

# Tubular Inductive Proximity Sensor

# M12

## ◆ Characteristic / 特點：

- Standard models for metal detection.  
/ 標準型含鐵金屬檢測有無。
- Assorted variety：Short body/ Long body/  
AC or DC available.  
/ 廣泛的選擇性，短本體、長本體、直流、  
交流型皆具備。



## ◆ Specifications / 規格表：

|                                  |                                |                                                                           |                                       |                                                                           |                                       |
|----------------------------------|--------------------------------|---------------------------------------------------------------------------|---------------------------------------|---------------------------------------------------------------------------|---------------------------------------|
| Output method<br>/輸出模式           | NPN N.O.                       | SC1202-N<br>SCS1202-N<br>SCL1202-N                                        | SC1202-ND<br>SCS1202-ND<br>SCL1202-ND | SC1204-N<br>SCS1204-N<br>SCL1204-N                                        | SC1204-ND<br>SCS1204-ND<br>SCL1204-ND |
|                                  | PNP N.O.                       | SC1202-P<br>SCS1202-P<br>SCL1202-P                                        | SC1202-PD<br>SCS1202-PD<br>SCL1202-PD | SC1204-P<br>SCS1204-P<br>SCL1204-P                                        | SC1204-PD<br>SCS1204-PD<br>SCL1204-PD |
|                                  | NPN N.O./N.C.<br>PNP N.C./N.O. | SC1202-KP2                                                                | —                                     | SC1204-KP2                                                                | —                                     |
|                                  | SCR N.O.                       | SC1202-A                                                                  | —                                     | SC1204-A                                                                  | —                                     |
|                                  | SCR N.C.                       | SC1202-A2                                                                 | —                                     | SC1204-A2                                                                 | —                                     |
| Sensing distance / 檢出距離          |                                | 2 mm                                                                      |                                       | 4 mm                                                                      |                                       |
| Secure sensing distance / 建議距離   |                                | 0 to 1.6 mm                                                               |                                       | 0 to 3.2 mm                                                               |                                       |
| Standard sensing object / 標準檢測物  |                                | Iron 12 x 12 x 1 mm                                                       |                                       |                                                                           |                                       |
| Sensing type / 檢出方式              |                                | Shielded / 隔離型                                                            |                                       | Unshielded / 非隔離型                                                         |                                       |
| Description / 外型                 |                                | Standard M12 / 標準M12                                                      |                                       |                                                                           |                                       |
| Hysteresis / 遲滯                  |                                | ≤ 10 % of sensing distance                                                |                                       |                                                                           |                                       |
| Response time / 反應時間             |                                | DC Type 1 ms Max. or AC Type 50ms                                         |                                       |                                                                           |                                       |
| Operating voltage / 工作電壓         |                                | DC 12 ~ 24V or AC90 ~ 260 V                                               |                                       |                                                                           |                                       |
| Current consumption / 消耗電流       |                                | DC : ≤ 8 mA no-load or AC : 2 mA Max.                                     |                                       |                                                                           |                                       |
| Load current / 負載電流              |                                | DC : 100 mA Max. at DC 24V or AC : 5 ~ 300 mA Max.                        |                                       |                                                                           |                                       |
| Leakage current / 漏電流            |                                | ≤ 1.1 mA no-load                                                          |                                       |                                                                           |                                       |
| Residual voltage / 殘餘電壓          |                                | ≤ DC 1.5V                                                                 |                                       |                                                                           |                                       |
| Insulation resistance / 隔離阻抗     |                                | 20MΩ min. (DC500V)                                                        |                                       |                                                                           |                                       |
| Voltage withstandability / 絕緣耐壓  |                                | AC1000V 60Hz for 60Sec.                                                   |                                       |                                                                           |                                       |
| Operating temperature / 工作溫度     |                                | -20℃ ~ + 60℃                                                              |                                       |                                                                           |                                       |
| Protection degree / 防水等級         |                                | IP 66                                                                     |                                       |                                                                           |                                       |
| Wiring method / 出線方式             |                                | N/P : Ø4.2x 2M /3-wires<br>KP2 : Ø4.2x2M /4-wires<br>AC : Ø4.2x2M /-wires | M8 pigtailed type<br>/ M8接頭15cm電線式    | N/P : Ø4.2x 2M /3-wire<br>KP2 : Ø4.2x2M /4-wires<br>AC : Ø4.2x2M /2-wires | M8 pigtailed type<br>/ M8接頭15cm電線式    |
| Weight / 重量                      | SC                             | Approx. 65g                                                               | Approx. 15g                           | Approx. 65g                                                               | Approx. 15g                           |
|                                  | SCL                            | Approx. 70g                                                               | Approx. 20g                           | Approx. 70g                                                               | Approx. 20g                           |
|                                  | SCS                            | Approx. 60g                                                               | Approx. 15g                           | Approx. 60g                                                               | Approx. 15g                           |
| ◆ Dimensions / 尺寸圖：<br>(unit:mm) |                                |                                                                           |                                       |                                                                           |                                       |
| ◆ Wiring diagrams<br>/ 接線圖：      |                                |                                                                           |                                       |                                                                           |                                       |

Inductive / Capacitive Proximity Sensor

PSD18-LA/LV  
PSC18-LA/LV  
SC18-LA/LV

HPD  
HPS

Ø4  
M5  
Ø6  
M8  
M12  
M18  
M30

JN  
JND  
KND  
PN  
PND  
RN  
SN  
TSN

SID  
SIR  
SIA

PKC  
KC  
KCM  
KCP