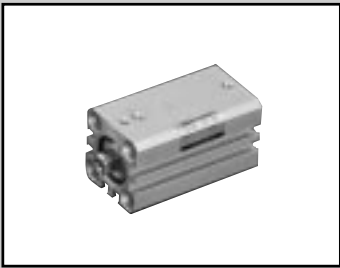


SCP*2
CMK2
CMA2
SCM
SCG
SCA2
SCS
CKV2
CA/OV2
SSD
CAT
MDC2
MVC
SMD2
MSD*
FC*
STK
ULK*
JSK/M2
JSG
JSC3
USSD
USC
JSB3
LMB
STG
STS/L
LCS
LCG
LCM
LCT
LCY
STR2
UCA2
HCM
HCA
SRL2
SRG
SRM
SRT
MRL2
MRG2
SM-25
CAC3
UCAC
RCC2
MFC
SHC
GLC
Ending



Compact cylinder Double acting non-rotating type

SSD-M Series

● Bore size: ϕ 12, ϕ 16, ϕ 20, ϕ 25
 ϕ 32, ϕ 40, ϕ 50, ϕ 63

JIS symbol



Specifications

Descriptions		SSD-M SSD-ML (with switch)							
Bore size	mm	φ12	φ16	φ20	φ25	φ32	φ40	φ50	φ63
Actuation		Double acting							
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		M5				Rc1/8		Rc1/4	
Stroke tolerance	mm	+1.0 0							
Working piston speed	mm/s	50 to 500							50 to 300
Cushion		None							
Lubrication		Not required (when lubricating, use turbine oil ISO VG32)							
Revolvable angle tolerance		±2°	±1.5°			±1°			
Allowable energy absorption	J	0.004	0.01	0.016	0.021	0.025	0.092	0.1	0.12

Stroke length

Bore size (mm)	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)
ϕ12	5, 10, 15, 20, 25, 30	30	1
ϕ16			
ϕ20			
ϕ25	5, 10, 15, 20, 25, 30, 40, 50	50	
ϕ32			
ϕ40			
ϕ50			
ϕ63	5, 10, 20, 30, 40, 50	50	

Note 1) Custom stroke length is available per 1mm increment. The same dimension as next longer standard stroke length applies to the total length.
Note 2) Refer to the following table for the type with switch. For 2 color indicator, off-delay, strong magnetic field, T1* or T8* switch, the stroke length less than 10mm is not available.

Switch quantity and min. stroke length (mm)

Switch quantity	1	2	3	4	5
Switch model no.	T*	T*	T*	T*	T*
Bore size (mm)	T*	T*	T*	T*	T*
ϕ 12	5	5	25	-	-
ϕ 16	5	5	25	-	-
ϕ 20	5	5	-	-	-
ϕ 25	5	5	35	50	-
ϕ 32	5	5	35	50	-
ϕ 40	5	5	35	50	-
ϕ 50	5	5	35	50	-
ϕ 63	5	5	35	50	-

Note: For 2 color indicator, off-delay, strong magnetic field, T1* or T8* switch, the stroke length less than 10mm are not available.

Switch specifications

- 1 color/2 color indicator/strong magnetic field proof

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

Descriptions	Proximity 2 wire			Proximity 3 wire			Reed 2 wire						Proximity 2 wire	
	T1H/T1 V	T2H/T2V/ T2JH/T2JV	T2YH/T2YV	T3H/T3V	T3PH/T3PV (Custom order)	T3YH/T3YV	T0H/T0V	T5H/T5V	T8H/T8V			T2YD		
Applications	Programmable controller relay, small solenoid valve	Programmable controller		Programmable controller, relay			Programmable controller, relay	Programmable controller, relay, IC circuit (without light), serial connection		Programmable controller and relay			Programmable controller	
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	24 VDC ±10%
Load current	5 to 100mA	5 to 20mA (Note 1)		100mA or less		50mA or less	5 to 50mA	7 to 20mA	50mA or less	20mA or less	5 to 50mA	7 to 20mA	7 to 10mA	5 to 20mA
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 indicator light		LED (ON lighting)			Red/green LED (ON lighting)	
Leakage current	1mA or less with 100 VAC 2mA or less with 200 VAC	1mA or less		10 μA or less			0mA						1mA or less	

- 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	Programmable controller, relay	Programmable controller	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 20mA	50mA or less	5 to 20mA	50mA or less
	Leakage current	1mA or less	10 μA or less	1.2mA or less	10 μA or less
Preventive maintenance output	Load voltage	30 VDC or less			
	Load current	20mA or less	50mA or less	5 to 20mA or less	50mA or less
	Leakage current	10 μA or less			

Note 1: Refer to Ending 1 for other switches.

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

Cylinder weight table (weight with switch includes weight with two switches)

(Unit: g)

Stroke length (mm)	5		10		15		20		25		30		40		50	
Bore size (mm)	w/o SW	w/ SW	w/o SW	w/ SW	w/o SW	w/ SW	w/o SW	w/ SW	w/o SW	w/ SW	w/o SW	w/ SW	w/o SW	w/ SW	w/o SW	w/ SW
φ12	44	94	52	94	61	103	69	111	78	120	80	122	-	-	-	-
φ16	58	114	69	114	79	124	90	135	101	146	112	157	-	-	-	-
φ20	76	131	88	163	101	176	114	189	126	201	139	214	-	-	-	-
φ25	102	193	117	208	133	224	149	240	165	256	180	271	212	303	243	334
φ32	166	280	188	302	210	324	232	346	253	367	275	389	319	433	362	476
φ40	210	353	237	380	263	406	290	433	317	460	343	486	396	539	449	592
φ50	341	535	383	577	425	619	467	661	509	703	552	746	636	830	720	914
φ63	507	786	562	841	-	-	672	951	-	-	782	1061	893	1172	1003	1282

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

Compact cylinder
Space saving structure

How to order

Without switch

SSD-M - 12 - 5 - N - LB - I

With switch

SSD-ML - 12 - 5 - T0H - R - N - LB - I

2 color indicator type/off-delay type, with T1* switch (only $\phi 12/\phi 16$)

SSD-ML1 - 12 - 10 - T2YH - R - N - LB - I

A Model no.

B Bore size

C Port thread type

D Stroke length

E Switch model no.
Note 1
Note 2

F Switch quantity

G Option
Note 3

H Mounting bracket
Note 5
Note 6

I Accessory
Note 7

Note on model no. selection

Note 1: Switches other than E switch model no. are available. (custom order) Refer to Ending 4, 5 for details.

Note 2: Strong magnetic field proof switches cannot be installed on $\phi 12$ and $\phi 16$. T8* switches can not be installed on $\phi 12$ to $\phi 32$.

Note 3: $\phi 12$ to $\phi 25$ piston rod material is stainless steel as standard. The C type snap ring was changed from copper to stainless steel. When the male thread rod end is selected, stainless steel nuts are provided.

Note 4: SSD-M-12 to 25 is copper and PTFE free as standard.

Note 5: The mounting bracket is attached at shipment.

Note 6: Piston rod projecting dimensions WF differs from standard when selecting LB2, FA. Refer to pages 939 to 940 for dimensions.

Note 7: "I" and "Y" can not be selected at the same time.

Note 8: Refer to Ending 89 for custom specifications of rod end form.

Note 9: Refer to pages 720 to 723 for the variation and

<Example of model number>

SSD-ML-12-5-T0H-R-N

Model: Compact cylinder non-rotating type

B Bore size : $\phi 12\text{mm}$

C Port thread type : Rc thread

D Stroke length : 5mm

E Switch model no. : Reed switch T0H

F Switch quantity : One on rod end

G Option : Rod end male thread

Symbol	Descriptions
A Model no.	
SSD-M	Double acting non-rotating type
SSD-ML	Double acting non-rotating type/with switch
SSD-ML1	$\phi 12$, $\phi 16$, 2 color indicator, off-delay type, with T1* switch

B Bore size (mm)	
12	$\phi 12$
16	$\phi 16$
20	$\phi 20$
25	$\phi 25$
32	$\phi 32$
40	$\phi 40$
50	$\phi 50$
63	$\phi 63$

C Port thread type	
Blank	Rc thread
NN	NPT thread ($\phi 32$ and over) (custom order)
GN	G thread ($\phi 32$ and over) (custom order)

D Stroke length (mm)	
Refer to the stroke length table on the following page.	

E Switch model no.				
Axial lead wire	Radial lead wire	Contact	Indication	Lead wire
T0H*	T0V*	Reed	1 color indicator type	2-wire
T5H*	T5V*		Without indicator 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	3-wire
T2YH*	T2YV*		2 color indicator type (without light for preventive maintenance output)	3-wire
T3YH*	T3YV*		2 color indicator type (with light for preventive maintenance output (1 color))	4-wire
T2YFH*	T2YFV*		Off-delay type	2-wire
T3YFH*	T3YFV*			
T2YMH*	T2YMV*		Strong magnetic field proof switch	2-wire
T3YMH*	T3YMV*			
T2JH*	T2JV*			
T2YD*	-			
T2YDT*	-			

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

F Switch quantity	
R	One on rod end
H	One on head end
D	Two

G Option	
Blank	Rod end female thread
N	Rod end male thread
M	Piston rod material (stainless steel)

H Mounting bracket	
LB	Axial foot
LB2	Axial foot (compact type)
CB	Clevis (pin and snap ring attached)
CB2	Clevis (compact type) (pin and snap ring attached)
FA	Rod end flange type
FB	Head end flange type

I Accessory (permissible if rod end male thread "N" was selected)	
I	Rod eye
I2	Rod eye (compact type)
Y	Rod clevis (pin and snap ring attached)
Y2	Rod clevis (compact type) (pin and snap ring attached)

How to order switch

SW - **T0H**

Switch model no.
(Item **E** previous page)

(Stroke length table)

Stroke length (mm)		Applicable bore size							
		φ12	φ16	φ20	φ25	φ32	φ40	φ50	φ63
Standard stroke length	5	●	●	●	●	●	●	●	●
	10	●	●	●	●	●	●	●	●
	15	●	●	●	●	●	●	●	
	20	●	●	●	●	●	●	●	●
	25	●	●	●	●	●	●	●	
	30	●	●	●	●	●	●	●	●
	40				●	●	●	●	●
	50				●	●	●	●	●
Min. stroke length (mm) Note 1		1							
Max. stroke length (mm)		30				50			
Custom stroke length Note 2		Per 1mm increment							

Note 1: The 1 color indicator is not available with a stroke less than 5mm, 2 color indicator type, off delay, strong magnetic field proof, or 10mm or shorter type with T1* or T8* switch is not available.

Refer to page 850 for switch installation quantity and min. stroke length.

Note 2: The total length is the same as the next longer standard stroke length.

How to order mounting bracket

Bore size (mm)	φ12	φ16	φ20	φ25	φ32	φ40	φ50	φ63
Mounting bracket								
Foot (LB)	SSD-LB-12	SSD-LB-16	SSD-LB-20	SSD-LB-25	SSD-LB-32	SSD-LB-40	SSD-LB-50	SSD-LB-63
Foot (LB2)	SSD-LB2-12	SSD-LB2-16	SSD-LB2-20	SSD-LB2-25	SSD-LB2-32	SSD-LB2-40	SSD-LB2-50	SSD-LB2-63
Flange (FA/FB)	SSD-FA-12	SSD-FA-16	SSD-FA-20	SSD-FA-25	SSD-FA-32	SSD-FA-40	SSD-FA-50	SSD-FA-63
Clevis (CB)	SSD-CB-12	SSD-CB-16	SSD-CB-20	SSD-CB-25	SSD-CB-32	SSD-CB-40	SSD-CB-50	SSD-CB-63
Clevis (CB2)	SSD-CB2-12	SSD-CB2-16	SSD-CB2-20	SSD-CB2-25	SSD-CB2-32	SSD-CB2-40	SSD-CB2-50	SSD-CB2-63

Note 1: Foot type mounting bracket is a two-piece/set.

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

Compact cylinder
Space saving structure