

## Transmission coupler


### ■ Features

- Loop powered type  
The signal is transmitted by magnetic coupling of coils.
- Superior with environmental resistance  
Non-malfunction for oil or dust on transmission part
- Applications  
Drilling, Machine table, Robot arm, Conveyor belt and Various revolution axis.



**⚠ Please read "Safety Considerations" in the instruction manual before using.**

### ■ Type

Appearances	Model
M18 	<b>PET18-5</b>

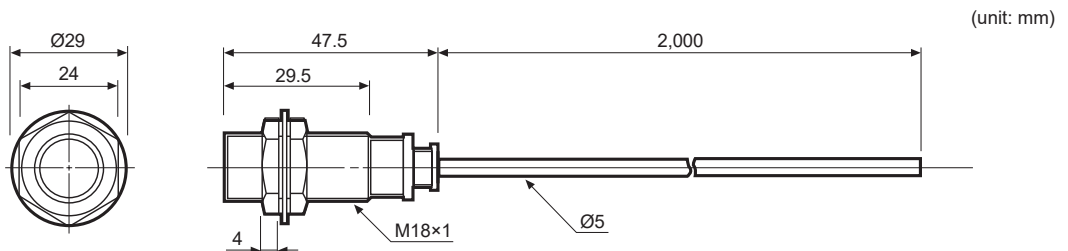
### ■ Specifications

Model	<b>PET18-5</b>						
Transmitting distance	5mm						
Set transmitting distance	1 to 4.5mm						
Response time	Max. 1ms						
Insulation resistance	Over 50MΩ (at 500VDC megger)						
Dielectric strength	1,500VAC 50/60Hz for 1 min						
Vibration	1mm amplitude at frequency of 10 to 55Hz in each X, Y, Z direction for 2 hours						
Shock	500m/s <sup>2</sup> (approx. 50G) in each X, Y, Z direction for 3 times						
Environment	Ambient temperature	-25 to 70°C, storage: -30 to 80°C					
	Ambient humidity	35 to 95%RH, storage: 35 to 95%RH					
Protection structure	IP67 (IEC standard)						
Cable	Ø5mm, 2-wire, 2m (AWG22, Core diameter: 0.08mm, Number of cores: 60, Insulator out diameter: Ø1.25mm)						
Material	Case and nut: Nickel-plated brass, Washer: Nickel-plated steel, Sensing part: Polybutylene terephthalate, Standard cable (black): Polyvinyl chloride (PVC)						
Weight <sup>*1</sup>	Approx. 133g (approx. 121g)						
Application of proximity sensor	PR18-5DN PR18-5DP PR18-5DN2 PR18-5DP2	PRW18-5DN PRW18-5DP PRW18-5DN2 PRW18-5DP2	PRCM18-5DN PRCM18-5DP PRCM18-5DN2 PRCM18-5DP2	PRWL18-5DN PRWL18-5DP PRWL18-5DN2 PRWL18-5DP2	PRL18-5DN PRL18-5DP PRL18-5DN2 PRL18-5DP2	PRCML18-5DN PRCML18-5DP PRCML18-5DN2 PRCML18-5DP2	PRT18-5DO PRT18-5DC PRCMT18-5DO PRCMT18-5DC

\*1: The weight includes packaging. The weight in parenthesis in for unit only.

※Environment resistance is rated at no freezing or condensation.

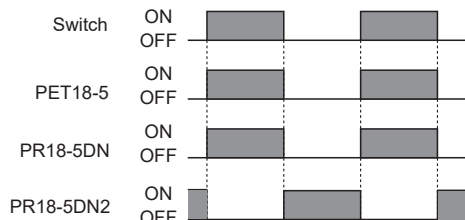
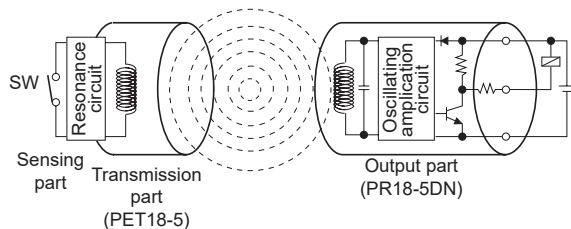
### ■ Dimensions



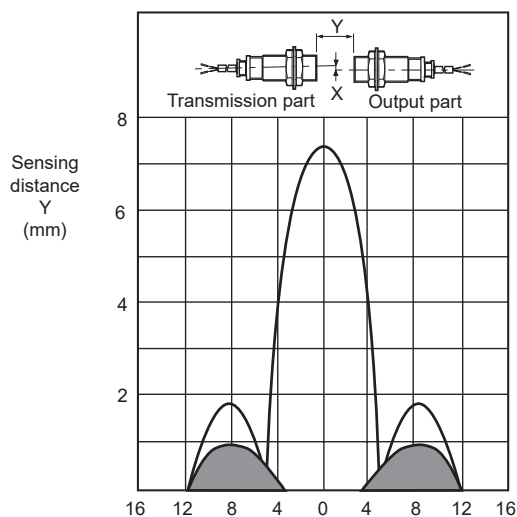
# Transmission Coupler

## Operation Mechanism

It transmits ON/OFF signal with a magnetic coupling of coils. The coil of transmission part and proximity sensor is coupled electronically, the induced current is generated at closed-loop of transmission part influenced by a magnetic field from proximity sensor coil when the switch of sensing part is ON.

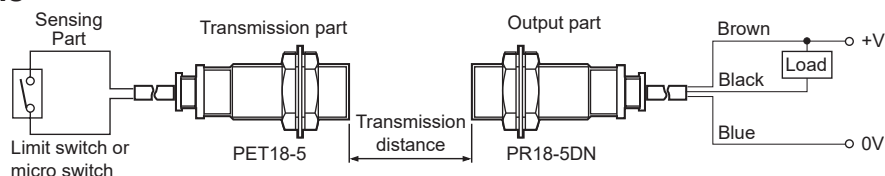


## Feature Data



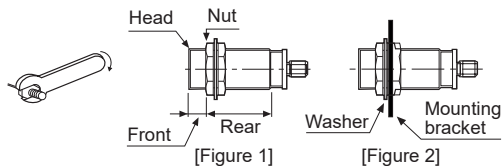
Please note the proximity sensor detects the surrounding cover of the sensing side of transmission coupler even the connection switch is OFF in sensing part of part.

## Connections



## Proper Usage

1. This equipment shall not be used outdoors or beyond specified temperature range.
2. Do not apply over tensile strength of cord. (Ø5: Max. 50N)
3. Do not use the same conduit with cord of this unit and electric power line or power line.
4. Do not put overload to tighten nut, please use the supplied washer for tightening.
5. Please shorten the wiring to avoid noise.
6. Please use the cable written on the specification of the product. If the other cable or a crooked cable is used, the waterproof cannot be maintained.
7. 0.3mm<sup>2</sup> or larger cable can be extended up to 5m.
8. When the transceiver is attached to the proximity sensor or close to the wires, it may cause a malfunction.
9. The contact switch in the sensing part should not have leakage current when it is OFF.
10. The contact resistance is under 300mΩ, open resistance is more than 10MΩ to satisfy the specification of contact switch. (limit switch or micro switch)
11. The inductive proximity sensor used in output part may cause a malfunction, if metal particles attach to sensing area.
12. It is able to transmit signal through the plastic or mirror.
13. Please set sensing distance within part A of the below operation range for mounting at the rotator.



[Table 1]

Model	Strength	Front		Rear
		Size	Torque	Torque
PET18-5	Flush	—	150kgf·cm (14.7N·m)	

Note1) Allowable tightening torque of a nut may be different by the distance from the head. For allowable tightening torque and the range of front and rear parts, refer to [Table 1] and above [Figure 1] respectively. The rear part includes a nut on the head side (as the [Figure 1]). Please apply a tightening torque of the front part when the nut on the front is located in the front part.

Note2) The allowable tightening torque denotes a torque value when using a provided washer as above [Figure 2].

