

Autonics

TRANSMISSION COUPLER PET18-5

INSTRUCTION MANUAL



Thank you for choosing our Autonics product.
Please read the following safety considerations before use.

■ Safety Considerations

※Please observe all safety considerations for safe and proper product operation to avoid hazards.
※⚠ symbol represents caution due to special circumstances in which hazards may occur.

⚠Warning Failure to follow these instructions may result in serious injury or death.

⚠Caution Failure to follow these instructions may result in personal injury or product damage.

⚠Warning

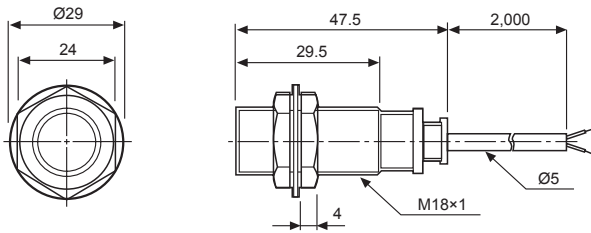
- Fail-safe device must be installed when using the unit with machinery that may cause serious injury or substantial economic loss.** (e.g. nuclear power control, medical equipment, ships, vehicles, railways, aircraft, combustion apparatus, safety equipment, crime/disaster prevention devices, etc.)
Failure to follow this instruction may result in fire, personal injury, or economic loss.
- Do not disassemble or modify the unit.**
Failure to follow this instruction may result in fire.
- Check 'Connections' before wiring.**
Failure to follow this instruction may result in fire.

⚠Caution

- Use the unit within the rated specifications.**
Failure to follow this instruction may result in fire or product damage.
- Use dry cloth to clean the unit, and do not use water or organic solvent.**
Failure to follow this instruction may result in fire.
- Do not use the unit in the place where flammable/explosive/corrosive gas, humidity, direct sunlight, radiant heat, vibration, impact, or salinity may be present.**
Failure to follow this instruction may result in fire or explosion.

■ Dimensions

(Unit: mm)



※The above specifications are subject to change and some models may be discontinued without notice.
※Be sure to follow cautions written in the instruction manual and the technical descriptions (catalog, homepage).

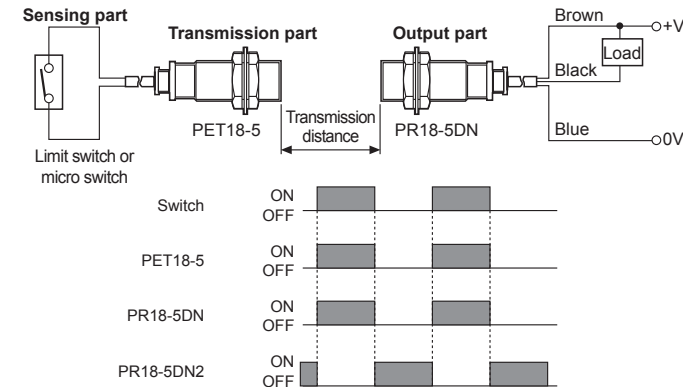
■ Specifications

Model	PET18-5			
Transmitting distance	5mm			
Setting 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 ² (approx. 50G) X, Y, Z directions for 3 times			
Environment	Ambient temp.	-25 to 70°C, Storage: -30 to 80°C		
	Ambient humi.	35 to 95%RH, Storage: 35 to 95%RH		
Protection	IP67(IEC standards)			
	Ø5mm, 2-wire, 2m			
Cable*1	AWG22, core diameter: 0.08mm, Number of cores: 60, Insulator diameter: Ø1.25mm			
Material	Case and nut: Nickel-plated brass, Washer: Nickel-plated steel, Sensing part: PBT, General cable(Black): Polyvinyl chloride(PVC)			
Unit weight*2	Approx. 133g(Approx. 121g)			
Application of proximity sensor	PR18-5DN	PRCM18-5DN	PRL18-5DN	PRT18-5DO PRT18-5DC PRCMT18-5DO PRCMT18-5DC
	PR18-5DP	PRCM18-5DP	PRL18-5DP	
	PR18-5DN2	PRCM18-5DN2	PRL18-5DN2	
	PR18-5DP2	PRCM18-5DP2	PRL18-5DP2	
	PRW18-5DN	PRWL18-5DN	PRCML18-5DN	
	PRW18-5DP	PRWL18-5DP	PRCML18-5DP	
	PRW18-5DN2	PRWL18-5DN2	PRCML18-5DN2	
	PRW18-5DP2	PRWL18-5DP2	PRCML18-5DP2	

- ※1: Do not pull the cable with a tensile strength of 50N or over. It may result in fire due to the broken wire. When extending wire, use AWG22 cable or over within 5m.
※2: The weight with packaging and the weight in parentheses is only unit weight.
※Environment resistance is rated at no freezing or condensation.

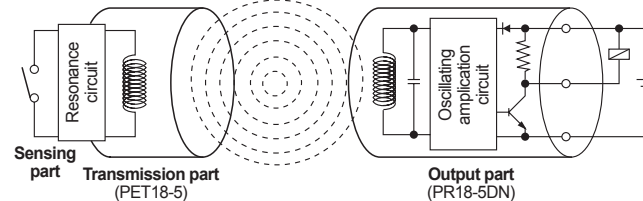
■ Connections

※Use contact switch which of contact resistance is max. 300Ω, open resistance is min. 10MΩ, and leakage current at OFF is zero.



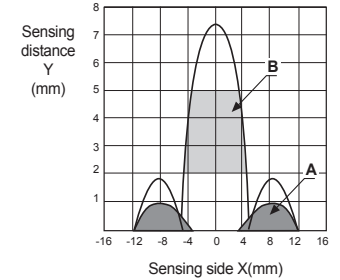
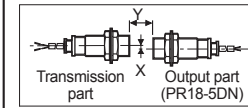
■ Operation Mechanism

It is transmitted 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.
※ Signal transmission is possible even with plastic or glass.



■ 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 A part.
When installing in the rotating body, set within the range of B part on the graph.



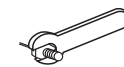
■ Installation and Tightening Torque

When tightening the nut, use the provided washer as [Figure 1]

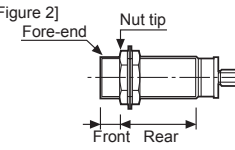
When installing the product, the tightening torque of the nut varies according to the distance from the fore-end. The front part of the product is from the fore-end to the dimension on the below table, and the rear part is from the tip of the nut to the end of the product. [Figure 2]

In case the nut is placed in the front part of the product, apply tightening torque for front part. [Table 1] the allowable tightening torque table is for inserting the washer as [Figure 3].

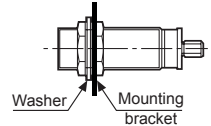
[Figure 1]



[Figure 2]



[Figure 3]



■ Caution during Use

- Follow instructions in 'Cautions during Use'. Otherwise, it may cause unexpected accidents.
- Wire as short as possible and keep away from high voltage lines or power lines, to prevent surge and inductive noise.
Do not use near the equipment which generates strong magnetic force or high frequency noise (transceiver, etc.).
In case installing the product near the equipment which generates strong surge (motor, welding machine, etc.), use diode or varistor to remove surge.
- This unit may be used in the following environments.
 - ① Indoors (in the environment condition rated in 'Specifications')
 - ② Altitude max. 2,000m
 - ③ Pollution degree 2
 - ④ Installation category II

■ Major Products

- Photoelectric sensors
- Fiber optic sensors
- Door sensors
- Door side sensors
- Area sensors
- Proximity sensors
- Pressure sensors
- Rotary encoders
- Connector/sockets
- Switching mode power supplies
- Control switches/Lamps/Buzzers
- I/O Terminal Blocks & Cables
- Stepper motors/drivers/motion controllers
- Graphic/Logic panels
- Field network devices
- Laser marking system(Fiber, CO₂, Nd:YAG)
- Laser welding/soldering system
- Temperature controllers
- Temperature/Humidity transducers
- SSR/Power controllers
- Counters
- Timers
- Panel meters
- Tachometer/Pulse(Rate)meters
- Display units
- Sensor controllers

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