

Cylinder with Lock

Double Acting, Single Rod

Series MNB

ø32, ø40, ø50, ø63, ø80, ø100

How to Order

Without auto switch

MNB **L** **50** **100** **D**

With auto switch

MDNB **L** **50** **100** **D** **Y7BW**

Built-in magnet

Mounting bracket

Bore size

B	Basic style
L	Axial foot style
F	Rod side flange style
G	Head side flange style
C	Single clevis style
D	Double clevis style

Bore size	32	32 mm
40	40 mm	
50	50 mm	
63	63 mm	
80	80 mm	
100	100 mm	

Cylinder stroke (mm)

Refer to "Standard Stroke" on page 9-6-9.

Number of auto switch

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

Auto switch

Nil	Without auto switch
* For the applicable auto switch model, refer to the table below.	
* D-Z7□/Z80/Y59□/Y69□/Y7□□ types are shipped together, (but not assembled). (But, only the mounting bracket for the above models is assembled when shipping.)	

Locking direction

D	Both directions
* With rod boot	

Rod boot	Nil	None
J	Nylon tarpaulin	
K	Heat resistant tarpaulin	

Built-in magnet cylinder model

In the case of built-in magnet without auto switch, the symbol for auto switch is "Nil".
(Example) MDNBL40-100-D

Applicable Auto Switch/Refer to page 9-15-1 for further information on auto switches.

Applicable Rate Switch/Relay Refer to page 9-15 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	Tie-rod mounting	Band mounting	0.5 (Nil)	3 (L)	5 (Z)				
Reed switch	—	Grommet	Yes	3-wire (NPN equivalent)	—	5 V	—	Z76	—	●	●	—	—	IC circuit	—
		2-wire		24 V	12 V	100 V	Z73	—	●	●	●	—	—	Relay PLC	
						100 V, 200 V	A54	—	●	●	●	—			
						—	—	A33	—	—	—	—			
						100 V, 200 V	—	A34	—	—	—	—			
	—	—	A59W	—	●	●	—	—	—	—	Relay PLC				
Diagnostic indication (2-color indication)	Grommet	—	—	—	—	A59W	—	●	●	—	—	—	—	—	
Solid state switch	—	Grommet	Yes	3-wire (NPN)	24 V	5 V, 12 V	—	Y59A	—	●	●	○	○	IC circuit	Relay PLC
				3-wire (PNP)			—	Y7P	—	●	●	○	○	—	
				2-wire			100 V, 200 V	J51	—	●	●	○	—		
		Terminal conduit		12 V	Y59B	—	●	●	○	○	—				
				3-wire (NPN)	5 V, 12 V	—	G39	—	—	—	—	IC circuit			
				2-wire	12 V	—	K39	—	—	—	—	—			
	Diagnostic indication (2-color indication)	Grommet		3-wire (NPN)	24 V	5 V, 12 V	—	Y7NW	—	●	●	○	○	IC circuit	
				3-wire (PNP)			—	Y7PW	—	●	●	○	○	IC circuit	
				2-wire			12 V	Y7BW	—	●	●	○	○	—	
				—			Y7BA	—	—	●	○	○	—		
				—			F59F	—	●	●	○	○	IC circuit		
				—			P5DW	—	—	●	●	○	—		
	Water resistant (2-color indication)	Grommet		4-wire (NPN)	24 V	5 V, 12 V	—	—	—	—	●	○	○	—	
	With diagnostic output (2-color indication)			—			—	—	—	●	○	○	—		
	Latch type with diagnostic output (2-color indication)			—			—	—	—	●	○	○	—		

* Lead wire length symbols: 0.5 m.....Nil (Example) A54
3 m.....L (Example) A54L
5 m.....Z (Example) A54Z

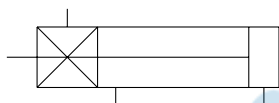
* Solid state switches marked with "○" are produced upon receipt of order.

- Since there are other applicable auto switches than listed, refer to page 9-6-22 for details.
- For details about auto switches with pre-wire connector, refer to page 9-15-66.

Cylinder with Lock Double Acting, Single Rod Series MNB



JIS Symbol
Cylinder with brake



Made to Order Specifications
(For details, refer to page 9-16-1.)

Symbol	Specifications
-XA□	Change of rod end shape
-XC35	With coil scraper

Model

Model	Type	Action	Lock operation	Bore size (mm)
MNB	Non-lube	Double acting	Spring locking	32, 40, 50, 63, 80, 100

Cylinder Specifications

Bore size (mm)	32, 40, 50, 63, 80, 100,
Type	Non-lube
Fluid	Air
Proof pressure	1.5 MPa
Max. operating pressure	1.0 MPa
Min. operating pressure	0.08 MPa
Piston speed	50 to 1000 mm/s *
Ambient and fluid temperature	Without auto switch: -10 to 70°C (No freezing) With auto switch: -10 to 60°C (No freezing)
Cushion	Air cushion on both ends
Stroke length tolerance	Up to 250: $^{+1.0}_0$, 251 to 1000: $^{+1.4}_0$
Mounting	Basic style, Axial foot style, Rod side flange style, Center trunnion style, Single clevis style, Double clevis style

* Load limits exist depending upon piston speed when locked, mounting direction and operating pressure.

Lock Specifications

Locking action	Spring locking (Exhaust locking)
Unlocking pressure	0.25 MPa or more
Lock starting pressure	0.20 MPa or less
Max. operating pressure	1.0 MPa
Locking direction	Both directions

Standard Stroke

For cases with auto switches, refer to the table of minimum strokes for /mounting of auto switches (page 9-6-22).

Bore size (mm)	Standard stroke (mm)	Maximum manufacturable stroke
32	25, 50, 75, 100, 125, 150, 175, 200, 250, 300, 350, 400, 450, 500	700
40	25, 50, 75, 100, 125, 150, 175, 200, 250, 300, 350, 400, 450, 500	800
50	25, 50, 75, 100, 125, 150, 175, 200, 250, 300, 350, 400, 450, 500, 600	1000
63	25, 50, 75, 100, 125, 150, 175, 200, 250, 300, 350, 400, 450, 500, 600	1000
80	25, 50, 75, 100, 125, 150, 175, 200, 250, 300, 350, 400, 450, 500, 600, 700, 800	1000
100	25, 50, 75, 100, 125, 150, 175, 200, 250, 300, 350, 400, 450, 500, 600, 700, 800	1000

Intermediate strokes are available, too.

Stopping Accuracy

Lock type	Piston speed (mm/s)			
	100	300	500	1000
Spring locking	±0.3	±0.6	±1.0	±2.0

Condition: Lateral, Supply pressure P = 0.5 MPa

Load weight Upper limit of allowed value

Solenoid valve for locking mounted on the unlocking port

Maximum value of stopping position dispersion from 100 measurements

Holding Force of Spring Locking (Maximum static load)

Bore size (mm)	32	40	50	63	80	100
Holding force (N)	552	882	1370	2160	3430	5390