

# PET18-5

## 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 "Caution for your safety" in operation manual before using.

### ■ Type

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

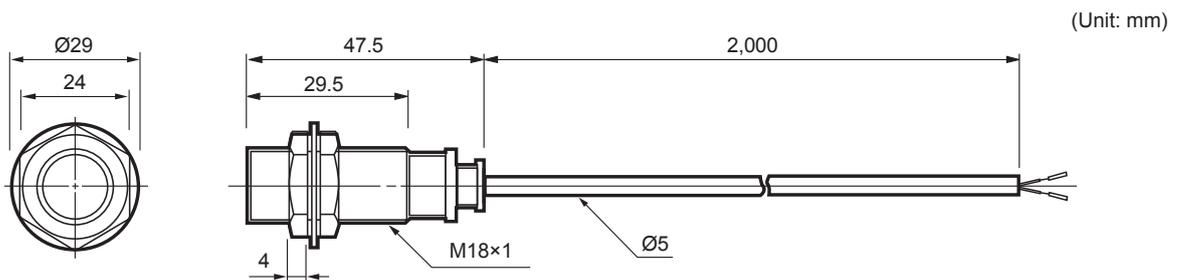
### ■ Specifications

Model	<b>PET18-5</b>			
Transmitting distance	5mm			
Set transmitting distance	1 to 4.5mm			
Response time	Max. 1ms			
Insulation resistance	Min. 50MΩ(at 500VDC megger)			
Dielectric strength	1,500VAC 50/60Hz for 1minute			
Vibration	1mm amplitude at frequency of 10 to 55Hz in each of X, Y, Z directions for 2 hours			
Shock	500m/s <sup>2</sup> (50G) in each of X, Y, Z directions 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	IP67(IEC standards)			
Cable	Ø5, 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: PBT, General 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 with packaging and the weight in parentheses is only unit weight.

※Environment resistance is rated at no freezing or condensation.

### ■ Dimensions

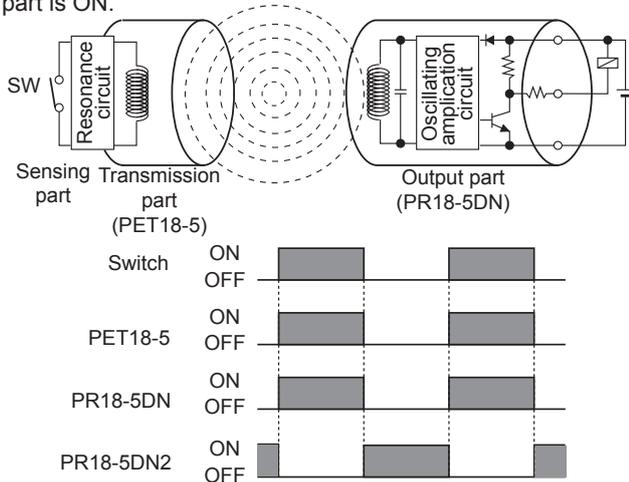


# Transmission Coupler

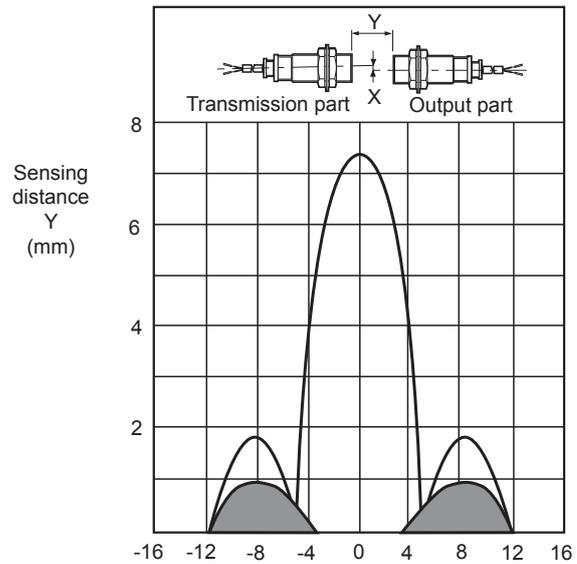
## Operation mechanism

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.

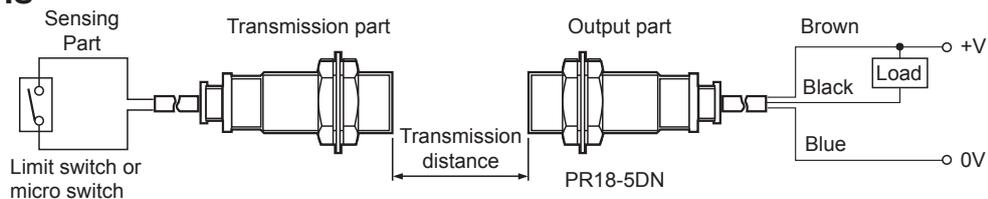


## Feature data



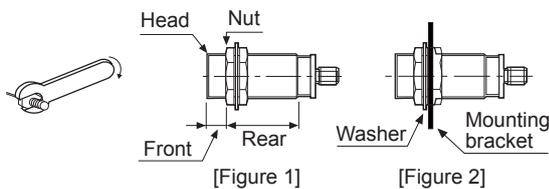
Please note the proximity sensor detects the surrounding cover of the sensing side of transmission coupler even the connection switch is OFF in sensing part.

## Connections



## Proper usage

- This equipment shall not be used outdoors or beyond specified temperature range.
- Do not apply over tensile strength of cord. ( $\varnothing 5$ : 50N max.)
- Do not use the same conduit with cord of this unit and electric power line or power line.
- Do not put overload to tighten nut, please use the supplied washer for tightening.
- Please shorten the wiring to avoid noise.
- 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.
- 0.3mm<sup>2</sup> or larger cable can be extended up to 5m.
- When the transceiver is attached to the proximity sensor or close to the wires, it may cause a malfunction.
- The contact switch in the sensing part should not have leakage current when it is OFF.
- The contact resistance is under 300m $\Omega$ , open resistance is more than 10M $\Omega$  to satisfy the specification of contact switch. (Limit switch or micro switch)
- The inductive proximity sensor used in output part may cause a malfunction, if metal particles attach to sensing area.
- It is able to transmit signal through the plastic or mirror.
- Please set sensing distance within part A of the below operation range for mounting at the rotator.

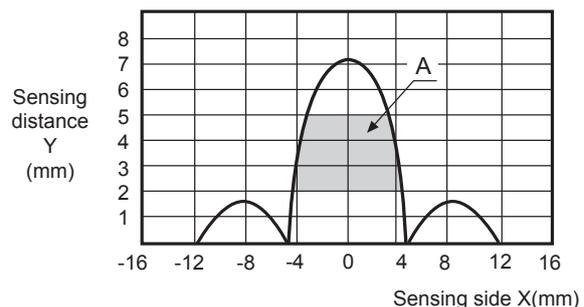


[Table 1]

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

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].



(A) Photo electric sensor

(B) Fiber optic sensor

(C) Door/Area sensor

(D) Proximity sensor

(E) Pressure sensor

(F) Rotary encoder

(G) Connector/Socket

(H) Temp. controller

(I) SSR/Power controller

(J) Counter

(K) Timer

(L) Panel meter

(M) Tacho/Speed/Pulse meter

(N) Display unit

(O) Sensor controller

(P) Switching power supply

(Q) Stepping motor & Driver/Controller

(R) Graphic/Logic panel

(S) Field network device

(T) Software

(U) Other