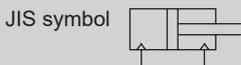


Compact cylinder Double acting/single rod

SSD2 Series

- Bore size: $\phi 12/\phi 16/\phi 20/\phi 25/\phi 32/\phi 40/\phi 50/\phi 63/\phi 80/\phi 100/\phi 125/\phi 140/\phi 160$



Structure and material restriction

	Structure	Material restriction	Model No.		Structure	Material restriction			Model No.
P7 Series	Exhaust treatment	-	P7	P5 Series (custom order product)	Exhaust treatment	Copper-based materials prohibited	Silicon-based materials prohibited	Halogen-based materials prohibited (fluorine, chlorine, bromine)	P5
	Vacuum treatment	-	P71		Vacuum treatment	Copper-based materials prohibited	Silicon-based materials prohibited	Halogen-based materials prohibited (fluorine, chlorine, bromine)	P51

Specifications

Descriptions	SSD2-P7*/P5* SSD2-L-P7*/P5* (with switch)															
	mm		$\phi 12$	$\phi 16$	$\phi 20$	$\phi 25$	$\phi 32$	$\phi 40$	$\phi 50$	$\phi 63$	$\phi 80$	$\phi 100$	$\phi 125$	$\phi 140$	$\phi 160$	
Bore size	mm		$\phi 12$	$\phi 16$	$\phi 20$	$\phi 25$	$\phi 32$	$\phi 40$	$\phi 50$	$\phi 63$	$\phi 80$	$\phi 100$	$\phi 125$	$\phi 140$	$\phi 160$	
Actuation	Double acting															
Working fluid	Compressed air															
Max. working pressure	MPa	1.0														
Min. working pressure	MPa	0.15										0.1				
Proof pressure	MPa	1.6														
Ambient temperature	$^{\circ}\text{C}$	-10 to 60 (no freezing)														
Port size		M5				Rc1/8 *1			Rc1/4			Rc3/8				
Port size (relief port)		M5										Rc3/8				
Stroke tolerance	mm	$+1.0$ 0										$+2.0$ 0				
Working piston speed	mm/s	50 to 500							50 to 300							
Cushion		None										Rubber cushion				
Lubrication		Not available														
Allowable energy absorption	J	0.004	0.01	0.016	0.021	0.025	0.092	0.1	0.12	0.27	0.56	6.52	6.52	7.78		

*1: The port size of 5 mm stroke length of $\phi 32$ without switch is M5.

Stroke length

Bore size (mm)	Standard stroke length (mm)	Max. stroke length (mm)	Min. stroke length (mm)
$\phi 12$	5/10/15/20	30	1 (5) The value in () is for types with one or two switches.
$\phi 16$	25/30		
$\phi 20$	5/10/15/20/25	50	
$\phi 25$	30/35/40/45/50		
$\phi 32$	5/10/15/20/25/30	100	
$\phi 40$	35/40/45/50/75/100		
$\phi 50$	10/15/20		
$\phi 63$	25/30/35		
$\phi 80$	40/45/50	300	
$\phi 100$	75/100		
$\phi 125$	10/20/30/40/50		
$\phi 140$	75/100/125/150	300	
$\phi 160$	175/200/250/300		

1: We cannot manufacture switches with 1-color display less than 5 mm, or switches with 2-color display, off-delay type, T1, T8* less than 10 mm.

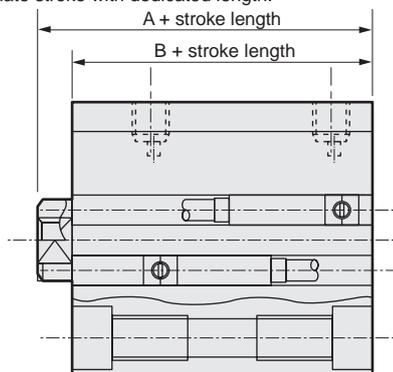
Custom stroke length

- SSD2-P7*, P5* Series

Descriptions	Standard products	
	Standard stroke length body with spacer	
Model No.	Refer to how to order.	
Content	A spacer is added to the standard stroke length body to adjust the stroke length in 1 mm increments.	
Stroke range	Bore size	Stroke range
	12/16	1 to 29
	20 to 25	1 to 49
	32 to 100	1 to 99
	125 to 160	1 to 299
Example of model No.	Model No.: SSD2-32-38-P7 A +2 mm spacer is added to the SSD2-32-40-P7 standard cylinder to create 38 mm stroke length. B + stroke length is 73mm.	

*1 Custom stroke length is available in 1 mm increments.

*2 Total length dimension for intermediate strokes of $\phi 125$ to $\phi 160$ is handled as intermediate stroke with dedicated length.



Switch specifications (F switch)

● 1-color/2-color display

Descriptions	Proximity 2-wire		Proximity 3-wire		Proximity 2-wire		Proximity 3-wire		
	F2S		F3S		F2H/F2V	F2YH/F2YV	F3H/F3V	F3PH/F3PV (custom order)	F3YH/F3YV
Applications	Programmable controller		Programmable controller, relay		Programmable controller		Programmable controller, relay		
Output method	-		NPN output		-		NPN output	PNP output	NPN output
Power supply voltage	-		10 to 28 VDC		-		10 to 28 VDC	4.5 to 28 VDC	10 to 28 VDC
Load voltage	10 to 30 VDC		30 VDC or less		10 to 30 VDC	24 VDC ±10%	30 VDC or less		
Load current	5 to 20 mA		50 mA or less		5 to 20 mA		100 mA or less	50 mA or less	
Indicator lamp	Red LED (Lit when ON)				LED (Lit when ON)	Red/green LED (Lit when ON)	LED (Lit when ON)	Yellow LED (Lit when ON)	Red/green LED (Lit when ON)
Leakage current	1 mA or less		10 µA or less		1 mA or less		10 µA or less		
Weight	g		1 m: 10 3 m: 29						

Switch specifications (T switch)

● 1-color/2-color display/for AC magnetic field

Descriptions	Proximity 2-wire				Proximity 3-wire				Reed 2-wire				Proximity 2-wire			
	T1H/T1V	T2H/T2V/ T2JH/T2JV	T2YH/T2YV	T2WH/T2WV	T3H/T3V	T3PH/ T3PV	T3YH/T3YV	T3WH/T3WV	T0H/T0V	T5H/T5V	T8H/T8V		T2YD(*3) T2YDT			
Applications	Programmable controller, small solenoid valve				Programmable controller, relay				Programmable controller, relay	Programmable controller, relay IC circuit (without indicator lamp), serial connection	Programmable controller, relay		Programmable controller			
Output method	-				NPN output	PNP output	NPN output	NPN output	-				-			
Power supply voltage	-				10 to 28 VDC				-				-			
Load voltage	85 to 265 VAC	10 to 30 VDC	24 VDC ±10%		30 VDC or less				12/24 VDC	100/110 VAC	5/12/24 VDC	100/110 VAC	12/24 VDC	110 VAC	220 VAC	24 VDC ±10%
Load current	5 to 100 mA	5 to 20 mA (*2)		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	
Indicator lamp	LED (Lit when ON)		Red/green LED (Lit when ON)		LED (Lit when ON)	Yellow LED (Lit when ON)	Red/green LED (Lit when ON)		LED (Lit when ON)	Without indicator lamp		LED (Lit when ON)		Red/green LED (Lit when ON)		
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				
Weight g	1 m: 33 3 m: 87 5 m: 142	1 m: 18 3 m: 49 5 m: 80	1 m: 33 3 m: 87 5 m: 142	1 m: 18 3 m: 49 5 m: 80	1 m: 18 3 m: 49 5 m: 80	1 m: 33 3 m: 87 5 m: 142	1 m: 18 3 m: 49 5 m: 80	1 m: 18 3 m: 49 5 m: 80	1 m: 18 3 m: 49 5 m: 80				1 m: 33 3 m: 87 5 m: 142	1 m: 61 3 m: 166 5 m: 272		

*1: Refer to page 309 for detailed switch specifications and dimensions.

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

*3: Switch for AC magnetic field (T2YD/T2YDT) cannot be used in DC magnetic field.

*4: The F type switch uses a bend-resistant lead wire.

Cylinder weight table (The weight with switch includes weight of two cylinder switches)

● ø12 to ø100

(Unit: g)

Stroke length (mm)	5		10		15		20		25		30		35		40		45		50		75		100	
	No switch	With switch																						
ø12	66	107	74	116	83	125	91	133	100	142	108	150	-	-	-	-	-	-	-	-	-	-	-	-
ø16	92	138	103	148	113	158	124	169	135	180	146	191	-	-	-	-	-	-	-	-	-	-	-	-
ø20	130	185	142	217	155	230	168	243	180	255	193	268	206	281	219	294	232	307	245	320	-	-	-	-
ø25	181	272	196	287	212	303	228	319	244	335	259	350	275	366	291	382	307	398	322	413	-	-	-	-
ø32	254	368	276	390	298	412	320	434	341	455	363	477	385	499	407	521	429	543	450	564	558	672	665	779
ø40	373	516	400	543	426	569	453	596	480	623	506	649	533	676	559	702	586	729	612	755	745	888	877	1020
ø50	-	-	691	885	733	927	775	969	817	1011	860	1054	902	1096	944	1138	986	1180	1028	1222	1238	1432	1448	1642
ø63	-	-	939	1218	994	1273	1049	1328	1104	1383	1159	1438	1215	1494	1270	1549	1325	1604	1380	1659	1655	1934	1930	2209
ø80	-	-	1911	2324	1998	2411	2084	2497	2171	2584	2257	2670	2344	2757	2431	2844	2518	2931	2604	3017	3037	3450	3469	3882
ø100	-	-	2625	3192	2739	3306	2852	3419	2966	3533	3080	3647	3194	3761	3307	3874	3421	3988	3535	4102	4105	4672	4675	5242

● ø125 to ø160

(Unit: kg)

Stroke length (mm)	10		20		30		40		50		75		100		125		150		175		200		250		300	
	No switch	With switch																								
ø125	6.12	6.22	6.39	6.49	6.65	6.75	6.92	7.02	7.18	7.28	7.90	8.25	8.51	8.61	9.18	9.28	9.84	9.94	10.51	10.61	11.17	11.27	12.50	12.60	13.83	13.93
ø140	8.50	8.61	8.80	8.91	9.11	9.22	9.41	9.52	9.72	9.83	10.54	10.94	11.24	11.35	12.00	12.11	12.76	12.87	13.52	13.63	14.28	14.39	15.80	15.91	17.32	17.43
ø160	11.86	11.98	12.24	12.36	12.62	12.74	13.00	13.12	13.38	13.50	14.39	14.90	15.28	15.40	16.23	16.35	17.18	17.30	18.13	18.25	19.08	19.20	20.98	21.10	22.88	23.00

How to order

Without switch (No magnet for switch)

SSD2 - **12** - **5** - **N** - **P7**

With switch (Magnet for switch incorporated)

SSD2-L - **12** - **5** - **T0H** - **R** - **N** - **P7**

A Model No.

B Bore size

C Stroke length

D Switch

* indicates lead wire length.

*1

*2

*3

*4

E Switch quantity

F Option

G Clean room specifications

*6

Precautions for model No. selection

1: T2YD switch cannot be installed on $\phi 12$ and $\phi 16$.

2: $\phi 12$ to $\phi 32$ is not compatible with T8 switch built-in.

*3: The F switch can be connected only to the piping port surface of bore sizes $\phi 20$ and $\phi 25$.

*4: $\phi 20$ F switch with L lead wire models cannot be selected on stroke lengths of 15 mm or under.

*5: The 5 m lead wire cannot be selected for the F switch.

*6: "P5""P51" is made to order.

*7: Refer to pages 48 and 49 for combinations of variations/options.

[Example of model No.]

SSD2-L-12-5-T0H-R-NP7

A Model : Compact cylinder, standard

B Bore size : $\phi 12$ mm

C Stroke length : 5 mm

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

E Switch quantity : 1 (on rod end)

F Option : Rod end male thread

G Clean room specifications : Exhaust treatment

Code	Content
A Model No.	
SSD2	Double acting/single rod
SSD2-L	Double acting/single rod/with 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	$\phi 63$
80	$\phi 80$
100	$\phi 100$
125	$\phi 125$
140	$\phi 140$
160	$\phi 160$

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

D Switch model No.		Lead wire	Lead wire	Contact	Voltage	Display	Lead wire	Bore size															
straight	L-shaped				AC/DC			12	16	20	25	32	40	50	63	80	100	125	140	160			
F2S					●	1-color display	2 wires			●	●												
F3S					●		1-color display	3 wires			●	●											
F2H*	F2V*				●			1-color display (PNP output) (custom order)	2 wires			●	●										
F3H*	F3V*				●	2-color display	2 wires				●	●											
F3PH*	F3PV*				●		2-color display	3 wires			●	●											
F2YH*	F2YV*				●			1-color display	2 wires			●	●										
F3YH*	F3YV*				●	1-color display	3 wires				●	●											
T0H*	T0V*				●		Without indicator lamp		2 wires	●	●	●	●	●	●	●	●	●	●	●	●	●	●
T5H*	T5V*				●	1-color display		2 wires	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
T8H*	T8V*				●			1-color display	2 wires	●	●	●	●	●	●	●	●	●	●	●	●	●	●
T1H*	T1V*				●	1-color display	2 wires		●	●	●	●	●	●	●	●	●	●	●	●	●	●	
T2H*	T2V*				●		1-color display (PNP output)		2 wires	●	●	●	●	●	●	●	●	●	●	●	●	●	●
T3H*	T3V*				●	2-color display		3 wires	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
T3PH*	T3PV*				●			2-color display	2 wires	●	●	●	●	●	●	●	●	●	●	●	●	●	●
T2WH*	T2WV*				●	2-color display	3 wires		●	●	●	●	●	●	●	●	●	●	●	●	●	●	
T2YH*	T2YV*				●		2-color display		2 wires	●	●	●	●	●	●	●	●	●	●	●	●	●	●
T3WH*	T3WV*				●	2-color display		3 wires	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
T3YH*	T3YV*				●			2-color display	2 wires	●	●	●	●	●	●	●	●	●	●	●	●	●	●
T2YD*	-				●	AC magnetic field	2 wires		●	●	●	●	●	●	●	●	●	●	●	●	●	●	
T2YDT*	-				●		1-color display off-delay		2 wires	●	●	●	●	●	●	●	●	●	●	●	●	●	●
T2JH*	T2JV*				●	1-color display off-delay		2 wires	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
T2JH*	T2JV*				●			1-color display off-delay	2 wires	●	●	●	●	●	●	●	●	●	●	●	●	●	●

*Lead wire length

Blank	1 m (standard)
3	3 m (optional)
5	5 m (optional) (*5)

E Switch quantity	
R	1 (on rod end)
H	1 (on head end)
D	2

F Option	
Blank	Rod end female thread
N	Rod end male thread

G Clean room specifications		
	Structure	Material restriction
P7	Exhaust treatment	-
P71	Vacuum treatment	-
P5	Exhaust treatment	Copper-based/silicon-based/halogen-based materials (fluorine, chlorine, bromine) are prohibited
P51	Vacuum treatment	Copper-based/silicon-based/halogen-based materials (fluorine, chlorine, bromine) are prohibited

(Stroke length table)

Stroke (mm)	Applicable bore size													
	ø12	ø16	ø20	ø25	ø32	ø40	ø50	ø63	ø80	ø100	ø125	ø140	ø160	
Standard stroke	5	●	●	●	●	●	●							
	10	●	●	●	●	●	●	●	●	●	●	●	●	●
	15	●	●	●	●	●	●	●	●	●	●			
	20	●	●	●	●	●	●	●	●	●	●	●	●	●
	25	●	●	●	●	●	●	●	●	●	●			
	30	●	●	●	●	●	●	●	●	●	●	●	●	●
	35			●	●	●	●	●	●	●	●			
	40			●	●	●	●	●	●	●	●	●	●	●
	45			●	●	●	●	●	●	●	●			
	50			●	●	●	●	●	●	●	●	●	●	●
	75					●	●	●	●	●	●	●	●	●
	100					●	●	●	●	●	●	●	●	●
	125											●	●	●
	150											●	●	●
	175											●	●	●
	200											●	●	●
	250											●	●	●
300											●	●	●	
Min. stroke length (mm) (*1)	1													
Max. stroke length (mm)	30		50			100					300			
Custom stroke length (mm) (*2)	By 1 mm increments													

1: Stroke length less than 5 mm for 1-color display and stroke length less than 10 mm is not available for 2-color display, off-delay, or types with T1 or T8* switches.

*2: Total length of when using custom stroke length is different between ø12 to ø100 and ø125 to ø160 as below.

(ø12 to ø100)

The total length with the custom stroke length are the same as the next longer standard stroke length.

(ø125 to ø160)

Special total length for custom stroke length is provided when custom stroke length is used.

Theoretical thrust table

(Unit: N)

Bore size (mm)	Operating direction	Working pressure MPa										
		0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
ø12	Push	-	17.0	22.6	33.9	45.2	56.5	67.9	79.2	90.5	1.02 × 10 ²	1.13 × 10 ²
	Pull	-	12.7	17.0	25.4	33.9	42.4	50.9	59.4	67.9	76.3	84.8
ø16	Push	-	30.2	40.2	60.3	80.4	1.01 × 10 ²	1.21 × 10 ²	1.41 × 10 ²	1.61 × 10 ²	1.81 × 10 ²	2.01 × 10 ²
	Pull	-	22.6	30.2	45.2	60.3	75.4	90.5	1.06 × 10 ²	1.21 × 10 ²	1.36 × 10 ²	1.51 × 10 ²
ø20	Push	-	47.1	62.8	94.2	1.26 × 10 ²	1.57 × 10 ²	1.88 × 10 ²	2.20 × 10 ²	2.51 × 10 ²	2.83 × 10 ²	3.14 × 10 ²
	Pull	-	35.3	47.1	70.7	94.2	1.18 × 10 ²	1.41 × 10 ²	1.65 × 10 ²	1.88 × 10 ²	2.12 × 10 ²	2.36 × 10 ²
ø25	Push	-	73.6	98.2	1.47 × 10 ²	1.96 × 10 ²	2.45 × 10 ²	2.95 × 10 ²	3.44 × 10 ²	3.93 × 10 ²	4.42 × 10 ²	4.91 × 10 ²
	Pull	-	56.7	75.6	1.13 × 10 ²	1.51 × 10 ²	1.89 × 10 ²	2.27 × 10 ²	2.64 × 10 ²	3.02 × 10 ²	3.40 × 10 ²	3.78 × 10 ²
ø32	Push	-	1.21 × 10 ²	1.61 × 10 ²	2.41 × 10 ²	3.22 × 10 ²	4.02 × 10 ²	4.83 × 10 ²	5.63 × 10 ²	6.43 × 10 ²	7.24 × 10 ²	8.04 × 10 ²
	Pull	-	90.5	1.21 × 10 ²	1.81 × 10 ²	2.41 × 10 ²	3.02 × 10 ²	3.62 × 10 ²	4.22 × 10 ²	4.83 × 10 ²	5.43 × 10 ²	6.03 × 10 ²
ø40	Push	-	1.88 × 10 ²	2.51 × 10 ²	3.77 × 10 ²	5.03 × 10 ²	6.28 × 10 ²	7.54 × 10 ²	8.80 × 10 ²	1.01 × 10 ³	1.13 × 10 ³	1.26 × 10 ³
	Pull	-	1.58 × 10 ²	2.11 × 10 ²	3.17 × 10 ²	4.22 × 10 ²	5.28 × 10 ²	6.33 × 10 ²	7.39 × 10 ²	8.44 × 10 ²	9.50 × 10 ²	1.06 × 10 ³
ø50	Push	-	2.95 × 10 ²	3.93 × 10 ²	5.89 × 10 ²	7.85 × 10 ²	9.82 × 10 ²	1.18 × 10 ³	1.37 × 10 ³	1.57 × 10 ³	1.77 × 10 ³	1.96 × 10 ³
	Pull	-	2.47 × 10 ²	3.30 × 10 ²	4.95 × 10 ²	6.60 × 10 ²	8.25 × 10 ²	9.90 × 10 ²	1.15 × 10 ³	1.32 × 10 ³	1.48 × 10 ³	1.65 × 10 ³
ø63	Push	3.12 × 10 ²	4.68 × 10 ²	6.23 × 10 ²	9.35 × 10 ²	1.25 × 10 ³	1.56 × 10 ³	1.87 × 10 ³	2.18 × 10 ³	2.49 × 10 ³	2.81 × 10 ³	3.12 × 10 ³
	Pull	2.80 × 10 ²	4.20 × 10 ²	5.61 × 10 ²	8.41 × 10 ²	1.12 × 10 ³	1.40 × 10 ³	1.68 × 10 ³	1.96 × 10 ³	2.24 × 10 ³	2.52 × 10 ³	2.80 × 10 ³
ø80	Push	5.03 × 10 ²	7.54 × 10 ²	1.01 × 10 ³	1.51 × 10 ³	2.01 × 10 ³	2.51 × 10 ³	3.02 × 10 ³	3.52 × 10 ³	4.02 × 10 ³	4.52 × 10 ³	5.03 × 10 ³
	Pull	4.54 × 10 ²	6.80 × 10 ²	9.07 × 10 ²	1.36 × 10 ³	1.81 × 10 ³	2.27 × 10 ³	2.72 × 10 ³	3.17 × 10 ³	3.63 × 10 ³	4.08 × 10 ³	4.54 × 10 ³
ø100	Push	7.85 × 10 ²	1.18 × 10 ³	1.57 × 10 ³	2.36 × 10 ³	3.14 × 10 ³	3.93 × 10 ³	4.71 × 10 ³	5.50 × 10 ³	6.28 × 10 ³	7.07 × 10 ³	7.85 × 10 ³
	Pull	7.15 × 10 ²	1.07 × 10 ³	1.43 × 10 ³	2.14 × 10 ³	2.86 × 10 ³	3.57 × 10 ³	4.29 × 10 ³	5.00 × 10 ³	5.72 × 10 ³	6.43 × 10 ³	7.15 × 10 ³
ø125	Push	1.23 × 10 ³	1.84 × 10 ³	2.45 × 10 ³	3.68 × 10 ³	4.91 × 10 ³	6.14 × 10 ³	7.36 × 10 ³	8.59 × 10 ³	9.82 × 10 ³	1.10 × 10 ⁴	1.23 × 10 ⁴
	Pull	1.13 × 10 ³	1.70 × 10 ³	2.26 × 10 ³	3.39 × 10 ³	4.52 × 10 ³	5.65 × 10 ³	6.79 × 10 ³	7.92 × 10 ³	9.05 × 10 ³	1.02 × 10 ⁴	1.13 × 10 ⁴
ø140	Push	1.54 × 10 ³	2.31 × 10 ³	3.08 × 10 ³	4.62 × 10 ³	6.16 × 10 ³	7.70 × 10 ³	9.24 × 10 ³	1.08 × 10 ⁴	1.23 × 10 ⁴	1.39 × 10 ⁴	1.54 × 10 ⁴
	Pull	1.44 × 10 ³	2.16 × 10 ³	2.89 × 10 ³	4.33 × 10 ³	5.77 × 10 ³	7.22 × 10 ³	8.66 × 10 ³	1.01 × 10 ⁴	1.15 × 10 ⁴	1.30 × 10 ⁴	1.44 × 10 ⁴
ø160	Push	2.01 × 10 ³	3.02 × 10 ³	4.02 × 10 ³	6.03 × 10 ³	8.04 × 10 ³	1.01 × 10 ⁴	1.21 × 10 ⁴	1.41 × 10 ⁴	1.61 × 10 ⁴	1.81 × 10 ⁴	2.01 × 10 ⁴
	Pull	1.88 × 10 ³	2.83 × 10 ³	3.77 × 10 ³	5.65 × 10 ³	7.54 × 10 ³	9.42 × 10 ³	1.13 × 10 ⁴	1.32 × 10 ⁴	1.51 × 10 ⁴	1.70 × 10 ⁴	1.88 × 10 ⁴

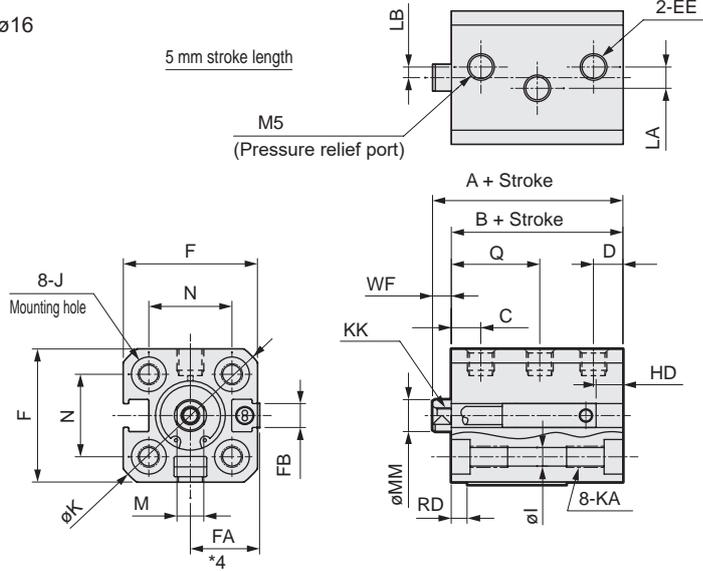
SCPD3
SCM
SSD2
MDC2
SMG
LCM
LCR
LCG
LCX
STM
STG
STR2
MRL2
GRC
Cylinder Switch
MN3E MN4E
4GA/B
M4GA/B
MN4GA/B
F.R.(module unit)
Clean F.R
Precision R
Press gauge Diff. press gauge
Electro-pneumatic R
Speed controller
Auxiliary valve
Fitting/tube
Clean air unit
Pressure sensor
Flow rate sensor
Valve for air blow
Ending

Dimensions

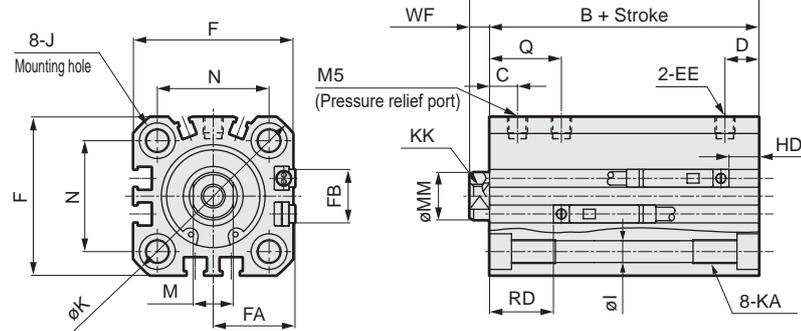
● SSD2-(L-)12 to 25-P7*/P5* (With switch TOH/V, T5H/V, T2H/V, T3H/V)

● Rod end male thread

ø12/ø16



ø20/ø25



● Precautions regarding the switch mounting groove

*1: Only F switch is available for the ø20 or ø25 piping port surface.

Code	Without switch		Common dimension with switch																		
	A ^{*1}	B ^{*1}	A	B	C	D	LA		LB		Q ^{*5}	EE	F	FA ^{*4}	FB	I	J	K	KA	KK	
Bore size (mm)							5 mm stroke length or less	Over 5 mm stroke length	5 mm stroke length or less	Over 5 mm stroke length											
ø12	30.5	27	35.5	32	5.5	5.5	4	0	2	0	16.5 (16)	M5	25	13 (16.5)	4.5	3.5	6.5 spot face depth 3.5	32	M4 depth 7	M3 depth 6	
ø16	30.5	27	35.5	32	5.5	5.5	6	0	0	0	16.5	M5	29	15 (18.5)	4.5	3.5	6.5 spot face depth 3.5	38	M4 depth 7	M4 depth 8	
ø20	34	29.5	44	39.5	5.5	7	-	-	-	-	16.5	M5	36	18.5 (22)	12.5	5.5	9 spot face depth 5.5	47	M6 depth 11	M5 depth 7	
ø25	37.5	32.5	47.5	42.5	7	8.5	-	-	-	-	18	M5	40	20.5 (24)	13.5	5.5	9 spot face depth 5.5	51	M6 depth 11	M6 depth 12	

Code	Common dimension with switch				Reed TOH/TOV, T5H/T5V		Proximity T2H/T2V, T3H/T3V		Proximity T2WH/T2WV, T3WH/T3WV		Proximity F2H/F2V, F3H/F3V, F2YH/F2YV, F3YH/F3YV		Proximity F2S/F3S	
	M	MM	N	WF	HD	RD	HD	RD	HD	RD	HD	RD	HD	RD
ø12	5	6	15.5	3.5	4	9	4	9	6	11	-	-	-	-
ø16	6	8	20	3.5	2	11.5	2	11.5	3	13.5	-	-	-	-
ø20	8	10	25.5	4.5	6	14.5	6	14.5	8	16.5	10.5	19	9.5	18
ø25	10	12	28	5	8	16	8	16	10	18	12.5	20	11.5	19

*1: To calculate A + stroke length or B + stroke length when using custom stroke length, apply the next longer standard stroke length instead of the custom stroke length to the stroke length.

Example: If the custom stroke length is 7 mm, apply the standard stroke length 10 mm.

*2: HD and RD dimensions for 5 mm stroke length differ from these dimensions according to the setting.

3: Refer to page 57 for dimensions of HD, RD and projection of the switches of 2-color display, off-delay, AC magnetic field, T1 and T8*.

*4: Dimensions in () of code FA are for the L type lead wire.

*5: Dimensions in () of code Q are for 5 mm stroke length without switch.

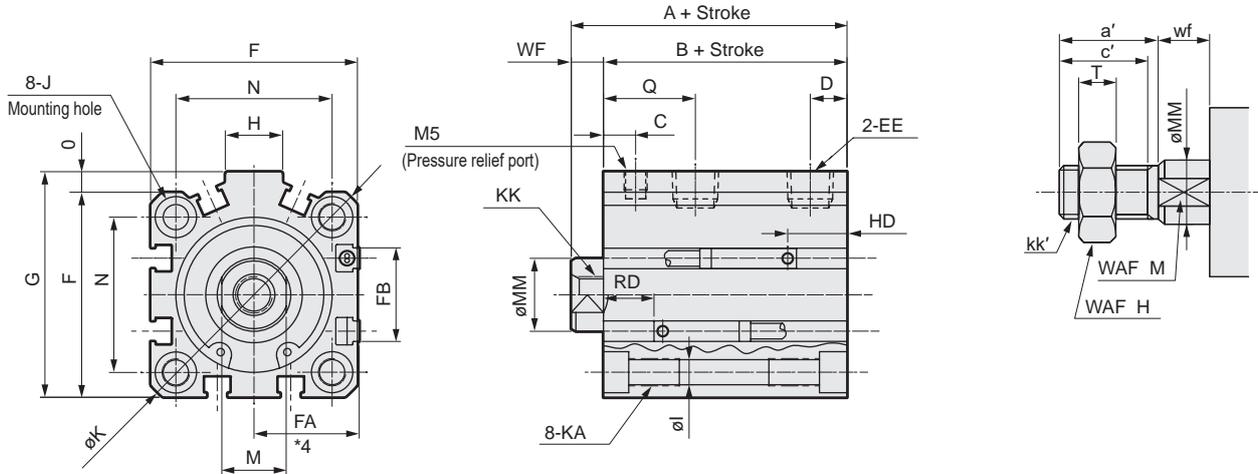
● Rod end male thread

Code	a'	c'	H	kk'	M	MM	T	wf
ø12	10.5	9	8	M5	5	6	3.2	3.5
ø16	12	10	10	M6	6	8	3.6	3.5
ø20	14	12	13	M8	8	10	5	4.5
ø25	17.5	15	17	M10 × 1.25	10	12	6	5

Dimensions

● SSD2-(L-)32 to 100-P7*/P5* (With switch TOH/V, T5H/V, T2H/V, T3H/V)

● Rod end male thread



Code	Without switch		Common dimension with switch													
	A ^{*1*5}	B ^{*1*5}	A ^{*1}	B ^{*1}	C	D ^{*7}	Q	EE	F	FA ^{*4}	FB	G	H	I	J	K
ø32	40 (50)	33 (43)	50	43	7	8(5.5)	20	Rc1/8 ¹⁵	45	23 (26.5)	20.5	49.5	12.5	5.5	9 spot face depth 5.5	60
ø40	46.5 (56.5)	39.5 (49.5)	56.5	49.5	8.5	8	21.5	Rc1/8	52	26.5 (30)	27.5	57	15	5.5	9 spot face depth 5.5	69
ø50	48.5 (58.5)	40.5 (50.5)	58.5	50.5	9.5	10.5(9.5)	25	Rc1/4 ¹⁵	64	32.5 (36)	28.5	71	18	6.9	11 spot face depth 6.5	86
ø63	54 (64)	46 (56)	64	56	10	11	25.5	Rc1/4	77	39 (42.5)	28.5	84	23	8.7	14 spot face depth 9	103
ø80	68.5 (78.5)	58.5 (68.5)	78.5	68.5	11.5	13	30	Rc3/8	98	49.5 (53)	28.5	104	31	10.5	17.5 spot face depth 11	132
ø100	80 (90)	68 (78)	90	78	15.5	15	35	Rc3/8	117	59 (62.5)	28.5	123.5	38	10.5	17.5 spot face depth 11	156

Code	Common dimension with switch							Reed TOH/TOV, T5H/T5V		Proximity T2H/T2V, T3H/T3V		Proximity T2WH/T2WV, T3WH/T3WV	
	KA	KK	M	MM	N	O	WF	HD	RD	HD	RD	HD	RD
ø32	M6 depth 11	M8 depth 13	14	16	34	4.5	7	4	19.5	4	19.5	6	21.5
ø40	M6 depth 11	M8 depth 13	14	16	40	5	7	7	22	7	22	8.5	23.5
ø50	M8 depth 13	M10 depth 15	17	20	50	7	8	7.5	22.5	7.5	22.5	9	24
ø63	M10 depth 25	M10 depth 15	17	20	60	7	8	12.5	23	12.5	23	14	24.5
ø80	M12 depth 28	M16 depth 21	22	25	77	6	10	17.5	25.5	17.5	25.5	19	27
ø100	M12 depth 28	M20 depth 27	27	30	94	6.5	12	23	29.5	23	29.5	24.5	31

- *1: To calculate A + stroke length or B + stroke length when using custom stroke length, apply the next longer standard stroke length instead of the custom stroke length to the stroke length. Example: If the custom stroke length is 7 mm, apply the standard stroke length 10 mm.
- *2: HD and RD dimensions for 5 mm stroke length differ from these dimensions according to setting.
- *3: Refer to page 57 for dimensions of HD, RD and protruding dimensions of the 2-color display, off-delay, AC magnetic field proof, T1* and T8* switches.
- *4: Dimensions in () of code FA are for the L type lead wire type.
- *5: Dimensions in () of A and B are for the stroke length of more than 50 mm.
- *6: The ø32 bore size with a 5 mm stroke and without a switch has a port size of M5. The ø50 bore size with a 10 mm stroke and without a switch has a port size of Rc1/8.
- *7: Dimensions in () of codes C and D are for 5 mm stroke length without switch.

● Rod end male thread

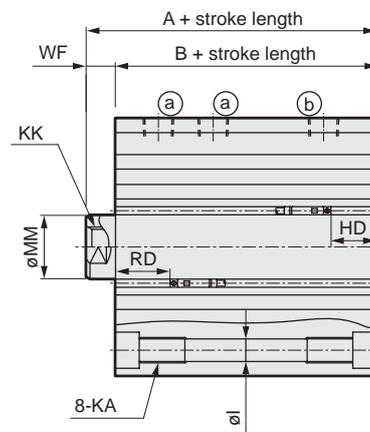
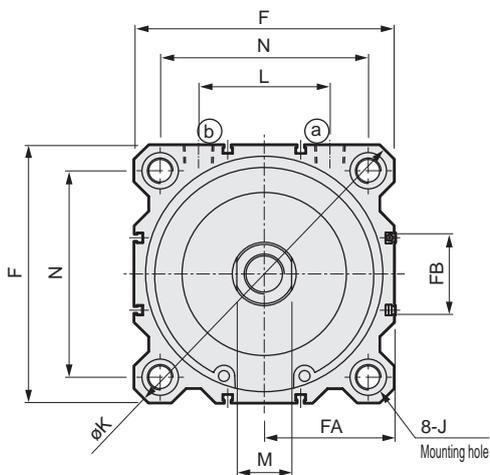
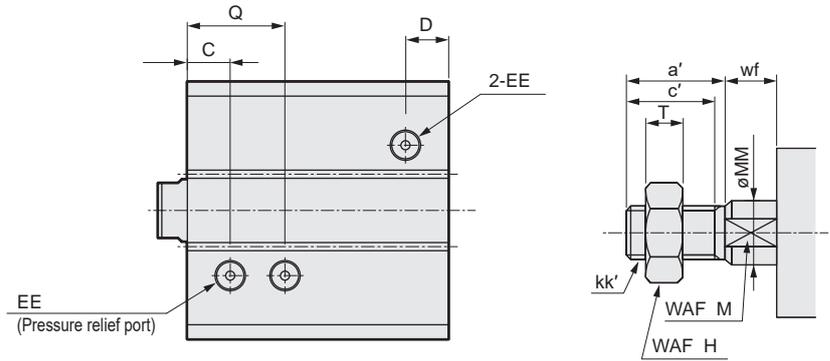
Code	a'	c'	H	kk'	M	MM	T	wf
ø32	23.5	20.5	22	M14 × 1.5	14	16	8	5
ø40	23.5	20.5	22	M14 × 1.5	14	16	8	5
ø50	28.5	26	27	M18 × 1.5	17	20	11	5
ø63	28.5	26	27	M18 × 1.5	17	20	11	5
ø80	35.5	32.5	32	M22 × 1.5	22	25	13	8
ø100	35.5	32.5	41	M26 × 1.5	27	30	16	8

SCPD3
SCM
SSD2
MDC2
SMG
LCM
LCR
LCG
LCX
STM
STG
STR2
MRL2
GRC
Cylinder Switch
MN3E MN4E
4GA/B
M4GA/B
MN4GA/B
F.R.(module unit)
Clean F.R
Precision R
Press gauge Diff. press gauge
Electro-pneumatic R
Speed controller
Auxiliary valve
Fitting/tube
Clean air unit
Pressure sensor
Flow rate sensor
Valve for air blow
Ending

Dimensions (ø125 to ø160)

● SSD2-(L-)125 to 160-P7*/P5* (With switch)

● Rod end male thread



Code	Common dimensions in the type with switch and without switch																		
Bore size (mm)	A	B	C	D	EE	F	FA	FB	I	J	K	KA	KK	L	M	MM	N	Q	WF
ø125	118	102	23.5	23.5	Rc3/8	142	71.5 (75)	44.5	12.5	20 spot face depth 13	190	M14 depth 25	M22 depth 30	72	30	35	114	53.5	16
ø140	128	112	27	27	Rc3/8	158	79.5 (83)	44.5	12.5	20 spot face depth 13	210	M14 depth 25	M22 depth 30	80	30	35	128	57	16
ø160	143	126	30	30	Rc3/8	178	89.5 (93)	48.5	14.7	23 spot face depth 15.2	238	M16 depth 28	M24 depth 33	90	36	40	144	65	17

Code	Reed T0H/T0V, T5H/T5V		Proximity T2H/T2V, T3H/T3V		Proximity T2WH/T2WY, T3WY/T3WV	
Bore size (mm)	HD	RD	HD	RD	HD	RD
ø125	24.5	59.5	24.5	59.5	26	61
ø140	31	63	31	63	32.5	64.5
ø160	34	74	34	74	35.5	75.5

● *1: Refer to page 57 for HD and RD dimensions and projection dimensions of 2-color display switches.

● *2: Dimensions in () of code FA are for the L type lead wire.

Dimensions of rod end male thread

Code	a'	c'	H	kk'	M	MM	T	wf
ø125	45	42	46	M30 × 1.5	30	35	18	13
ø140	45	42	46	M30 × 1.5	30	35	18	13
ø160	50	47	55	M36 × 1.5	36	40	21	14

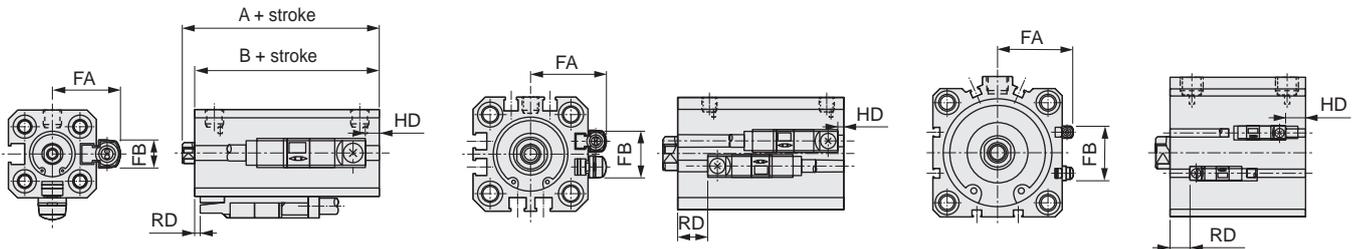
Dimensions common to SSD2 Series with switches (2-color display, off-delay, for AC magnetic field, with T1* and T8* switches)

● SSD2-L-12 to 160 (2-color display, off-delay, with T8* switch: T2YH/V, T3YH/V, T2JH/V, T8H/V)

• $\phi 12/\phi 16$

• $\phi 20/\phi 25$

• $\phi 32$ to $\phi 160$



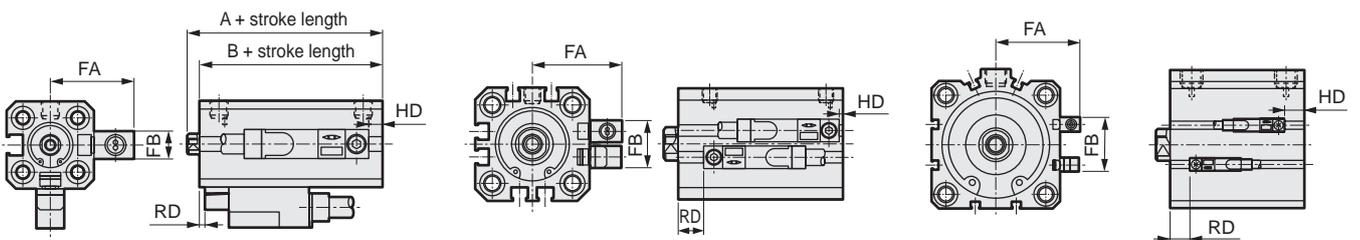
Code Bore size (mm)	FA	FB	T2YH/V, T3YH/V, T2JH/V		T8H/V	
			RD	HD	RD	HD
$\phi 12$	18.8	8	-	-	-	-
$\phi 16$	20.8	8	-	-	-	-
$\phi 20$	24.3	16	6.5	2	-	-
$\phi 25$	26.3	17	8.5	3	-	-
$\phi 32$	28.8	24	8.5	3.5	-	-
$\phi 40$	32.3	31	10.5	5.5	6	1
$\phi 50$	38.3	32	11	6	6.5	1.5
$\phi 63$	44.8	32	11.5	11	7	6.5
$\phi 80$	55.3	32	14	16	9.5	11.5
$\phi 100$	64.8	32	18	21.5	13.5	17
$\phi 125$	77	48	58	23	53	18
$\phi 140$	85	48	61.5	29.5	56.5	24.5
$\phi 160$	95	52	72.5	32.5	67.5	27.5

● SSD2-L-12 to 160 (for AC magnetic field, with T1* switch, T2YD, T2YDT, T1H/V)

• $\phi 12/\phi 16$

• $\phi 20/\phi 25$

• $\phi 32$ to $\phi 160$



Code Bore size (mm)	FA	FB	RD	HD
$\phi 12$	23.8	8	-	-
$\phi 16$	25.8	8	-	-
$\phi 20$	29.3	16	6.5	2
$\phi 25$	31.3	17	8.5	3
$\phi 32$	33.8	24	8.5	3.5
$\phi 40$	37.3	31	10.5	5.5
$\phi 50$	43.3	32	11	6
$\phi 63$	49.8	32	11.5	11
$\phi 80$	60.3	32	14	16
$\phi 100$	60.8	32	18	21.5
$\phi 125$	82.5	48	58	23
$\phi 140$	90.5	48	61.5	29.5
$\phi 160$	100.5	52	72.5	32.5

- SCPD3
- SCM
- SSD2**
- MDC2
- SMG
- LCM
- LCR
- LCG
- LCX
- STM
- STG
- STR2
- MRL2
- GRC
- Cylinder Switch
- MN3E
MN4E
- 4GA/B
- M4GA/B
- MN4GA/B
- F.R. (module unit)
- Clean F.R
- Precision R
- Press gauge
Diff. press gauge
- Electro-pneumatic R
- Speed controller
- Auxiliary valve
- Fitting/tube
- Clean air unit
- Pressure sensor
- Flow rate sensor
- Valve for air blow
- Ending