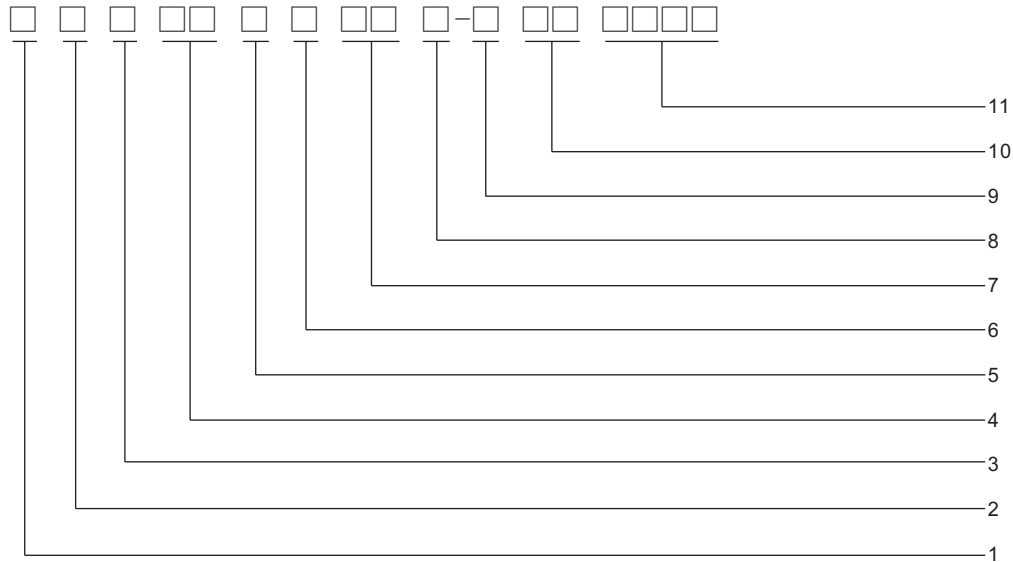


Magnetic Model Description



- | | |
|---|--|
| <ol style="list-style-type: none"> 1. Type Code
F: Hall Sensor
FT: Reed Switch 2. Sensing Mode
N/A: Omni polar Sensing
N: North Magnetic field sensing
S: South Magnetic field sensing
U: Linear Voltage type sensing
C: Bipolar sensing
Y: Gear-tooth sensing 3. Material Classification
N/A: Plastic
T: Iron
V: Aluminum 4. Size Code
Number: Housing Size 5. Shape Code
N/A: Cylindrical Screw Housing
Q: Smooth Cylindrical
T: Special type
H: Circle type 6. Operation Pressure
A: 20...250VAC
A1: 110VAC
A2: 220VAC
B: 90...250VAC
C: 380VAC
D: 10...30VDC
E: 10...60VDC
I: 10...40VDC
J: 5VDC
S: 12...240VDC/24...240VAC | <ol style="list-style-type: none"> 7. Output Mode
L: DC2
T: AC2
P: PNP
N: NPN 8. Output Status
O: Normally Open
C: Normally Closed
R: Normally Open+Normally Closed 9. Cable Length
N/A: 2M
3M: 3M 10. Connection Mode
N/A: Lead Wire
E1: M8, 3Pins
E2: M12, 4Pins
E3: M8, 4Pins
E4: M12, 4Pins
E5: M12, 5Pins
D: Internal Terminal block 11. Special Requirement
Expressed in 4 digits |
|---|--|

Features:

Long life and high reliability
LED Indicator
Widely used in door and
Cylinder position detect
IP67 (IEC)



! Please read "caution for your safety" in operation manual before using

FT series

Shape	Power supply	Output model		Output form	Model (cable 2m)
FT03	DC	2-Wire	NO	Terminal	FT03DLO
FT05	DC	2-Wire	NO	Terminal	FT05DLO
FT07	DC	2-Wire	NO	Terminal	FT07DLO
FT11	DC	2-Wire	NO	Terminal	FT11DLO
		2-Wire	NO+NC	Terminal	FT11DLR
FT13	DC	2-Wire	NO	Terminal	FT13DLO
		2-Wire	NO+NC	Terminal	FT13DLR
FT15	DC	2-Wire	NO	Terminal	FT15DLO
		2-Wire	NO+NC	Terminal	FT15DLR

FT series

Shape	Power supply	Output model			Output form	Model (cable 2m)
FT21	DC	2-Wire	NO		Terminal	FT21DLO
		3-Wire	NO+NC		Terminal	FT21DLR
		3-Wire	NPN	NO	Transistor	FT21DNO
		3-Wire	PNP	NO	Transistor	FT21DPO
FT22	DC	2-Wire	NO		Terminal	FT22DLO
		3-Wire	NO+NC		Terminal	FT22DLR
		3-Wire	NPN	NO	Transistor	FT22DNO
		3-Wire	PNP	NO	Transistor	FT22DPO
FT25	DC	2-Wire	NO		Terminal	FT25DLO
		3-Wire	NO+NC		Terminal	FT25DLR
		3-Wire	NPN	NO	Transistor	FT25DNO
		3-Wire	PNP	NO	Transistor	FT25DPO
FT51	DC	2-Wire	NO		Terminal	FT51DLO
		3-Wire	NO+NC		Terminal	FT51DLR
		3-Wire	NPN	NO	Transistor	FT51DNO
		3-Wire	PNP	NO	Transistor	FT51DPO
FT52	DC	2-Wire	NO		Terminal	FT52DLO
		3-Wire	NO+NC		Terminal	FT52DLR
		3-Wire	NPN	NO	Transistor	FT52DNO
		3-Wire	PNP	NO	Transistor	FT52DPO
FT53	DC	2-Wire	NO		Terminal	FT53DLO
		3-Wire	NO+NC		Terminal	FT53DLR
		3-Wire	NPN	NO	Transistor	FT53DNO
		3-Wire	PNP	NO	Transistor	FT53DPO

SUMMARY

Inductive sensor

Capacitive sensor

Photoelectric sensor

Magnetic sensor

Mark sensor

Fiber Optic

ACCESSORY

Property Parameters (DC 2 wire)

Housing size	3. 2*3. 9*23	4. 3*6. 2*23	4. 5*6. 2*26. 8
Dimensions	Type: FT03□□□ 	Type: FT05□□□ 	型号: FT07□□□
Type	FT03DLO	FT05DLO	FT07DLO
Item			
Output	NO	NO	NO
Power supply	10...30VDC	10...30VDC	10...30VDC
Terminal power supply	1W	1W	1W
Loaded current	≤50mA	≤50mA	≤50mA
Residual voltage	----	≤2. 5VDC	≤2. 5VDC
Leakage	----	----	----
Protection	----	----	----
Indicator	----	Yellow LED	Yellow LED
Ambient temp	-10...70℃	-10...70℃	-10...70℃
Ambient RH	35...95%RH	35...95%RH	35...95%RH
Frequency	200Hz	200Hz	200Hz
Dielectric	1000V/AC 50/60Hz 60s	1000V/AC 50/60Hz 60s	1000V/AC 50/60Hz 60s
Insulation	≥50MΩ(500VDC)	≥50MΩ(500VDC)	≥50MΩ(500VDC)
Vibration	1. 5mm amplitude at 10 to 50Hz in each of x, y and z direction for two hours		
Protection	IP67	IP67	IP67
House	PBT/ABS	PBT	PBT
Connection	Cable 2M	Cable 2M	Cable 2M
Approval	CE SF UL CC	CE SF UL CC	CE SF UL CC

SUMMARY

Inductive sensor

Capacitive sensor

Photoelectric sensor

Magnetic sensor

Mark sensor

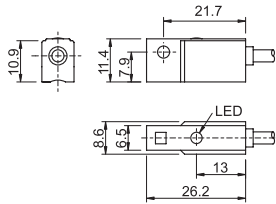
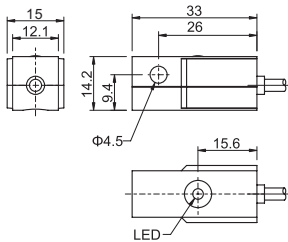
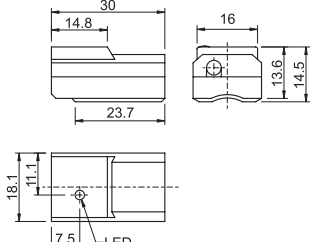
Fiber Optic

ACCESSORY

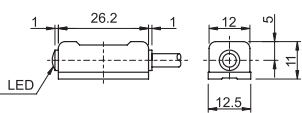
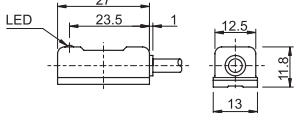
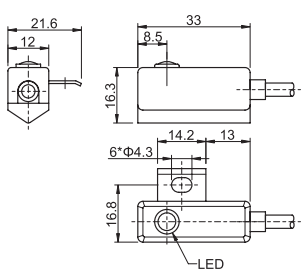
Property Parameters (DC 2/3 wire)

Housing size	6*14*23	7*16*34	7.5*7.5*22
Dimensions	Type: FT11DL□ 	Type: FT13DL□ 	Type: FT15DL□
Type	FT11DLO FT11DLR	FT13DLO FT13DLR	FT15DLO FT15DLR
Item			
Output	NO/NO+NC	NO/NO+NC	NO/NO+NC
Power supply	10...30VDC	10...30VDC	10...30VDC
Terminal power supply	1W	1W	1W
Loaded current	≤50mA	≤50mA	≤50mA
Residual voltage	----	----	----
Leakage	----	----	----
Protection	----	----	----
Indicator	----	----	----
Ambient temp	-10...70℃	-10...70℃	-10...70℃
Ambient RH	35...95%RH	35...95%RH	35...95%RH
Frequency	200Hz	200Hz	200Hz
Dielectric	1000V/AC 50/60Hz 60s	1000V/AC 50/60Hz 60s	1000V/AC 50/60Hz 60s
Insulation	≥50MΩ(500VDC)	≥50MΩ(500VDC)	≥50MΩ(500VDC)
Vibration	1. 5mm amplitude at 10 to 50Hz in each of x, y and z direction for two hours		
Protection	IP67	IP67	IP67
House	PBT/ABS	PBT	PBT
Connection	Cable 2M	Cable 2M	Cable 2M
Approval	CE SF UL CC	CE SF UL CC	CE SF UL CC

Property Parameters (DC 2/3 wire)

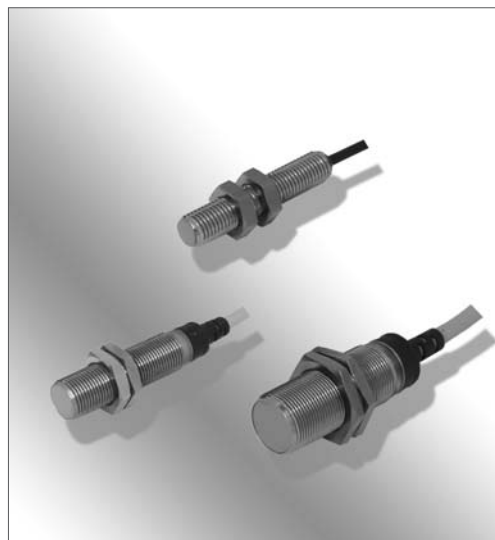
Housing size	8. 6*11. 4*26. 2		14. 2*15*33		14. 5*18. 1*30	
Dimensions	Type: FT21D□□ 		Type: FT22D□□ 		Type: FT25D□□ 	
Type						
Item	FT21DLO FT21DLR	FT21DNO FT21DPO	FT22DLO FT22DLR	FT22DNO FT22DPO	FT25DLO FT25DLR	FT25DNO FT25DPO
Output	NO/NO+NC	NPN/PNP NO	NO/NO+NC	NPN/PNP NO	NO/NO+NC	NPN/PNP NO
Power supply	10...30VDC		10...30VDC		10...30VDC	
Terminal power supply	1W	----	1W	----	1W	----
Loaded current	≤50mA	≤200mA	≤50mA	≤200mA	≤50mA	≤200mA
Residual voltage	≤2. 5VDC		≤2. 5VDC		≤2. 5VDC	
Leakage	----		----		----	
Protection	----	Reverse polarity protection	----	Reverse polarity protection	----	Reverse polarity protection
Indicator	Yellow LED		Yellow LED		Yellow LED	
Ambient temp	-10...70℃		-10...70℃		-10...70℃	
Ambient RH	35...95%RH		35...95%RH		35...95%RH	
Frequency	200Hz		200Hz		200Hz	
Dielectric	1000V/AC 50/60Hz 60s		1000V/AC 50/60Hz 60s		1000V/AC 50/60Hz 60s	
Insulation	≥50MΩ(500VDC)		≥50MΩ(500VDC)		≥50MΩ(500VDC)	
Vibration	1. 5mm amplitude at 10 to 50Hz in each of x, y and z direction for two hours					
Protection	IP67		IP67		IP67	
House	PBT		PBT		PBT	
Connection	Cable 2M		Cable 2M		Cable 2M	
Approval	CE SF UL CC		CE SF UL CC		CE SF UL CC	

Property Parameters (DC 2/3 wire)

Housing size	11*12*28.2		13*11.8*27		16.3*21.6*33	
Dimensions	Type: FT51D□□		Type: FT52D□□		Type: FT53D□□	
						
Type	FT51DLO		FT52DLO		FT53DLO	
Item	FT51DLR		FT52DLR		FT53DLR	
	FT51DNO		FT52DNO		FT53DNO	
Item	FT51DPO		FT52DPO		FT53DPO	
Output	NO/NO+NC		NO/NO+NC		NO/NO+NC	
Power supply	10...30VDC		10...30VDC		10...30VDC	
Terminal power supply	1W		1W		1W	
Loaded current	≤50mA		≤50mA		≤50mA	
Residual voltage	≤2.5VDC		≤2.5VDC		≤2.5VDC	
Leakage	-----		-----		-----	
Protection	----- Reverse polarity protection		----- Reverse polarity protection		----- Reverse polarity protection	
Indicator	Yellow LED		Yellow LED		Yellow LED	
Ambient temp	-10...70℃		-10...70℃		-10...70℃	
Ambient RH	35...95%RH		35...95%RH		35...95%RH	
Frequency	200Hz		200Hz		200Hz	
Dielectric	1000V/AC 50/60Hz 60s		1000V/AC 50/60Hz 60s		1000V/AC 50/60Hz 60s	
Insulation	≥50MΩ(500VDC)		≥50MΩ(500VDC)		≥50MΩ(500VDC)	
Vibration	1.5mm amplitude at 10 to 50Hz in each of x, y and z direction for two hours		1.5mm amplitude at 10 to 50Hz in each of x, y and z direction for two hours		1.5mm amplitude at 10 to 50Hz in each of x, y and z direction for two hours	
Protection	IP67		IP67		IP67	
House	Fe+PBT		Fe+PBT		Fe+PBT	
Connection	Cable 2M		Cable 2M		Cable 2M	
Approval	CE SF UL CC		CE SF UL CC		CE SF UL CC	

Features :

**Sensing distance is up to
the magnetic of target
Reverse Polarity Protection
Overload Protection
Long life and high reliability
LED Indicator
Economical and easy to mount
IP67 (IEC)**



! Please read "caution for your safety"
in operation manual before using

Type M8 DC 3 Wire

Shape	Mounting	SN	Output		Model (cable 2m)	Model (connector M8)	Model (connector M12)
M8 Standard	F	8mm	NPN	NO	FN08DNO	FN08DNO-E1	FN08DNO-E2
				NC	FN08DNC	FN08DNC-E1	FN08DNC-E2
				NO+NC	----	----	----
			PNP	NO	FN08DPO	FN08DPO-E1	FN08DPO-E2
				NC	FN08DPC	FN08DPC-E1	FN08DPC-E2
				NO+NC	----	----	----

Type M12 DC 3 Wire

Shape	Mounting	SN	Output		Model (cable 2m)	Model (connector M12)
M12 Standard	F	12mm	NPN	NO	FN12DNO	FN12DNO-E2
				NC	FN12DNC	FN12DNC-E2
				NO+NC	----	----
			PNP	NO	FN12DPO	FN12DPO-E2
				NC	FN12DPC	FN12DPC-E2
				NO+NC	----	----

Type M18 DC 3 Wire

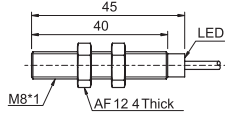
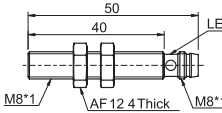
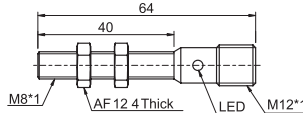
Shape	Mounting	SN	Output		Model (cable 2m)	Model (connector M12)
M18 Standard	F	15mm	NPN	NO	FN18DNO	FN18DNO-E2
				NC	FN18DNC	FN18DNC-E2
				NO+NC	----	----
			PNP	NO	FN18DPO	FN18DPO-E2
				NC	FN18DPC	FN18DPC-E2
				NO+NC	----	----

SUMMARY

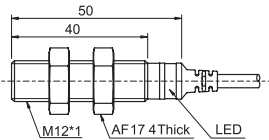
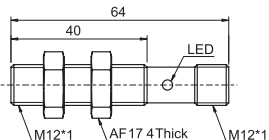
Inductive
sensorCapacitive
sensorPhotoelectric
sensorMagnetic
sensorMark
sensorFiber
Optic

ACCESSORY

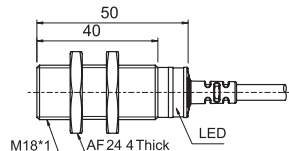
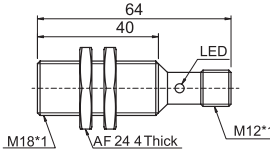
Property Parameters (DC 3 wire)

Housing size	M8*1*40		M8*1*40		M8*1*40	
Dimensions	Type: FN08D□□		Type: FN08D□□-E1		Type: FN08D□□-E2	
						
Type	FN08DNO	FN08DPO	FN08DNO-E1	FN08DPO-E1	FN08DNO-E2	FN08DPO-E2
Item	FN08DNC	FN08DPC	FN08DNC-E1	FN08DPC-E1	FN08DNC-E2	FN08DPC-E2
SN	8mm		8mm		8mm	
Mounting	F		F		F	
Output	NPN/PNP NO/NC		NPN/PNP NO/NC		NPN/PNP NO/NC	
Power supply	10...30VDC		10...30VDC		10...30VDC	
Standard object	----		----		----	
Switch-pointdrift	≤±10%		≤±10%		≤±10%	
Hysteresis	3...20%		3...20%		3...20%	
Repeat accuracy	≤3%		≤3%		≤3%	
Load current	≤200mA		≤200mA		≤200mA	
Residual voltage	≤2. 5VDC		≤2. 5VDC		≤2. 5VDC	
Protection	Reverse polarity/Short protection/Overload, surge protection					
Indicator	Yellow LED		Yellow LED		Yellow LED	
Consumption	≤15mA		≤15mA		≤15mA	
Ambient temp	-25...70℃		-25...70℃		-25...70℃	
Ambient RH	35...95%RH		35...95%RH		35...95%RH	
Frequency	200Hz		200Hz		200Hz	
Dielectric	1000V/AC 50/60Hz 60s		1000V/AC 50/60Hz 60s			
Insulation	≥50MΩ(500VDC)		≥50MΩ(500VDC)		≥50MΩ(500VDC)	
Vibration	1. 5mm amplitude at 10 to 50Hz in each of x, y and z direction for two hours					
Protection	IP67		IP67		IP67	
Housing	Stainless steel		Stainless steel/nickel-copper alloys			
Connection	cable 2m		connector M8		connector M12	
Approval	CE SF UL CC		CE SF UL CC		CE SF UL CC	

Property Parameters (DC 3 wire)

Housing size	M12*1*40		M12*1*40		
Dimensions	Type: FN12D□□		Type: FN12D□□-E2		
					
Type					
Item	FN12DNO	FN12DPO	FN12DNO-E2	FN12DPO-E2	
	FN12DNC	FN12DPC	FN12DNC-E2	FN12DPC-E2	
SN	12mm		12mm		
Mounting	F		F		
Output	NPN/PNP NO/NC		NPN/PNP NO/NC		
Power supply	10...30VDC		10...30VDC		
Standard object	----		----		
Switch-point drift	≤±10%		≤±10%		
Hysteresis	3...20%		3...20%		
Repeat accuracy	≤3%		≤3%		
Load current	≤200mA		≤200mA		
Residual voltage	≤2. 5VDC		≤2. 5VDC		
Protection	Reverse polarity/Short protection/Overload, surge protection				
Indicator	Yellow LED		Yellow LED		
Consumption	≤15mA		≤15mA		
Ambient temp	-25...70℃		-25...70℃		
Ambient RH	35...95%RH		35...95%RH		
Frequency	200Hz		200Hz		
Dielectric	1000V/AC 50/60Hz 60s		1000V/AC 50/60Hz 60s		
Insulation	≥50MΩ(500VDC)		≥50MΩ(500VDC)		
Vibration	1. 5mm amplitude at 10 to 50Hz in each of x, y and z direction for two hours				
Protection	IP67		IP67		
Housing	Nickel-copper alloys		Nickel-copper alloys		
Connection	Cable 2m		Connector M12		
Approval	CE SF UL CC		CE SF UL CC		

Property Parameters (DC 3 wire)

Housing size	M18*1*40		M18*1*40		
Dimensions	Type: FN18D□□		Type: FN18D□□-E2		
					
Type	FN18DNO		FN18DNO-E2		
Item	FN18DNC		FN18DNC-E2		
	FN18DPO		FN18DPO-E2		
	FN18DPC		FN18DPC-E2		
SN	15mm		15mm		
Mounting	F		F		
Output	NPN/PNP NO/NC		NPN/PNP NO/NC		
Power supply	10...30VDC		10...30VDC		
Standard object	----		----		
Switch-point drift	≤±10%		≤±10%		
Hysteresis	3...20%		3...20%		
Repeat accuracy	≤3%		≤3%		
Load current	≤200mA		≤200mA		
Residual voltage	≤2.5VDC		≤2.5VDC		
Protection	Reverse polarity/Short protection/Overload, surge protection				
Indicator	Yellow LED		Yellow LED		
Consumption	≤15mA		≤15mA		
Ambient temp	-25...70℃		-25...70℃		
Ambient RH	35...95%RH		35...95%RH		
Frequency	200Hz		200Hz		
Dielectric	1000V/AC 50/60Hz 60s		1000V/AC 50/60Hz 60s		
Insulation	≥50MΩ(500VDC)		≥50MΩ(500VDC)		
Vibration	1.5mm amplitude at 10 to 50Hz in each of x, y and z direction for two hours				
Protection	IP67		IP67		
Housing	Nickel-copper alloys		Nickel-copper alloys		
Connection	Cable 2m		Connector M12		
Approval	CE SF UL CC		CE SF UL CC		

SUMMARY

Inductive
sensorCapacitive
sensorPhotoelectric
sensorMagnetic
sensorMark
sensorFiber
Optic

ACCESSORY

Control output diagram

Type	Mounting	Model	Output diagram
NPN	F	FN08DN□	Target A NO NC Load Active Reset Indicator On Off (+12...24V) BN (NO) BK (0V) BU (NC) WH
		FN08DN□-E1	
		FN08DN□-E2	
		FN12DN□	
		FN12DN□-E2	
		FN18DN□	
PNP	F	FN08DP□	Target A NO NC Load Active Reset Indicator On Off (+12...24V) BN (NO) BK (0V) BU (NC) WH
		FN08DP□-E1	
		FN08DP□-E2	
		FN12DP□	
		FN12DP□-E2	
		FN18DP□	
PNP	F	FN18DP□-E2	Target A NO NC Load Active Reset Indicator On Off (+12...24V) BN (NO) BK (0V) BU (NC) WH
		FN18DP□-E2	
		FN18DP□-E2	
		FN18DP□-E2	
		FN18DP□-E2	
		FN18DP□-E2	

SUMMARY

Inductive sensor

Capacitive sensor

Photoelectric sensor

Magnetic sensor

Mark sensor

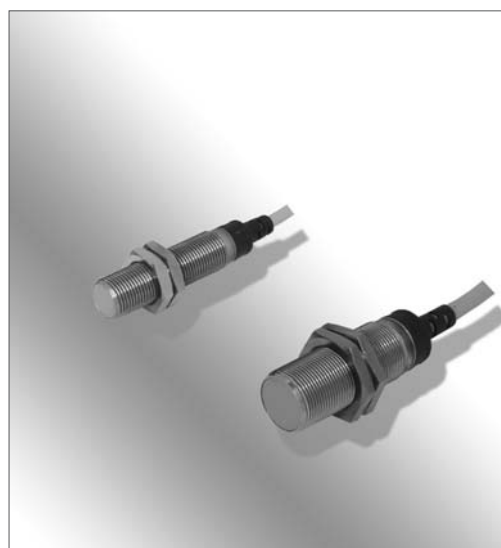
Fiber Optic

ACCESSORY

Features :

Reverse Polarity Protection
Surge Protection
Frequency up to 25HKZ
Long life and high reliability
LED Indicator
Economical and easy to mount
IP67 (IEC)

! Please read "caution for your safety" in operation manual before using

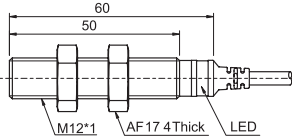
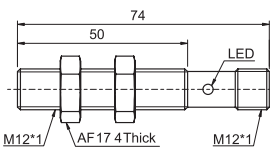
**Type M12 DC 3 Wire**

Shape	Mounting	SN	Output		Model (cable 2m)	Model (connector M12)
M12 Long	F	2mm	NPN	NO	FY12DNO	FY12DNO-E2
				NC	FY12DNC	FY12DNC-E2
				NO+NC	----	----
			PNP	NO	FY12DPO	FY12DPO-E2
				NC	FY12DPC	FY12DPC-E2
				NO+NC	----	----

Type M18 DC 3 Wire

Shape	Mounting	SN	Output		Model (cable 2m)	Model (connector M12)
M18 Long	F	2mm	NPN	NO	FY18DNO	FY18DNO-E2
				NC	FY18DNC	FY18DNC-E2
				NO+NC	----	----
			PNP	NO	FY18DPO	FY18DPO-E2
				NC	FY18DPC	FY18DPC-E2
				NO+NC	----	----

Property Parameters (DC 3 wire)

Housing size	M12*1*50		M12*1*50		
Dimensions	Type: FY12D□□		Type: FY12D□□-E2		
					
Type					
Item	FY12DNO FY12DNC	FY12DPO FY12DPC	FY12DNO-E2 FY12DNC-E2	FY12DPO-E2 FY12DPC-E2	
SN	2mm		2mm		
Mounting	F		F		
Output	NPN/PNP NO/NC		NPN/PNP NO/NC		
Power supply	10...30VDC		10...30VDC		
Switch-pointdrift	≤±10%		≤±10%		
Hysteresis	1...15%		1...15%		
Repeat accuracy	≤3%		≤3%		
Load current	≤200mA		≤200mA		
Residual voltage	≤2. 5VDC		≤2. 5VDC		
Protection	Reverse polarity/Short protection/Overload, surge protection				
Indicator	Yellow LED		Yellow LED		
Consumption	≤15mA		≤15mA		
Ambient temp	-25...70℃		-25...70℃		
Ambient RH	35...95%RH		35...95%RH		
Frequency	25KHz		25KHz		
Dielectric	1000V/AC 50/60Hz 60s		1000V/AC 50/60Hz 60s		
Insulation	≥50MΩ(500VDC)		≥50MΩ(500VDC)		
Vibration	1. 5mm amplitude at 10 to 50Hz in each of x, y and z direction for two hours				
Protection	IP67		IP67		
Housing	Nickel-copper alloys		Nickel-copper alloys		
Connection	Cable 2m		Connector M12		
Approval	CE SF UL CC		CE SF UL CC		

SUMMARY

Inductive sensor

Capacitive sensor

Photoelectric sensor

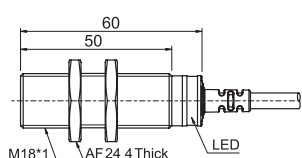
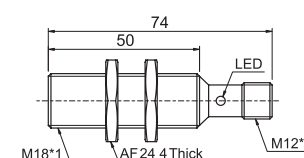
Magnetic sensor

Mark sensor

Fiber Optic

ACCESSORY

Property Parameters (DC 3 wire)

Housing size	M18*1*50		M18*1*50		
Dimensions	Type: FY18D□□		Type: FY18D□□-E2		
					
Type	FY18DNO	FY18DPO	FY18DNO-E2	FY18DPO-E2	
	FY18DNC	FY18DPC	FY18DNC-E2	FY18DPC-E2	
SN	2mm		2mm		
Mounting	F		F		
Output	NPN/PNP NO/NC		NPN/PNP NO/NC		
Power supply	10...30VDC		10...30VDC		
Switch-pointdrift	≤±10%		≤±10%		
Hysteresis	1...15%		1...15%		
Repeat accuracy	≤3%		≤3%		
Load current	≤200mA		≤200mA		
Residual voltage	≤2. 5VDC		≤2. 5VDC		
Protection	Reverse polarity/Short protection/Overload, surge protection				
Indicator	Yellow LED		Yellow LED		
Consumption	≤10mA		≤10mA		
Ambient temp	-25...70℃		-25...70℃		
Ambient RH	35...95%RH		35...95%RH		
Frequency	25KHz		25KHz		
Dielectric	1000V/AC 50/60Hz 60s		1000V/AC 50/60Hz 60s		
Insulation	≥50MΩ(500VDC)		≥50MΩ(500VDC)		
Vibration	1. 5mm amplitude at 10 to 50Hz in each of x, y and z direction for two hours				
Protection	IP67		IP67		
Housing	Nickel-copper alloys		Nickel-copper alloys		
Connection	Cable 2m		Connector M12		
Approval	CE SF UL CC		CE SF UL CC		

SUMMARY

Inductive sensor

Capacitive sensor

Photoelectric sensor

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ACCESSORY

Control output diagram

Type	Mounting	Model	Output diagram
NPN	F	FY12DN□ FY12DN□-E2 FY18DN□ FY18DN□-E2	
PNP	F	FY12DP□ FY12DP□-E2 FY18DP□ FY18DP□-E2	