

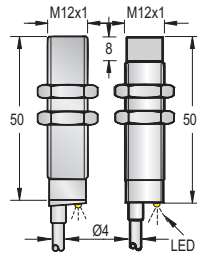
# DC Metal-face Inductive Proximity Sensors

Ferrous Only Sensing / Non-Ferrous Only Sensing

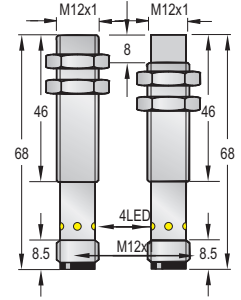


## Features

- M12mm diameter
- 10-30VDC operating voltage
- Sn=2mm, shielded  
4mm, non-shielded
- Ferrous Only Sensing
- Non-Ferrous Only Sensing
- Full stainless steel housing case
- Built-in electric protection
- NPN, PNP Output
- NO, NC Function
- Cable version
- IP67 Protection



(Unit: mm)



(Unit: mm)

		2m Cable		4 Pin M12 Connector	
		Shielded	Non-shielded	Shielded	Non-shielded
Ferrous Only Sensing	NPN-NO	X1CE12C02A	X1CF12C04A	X1CE12C02H	X1CF12C04H
	NPN-NC	X1CE12D02A	X1CF12D04A	X1CE12D02H	X1CF12D04H
	PNP-NO	X1CE12A02A	X1CF12A04A	X1CE12A02H	X1CF12A04H
	PNP-NC	X1CE12B02A	X1CF12B04A	X1CE12B02H	X1CF12B04H
Non-Ferrous Only Sensing	NPN-NO	Y1CE12C02A	Y1CF12C04A	Y1CE12C02H	Y1CF12C04H
	NPN-NC	Y1CE12D02A	Y1CF12D04A	Y1CE12D02H	Y1CF12D04H
	PNP-NO	Y1CE12A02A	Y1CF12A04A	Y1CE12A02H	Y1CF12A04H
	PNP-NC	Y1CE12B02A	Y1CF12B04A	Y1CE12B02H	Y1CF12B04H

General Data		M12mm		M12mm	
		Shielded	Non-shielded	Shielded	Non-shielded
Housing size		M12mm		M12mm	
Installation type		Shielded	Non-shielded	Shielded	Non-shielded
Sensing distance(Sn: mm)		2mm	4mm	2mm	4mm
Standard sensing object		Steel 12x12x1mm	Steel 12x12x1mm	Steel 12x12x1mm	Steel 12x12x1mm
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		Stainless steel		Stainless steel	
Operating voltage		10 ... 30VDC		10 ... 30VDC	

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		<1.5V	<1.5V	<1.5V	<1.5V
Switching frequency		2000Hz	1000Hz	2000Hz	1000Hz
Response time		0.1ms/0.1ms	0.2ms/0.2ms	0.1ms/0.1ms	0.2ms/0.2ms
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		Stainless steel		Stainless steel	
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 3x0.34mm <sup>2</sup> )		4 Pin M12 connector	
Weight		Approx. 67g		Approx. 20g	

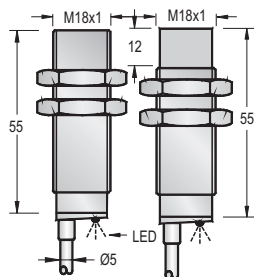
# DC Metal-face Inductive Proximity Sensors

Ferrous Only Sensing / Non-Ferrous Only Sensing

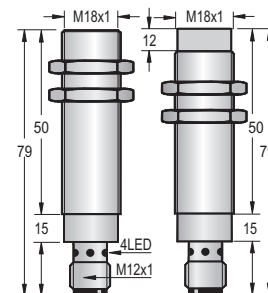


## Features

- M18mm diameter
- 10-30VDC operating voltage
- Sn=5mm, shielded  
8mm, non-shielded
- Ferrous Only Sensing
- Non-Ferrous Only Sensing
- Full stainless steel housing case
- Built-in electric protection
- NPN, PNP Output
- NO, NC Function
- Cable version
- IP67 Protection



(Unit: mm)



(Unit: mm)

		2m Cable		4 Pin M12 Connector	
		Shielded	Non-shielded	Shielded	Non-shielded
Ferrous Only Sensing	NPN-NO	X1CE18C05A	X1CF18C08A	X1CE18C05H	X1CF18C08H
	NPN-NC	X1CE18D05A	X1CF18D08A	X1CE18D05H	X1CF18D08H
	PNP-NO	X1CE18A05A	X1CF18A08A	X1CE18A05H	X1CF18A08H
	PNP-NC	X1CE18B05A	X1CF18B08A	X1CE18B05H	X1CF18B08H
Non-Ferrous Only Sensing	NPN-NO	Y1CE18C05A	Y1CF18C08A	Y1CE18C05H	Y1CF18C08H
	NPN-NC	Y1CE18D05A	Y1CF18D08A	Y1CE18D05H	Y1CF18D08H
	PNP-NO	Y1CE18A05A	Y1CF18A08A	Y1CE18A05H	Y1CF18A08H
	PNP-NC	Y1CE18B05A	Y1CF18B08A	Y1CE18B05H	Y1CF18B08H

General Data		
Housing size	M18mm	
Installation type	Shielded	Non-shielded
Sensing distance(Sn: mm)	5mm	8mm
Standard sensing object	Steel 18x18x1mm	Steel 24x24x1mm
Effective sensing distance (Sr: mm)	90 ... 110% of Sn	
Assured operating distance(Sa: mm)	0 ... 80% of Sn	
Hysteresis	<15%	
Housing material	Stainless steel	
Operating voltage	10 ... 30VDC	
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	<1.5V	1.5V
Switching frequency	1000Hz	500Hz
Response time	0.2ms/0.2ms	0.5ms/0.5ms
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	Stainless steel	
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 (Ø5 3x0.5mm <sup>2</sup> )	
Weight	Approx. 153g	

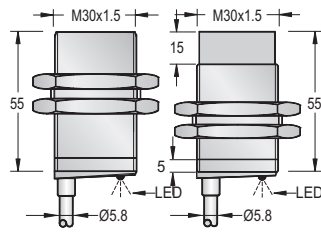
# DC Metal-face Inductive Proximity Sensors

Ferrous Only Sensing / Non-Ferrous Only Sensing

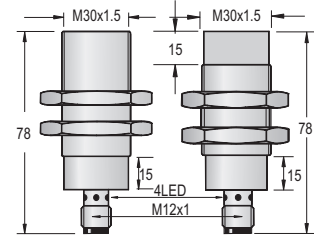


## Features

- M30mm diameter
- 10-30VDC operating voltage
- Sn=10mm, shielded  
15mm, non-shielded
- Ferrous Only Sensing
- Non-Ferrous Only Sensing
- Full stainless steel housing case
- Built-in electric protection
- NPN, PNP Output
- NO, NC Function
- Cable version
- IP67 Protection



(Unit: mm)



(Unit: mm)

		2m Cable		4 Pin M12 Connector	
		Shielded	Non-shielded	Shielded	Non-shielded
Ferrous Only Sensing	NPN-NO	X1CE30C10A	X1CF30C15A	X1CE30C10H	X1CF30C15H
	NPN-NC	X1CE30D10A	X1CF30D15A	X1CE30D10H	X1CF30D15H
	PNP-NO	X1CE30A10A	X1CF30A15A	X1CE30A10H	X1CF30A15H
	PNP-NC	X1CE30B10A	X1CF30B15A	X1CE30B10H	X1CF30B15H
Non-Ferrous Only Sensing	NPN-NO	Y1CE30C10A	Y1CF30C15A	Y1CE30C10H	Y1CF30C15H
	NPN-NC	Y1CE30D10A	Y1CF30D15A	Y1CE30D10H	Y1CF30D15H
	PNP-NO	Y1CE30A10A	Y1CF30A15A	Y1CE30A10H	Y1CF30A15H
	PNP-NC	Y1CE30B10A	Y1CF30B15A	Y1CE30B10H	Y1CF30B15H
<b>General Data</b>					
Housing size		M30mm		M30mm	
Installation type		Shielded	Non-shielded	Shielded	Non-shielded
Sensing distance(Sn: mm)		10mm	15mm	10mm	15mm
Standard sensing object		Steel 30x30x1mm	Steel 45x45x1mm	Steel 30x30x1mm	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		Stainless steel		Stainless steel	
Operating voltage		10 ... 30VDC		10 ... 30VDC	
<b>Electrical Data</b>					
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		<1.5V	1.5V	<1.5V	1.5V
Switching frequency		500Hz	300Hz	500Hz	300Hz
Response time		0.5ms/0.5ms	0.5ms/0.5ms	0.5ms/0.5ms	0.5ms/0.5ms
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	
<b>Mechanical Data</b>					
Sensing surface material		Stainless steel		Stainless steel	
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 <sup>2</sup> )		4 Pin M12 connector	
Weight		Approx. 247g		Approx. 147g	