2	Custom stroke length
ϕ 20 to ϕ 63	10 to 600	Per 1 mm

F 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*		1 color indicator type (custom order)	3-wire
T3H*	T3V*			
T3PH*	T3PV*		2 color indicator type	2-wire
T2YH*	T2YV*		2 color indicator type (W/o light for preventive maintenance output)	3-wire
T3YH*	T3YV*		2 color indicator type (W/ light for preventive maintenance output (1 color))	4-wire
T2YFH*	T2YFV*		Strong magnetic field proof switch	2-wire
T3YFH*	T3YFV*			
T2YMH*	T2YMV*		Off-delay type	2-wire
T2YD*	-			
T2YDT*	-			
T2JH*	T2JV*			

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

G 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.)

H Switch installation method	
Blank	Rail method
Z	Band method

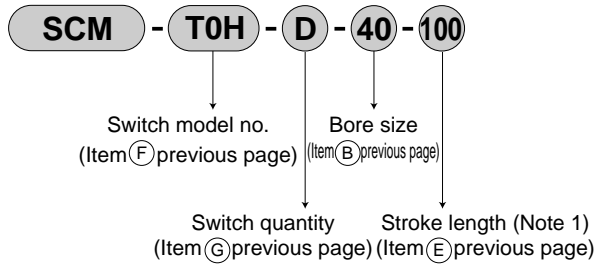
I Option			
		Max. ambient	Max. instantaneous
J	Bellows	60 °C	100 °C
K	Bellows	100 °C	200 °C
L	Bellows	250 °C	400 °C
Q	Switch rail attached at shipment		

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

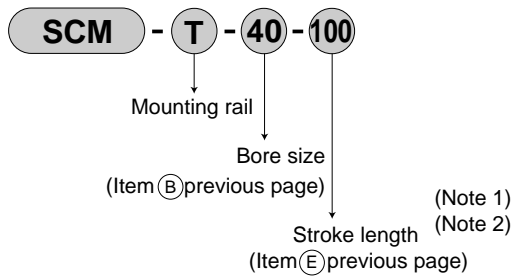
How to order switch

(switch installation method: rail method)

● Switch body + mounting rail set



● Only mounting rail

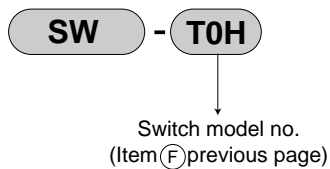


Note 1: When more than 300 mm stroke, indicate "X".

When more than 300 mm stroke, a short rail
(100 mm switch adjustment distance) is provided per switch.

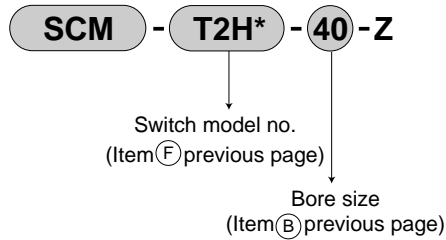
Note 2: When X is indicated only with the mounting rail,
order the same number of rails as the number of switches being used.

(only switch body)

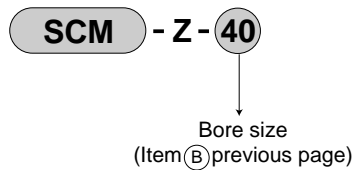


(switch installation method: band method)

● Switch body + mounting rail + band



● Mounting rail + band



How to order mounting bracket

Bore size (mm)	φ20	φ25	φ32	φ40	φ50	φ63
Mounting bracket						
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
Eye (CA)	SCM-CA-20	SCM-CA-25	SCM-CA-32	SCM-CA-40	SCM-CA-50	SCM-CA-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 bolt is attached to each mounting bracket.

Note 2: 2 piece/set is applied for a foot type mounting bracket.

SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS/L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL2
SRG
SRM
SRT
MRL2
MRG2
SM-25
CAC3
UCAC
RCC2
MFC
SHC
GLC
Ending

Round shaped cylinder
Standard type