

Mounting band: BK PAB PBM



TGC series
Use for: TGC TGG Series



IH series
Use for: TGC TGG Series

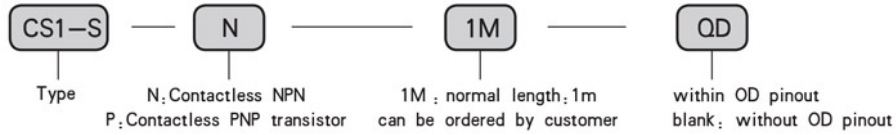


PI series
Use for: TGU TGI Series



PM series
Use for: TGC TGG Series

● Ordering Code

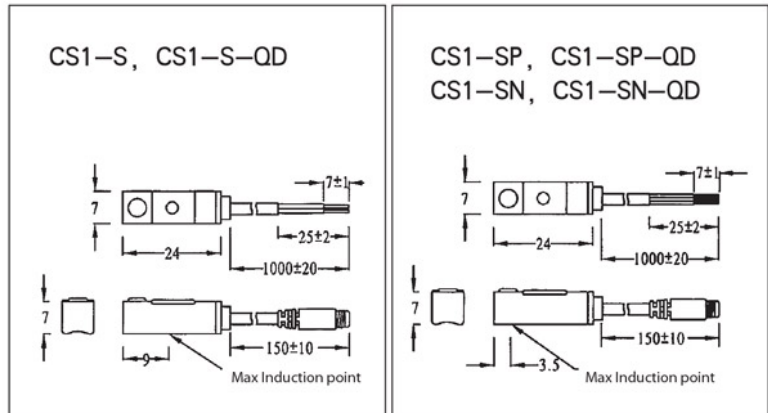


| Specification | Type | | Size | Voltage | User |
|------------------------|---------------|--|------|-----------------|---------------------------|
| Contact/Magnetic reed | CS1—U Series | | | 5 ~ 240VDC / AC | Used for: TGU TGC TGI TGG |
| Contactless/NPN output | | | | | |
| Contactless/PNP output | CS1—F Series | | | 5 ~ 30VDC | |
| Contact/Magnetic reed | CS1—J Series | | | 5 ~ 240VDC / AC | Used for: TGN |
| Contactless/NPN output | | | | 5 ~ 30VDC | |
| Contactless/PNP output | | | | | |
| Contact/Magnetic reed | CS1—S Series | | | 5 ~ 240VDC / AC | Used for: TGL TGA TGM |
| Contactless/NPN output | | | | 5 ~ 30VDC | |
| Contactless/PNP output | | | | | |
| Contact/magnetic reed | CS1—M Series | | | 5 ~ 240VDC / AC | Used for: DNC |
| Contactless/NPN output | | | | 5 ~ 30VDC | |
| Contactless/PNP output | | | | | |
| Contact/Magnetic reed | CS1—H Series | | | 5 ~ 240VDC / AC | Used for: CXS / TGD |
| Contactless/NPN output | CS1—G Series | | | 5 ~ 30VDC | Used for: TGN |
| Contactless/PNP output | | | | | |
| Contact/Magnetic reed | CS1—72 Series | | | 5 ~ 240VDC / AC | Used for: CQ2 |
| Contactless/NPN output | | | | 5 ~ 30VDC | |
| Contactless/PNP output | | | | | |

CS1-S Series



* CS1-S series used for: TGA, TGL, TGM



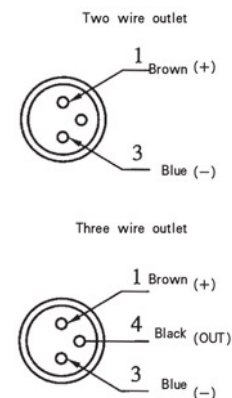
| Specitication | CS1-S | CS1-SN | CS1-SP |
|---------------------------|-----------------------|--|----------------------------|
| Wire pattern | 2-wire type | 3-wire type | |
| Switching logic | SPST Normally open | Solidstate output Normally open | |
| Output | Magnetic reed contact | Contactless NPN | Contactless PNP transistor |
| Operating voltage | 5~2400V DC/AC | 5~30V DC/AC | |
| Switch current | 100mA max. | 200mA max. | |
| Contact rating | 10W max. | 6W max. | |
| Current consumption | None | 22mA @ 24V max. | 20mA @ 24V max. |
| Voltage drop | 3.5V max. | 0.5V max. | |
| Current leakage | None | 0.01mA max. | |
| LED indicator | Green LED | Red LED | Green LED |
| Wire | 3, 3φ, 2C, Gray PVC | 3, 3φ, 3C, Black Oil-resistant PU | |
| Operating Frequency | 200Hz | 1000Hz | |
| Tem range | -10~60°C (No Freeze) | | |
| Shock | 30G | 50G | |
| Vibration | 9G | | |
| Enclosure class itication | IEC529 IP67 (NEMA6) | | |
| Protection circuit | None | Power source reverse polarity; Surge suppression | |
| Current Drawing | | | |

*CS1-S Series BK mounting band



Used for 6-63 Round cylinder

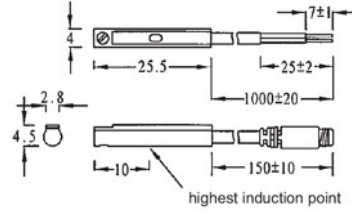
QD Pinout drawing



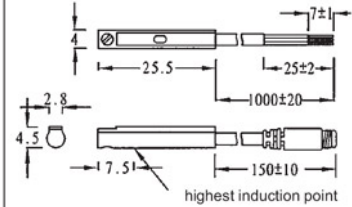
CS1-H Series



CS1-H, CS1-H-QD



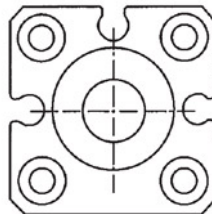
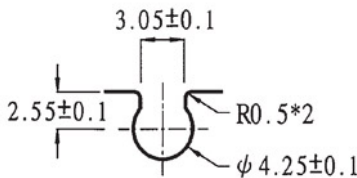
CS1-HP, CS1-HP-QD
CS1-HN, CS1-HN-QD



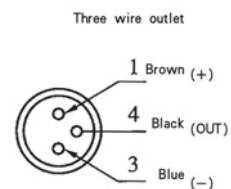
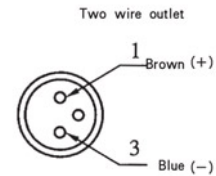
* CS1-H series used for CXS / TGD

| Specification | CS1-H | CS1-HN | CS1-HP |
|---------------------------|-----------------------|--|----------------------------|
| Wire pattern | 2-wire type | 3-wire type | |
| Switching logic | SPST Normally open | Solidstate output Normally open | |
| Output | Magnetic reed contact | Contactless NPN | Contactless PNP transistor |
| Operating voltage | 5~120V DC/AC | 5~30V DC | |
| Switch current | 100mA max. | 200mA max. | |
| Contact rating | 10W max. | 6W max. | |
| Current consumption | None | 20mA @ 24V max. (Switch Active) | |
| Voltage drop | 2.5V max. | 0.5V @ 20mA max. | |
| Current leakage | None | 0.01mA max. | |
| LED indicator | Red LED | Red LED | Green LED |
| Wire | 2.8φ, 2C, Gray PVC | 2.8φ, 3C, Black Oil-resistant PU | |
| Operating Frequency | 200Hz | 1000Hz | |
| Tem range | | -10~60°C (No Freeze) | |
| Shock | 30G | 50G | |
| Vibration | | 9G | |
| Enclosure class itication | | IEC529 IP67 (NEMA6) | |
| Protection circuit | None | Power source reverse polarity; Surge suppression | |
| Current Drawing | | | |

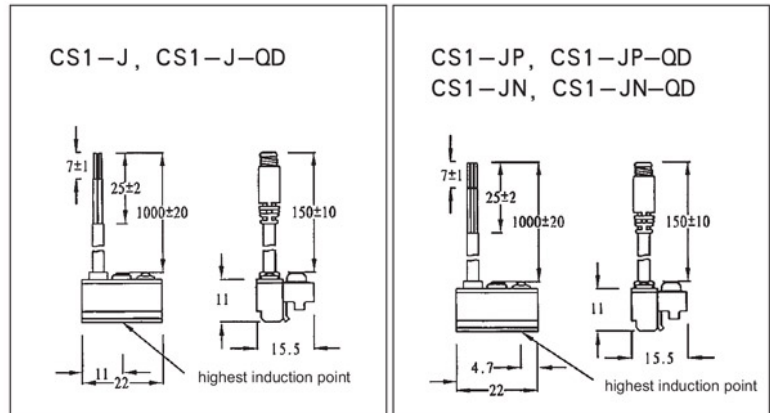
*CS1-H Series groove size, installation means
Used for SMC



QD Pinout drawing



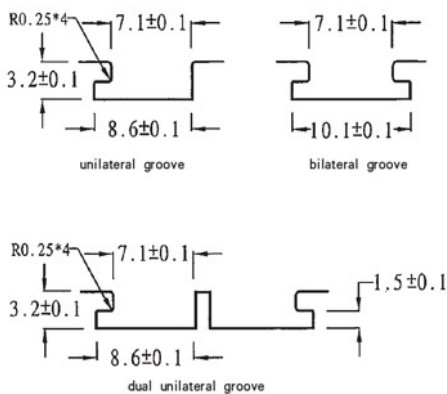
CS1-J Series



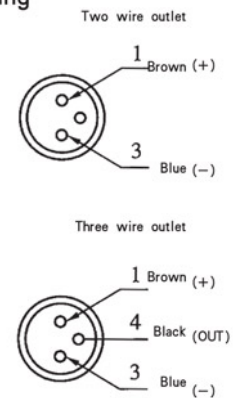
* CS1-J series used for TGN

| Specitication | CS1-J | CS1-JN | CS1-JP |
|---------------------------|-----------------------|--|----------------------------|
| Wire pattern | 2-wire type | 3-wire type | |
| Switching logic | SPST Normally open | Solidstate output Normally open | |
| Output | Magnetic reed contact | Contactless NPN | Contactless PNP transistor |
| Operating voltage | 5 ~ 240V DC/AC | 5 ~ 30V DC | |
| Switch current | 100mA max. | 200mA max. | |
| Contact rating | 10W max. | 6W max. | |
| Current consumption | None | 22mA @ 24V max. | 20mA @ 24V max. |
| Voltage drop | 3.5V max. | 0.5V max. | |
| Current leakage | None | 0.01mA max. | |
| LED indicator | Green LED | Red LED | Green LED |
| Wire | 3.3φ, 2C, Gray PVC | 3.0φ, 3C, Black Oil-resistant PU | |
| Operating Frequency | 200Hz | 1000Hz | |
| Tem range | | -10 ~ 60°C (No Freeze) | |
| Shock | 30G | 50G | |
| Vibration | | 9G | |
| Enclosure class itication | | IEC529 IP67 (NEMA6) | |
| Protection circuit | None | Power source reverse polarity, Surge suppression | |
| Current Drawing | | | |

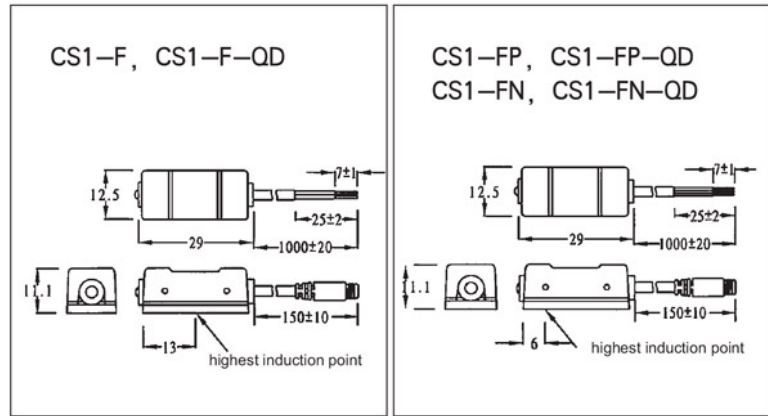
*CS1-J Series groove size, installation means



QD Pinout drawing



CS1-F Series

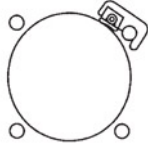


* CS1-F Series used for :TGU,TGC,TGI,TGG

| Specitication | CS1-F | CS1-FN | CS1-FP |
|---------------------------|-----------------------|--|----------------------------|
| Wire pattern | 2-wire type | 3-wire type | |
| Switching logic | SPST Normally open | Solidstate output Normally open | |
| Output | Magnetic reed contact | Contactless NPN | Contactless PNP transistor |
| Operating voltage | 5 ~ 240V DC/AC | 5 ~ 30V DC | |
| Switch current | 100mA max. | 200mA max. | |
| Contact rating | 10W max. | 6W max. | |
| Current consumption | None | 20mA @ 24V max. | 20mA @ 24V max. |
| Voltage drop | 3.5V max. | 0.5V max. | |
| Current leakage | None | 0.01mA max. | |
| LED indicator | Green LED | Red LED | Green LED |
| Wire | 4 φ , 2C, Gray PVC | 4.0 φ , 3C, Black Oil-resistant PU | |
| Operating Frequency | 200Hz | 1000Hz | |
| Tem range | | -10 ~ 60°C (No Freeze) | |
| Shock | 30G | 50G | |
| Vibration | | 9G | |
| Enclosure class itication | | IEC529 IP67 (NEMA6) | |
| Protection circuit | None | Power source reverse polarity, Surge suppression | |
| Current Drawing | | | |

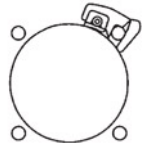
*CS1-F Series groove size, installation means

PM Clamp



Used for φ 32-φ 150 tie-rod cylinder rod size φ 5-φ 16

PM Clamp



Used for φ 32-φ 125 tie-rod cylinder rod size φ 5-φ 16

PM Clamp



Used for φ 32-φ 100 ISO M cylinder

PN Mounting Band



Used for φ 12-φ 100 Round cylinder φ 12-φ 100Tie-rod cylinder

PN Mounting Band



Used for φ 10-φ 150 Round cylinder

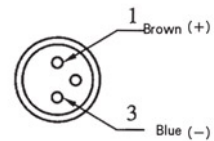
PN Mounting Band



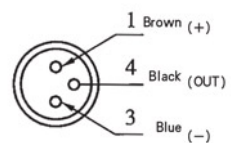
Used for φ 6-φ 125 Round cylinder

QD Pinout drawing

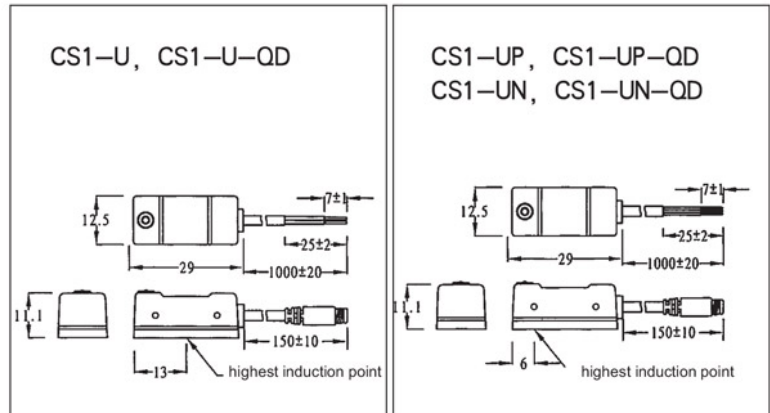
Two wire outlet



Three wire outlet



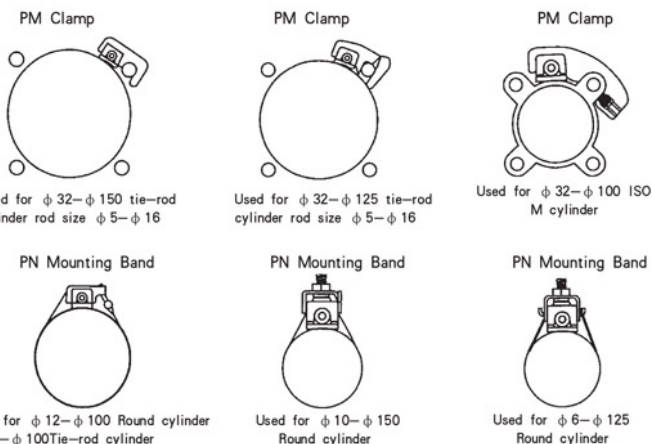
CS1-U Series



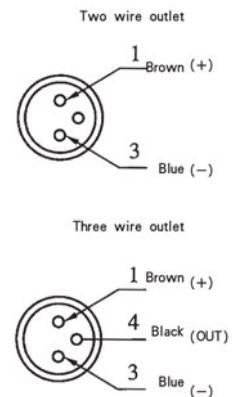
* CS1-U Series used for: TGU, TGC, TGI, TGG

| Specitication | CS1-U | CS1-UN | CS1-UP |
|---------------------------|-----------------------|--|----------------------------|
| Wire pattern | 2-wire type | 3-wire type | |
| Switching logic | SPST Normally open | Solidstate output Normally open | |
| Output | Magnetic reed contact | Contactless NPN | Contactless PNP transistor |
| Operating voltage | 5~120V DC/AC | 10~30V DC/AC | |
| Switch current | 100mA max. | 100mA max. | |
| Contact rating | 10W max. | 3W max. | |
| Current consumption | None | 17mA @ 24V max. | 14mA @ 24V max. |
| Voltage drop | 3.0V max. | 2.0V max. | |
| Current leakage | None | 0.01mA max. | |
| LED indicator | Green LED | Red LED | Green LED |
| Wire | 2.8φ, 2C, Gray PVC | 3.0φ, 3C, Black Oil-resistant PU | |
| Operating Frequency | 200Hz | 1000Hz | |
| Tem range | -10~60°C (No Freeze) | | |
| Shock | 30G | 50G | |
| Vibration | 9G | | |
| Enclosure class itication | IEC529 IP67 (NEMA6) | | |
| Protection circuit | None | Power source reverse polarity; Surge suppression | |
| Current Drawing | | | |

* CS1-U Series groove size, installation means



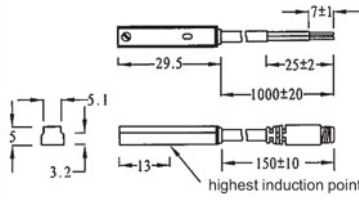
QD Pinout drawing



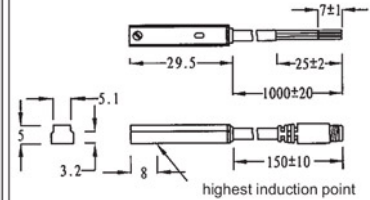
CS1-M Series



CS1-M, CS1-M-QD



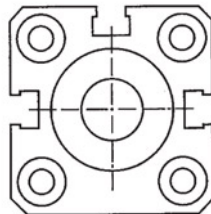
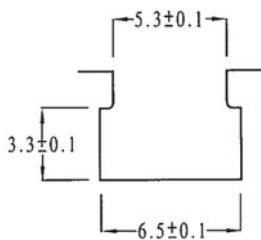
CS1-MP, CS1-MP-QD
CS1-MN, CS1-MN-QD



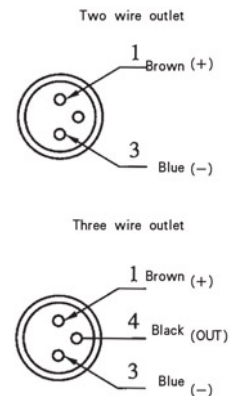
* CS1-M Series used for;DNC

| Specitication | CS1-M | CS1-MN | CS1-MP |
|---------------------------|-----------------------|--|----------------------------|
| Wire pattern | 2-wire type | 3-wire type | |
| Switching logic | SPST Normally open | Solidstate output Normally open | |
| Output | Magnetic reed contact | Contactless NPN | Contactless PNP transistor |
| Operating voltage | 5~120V DC/AC | 10~30V DC | |
| Switch current | 100mA max. | 100mA max. | |
| Contact rating | 10W max. | 3W max. | |
| Current consumption | None | 17mA @ 24V max. | 14mA @ 24V max. |
| Voltage drop | 3.0V max. | 2.0V max. | |
| Current leakage | None | 0.01mA max. | |
| LED indicator | Red LED | Red LED | Yellow LED |
| Wire | 2.8φ, 2C, Gray PVC | 3.0φ, 3C, Black Oil-resistant PU | |
| Operating Frequency | 200Hz | 1000Hz | |
| Tem range | | -10~60°C (No Freeze) | |
| Shock | 30G | 50G | |
| Vibration | | 9G | |
| Enclosure class itication | | IEC529 IP67 (NEMA6) | |
| Protection circuit | None | Power source reverse polarity, Surge suppression | |
| Current Drawing | | | |

*CS1-M Series groove size, installation means
Used for;SMC.FESTO



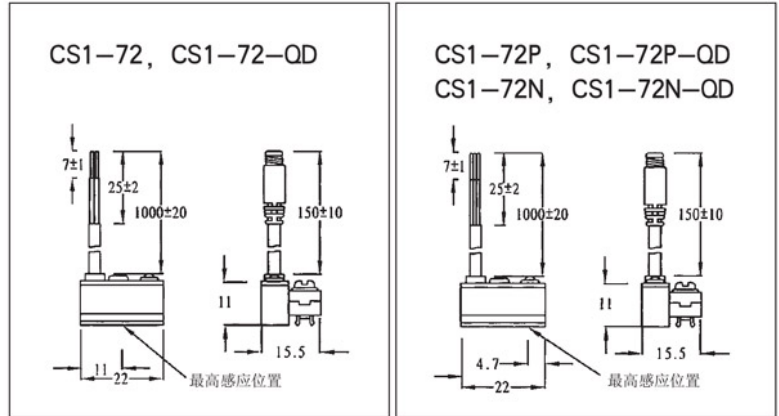
QD Pinout drawing



CS1-72 Series

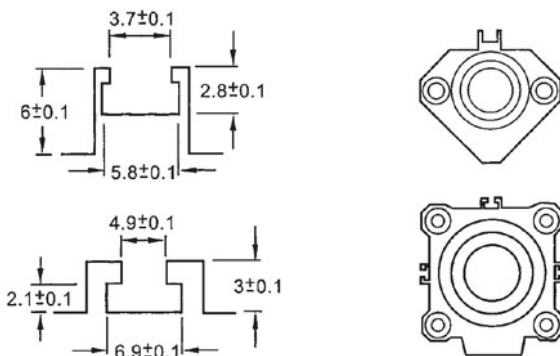


* CS1-72 series used for: CQ2

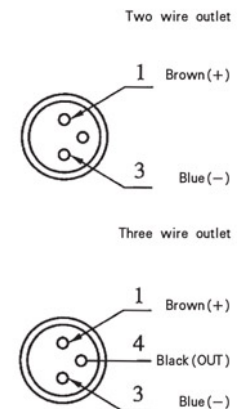


| Specitication | CS1-72 | CS1-72N | CS1-72P |
|---------------------------|-----------------------|--|----------------------------|
| Wire pattern | 2-wire type | 3-wire type | |
| Switching logic | SPST Normally open | Solidstate output Normally open | |
| Output | Magnetic reed contact | Contactless NPN | Contactless PNP transistor |
| Operating voltage | 5-2400V DC/AC | 5-30V DC | |
| Switch current | 100mA max. | 200mA max. | |
| Contact rating | 10W max. | 6W max. | |
| Current consumption | None | 22mA @ 24V max. | 20mA @ 24V max. |
| Voltage drop | 3.5V max. | 0.5V max. | |
| Current leakage | None | 0.01mA max. | |
| LED indicator | Green LED | Red LED | Green LED |
| Wire | 3, 3, 2C, Gray PVC | 3, 3, 3C Black Oil-resistant PU | |
| Operating Frequency | 200Hz | 1000Hz | |
| Tem range | | -10~60°C (No Freeze) | |
| Shock | 30G | 50G | |
| Vibration | | 9G | |
| Enclosure class itication | | IEC529 IP67 (NEMA6) | |
| Protection circuit | None | Power source reverse polarity; Surge suppression | |
| Current Drawing | | | |

*CS1-72 Series groove dimensional drawing
Used to SMC



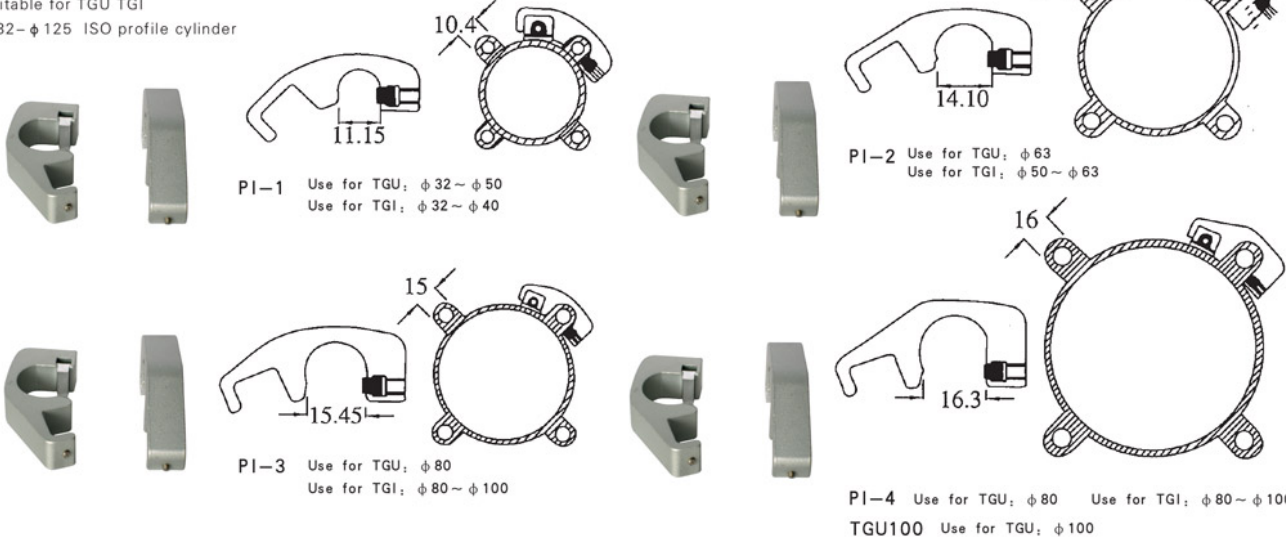
QD Pinout drawing



PI Clamp

Used for CS1-F & CS1-U sensor switch

Suitable for TGU TGI
 $\phi 32 - \phi 125$ ISO profile cylinder



PI-1 Use for TGU: $\phi 32 - \phi 50$
 Use for TGI: $\phi 32 - \phi 40$

PI-2 Use for TGU: $\phi 63$
 Use for TGI: $\phi 50 - \phi 63$

PI-3 Use for TGU: $\phi 80$
 Use for TGI: $\phi 80 - \phi 100$

PI-4 Use for TGU: $\phi 80$ Use for TGI: $\phi 80 - \phi 100$
 TGU100 Use for TGU: $\phi 100$

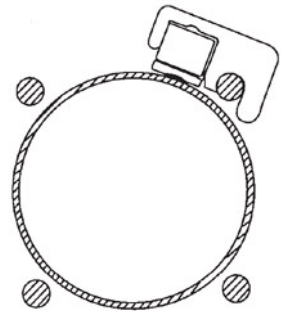
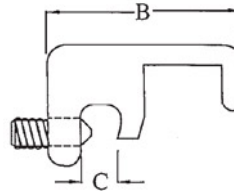
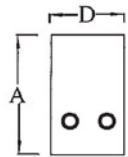
PM Clamp

Used for CS1-F & CS1-U sensor switch

Suitable for TGC
 $\phi 32 - \phi 200$ air, hydraulic cylinder (With tie-rod)



| Size | Type | A | B | C | D |
|--|------|----|------|-----|----|
| PM-6 (TGC: $\phi 32-50$ /TGG: $\phi 32-40$) | | 19 | 31.0 | 6.5 | 12 |
| PM-8 (TGC: $\phi 63$ /TGG: $\phi 50-63$) | | 20 | 34.5 | 8.0 | 12 |
| PM-10 (TGC/TGG: $\phi 80-100$) | | 18 | 33.0 | 10 | 12 |
| PM-12 (TGC/TGG: $\phi 125$) | | 20 | 35.5 | 12 | 12 |
| PM-16 (TGC/TGG: $\phi 160-200$) | | 24 | 40.0 | 16 | 12 |



PI Clamp

Used for CS1-F & CS1-U sensor switch

Suitable for; tie rod diameter $4\phi - 10\phi$

