

High Precision Stroke Reading Cylinder Non-rotating Piston Type

Series CEP1

ø12, ø20



For details about certified products conforming to international standards, visit us at www.smcworld.com.

How to Order

CEP1 **B** **12** **50** **F9BW**

Mounting style

B	Direct mounting rod side tapped
L	Foot style
F	Rod side flange style

Bore size

12	12 mm equivalent
20	20 mm equivalent

Standard cylinder stroke (mm)
Refer to "Standard Stroke" on page 10-12-9.

Number of auto switches

Nil	2 pcs.
S	1 pc.
n	"n" pcs.

Auto switch

Nil	Without auto switch
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Sensor cable length

Nil	0.5 m
L	3 m

Connector

Nil	With connector
Z	Without connector

Applicable counter
Series CEU5

<Made-to-order>
Fluoro rubber seals: -XC22
(Example) CEP1B12-100-M9N-XC22

<Option>
Extension cable CE1-R **05**

Cable length

05	5 m
10	10 m
15	15 m
20	20 m

Suffix

Nil	Extension cable
C	Extension cable & connector

Mounting Bracket Part No.

Cylinder part no.	Foot	Rod side flange
CEP1□12	CEP1-L12	CEP1-F12
CEP1□20	CEP1-L20	CEP1-F20

Applicable Auto Switch/Refer to page 10-20-1 for further information on auto switches.

Type	Special function	Electrical entry	Indicator light	Wiring (Output)	Load voltage			Auto switch model		Lead wire length (m)			Pre-wire connector	Applicable load	
					DC		AC	Perpendicular	In-line	0.5 (Nil)	3 (L)	5 (Z)			
Reed switch	—	Grommet	Yes	3-wire (NPN equivalent)	—	5 V	—	A96V	A96	●	●	—	—	IC circuit	—
				2-wire	24 V	12 V	100 V	A93V	A93	●	●	—	—	—	Relay, PLC
Solid state switch	—	Grommet	Yes	3-wire (NPN)	24 V	5 V, 12 V		M9NV	M9N	●	●	○	○	IC circuit	Relay, PLC
				3-wire (PNP)		12 V		M9PV	M9P	●	●	○	○	—	
				2-wire	24 V	5 V, 12 V		M9BV	M9B	●	●	○	○	—	
				3-wire (NPN)		5 V, 12 V		F9NWV	F9NW	●	●	○	○	IC circuit	
	Diagnostic indication (2-color indication)	Grommet	Yes	3-wire (PNP)	24 V	5 V, 12 V		F9PWV	F9PW	●	●	○	○	—	
				2-wire		12 V		F9BWV	F9BW	●	●	○	○	—	
	Water resistant (2-color indication)	Grommet	Yes	3-wire (NPN)	24 V	5 V, 12 V		F9NWV	F9NW	●	●	○	○	IC circuit	
				2-wire		12 V		F9BWV	F9BW	●	●	○	○	—	
	Water resistant (2-color indication)	Grommet	Yes	3-wire (PNP)	24 V	5 V, 12 V		F9PWV	F9PW	●	●	○	○	—	
				2-wire		12 V		F9BWV	F9BW	●	●	○	○	—	
	Water resistant (2-color indication)	Grommet	Yes	3-wire (NPN)	24 V	5 V, 12 V		F9NWV	F9NW	●	●	○	○	IC circuit	
				2-wire		12 V		F9BWV	F9BW	●	●	○	○	—	
	Water resistant (2-color indication)	Grommet	Yes	3-wire (PNP)	24 V	5 V, 12 V		F9PWV	F9PW	●	●	○	○	—	
				2-wire		12 V		F9BWV	F9BW	●	●	○	○	—	
	Water resistant (2-color indication)	Grommet	Yes	3-wire (NPN)	24 V	5 V, 12 V		F9NWV	F9NW	●	●	○	○	IC circuit	
				2-wire		12 V		F9BWV	F9BW	●	●	○	○	—	

* Lead wire length symbols: 0.5 m Nil (Example) M9N
3 m L (Example) M9NL
5 m Z (Example) M9NZ

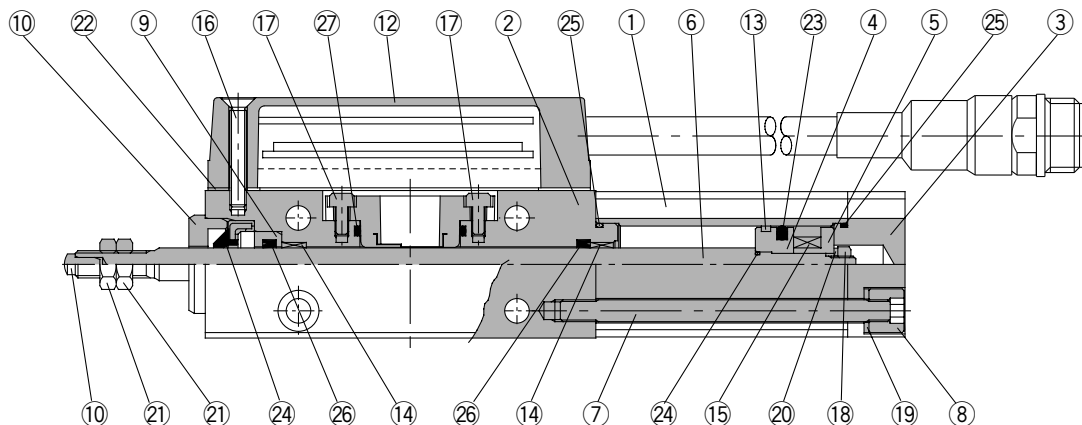
* Solid state switches marked with "○" are produced upon receipt of order.

- Refer to page 10-12-16 for details on other applicable auto switches than listed above.
- For details about auto switches with pre-wire connector, refer to page 10-20-66.

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Construction

ø12, ø20



Component Parts

No.	Description	Material	Note
①	Cylinder tube	Aluminum alloy	Hard anodized
②	Rod cover	Aluminum alloy	Hard chrome plated
③	Head cover	Aluminum alloy	Hard anodized
④	Piston A	Aluminum alloy	Hard anodized
⑤	Piston B	Aluminum alloy	Hard anodized
⑥	Piston rod	Carbon steel	Hard chrome plated
⑦	Tie-rod	Carbon steel	Chromated
⑧	Tie-rod nut	Carbon steel	Nickel plated
⑨	Seal ring	Aluminum alloy	White anodized
⑩	Centering location ring	Aluminum alloy	White anodized
⑪	Rod end pin	Stainless steel	Quenched
⑫	Sensor unit	—	With or without connector
⑬	Wear ring	Special resin	
⑭	Bushing	Cast iron	

No.	Description	Material	Note
⑮	Magnet	Rare earth	
⑯	Cross recessed countersunk head screw	Chromium molybdenum steel	Nickel plated
⑰	Hexagon socket head cap screw	Stainless steel	
⑱	Hexagon nut	Carbon steel	Nickel plated
⑲	Spring washer	Steel wire	Nickel plated
⑳	Spring washer	Steel wire	Nickel plated
㉑	Hexagon nut	Carbon steel	Rod end nut
㉒	Sensor case gasket	NBR	
㉓	Piston seal	NBR	
㉔	Scraper	NBR	
㉕	Tube gasket	NBR	
㉖	Rod seal	NBR	
㉗	O-ring	NBR	
㉘	O-ring	NBR	

* Since there is a possibility of improper operation, please contact SMC regarding the replacement of seals.

RE^A_B

REC

C□X

C□Y

MQ^Q_M

RHC

MK(2)

RS^Q_G

RS^H_A

RZQ

MI^W_S

CEP1

CE1

CE2

ML2B

C_G5-S

CV

MVGQ

CC

RB

J

D-

-X

20-

Data

Series CEP1

Dimensions: ø12

Direct mounting, rod side tapped style:

CEP1B12 — **Stroke**

