

Air Cylinder

Series CDS1

ø125, ø140, ø160, ø180, ø200

How to Order

With auto switch CDS1 **L** **160** **-300** **-M9BW**

Mounting style

B	Basic style
L	Foot style
F	Rod side flange style
G	Head side flange style
C	Single clevis style
D	Double clevis style
T	Center trunnion style

Type

Nil	Lube
N	Non-lube
H	Air-hydro

Bore size

Lube, Non-lube		Air-hydro	
125	125 mm	125	125 mm
140	140 mm	140	140 mm
160	160 mm	160	160 mm
180	180 mm		
200	200 mm		

Port thread type

Nil	Rc
TN	NPT
TF	G

Number of auto switches

Nil	2 pcs.
3	3 pcs.
S	1 pc.
n	"n" pcs.

Auto switch

Nil	Without auto switch
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Suffix for cylinder

Rod boot	J	Nylon tarpaulin
	K	Heat resistant tarpaulin
	N	Without cushion
	R	With cushion in rod side
Cushion	H	With cushion in head side
	Nil	With cushion in both sides (Air-hydro type has no cushion.)

Built-in Magnet Cylinder Model

If a built-in magnet cylinder without auto switch is required, there is no need to enter the symbol for auto switch.

Example) CDS1B125-200

Cylinder stroke (mm)

(Refer to Maximum Stroke on page 418.)

Made to Order
(Refer to page 418 for details.)

*** Refer to the table below for the applicable auto switch model.**

*** If specifying more than one symbol, indicate them alphabetically.**

**** Air-hydro type has no cushion. No symbol indicates no cushion.**

Applicable Auto Switch/Refer to pages 1263 to 1371 for further information on auto switches.

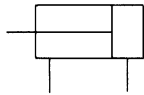
Type	Special function	Electrical entry	Indicator light	Wiring (Output)	Load voltage			Auto switch model		Lead wire length (m)					Pre-wired connector	Applicable load	
					DC		AC	Tie-rod mounting	Band mounting	0.5 (Nil)	1 (M)	3 (L)	5 (Z)				
Solid state switch	—	Grommet	Yes	3-wire (NPN)	24V	5V,12V	—	M9N	—	●	●	●	○	○	IC circuit	Relay, PLC	
				3-wire (PNP)	—	12V		M9P	—	●	●	●	○	○			
		2-wire		—		100V, 200V		M9B	—	●	—	●	○	○			
		Terminal conduit			2-wire	—	J51	—	●	—	●	○	—				
	Diagnostic indication (2-color indication)			Grommet	3-wire (NPN)	24V	5V,12V	—	—	G39	—	—	—	—	—		IC circuit
		2-wire			12V		—		K39	—	—	—	—	—			
		3-wire (NPN)			5V,12V		M9NW		—	●	●	●	○	○	IC circuit		
		3-wire (PNP)			12V		M9PW		—	●	●	●	○	○	IC circuit		
		2-wire					M9BW		—	●	—	●	○	○	—		
		3-wire (NPN)					M9NA		—	○	○	●	○	○	IC circuit		
		3-wire (PNP)			M9PA		—		○	○	●	○	○	—			
		2-wire			M9BA		—		○	○	●	○	○	—			
		4-wire (NPN)	5V,12V		F59F		—		●	—	●	○	○	IC circuit			
With diagnostic output (2-color indication)																	
Reed switch	—	Grommet	Yes	3-wire (NPN equivalent)	—	5V	—	A96	—	●	—	●	—	—	IC circuit	—	
				2-wire	24V	12V	100V	A93	—	●	—	●	—	—	—		
			12V			5V,12V	100V or less	A90	—	●	—	●	—	—	IC circuit		
						100V, 200V	A54	—	●	—	●	●	—	—			
	200V or less	A64				—	●	—	●	—	—	—					
	Terminal conduit	—				—	A33	—	—	—	—	—	—	—	—	PLC	
		DIN terminal	100V, 200V			—	A34	—	—	—	—	—	—	—	Relay, PLC		
			—	A44	—	—	—	—	—	—	—						
		Diagnostic indication (2-color indication)	Grommet	Yes	—	—	A59W	—	●	—	●	—	—				
					—	—	—	—	—	—	—	—					

- * 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 "○" are produced upon receipt of order.
- * Since there are other applicable auto switches than listed above, refer to page 445 for details.
- * For details about auto switches with pre-wired connector, refer to pages 1328 and 1329.
- * D-A9□/M9□/M9□W/M9□AL auto switches are shipped together (not assembled). (Only auto switch mounting brackets are assembled before shipped.)

Series CDS1



JIS Symbol
Double acting



Made to Order Specifications
(For details, refer to pages 1373 to 1498.)

Symbol	Specifications
—XA□	Change of rod end shape
—XB5	Oversized rod cylinder
—XC3	Special port location
—XC4	With heavy duty scraper
—XC6	Piston rod and rod end nut made of stainless steel
—XC8	Adjustable stroke cylinder/Adjustable extension type
—XC9	Adjustable stroke cylinder/Adjustable retraction type
—XC10	Dual stroke cylinder/Double rod type
—XC11	Dual stroke cylinder/Single rod type
—XC14	Change of trunnion bracket mounting position
—XC15	Change of tie-rod length
—XC22	Fluororubber seal
—XC26	Clevis pins with flat washer
—XC27	Double clevis pin and double knuckle pin made of stainless steel
—XC30	Rod side trunnion
—XC35	With coil scraper
—XC68	Hard chrome plated stainless steel rod

Refer to pages 443 to 445 for auto switch specifications.

- Minimum auto switch mounting stroke
- Proper auto switch mounting position (detection at stroke end) and mounting height
- Operating range
- Switch mounting bracket: Part no.

Specifications

Type	Lube, Non-lube		Air-hydro
Fluid	Air		Turbine oil
Bore size (mm)	125, 140, 160	180, 200	125, 140, 160
Proof pressure	1.57 MPa	1.2 MPa	1.57 MPa
Maximum operating pressure	0.97 MPa	0.7 MPa	0.97 MPa
Minimum operating pressure	0.05 MPa		0.06 MPa
Piston speed	50 to 500 mm/s		0.5 to 200 mm/s
Cushion	Interchangeable		None
Ambient and fluid temperature	0 to 60°C (No freezing), Air-hydro type: 5 to 60°C		
Stroke length tolerance (mm)	250 or less $\begin{smallmatrix} st \\ \cdot \\ +1.0 \\ 0 \end{smallmatrix}$, 251 to 1,000 $\begin{smallmatrix} st \\ \cdot \\ +1.4 \\ 0 \end{smallmatrix}$, 1,001 to 1,500 $\begin{smallmatrix} st \\ \cdot \\ +1.8 \\ 0 \end{smallmatrix}$		
Mounting	Basic style, Foot style, Rod side flange style, Head side flange style, Single clevis style, Double clevis style, Center trunnion style		

Maximum Stroke

(mm)

Bore size (mm)	Maximum stroke	
	Basic style, Head side flange style, Single clevis style, Double clevis style, Center trunnion style	Foot style, Rod side flange style
125, 140	1000 or less	1400 or less
160	1200 or less	1400 or less
180	1200 or less	1500 or less
200	998 or less	998 or less
Note	ø200: Cylinders of the stroke range of 998 to 1200 are special products.	ø200: Cylinders of the stroke range of 998 to 1500 are special products.