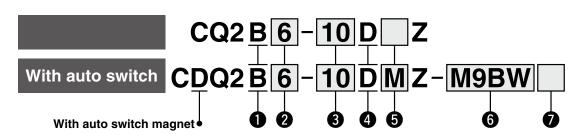
Compact Cylinder: Standard Double Acting, Single Rod CQ2 Series Ø4, Ø6, Ø10



How to Order



Mounting

Through-hole/Head end tapped

2 Bore size

4	4 mm
6	6 mm
10	10 mm

* Auto switches cannot be mounted on ø4.

3 Cylinder stroke

Bore size	Standard stroke
4, 6	5, 10
10	5, 10, 15, 20

Action

D	Double acting

5 Body option

Nil	Rod end female thread (Without thread for ø4)				
C With rubber bumper					
M	Rod end male thread				

* Combined body options "CM" can be selected.

6 Auto switch

	Nil	Without auto switch
--	-----	---------------------

* For applicable auto switches, refer to the table below.

Number of auto switches

Nil	2
S	1
n	n

Applicable Auto Switches / Refer to the Web Catalog for further information on auto switches.

7,	Applicable Acto Official to the web catalog for further information of acto switches.																																																												
	Type Special function Electrical entry		F) A /::	Lo	Load voltage		Auto switch model		Lead wire length [m]*2					D																																													
Ту			Indicator	Wiring (Output)	DC		AC	Perpendicular	In-line	0.5 (Nil)	1 (M)	3 (L)	5 (Z)	None (N)	Pre-wired connector	Applicable load																																													
					O wine (NIDNI)				F8N	_	•	 —	•	0	_	_																																													
	_				3-wire (NPN)		5 V,		M9NV	M9N	•	•	•	0	_	0	IC																																												
1 -	switch —				3-wire (PNP)		12 V		F8P	_		—	•	0	_	_	circuit																																												
<u> </u>	_			3-WITE (PINP)				M9PV	M9P	•	•	•	0	_	0																																														
	anto				2-wire	24 V 12 V 5 V,	12.1/		F8B	_		—	•	0	_	_	-																																												
		Grommet	net Yes		24 \/		24 V				M9BV	M9B	•	•	•	0	_	0		Relay,																																									
		Diagnostic indication	Grommet	165	3-wire (NPN)		5 V,	M9NWV	M9NW		•	•	0	_	0	IC	PLC																																												
-	Diagnostic indication (2-color indicator)		12 V		M9PWV	M9PW	•	•		0	_	0	circuit																																																
		(2-color indicator)	(2-color indicator)		2-wire															İ	İ	İ	İ	İ		İ	ĺ		İ	İ	ĺ	ĺ	İ								l	l							l		12 V		M9BWV	M9BW		•	•	0	_	0	_
	Nate	<u> </u>	Mater registers	Water resistant			3-wire (NPN)		5 V,		M9NAV*1	M9NA*1	0	0	•	0	_	0	IC																																										
		(2-color indicator)	3-wire (PNP) 12 V		12 V		M9PAV*1	M9PA*1	0	0	•	0	_	0	circuit																																														
	(2-color indicator)				2-wire		12 V		M9BAV*1	M9BA*1					l —	\circ																																													

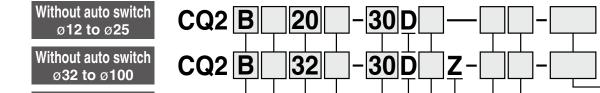
- *1 Water-resistant type auto switches can be mounted on the above models, but SMC cannot guarantee water resistance.
- Please contact SMC regarding water-resistant types with the above model numbers.
- *2 Lead wire length symbols: 0.5 m ······· Nil (Example) M9N 1 m M (Example) M9NM
- * Solid state auto switches marked with a "O" are produced upon receipt of order.
- (Example) M9NL 3 m L 5 m (Example) M9NZ * For 2-color indicator, use caution on hysteresis. Refer to the "Auto Switch Hysteresis" section in the Web Catalog.
- * For the detailed specifications of auto switches, refer to the Web Catalog.
 - Auto switches are shipped together with the product but do not come assembled.

Compact Cylinder: Standard Double Acting, Single Rod

CQ2 Series

Ø12, Ø16, Ø20, Ø25, Ø32, Ø40, Ø50, Ø63, Ø80, Ø100

How to Order



CDQ2B With auto switch

With auto switch magnet

The overall length of the cylinder with an auto switch magnet is longer than that of the cylinder without an auto switch magnet by the length of the built-in magnet. For details, refer to the dimensions of each size.

Mounting

В	Through-hole						
Α	Both ends tapped						
L	Foot						
LC	C Compact foot						
F	Rod flange						
G	G Head flange						
D	Double clevis						

- * Mounting brackets are shipped together with the product but do not come assembled.
- * Refer to 9 for the through-hole type mounting bolt.
- For cylinders with mounting options "L," "LC," or "F," the cylinder rod protrusion dimensions (Dimensions L and L1) vary from the standard cylinder. When only ordering the cylinder, order the rod end length increased by 10 mm (-XC2) cylinder. For details ⇒ p. 178

2 Type

	Nil		Pneumatic								
	Н		Air	-hydro*1							
1	The	horo	01700	ovoiloblo	for	tha					

The bore sizes available for the air-hydro type are ø20 to ø100.

3 Bore size

12	12 mm
16	16 mm
20	20 mm
25	25 mm
32	32 mm
40	40 mm
50	50 mm
63	63 mm
80	80 mm
100	100 mm

Port thread type

Nil	M thread	ø12 to ø25					
INII	Rc						
TN	NPT	ø32 to ø100					
TF	G						
F	Built-in One-touch fittings*1						

- *1 The bore sizes available with Onetouch fittings are ø32 to ø63. However, they cannot be selected for the airhydro type.
- * "TF" is not selectable for the air-hydro type.
- * For cylinders without an auto switch magnet, M threads are compatible only with ø32-5 mm stroke.

6 Action

D Double acting

5 Cylinder stroke (For details on the minimum stroke for auto switch mounting ⇒ p. 157)

	[mm]
Bore size	Standard stroke
12, 16	5, 10, 15, 20, 25, 30
20, 25	5, 10, 15, 20, 25, 30, 35, 40, 45, 50
32, 40	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100
50, 63, 80, 100	10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100

- For long strokes exceeding the standard stroke range ⇒ p. 80
- For details on the manufacturing of intermediate strokes ⇒ p. 18
- * The bore sizes available for the air-hydro type are ø20 to ø100.

9 Through-hole type mounting bolt

"B" (Through-hole). For details:

Without auto switch magnet ⇒ p. 21

with the product. Please order it

separately.

When a made-to-order option is selected,

the mounting bolt is not shipped together

With auto switch magnet ⇒ p. 22

None Shipped together Mounting bolt is shipped together with the product only when the mounting bracket is

Nil	Rod end female thread
F	With boss on head end
С	With rubber bumper*1
М	Rod end male thread

Body option

- *1 The type with a rubber bumper is not selectable for the air-hydro type.
- * Combined body options, such as "FC," "FM," "FCM," and "CM" can be selected.

Auto switch mounting groove

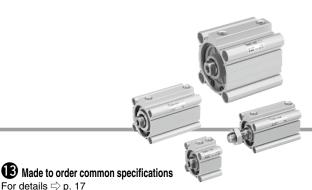
<u> </u>	tato omitori moc	mang groote
7	ø12 to ø25	2 surfaces
_	ø32 to ø100	4 surfaces

10 Rod end bracket (⇔ p. 34 to 36)

None
Type A mounting bracket + Joint
Type B mounting bracket + Joint
Single knuckle joint
Double knuckle joint

- * Options "D" and "E" must be used in combination with body option (Nil), the rod end female thread, and options "V" and "W" must be used in combination with body option (M), the rod end male thread.
- * A knuckle pin is not provided with the single knuckle joint (V). If a pin is required, please order it separately.
- * When a made-to-order option is selected, the rod end bracket cannot be selected. Please order it separately.





Auto switch

Nil Without auto switch

* For applicable auto switches, refer to the table below.

symbol for the auto switch.

(Example) CDQ2L32-25DZ

Number of auto switches

US INUI	ilibei oi auto swit
Nil	2
S	1
n	n

For details on auto switch mounting \$\Rightarrow\$ p. 149 to 165

For details ⇒ p. 17

- · Auto Switch Proper Mounting Position (Detection at stroke end) and Mounting Height
- · Minimum Stroke for Auto Switch Mounting
- · Operating Range
- · Auto Switch Mounting Brackets/Part Nos.

Proposals for Improving Water and Dust-resistance

SMC offers a wide range of models suitable for various operating environments. This includes models that can be used in environments that the basic model cannot, such as those where coolant liquid, water droplets/splashing, dust, etc., are present.

For details, refer to the Web Catalog.

Cylinder Model with Auto Switch Magnet If a cylinder with an auto switch magnet and without an

auto switch is required, there is no need to enter the

- · Water-resistant cylinder
- · Cylinder with Stable Lubrication Function (Lube-retainer)
- · Dust resistant cylinder

Applicable Auto Switches / Refer to the Web Catalog for further information on auto switches.

- In In In	IOUDIC AUTO OWITE																																	
	□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □		후	\A/:	L	oad volta	age	Auto swite	ch model	Lead	l wir	e ler	ngth	[m]	D																			
Туре	Special function	Electrical entry	Indicate light	Wiring (Output)	С	C	AC	Perpendicular	In-line	0.5 (Nil)	1 (M)	3 (L)	5 (Z)	None (N)	Pre-wired connector	Applical	ble load																	
				3-wire (NPN)		5 V,		M9NV	M9N		•	•	0	_	0	IC circuit																		
당				3-wire (PNP)		12 V		M9PV	M9P	•	•	•	0	_	0	ic circuit																		
switch					2-wire		12 V	V	M9BV	M9B	•	•	•	0	 —	0	_																	
	Di	Grommet Ye					3-wire (NPN)	e (NPN)	5 V,		M9NWV	M9NW	•	•	•	0	_	0	IC airearia															
auto			Vac	3-wire (PNP)	24 V	, 12 V		M9PWV	M9PW	•	•	•	0	_	0	C circuit Relay,																		
	(2-color indicator)		Grommet	Grommet	Grommet	Grommet	Grommet	Grommet	Grommet	res	2-wire	24 V	24 V	24 V	12 V	-	M9BWV	M9BW	•	•	•	0	_	0	_	PLC								
state	14/-1								3-wire (NPN)		-	5 V,		M9NAV*1	M9NA*1	0	0	•	0	_	0	IC circuit												
	Water resistant (2-color indicator)		3-wire (PNP) 2-wire 2-wire (Non-polar)	3-wire (PNP)]							l	l													12 V		M9PAV*1	M9PA*1	0	0	•	0	_
Solid	(2-color indicator)				2-wire	2-wire	12 V		M9BAV*1	M9BA*1	0	0	•	0	_	0																		
	Magnetic field resistant (2-color indicator)			2-wire (Non-polar)	ıΊ	_			P3DWA	•	_	•	•	_	0	_																		
tch			Yes	3-wire (NPN equivalent)	_	5 V	_	A96V	A96	•	_	•	_	_	_	IC circuit	_																	
Reed auto switch		Grommet 1es 12 V 100 V A93V*2 A93 • •	•	•	_	_	_	Relay,																										
at a	auto		No	2-wire	24 V	5 V,12 V	100 V or less	A90V	A90	•	_	•	_	_	_	IC circuit	PLC																	

- *1 Water-resistant type auto switches can be mounted on the models on page 15, but SMC cannot guarantee water resistance. A water-resistant type cylinder (🖒 p. 107) is recommended for use in environments which require water resistance.
- *2 The 1 m lead wire is only applicable to the D-A93.
- * Lead wire length symbols: 0.5 m ······ Nil (Example) M9NW 1 m M (Example) M9NWM

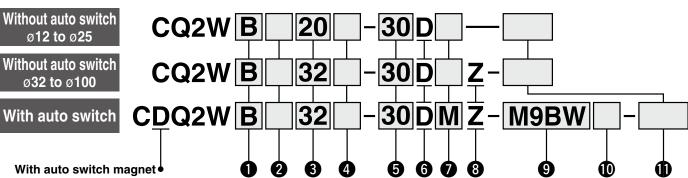
5 m Z

- 3 m L (Example) M9NWL (Example) M9NWZ
- * Solid state auto switches marked with a "O" are produced upon receipt of order.
- * The D-P3DWA type is only available in sizes ø25 to ø100.
- There are applicable auto switches other than those listed above. For details ⇒ p. 165

Compact Cylinder: Standard Double Acting, Double Rod CQ2W Series

Ø12, Ø16, Ø20, Ø25, Ø32, Ø40, Ø50, Ø63, Ø80, Ø100

How to Order



With auto switch magnet The overall length of the cylinder with an auto switch magnet is longer

with an auto switch magnet is longer than that of the cylinder without an auto switch magnet by the length of the built-in magnet. For details, refer to the dimensions of each size.

Mounting

В	Through-hole
Α	Both ends tapped
L	Foot
LC	Compact foot
F	Flange

- Mounting brackets are shipped together with the product but do not come assembled.
- A through-hole type mounting bolt is available as an option.
 For details ⇒ p. 42
- * For cylinders with mounting options "L," "LC," or "F," the cylinder rod protrusion dimensions (Dimensions L and L1) vary from the standard cylinder. When only ordering the cylinder, order the rod end length increased by 10 mm (-XC2) cylinder. For details ⇒ p. 178

2 Туре

<u> </u>	
Nil	Pneumatic
Н	Air-hydro*1

*1 The bore sizes available for the air-hydro type are ø20 to ø100.

3 Bore size

12	12 mm
16	16 mm
20	20 mm
25	25 mm
32	32 mm
40	40 mm
50	50 mm
63	63 mm
80	80 mm
100	100 mm

4 Port thread type

Nil	M thread	ø12 to ø25						
INII	Rc							
TN	NPT	ø32 to ø100						
TF	G							
F	Built-in One-touch fittings*1							

- *1 The bore sizes available with Onetouch fittings are ø32 to ø63. However, they cannot be selected for the airhydro type.
- * "TF" is not selectable for the air-hydro type.
- For cylinders without an auto switch magnet, M threads are compatible only with ø32-5 mm stroke.

f 5 **Cylinder stroke** (For details on the minimum stroke for auto switch mounting \Rightarrow p. 157)

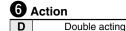
	[mm]
Bore size	Standard stroke
12, 16	5, 10, 15, 20, 25, 30
20, 25	5, 10, 15, 20, 25, 30, 35, 40, 45, 50
32, 40	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100
50, 63, 80, 100	10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100

- For the manufacturing of intermediate strokes ⇒ p. 39
- * The bore sizes available for the air-hydro type are ø20 to ø100.

Body option

Nil	Rod end female thread
С	With rubber bumper*1
M	Rod end male thread

- *1 The type with a rubber bumper is not selectable for the air-hydro type.
- * Combined body options "CM" can be selected.



•				
Ö	Auto	switch	mounting	groove

_		, <u>, , , , , , , , , , , , , , , , , , </u>		
7	ø12 to ø25	2 surfaces		
	ø32 to ø100	4 surfaces		



9 Auto switch

Nil Without auto switch

* For applicable auto switches, refer to the table below.

Φ Number of aι	uto switches

Nil	2
S	1
n	n

Made to order common specifications

For details ⇒ p. 39

Cylinder Model with Auto Switch Magnet

If a cylinder with an auto switch magnet and without an auto switch is required, there is no need to enter the symbol for the auto switch.

(Example) CDQ2WL32-25DZ

For details on auto switch mounting \Rightarrow p. 149 to 165

- · Auto Switch Proper Mounting Position (Detection at stroke end) and Mounting Height
- · Minimum Stroke for Auto Switch Mounting
- · Operating Range
- · Auto Switch Mounting Brackets/Part Nos.

Applicable Auto Switches / Refer to the Web Catalog for further information on auto switches.

<u> </u>	Applicable Auto Switches / Refer to the web Catalog for further information on auto switches.																				
		Electrical	t to	NAC in in a	L	oad volta	age	Auto swit	ch model	Lea	d wir	e ler	ngth	[m]	D						
Туре	Type Special function		Indicator light	Wiring (Output)	D	С	AC	Perpendicular	In-line	0.5 (Nil)	1 (M)	3 (L)	5 (Z)	IINone	Pre-wired connector	Applical	ole load				
				3-wire (NPN)		5 V,		M9NV	M9N	•	•	•	0	_	0	IC circuit	O almanda				
당				3-wire (PNP)		12 V		M9PV	M9P	•	•	•	0	_	0	ic circuit					
switch			İ	2-wire		12 V		M9BV	M9B	•	•	•	0	_	0	_					
	Diagnostic indication (2-color indicator)	Grommet		3-wire (NPN)		5 V,		M9NWV	M9NW	•	•	•	0	_	0	10 -11					
auto			V	3-wire (PNP)	12 V	V	M9PWV	M9PW	•	• • C	0	_	0	IC circuit	Relay,						
			res	2-wire	- 1 1		2 V	M9BWV	M9BW	•	•	•	0	_	0		PLC				
state	14/-4		İ	3-wire (NPN) 3-wire (PNP)				M9NAV*1	M9NA*1	0	0	•	0	_	0	IC airearia					
<u>.</u>	Water resistant					12 V	12 V		M9PAV*1	M9PA*1	0	0	•	0	_	0	IC circuit				
Solid	(2-color indicator)									2-wire	e	12 V	12 V	M9BAV*1	M9BA*1	0	0	•	0	_	0
	Magnetic field resistant (2-color indicator)			2-wire (Non-polar)		_		_	P3DWA	•	_	•	•	<u> </u>	0						
it i	,,	Grommet		Yes	3-wire (NPN equivalent)	_	5 V	_	A96V	A96	•	_	•	—	_	_	IC circuit	_			
Reed auto switch			res	2-wire	24 V	12 V	100 V	A93V*2	A93	•	•	•	•	<u> </u>	_	_	Relay,				
antc			No	∠-wire	24 V	5 V,12 V	100 V or less	A90V	A90	•	_	•	_	_	_	IC circuit	PLC				

- *1 Water-resistant type auto switches can be mounted on the models on page 37, but SMC cannot guarantee water resistance. Please contact SMC regarding water-resistant types with the model numbers on page 37.
- *2 The 1 m lead wire is only applicable to the D-A93.

* Lead wire length symbols: 0.5 m ······· Nil (Example) M9NW 1 m ······ M (Example) M9NWM

3 m ······· L (Example) M9NWL 5 m ······ Z (Example) M9NWZ

- * Solid state auto switches marked with a "O" are produced upon receipt of order.
- * The D-P3DWA□ type is only available in sizes ø25 to ø100.

* There are applicable auto switches other than those listed above. For details \Rightarrow p. 165

ouble Acting, Single F

Standard Soube Adrig, Double Rod CQ2W

> ge Ading Spring RetumExter CQ2

N CO2

Rod Double Acting, Doubl

od Double Acting, Single

Long Stroke Jouble Acting, Single Ro

Double Acting, Single Rod

uble Acting, Double Rod Do

Presistant
Rod Double Acting, Single Rod Do
N CO2-B/V C

Double Acting Double Acting Double CO2W-R

Single Acting, Spring Returm External Double COP2 C

With End Lock | [
Double Acing, Single Rod | Si
CBQ2

Auto Switch

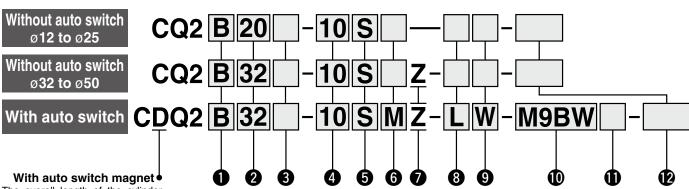
Made to

Compact Cylinder: Standard Single Acting, Single Rod

CQ2 Series

Ø12, Ø16, Ø20, Ø25, Ø32, Ø40, Ø50

How to Order



The overall length of the cylinder with an auto switch magnet is longer than that of the cylinder without an auto switch magnet by the length of the built-in magnet. For details, refer to the dimensions of each size.

Mounting

В	Through-hole						
Α	Both ends tapped						
L	Foot						
LC	Compact foot						
F	Rod flange						
G	Head flange						
D	Double clevis						

- * Mounting brackets are shipped together with the product but do not come assembled.
- * Refer to **3** for the through-hole type mounting bolt.
- * For cylinders with mounting options "L," "LC," or "F," the cylinder rod protrusion dimensions (Dimensions L and L₁) vary from the standard cylinder. When only ordering the cylinder, order the rod end length increased by 10 mm (-XC2) cylinder.
 For details ⇒ p. 178

4 Cylinder stroke

(For details on the minimum stroke for auto switch mounting \Rightarrow p. 157)						
Bore size	Standard stroke					
12, 16, 20, 25, 32, 40	5, 10					
50	10. 20					

* For the manufacturing of intermediate strokes ⇒ p. 53

Auto switch mounting groove

7	ø12 to ø25	2 surfaces
	ø32 to ø50	4 surfaces

2 Bore size

12	12 mm
16	16 mm
20	20 mm
25	25 mm
32	32 mm
40	40 mm
50	50 mm

3 Port thread type

Nil	M thread	ø12 to ø25				
INII	Rc					
TN	NPT	ø32 to ø50				
TF	G					
F	Built-in One-touch fittings*1					

- *1 The bore sizes available with One-touch fittings are Ø32 to Ø50.
- For cylinders without an auto switch magnet, M threads are compatible only with ø32-5 mm stroke.

6 Action

S	Single acting, Spring return
Т	Single acting, Spring extend

8 Through-hole type mounting bolt

_	ough hold type histaning no
Nil	None
L	Shipped together

- Mounting bolt is shipped together with the product only when the mounting bracket is "B" (Through-hole). For details
 ⇒ p. 56
- * When a made-to-order option is selected, the mounting bolt is not shipped together with the product. Please order it separately.

6 Body option

	<u>, , , , , , , , , , , , , , , , , , , </u>
Nil	Rod end female thread
F	With boss on head end
M	Rod end male thread

* Combined body options "FM" can be selected.

9 Rod end bracket (⇒ p. 34 to 36)

Nil	None
D	Type A mounting bracket + Joint
Е	Type B mounting bracket + Joint
٧	Single knuckle joint
W	Double knuckle joint

- * Options "D" and "E" must be used in combination with body option (Nil), the rod end female thread, and options "V" and "W" must be used in combination with body option (M), the rod end male thread.
- * A knuckle pin is not provided with the single knuckle joint (V). If a pin is required, please order it separately.
 For details ⇒ p. 34
- * When a made-to-order option is selected, the rod end bracket cannot be selected. Please order it separately.

Compact Cylinder: Standard Single Acting, Single Rod CQ2 Series



Auto switch

Nil Without auto switch

For applicable auto switches, refer to the table below.

Number of auto switches

Nil	2
S	1
n	n

Made to order common specifications

For details ⇒ p. 53

Cylinder Model with Auto Switch Magnet

If a cylinder with an auto switch magnet and without an auto switch is required, there is no need to enter the symbol for the auto switch.

(Example) CDQ2L32-10SZ

For details on auto switch mounting \Rightarrow p. 149 to 165

- · Auto Switch Proper Mounting Position (Detection at stroke end) and Mounting Height
- · Minimum Stroke for Auto Switch Mounting

Applicable Auto Switches / Refer to the Web Catalog for further information on auto switches.

			ō.		L	oad volta	age	Auto swit	ch model	Lead	d wir	e lei	ngth	[m]				ľ																																																			
Туре	Special function Electrical entry	Electrical entry			Indicate	Wiring (Output)	D	С	AC	Perpendicular	In-line	0.5 (Nil)	1 (M)	3 (L)	5 (Z)	None (N)	Pre-wired connector	Applical	ole load																																																		
Ę				3-wire (NPN)		5 V,		M9NV	M9N	•	•	•	0	-	0	IC circuit																																																					
switch				3-wire (PNP)		12 V		M9PV	M9P	•	•	•	0	-	0	ic circuit																																																					
				2-wire		12 V		M9BV	M9B	•	•	•	0	-	0	_																																																					
anto	Diagnostic indication (2-color indicator) Grommet			3-wire (NPN)	-wire (PNP) 24 V 2-wire	5 V,]	M9NWV	M9NW	•	•	•	0	-	0	IC circuit	D-1																																																				
		Grommet	Yes	3-wire (PNP)		12 V	12 V —	M9PWV	M9PW	•	•	•	0	-	0	IC CIICUII	Relay, PLC																																																				
state				2-wire			-																																																			12 V		M9BWV	M9BW	•	•	•	0	I—	0	_	FLC
र	Water resistant (2-color indicator)			3-wire (NPN)																				5 V,		M9NAV*1	M9NA*1	0	0	•	0	 —	0	IC circuit		ľ																																	
Solid				color indicator) 3-wire (PNP) 12 V	12 V		M9PAV*1	M9PA*1	0	0	•	0	I—	0	ic circuit																																																						
																								2-wire		12 V		M9BAV*1	M9BA*1	0	0	•	0	-	0	_																																	
itc _			Yes	3-wire (NPN equivalent)		5 V	_	A96V	A96	•		•	_	-	_	IC circuit	_																																																				
Reed auto switch	—— Gromm	Grommet	Grommet '	Grommet	Grommet	Grommet	Grommet	Grommet	ies	2-wire	24 V	12 V	100 V	A93V*2	A93	•	•	•	•		_	_	Relay,																																														
autc			No	Z-WITE	24 V	5 V,12 V	100 V or less	A90V	A90	•	_	•	_	-	_	IC circuit	PLC																																																				

*1 Water-resistant type auto switches can be mounted on the models on page 51, but SMC cannot guarantee water resistance. Please contact SMC regarding water-resistant types with the model numbers on page 51.

*2 The 1 m lead wire is only applicable to the D-A93.

* Lead wire length symbols: 0.5 m Nil (Example) M9NW 1 m M

(Example) M9NWM 3 m L (Example) M9NWL

5 m Z (Example) M9NWZ

There are applicable auto switches other than those listed above. For details ⇒ p. 165

* Solid state auto switches marked with a "O" are produced upon receipt of order.

- · Operating Range
- · Auto Switch Mounting Brackets/Part Nos.

Double Acting, Double Rod

CQ2W-R/V

CQ2-R/V

Double Acting, Double Rod

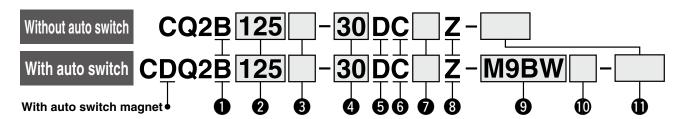
Long Stroke

Double Acting, Single Rod

Compact Cylinder: Large Bore Size Double Acting, Single Rod

CQ2 Series ø125, ø140, ø160, ø180, ø200

How to Order



Mounting

- B Through-hole/both ends tapped
- A through-hole type mounting bolt is available as an option. For details
 ⇒ p. 64

2 Bore size

125	125 mm
140	140 mm
160	160 mm
180	180 mm
200	200 mm

3 Port thread type

Nil	Rc
TN	NPT
TF	G

4 Cylinder stroke

(For details on the minimum stroke for auto switch mounting □ p. 145)[n					
Bore size	Standard stroke				
125, 140, 160 180, 200	10, 20, 30, 40, 50, 75 100, 125, 150, 175 200, 250, 300				

* For the manufacturing of intermediate strokes ⇒ p. 62

5 Action

D	Double acting

6 c	ushion
------------	--------

С	Rubber bumper

7 Body option

	<i>,</i> .
Nil	Rod end female thread
M	Rod end male thread

Auto switch mounting groove Z 4 surfaces

Auto switch

Nil	Without auto switch

^{*} For applicable auto switches, refer to the table below.

10 Number of auto switches

Nil	2
S	1
n	n

Cylinder Model with Auto Switch Magnet

If a cylinder with an auto switch magnet and without an auto switch is required, there is no need to enter the symbol for the auto switch. (Example) CDQ2B140-30DCZ

Made to order common specifications

For details ⇒ p. 62

For details on **auto switch mounting** \Rightarrow p. 149 to 165

- · Auto Switch Proper Mounting Position (Detection at stroke end) and Mounting Height
- · Minimum Stroke for Auto Switch Mounting
- · Operating Range
- · Auto Switch Mounting Brackets/Part Nos.

Applicable Auto Switches / Refer to the Web Catalog for further information on auto switches.

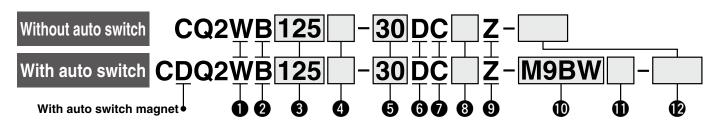
			E	tor	14 <i>0</i> ·	L	oad volta	age	Auto swit	ch model	Lead	d wir	e lei	ngth	[m]	D																							
-	Туре	Special function	Electrical entry	Indicator light	Wiring (Output)	D	С	AC	Perpendicular	In-line	0.5 (Nil)	1 (M)	3 (L)	5 (Z)	None (N)	Pre-wired connector	Applicat	ole load																					
					3-wire (NPN)		5 V,		M9NV	M9N	•	•	•	0	_	0	IC airearit																						
	뒫				3-wire (PNP)		12 V		M9PV	M9P	•	•	•	0	<u> </u>	0	IC circuit																						
	switch				2-wire		12 V		M9BV	M9B	•	•	•	0	_	0	_																						
		Di	Grommet Yes														3-wire (NPN)	24.1/	24 V	5 V,		M9NWV	WN6W	•	•	•	0	_	0	IC circuit									
	anto	Diagnostic indication (2-color indicator)		Vaa	3-wire (PNP)	04.1/	24.1/	24.1/	24.1/	24.1/	24.1/	24.17	24.17	24.17	24.17	24.1/	24.1/			24 V	12 V		M9PWV	M9PW	•	•	•	0	_	0	ic circuit	Relay,							
	ţ.	(2-color indicator)		Grommet	Grommet Tes	Grommer re	Grommet re	Grommet	Grommet les	Grommet les	Grommet les	Grommer Tes	Grommet	Grommet	Grommet	Grommet	res	2-wire							24 V	12 V	_	M9BWV	M9BW	•	•	•	0	_	0	_	PLC		
id state	sta	Water resistant												3-wire (NPN)]		-	-										5 V,		M9NAV*1	M9NA*1	0	0	•	0	_	0	IC circuit	
	<u> </u>	(2-color indicator)														3-wire (PNP)																			12 V		M9PAV*1	M9PA*1	0
	Solid	,			2-wire		12 V		M9BAV*1	M9BA*1	0	0		0	_	0																							
		Magnetic field resistant (2-color indicator)			2-wire (Non-polar)		_		_	P3DWA	•	_	•	•	_	0	_																						
	_ 달			Yes	3-wire (NPN equivalent)	_	5 V	_	A96V	A96	•	_	•	_	_	_	IC circuit	_																					
	Reed auto switch	—— Gromm	Grommet 2-wire 24 V 100 V A93V	A93V*2	A93	•		•	•	_	_	_	Relay,																										
				No	Z-wire	24 V	5 V.12 V	100 V or less	A90V	A90						_	IC circuit	PLC																					

- *1 Water-resistant type auto switches can be mounted on the above models, but SMC cannot guarantee water resistance. Please contact SMC regarding water-resistant types with the above model numbers.
- *2 The 1 m lead wire is only applicable to the D-A93.
- Lead wire length symbols: 0.5 m Nil (Example) M9NW
 1 m M (Example) M9NWM
 - 3 m ······· L (Example) M9NWL 5 m ····· Z (Example) M9NWZ
- * Solid state auto switches marked with a "O" are produced upon receipt of order.

* There are applicable auto switches other than those listed above. For details \Rightarrow p. 165

Compact Cylinder: Large Bore Size Double Acting, Double Rod CQ2W Series ø125, ø140, ø160, ø180, ø200

How to Order





2 Mounting

- Through-hole/both ends tapped
- A through-hole type mounting bolt is available as an option. For details ⇒ p. 70

3 Bore siz	е
------------	---

_	
125	125 mm
140	140 mm
160	160 mm
180	180 mm
200	200 mm

4 Port thread type

Nil	Rc
TN	NPT
TF	G

5 Cylinder stroke	(For details on the minimum stroke for auto switch mounting \Rightarrow p. 157) [mm]
Bore size	Standard stroke

Bore size	Standard stroke
125, 140, 160	10, 20, 30, 40, 50, 75, 100, 125
180, 200	150, 175, 200, 250, 300

For the manufacturing of intermediate strokes ⇒ p. 68



Auto	switch
------	--------

Nil	Without auto switch	
-----	---------------------	--

For applicable auto switches, refer to the table below

Number of auto switches

Nil	2
S	1
n	n

Made to order common specifications

For details ⇒ p. 68

6 Action

Double acting

7	Cushion
С	Rubber bumper

8 Body option

Nil	Rod end female thread
M	Rod end male thread

Cylinder Model with Auto Switch Magnet

If a cylinder with an auto switch magnet and without an auto switch is required, there is no need to enter the symbol for the auto switch. (Example) CDQ2WB140-30DCZ

For details on **auto switch mounting** ⇒ p. 149 to 165

- · Auto Switch Proper Mounting Position (Detection at stroke end) and Mounting Height
- Minimum Stroke for Auto Switch Mounting
- · Operating Range
- · Auto Switch Mounting Brackets/Part Nos.

Applicable Auto Switches / Refer to the Web Catalog for further information on auto switches.

Electrica			tor	\A/: ::: ::	L	oad volta	age	Auto swit	ch model	Lead	d wir	e ler	ngth	[m]	Duaiua.d																	
Type	Special function	ecial function entry	Indicat	Wiring (Output)	D	С	AC	Perpendicular	In-line	0.5 (Nil)	1 (M)	3 (L)	5 (Z)	None (N)	Pre-wired connector	Applicat	ole load															
				3-wire (NPN)	`	-	5 V,		M9NV	M9N	•	•	•	0	—	0	IC circuit															
달				3-wire (PNP)			'	12 V		M9PV	M9P	•	•	•	0	_	0	ic circuit														
switch				2-wire		12 V		M9BV	M9B	•	•		0	_	0	_																
	Diagnostic indication	Grommet Ye		3-wire (NPN) 3-wire (PNP) 2-wire	1	1	5 V,		M9NWV	M9NW	•	•	•	0	_	0	IC circuit															
anto	Diagnostic indication (2-color indicator)		Vaa				24 V	24 V	24 V	24 V	24 V	24 V	24 V	24 V	24 V	24 V	24.17	24.17	24.1/	24.1/	12 V		M9PWV	M9PW	•	•		0	_	0	TIC CITCUIT	Relay,
	(2-color indicator)		res														12 V	_	M9BWV	M9BW	•	•	•	0	_	0	_	PLC				
state	W-1				,		3-wire (NPN			5 V,		M9NAV*1	M9NA*1	0	0	•	0	_	0	IC circuit												
<u>.</u>	Water resistant (2-color indicator)					3-wire (PNP)					1						12 V		M9PAV*1	M9PA*1	0	0	•	0	_	0	ic circuit					
Solid	, , ,			2-wire	'	l		12 V		M9BAV*1	M9BA*1	0	0		0	_	0															
	Magnetic field resistant (2-color indicator)			2-wire (Non-polar)		_		_	P3DWA	•	_	•		_	0																	
_ 달			Yes	3-wire (NPN equivalent)	_	5 V	_	A96V	A96	•		•		_	_	— IC circuit -	_															
Reed auto switch	—— Gromme	—— Grommet	Grommet	Grommet	Grommet	Grommet	Grommet	Grommet	ies	2-wire	24 V	12 V	100 V	A93V*2	A93	•		•	•	_	_	_	Relay,									
ante										No	Z-WIIE	24 V	5 V,12 V	100 V or less	A90V	A90	•	_		_	_	_	IC circuit	PLC								

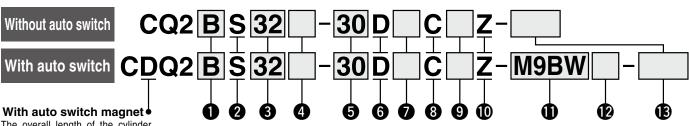
- *1 Water-resistant type auto switches can be mounted on the above models, but SMC cannot guarantee water resistance. Please contact SMC regarding water-resistant types with the above model numbers.
- *2 The 1 m lead wire is only applicable to the D-A93.
- * Lead wire length symbols: 0.5 m Nil (Example) M9NW (Example) M9NWM
 - 3 m L (Example) M9NWL 5 m Z (Example) M9NWZ
- * Solid state auto switches marked with a "O" are produced upon receipt of order.

* There are applicable auto switches other than those listed above. For details ⇒ p. 165

Compact Cylinder: Anti-lateral Load

CQ2 S Series ø32, ø40, ø50, ø63, ø80, ø100

How to Order



The overall length of the cylinder with an auto switch magnet is longer than that of the cylinder without an auto switch magnet by the length of the built-in magnet. For details, refer to the dimensions of each size.

Mounting

В	Through-hole
Α	Both ends tapped
L	Foot
LC	Compact foot
F	Rod flange
G	Head flange
D	Double clevis

- * Mounting brackets are shipped together with the product but do not come assembled.
- A through-hole type mounting bolt is available as an option.
 For details

 p. 77
- * For cylinders with mounting options "L," "LC," or "F," the cylinder rod protrusion dimensions (Dimensions L and L₁) vary from the standard cylinder. When only ordering the cylinder, order the rod end length increased by 10 mm (-XC2) cylinder. For details ⇔ p. 178

2 Type

• ,,	
S	Anti-lateral load

3 Bore size

32	32 mm
40	40 mm
50	50 mm
63	63 mm
80	80 mm
100	100 mm

4 Port thread type

Nil	Rc
TN	NPT
TF	G
F	Built-in One-touch fittings*1

*1 The bore sizes available with Onetouch fittings are ø32 to ø63.

6 Cylinder stroke (For details on the minimum stroke for auto switch mounting ⇒ p. 157) [mm]

Bore size	Standard stroke
32, 40	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100
50, 63, 80, 100	10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100

* For the manufacturing of intermediate strokes \Rightarrow p. 75

6 Action

D Double acting

1	Auto switch mounting groove
Z	4 surfaces

Body option 1

_	<u> </u>
Nil	Standard
F	With boss on head end

8 Cushion

С	Rubber bumper

9 Body option 2

	·
Nil	Rod end female thread
M	Rod end male thread

Auto switch

Nil	Without auto switch

*	For applicable auto switches
	⇒ p. 74

Number of auto switches

_	- 114	inder of date owntones
	Nil	2
	S	1
Г	n	n

Made to order common specifications For details ⇒ p. 75

Cylinder Model with Auto Switch Magnet

If a cylinder with an auto switch magnet and without an auto switch is required, there is no need to enter the symbol for the auto switch.

(Example) CDQ2LS40-30DCZ

Compact Cylinder: Anti-lateral Load CQ2 Series



For details on **auto switch mounting** \Rightarrow p. 149 to 165

- · Auto Switch Proper Mounting Position (Detection at stroke end) and Mounting Height
- · Minimum Stroke for Auto Switch Mounting
- · Operating Range
- · Auto Switch Mounting Brackets/Part Nos.

Applicable Auto Switches / Refer to the Web Catalog for further information on auto switches.																																					
		Clastriasi	tor	\A/ississ or	Load voltage		Auto switch model		Lead wire length				[m]	Dua suisaal																							
Type	Special function Electrical entry		Indicate light	Wiring (Output)	С	C	AC	Perpendicular	In-line	0.5 (Nil)	1 (M)	3 (L)		None	Pre-wired connector	Applica	ble load																				
				3-wire (NPN)		5 V,		M9NV	M9N	•	•	•	0	_	0	IC circuit																					
달				3-wire (PNP)		12 V		M9PV	M9P	•	•	•	0	_	0	IC Circuit																					
switch				2-wire		12 V		M9BV	M9B	•	•	•	0	_	0	_																					
	Diagnostic indication (2-color indicator) Gron			3-wire (NPN)		5 V,		M9NWV	M9NW	•	•	•	0	_	0	IC airecit																					
anto		Grommet	V	3-wire (PNP)	24 V	, 12 V		M9PWV	M9PW	•	•	•	0		IC circuit	Relay,																					
			Yes	2-wire 3-wire (NPN)							1 1	12 V	_	M9BWV	M9BW	•	•	•	0	_	0	_	PLC														
state	Water resistant											i	5 V,		M9NAV*1	M9NA*1	0	0	•	0	_	0	IO aimanit														
9					(2-color indicator)	3-wire (PNP)		12 V		M9PAV*1	M9PA*1	0	0	•	0	_	0	IC circuit																			
Solid	(2-color indicator)															2-wire											12 V	I	M9BAV*1	M9BA*1	0	0	•	0	_	0	
	Magnetic field resistant (2-color indicator)			2-wire (Non-polar)		_			P3DWA	•	_	•	•	_	0	_																					
뒫	—— Gromme		,		,				Yes	3-wire (NPN equivalent)	_	5 V	_	A96V	A96	•	_	•	_	_	_	IC circuit	_														
Reed auto switch		Grommet	t res			12 V	100 V	A93V*2	A93	•	•	•	•	_	_	_	Relay,																				
afte			No	2-wire	24 V	5 V,12 V	100 V or less	A90V	A90	•	_	•	_	_	_	IC circuit	PLC																				

- *1 Water-resistant type auto switches can be mounted on the models on page 73, but SMC cannot guarantee water resistance. Please contact SMC regarding water-resistant types with the model numbers on page 73.
- *2 The 1 m lead wire is only applicable to the D-A93.

 Lead wire length symbols: 0.5 m ······· Nil 	(Example) M9NW
1 m M	(Example) M9NWM
3 m L	(Example) M9NWL
5 m Z	(Example) M9NWZ

* Solid state auto switches marked with a "O" are produced upon receipt of order.

* There are applicable auto switches other than those listed above. For details ⇒ p. 165

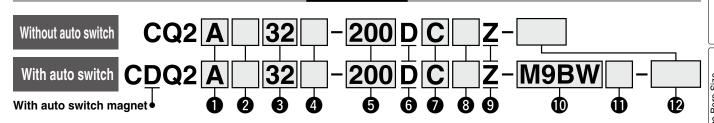
Double Acting, Single Rod

Compact Cylinder: Long Stroke Double Acting, Single Rod

CQ2 Series

ø**32**, ø**40**, ø**50**, ø**63**, ø**80**, ø**100**

How to Order



Mounting

Α	Both ends tapped					
L	L Foot					
LC Compact foot						
F	Rod flange					
G	Head flange					
D	Double clevis					

Mounting brackets are shipped together with the product but do not come assembled

2 Type

Nil	Pneumatic
н	Air-hydro

3 Bore size

32	32 mm
40	40 mm
50	50 mm
63	63 mm
80	80 mm
100	100 mm

4 Port thread type

Nil	Rc
TN	NPT
TF	G
F	Built-in One-touch fittings*1

- *1 The bore sizes available with One-touch fittings are ø32 to ø63. However, they cannot be selected for the air-hydro type.
- * "TF" is not selectable for the air-hydro type.

6 Cylinder stroke

(For details on the minimum stroke for auto switch mounting 🖒 p. 157) [mm]

Bore size	Standard stroke
32, 40, 50 63, 80, 100	125, 150, 175 200, 250, 300
	•

For the manufacturing of intermediate

6 Action

Auto switch

For details \Rightarrow p. 81

Action						
	D	Double acting				

Cushion

er
r

* Pneumatic type: With rubber bumper only Air-hydro type: Without rubber bumper only

8 Body option

	. 7 . 1
Nil	Rod end female thread
M	Rod end male thread

Auto switch mounting groove 4 surfaces

Cylinder Model with Auto Switch Magnet

If a cylinder with an auto switch magnet and without an auto switch is required, there is no need to enter the symbol for the auto switch. (Example) CDQ2L40-200DCZ

For applicable auto switches, n

refer to the table below.

Without auto switch

Made to order common specifications

Number of auto switches Nil S

For details on auto switch mounting \Rightarrow p. 149 to 165

- · Auto Switch Proper Mounting Position (Detection at stroke end) and Mounting Height
- · Minimum Stroke for Auto Switch Mounting
- · Operating Range
- · Auto Switch Mounting Brackets/Part Nos.

Applicable Auto Switches / Refer to the Web Catalog for further information on auto switches.

<u>, , , pp.</u>	ouble Aute Civit	7110071101	O1 1	THIC TICE CAL	uiog io	Turtifici	momati	on on auto	SWITCHICS.													
		Ele et de el	tor	VA (Surface or	L	oad volta	age	Auto swite	ch model	Lead	d wir	e ler	ngth	[m]	D			П				
Туре	Special function	Electrical entry	Indicate	Wiring (Output)	D	C	AC	Perpendicular	In-line	0.5 (Nil)	1 (M)	3 (L)	5 (Z)	None (N)	Pre-wired connector	Applica	ble load					
				3-wire (NPN)		5 V,		M9NV	M9N	•	•	•	0	_	0	10						
당				3-wire (PNP)		12 V		M9PV	M9P	•	•	•	0	_	0	IC circuit						
switch				2-wire		12 V		M9BV	M9B	•	•	•	0	_	0	_						
	Diama and a familiand and		İ	3-wire (NPN)	1	. [[5 V,		M9NWV	M9NW	•	•	•	0	_	0	IC airea sit		
auto	Diagnostic indication (2-color indicator)	Grommet	V	3-wire (PNP)		12 V		M9PWV	M9PW	•	•	•	0	_	0	IC circuit	Relay,	Ш				
	(2-color indicator)		Grommet	Grommet	Grommet	Grommet	Grommet	Grommet	Yes	2-wire	24 V	12 V	-	M9BWV	M9BW	•	•	•	0	_	0	— PLC
state	\A/-+			3-wire (NPN)	NPN)	5 V,		M9NAV*1	M9NA*1	0	0	•	0	_	0	IC aires sit	i waa sida	Ш				
	Water resistant			3-wire (PNP)		12 V		M9PAV*1	M9PA*1	0	0	•	0	_	0	IC circuit						
Solid	(2-color indicator)			2-wire		12 V		M9BAV*1	M9BA*1	0	0	•	0	_	0							
	Magnetic field resistant (2-color indicator)			2-wire (Non-polar)		_		_	P3DWA	•	_	•	•	_	0	_						
당			Yes	3-wire (NPN equivalent)	_	5 V	_	A96V	A96	•	_	•	_	<u> </u>	_	IC circuit	_					
Reed auto switch		Grommet	res		24 V	12 V	100 V	A93V*2	A93	•	•	•	•	_	_	_	Relay,					
ante			No	2-wire	24 V	5 V,12 V	100 V or less	A90V	A90	•	_	•	<u> </u>	<u> </u>	_	IC circuit	PLC	U				

- Water-resistant type auto switches can be mounted on the above models, but SMC cannot guarantee water resistance. Please contact SMC regarding water-resistant types with the above model numbers.
- *2 The 1 m lead wire is only applicable to the D-A93.
- * Lead wire length symbols: 0.5 m Nil (Example) M9NW (Example) M9NWM
 - (Example) M9NWL 3 m L 5 m Z (Example) M9NWZ
- * Solid state auto switches marked with a "O" are produced upon receipt of order.

Auto Switch Made to Order

CQ2

CQ2\\\\

CQ2K

Double Acting, Double Rod

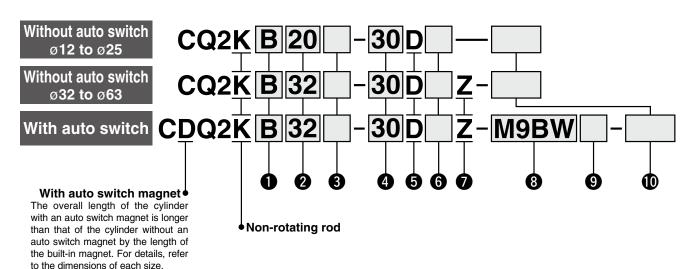
CQ2W-R/V CQ2-R/V

There are applicable auto switches other than those listed above. For details ⇒ p. 165

Compact Cylinder: Non-rotating Rod Double Acting, Single Rod CQ2K Series

Ø12, Ø16, Ø20, Ø25, Ø32, Ø40, Ø50, Ø63

How to Order



Mounting

В	Through-hole	ø12 to ø63
Α	Both ends tapped	
L	Foot	
LC	Compact foot	~40 ~50 ~60
F	Rod flange	ø40, ø50, ø63
G	Head flange	
D	Double clevis	

- Mounting brackets are shipped together with the product but do not come assembled.
- A through-hole type mounting bolt is available as an option. For details:
 Without auto switch magnet ⇒ p. 89

With auto switch magnet ⇒ p. 90

* For cylinders with mounting options "L," "LC," or "F," the cylinder rod protrusion dimensions (Dimensions L and L₁) vary from the standard cylinder. When only ordering the cylinder, order the rod end length increased by 10 mm (-XC2) cylinder.

For details ⇒ p. 178

2 Bore size

12*1	12 mm
16	16 mm
20	20 mm
25	25 mm
32	32 mm
40	40 mm
50	50 mm
63	63 mm

*1 When ø12 with auto switch magnet is required, the body option should be with rubber bumper (C).

Example) CDQ2KB12-30DCZ

Port thread type

Nil	M thread	ø12 to ø25					
INII	Rc						
TN	NPT	ø32 to ø63					
TF	G						
F	Built-in One-touch fittings*1						

- *1 The bore sizes available with One-touch fittings are ø32 to ø63.
- For cylinders without an auto switch magnet, M threads are compatible only with ø32-5 mm stroke.

4 Cylinder stroke

(For details on the minimum stroke for auto switch mounting □ p. 157) [mm]

Bore size Standard stroke

12, 16 5, 10, 15, 20, 25, 30

20, 25 5, 10, 15, 20, 25, 30, 35

40, 45, 50

32, 40 5, 10, 15, 20, 25, 30, 35

40, 45, 50, 75, 100

50, 63 10, 15, 20, 25, 30, 35, 40

45, 50, 75, 100

5 Action

	1011011
D	Double acting

6 Body option

9 50	Dody option						
Nil	Rod end female thread						
F	With boss on head end						
С	With rubber bumper						
	(ø12 with auto switch magnet only)						
M	Rod end male thread						

^{*} Combined body options "FM" can be selected.

For the manufacturing of intermediate strokes ⇒ p. 87

Compact Cylinder: Non-rotating Rod Double Acting, Single Rod CQ2K Series



Auto switch mounting groove

 8 Auto switch

to the table below.

_	_	
	Nil	Without auto switch
*	For ap	oplicable auto switches, refer

Nil S n Made to order common specifications

For details ⇒ p. 87

Cylinder Model with Auto Switch Magnet

If a cylinder with an auto switch magnet and without an auto switch is required, there is no need to enter the symbol for the auto switch.

(Example) CDQ2KB32-30DZ

For details on **auto switch mounting** \Rightarrow p. 149 to 165

· Auto Switch Proper Mounting Position (Detection at stroke end) and Mounting Height

* Solid state auto switches marked with a "O" are produced upon receipt of order.

* The D-P3DWA□ type is only available in sizes ø25 to ø63.

 \cdot Minimum Stroke for Auto Switch Mounting

Number of auto switches

2

- · Operating Range
- · Auto Switch Mounting Brackets/Part Nos.

Applicable Auto Switches / Refer to the Web Catalog for further information on auto switches.

	Load voltage Auto switch model Lead wire length [m]																					
Туре	Type Special function		Indicate	Wiring (Output)		C		Perpendicular		0.5 (Nil)	1	3	5	None	Pre-wired connector	Applical	ole load					
				3-wire (NPN)		5 V,		M9NV	M9N	•	•	•	0	_	0	IC ainaccit						
당				3-wire (PNP)		12 V		M9PV	M9P	•	•	•	0	_	0	IC circuit						
switch			İ	2-wire		12 V		M9BV	M9B	•	•	•	0	_	0	_						
	5			3-wire (NPN)		5 V,		M9NWV M9NW	•	•	•	0	_	0	10 -11							
auto	Diagnostic indication	Grommet	V	3-wire (PNP)		12 V		M9PWV	M9PW	•	•	•	0	_	O IC CITC	IC circuit	Relay,					
	(2-color indicator)		Grommet	Grommet	Grommet	Grommet	Grommet	Yes	2-wire	24 V	12 V	_	M9BWV	M9BW	•	•	•	0	_	0	_	PLC
state	147			3-wire (NPN)		5 V,		M9NAV*1	M9NA*1	0	0	•	0	_	0	10 -11						
<u> </u>	Water resistant		İ	3-wire (PNP)		12 V		M9PAV*1	M9PA*1	0	0	•	0	_	0	IC circuit	circuit					
Solid	(2-color indicator)			2-wire		12 V		M9BAV*1	M9BA*1	0	0	•	0	_	0							
0,	Magnetic field resistant (2-color indicator)		İ	2-wire (Non-polar)	-wire (Non-polar)			_	P3DWA	•	_	•	•	_	0	_						
달	tch		V	3-wire (NPN equivalent)	_	5 V	_	A96V	A96	•	_	•	_	_	_	IC circuit	_					
Reed swi		Grommet	Yes		04.1/	12 V	100 V	A93V*2	A93	•	•	•	•	_	_	_	Relay,					
Reed auto switch			No	No	No	2-wire	24 V	5 V,12 V	100 V or less	A90V	A90	•	_	•	_	_	_	IC circuit	PLC			

- *1 Water-resistant type auto switches can be mounted on the models on page 85, but SMC cannot guarantee water resistance. Please contact SMC regarding water-resistant types with the model numbers on page 85.
- *2 The 1 m lead wire is only applicable to the D-A93.

* Lead wire length symbols: 0.5 m Nil (Example) M9NW

1 m ······· M (Example) M9NWM

3 m ······ L (Example) M9NWL 5 m ····· Z (Example) M9NWZ

- 9NV/C
- There are applicable auto switches other than those listed above. For details ⇒ p. 165

Double Acting, 9

Double Acting, Double R.

Singe Acting Spring ReturnExter CQ2

uble Rod Double Acting, Single Ro

cing, Single Rod Double Acti

Long Stroke

Double Acting, Single PCO CO 2K

Double Acting, Double Rod

Double Acting, Double Acting, Single Rod

CQ2W-R/V

CQ2-R/V

Ederif Double Acting, Single Rod Do

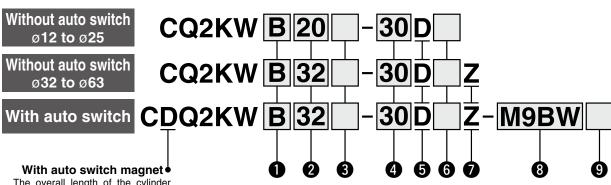
CBQ2

Auto Switch

Made to

Compact Cylinder: Non-rotating Rod Double Acting, Double Rod CQ2KW Series Ø12, Ø16, Ø20, Ø25, Ø32, Ø40, Ø50, Ø63

How to Order



The overall length of the cylinder with an auto switch magnet is longer than that of the cylinder without an auto switch magnet by the length of the built-in magnet. For details, refer to the dimensions of each size.

Mounting

В	Through-hole	ø12 to ø63
Α	Both ends tapped	
L	Foot	ø40 to ø63
LC	Compact foot	040 10 003
F	Flange	

- * Mounting brackets are shipped together with the product but do not come assembled.
- A through-hole type mounting bolt is available as an option. For details: Without auto switch magnet ⇒ p. 101
- For cylinders with mounting options "L," "LC," or "F," the cylinder rod protrusion dimensions (Dimensions L and L1) vary from the standard cylinder. When only ordering the cylinder, order the rod end length increased by 10 mm (-XC2) cylinder. For details ⇒ p. 178

2 Bore size

12 12 mm 16 16 mm 20 20 mm 25 25 mm 32 32 mm 40 40 mm 50 50 mm 63 63 mm	_	
20 20 mm 25 25 mm 32 32 mm 40 40 mm 50 50 mm	12	12 mm
25 25 mm 32 32 mm 40 40 mm 50 50 mm	16	16 mm
32 32 mm 40 40 mm 50 50 mm	20	20 mm
40 mm 50 50 mm	25	25 mm
50 50 mm	32	32 mm
	40	40 mm
63 mm	50	50 mm
	63	63 mm

3 Port thread type

Nil	M thread	ø12 to ø25				
INII	Rc					
TN	NPT	ø32 to ø63				
TF	G					
F	Built-in One-touch fittings*1					
	•					

- *1 The bore sizes available with One-touch fittings are ø32 to ø63.
- For cylinders without an auto switch magnet, M threads are compatible only with ø32-5 mm stroke.

Cylinder stroke

(For details on the minin	num stroke for auto switch mounting \Rightarrow p. 157) [mm]
Bore size	Standard stroke
12, 16	5, 10, 15, 20, 25, 30
20, 25	5, 10, 15, 20, 25, 30, 35 40, 45, 50
32, 40	5, 10, 15, 20, 25, 30, 35 40, 45, 50, 75, 100
50, 63	10, 15, 20, 25, 30, 35, 40 45, 50, 75, 100

5 Action

_	
D	Double acting

6 Body option

Nil	Rod end female thread
С	With rubber bumper
C	(ø12 with auto switch magnet only)
М	Rod end male thread

For the manufacturing of intermediate strokes ⇒ p. 99

Auto switch mounting groove

7	ø12 to ø25	2 surfaces
	ø32 to ø63	4 surfaces

Cylinder Model with Auto Switch Magnet

If a cylinder with an auto switch magnet and without an auto switch is required, there is no need to enter the symbol for the auto switch. (Example) CDQ2KWB32-30DZ

8 Auto switch

Nil Without auto switch

* For applicable auto switches, refer to the next page.

9 Number of auto switches

Nil	2
S	1
n	n

Compact Cylinder: Non-rotating Rod Double Acting, Double Rod CQ2KW Series



For details on auto switch mounting \Rightarrow p. 149 to 165

· Auto Switch Proper Mounting Position (Detection at stroke end) and Mounting Height

* Solid state auto switches marked with a "O" are produced upon receipt of order.

* The D-P3DWA□ type is only available in sizes ø25 to ø63.

- · Minimum Stroke for Auto Switch Mounting
- · Operating Range
- · Auto Switch Mounting Brackets/Part Nos.

Applicable Auto Switches / Refer to the Web Catalog for further information on auto switches

Applicable Auto Switches / Reier to the web catalog for further information on auto switches.																																											
		Electrical to		Clastrias	The state of	tor	M/inim m	L	oad volta	age	Auto swit	ch model	Lead	l wir	e ler	ngth	[m]	Dua suinad																									
Туре	Type Special function entry		Indicate	Wiring (Output)	D	C	AC	Perpendicular	In-line	0.5 (Nil)	1 (M)	3 (L)		None (N)		Applical	ole load																										
_				3-wire (NPN)		5 V,		M9NV	M9N	•	•	•	0	-	0	IC circuit																											
달				3-wire (PNP)		12 V		M9PV	M9P	•	•	•	0	-	0	ic circuit																											
switch		,			2-wire		12 V		M9BV	M9B	•	•	•	0	_	0	_																										
auto	Diameratic in diameter			3-wire (NPN)	e (PNP) wire e (NPN)	5 V,		M9NWV	M9NW	•	•	•	0	-	0	IC circuit																											
	(2-color indicator)		Yes	3-wire (PNP)		1 V 12 V	M9PW	M9PWV	M9PW	•	•	•	0	_	0	ic circuit	Relay,																										
				24 V		12 V	12 V	24 V	24 V	_ 24 V] 24 V] 24 V] 24 V	_ 24 V	24 V	24 V	24 V	24 V	24 V	24 V	24 V	24 V	24 V	24 V	24 V	24 V	24 V	24 V	24 V	24 V	24 V	24 V	24 V	12 V	_	M9BWV	M9BW	•	•	•	0	-	0
state	Water resistant (2-color indicator)			3-wire (NPN)				7,		M9NAV*1	M9NA*1	0	0	•	0	_	0	IC circuit																									
				3-wire (PNP)		12 V		M9PAV*1	M9PA*1	0	0	•	0	-	0	ic circuit																											
Solid	,	'								2-wire	1 [12 V		M9BAV*1	M9BA*1	0	0	•	0	—	0																						
	Magnetic field resistant (2-color indicator)			2-wire (Non-polar)		_			P3DWA	•	_	•		-	0																												
_ 달			Yes	3-wire (NPN equivalent)	_	5 V	_	A96V	A96	•	_	•	_	 —	_	IC circuit	_																										
Reed auto switch				Grommet	et res	2-wire	24 V	12 V	100 V	A93V*2	A93	•	•	•	•	_	_	_	Relay,																								
afte			No	Z-WITE	24 V	5 V,12 V	100 V or less	A90V	A90	•	_	•	_	_	_	IC circuit	PLC																										

- *1 Water-resistant type auto switches can be mounted on the models on page 97, but SMC cannot guarantee water resistance. Please contact SMC regarding water-resistant types with the model numbers on page 97.
- *2 The 1 m lead wire is only applicable to the D-A93.
- * Lead wire length symbols: 0.5 m Nil (Example) M9NW

 - 1 m ······· M (Example) M9NWM 3 m ······ L (Example) M9NWL
 - 5 m Z (Example) M9NWZ
- * There are applicable auto switches other than those listed above. For details ⇒ p. 165

Long Stroke

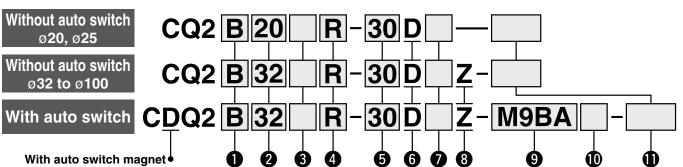
CBQ2

Compact Cylinder: Water Resistant Double Acting, Single Rod

CQ2-R/V Series

Ø20, Ø25, Ø32, Ø40, Ø50, Ø63, Ø80, Ø100

How to Order



The overall length of the cylinder with an auto switch magnet is longer than that of the cylinder without an auto switch magnet by the length of the built-in magnet. For details, refer to the dimensions of each size.

Mounting

В	Through-hole	(ø20 to ø100)				
Α	Both ends tapped					
L	Foot					
LC	Compact foot	(~40 to ~100)				
F	Rod flange	(ø40 to ø100)				
G	Head flange					
D	Double clevis					

- Mounting brackets are shipped together with the product but do not come assembled.
- A through-hole type mounting bolt is available as an option. For details ⇒ p. 110

2 Bore size

20	20 mm
25	25 mm
32	32 mm
40	40 mm
50	50 mm
63	63 mm
80	80 mm
100	100 mm

3 Port thread type

Nil	M thread
1411	Rc
TN	NPT
TF	G

4 Water-resistant cylinder

=	rator roototant cymnaei
R	NBR seal (Nitrile rubber)
٧	FKM seal (Fluororubber)

5 Cylinder stroke (For details on the minimum stroke for auto switch mounting ▷ p. 157) [mm]

	0 1 7 1 3
Bore size	Standard stroke
20, 25	5, 10, 15, 20, 25, 30, 35, 40, 45, 50
32, 40	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100
50, 63, 80, 100	10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100

[∗] For the manufacturing of intermediate strokes ⇒ p. 108

6 Action

_	
D	Double acting

Body option

Nil	Rod end female thread
M	Rod end male thread

8 Auto switch mounting groove

_	, tato omiton mounting	, 9
7	ø20 to ø25	2 surfaces
	a32 to a100	1 curfaces

9 Auto switch

Nil		Witho	out a	uto switch	

* For applicable auto switches, refer to the table below.

Number of auto switches

Nil	2			
S	1			
n	n			

Made to order common specifications

For details ⇒ p. 108

For details on **auto switch mounting** \Rightarrow p. 149 to 165

- \cdot Auto Switch Proper Mounting Position (Detection at stroke end) and Mounting Height
- · Minimum Stroke for Auto Switch Mounting
- · Operating Range
- · Auto Switch Mounting Brackets/Part Nos.

Cylinder Model with Auto Switch Magnet

If a cylinder with an auto switch magnet and without an auto switch is required, there is no need to enter the symbol for the auto switch.

(Example) CDQ2B32R-25DMZ

Applicable Auto Switches / Refer to the Web Catalog for further information on auto switches.

	-	E		VA (See See See	Lo	ad volta	ge	Auto swit	ch model	Lead	wire l	ength	[m]	Due sudue d				
Type	Special function	ecial function Electrical entry	Electrical	Electrical	dicato light	Wiring	DO 40		40	Dawaaadiaadaa	la liaa	0.5 1 3 5		5	Pre-wired A	Applical	Applicable load	
,			<u>l</u>	≅ (Output)	Output) DC		AC Perpe		Perpendicular In-line		(M)	(L)	(Z)	connector				
ate				3-wire (NPN)		5 V,		M9NAV	M9NA	0	0	•	0	0	IC circuit			
id st	Water resistant	Water resistant (2-color indicator) Grommet Yes 3-wire (PNP) 24 V 12 V	12 V	_	M9PAV	М9РА	0	0	•	0	0	IC circuit	Relay, PLC					
water resistant (2-color indicator)				2-wire		12 V		M9BAV	M9BA	0	0	•	0	0		1 20		

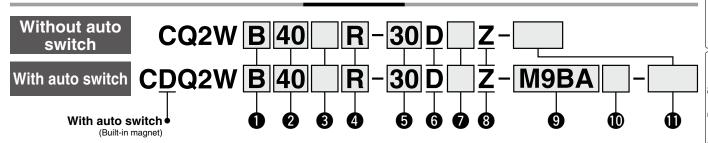
^{*} Lead wire length symbols: 0.5 m ······· Nil (Example) M9BA

1 m ······· M (Example) M9BAM 3 m ······ L (Example) M9BAL 5 m ······ Z (Example) M9BAZ

^{*} Solid state auto switches marked with a "O" are produced upon receipt of order.

Compact Cylinder: Water Resistant Double Acting, Double Rod CQ2W-R/V Series Ø40, Ø50, Ø63, Ø80, Ø100

How to Order



Mounting

В	Through-hole
Α	Both ends tapped
L	Foot
LC	Compact foot
F	Rod flange

- Mounting brackets are shipped together with the product but do not come assembled.
- A through-hole type mounting bolt is available as an option. For details ⇒ p. 119

6 Action

D	Double acting

Auto switch

Nil	Without auto switch

For applicable auto switches, refer to the table below.

2 Bore size

40	40 mm
50	50 mm
63	63 mm
80	80 mm
100	100 mm

Body option

3 Port thread type

	Nil	M thread
	INII	Rc
	TN	NPT
	TF	G

Water-resistant cylinder

_	
R	NBR seal (Nitrile rubber)
٧	FKM seal (Fluororubber)

Cylinder stroke [mm]

For standard strokes ⇒ p. 117

Number of auto switches						
Nil	2					
S	1					
n	n					

Rod end female thread Rod end male thread

Auto switch mounting groove 4 surfaces ø40 to ø100

Made to order common specifications

For details ⇒ p. 117

For details on auto switch mounting p. 149 to 165

- · Auto Switch Proper Mounting Position (Detection at stroke end) and Mounting Height
- · Minimum Stroke for Auto Switch Mounting
- · Operating Range
- · Auto Switch Mounting Brackets/Part Nos.

Cylinder Model with Auto Switch Magnet

If a cylinder with an auto switch magnet and without an auto switch is required, there is no need to enter the symbol for the auto switch.

(Example) CDQ2B40R-50DMZ

Applicable Auto Switches / Refer to the Web Catalog for further information on auto switches.

		Electrical entry	Electrical	Ele et de el	Electrical	Electrical	Electrical	The state of	tor	14 <i>0</i> .	Lo	Load voltage Auto swi			ch model	Lead	Lead wire length [m]				
Туре	·		Indicate	Wiring (Output)	D	С	AC	Perpendicular	In-line	0.5 (Nil)	1 (M)	3 (L)		Pre-wired connector	LAnnlical	ole load					
ate itc				3-wire (NPN)		5 V,		M9NAV	M9NA	0	0	•	0	0	IC circuit	Б.					
id st	Water resistant □ (2-color indicator)	Grommet	Yes	3-wire (PNP) 24 V	12 V	_	M9PAV	M9PA	0	0	•	0	0	IC Circuit	Relay, PLC						
Water resistant (2-color indicator)	ilulcator)		2-wire		12 V		M9BAV	M9BA	0	0	•	0	0	_	1 20						

^{*} Lead wire length symbols: 0.5 m Nil (Example) M9BA

1 m ······· M (Example) M9BAM 3 m ······ L (Example) M9BAL

5 m Z (Example) M9BAZ

Long Stroke

Double Acting, Double Rod

Double Acting, Single Rod CQ2-R/V

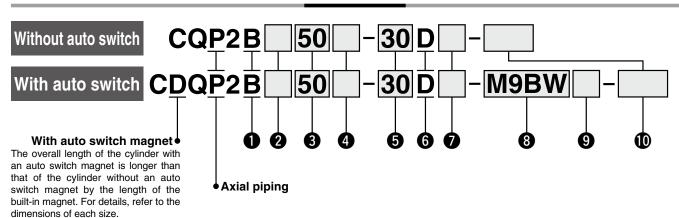
^{*} Solid state auto switches marked with a "O" are produced upon receipt of order.

Compact Cylinder: Axial Piping Double Acting, Single Rod

CQP2 Series

Ø12, Ø16, Ø20, Ø25, Ø32, Ø40, Ø50, Ø63, Ø80, Ø100

How to Order



Mounting

	В	Through-hole							
-	۸	through-hole type mounting							

 A through-hole type mounting bolt is available as an option.
 For details

p. 127

2	Туре

• ,,	••
Nil	Pneumatic
Н	Air-hydro*1

*1 The bore sizes available for the air-hydro type are ø20 to ø100.

3 Bore size

_	
12	12 mm
16	16 mm
20	20 mm
25	25 mm
32	32 mm
40	40 mm
50	50 mm
63	63 mm
80	80 mm
100	100 mm

4 Port thread type

NII	M thread	ø12 to ø25
INII	Rc	
TN	NPT	ø32 to ø100
TF	G	

 $\textbf{5} \textbf{ Cylinder stroke} \text{ (For details on the minimum stroke for auto switch mounting} \Rightarrow \textbf{p. 157)}$

		[mm]
Bore size	Standard stroke	
12, 16	5, 10, 15, 20, 25, 30	
20, 25	5, 10, 15, 20, 25, 30, 35, 40, 45, 50	
32, 40	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100	
50, 63, 80, 100	10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100	

- For the manufacturing of intermediate strokes ⇒ p. 125
- * The bore sizes available for the air-hydro type are ø20 to ø100.

Nil	Rod end female thread
С	With rubber bumper*1
М	Rod end male thread

- *1 The type with a rubber bumper is not selectable for the air-hydro type.
- Combined body options "CM" can be selected.

8 Auto switch

Nil	Without auto switch
* For a	plicable auto switches
□ p.	124

9 Number of auto switches

Nil	2
S	1
n	n

Double acting

Made to order common specifications

For details ⇒ p. 125

Body option



Cylinder Model with Auto Switch Magnet

If a cylinder with an auto switch magnet and without an auto switch is required, there is no need to enter the symbol for the auto switch.

(Example) CDQP2B32-30D

For details on **auto switch mounting** ⇒ p. 149 to 165

- · Auto Switch Proper Mounting Position (Detection at stroke end) and Mounting Height
- \cdot Minimum Stroke for Auto Switch Mounting
- · Operating Range
- · Auto Switch Mounting Brackets/Part Nos.

Applicable Auto Switches / Refer to the **Web Catalog** for further information on auto switches.

, , bb	pplicable Auto Switches / Refer to the web Catalog for further information on auto switches.																																
		Electrical	호	Wiring	Load voltage		age	Auto swit	ch model	Lead wire length				[m]	Pre-wired																		
Type	Type Special function	entry	Indicator	(Output)		C	AC	Perpendicular	In-line	0.5 (Nil)	1 (M)	3 (L)	5 (Z)	None (N)	connector	Applica	ble load																
				3-wire (NPN)		5 V,		M9NV	M9N	•	•	•	0	_	0	IC circuit																	
		Grommet		3-wire (PNP)		12 V		M9PV	M9P	•	•	•	0	_	0	IC CIICUII																	
tch				2-wire		12 V		M9BV	M9B	•	•	•	0	_	0																		
switch		Connector		Z-WITE		12 V		J79C	_		_	•	•	•	_																		
uto s	Diagnostic indication			3-wire (NPN)		5 V,		M9NWV	M9NW	•	•	•	0	_	0	IC circuit																	
anı	Diagnostic indication (2-color indicator)																		Yes	3-wire (PNP)	24 V	12 V	2 V	M9PWV	M9PW	•	•	•	0	_	0	10 Circuit	Relay,
te	(2 color indicator)		163	2-wire	2-wire 8-wire (NPN)		5 V, 12 V	12 V		M9BWV	M9BW	•	•	•	0	_	0	_	PLC														
state	Water resistant	Grommet		3-wire (NPN)				5 V,		M9NAV*1	M9NA*1	0	0	•	0	_	0	IC circuit															
Þ	(2-color indicator)			3-wire (PNP)				12 V		M9PAV*1	M9PA*1	0	0	•	0	_	0	10 Circuit															
Solid	,													2-wire	1			, ,	12 V		M9BAV*1	M9BA*1	0	0	•	0	_	0	_				
	With diagnostic output (2-color indicator)														4-wire		5 V, 12 V			F79F	•	_	•	0	_	0	IC circuit						
	Magnetic field resistant (2-color indicator)			2-wire (Non-polar)		_		_	P4DW	_	_	•	•	_	0	_																	
듯				3-wire (NPN equivalent)		5 V	_	A96V	A96	•	_	•		_	_	IC circuit	_																
switch		Grommet	Yes			_	200 V	A72	A72H	•	_	•	_	_	_																		
		arominet			l							ı		ı	ı		12 V	100 V	A93V*2	A93	•	•	•	•	_	_							
auto			No	2-wire		5 V, 12 V	100 V or less	A90V	A90	•	_	•	_	_	_	IC circuit	Relay,																
a		Connector	Yes	2 4/116	24 V	12 V	_	A73C	_	•	_	•	•	•	_	_	PLC																
Reed		COITIECTOI	Connector	Connector	Cominector	Connector	Connector	Cominector	No			5 V, 12 V	24 V or less	A80C	_	•	<u> </u>	•	•	•		IC circuit											
E	Diagnostic indication (2-color indicator)	Grommet	Yes			_	_	A79W	_		-		-	_	—	_																	

- *1 Water-resistant type auto switches can be mounted on the models on page 123, but SMC cannot guarantee water resistance. Please contact SMC regarding water-resistant types with the model numbers on page 123.
- *2 The 1 m lead wire is only applicable to the D-A93.
- * Lead wire length symbols: 0.5 m ······· Nil (Example) M9NW
 - 1 m ······ M (Example) M9NWM
 - 3 m L (Example) M9NWL
 - 5 m ······· Z (Example) M9NWZ None ······ N (Example) J79CN
- st Solid state auto switches marked with a "O" are produced upon receipt of order.
- * The D-P4DW type is only available in sizes ø40 to ø100.
- * Only for the D-P4DW type, an auto switch is assembled and shipped with the cylinder.
- * There are applicable auto switches other than those listed above. For details ⇒ p. 165

Double Acting, Single R

ouble Acting, Double Rod

rije Adring Spring RetumExte CQ2

ing, Double Rod Double Actin

ble Acting, Single Rod Double

Long Stroke
Double Acting, Single Rod
CQ2

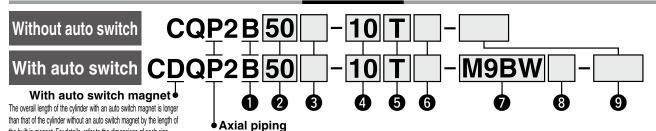
Auto Switch

Compact Cylinder: Axial Piping Single Acting, Single Rod

QP2 Series

12, Ø16, Ø20, Ø25, Ø32, Ø40, Ø50

How to Order



Mounting

Through-hole

A through-hole type mounting bolt is available as an option. For details

the built-in magnet. For details, refer to the dimensions of each size.

Action

S	Single acting, Spring return
Т	Single acting, Spring extend

Number of auto switches

Nil	2
S	1
n	n

2 Bore size

12	12 mm	32	32 mm
16	16 mm	40	40 mm
20	20 mm	50	50 mm
25	25 mm		

6 Body option

Nil	Rod end female thread
M	Rod end male thread

Made to order common specifications

For details ⇒ p. 131

3 Port thread type

Nii	M thread	ø12 to ø25
IVII	Rc	
TN	NPT	ø32 to ø50
TF	G	

Auto switch Nil Without auto switch

For applicable auto switches, refer to the table below.

4 Cylinder stroke

(For details on the minimum stroke for auto switch mounting 🖒 p. 157) Bore size Standard stroke 12, 16, 20, 25, 32, 40 5, 10 10, 20

For the manufacturing of intermediate

Cylinder Model with Auto Switch Magnet

If a cylinder with an auto switch magnet and without an auto switch is required, there is no need to enter the symbol for the auto switch.

(Example) CDQP2B32-10S

* Solid state auto switches marked with a "O" are produced upon receipt of order.

For details on auto switch mounting p. 149 to 165

- · Auto Switch Proper Mounting Position (Detection at stroke end) and Mounting Height
- · Minimum Stroke for Auto Switch Mounting
- · Operating Range
- · Auto Switch Mounting Brackets/Part Nos.

Applicable Auto Switches / Refer to the Web Catalog for further information on auto switches.

		Flactwicel	tor	Wiring	L	oad volta	age	Auto swit	ch model	Lea	d wir	e le	ngth	[m]	Due mined												
Type	Special function	Electrical entry	Indicator light	(Output)	9		AC	Perpendicular	In-line	0.5 (Nil)	1 (M)	3 (L)	5 (Z)	None (N)	Pre-wired connector	Applica	ble load										
				3-wire (NPN)		5 V,		M9NV	M9N	•	•	•	0	—	0	IC circuit											
ج		Grommet		3-wire (PNP)		12 V		M9PV	M9P	•			0	_	0	io circuit											
switch				2-wire		12 V		M9BV	M9B	•	•	•	0	—	0												
		Connector		2-wire		12 V		J79C	_	•	-	•		•	_												
anto	Diagnostic indication			3-wire (NPN)		5 V,		M9NWV	M9NW	•	•	•	0	—	0	IC circuit	Relay,										
				Yes	3-wire (PNP)	24 V	12 V	v _	M9PWV	M9PW	•	•	•	0	_	0	io circuit	PLC									
state	(Z-color indicator)			2-wire		12 V	V	M9BWV	M9BW	•	•	•	0	—	0	_	1 20										
<u>S</u>	Water resistant	Grommet	Grommet	Grommet	Grommet	Grommet		3-wire (NPN)		5 V,		M9NAV*1	M9NA*1	0	0	•	0	_	0	IC circuit							
Solid	Water resistant	(2-color indicator)			3-wire (PNP)		12 V	12 V		M9PAV*1	M9PA*1	0	0	•	0	—	0	io circuit									
Ň	,			2-wire		12 V		M9BAV*1	M9BA*1	0	0	•	0	_	0	_											
	With diagnostic output (2-color indicator)			4-wire		5 V, 12 V		_	F79F	•	-	•	0	_	0	IC circuit											
듯				3-wire (NPN equivalent)		5 V	_	A96V	A96	•	_	•	_	_	_	IC circuit	_										
switch		Grommet	Crommot	Crommot	Grommot	Grommot	Grommot	Grommot	Grommot	Yes			_	200 V	A72	A72H	•	_	•	_	_		_				
						12 V	100 V	A93V*2	A93	•	•	•	•	_													
울	8		No	2-wire				1	1						5 V, 12 V	100 V or less	A90V	A90	•	_	•	_	_		IC circuit	Relay,	
		Connector	Yes	Z-WIIG	24 V	12 V	_	A73C	_	•	<u> </u>	•	•	•		_	PLC										
9		Connector	No			5 V, 12 V	24 V or less	A80C	_	•	<u> — </u>	•	•	•		IC circuit											
Œ	Diagnostic indication (2-color indicator)	Grommet	Yes				_	A79W	_	•	-	•	_	—		_											

- *1 Water-resistant type auto switches can be mounted on the above models, but SMC cannot guarantee water resistance. Please contact SMC regarding water-resistant types with the above model numbers.
- *2 The 1 m lead wire is only applicable to the D-A93.
- * Lead wire length symbols: 0.5 m Nil (Example) M9NW

1 m M (Example) M9NWM

3 m ······ L (Example) M9NWL 5 m Z (Example) M9NWZ

None ······· N (Example) J79CN

* There are applicable auto switches other than those listed above. For details ⇒ p. 165

Double Acting, Double Rod

Double Acting, Double Rod

CQ2W-R/V

CQ2-R/V

Double Acting, Single

Auto Switch

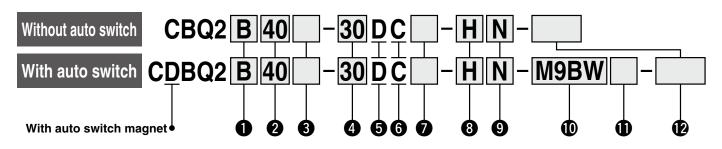
Made to Order

Compact Cylinder: With End Lock

CBQ2 Series

Ø20, Ø25, Ø32, Ø40, Ø50, Ø63, Ø80, Ø100

How to Order



Mounting

В	Through-hole*1				
L	Foot				
LC	Compact foot	~20 to ~100			
F	Rod flange	ø20 to ø100			
G	Head flange				
D	Double clevis				
Α	Both ends tapped	ø32 to ø100			

- *1 Ø20, Ø25 have both through-hole (B) and both ends tapped (A). At the 75 and 100 mm strokes with ø80, ø100, both ends tapped (A) is the standard. Through-hole (B) is not available.
- * Mounting brackets are shipped together with the product but do not come assembled.
- A through-hole type mounting bolt is available as an option. For details \Rightarrow p. 143

Cylinder Stroke (For details on the minimum shoke for adio switch modifying $\frac{1}{2}$ p. 137) [111]					
Bore size	Standard stroke				
20, 25, 32, 40, 50, 63	10, 15, 20, 25, 50, 75, 100				
80, 100	25, 50, 75, 100				

For the manufacturing of intermediate strokes ⇒ p. 141

	_			
4	Во	re	Si	ze

20	20 mm
25	25 mm
32	32 mm
40	40 mm
50	50 mm
63	63 mm
80	80 mm
100	100 mm

3 Port thread type

Nil	M thread	ø12, ø25
IVIII	Rc	
TN	NPT	ø32 to ø100
TF	G	

6	Action
$\overline{}$	Double

_	
D	Double acting

6	Cushion
С	Rubber bumper

Body option

Nil	
Nil	Rod end female thread
М	Rod end male thread

<u>8</u>	Lock	positio

_	
Н	Head end lock
R	Rod end lock

Manual release type

_	namaan release type
N	Non-lock type
L	Lock type

Auto switch

	Nil	Withou	t auto	switch	
*	For a	oplicable	auto	switches	6
	□ p. 1	40			

Number of auto switches

D 11011	ibol of date entitories
Nil	2
S	1
n	n

Made to order common specifications

For details ⇒ p. 141

Cylinder Model with Auto Switch Magnet

If a cylinder with an auto switch magnet and without an auto switch is required, there is no need to enter the symbol for the auto switch. (Example) CDBQ2L32-30DC-RL

Compact Cylinder: With End Lock CBQ2 Series



For details on **auto switch mounting** ⇒ p. 149 to 165

- · Auto Switch Proper Mounting Position (Detection at stroke end) and Mounting Height
- · Minimum Stroke for Auto Switch Mounting
- · Operating Range
- · Auto Switch Mounting Brackets/Part Nos.

App	Applicable Auto Switches / Refer to the Web Catalog for further information on auto switches.																			
Type Special function Electrical by Electrical entry				147	Load voltage			Auto switch model			Lea	d wir	e ler	ngth	[m]					
Type Special function		entry	igal	Wiring (Output)	DC		AC			0.5			5	None	Pre-wired connector	Applicable lo		П		
		Citaly	드	(Output)	U		AC	ø20, ø25	ø32 to ø100	ø20, ø25 ø32 ø40 to ø100		(Nil)	(M)	(L)	(Z)	(N)	CONTINUOUS			
				3-wire (NPN)		5 V,		M9	NV	N	19N	•		•	0	_	0	IC circuit		
		Grommet		3-wire (PNP)	ĺ	12 V			М9	PV	N	19P			•	0	_	0	io circuit	
당				2-wire		12 V		M9BV		N	19B	•			0	_	0			
switch		Connector		Z-WIIE		12 V		_	J79C		_	•	_		•	•	_			
	Diagnostic indication			3-wire (NPN)		5 V,		M9N	1MA	M	WNG	•	•		0	_	0	IC circuit		
auto	Diagnostic indication (2-color indicator)		Yes	3-wire (PNP)	24 V	12 V		M9F	νV	M	9PW	•	•		0	_	0	10 circuit	Relay,	
state	(2-color indicator)		162	2-wire	24 V	12 V	_	M9E	3WV	M	BW	•	•		0	_	0	_	PLC	
sts	(2-color indicator)	Grommet		3-wire (NPN)		5 V,		M9N	AV*1	M9NA*1		0	0	•	0	_		IC circuit		
Solid				3-wire (PNP)		12 V	V		M9P	AV*1	M9	PA*1	0	0		0	_	0	10 circuit	
တိ				2-wire		12 V			M9B	AV*1	M9	BA*1	0	0	•	0	_	0		
	With diagnostic output (2-color indicator)	_		4-wire		5 V, 12 V		_		_	F79F	•	_	•	0	_	0	IC circuit		H
	Magnetic field resistant (2-color indicator)			2-wire (Non-polar)	ar) —	_	_		P4DW		<u> </u>	•	•	_	0	_				
switch			Yes No	3-wire (NPN equivalent)	_	5 V	_	A9	6V	,	\96	•	-	•	_	_	_	IC circuit	_	
N E		Grommet				_	200 V	_	A72	_	A72H	•	_	•	_	_	_			1
						12 V	100 V	A93	8 V *2	F	193	•	•	•	•	_	_	_		
auto				0		5 V, 12 V	100 V or less	A9	ΟV	l l	190	•	_	•	_	_	_	IC circuit	Relay,	
Reed		Connector	Yes	2-wire	24 V	12 V	_	_	A73C		_	•	_	•	•	•	_	_	PLC	
8		Connector	No			5 V, 12 V	24 V or less	_	A80C		_	•	_	•	•	•	_	IC circuit		
	Diagnostic indication (2-color indicator)	Grommet	Yes			_	_	_	A79W		_	•		•			_] !

- *1 Water-resistant type auto switches can be mounted on the models on page 139, but SMC cannot guarantee water resistance. Please contact SMC regarding water-resistant types with the model numbers on page 139.
- *2 The 1 m lead wire is only applicable to the D-A93.
- * Lead wire length symbols: 0.5 m Nil (Example) M9NW
 - 1 m ······ M (Example) M9NWM 3 m ······ L (Example) M9NWL
 - 5 m \cdots Z (Example) M9NWZ None N (Example) J79CN
- * Solid state auto switches marked with a "O" are produced upon receipt of order.
- * The D-P4DW type is only available in sizes ø40 to ø100.
- * Only for the D-P4DW type, an auto switch is assembled and shipped with the
- * There are applicable auto switches other than those listed above. For details ⇒ p. 165
- * When the D-A9□(V)/M9□(V)/M9□W(V)/M9□A(V) types with ø32 to ø50 are mounted on a surface other than the port side, order auto switch mounting brackets separately. For details ⇒ p. 163, 164

Long Stroke

Made to Order