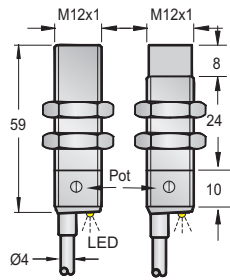




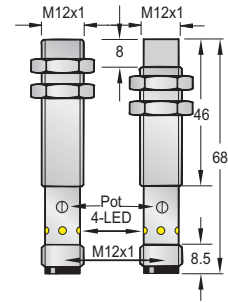
DC Capacitive Proximity Sensors- PTFE Body

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	CBHA-1203N-A3W2	CBHB-1206N-A3W2	CBHA-1203N-AEW4	CBHB-1206N-AEW4
	NPN-NC	CBHA-1203N-B3W2	CBHB-1206N-B3W2	CBHA-1203N-BEW4	CBHB-1206N-BEW4
	PNP-NO	CBHA-1203P-A3W2	CBHB-1206P-A3W2	CBHA-1203P-AEW4	CBHB-1206P-AEW4
	PNP-NC	CBHA-1203P-B3W2	CBHB-1206P-B3W2	CBHA-1203P-BEW4	CBHB-1206P-BEW4
	NPN-NO+NC	CBHA-1203N-C4W2	CBHB-1206N-C4W2	CBHA-1203N-CEW4	CBHB-1206N-CEW4
	PNP-NO+NC	CBHA-1203P-C4W2	CBHB-1206P-C4W2	CBHA-1203P-CEW4	CBHB-1206P-CEW4

General Data

Housing size	M12mm		M12mm	
	Shielded	Non-shielded	Shielded	Non-shielded
Installation type				
Sensing distance(Sn: mm)	1...3mm adjustable	2...6mm adjustable	1...3mm adjustable	2...6mm adjustable
Standard sensing object	Steel 12x12x1mm	Steel 18x18x1mm	Steel 12x12x1mm	Steel 18x18x1mm
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	

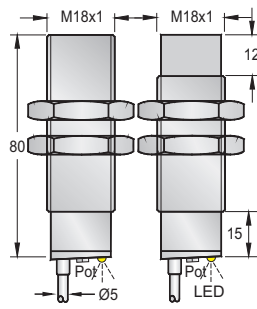
Mechanical Data

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 (Ø4 3x0.14mm ² /4x0.14mm ²)		Euro-Style 4-Pin M12 Connector	
Weight	Approx. 60g/55g		Approx. 25g/23g	

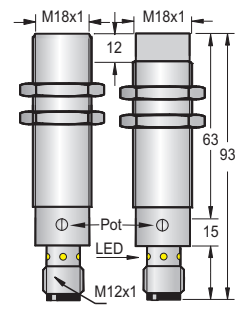


Features

- 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	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

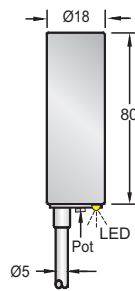
General Data					
Housing size	Ø18mm		Ø18mm		
Installation type	Shielded	Non-shielded	Shielded	Non-shielded	
Sensing distance(Sn: mm)	2...8mm adjustable		2...15mm adjustable		
Standard sensing object	Steel 24x24x1mm		Steel 45x45x1mm		
Effective sensing distance (Sr: mm)	90 ... 110% of Sn		90 ... 110% 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 3x0.34mm ² /4x0.34mm ²)		Euro-Style 4-Pin M12 Connector		
Weight	Approx. 115g/110g		Approx. 70g/69g		



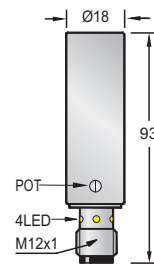
DC Capacitive Proximity Sensors- PTFE Body

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)

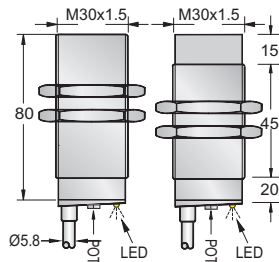
		Shielded	Non-shielded	Shielded	Non-shielded
PTFE Body	NPN-NO	C1QE18C08A	C1QF18C15A	C1QE18C08H	C1QF18C15H
	NPN-NC	C1QE18D08A	C1QF18D15A	C1QE18D08H	C1QF18D15H
	PNP-NO	C1QE18A08A	C1QF18A15A	C1QE18A08H	C1QF18A15H
	PNP-NC	C1QE18B08A	C1QF18B15A	C1QE18B08H	C1QF18B15H
	NPN-NO+NC	C1QE18F08A	C1QF18F15A	C1QE18F08H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

General Data					
Housing size	Ø18mm		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	/		/		
Connection	2m PVC cable (Ø5 3x0.34mm ² /4x0.34mm ²)		Euro-Style 4-Pin M12 Connector		
Weight	Approx. 95g		Approx. 65g		

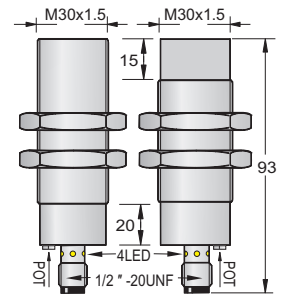


Features

- 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		
Sensing distance(Sn: mm)	2...20mm adjustable		2...30mm adjustable		
Standard sensing object	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		
Switching frequency	100Hz		100Hz		
Response time	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 3x0.5mm ² /4x0.5mm ²)			Euro-Style 4-Pin M12 connector	
Weight	Approx. 231g/219g			Approx. 137g/147g	