# Rotary Cylinder <br> Series MRQ <br> Size: 32, 40 

How to Order


Applicable Auto Switch (Common for the linear and the rotary motion parts)/Refer to pages 761 to 809 for further information on auto switches.

| Type | Special function | Electrical entry | $\begin{array}{\|l\|} \hline \text { ㅎㅡㅡ } \\ \text { 保 } \\ \text { 흐 } \\ \text { 응 } \\ \hline \end{array}$ | Wiring (Output) | Load voltage |  |  | Auto switch model |  | Lead wire length (m) * |  |  |  | Pre-wired connector | Applicable load |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | DC |  | AC | Perpendicular | In-line | $\begin{gathered} \hline 0.5 \\ \text { (Nil) } \end{gathered}$ | $\begin{gathered} 3 \\ (\mathrm{~L}) \end{gathered}$ | $\begin{gathered} 5 \\ (\mathrm{Z}) \end{gathered}$ | None ( N ) |  |  |  |
|  |  | Grommet | $\stackrel{』}{\underset{\sim}{\infty}}$ | 3-wire (NPN) | 24V | 5V, 12V |  | F7NV | F79 | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | - | $\bigcirc$ | IC circuit | Relay, <br> PLC |
|  |  |  |  | 3-wire (PNP) |  |  |  | F7PV | F7P | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | - | $\bigcirc$ |  |  |
|  |  |  |  | 2-wire |  | 12V |  | F7BV | J79 | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | - | $\bigcirc$ |  |  |
|  |  | Connector |  |  |  |  |  | J79C | - | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | - |  |  |
|  | Diagnostic indicator (2-color) | Grommet |  | 3-wire (NPN) |  | 5V, 12 V |  | F7NWV | F79W | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | - | $\bigcirc$ | IC circuit |  |
|  |  |  |  | 3-wire (PNP) |  |  |  | - | F7PW | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | - | $\bigcirc$ |  |  |
|  |  |  |  | 2-wire |  | 12V |  | F7BWV | J79W | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | - | $\bigcirc$ |  |  |
|  | Water resistant (2-color) |  |  |  |  | 12 V |  | **F7BAV | **F7BA | - | $\bigcirc$ | $\bigcirc$ | - | $\bigcirc$ |  |  |
|  | Diagnosis output (2-color) |  |  | 4-wire (NPN) |  | 5V, 12V |  | - | F79F | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | - | $\bigcirc$ | IC circuit |  |
|  | - | Grommet | $\stackrel{\infty}{\underset{\sim}{\infty}}$ | 3-wire (NPN equivalert) | - | 5 V | - | - | A76H | $\bigcirc$ | $\bigcirc$ | - | - | - | IC circuit | - |
|  |  |  |  | 2-wire | - | - | 200 V | A72 | A72H | $\bigcirc$ | $\bigcirc$ | - | - | - | - | Relay, <br> PLC |
|  |  |  |  |  | 24 V | 12V | 100 V | A73 | A73H | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | - | - |  |  |
|  |  |  | 은 |  |  |  | 100 V or less | A80 | A80H | $\bigcirc$ | $\bigcirc$ | - | - | - | IC circuit |  |
|  |  | Connector | $\stackrel{\infty}{\infty}$ |  |  |  | - | A73C |  | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | - | - |  |
|  |  |  | ㅇ |  |  |  |  | A80C | - | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | - | IC circuit |  |
|  | Diagnostic indicator (2-color) | Grommet | $\stackrel{\text { O}}{\sim}$ |  |  | - | - | A79W | - | $\bigcirc$ | $\bigcirc$ | - | - | - | - |  |

[^0]- Since other auto switches are available other than those listed above, refer to page 350 for details on other applicable auto switches. state auto switches with pre-wired connectors.
* Auto switch is shipped together (not assembled).

Standard Specifications


| Fluid | Air (Non-lube) |
| :--- | :---: |
| Max. operating pressure (MPa) | 0.7 MPa |
| Min. operating pressure (MPa) | 0.15 MPa |
| Ambient and fluid temperature | 0 to $60^{\circ} \mathrm{C}$ (No freezing) |
| Mounting | Basic style, Rod side flange style |

Linear Motion Parts, Rotary Motion Parts/Specifications

| Linear motion parts | Size | 32 | 40 |
| :---: | :---: | :---: | :---: |
|  | Piston speed | 50 to $500 \mathrm{~mm} / \mathrm{s}$ |  |
|  | Cushion | With air cushion, Without air cushion |  |
|  | Port size | Rc 1/8 |  |
| Rotary motion parts | Output torque (At 0.5 MPa) | $1 \mathrm{~N} \cdot \mathrm{~m}$ | 1.9 N.m |
|  | Rotation time adjustment range | 0.2 to $1^{\mathrm{S}} / 90^{\circ}$ |  |
|  | Cushion | None |  |
|  | Allowable kinetic energy | 0.023J | 0.028J |
|  | Port size | 1/8, M5 $\times 0.8$ (The port is plugged for delivery.) |  |
|  | Backlash | $2^{\circ}$ or less |  |

338. 

Linear Motion Parts/Standard Stroke

| Size | Standard stroke (mm) |
| :---: | :---: |
| $\mathbf{3 2 , 4 0}$ | $5,10,15,20,25,30,40,50,75,100$ |

T~Refer to page 352 for other intermediate strokes.

Mass

| Size | Rotating angle | Basic mass (g) | Add'l stroke mass (g/mm) | Flange (g) |
| :---: | :---: | :---: | :---: | :---: |
| 32 | $80^{\circ}$ to $100^{\circ}$ | 1400 | 4 | 500 |
|  | $170^{\circ}$ to $190^{\circ}$ | 1500 |  |  |
| 40 | $80^{\circ}$ to $100^{\circ}$ | 2100 | 5 |  |
|  | $170^{\circ}$ to $190^{\circ}$ | 2300 |  |  |

Calculation: (Example) MRQBS32-50CA

| Basic | 1400 g |
| :---: | :---: |
| - Stroke additional mass | $4 \times 50=200 \mathrm{~g}$ |
|  | Total 1600 g |

For the mass of auto switch alone, refer to pages 767 to 809.

Possible to Exchange Basic Style with Flange Style
Specify with the part numbers shown below when ordering flange parts.

| Size | Part no. |
| :---: | :---: |
| $\mathbf{3 2}$ | P317010-7 |
| $\mathbf{4 0}$ | P317020-7 |


[^0]:    ** Although it is possible to mount water resistant type auto switches, note that the rotary actuator itself is not of water resistant construction.

    * Lead wire length symbols: $0.5 \mathrm{~m} \cdots \ldots .$. Nil (Example) A73C * Solid state auto switches marked with " $\bigcirc$ " are manufactured upon receipt of order.
    $3 \mathrm{~m} \cdots \cdots . . . . \mathrm{L}$ (Example) A73CL
    $5 \mathrm{~m} . . . . . . .$. Z (Example) A73CZ
    None.......... N (Example) A73CN

