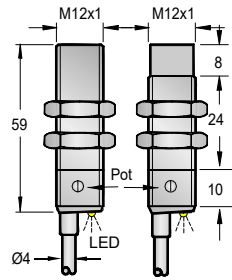
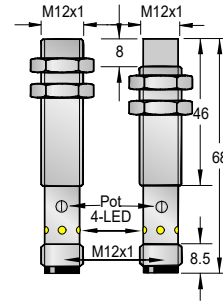


Features

- M12mm diameter
- Sn=1 ... 3mm, shielded
2 ... 6mm, non-shielded
- PTFE housing case
- Short circuit protection
- Overload protection
- Reverse-polarity protection
- NPN, PNP Output
- NO, NC, NO+NC Function
- Cable version
M12 connector version
- IP67 protection



(Unit: mm)



(Unit: mm)

		Shielded	Non-shielded	Shielded	Non-shielded
PTFE Body	NPN-NO	C1PE12C03A	C1PF12C06A	C1PE12C03H	C1PF12C06H
	NPN-NC	C1PE12D03A	C1PF12D06A	C1PE12D03H	C1PF12D06H
	PNP-NO	C1PE12A03A	C1PF12A06A	C1PE12A03H	C1PF12A06H
	PNP-NC	C1PE12B03A	C1PF12B06A	C1PE12B03H	C1PF12B06H
	NPN-NO+NC	C1PE12F03A	C1PF12F06A	C1PE12F03H	C1PF12F06H
	PNP-NO+NC	C1PE12E03A	C1PF12E06A	C1PE12E03H	C1PF12E06H

General Data		
Housing size	M12mm	
Installation type	Shielded	Non-shielded
Sensing distance(Sn: mm)	1...3mm adjustable	2...6mm adjustable
Standard sensing object	Steel 12x12x1mm	Steel 18x18x1mm
Effective sensing distance (Sr: mm)	90 ... 110% of Sn	
Assured operating distance(Sa: mm)	0 ... 80% of Sn	
Hysteresis	<15%	
Housing material	PTFE	
Operating voltage	10 ... 30VDC(55VDC can also be customized)	
Electrical Data		
Rated operating voltage	24VDC	
Repeated accuracy	±10%	
Ripple	<10%	
No load current	10mA	
Max. Load current	200mA	
Leakage current	0.01mA	
Voltage drop	<2VDC	<2VDC
Switching frequency	100Hz	100Hz
Response time	1.5ms/1.5ms	1.5ms/1.5ms
Rated insulation voltage	75VDC	
Operating temperature	-25°C ... +70°C	
Storage temperature	-40°C ... +80°C	
Temperature drift	<10%	
Power indicator	No	
Function indicator	Yellow LED	
Reverse polarity protection	Yes	
Short-circuit protection	Yes	
Overload trip point	220mA	
Correction factors	Fe37 steel=1/stainless steel approx. 0.85/brass approx. 0.5/ Al. Approx. 0.45/ copper approx. 0.4	
Mechanical Data		
Sensing surface material	PTFE	
Protection	IP67	
Shock rating	Shock, half-sinus, 30gn, 11ms	
Vibration rating	55Hz, 1mm ampl., 3x30min.	
EMC	IEC 60947-5-2	
Accessory	2 nuts	
Connection	2m PVC cable (Ø4 3x0.14mm²/4x0.14mm²)	
Weight	Approx. 60g/55g	

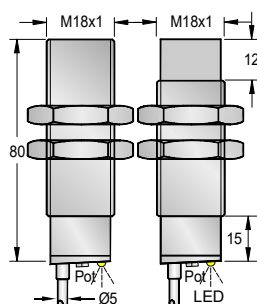
M12mm	
Shielded	Non-shielded
1...3mm adjustable	2...6mm adjustable
Steel 12x12x1mm	Steel 18x18x1mm
90 ... 110% of Sn	
0 ... 80% of Sn	
<15%	
PTFE	
10 ... 30VDC(55VDC can also be customized)	

24VDC	
±10%	
<10%	
10mA	
200mA	
0.01mA	
<2VDC	<2VDC
100Hz	100Hz
1.5ms/1.5ms	1.5ms/1.5ms
75VDC	
-25°C ... +70°C	
-40°C ... +80°C	
<10%	
No	
Yellow LED	
Yes	
Yes	
220mA	
Fe37 steel=1/stainless steel approx. 0.85/brass approx. 0.5/ Al. Approx. 0.45/ copper approx. 0.4	

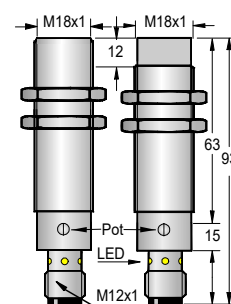
PTFE	
IP67	
Shock, half-sinus, 30gn, 11ms	
55Hz, 1mm ampl., 3x30min.	
IEC 60947-5-2	
2 nuts	
Euro-Style 4-Pin M12 Connector	
Approx. 25g/23g	

**Features**

- M18mm diameter
- Sn=2 ... 8mm, shielded
2 ... 15mm, non-shielded
- PTFE housing case
- NPN, PNP Output
- NO, NC, NO+NC Function
- Short circuit protection
- Overload protection
- Reverse-polarity protection
- Cable version
- M12 connector version
- IP67 protection



(Unit: mm)



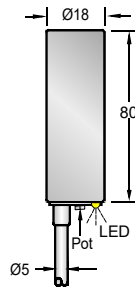
(Unit: mm)

		Shielded	Non-shielded	Shielded	Non-shielded
PTFE Body	NPN-NO	C1PE18C08A	C1PF18C15A	C1PE18C08H	C1PF18C15H
	NPN-NC	C1PE18D08A	C1PF18D15A	C1PE18D08H	C1PF18D15H
	PNP-NO	C1PE18A08A	C1PF18A15A	C1PE18A08H	C1PF18A15H
	PNP-NC	C1PE18B08A	C1PF18B15A	C1PE18B08H	C1PF18B15H
	NPN-NO+NC	C1PE18F08A	C1PF18F15A	C1PE18F08H	C1PF18F15H
	PNP-NO+NC	C1PE18E08A	C1PF18E15A	C1PE18E08H	C1PF18E15H

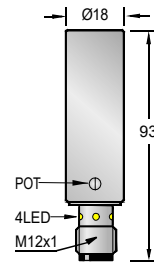
General Data				
Housing size	Ø18mm		Ø18mm	
Installation type	Shielded	Non-shielded	Shielded	Non-shielded
Sensing distance(Sn: mm)	2...8mm adjustable	2...15mm adjustable	2...8mm adjustable	2...15mm adjustable
Standard sensing object	Steel 24x24x1mm	Steel 45x45x1mm	Steel 24x24x1mm	Steel 45x45x1mm
Effective sensing distance (Sr: mm)	90 ... 110% of Sn		90 ... 110% of Sn	
Assured operating distance(Sa: mm)	0 ... 80% of Sn		0 ... 80% of Sn	
Hysteresis	<15%		<15%	
Housing material	PTFE		PTFE	
Operating voltage	10 ... 30VDC(55VDC can also be customized)		10 ... 30VDC(55VDC can also be customized)	
Electrical Data				
Rated operating voltage	24VDC		24VDC	
Repeated accuracy	±10%		±10%	
Ripple	<10%		<10%	
No load current	10mA		10mA	
Max. Load current	200mA		200mA	
Leakage current	0.01mA		0.01mA	
Voltage drop	<2VDC	<2VDC	<2VDC	<2VDC
Switching frequency	100Hz	100Hz	100Hz	100Hz
Response time	1.5ms/1.5ms	1.5ms/1.5ms	1.5ms/1.5ms	1.5ms/1.5ms
Rated insulation voltage	75VDC		75VDC	
Operating temperature	-25°C ... +70°C		-25°C ... +70°C	
Storage temperature	-40°C ... +80°C		-40°C ... +80°C	
Temperature drift	<10%		<10%	
Power indicator	No		No	
Function indicator	Yellow LED		Yellow LED	
Reverse polarity protection	Yes		Yes	
Short-circuit protection	Yes		Yes	
Overload trip point	220mA		220mA	
Correction factors	Fe37 steel=1/stainless steel approx. 0.85/brass approx. 0.5/ Al. Approx. 0.45/ copper approx. 0.4		Fe37 steel=1/stainless steel approx. 0.85/brass approx. 0.5/ Al. Approx. 0.45/ copper approx. 0.4	
Mechanical Data				
Sensing surface material	PTFE		PTFE	
Protection	IP67		IP67	
Shock rating	Shock, half-sinus, 30gn, 11ms		Shock, half-sinus, 30gn, 11ms	
Vibration rating	55Hz, 1mm ampl., 3x30min.		55Hz, 1mm ampl., 3x30min.	
EMC	IEC 60947-5-2		IEC 60947-5-2	
Accessory	2 nuts		2 nuts	
Connection	2m PVC cable (Ø5 3x0.34mm²/4x0.34mm²)		Euro-Style 4-Pin M12 Connector	
Weight	Approx. 115g/110g		Approx. 70g/69g	

Features

- Ø18mm diameter
- Sn=2 ... 8mm, shielded
2 ... 15mm, non-shielded
- PTFE housing case
- NPN, PNP Output
- NO, NC, NO+NC Function
- Short circuit protection
- Overload protection
- Reverse-polarity protection
- Cable version
- M12 connector version
- IP67 protection



(Unit: mm)



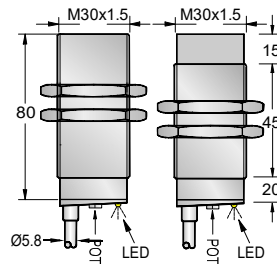
(Unit: mm)

		Shielded	Non-shielded	Shielded	Non-shielded
PTFE Body	NPN-NO	C1QE18C08A	C1QF18C15A	C1QE18C08H	C1QF18C15H
	NPN-NC	C1QE18D08A	C1QF18D15A	C1QE18D08H	C1QF18D15H
	PNP-NO	C1QE18A08A	C1QF18A15A	C1QE18A08H	C1QF18A15H
	PNP-NC	C1QE18B08A	C1QF18B15A	C1QE18B08H	C1QF18B15H
	NPN-NO+NC	C1QE18F08A	C1QF18F15A	C1QE18F08H	C1QF18F15H
	PNP-NO+NC	C1QE18E08A	C1QF18E15A	C1QE18E08H	C1QF18E15H

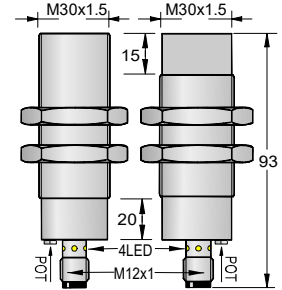
General Data		
Housing size	Ø18mm	
Installation type	Shielded	Non-shielded
Sensing distance(Sn: mm)	2...8mm adjustable	2...15mm adjustable
Standard sensing object	Steel 24x24x1mm	Steel 45x45x1mm
Effective sensing distance (Sr: mm)	90 ... 110% of Sn	
Assured operating distance(Sa: mm)	0 ... 80% of Sn	
Hysteresis	<15%	
Housing material	PTFE	
Operating voltage	10 ... 30VDC(55VDC can also be customized)	
Electrical Data		
Rated operating voltage	24VDC	
Repeated accuracy	±10%	
Ripple	<10%	
No load current	10mA	
Max. Load current	200mA	
Leakage current	0.01mA	
Voltage drop	<2VDC	<2VDC
Switching frequency	100Hz	100Hz
Response time	1.5ms/1.5ms	1.5ms/1.5ms
Rated insulation voltage	75VDC	
Operating temperature	-25°C ... +70°C	
Storage temperature	-40°C ... +80°C	
Temperature drift	<10%	
Power indicator	No	
Function indicator	Yellow LED	
Reverse polarity protection	Yes	
Short-circuit protection	Yes	
Overload trip point	220mA	
Correction factors	Fe37 steel=1/stainless steel approx. 0.85/brass approx. 0.5/ Al. Approx. 0.45/ copper approx. 0.4	
Mechanical Data		
Sensing surface material	PTFE	
Protection	IP67	
Shock rating	Shock, half-sinus, 30gn, 11ms	
Vibration rating	55Hz, 1mm ampl., 3x30min.	
EMC	IEC 60947-5-2	
Accessory	/	
Connection	2m PVC cable (Ø5 3x0.34mm²/4x0.34mm²)	
Weight	Approx. 95g	

Features

- M30mm diameter
- Sn=2 ... 20mm, shielded
2 ... 30mm, non-shielded
- PTFE housing case
- NPN, PNP Output
- NO, NC, NO+NC Function
- Short circuit protection
- Overload protection
- Reverse-polarity protection
- Cable version
- M12 connector version
- IP67 protection



(Unit: mm)



(Unit: mm)

		Shielded	Non-shielded	Shielded	Non-shielded
PTFE Body	NPN-NO	C1PE30C20A	C1PF30C30A	C1PE30C20H	C1PF30C30H
	NPN-NC	C1PE30D20A	C1PF30D30A	C1PE30D20H	C1PF30D30H
	PNP-NO	C1PE30A20A	C1PF30A30A	C1PE30A20H	C1PF30A30H
	PNP-NC	C1PE30B20A	C1PF30B30A	C1PE30B20H	C1PF30B30H
	NPN-NO+NC	C1PE30F20A	C1PF30F30A	C1PE30F20H	C1PF30F30H
PNP-NO+NC	C1PE30E20A	C1PF30E30A	C1PE30E20H	C1PF30E30H	
General Data					
Housing size		M30mm		M30mm	
Installation type		Shielded	Non-shielded	Shielded	Non-shielded
Sensing distance(Sn: mm)		2...20mm adjustable	2...30mm adjustable	2...20mm adjustable	2...30mm adjustable
Standard sensing object		Steel 60x60x1mm	Steel 90x90x1mm	Steel 60x60x1mm	Steel 90x90x1mm
Effective sensing distance (Sr: mm)		90 ... 110% of Sn		90 ... 110% of Sn	
Assured operating distance(Sa: mm)		0 ... 80% of Sn		0 ... 80% of Sn	
Hysteresis		<15%		<15%	
Housing material		PTFE		PTFE	
Operating voltage		10 ... 30VDC(55VDC can also be customized)		10 ... 30VDC(55VDC can also be customized)	
Electrical Data					
Rated operating voltage		24VDC		24VDC	
Repeated accuracy		±10%		±10%	
Ripple		<10%		<10%	
No load current		10mA		10mA	
Max. Load current		200mA		200mA	
Leakage current		0.01mA		0.01mA	
Voltage drop		<2VDC	<2VDC	<2VDC	<2VDC
Switching frequency		100Hz	100Hz	100Hz	100Hz
Response time		1.5ms/1.5ms	1.5ms/1.5ms	1.5ms/1.5ms	1.5ms/1.5ms
Rated insulation voltage		75VDC		75VDC	
Operating temperature		-25°C ... +70°C		-25°C ... +70°C	
Storage temperature		-40°C ... +80°C		-40°C ... +80°C	
Temperature drift		<10%		<10%	
Power indicator		No		No	
Function indicator		Yellow LED		Yellow LED	
Reverse polarity protection		Yes		Yes	
Short-circuit protection		Yes		Yes	
Overload trip point		220mA		220mA	
Correction factors		Fe37 steel=1/stainless steel approx. 0.85/brass approx. 0.5/ Al. Approx. 0.45/ copper approx. 0.4		Fe37 steel=1/stainless steel approx. 0.85/brass approx. 0.5/ Al. Approx. 0.45/ copper approx. 0.4	
Mechanical Data					
Sensing surface material		PTFE		PTFE	
Protection		IP67		IP67	
Shock rating		Shock, half-sinus, 30gn, 11ms		Shock, half-sinus, 30gn, 11ms	
Vibration rating		55Hz, 1mm ampl., 3x30min.		55Hz, 1mm ampl., 3x30min.	
EMC		IEC 60947-5-2		IEC 60947-5-2	
Accessory		2 nuts		2 nuts	
Connection		2m PVC cable (Ø5.8 3x0.5mm²/4x0.5mm²)		Euro-Style 4-Pin M12 connector	
Weight		Approx. 231g/219g		Approx. 137g/147g	