



Compact cylinder High load type rubber-air cushioned

SSD-K-*C Series

● Bore size: ϕ 20, ϕ 25, ϕ 32, ϕ 40, ϕ 50, ϕ 63, ϕ 80, ϕ 100



Specifications

Descriptions		SSD-K							
Bore size	mm	φ 20	φ 25	φ 32	φ 40	φ 50	φ 63	φ 80	φ 100
Actuation		Double acting							
Working fluid		Compressed air							
Max. working pressure	MPa	1.0							
Min. working pressure	MPa	0.25		0.2					
Withstanding pressure	MPa	1.6							
Ambient temperature	℃	-10 to 60 (no freezing)							
Port size		Rc1/8			Rc1/4		Rc3/8		
Stroke tolerance	mm	+2.0							
		0							
Working piston speed	mm/s	50 to 500					50 to 300		
Cushion		Rubber-air cushion							
Lubrication		Not required (when lubricating, use turbine oil ISO VG32.)							
Allowable absorbed energy	J	0.16	0.16	0.40	0.63	0.98	1.56	2.51	3.92

Stroke length

Bore size (mm)	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)
φ 20	5, 10, 15, 20, 25, 30, 40, 50	200	5 mm (φ 20 to φ50) 10 mm (φ 63 to φ100)
φ 25	10, 15, 20, 25, 30, 40, 50, 60, 70, 80, 90,100	300	
φ 32			
φ 40			
φ 50			
φ 63	10, 20, 30, 40, 50, 60, 70, 80, 90,100		
φ 80			
φ 100			

Note 1: Custom stroke length is available per 1 mm increment. Note that the total length is the same as the next longer standard stroke length.

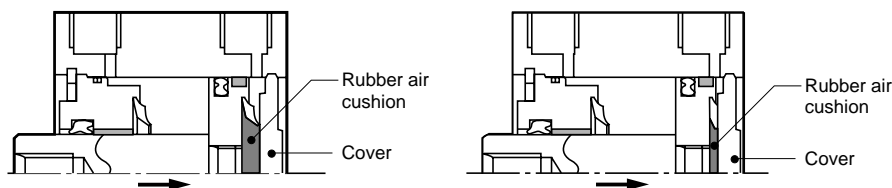
Note 2: Refer to the following table when a switch is used.

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 20	5	5	35	50	65
ϕ 25	5	5	35	50	65
ϕ 32	5	5	35	50	65
ϕ 40	5	5	35	50	65
ϕ 50	5	5	35	50	65
ϕ 63	10	10	35	50	65
ϕ 80	10	10	35	50	65
ϕ 100	10	10	35	50	65

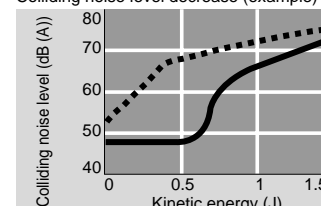
Note: Stroke less than 10 mm is not available for 2 color indicator, off-delay, strong magnetic field proof, or types with T1* or T8* switch.

Rubber-air cushion mechanism

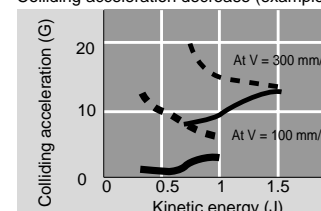


--- Rubber cushioned cylinder
— Rubber-air cushioned cylinder

Colliding noise level decrease (example)



Colliding acceleration decrease (example)



Explanation at PULL

When the piston moves and the rubber-air cushion and cover contact, a sealed air space is formed in the shaded section in which air is compressed as the piston moves and energy is absorbed by the rubber air cushion's compression strain, calculated at the stroke end.

Switch specifications

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

220 VAC is available for T0/T5 switches.
Consult with CKD for conditions.

Descriptions	Proximity 2-wire			Proximity 3-wire			Reed 2-wire						Proximity 2-wire	
	T1H, T1V	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 dedicated		Programmable controller, relay			Programmable controller, relay	Programmable controller, relay, IC circuit (w/o indicator light), serial connection		Programmable controller, relay		Programmable controller dedicated		
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 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	5 to 20 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 indicator light		LED (ON lighting)		Red/green 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						1 mA 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 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 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 switches.

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 10 mA at 60 °C)

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

SSD-K-*C Series

How to order

Without switch

SSD-K - 40 - C - 10 - N - LB - I

With switch

SSD-KL - 40 - C - 10 - T0H - R - N - LB - I

A Bore size

Rubber air cushioned

B Port thread type

C Stroke length

D Switch model no.
Note 1

E Switch quantity

F Option
Note 2

G Mounting bracket
Note 3
Note 4

H Accessory
Note 5

Caution for model No. selection

Note 1: Switches other than listed D switch model No. are available.(custom order) Please refer to Ending 1 about details.

Note 2: Piston rod material of $\phi 20$, $\phi 25$ is stainless steel as standard. The snap ring is changed from copper to stainless steel. When the male thread rod end is selected, stainless steel nuts are provided.

Note 3: The mounting bracket is attached at shipment.

Note 4: When selecting LB2, FA, piston rod projecting dimension WF differs from standard. Refer to the dimensions on pages 939 to 940.

Note 5: "I" and "Y" can not be selected at the same time.

Note 6: Refer to Ending 89 for custom specifications of rod end form.

Note 7: Refer to pages 722 to 723 for the variation and option combination.

<Example of model number>

SSD-KL-32C-10-T0H-R-N

Model: Compact cylinder rubber-air cushioned

A Bore size : $\phi 32$ mm

B Port thread type : Rc thread

C Stroke length : 10 mm

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

E Switch quantity : One on rod end

F Option : Rod end male thread

How to order switch

SW - T0H

(Item D above)

Symbol	Descriptions
A Bore size (mm)	
20	$\phi 20$
25	$\phi 25$
32	$\phi 32$
40	$\phi 40$
50	$\phi 50$
63	$\phi 63$
80	$\phi 80$
100	$\phi 100$

B Port thread type	
Blank	Rc thread
N	NPT thread ($\phi 32$ and over) (custom order)
G	G thread ($\phi 32$ and over) (custom order)

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

D Switch model no.				
Axial lead wire	Radial lead wire	contact	Display	Lead Wire
T0H*	T0V*	Reed	1 color indicator	2-wire
T5H*	T5V*		Without indicator light	
T8H*	T8V*		1 color indicator	
T1H*	T1V*		1 color indicator	
T2H*	T2V*	Proximity	1 color indicator	2-wire
T3H*	T3V*		1 color indicator (custom order)	3-wire
T3PH*	T3PV*		2 color indicator	2-wire
T2YH*	T2YV*		2 color indicator	3-wire
T3YH*	T3YV*		2 color indicator (w/o light for preventive maintenance output)	4-wire
T2YFH*	T2YFV*		2 color indicator (w/ light for preventive mainte. output (1 color))	4-wire
T3YFH*	T3YFV*		Off-delay type	2-wire
T2YMH*	T2YMV*		Switch for strong magnetic field	2-wire
T3YMH*	T3YMV*			
T2JH*	T2JV*			
T2YD*	-			
T2YDT*	-			

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

E Switch quantity	
R	One on rod side
H	One on head side
D	2

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

G 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

H 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)

(Stroke length table)

Stroke length (mm)		Applicable bore size							
		φ 20	φ 25	φ 32	φ 40	φ 50	φ 63	φ 80	φ 100
Standard stroke length	5	●							
	10	●	●	●	●	●	●	●	●
	15	●	●	●	●	●			
	20	●	●	●		●	●	●	●
	25	●	●	●	●	●			
	30	●	●	●	●	●	●	●	●
	40	●	●	●		●	●	●	●
	50	●	●	●	●	●	●	●	●
	60			●	●	●	●	●	●
	70			●	●	●	●	●	●
	80			●	●	●	●	●	●
	90			●	●	●	●	●	●
100			●	●	●	●	●	●	
Min. stroke length (mm) Note 1		5					10		
Max. stroke length (mm)		200	300						
Custom stroke length Note 2		Per 1 mm increment							

Note 1: 2 color indicator, off-delay, strong magnetic field proof, or 10 mm or shorter types with T1* or T8* switch is not available.

Refer to page 780 for switch quantity and min. stroke length.

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

How to order mounting bracket

Bore size (mm)	φ 20	φ 25	φ 32	φ 40	φ 50	φ 63	φ 80	φ 100
Mounting bracket								
Foot (LB)	SSD-LB-20	SSD-LB-25	SSD-LB-32	SSD-LB-40	SSD-LB-50	SSD-LB-63	SSD-LB-80	SSD-LB-100
Foot (LB2)	SSD-LB2-20	SSD-LB2-25	SSD-LB2-32	SSD-LB2-40	SSD-LB2-50	SSD-LB2-63	SSD-LB2-80	SSD-LB2-100
Flange (FA/FB)	SSD-FA-20	SSD-FA-25	SSD-FA-32	SSD-FA-40	SSD-FA-50	SSD-FA-63	SSD-FA-80	SSD-FA-100
Clevis (CB)	SSD-CB-20	SSD-CB-25	SSD-CB-32	SSD-CB-40	SSD-CB-50	SSD-CB-63	SSD-CB-80	SSD-CB-100
Clevis (CB2)	SSD-CB2-20	SSD-CB2-25	SSD-CB2-32	SSD-CB2-40	SSD-CB2-50	SSD-CB2-63	SSD-CB2-80	SSD-CB2-100

Note 1: 2 pcs./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

Compact cylinder
Space saving structure