B&PLUS®

Remote Sensor System

# Transmits the power supply & signals of max. 16 detector switches by non-contact

Terminal unit version
16 signals transmission
8 signals transmission
RS series

- Inductive power supply 12V DC/150mA
- Remote terminals of connector connection
- Output head is directly wired to the PLC



Anti-weld slag type

New compact type!! 8 signals transmission

## Advantage of connector type

- Save time to wiring!!
- Easy connection! Prevent miswiring!
- Improved waterproofness IP67

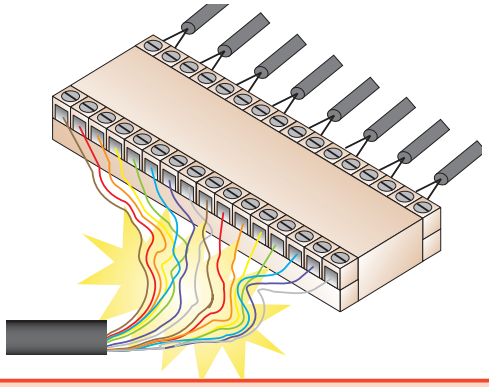
NEWS

## Features

### Connector connection at moving side !!

Traditional model

- Difficult wiring
- Possibility of miswiring
- Poor waterproofness



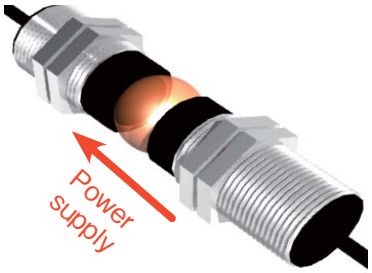
connector

Remote terminal version

- Easy connecting
- Prevent miswiring
- IP67 protection class; fix the problem of water or oil


### Inductive power supply !!

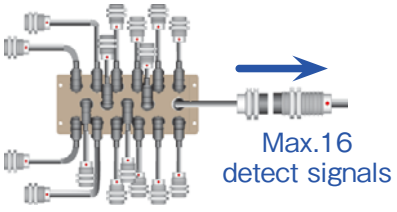
Inductive power supply to Detector on moving side
for DC2 wire : 22VDC/5mA × 8 or16 detector switches
for DC3 wire : 12VDC/150mA




### Possible to operate max. 16 detector switches

Possible to operate max. 16 detectores (DC2 wire or DC3 wire) at once.

- Solve disconnecting trouble at moving side
- Save time for removing



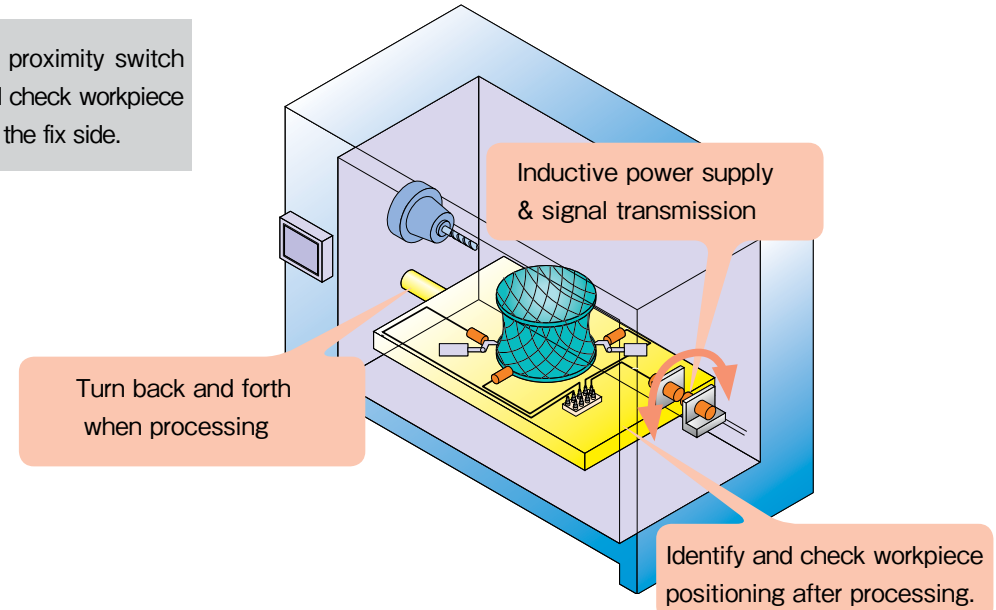

### Directly input to control unit !!

- Output 8 or 16 parallel signals corresponding to detector switches.
- Because of buit-in amplifier, it keeps waterproofness of IP67 until in front of PLC.

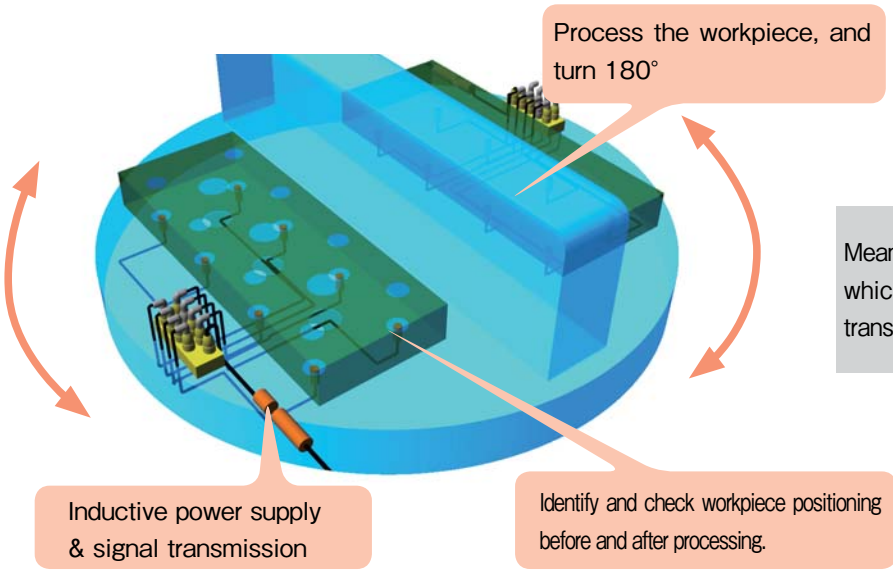
## Applications

### Processing table of machine tool

Meanwhile supply power to the proximity switch which identify cylinder clamp and check workpiece position, transmit detect signal to the fix side.



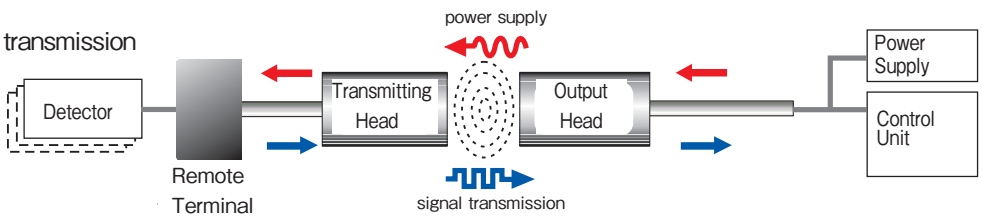

### Identify and check workpiece positioning on turning table




Meanwhile supply power to the proximity switch which identify and check workpiece position, transmit detect signal to the fix side.

## System configuration

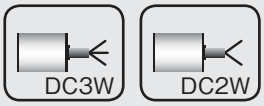
8 or 16 signals transmission



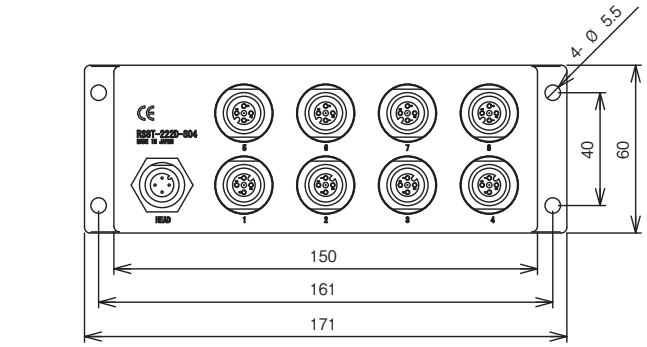
Remote Sensor System
Switch Signal Transmission
for DC3 wire/DC2 wire

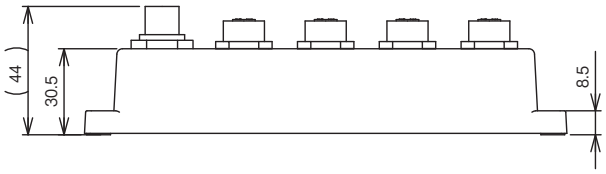
Terminal Unit
8 signals transmission

**Applicable SW**
- DC3 wire
- DC2 wire

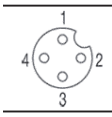
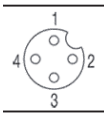



## Remote terminal




A059

| | | Remote terminal | Remote terminal |
|---|---|---|---|
| Type code (see connector type) | type-1 | RS8TA-222D-S04 | RS8TA-222P-S04 |
| | type-2 | RS8T-222D-S04 | RS8T-222P-S04 |
| Applicable Detector SW | | DC2 wire (polarized/ 1 : + , 4 : - • non-polarized / 3 : + , 4 : - ) | DC3 wire (PNP / 1 : + , 3 : - , 4 : SI) |
| Driving voltage | | 22V DC ± 10% | 12V DC ± 10% |
| Driving current | | 5mA (per 1 signal) | 150mA |
| Connection | Detector SW | M12 connector (female) x 8 | M12 connector (female) x 8 |
| | Transmitting Head | M12 connector (male) x 1 | M12 connector (male) x 1 |
| Material | Housing | PPS | PPS |
| Operating Temperature | | 0...+50℃ | 0...+50℃ |
| Protection class | | IP67 | IP67 |
| Pin assign of connector (for Detector switch) | |  1 : + 2 : 3 : + 4 : - |  1 : + 2 : 3 : - 4 : SI |
| Note | | The unused connectors should be protected by an exclusive protection cap.(Type code : XS2Z-12:please order separately) | The unused connectors should be protected by an exclusive protection cap.(Type code : XS2Z-12:please order separately) |

## Applicable switch

| | |
|---|---|
| Supply voltage | 22V DC |
| Current Consumption | --- |
| Residual voltage | ≦ 6V |
| Load current | ≦ 5mA |

Please sure to use applicable detector switch according to the specification on left.

## Applicable switch

| | |
|---|---|
| Supply voltage | 12V DC |
| Total current consumption* | 150mA |
| Residual voltage | --- |
| Off-state current | --- |

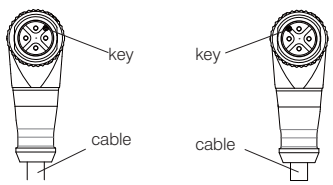
Please sure to use applicable detector switch according to the specification on left.

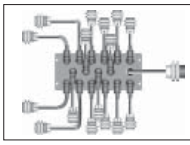
*Total current consumption of all connected detector switch.

**Applicable angle connector type** (Detector's connector)

When using an angle connector, please use a connector of which key is positioned same as the following figure.

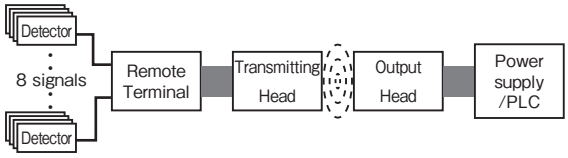
<1> Applicable to RS8TA-222_ <2> Applicable to RS8T-222_



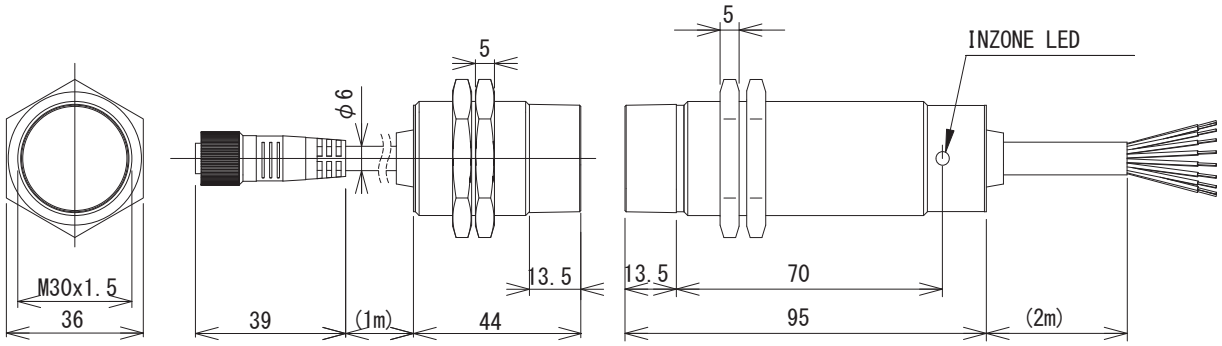



The direction of the cable is shown in the left figure.

Number of signals
8




## Transmitting head/Output head



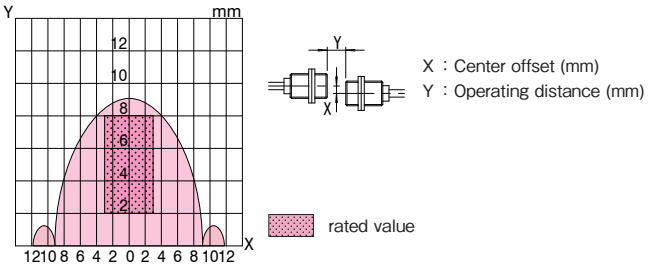

A057

| Transmitting head | | |
|---|---|---|
| Type code | RS8T | RSH8T-030-PU-CP1.0 |
| Driving voltage | | 22V ± 1.5V DC |
| Driving current | | 120mA |
| Applicable remote terminal | | RS8T-222P-S04、RS8T-222D-S04 |
| Operating distance | | 2...8mm |
| Center offset | | ± 3mm |
| OperatingTemperature | | 0...+50℃ |
| Protection class | | IP67 |
| Connection | | M12 connector cable（1m、3m、5m） |
| Material | Housing | Nickel plated brass |
| | Active surface | Nylon12 |
| Anti-weld slag type | | RSH8T-TF030-PU-CP1.0 |
| | Material | Housing: fluorinated resin coated/Active surface: fluorinated resin |
| Note | | used with Remote terminal S04type |

| Output head | | |
|---|---|---|
| Type code | NPN | RSH8E-030N-PU-02 |
| | PNP | RSH8E-030P-PU-02 |
| Supply Voltage | | 24V DC ± 10%（incl. ripple） |
| Current Consumption | | ≦ 500mA |
| Output singal | | 8+1（INZONE） |
| Load current | | max.50mA / 1 output type |
| Frequency of operation | | 20Hz |
| LED | | INZONE |
| OperatingTemperature | | 0...+50℃ |
| Protection class | | IP67 |
| Connection | | PUR/ ϕ 7.7、2x0.5mm²+9x0.18mm²（2 , 3 , 5m） |
| Material | Housing | Nickel plated brass |
| | Active surface | Nylon12 |
| Anti-weld slag type | NPN | RSH8E-TF030N-PU-02 |
| | PNP | RSH8E-TF030P-PU-02 |
| | Material | Housing: fluorinated resin coated/Active surface: fluorinated resin |
| Note | | |

## Typical Transmitting Diagram (supply voltage at 24V/non-flush)

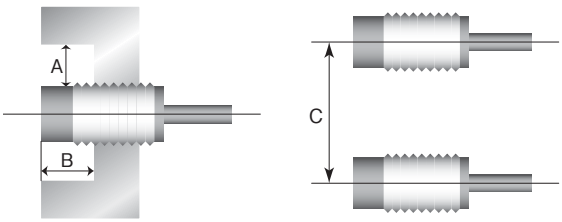
RSH8T-030-PU-CP_ _ / RSH8E-030 □ -PU-_ _




## Mounting

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted heads, keep the minimum free zone as described below.

■ Influence of surrounding metal ■ Mutual interference

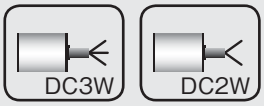



| Type code | A(mm) | B(mm) | C(mm) |
|---|---|---|---|
| RSH8T-030-PU-CP_ _ | 30 | 30 | 160 |
| RSH8E-030 □ -PU-_ _ | | | |

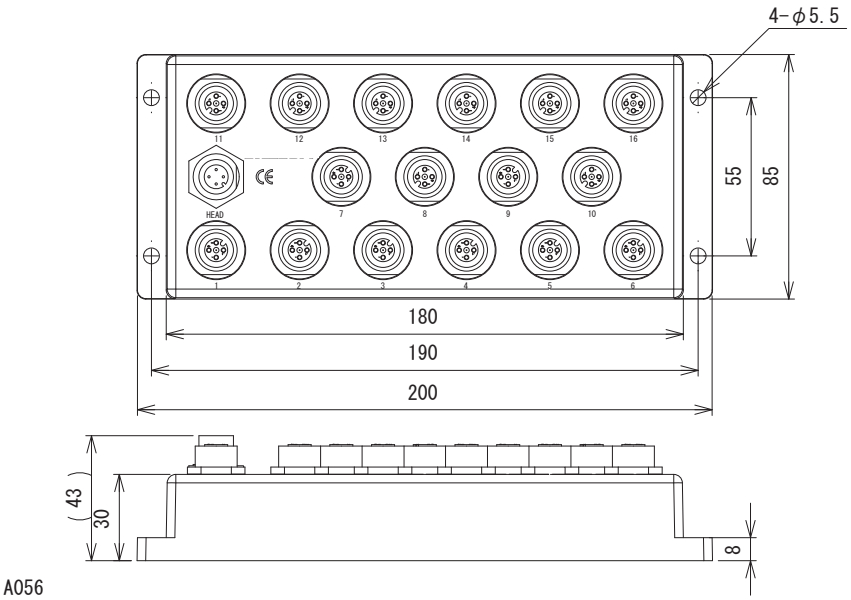
Remote Sensor System
Switch Signal Transmission
for DC3 wire/DC2 wire

Terminal Unit
16 signals transmission

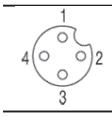
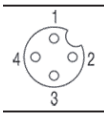
**Applicable SW**
- DC3 wire
- DC2 wire




## Remote terminal




A056

| | | Remote terminal | Remote terminal |
|---|---|---|---|
| Type code (see connector type) | type-1 | RS16TA-211D-S04 | RS16TA-211P-S04 |
| | type-2 | RS16T-211D-S04 | RS16T-211P-S04 |
| Applicable Detector SW | | DC2 wire（polarized/ 1 : + , 4 : - ・non-polarized / 3 : + , 4 : - ） | DC3 wire（PNP / 1 : + , 3 : - , 4 : SI ） |
| Driving voltage | | 22V DC ± 10% | 12V DC ± 10% |
| Driving current | | 5mA（per 1 signal） | 150mA |
| Connection | Detector SW | M12 connector（female）x 16 | M12 connector（female）x 16 |
| | Transmitting head | M12 connector（male）x 1 | M12 connector（male）x 1 |
| Material | Housing | PPS | PPS |
| Operating Temperature | | 0...+50℃ | 0...+50℃ |
| Protection class | | IP67 | IP67 |
| Pin assign of connector (for Detector switch) | |  1 : + 2 : 3 : + 4 : - |  1 : + 2 : 3 : - 4 : SI |
| Note | | The unused connectors should be protected by an exclusive protection cap.(Type code : XS2Z-12:please order separately) | The unused connectors should be protected by an exclusive protection cap.(Type code : XS2Z-12:please order separately) |

## Applicable switch

| | |
|---|---|
| Supply voltage | 22V DC |
| Current Consumption | --- |
| Residual voltage | ≦ 6V |
| Load current | ≦ 5mA |

Please sure to use applicable detector switch according to the specification on left.

## Applicable switch

| | |
|---|---|
| Supply voltage | 12V DC |
| Total current consumption* | 150mA |
| Residual voltage | --- |
| Off-state current | --- |

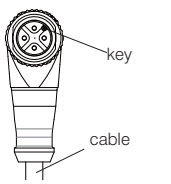
Please sure to use applicable detector switch according to the specification on left.

*Total current consumption of all connected detector switch.

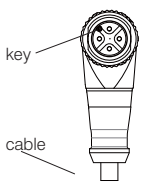
**Applicable angle connector type** (Detector's connector)

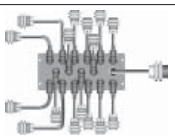
When using an angle connector, please use a connector of which key is positioned same as the following figure.

<1> Applicable to RS16TA-211_




<2> Applicable to RS16T-211_

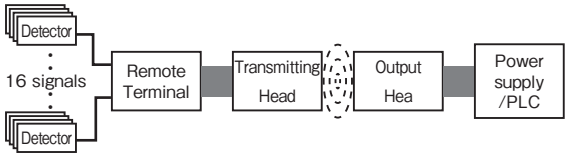


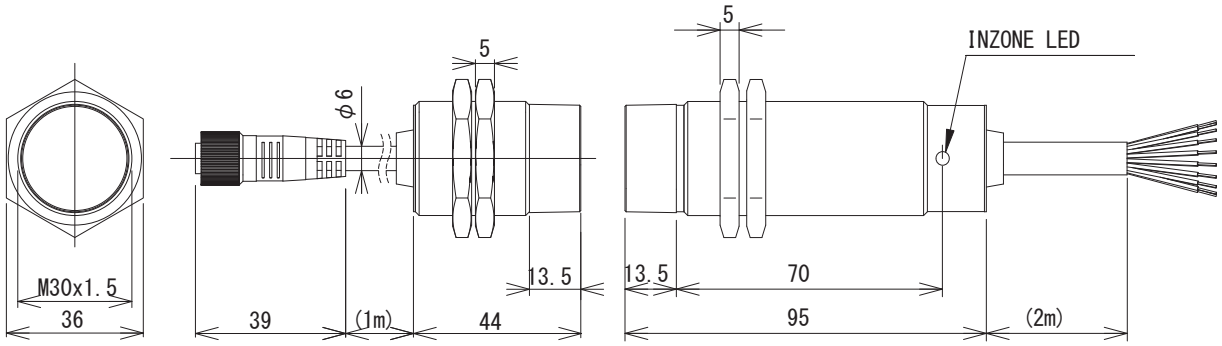
The direction of the cable is shown in the left figure.

Number of signals

16




## Transmitting head/Output head



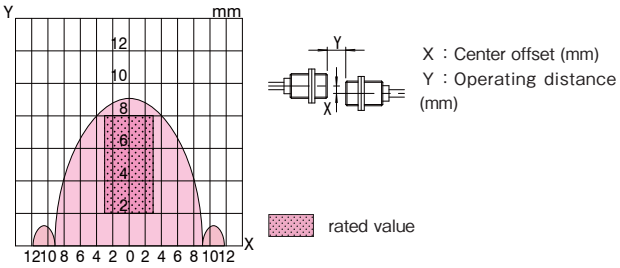

A057

| Transmitting head | | |
|---|---|---|
| Type code | RS16T | RSH16T-030-PU-CP1.0 |
| Driving voltage | | 22V ± 1.5V DC |
| Driving current | | 120mA |
| Applicable remote terminal | | RS16T-211P-S04、RS16T-211D-S04 |
| Operating distance | | 2...8mm |
| Center offset | | ± 3mm |
| OperatingTemperature | | 0...+50℃ |
| Protection class | | IP67 |
| Connection | | M12 connector cable（1m、3m、5m） |
| Material | Housing | Nickel plated brass |
| | Active surface | Nylon12 |
| Anti-weld slag type | | RSH16T-TF030-PU-CP1.0 |
| | Material | Housing: fluorinated resin coated/Active surface: fluorinated resin |
| Note | | used with Remote terminal S04type |

| Output head | | |
|---|---|---|
| Type code | NPN | RSH16E-030N-PU-02 |
| | PNP | RSH16E-030P-PU-02 |
| Supply Voltage | | 24V DC ± 10%（incl. ripple） |
| Current Consumption | | ≦ 500mA |
| Output singal | | 16 点 +1（INZONE） |
| Load current | | max.50mA / 1 output type |
| Frequency of operation | | 20Hz |
| LED | | INZONE |
| OperatingTemperature | | 0...+50℃ |
| Protection class | | IP67 |
| Connection | | PUR/ ϕ 8.5、2x0.5mm²+17x0.18mm²（2 , 3 , 5m） |
| Material | Housing | Nickel plated brass |
| | Active surface | Nylon12 |
| Anti-weld slag type | NPN | RSH16E-TF030N-PU-02 |
| | PNP | RSH16E-TF030P-PU-02 |
| | Material | Housing: fluorinated resin coated/Active surface: fluorinated resin |
| Note | | |

## Typical Transmitting Diagram (supply voltage at 24V/non-flush)

RSH16T-030-PU-CP_ _ / RSH16E-030 □ -PU-_ _




## Mounting

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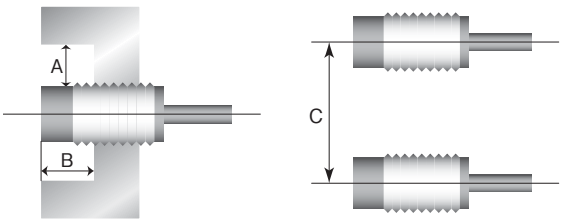
■ Influence of surrounding metal ■ Mutual interference




| Type code | A(mm) | B(mm) | C(mm) |
|---|---|---|---|
| RSH16T-030-PU-CP_ _ | 30 | 30 | 160 |
| RSH16E-030 □ -PU-_ _ | | | |

*With Tomorrow Automation*

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