

Autonics

TRANSMISSION COUPLER PET18-5

M A N U A L



Thank you very much for selecting Autonics products.
For your safety, please read the following before using.

Caution for your safety

※Please keep "Caution for your safety" to avoid accidents or damages as using it correctly.

※The meaning of 'Warning' and 'Caution' is as follows;

Warning In case a serious injury or dead may be occurred.

Caution In case a little injury or a damage of this unit may be occurred.

※The meaning of the mark on the product and manual is as follows;
▲ is a caution mark for danger in special condition.

Warning

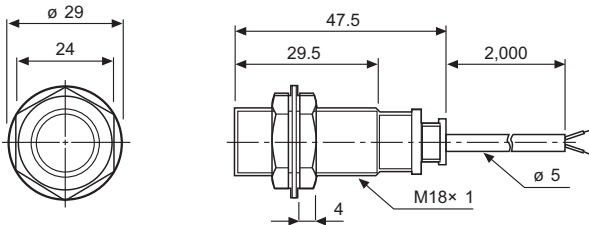
- In case of using this unit with machinery(Ex: nuclear power control, medical equipment, ship, vehicle, train, airplane, combustion apparatus, safety device, crime/disaster prevention equipment, etc) which may cause damages to human life or property, it is required to install fail-safe device. It may cause a fire, human injury or damage to property.

Caution

- Do not use this unit in place where there are flammable, explosive gas, chemical or strong alkalis, acids. It may cause a fire or explosion.
- Do not impact on this unit. It may result in malfunction or damage to the product.

Dimensions

(Unit:mm)



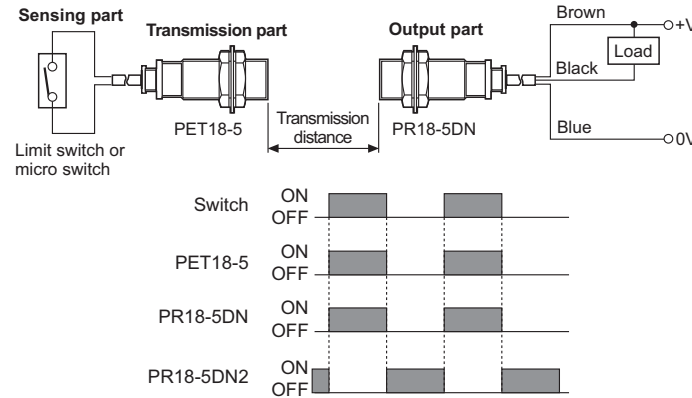
※The above specification are subject to change without notice.

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 (50G) X, Y, Z directions for 3 times			
Environ-ment	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	ø 5, 2-wire, 2m(AWG22, core diameter:0.08mm, Number of cores:60, Insulator diameter:ø 1.25mm)			
Material	Case and nut: Nickel-plated brass, Washer: Nickel-plated steel, Sensing part: PBT, General cable(Black): Polyvinyl chloride(PVC)			
Unit weight*1	Approx. 133g(Approx. 121g)			
Application of proximity sensor	PR18-5DN	PRCM18-5DN	PRL18-5DN	PRT18-5DO
	PR18-5DP	PRCM18-5DP	PRL18-5DP	PRT18-5DC
	PR18-5DN2	PRCM18-5DN2	PRL18-5DN2	PRCMT18-5DO
	PR18-5DP2	PRCM18-5DP2	PRL18-5DP2	PRCMT18-5DC
	PRW18-5DN	PRWL18-5DN	PRCML18-5DN	
	PRW18-5DP	PRWL18-5DP	PRCML18-5DP	
	PRW18-5DN2	PRWL18-5DN2	PRCML18-5DN2	
	PRW18-5DP2	PRWL18-5DP2	PRCML18-5DP2	

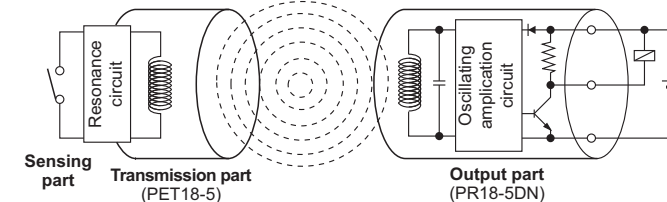
*1: The weight with packaging and the weight in parentheses is only unit weight.
※Environment resistance is rated at no freezing or condensation.

Connections

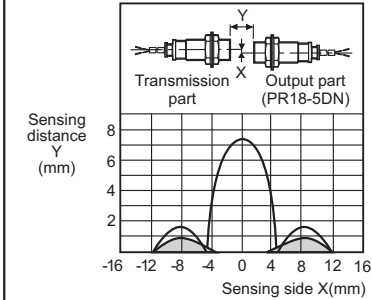


Operation mechanism

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.



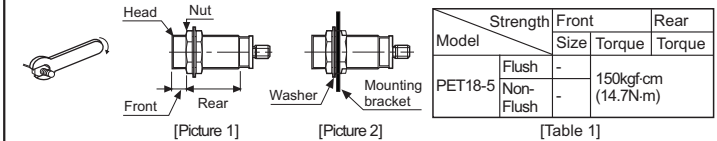
Feature data



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.

Caution for using

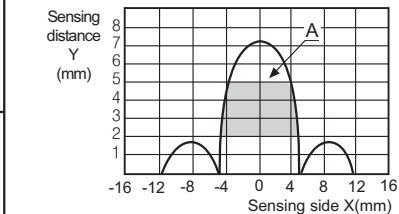
- This equipment shall not be used outdoors or beyond specified temperature range.
- Do not apply over tensile strength of cord. (ø 5: 50N max.)
- Do not use the same conduit with cord of this unit and electric power line or power line.
- Do not put overload to tighten nut, please use the supplied washer for tightening.



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 [Picture 1] respectively. The rear part includes a nut on the head side (see above [Picture 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 [Picture 2].

- Please make wire short as much as possible in order to avoid noise.
- Be sure to cable as indicated specification on this product. If use wrong cable or bended cable, it shall not maintain the water-proof.
- It is available to extend to max. 5m cable with thicker than 0.3mm² diameter.
- It may cause malfunction when putting transceiver near by proximity sensor and the cable.
- Contact switch at the detecting part shouldn't have a leakage current when it is off.
- Contact switch (Limit switch or Micro switch etc.) should be max. 300mΩ of contact resistant and min. 10MΩ of open resistant.
- It may cause malfunction if metal dust etc. is put on the detecting surface since using inductive proximity sensor as output part.
- It is available to transmit a signal even though there is the material like plastic or mirror etc.
- Please set it up in A area of below chart when installing on a body of revolution.



※It may cause malfunction if above instructions are not followed.

Main products

- Proximity sensors
- Area sensors
- Door/Door side sensors
- Counters
- Rotary encoders
- Power controllers
- Panel meters
- Temperature controllers
- Temperature/Humidity transducers
- Stepping motors/drivers/motion controllers
- Laser marking system(CO₂, Nd:YAG)
- Laser welding/soldering system
- Photoelectric sensors
- Fiber optic sensors
- Pressure sensors
- Timers
- Display units
- Sensor controllers
- Graphic/Logic panels
- Tachometer/Pulse(Rate) meters

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