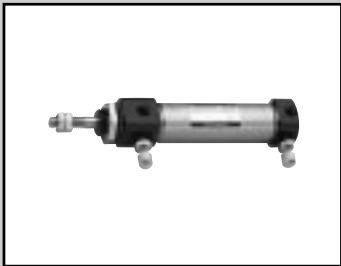


SCP\*2  
 CMK2  
 CMA2  
 SCM  
 SCG  
 SCA2  
 SCS  
 CKV2  
 CA/OV2  
 SSD  
 CAT  
 MDC2  
 MVC  
 SMD2  
 MSD\*  
 FC\*  
 STK  
 ULK\*  
 JSK/M2  
 JSG  
 JSC3  
 USSD  
 USC  
 JSB3  
 LMB  
 STG  
 STS/L  
 LCS  
 LCG  
 LCM  
 LCT  
 LCY  
 STR2  
 UCA2  
 HCM  
 HCA  
 SRL2  
 SRG  
 SRM  
 SRT  
 MRL2  
 MRG2  
 SM-25  
 CAC3  
 UCAC  
 RCC2  
 MFC  
 SHC  
 GLC  
 Ending



Pencil shaped cylinder  
Double acting, with speed control valve

# SCPD2-Z Series

● Bore size:  $\phi$  10,  $\phi$  16



## Specifications

| Descriptions                |      | SCPD2-Z<br>SCPD2-ZL  |           |
|-----------------------------|------|--|-----------|
| Bore size                   | mm   | $\phi$ 10  | $\phi$ 16 |
| Actuation                   |      | Double acting, with speed control valve                    |           |
| Working fluid               |      | Compressed air   |           |
| Max. working pressure       | MPa  | 1.0  |           |
| Min. working pressure       | MPa  | 0.1  |           |
| Withstanding pressure       | MPa  | 1.6  |           |
| Ambient temperature         |      | -10 to 60 (no freezing)                                    |           |
| Port size                   |      | M5   |           |
| Stroke tolerance            | mm   | $\begin{smallmatrix} +1.0 \\ 0 \end{smallmatrix}$          |           |
| Working piston speed        | mm/s | 50 to 500  |           |
| Cushion                     |      | Rubber cushion   |           |
| Lubrication                 |      | Not required (when lubricating, use turbine oil ISO VG32.) |           |
| Allowable energy absorption | J    | 0.041  | 0.162     |

## Stroke length

| Bore size (mm) | Standard stroke length (mm) | Max. stroke length (mm) | Min. stroke length (mm) |
|----------------|-----------------------------|-------------------------|-------------------------|
| $\phi$ 10      | 15, 30, 45, 60              | 200                     | 5                       |
| $\phi$ 16      |                             | 260                     |                         |

Note 1: Custom stroke length is available per 1mm increment.

## Min. stroke length of type with switch

| Rough sketch       | With 1 switch         |                        | With 2 switches                |                           |
|--------------------|-----------------------|------------------------|--------------------------------|---------------------------|
|                    |                       |                        |                                |                           |
|                    | Rod side installation | Head side installation | Different surface installation | Same surface installation |
| Min. stroke length | 5mm                   |                        | 10mm                           | 28 mm and over            |

|        |
|--------|
| SCP*2  |
| CMK2   |
| CMA2   |
| SCM    |
| SCG    |
| SCA2   |
| SCS    |
| CKV2   |
| CA/OV2 |
| SSD    |
| CAT    |
| MDC2   |
| MVC    |
| SMD2   |
| MSD*   |
| FC*    |
| STK    |
| ULK*   |
| JSK/M2 |
| JSG    |
| JSC3   |
| USSD   |
| USC    |
| JSB3   |
| LMB    |
| STG    |
| STS/L  |
| LCS    |
| LCG    |
| LCM    |
| LCT    |
| LCY    |
| STR2   |
| UCA2   |
| HCM    |
| HCA    |
| SRL2   |
| SRG    |
| SRM    |
| SRT    |
| MRL2   |
| MRG2   |
| SM-25  |
| CAC3   |
| UCAC   |
| RCC2   |
| MFC    |
| SHC    |
| GLC    |
| Ending |

Pencil shaped cylinder  
Standard type

### Switch specifications

| Descriptions           | Proximity 2-wire                                    |                                  | Proximity 3-wire   |                          |                                  |
|------------------------|---|----------------------------------|--|--------------------------|----------------------------------|
|                        | M2V   | M2WV<br>(2 color indicator type) | M3V  | M3PV<br>(Custom order)   | M3WV<br>(2 color indicator type) |
| Applications           | Programmable controller                             |                                  | Programmable controller, relay,<br>IC circuit, small solenoid valve          |                          |                                  |
| Output method          | ————  |                                  | NPN output   | PNP output               | NPN output                       |
| Power voltage          | ————  |                                  | 4.5 to 28 VDC  |                          | 10 to 28 VDC                     |
| Load voltage           | 10 to 30 VDC  |                                  | 30 VDC or less   |                          |                                  |
| Load current           | 5 to 20 mA  |                                  | 200 mA or less   | 100 mA or less           | 150 mA or less                   |
| Light                  | LED (ON lighting)                                   | Red/green LED (ON lighting)      | LED (ON lighting)  | Yellow LED (ON lighting) | Red/green LED (ON lighting)      |
| Leakage current        | 1 mA or less  |                                  | 10 $\mu$ A or less   | 0.05 mA or less          | 10 $\mu$ A or less               |
| Descriptions           | Reed 2 wire   |                                  |  |                          |                                  |
|                        | M0V   |                                  | M5V  |                          |                                  |
| Applications           | Programmable controller, relay                      |                                  | Programmable controller, relay,<br>IC circuit (w/o light), serial connection |                          |                                  |
| Load voltage / current | 5 to 50 mA with 12/ 24 VDC<br>7 to 20 mA at 110 VAC |                                  | 50 mA or less at 5/12/24 VDC,<br>20 mA or less at 110 VAC                    |                          |                                  |
| Light                  | LED (ON lighting)                                   |                                  | Without indicator light  |                          |                                  |
| Leakage current        | 0mA   |                                  |  |                          |                                  |

### Cylinder weight

(Unit: g)

| Type    | Stroke length  | Without switch |      |      |      | With switch (2 switches) |      |      |      | Switch weight<br>(per switch) |
|---------|----------------|----------------|------|------|------|--------------------------|------|------|------|-------------------------------|
|         | Bore size (mm) | 15st           | 30st | 45st | 60st | 15st                     | 30st | 45st | 60st |                               |
| SCPD2-Z | $\phi$ 10      | 36             | 41   | 46   | 51   | 84                       | 89   | 94   | 99   | 24                            |
|         | $\phi$ 16      | 66             | 74   | 82   | 90   | 114                      | 122  | 130  | 138  |                               |

### Mounting bracket weight

(Unit: g)

| Applicable<br>bore size | Mounting style  |                   |                   |
|-------------------------|-----------------|-------------------|-------------------|
|                         | Foot type<br>LS | Flange type<br>FA | Clevis type<br>CB |
| $\phi$ 10               | 6               | 4                 | 4                 |
| $\phi$ 16               | 15              | 12                | 10                |

# SCPD2-Z Series

## How to order

Without switch

SCPD2-Z - LS - 10 - 15 - I

With switch

SCPD2-ZL - LS - 10 - 15 - M2V - R - I

A Mounting style

B Bore size

C Stroke length

D Switch model no.

E Switch quantity

F Accessory  
Note 2

## Note on model no. selection

Note 1: Refer to page 50 for min. stroke length with switch.

Note 2: "I" and "Y" can not be selected at the same time.

Note 3: Copper and PTFE free as standard for SCPD2-Z.

**Note 4: Refer to Ending 89 for custom specifications of rod end form.**

Note 5: Refer to page 6 for variation/option combination.

## <Example of model number>

SCPD2-ZL-00-10-15-M2V-R-I

Model: Pencil shaped cylinder Double acting speed with controller

A Mounting style : Basic type

B Bore size :  $\phi 10$  mm

C Stroke length : 15 mm

D Switch model no. : Proximity switch M2V

E Switch quantity : 1 on rod end

F Accessory : Rod eye

| Symbol                  | Descriptions                                     |
|-------------------------|--|
| <b>A Mounting style</b> |  |
| 00                      | Basic type                                       |
| LS                      | Single axial foot type (rod side)                |
| FA                      | Rod side flange type                             |
| CB                      | Clevis bracket type (pin and snap ring attached) |

|                         |           |  |
|-------------------------|-----------|--|
| <b>B Bore size (mm)</b> |           |  |
| 10                      | $\phi 10$ |  |
| 16                      | $\phi 16$ |  |

| <b>C Stroke length (mm)</b> |                      |                      |
|-----------------------------|----------------------|----------------------|
| Bore size                   | Stroke length Note 1 | Custom stroke length |
| $\phi 10$                   | 5 to 200             | 1 mm increment       |
| $\phi 16$                   | 5 to 260             |                      |

| <b>D Switch model no.</b> |           |                                  |           |
|---------------------------|-----------|----------------------------------|-----------|
| Lead wire L type          | Contact   | Indicator                        | Lead wire |
| M2V*                      | Proximity | 1 color indicator                | 2-wire    |
| M2WV*                     |           | 2 color indicator                |           |
| M3V*                      |           | 1 color indicator                | 3-wire    |
| M3PV*                     | Reed      | 1 color indicator (custom order) |           |
| M3WV*                     |           | 2 color indicator                |           |
| M0V*                      | Reed      | 1 color indicator                | 2-wire    |
| M5V*                      |           | Without indicator light          |           |

|                          |                |
|--------------------------|----------------|
| <b>*Lead wire length</b> |                |
| Blank                    | 1 m (standard) |
| 3                        | 3 m (option)   |
| 5                        | 5 m (option)   |

|                          |               |
|--------------------------|---------------|
| <b>E Switch quantity</b> |               |
| R                        | 1 on rod end  |
| H                        | 1 on head end |
| D                        | Two           |
| T                        | Three         |

|                    |   |
|--------------------|---|
| <b>F Accessory</b> |   |
| I                  | Rod eye                                 |
| Y                  | Rod clevis (pin and snap ring attached) |

## How to order switch

● Switch body + mounting bracket

SCPD2 - M2V - 10

Bore size  
(Item B above)

Switch model no.  
(Item D above)

● Only switch body

SW - M2V

Switch model no.  
(Item D above)

● Mounting bracket

SCPD2 - M - 10

Bore size  
(Item B above)

Bracket

## How to order mounting bracket

| Bore size (mm)   | $\phi 10$ | $\phi 16$ |
|------------------|-----------|-----------|
| Mounting bracket |           |           |
| Foot (LS)        | P2-LS-10M | P2-LS-16M |
| Flange (FA)      | P2-FA-10M | P2-FA-16M |

Note : 1 pc./set is applied for a foot (LS) type mounting bracket.