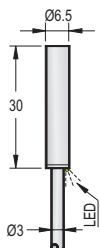


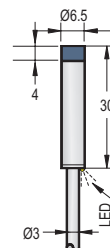


Features

- Ø6.5mm diameter
- Sn=1mm,2mm,3mm,shielded
2mm,4mm,6mm,non-shielded
- Stainless steel housing case
- NPN, PNP Output
- NO, NC Function
- Cable version
- Short circuit protection
- Overload protection
- Reverse polarity protection
- IP67 Protection



(Unit: mm)



(Unit: mm)

		Shielded			Non-Shielded		
		Standard Sn	Extended Sn	Long Sn	Standard Sn	Extended Sn	Long Sn
Steel Case	NPN-NO	L1DC6.5C01A	L1DC6.5C02A	L1DC6.5C03A	L1DD6.5C02A	L1DD6.5C04A	L1DD6.5C06A
	NPN-NC	L1DC6.5D01A	L1DC6.5D02A	L1DC6.5D03A	L1DD6.5D02A	L1DD6.5D04A	L1DD6.5D06A
	PNP-NO	L1DC6.5A01A	L1DC6.5A02A	L1DC6.5A03A	L1DD6.5A02A	L1DD6.5A04A	L1DD6.5A06A
	PNP-NC	L1DC6.5B01A	L1DC6.5B02A	L1DC6.5B03A	L1DD6.5B02A	L1DD6.5B04A	L1DD6.5B06A
	NPN-NO+NC						
	PNP-NO+NC						
Brass Case	NPN-NO						
	NPN-NC						
	PNP-NO						
	PNP-NC						
	NPN-NO+NC						
	PNP-NO+NC						

General Data

Housing size	Ø6.5mm			Ø6.5mm		
Installation type	Shielded			Non-shielded		
Sensing distance(Sn: mm)	1mm	2mm	3mm	2mm	4mm	6mm
Standard sensing object	Steel 6.5x6.5x1mm	Steel 6.5x6.5x1mm	Steel 9x9x1mm	Steel 6.5x6.5x1mm	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	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	<1.5VDC	<2.0VDC	<2.0VDC	<1.5VDC	<2.0VDC	<2.0VDC
Switching frequency	2000Hz	2000Hz	1000Hz	2000Hz	1000Hz	500Hz
Response time	0.1ms/0.1ms	0.1ms/0.1ms	0.2ms/0.2ms	0.1ms/0.1ms	0.2ms/0.2ms	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		

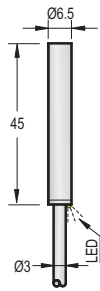
Mechanical Data

Sensing surface material	POM			POM		
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 (Ø3 3x0.15mm ²)			2m PVC cable (Ø3 3x0.15mm ²)		
Weight	Approx. 36g			Approx. 36g		

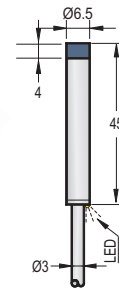


Features

- Ø6.5mm diameter
- Sn=1mm,2mm,3mm,shielded
2mm,4mm,6mm,non-shielded
- Stainless steel housing case
- NPN, PNP Output
- NO, NC Function
- Cable version
- Short circuit protection
- Overload protection
- Reverse polarity protection
- IP67 Protection



(Unit: mm)



(Unit: mm)

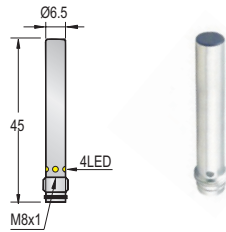
		Shielded			Non-Shielded		
		Standard Sn	Extended Sn	Long Sn	Standard Sn	Extended Sn	Long Sn
Steel Case	NPN-NO	L1DE6.5C01A	L1DE6.5C02A	L1DE6.5C03A	L1DF6.5C02A	L1DF6.5C04A	L1DF6.5C06A
	NPN-NC	L1DE6.5D01A	L1DE6.5D02A	L1DE6.5D03A	L1DF6.5D02A	L1DF6.5D04A	L1DF6.5D06A
	PNP-NO	L1DE6.5A01A	L1DE6.5A02A	L1DE6.5A03A	L1DF6.5A02A	L1DF6.5A04A	L1DF6.5A06A
	PNP-NC	L1DE6.5B01A	L1DE6.5B02A	L1DE6.5B03A	L1DF6.5B02A	L1DF6.5B04A	L1DF6.5B06A
	NPN-NO+NC						
	PNP-NO+NC						
Brass Case	NPN-NO						
	NPN-NC						
	PNP-NO						
	PNP-NC						
	NPN-NO+NC						
	PNP-NO+NC						

General Data							
Housing size	Ø6.5mm			Ø6.5mm			
Installation type	Shielded			Non-shielded			
Sensing distance(Sn: mm)	1mm	2mm	3mm	2mm	4mm	6mm	
Standard sensing object	Steel 6.5x6.5x1mm	Steel 6.5x6.5x1mm	Steel 9x9x1mm	Steel 6.5x6.5x1mm	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	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	<1.5VDC	<2.0VDC	<2.0VDC	<1.5VDC	<2.0VDC	<2.0VDC	
Switching frequency	2000Hz	2000Hz	1000Hz	2000Hz	1000Hz	500Hz	
Response time	0.1ms/0.1ms	0.1ms/0.1ms	0.2ms/0.2ms	0.1ms/0.1ms	0.2ms/0.2ms	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			
Mechanical Data							
Sensing surface material	POM			POM			
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 (Ø3 3x0.15mm ²)			2m PVC cable (Ø3 3x0.15mm ²)			
Weight	Approx. 37g			Approx. 37g			

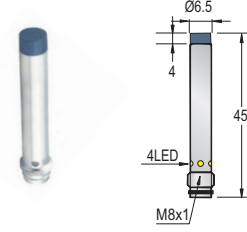


Features

- Ø6.5mm diameter
- Sn=1mm,2mm,3mm,shielded
2mm,4mm,6mm,non-shielded
- Stainless steel housing case
- NPN, PNP Output
- NO, NC Function
- M8 connector version
- Short circuit protection
- Overload protection
- Reverse polarity protection
- IP67 Protection



(Unit: mm)



(Unit: mm)

		Shielded			Non-Shielded		
		Standard Sn	Extended Sn	Long Sn	Standard Sn	Extended Sn	Long Sn
Steel Case	NPN-NO	L1DC6.5C01F	L1DC6.5C02F	L1DC6.5C03F	L1DD6.5C02F	L1DD6.5C04F	L1DD6.5C06F
	NPN-NC	L1DC6.5D01F	L1DC6.5D02F	L1DC6.5D03F	L1DD6.5D02F	L1DD6.5D04F	L1DD6.5D06F
	PNP-NO	L1DC6.5A01F	L1DC6.5A02F	L1DC6.5A03F	L1DD6.5A02F	L1DD6.5A04F	L1DD6.5A06F
	PNP-NC	L1DC6.5B01F	L1DC6.5B02F	L1DC6.5B03F	L1DD6.5B02F	L1DD6.5B04F	L1DD6.5B06F
	NPN-NO+NC						
	PNP-NO+NC						
Brass Case	NPN-NO						
	NPN-NC						
	PNP-NO						
	PNP-NC						
	NPN-NO+NC						
	PNP-NO+NC						

General Data

Housing size	Ø6.5mm			Ø6.5mm		
Installation type	Shielded			Non-shielded		
Sensing distance(Sn: mm)	1mm	2mm	3mm	2mm	4mm	6mm
Standard sensing object	Steel 6.5x6.5x1mm	Steel 6.5x6.5x1mm	Steel 9x9x1mm	Steel 6.5x6.5x1mm	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	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	<1.5VDC	<2.0VDC	<2.0VDC	<1.5VDC	<2.0VDC	<2.0VDC
Switching frequency	2000Hz	2000Hz	1000Hz	2000Hz	1000Hz	500Hz
Response time	0.1ms/0.1ms	0.1ms/0.1ms	0.2ms/0.2ms	0.1ms/0.1ms	0.2ms/0.2ms	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		

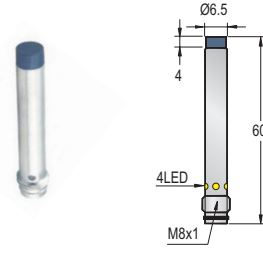
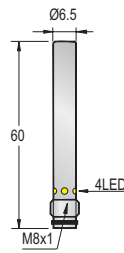
Mechanical Data

Sensing surface material	POM			POM		
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	3Pin M8 connector			3Pin M8 connector		
Weight	Approx. 15g			Approx. 15g		



Features

- Ø6.5mm diameter
- Sn=1mm,2mm,3mm,shielded
2mm,4mm,6mm,non-shielded
- Stainless steel housing case
- NPN, PNP Output
- NO, NC Function
- M8 connector version
- Short circuit protection
- Overload protection
- Reverse polarity protection
- IP67 Protection

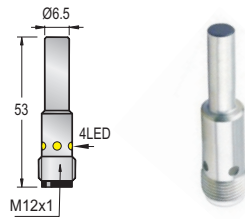


		Shielded			Non-Shielded		
		Standard Sn	Extended Sn	Long Sn	Standard Sn	Extended Sn	Long Sn
Steel Case	NPN-NO	L1DE6.5C01F	L1DE6.5C02F	L1DE6.5C03F	L1DF6.5C02F	L1DF6.5C04F	L1DF6.5C06F
	NPN-NC	L1DE6.5D01F	L1DE6.5D02F	L1DE6.5D03F	L1DF6.5D02F	L1DF6.5D04F	L1DF6.5D06F
	PNP-NO	L1DE6.5A01F	L1DE6.5A02F	L1DE6.5A03F	L1DF6.5A02F	L1DF6.5A04F	L1DF6.5A06F
	PNP-NC	L1DE6.5B01F	L1DE6.5B02F	L1DE6.5B03F	L1DF6.5B02F	L1DF6.5B04F	L1DF6.5B06F
	NPN-NO+NC						
	PNP-NO+NC						
Brass Case	NPN-NO						
	NPN-NC						
	PNP-NO						
	PNP-NC						
	NPN-NO+NC						
	PNP-NO+NC						

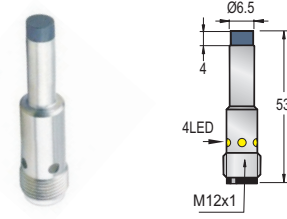
General Data							
Housing size	Ø6.5mm			Ø6.5mm			
Installation type	Shielded			Non-shielded			
Sensing distance(Sn: mm)	1mm	2mm	3mm	2mm	4mm	6mm	
Standard sensing object	Steel 6.5x6.5x1mm	Steel 6.5x6.5x1mm	Steel 9x9x1mm	Steel 6.5x6.5x1mm	Steel 12x12x1mm	Steel 18x18x1mm	
Effective sensing distance (Sr: 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	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	<1.5VDC	<2.0VDC	<2.0VDC	<1.5VDC	<2.0VDC	<2.0VDC	
Switching frequency	2000Hz	2000Hz	1000Hz	2000Hz	1000Hz	500Hz	
Response time	0.1ms/0.1ms	0.1ms/0.1ms	0.2ms/0.2ms	0.1ms/0.1ms	0.2ms/0.2ms	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			
Mechanical Data							
Sensing surface material	POM			POM			
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	3Pin M8 connector			3Pin M8 connector			
Weight	Approx. 15g			Approx. 15g			



- Features**
- Ø6.5mm diameter
 - Sn=1mm,2mm,3mm,shielded
2mm,4mm,6mm,non-shielded
 - Stainless steel housing case
 - NPN, PNP Output
 - NO, NC Function
 - M12 connector version
 - Short circuit protection
 - Overload protection
 - Reverse polarity protection
 - IP67 Protection



(Unit: mm)



(Unit: mm)

		Shielded			Non-Shielded		
		Standard Sn	Extended Sn	Long Sn	Standard Sn	Extended Sn	Long Sn
Steel Case	NPN-NO	L1DC6.5C01H	L1DC6.5C02H	L1DC6.5C03H	L1DD6.5C02H	L1DD6.5C04H	L1DD6.5C06H
	NPN-NC	L1DC6.5D01H	L1DC6.5D02H	L1DC6.5D03H	L1DD6.5D02H	L1DD6.5D04H	L1DD6.5D06H
	PNP-NO	L1DC6.5A01H	L1DC6.5A02H	L1DC6.5A03H	L1DD6.5A02H	L1DD6.5A04H	L1DD6.5A06H
	PNP-NC	L1DC6.5B01H	L1DC6.5B02H	L1DC6.5B03H	L1DD6.5B02H	L1DD6.5B04H	L1DD6.5B06H
	NPN-NO+NC						
	PNP-NO+NC						
Brass Case	NPN-NO						
	NPN-NC						
	PNP-NO						
	PNP-NC						
	NPN-NO+NC						
	PNP-NO+NC						

General Data

Housing size	Ø6.5mm			Ø6.5mm		
Installation type	Shielded			Non-shielded		
Sensing distance(Sn: mm)	1mm	2mm	3mm	2mm	4mm	6mm
Standard sensing object	Steel 6.5x6.5x1mm	Steel 6.5x6.5x1mm	Steel 9x9x1mm	Steel 6.5x6.5x1mm	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	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	<1.5VDC	<2.0VDC	<2.0VDC	<1.5VDC	<2.0VDC	<2.0VDC
Switching frequency	2000Hz	2000Hz	1000Hz	2000Hz	1000Hz	500Hz
Response time	0.1ms/0.1ms	0.1ms/0.1ms	0.2ms/0.2ms	0.1ms/0.1ms	0.2ms/0.2ms	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		

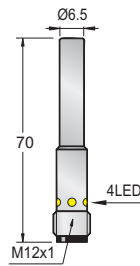
Mechanical Data

Sensing surface material	POM			POM		
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	4 Pin M12 connector			4 Pin M12 connector		
Weight	Approx. 20g			Approx. 20g		

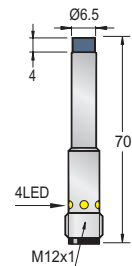


Features

- Ø6.5mm diameter
- Sn=1mm,2mm,3mm,shielded
2mm,4mm,6mm,non-shielded
- Stainless steel housing case
- NPN, PNP Output
- NO, NC Function
- M12 connector version
- Short circuit protection
- Overload protection
- Reverse polarity protection
- IP67 Protection



(Unit: mm)



(Unit: mm)

		Shielded			Non-Shielded		
		Standard Sn	Extended Sn	Long Sn	Standard Sn	Extended Sn	Long Sn
Steel Case	NPN-NO	L1DE6.5C01H	L1DE6.5C02H	L1DE6.5C03H	L1DF6.5C02H	L1DF6.5C04H	L1DF6.5C06H
	NPN-NC	L1DE6.5D01H	L1DE6.5D02H	L1DE6.5D03H	L1DF6.5D02H	L1DF6.5D04H	L1DF6.5D06H
	PNP-NO	L1DE6.5A01H	L1DE6.5A02H	L1DE6.5A03H	L1DF6.5A02H	L1DF6.5A04H	L1DF6.5A06H
	PNP-NC	L1DE6.5B01H	L1DE6.5B02H	L1DE6.5B03H	L1DF6.5B02H	L1DF6.5B04H	L1DF6.5B06H
	NPN-NO+NC PNP-NO+NC						
Brass Case	NPN-NO						
	NPN-NC						
	PNP-NO						
	PNP-NC						
	NPN-NO+NC PNP-NO+NC						

General Data							
Housing size	Ø6.5mm			Ø6.5mm			
Installation type	Shielded			Non-shielded			
Sensing distance(Sn: mm)	1mm	2mm	3mm	2mm	4mm	6mm	
Standard sensing object	Steel 6.5x6.5x1mm	Steel 6.5x6.5x1mm	Steel 9x9x1mm	Steel 6.5x6.5x1mm	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	Stainless steel			Stainless steel			
Operating voltage	10 ... 30VDC			10 ... 30VDC			

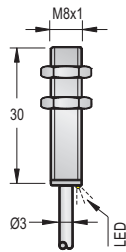
Electrical Data							
Rated operating voltage	24VDC			24VDC			
Repeated accuracy	±10%			±10%			
Ripple	<10%			<10%			
No load current	10mA			10mA			
Max. Load current	200mA			200mA			
Leakage current	<0.01mA			<0.01mA			
Voltage drop	<1.5VDC	<2.0VDC	<2.0VDC	<1.5VDC	<2.0VDC	<2.0VDC	
Switching frequency	2000Hz	2000Hz	1000Hz	2000Hz	1000Hz	500Hz	
Response time	0.1ms/0.1ms	0.1ms/0.1ms	0.2ms/0.2ms	0.1ms/0.1ms	0.2ms/0.2ms	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			

Mechanical Data							
Sensing surface material	POM			POM			
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	4 Pin M12 connector			4 Pin M12 connector			
Weight	Approx. 22g			Approx. 22g			

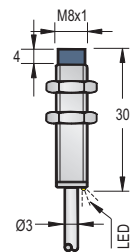


Features

- M8mm diameter
- Sn=1mm,2mm,3mm,shielded
2mm,4mm,6mm,non-shielded
- Stainless steel housing case
- NPN, PNP Output
- NO, NC Function
- Cable version
- Short circuit protection
- Overload protection
- Reverse polarity protection
- IP67 Protection



(Unit: mm)



(Unit: mm)

		Shielded			Non-Shielded		
		Standard Sn	Extended Sn	Long Sn	Standard Sn	Extended Sn	Long Sn
Steel Case	NPN-NO	L1CC08C01A	L1CC08C02A	L1CC08C03A	L1CD08C02A	L1CD08C04A	L1CD08C06A
	NPN-NC	L1CC08D01A	L1CC08D02A	L1CC08D03A	L1CD08D02A	L1CD08D04A	L1CD08D06A
	PNP-NO	L1CC08A01A	L1CC08A02A	L1CC08A03A	L1CD08A02A	L1CD08A04A	L1CD08A06A
	PNP-NC	L1CC08B01A	L1CC08B02A	L1CC08B03A	L1CD08B02A	L1CD08B04A	L1CD08B06A
	NPN-NO+NC						
	PNP-NO+NC						
Brass Case	NPN-NO						
	NPN-NC						
	PNP-NO						
	PNP-NC						
	NPN-NO+NC						
	PNP-NO+NC						

General Data		Shielded			Non-shielded		
Housing size		M8mm			M8mm		
Installation type		Shielded			Non-shielded		
Sensing distance(Sn: mm)		1mm	2mm	3mm	2mm	4mm	6mm
Standard sensing object		Steel 8x8x1mm	Steel 8x8x1mm	Steel 9x9x1mm	Steel 8x8x1mm	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		Stainless steel			Stainless steel		
Operating voltage		10 ... 30VDC			10 ... 30VDC		

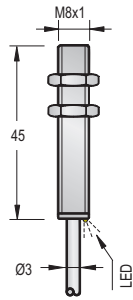
Electrical Data		Shielded			Non-shielded		
Rated operating voltage		24VDC			24VDC		
Repeated accuracy		±10%			±10%		
Ripple		<10%			<10%		
No load current		10mA			10mA		
Max. Load current		200mA			200mA		
Leakage current		<0.01mA			<0.01mA		
Voltage drop		<1.5VDC	<2.0VDC	<2.0VDC	<1.5VDC	<2.0VDC	<2.0VDC
Switching frequency		2000Hz	1000Hz	500Hz	2000Hz	1000Hz	500Hz
Response time		0.1ms/0.1ms	0.2ms/0.2ms	0.5ms/0.5ms	0.1ms/0.1ms	0.2ms/0.2ms	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		

Mechanical Data		Shielded			Non-shielded		
Sensing surface material		POM			POM		
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 (Ø3 3x0.15mm ²)			2m PVC cable (Ø3 3x0.15mm ²)		
Weight		Approx. 40g			Approx. 40g		

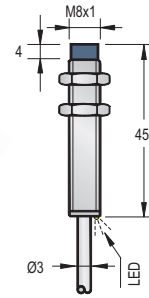


Features

- M8mm diameter
- Sn=1mm,2mm,3mm,shielded
2mm,4mm,6mm,non-shielded
- Stainless steel housing case
- NPN, PNP Output
- NO, NC Function
- Cable version
- Short circuit protection
- Overload protection
- Reverse polarity protection
- IP67 Protection



(Unit: mm)



(Unit: mm)

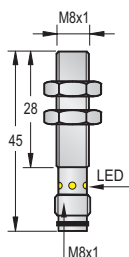
		Shielded			Non-Shielded		
		Standard Sn	Extended Sn	Long Sn	Standard Sn	Extended Sn	Long Sn
Steel Case	NPN-NO	L1CE08C01A	L1CE08C02A	L1CE08C03A	L1CF08C02A	L1CF08C04A	L1CF08C06A
	NPN-NC	L1CE08D01A	L1CE08D02A	L1CE08D03A	L1CF08D02A	L1CF08D04A	L1CF08D06A
	PNP-NO	L1CE08A01A	L1CE08A02A	L1CE08A03A	L1CF08A02A	L1CF08A04A	L1CF08A06A
	PNP-NC	L1CE08B01A	L1CE08B02A	L1CE08B03A	L1CF08B02A	L1CF08B04A	L1CF08B06A
	NPN-NO+NC						
	PNP-NO+NC						
Brass Case	NPN-NO						
	NPN-NC						
	PNP-NO						
	PNP-NC						
	NPN-NO+NC						
	PNP-NO+NC						

General Data							
Housing size	M8mm			M8mm			
Installation type	Shielded			Non-shielded			
Sensing distance(Sn: mm)	1mm	2mm	3mm	2mm	4mm	6mm	
Standard sensing object	Steel 8x8x1mm	Steel 8x8x1mm	Steel 9x9x1mm	Steel 8x8x1mm	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	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	<1.5VDC	<2.0VDC	<2.0VDC	<1.5VDC	<2.0VDC	<2.0VDC	
Switching frequency	2000Hz	1000Hz	500Hz	2000Hz	1000Hz	500Hz	
Response time	0.1ms/0.1ms	0.2ms/0.2ms	0.5ms/0.5ms	0.1ms/0.1ms	0.2ms/0.2ms	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			
Mechanical Data							
Sensing surface material	POM			POM			
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 (Ø3 3x0.15mm ²)			2m PVC cable (Ø3 3x0.15mm ²)			
Weight	Approx. 47g			Approx. 47g			

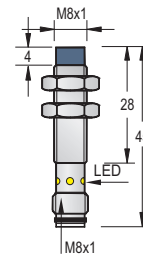


Features

- M8mm diameter
- Sn=1mm,2mm,3mm,shielded
2mm,4mm,6mm,non-shielded
- Stainless steel housing case
- NPN, PNP Output
- NO, NC Function
- M8 connector version
- Short circuit protection
- Overload protection
- Reverse polarity protection
- IP67 Protection



(Unit: mm)



(Unit: mm)

		Shielded			Non-Shielded		
		Standard Sn	Extended Sn	Long Sn	Standard Sn	Extended Sn	Long Sn
Steel Case	NPN-NO	L1CC08C01F	L1CC08C02F	L1CC08C03F	L1CD08C02F	L1CD08C04F	L1CD08C06F
	NPN-NC	L1CC08D01F	L1CC08D02F	L1CC08D03F	L1CD08D02F	L1CD08D04F	L1CD08D06F
	PNP-NO	L1CC08A01F	L1CC08A02F	L1CC08A03F	L1CD08A02F	L1CD08A04F	L1CD08A06F
	PNP-NC	L1CC08B01F	L1CC08B02F	L1CC08B03F	L1CD08B02F	L1CD08B04F	L1CD08B06F
	NPN-NO+NC						
	PNP-NO+NC						
Brass Case	NPN-NO						
	NPN-NC						
	PNP-NO						
	PNP-NC						
	NPN-NO+NC						
	PNP-NO+NC						

General Data

Housing size	M8mm			M8mm		
Installation type	Shielded			Non-shielded		
Sensing distance(Sn: mm)	1mm	2mm	3mm	2mm	4mm	6mm
Standard sensing object	Steel 8x8x1mm	Steel 8x8x1mm	Steel 9x9x1mm	Steel 8x8x1mm	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	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	<1.5VDC	<2.0VDC	<2.0VDC	<1.5VDC	<2.0VDC	<2.0VDC
Switching frequency	2000Hz	1000Hz	500Hz	2000Hz	1000Hz	500Hz
Response time	0.1ms/0.1ms	0.2ms/0.2ms	0.5ms/0.5ms	0.1ms/0.1ms	0.2ms/0.2ms	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		

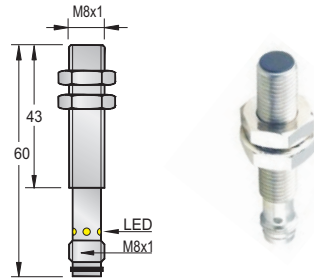
Mechanical Data

Sensing surface material	POM			POM		
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	3Pin M8 connector			3Pin M8 connector		
Weight	Approx. 12g			Approx. 12g		

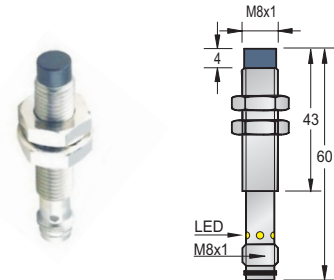


Features

- M8mm diameter
- Sn=1mm,2mm,3mm,shielded
2mm,4mm,6mm,non-shielded
- Stainless steel housing case
- NPN, PNP Output
- NO, NC Function
- M8 connector version
- Short circuit protection
- Overload protection
- Reverse polarity protection
- IP67 Protection



(Unit: mm)



(Unit: mm)

		Shielded			Non-Shielded		
		Standard Sn	Extended Sn	Long Sn	Standard Sn	Extended Sn	Long Sn
Steel Case	NPN-NO	L1CE08C01F	L1CE08C02F	L1CE08C03F	L1CF08C02F	L1CF08C04F	L1CF08C06F
	NPN-NC	L1CE08D01F	L1CE08D02F	L1CE08D03F	L1CF08D02F	L1CF08D04F	L1CF08D06F
	PNP-NO	L1CE08A01F	L1CE08A02F	L1CE08A03F	L1CF08A02F	L1CF08A04F	L1CF08A06F
	PNP-NC	L1CE08B01F	L1CE08B02F	L1CE08B03F	L1CF08B02F	L1CF08B04F	L1CF08B06F
	NPN-NO+NC						
	PNP-NO+NC						
Brass Case	NPN-NO						
	NPN-NC						
	PNP-NO						
	PNP-NC						
	NPN-NO+NC						
	PNP-NO+NC						

General Data

Housing size	M8mm			M8mm		
Installation type	Shielded			Non-shielded		
Sensing distance(Sn: mm)	1mm	2mm	3mm	2mm	4mm	6mm
Standard sensing object	Steel 8x8x1mm	Steel 8x8x1mm	Steel 9x9x1mm	Steel 8x8x1mm	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	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	<1.5VDC	<2.0VDC	<2.0VDC	<1.5VDC	<2.0VDC	<2.0VDC
Switching frequency	2000Hz	1000Hz	500Hz	2000Hz	1000Hz	500Hz
Response time	0.1ms/0.1ms	0.2ms/0.2ms	0.5ms/0.5ms	0.1ms/0.1ms	0.2ms/0.2ms	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		

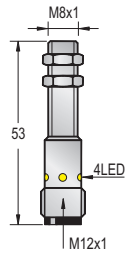
Mechanical Data

Sensing surface material	POM			POM		
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	3Pin M8 connector			3Pin M8 connector		
Weight	Approx. 15g			Approx. 15g		

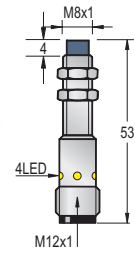


Features

- M8mm diameter
- Sn=1mm,2mm,3mm,shielded
2mm,4mm,6mm,non-shielded
- Stainless steel housing case
- NPN, PNP Output
- NO, NC Function
- M12 connector version
- Short circuit protection
- Overload protection
- Reverse polarity protection
- IP67 Protection



(Unit: mm)



(Unit: mm)

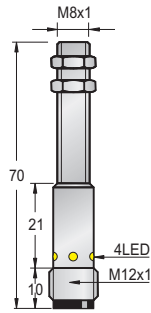
		Shielded			Non-Shielded		
		Standard Sn	Extended Sn	Long Sn	Standard Sn	Extended Sn	Long Sn
Steel Case	NPN-NO	L1CC08C01H	L1CC08C02H	L1CC08C03H	L1CD08C02H	L1CD08C04H	L1CD08C06H
	NPN-NC	L1CC08D01H	L1CC08D02H	L1CC08D03H	L1CD08D02H	L1CD08D04H	L1CD08D06H
	PNP-NO	L1CC08A01H	L1CC08A02H	L1CC08A03H	L1CD08A02H	L1CD08A04H	L1CD08A06H
	PNP-NC	L1CC08B01H	L1CC08B02H	L1CC08B03H	L1CD08B02H	L1CD08B04H	L1CD08B06H
	NPN-NO+NC						
	PNP-NO+NC						
Brass Case	NPN-NO						
	NPN-NC						
	PNP-NO						
	PNP-NC						
	NPN-NO+NC						
	PNP-NO+NC						

General Data							
Housing size	M8mm			M8mm			
Installation type	Shielded			Non-shielded			
Sensing distance(Sn: mm)	1mm	2mm	3mm	2mm	4mm	6mm	
Standard sensing object	Steel 8x8x1mm	Steel 8x8x1mm	Steel 9x9x1mm	Steel 8x8x1mm	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	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	<1.5VDC	<2.0VDC	<2.0VDC	<1.5VDC	<2.0VDC	<2.0VDC	
Switching frequency	2000Hz	1000Hz	500Hz	2000Hz	1000Hz	500Hz	
Response time	0.1ms/0.1ms	0.2ms/0.2ms	0.5ms/0.5ms	0.1ms/0.1ms	0.2ms/0.2ms	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			
Mechanical Data							
Sensing surface material	POM			POM			
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	4 Pin M12 connector			4 Pin M12 connector			
Weight	Approx. 20g			Approx. 20g			

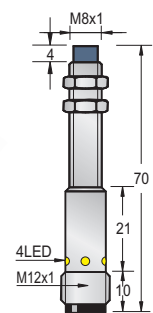


Features

- M8mm diameter
- Sn=1mm,2mm,3mm,shielded
2mm,4mm,6mm,non-shielded
- Stainless steel housing case
- NPN, PNP Output
- NO, NC Function
- M12 connector version
- Short circuit protection
- Overload protection
- Reverse polarity protection
- IP67 Protection



(Unit: mm)



(Unit: mm)

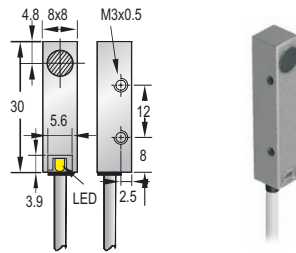
		Shielded			Non-Shielded		
		Standard Sn	Extended Sn	Long Sn	Standard Sn	Extended Sn	Long Sn
Steel Case	NPN-NO	L1CE08C01H	L1CE08C02H	L1CE08C03H	L1CF08C02H	L1CF08C04H	L1CF08C06H
	NPN-NC	L1CE08D01H	L1CE08D02H	L1CE08D03H	L1CF08D02H	L1CF08D04H	L1CF08D06H
	PNP-NO	L1CE08A01H	L1CE08A02H	L1CE08A03H	L1CF08A02H	L1CF08A04H	L1CF08A06H
	PNP-NC	L1CE08B01H	L1CE08B02H	L1CE08B03H	L1CF08B02H	L1CF08B04H	L1CF08B06H
	NPN-NO+NC						
	PNP-NO+NC						
Brass Case	NPN-NO						
	NPN-NC						
	PNP-NO						
	PNP-NC						
	NPN-NO+NC						
	PNP-NO+NC						

General Data							
Housing size	M8mm			M8mm			
Installation type	Shielded			Non-shielded			
Sensing distance(Sn: mm)	1mm	2mm	3mm	2mm	4mm	6mm	
Standard sensing object	Steel 8x8x1mm	Steel 8x8x1mm	Steel 9x9x1mm	Steel 8x8x1mm	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	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	<1.5VDC	<2.0VDC	<2.0VDC	<1.5VDC	<2.0VDC	<2.0VDC	
Switching frequency	2000Hz	1000Hz	500Hz	2000Hz	1000Hz	500Hz	
Response time	0.1ms/0.1ms	0.2ms/0.2ms	0.5ms/0.5ms	0.1ms/0.1ms	0.2ms/0.2ms	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			
Mechanical Data							
Sensing surface material	POM			POM			
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	4 Pin M12 connector			4 Pin M12 connector			
Weight	Approx. 25g			Approx. 25g			

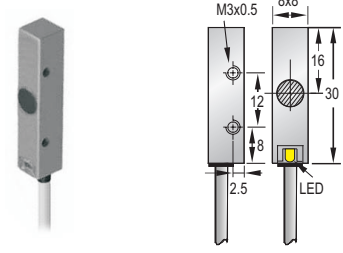


Features

- Q8x8mm diameter
- Sn=1mm,2mm,3mm,shielded
- Nickel plated brass housing case
- NPN, PNP Output
- NO, NC Function
- Cable version
- Short circuit protection
- Overload protection
- Reverse polarity protection
- IP67 Protection



(Unit: mm)



(Unit: mm)

		Shielded			Shielded		
		Standard Sn	Extended Sn	Long Sn	Standard Sn	Extended Sn	Long Sn
Brass Case	NPN-NO	L1FC08C01A	L1FC08C02A	L1FC08C03A	L1FG08C01A	L1FG08C02A	L1FG08C03A
	NPN-NC	L1FC08D01A	L1FC08D02A	L1FC08D03A	L1FG08D01A	L1FG08D02A	L1FG08D03A
	PNP-NO	L1FC08A01A	L1FC08A02A	L1FC08A03A	L1FG08A01A	L1FG08A02A	L1FG08A03A
	PNP-NC	L1FC08B01A	L1FC08B02A	L1FC08B03A	L1FG08B01A	L1FG08B02A	L1FG08B03A
	NPN-NO+NC						
	PNP-NO+NC						
PBT Case	NPN-NO						
	NPN-NC						
	PNP-NO						
	PNP-NC						
	NPN-NO+NC						
	PNP-NO+NC						

General Data

Housing size	Q8x8mm			Q8x8mm		
Installation type	Shielded			Shielded		
Sensing distance(Sn: mm)	1mm	2mm	3mm	1mm	2mm	3mm
Standard sensing object	Steel 8x8x1mm	Steel 8x8x1mm	Steel 9x9x1mm	Steel 8x8x1mm	Steel 8x8x1mm	Steel 9x9x1mm
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	Nickel plated brass			Nickel plated brass		
Operating voltage	10 ... 30VDC			10 ... 30VDC		

Electrical Data

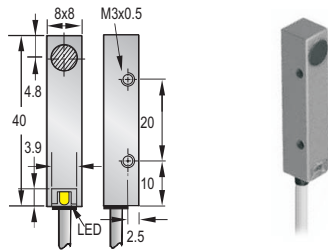
Rated operating voltage	24VDC			24VDC		
Repeated accuracy	±10%			±10%		
Ripple	<10%			<10%		
No load current	10mA			10mA		
Max. Load current	200mA			200mA		
Leakage current	<0.01mA			<0.01mA		
Voltage drop	<1.5VDC	<2.0VDC	<2.0VDC	<1.5VDC	<2.0VDC	<2.0VDC
Switching frequency	2000Hz	2000Hz	1000Hz	2000Hz	2000Hz	1000Hz
Response time	0.1ms/0.1ms	0.1ms/0.1ms	0.2ms/0.2ms	0.1ms/0.1ms	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

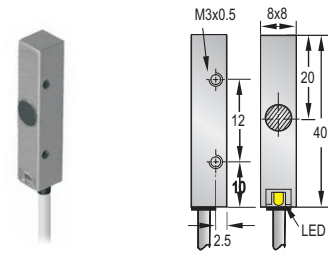
Sensing surface material	POM			POM		
Protection	IP67			IP67		
Shock rating	Shock, half-sinus, 30gn, 11ms			Shock, half-sinus, 30gn, 11ms		
Vibration rating	55Hz, 1mm ampl., 3x30min.			55Hz, 1mm ampl., 3x30min.		
EMC	IEC 60947-5-2			IEC 60947-5-2		
Accessory	2 nuts			2 nuts		
Connection	2m PVC cable (Ø3 3x0.15mm ²)			2m PVC cable (Ø3 3x0.15mm ²)		
Weight	Approx. 38g			Approx. 38g		

Features

- Q8x8mm diameter
- Sn=1mm,2mm,3mm,shielded
- Nickel plated brass housing case
- NPN, PNP Output
- NO, NC Function
- Cable version
- Short circuit protection
- Overload protection
- Reverse polarity protection
- IP67 Protection



(Unit: mm)



(Unit: mm)

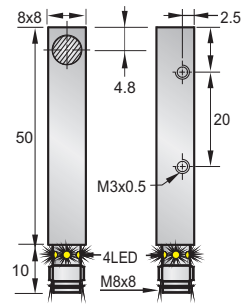
		Shielded			Shielded		
		Standard Sn	Extended Sn	Long Sn	Standard Sn	Extended Sn	Long Sn
Brass Case	NPN-NO	L1FC08C01A	L1FC08C02A	L1FC08C03A	L1FH08C01A	L1FH08C02A	L1FH08C03A
	NPN-NC	L1FC08D01A	L1FC08D02A	L1FC08D03A	L1FH08D01A	L1FH08D02A	L1FH08D03A
	PNP-NO	L1FC08A01A	L1FC08A02A	L1FC08A03A	L1FH08A01A	L1FH08A02A	L1FH08A03A
	PNP-NC	L1FC08B01A	L1FC08B02A	L1FC08B03A	L1FH08B01A	L1FH08B02A	L1FH08B03A
	NPN-NO+NC						
	PNP-NO+NC						
PBT Case	NPN-NO						
	NPN-NC						
	PNP-NO						
	PNP-NC						
	NPN-NO+NC						
	PNP-NO+NC						

General Data							
Housing size	Q8x8mm			Q8x8mm			
Installation type	Shielded			Shielded			
Sensing distance(Sn: mm)	1mm	2mm	3mm	1mm	2mm	3mm	
Standard sensing object	Steel 8x8x1mm	Steel 8x8x1mm	Steel 9x9x1mm	Steel 8x8x1mm	Steel 8x8x1mm	Steel 9x9x1mm	
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	Nickel plated brass			Nickel plated brass			
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	<1.5VDC	<2.0VDC	<2.0VDC	<1.5VDC	<2.0VDC	<2.0VDC	
Switching frequency	2000Hz	2000Hz	1000Hz	2000Hz	2000Hz	1000Hz	
Response time	0.1ms/0.1ms	0.1ms/0.1ms	0.2ms/0.2ms	0.1ms/0.1ms	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	POM			POM			
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 (Ø3 3x0.15mm ²)			2m PVC cable (Ø3 3x0.15mm ²)			
Weight	Approx. 40g			Approx. 40g			

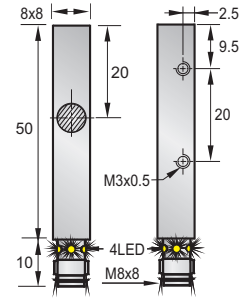


Features

- Q8x8mm diameter
- Sn=1mm,2mm,3mm,shielded
- Nickel plated brass housing case
- NPN, PNP Output
- NO, NC Function
- M8 connector version
- Short circuit protection
- Overload protection
- Reverse polarity protection
- IP67 Protection



(Unit: mm)



		Shielded			Shielded		
		Standard Sn	Extended Sn	Long Sn	Standard Sn	Extended Sn	Long Sn
Brass Case	NPN-NO	L1FC08C01F	L1FC08C02F	L1FC08C03F	L1FH08C01F	L1FH08C02F	L1FH08C03F
	NPN-NC	L1FC08D01F	L1FC08D02F	L1FC08D03F	L1FH08D01F	L1FH08D02F	L1FH08D03F
	PNP-NO	L1FC08A01F	L1FC08A02F	L1FC08A03F	L1FH08A01F	L1FH08A02F	L1FH08A03F
	PNP-NC	L1FC08B01F	L1FC08B02F	L1FC08B03F	L1FH08B01F	L1FH08B02F	L1FH08B03F
	NPN-NO+NC						
	PNP-NO+NC						
PBT Case	NPN-NO						
	NPN-NC						
	PNP-NO						
	PNP-NC						
	NPN-NO+NC						
	PNP-NO+NC						

General Data

Housing size	Q8x8mm			Q8x8mm		
Installation type	Shielded			Shielded		
Sensing distance(Sn: mm)	1mm	2mm	3mm	1mm	2mm	3mm
Standard sensing object	Steel 8x8x1mm	Steel 8x8x1mm	Steel 9x9x1mm	Steel 8x8x1mm	Steel 8x8x1mm	Steel 9x9x1mm
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	Nickel plated brass			Nickel plated brass		
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	<1.5VDC	<2.0VDC	<2.0VDC	<1.5VDC	<2.0VDC	<2.0VDC
Switching frequency	2000Hz	2000Hz	1000Hz	2000Hz	2000Hz	1000Hz
Response time	0.1ms/0.1ms	0.1ms/0.1ms	0.2ms/0.2ms	0.1ms/0.1ms	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		

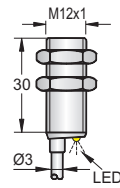
Mechanical Data

Sensing surface material	POM			POM		
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	3Pin M8 connector			3Pin M8 connector		
Weight	Approx. 38g			Approx. 38g		

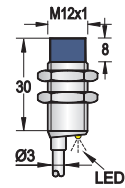


Features

- M12mm diameter
- Sn=2mm,4mm,6mm,shielded
4mm,8mm,10mm,non-shielded
- Nickel plated brass housing case
PBT Resin housing case
- NPN, PNP Output
- NO, NC Function
- Cable version
- Short circuit protection
Overload protection
Reverse polarity protection
- IP67 Protection



(Unit: mm)



(Unit: mm)

		Shielded			Non-Shielded		
		Standard Sn	Extended Sn	Long Sn	Standard Sn	Extended Sn	Long Sn
Brass Case	NPN-NO	L1AC12C02A	L1AC12C04A	L1AC12C06A	L1AD12C04A	L1AD12C08A	L1AD12C10A
	NPN-NC	L1AC12D02A	L1AC12D04A	L1AC12D06A	L1AD12D04A	L1AD12D08A	L1AD12D10A
	PNP-NO	L1AC12A02A	L1AC12A04A	L1AC12A06A	L1AD12A04A	L1AD12A08A	L1AD12A10A
	PNP-NC	L1AC12B02A	L1AC12B04A	L1AC12B06A	L1AD12B04A	L1AD12B08A	L1AD12B10A
	NPN-NO+NC PNP-NO+NC						
PBT Case	NPN-NO	L1MC12C02A	L1MC12C04A	L1MC12C06A	L1MD12C04A	L1MD12C08A	L1MD12C10A
	NPN-NC	L1MC12D02A	L1MC12D04A	L1MC12D06A	L1MD12D04A	L1MD12D08A	L1MD12D10A
	PNP-NO	L1MC12A02A	L1MC12A04A	L1MC12A06A	L1MD12A04A	L1MD12A08A	L1MD12A10A
	PNP-NC	L1MC12B02A	L1MC12B04A	L1MC12B06A	L1MD12B04A	L1MD12B08A	L1MD12B10A
	NPN-NO+NC PNP-NO+NC						

General Data

Housing size	M12mm			M12mm		
Installation type	Shielded			Shielded		
Sensing distance(Sn: mm)	2mm	4mm	6mm	4mm	8mm	10mm
Standard sensing object	Steel 12x12x1mm	Steel 12x12x1mm	Steel 18x18x1mm	Steel 12x12x1mm	Steel 24x24x1mm	Steel 30x30x1mm
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	Nickel plated brass/PBT Resin			Nickel plated brass/PBT Resin		
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	<1.5VDC	<2.0VDC	<2.0VDC	<1.5VDC	<2.0VDC	<2.0VDC
Switching frequency	2000Hz	1000Hz	800Hz	1000Hz	500Hz	400Hz
Response time	0.1ms/0.1ms	0.2ms/0.2ms	0.2ms/0.2ms	0.2ms/0.2ms	0.3ms/0.3ms	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		

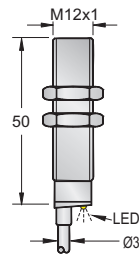
Mechanical Data

Sensing surface material	PBT			PBT		
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 (Ø3 3x0.34mm ²)			2m PVC cable (Ø3 3x0.34mm ²)		
Weight	Approx. 62g			Approx. 62g		

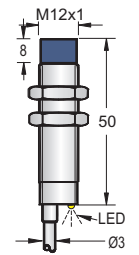


Features

- M12mm diameter
- Sn=2mm,4mm,6mm,shielded
4mm,8mm,10mm,non-shielded
- Nickel plated brass housing case
PBT Resin housing case
- NPN, PNP Output
- NO, NC Function
- Cable version
- Short circuit protection
Overload protection
Reverse polarity protection
- IP67 Protection



(Unit: mm)



(Unit: mm)

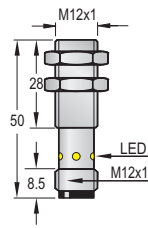
		Shielded			Non-Shielded		
		Standard Sn	Extended Sn	Long Sn	Standard Sn	Extended Sn	Long Sn
Brass Case	NPN-NO	L1AE12C02A	L1AE12C04A	L1AE12C06A	L1AF12C04A	L1AF12C08A	L1AF12C10A
	NPN-NC	L1AE12D02A	L1AE12D04A	L1AE12D06A	L1AF12D04A	L1AF12D08A	L1AF12D10A
	PNP-NO	L1AE12A02A	L1AE12A04A	L1AE12A06A	L1AF12A04A	L1AF12A08A	L1AF12A10A
	PNP-NC	L1AE12B02A	L1AE12B04A	L1AE12B06A	L1AF12B04A	L1AF12B08A	L1AF12B10A
	NPN-NO+NC	L1AE12F02A	L1AE12F04A		L1AF12F04A	L1AF12F08A	
	PNP-NO+NC	L1AE12E02A	L1AE12E04A		L1AF12E04A	L1AF12E08A	
PBT Case	NPN-NO	L1ME12C02A	L1ME12C04A	L1ME12C06A	L1MF12C04A	L1MF12C08A	L1MF12C10A
	NPN-NC	L1ME12D02A	L1ME12D04A	L1ME12D06A	L1MF12D04A	L1MF12D08A	L1MF12D10A
	PNP-NO	L1ME12A02A	L1ME12A04A	L1ME12A06A	L1MF12A04A	L1MF12A08A	L1MF12A10A
	PNP-NC	L1ME12B02A	L1ME12B04A	L1ME12B06A	L1MF12B04A	L1MF12B08A	L1MF12B10A
	NPN-NO+NC	L1ME12F02A	L1ME12F04A		L1MF12F04A	L1MF12F08A	
	PNP-NO+NC	L1ME12E02A	L1ME12E04A		L1MF12E04A	L1MF12E08A	

General Data							
Housing size	M12mm			M12mm			
Installation type	Shielded			Shielded			
Sensing distance(Sn: mm)	2mm	4mm	6mm	4mm	8mm	10mm	
Standard sensing object	Steel 12x12x1mm	Steel 12x12x1mm	Steel 18x18x1mm	Steel 12x12x1mm	Steel 24x24x1mm	Steel 30x30x1mm	
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	Nickel plated brass/PBT Resin			Nickel plated brass/PBT Resin			
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	<1.5VDC	<2.0VDC	<2.0VDC	<1.5VDC	<2.0VDC	<2.0VDC	
Switching frequency	2000Hz	1000Hz	800Hz	1000Hz	500Hz	400Hz	
Response time	0.1ms/0.1ms	0.2ms/0.2ms	0.2ms/0.2ms	0.2ms/0.2ms	0.3ms/0.3ms	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			
Mechanical Data							
Sensing surface material	PBT			PBT			
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 ² /4x0.34mm ²)			2m PVC cable (Ø4 3x0.34mm ² /4x0.34mm ²)			
Weight	Approx. 67g			Approx. 67g			

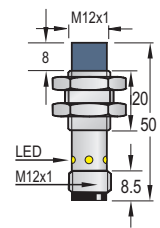


Features

- M12mm diameter
- Sn=2mm,4mm,6mm,shielded
4mm,8mm,10mm,non-shielded
- Nickel plated brass housing case
PBT Resin housing case
- NPN, PNP Output
- NO, NC Function
- M12 connector version
- Short circuit protection
- Overload protection
- Reverse polarity protection
- IP67 Protection



(Unit: mm)



(Unit: mm)

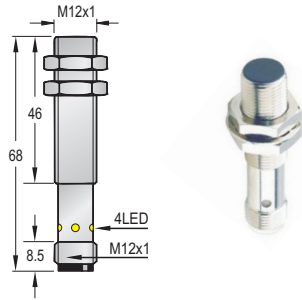
		Shielded			Non-Shielded		
		Standard Sn	Extended Sn	Long Sn	Standard Sn	Extended Sn	Long Sn
Brass Case	NPN-NO	L1AC12C02H	L1AC12C04H	L1AC12C06H	L1AD12C04H	L1AD12C08H	L1AD12C10H
	NPN-NC	L1AC12D02H	L1AC12D04H	L1AC12D06H	L1AD12D04H	L1AD12D08H	L1AD12D10H
	PNP-NO	L1AC12A02H	L1AC12A04H	L1AC12A06H	L1AD12A04H	L1AD12A08H	L1AD12A10H
	PNP-NC	L1AC12B02H	L1AC12B04H	L1AC12B06H	L1AD12B04H	L1AD12B08H	L1AD12B10H
	NPN-NO+NC PNP-NO+NC						
PBT Case	NPN-NO	L1MC12C02H	L1MC12C04H	L1MC12C06H	L1MD12C04H	L1MD12C08H	L1MD12C10H
	NPN-NC	L1MC12D02H	L1MC12D04H	L1MC12D06H	L1MD12D04H	L1MD12D08H	L1MD12D10H
	PNP-NO	L1MC12A02H	L1MC12A04H	L1MC12A06H	L1MD12A04H	L1MD12A08H	L1MD12A10H
	PNP-NC	L1MC12B02H	L1MC12B04H	L1MC12B06H	L1MD12B04H	L1MD12B08H	L1MD12B10H
	NPN-NO+NC PNP-NO+NC						

General Data							
Housing size	M12mm			M12mm			
Installation type	Shielded			Shielded			
Sensing distance(Sn: mm)	2mm	4mm	6mm	4mm	8mm	10mm	
Standard sensing object	Steel 12x12x1mm	Steel 12x12x1mm	Steel 18x18x1mm	Steel 12x12x1mm	Steel 24x24x1mm	Steel 30x30x1mm	
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	Nickel plated brass/PBT Resin			Nickel plated brass/PBT Resin			
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	<1.5VDC	<2.0VDC	<2.0VDC	<1.5VDC	<2.0VDC	<2.0VDC	
Switching frequency	2000Hz	1000Hz	800Hz	1000Hz	500Hz	400Hz	
Response time	0.1ms/0.1ms	0.2ms/0.2ms	0.2ms/0.2ms	0.2ms/0.2ms	0.3ms/0.3ms	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			
Mechanical Data							
Sensing surface material	PBT			PBT			
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	4 Pin M12 connector			4 Pin M12 connector			
Weight	Approx. 25g			Approx. 23g			

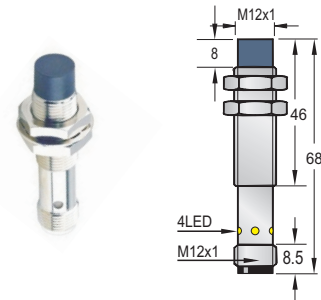


Features

- M12mm diameter
- Sn=2mm,4mm,6mm,shielded
4mm,8mm,10mm,non-shielded
- Nickel plated brass housing case
PBT Resin housing case
- NPN, PNP Output
- NO, NC Function
- M12 connector version
- Short circuit protection
Overload protection
Reverse polarity protection
- IP67 Protection



(Unit: mm)



(Unit: mm)

		Shielded			Non-Shielded		
		Standard Sn	Extended Sn	Long Sn	Standard Sn	Extended Sn	Long Sn
Brass Case	NPN-NO	L1AE12C02H	L1AE12C04H	L1AE12C06H	L1AF12C04H	L1AF12C08H	L1AF12C10H
	NPN-NC	L1AE12D02H	L1AE12D04H	L1AE12D06H	L1AF12D04H	L1AF12D08H	L1AF12D10H
	PNP-NO	L1AE12A02H	L1AE12A04H	L1AE12A06H	L1AF12A04H	L1AF12A08H	L1AF12A10H
	PNP-NC	L1AE12B02H	L1AE12B04H	L1AE12B06H	L1AF12B04H	L1AF12B08H	L1AF12B10H
	NPN-NO+NC	L1AE12F02H	L1AE12F04H		L1AF12F04H	L1AF12F08H	
	PNP-NO+NC	L1AE12E02H	L1AE12E04H		L1AF12E04H	L1AF12E08H	
PBT Case	NPN-NO	L1ME12C02H	L1ME12C04H	L1ME12C06H	L1MF12C04H	L1MF12C08H	L1MF12C10H
	NPN-NC	L1ME12D02H	L1ME12D04H	L1ME12D06H	L1MF12D04H	L1MF12D08H	L1MF12D10H
	PNP-NO	L1ME12A02H	L1ME12A04H	L1ME12A06H	L1MF12A04H	L1MF12A08H	L1MF12A10H
	PNP-NC	L1ME12B02H	L1ME12B04H	L1ME12B06H	L1MF12B04H	L1MF12B08H	L1MF12B10H
	NPN-NO+NC	L1ME12F02H	L1ME12F04H		L1MF12F04H	L1MF12F08H	
	PNP-NO+NC	L1ME12E02H	L1ME12E04H		L1MF12E04H	L1MF12E08H	

General Data

Housing size	M12mm			M12mm		
Installation type	Shielded			Shielded		
Sensing distance(Sn: mm)	2mm	4mm	6mm	4mm	8mm	10mm
Standard sensing object	Steel 12x12x1mm	Steel 12x12x1mm	Steel 18x18x1mm	Steel 12x12x1mm	Steel 24x24x1mm	Steel 30x30x1mm
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	Nickel plated brass/PBT Resin			Nickel plated brass/PBT Resin		
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	<1.5VDC	<2.0VDC	<2.0VDC	<1.5VDC	<2.0VDC	<2.0VDC
Switching frequency	2000Hz	1000Hz	800Hz	1000Hz	500Hz	400Hz
Response time	0.1ms/0.1ms	0.2ms/0.2ms	0.2ms/0.2ms	0.2ms/0.2ms	0.3ms/0.3ms	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		

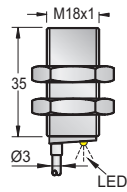
Mechanical Data

Sensing surface material	PBT			PBT		
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	4 Pin M12 connector			4 Pin M12 connector		
Weight	Approx. 31g			Approx. 30g		

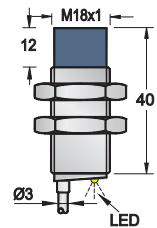


Features

- M18mm diameter
- Sn=5mm, 8mm, 12mm, shielded
8mm, 12mm, 20mm, non-shielded
- Nickel plated brass housing case
PBT Resin housing case
- NPN, PNP Output
- NO, NC, NO+NC Function
- Cable version
- Short circuit protection
Overload protection
Reverse polarity protection
- IP67 Protection



(Unit: mm)



(Unit: mm)

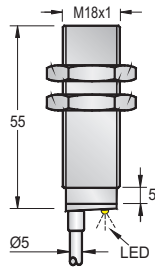
		Shielded			Non-Shielded		
		Standard Sn	Extended Sn	Long Sn	Standard Sn	Extended Sn	Long Sn
Brass Case	NPN-NO	L1AC18C05A	L1AC18C08A	L1AC18C12A	L1AD18C08A	L1AD18C12A	L1AD18C20A
	NPN-NC	L1AC18D05A	L1AC18D08A	L1AC18D12A	L1AD18D08A	L1AD18D12A	L1AD18D20A
	PNP-NO	L1AC18A05A	L1AC18A08A	L1AC18A12A	L1AD18A08A	L1AD18A12A	L1AD18A20A
	PNP-NC	L1AC18B05A	L1AC18B08A	L1AC18B12A	L1AD18B08A	L1AD18B12A	L1AD18B20A
	NPN-NO+NC	L1AC18F05A	L1AC18F08A		L1AD18F08A	L1AD18F12A	
	PNP-NO+NC	L1AC18E05A	L1AC18E08A		L1AD18E08A	L1AD18E12A	
PBT Case	NPN-NO	L1MC18C05A	L1MC18C08A	L1MC18C12A	L1MD18C08A	L1MD18C12A	L1MD18C20A
	NPN-NC	L1MC18D05A	L1MC18D08A	L1MC18D12A	L1MD18D08A	L1MD18D12A	L1MD18D20A
	PNP-NO	L1MC18A05A	L1MC18A08A	L1MC18A12A	L1MD18A08A	L1MD18A12A	L1MD18A20A
	PNP-NC	L1MC18B05A	L1MC18B08A	L1MC18B12A	L1MD18B08A	L1MD18B12A	L1MD18B20A
	NPN-NO+NC	L1MC18F05A	L1MC18F08A		L1MD18F08A	L1MD18F12A	
	PNP-NO+NC	L1MC18E05A	L1MC18E08A		L1MD18E08A	L1MD18E12A	

General Data							
Housing size	M18mm			M18mm			
Installation type	Shielded			Non-shielded			
Sensing distance(Sn: mm)	5mm	8mm	12mm	8mm	12mm	20mm	
Standard sensing object	Steel 18x18x1mm	Steel 24x24x1mm	Steel 36x36x1mm	Steel 24x24x1mm	Steel 36x36x1mm	Steel 60x60x1mm	
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	Nickel plated brass/PBT Resin			Nickel plated brass/PBT Resin			
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	<1.5VDC	<2.0VDC	<2.0VDC	<1.5VDC	<2.0VDC	<2.0VDC	
Switching frequency	1000Hz	500Hz	300Hz	500Hz	150Hz	100Hz	
Response time	0.2ms/0.2ms	0.5ms/0.5ms	0.5ms/0.5ms	0.5ms/0.5ms	1ms/1ms	1ms/1ms	
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	PBT			PBT			
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)			2m PVC cable (Ø5 3x0.34mm ² /4x0.34mm ²)			
Weight	Approx. 134g			Approx. 132g			

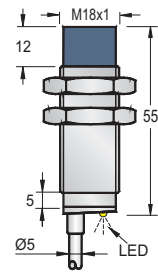


Features

- M18mm diameter
- Sn=5mm, 8mm, 12mm, shielded
8mm, 12mm, 20mm, non-shielded
- Nickel plated brass housing case
PBT Resin housing case
- NPN, PNP Output
- NO, NC, NO+NC Function
- Cable version
- Short circuit protection
Overload protection
Reverse polarity protection
- IP67 Protection



(Unit: mm)



(Unit: mm)



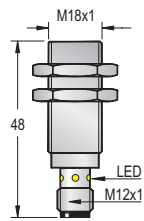
		Shielded			Non-Shielded		
		Standard Sn	Extended Sn	Long Sn	Standard Sn	Extended Sn	Long Sn
Brass Case	NPN-NO	L1AE18C05A	L1AE18C08A	L1AE18C12A	L1AF18C08A	L1AF18C12A	L1AF18C20A
	NPN-NC	L1AE18D05A	L1AE18D08A	L1AE18D12A	L1AF18D08A	L1AF18D12A	L1AF18D20A
	PNP-NO	L1AE18A05A	L1AE18A08A	L1AE18A12A	L1AF18A08A	L1AF18A12A	L1AF18A20A
	PNP-NC	L1AE18B05A	L1AE18B08A	L1AE18B12A	L1AF18B08A	L1AF18B12A	L1AF18B20A
	NPN-NO+NC	L1AE18F05A	L1AE18F08A	L1AE18F12A	L1AF18F08A	L1AF18F12A	L1AF18F20A
	PNP-NO+NC	L1AE18E05A	L1AE18E08A	L1AE18E12A	L1AF18E08A	L1AF18E12A	L1AF18E20A
PBT Case	NPN-NO	L1ME18C05A	L1ME18C08A	L1ME18C12A	L1MF18C08A	L1MF18C12A	L1MF18C20A
	NPN-NC	L1ME18D05A	L1ME18D08A	L1ME18D12A	L1MF18D08A	L1MF18D12A	L1MF18D20A
	PNP-NO	L1ME18A05A	L1ME18A08A	L1ME18A12A	L1MF18A08A	L1MF18A12A	L1MF18A20A
	PNP-NC	L1ME18B05A	L1ME18B08A	L1ME18B12A	L1MF18B08A	L1MF18B12A	L1MF18B20A
	NPN-NO+NC	L1ME18F05A	L1ME18F08A	L1ME18F12A	L1MF18F08A	L1MF18F12A	L1MF18F20A
	PNP-NO+NC	L1ME18E05A	L1ME18E08A	L1ME18E12A	L1MF18E08A	L1MF18E12A	L1MF18E20A

General Data							
Housing size	M18mm			M18mm			
Installation type	Shielded			Non-shielded			
Sensing distance(Sn: mm)	5mm	8mm	12mm	8mm	12mm	20mm	
Standard sensing object	Steel 18x18x1mm	Steel 24x24x1mm	Steel 36x36x1mm	Steel 24x24x1mm	Steel 36x36x1mm	Steel 60x60x1mm	
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	Nickel plated brass/PBT Resin			Nickel plated brass/PBT Resin			
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	<1.5VDC	<2.0VDC	<2.0VDC	<1.5VDC	<2.0VDC	<2.0VDC	
Switching frequency	1000Hz	500Hz	300Hz	500Hz	150Hz	100Hz	
Response time	0.2ms/0.2ms	0.5ms/0.5ms	0.5ms/0.5ms	0.5ms/0.5ms	1ms/1ms	1ms/1ms	
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	PBT			PBT			
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)			2m PVC cable (Ø5 3x0.34mm ² /4x0.34mm ²)			
Weight	Approx. 153g			Approx. 144g			

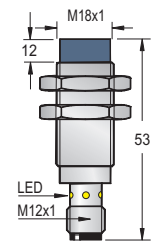


Features

- M18mm diameter
- Sn=5mm, 8mm, 12mm, shielded
8mm, 12mm, 20mm, non-shielded
- Nickel plated brass housing case
PBT Resin housing case
- NPN, PNP Output
- NO, NC, NO+NC Function
- M12 connector version
- Short circuit protection
- Overload protection
- Reverse polarity protection
- IP67 Protection



(Unit: mm)



(Unit: mm)

		Shielded			Non-Shielded		
		Standard Sn	Extended Sn	Long Sn	Standard Sn	Extended Sn	Long Sn
Brass Case	NPN-NO	L1AC18C05H	L1AC18C08H	L1AC18C12H	L1AD18C08H	L1AD18C12H	L1AD18C20H
	NPN-NC	L1AC18D05H	L1AC18D08H	L1AC18D12H	L1AD18D08H	L1AD18D12H	L1AD18D20H
	PNP-NO	L1AC18A05H	L1AC18A08H	L1AC18A12H	L1AD18A08H	L1AD18A12H	L1AD18A20H
	PNP-NC	L1AC18B05H	L1AC18B08H	L1AC18B12H	L1AD18B08H	L1AD18B12H	L1AD18B20H
	NPN-NO+NC	L1AC18F05H	L1AC18F08H		L1AD18F08H	L1AD18F12H	
	PNP-NO+NC	L1AC18E05H	L1AC18E08H		L1AD18E08H	L1AD18E12H	
PBT Case	NPN-NO	L1MC18C05H	L1MC18C08H	L1MC18C12H	L1MD18C08H	L1MD18C12H	L1MD18C20H
	NPN-NC	L1MC18D05H	L1MC18D08H	L1MC18D12H	L1MD18D08H	L1MD18D12H	L1MD18D20H
	PNP-NO	L1MC18A05H	L1MC18A08H	L1MC18A12H	L1MD18A08H	L1MD18A12H	L1MD18A20H
	PNP-NC	L1MC18B05H	L1MC18B08H	L1MC18B12H	L1MD18B08H	L1MD18B12H	L1MD18B20H
	NPN-NO+NC	L1MC18F05H	L1MC18F08H		L1MD18F08H	L1MD18F12H	
	PNP-NO+NC	L1MC18E05H	L1MC18E08H		L1MD18E08H	L1MD18E12H	

General Data							
Housing size	M18mm			M18mm			
Installation type	Shielded			Non-shielded			
Sensing distance(Sn: mm)	5mm	8mm	12mm	8mm	12mm	20mm	
Standard sensing object	Steel 18x18x1mm	Steel 24x24x1mm	Steel 36x36x1mm	Steel 24x24x1mm	Steel 36x36x1mm	Steel 60x60x1mm	
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	Nickel plated brass/PBT Resin			Nickel plated brass/PBT Resin			
Operating voltage	10 ... 30VDC(55Vdc can also be customized)			10 ... 30VDC(55Vdc can also be customized)			

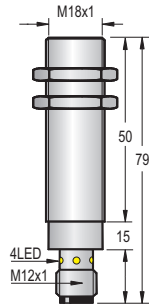
Electrical Data							
Rated operating voltage	24VDC			24VDC			
Repeated accuracy	±10%			±10%			
Ripple	<10%			<10%			
No load current	10mA			10mA			
Max. Load current	200mA			200mA			
Leakage current	<0.01mA			<0.01mA			
Voltage drop	<1.5VDC	<2.0VDC	<2.0VDC	<1.5VDC	<2.0VDC	<2.0VDC	
Switching frequency	1000Hz	500Hz	300Hz	500Hz	150Hz	100Hz	
Response time	0.2ms/0.2ms	0.5ms/0.5ms	0.5ms/0.5ms	0.5ms/0.5ms	1ms/1ms	1ms/1ms	
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	PBT			PBT			
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	4 Pin M12 connector			4 Pin M12 connector			
Weight	Approx. 52g			Approx. 48g			

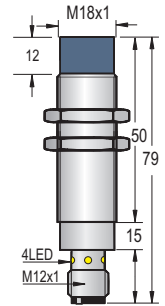


Features

- M18mm diameter
- Sn=5mm, 8mm, 12mm, shielded
8mm, 12mm, 20mm, non-shielded
- Nickel plated brass housing case
PBT Resin housing case
- NPN, PNP Output
- NO, NC, NO+NC Function
- M12 connector version
- Short circuit protection
Overload protection
Reverse polarity protection
- IP67 Protection



(Unit: mm)



(Unit: mm)

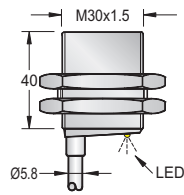
		Shielded			Non-Shielded		
		Standard Sn	Extended Sn	Long Sn	Standard Sn	Extended Sn	Long Sn
Brass Case	NPN-NO	L1AE18C05H	L1AE18C08H	L1AE18C12H	L1AF18C08H	L1AF18C12H	L1AF18C20H
	NPN-NC	L1AE18D05H	L1AE18D08H	L1AE18D12H	L1AF18D08H	L1AF18D12H	L1AF18D20H
	PNP-NO	L1AE18A05H	L1AE18A08H	L1AE18A12H	L1AF18A08H	L1AF18A12H	L1AF18A20H
	PNP-NC	L1AE18B05H	L1AE18B08H	L1AE18B12H	L1AF18B08H	L1AF18B12H	L1AF18B20H
	NPN-NO+NC	L1AE18F05H	L1AE18F08H	L1AE18F12H	L1AF18F08H	L1AF18F12H	L1AF18F20H
	PNP-NO+NC	L1AE18E05H	L1AE18E08H	L1AE18E12H	L1AF18E08H	L1AF18E12H	L1AF18E20H
PBT Case	NPN-NO	L1ME18C05H	L1ME18C08H	L1ME18C12H	L1MF18C08H	L1MF18C12H	L1MF18C20H
	NPN-NC	L1ME18D05H	L1ME18D08H	L1ME18D12H	L1MF18D08H	L1MF18D12H	L1MF18D20H
	PNP-NO	L1ME18A05H	L1ME18A08H	L1ME18A12H	L1MF18A08H	L1MF18A12H	L1MF18A20H
	PNP-NC	L1ME18B05H	L1ME18B08H	L1ME18B12H	L1MF18B08H	L1MF18B12H	L1MF18B20H
	NPN-NO+NC	L1ME18F05H	L1ME18F08H	L1ME18F12H	L1MF18F08H	L1MF18F12H	L1MF18F20H
	PNP-NO+NC	L1ME18E05H	L1ME18E08H	L1ME18E12H	L1MF18E08H	L1MF18E12H	L1MF18E20H

General Data							
Housing size	M18mm			M18mm			
Installation type	Shielded			Non-shielded			
Sensing distance(Sn: mm)	5mm	8mm	12mm	8mm	12mm	20mm	
Standard sensing object	Steel 18x18x1mm	Steel 24x24x1mm	Steel 36x36x1mm	Steel 24x24x1mm	Steel 36x36x1mm	Steel 60x60x1mm	
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	Nickel plated brass/PBT Resin			Nickel plated brass/PBT Resin			
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	<1.5VDC	<2.0VDC	<2.0VDC	<1.5VDC	<2.0VDC	<2.0VDC	
Switching frequency	1000Hz	500Hz	300Hz	500Hz	150Hz	100Hz	
Response time	0.2ms/0.2ms	0.5ms/0.5ms	0.5ms/0.5ms	0.5ms/0.5ms	1ms/1ms	1ms/1ms	
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	PBT			PBT			
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	4 Pin M12 connector			4 Pin M12 connector			
Weight	Approx. 94g			Approx. 91g			

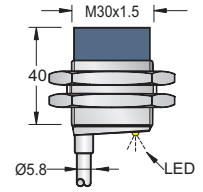


Features

- M30mm diameter
- Sn=10mm,16mm,22mm,shielded
15mm,25mm,40mm,non-shielded
- Nickel plated brass housing case
PBT Resin housing case
- NPN, PNP Output
- NO, NC, NO+NC Function
- Cable version
- Short circuit protection
Overload protection
Reverse polarity protection
- IP67 Protection



(Unit: mm)



(Unit: mm)

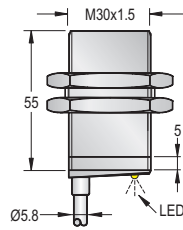
		Shielded			Non-Shielded		
		Standard Sn	Extended Sn	Long Sn	Standard Sn	Extended Sn	Long Sn
Brass Case	NPN-NO	L1AC30C10A	L1AC30C16A	L1AC30C22A	L1AD30C15A	L1AD30C25A	L1AD30C40A
	NPN-NC	L1AC30D10A	L1AC30D16A	L1AC30D22A	L1AD30D15A	L1AD30D25A	L1AD30D40A
	PNP-NO	L1AC30A10A	L1AC30A16A	L1AC30A22A	L1AD30A15A	L1AD30A25A	L1AD30A40A
	PNP-NC	L1AC30B10A	L1AC30B16A	L1AC30B22A	L1AD30B15A	L1AD30B25A	L1AD30B40A
	NPN-NO+NC	L1AC30F10A	L1AC30F16A		L1AD30F15A	L1AD30F25A	
	PNP-NO+NC	L1AC30E10A	L1AC30E16A		L1AD30E15A	L1AD30E25A	
PBT Case	NPN-NO	L1MC30C10A	L1MC30C16A	L1MC30C22A	L1MD30C15A	L1MD30C25A	L1MD30C40A
	NPN-NC	L1MC30D10A	L1MC30D16A	L1MC30D22A	L1MD30D15A	L1MD30D25A	L1MD30D40A
	PNP-NO	L1MC30A10A	L1MC30A16A	L1MC30A22A	L1MD30A15A	L1MD30A25A	L1MD30A40A
	PNP-NC	L1MC30B10A	L1MC30B16A	L1MC30B22A	L1MD30B15A	L1MD30B25A	L1MD30B40A
	NPN-NO+NC	L1MC30F10A	L1MC30F16A		L1MD30F15A	L1MD30F25A	
	PNP-NO+NC	L1MC30E10A	L1MC30E16A		L1MD30E15A	L1MD30E25A	

General Data							
Housing size	M30mm			M30mm			
Installation type	Shielded			Non-shielded			
Sensing distance(Sn: mm)	10mm	16mm	22mm	15mm	25mm	40mm	
Standard sensing object	Steel 30x30x1mm	Steel 48x48x1mm	Steel 66x66x1mm	Steel 45x45x1mm	Steel 75x75x1mm	Steel 120x120x1mm	
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	Nickel plated brass/PBT Resin			Nickel plated brass/PBT Resin			
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	<1.5VDC	<2.0VDC	<2.0VDC	<1.5VDC	<2.0VDC	<2.0VDC	
Switching frequency	300Hz	150Hz	100Hz	150Hz	100Hz	100Hz	
Response time	0.5ms/0.5ms	1ms/1ms	1ms/1ms	1ms/1ms	1ms/1ms	1ms/1ms	
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	PBT			PBT			
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)			2m PVC cable (Ø5.8 3x0.5mm ² /4x0.5mm ²)			
Weight	Approx. 182g			Approx. 180g			

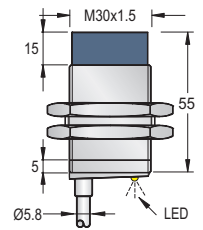


Features

- M30mm diameter
- Sn=10mm,16mm,22mm,shielded
15mm,25mm,40mm,non-shielded
- Nickel plated brass housing case
PBT Resin housing case
- NPN, PNP Output
- NO, NC, NO+NC Function
- Cable version
- Short circuit protection
Overload protection
Reverse polarity protection
- IP67 Protection



(Unit: mm)



(Unit: mm)

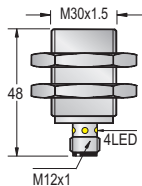
		Shielded			Non-Shielded		
		Standard Sn	Extended Sn	Long Sn	Standard Sn	Extended Sn	Long Sn
Brass Case	NPN-NO	L1AE30C10A	L1AE30C16A	L1AE30C22A	L1AF30C15A	L1AF30C25A	L1AF30C40A
	NPN-NC	L1AE30D10A	L1AE30D16A	L1AE30D22A	L1AF30D15A	L1AF30D25A	L1AF30D40A
	PNP-NO	L1AE30A10A	L1AE30A16A	L1AE30A22A	L1AF30A15A	L1AF30A25A	L1AF30A40A
	PNP-NC	L1AE30B10A	L1AE30B16A	L1AE30B22A	L1AF30B15A	L1AF30B25A	L1AF30B40A
	NPN-NO+NC	L1AE30F10A	L1AE30F16A	L1AE30F22A	L1AF30F15A	L1AF30F25A	L1AF30F40A
	PNP-NO+NC	L1AE30E10A	L1AE30E16A	L1AE30E22A	L1AF30E15A	L1AF30E25A	L1AF30E40A
PBT Case	NPN-NO	L1ME30C10A	L1ME30C16A	L1ME30C22A	L1MF30C15A	L1MF30C25A	L1MF30C40A
	NPN-NC	L1ME30D10A	L1ME30D16A	L1ME30D22A	L1MF30D15A	L1MF30D25A	L1MF30D40A
	PNP-NO	L1ME30A10A	L1ME30A16A	L1ME30A22A	L1MF30A15A	L1MF30A25A	L1MF30A40A
	PNP-NC	L1ME30B10A	L1ME30B16A	L1ME30B22A	L1MF30B15A	L1MF30B25A	L1MF30B40A
	NPN-NO+NC	L1ME30F10A	L1ME30F16A	L1ME30F22A	L1MF30F15A	L1MF30F25A	L1MF30F40A
	PNP-NO+NC	L1ME30E10A	L1ME30E16A	L1ME30E22A	L1MF30E15A	L1MF30E25A	L1MF30E40A

General Data							
Housing size	M30mm			M30mm			
Installation type	Shielded			Non-shielded			
Sensing distance(Sn: mm)	10mm	16mm	22mm	15mm	25mm	40mm	
Standard sensing object	Steel 30x30x1mm	Steel 48x48x1mm	Steel 66x66x1mm	Steel 45x45x1mm	Steel 75x75x1mm	Steel 120x120x1mm	
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	Nickel plated brass/PBT Resin			Nickel plated brass/PBT Resin			
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	<1.5VDC	<2.0VDC	<2.0VDC	<1.5VDC	<2.0VDC	<2.0VDC	
Switching frequency	300Hz	150Hz	100Hz	150Hz	100Hz	100Hz	
Response time	0.5ms/0.5ms	1ms/1ms	1ms/1ms	1ms/1ms	1ms/1ms	1ms/1ms	
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	PBT			PBT			
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)			2m PVC cable (Ø5.8 3x0.5mm ² /4x0.5mm ²)			
Weight	Approx. 217g			Approx. 207g			

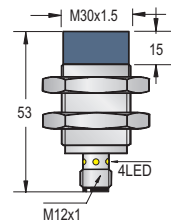


Features

- M30mm diameter
- Sn=10mm,16mm,22mm,shielded
15mm,25mm,40mm,non-shielded
- Nickel plated brass housing case
PBT Resin housing case
- NPN, PNP Output
- NO, NC, NO+NC Function
- M12 connector version
- Short circuit protection
Overload protection
Reverse polarity protection
- IP67 Protection



(Unit: mm)



(Unit: mm)

		Shielded			Non-Shielded		
		Standard Sn	Extended Sn	Long Sn	Standard Sn	Extended Sn	Long Sn
Brass Case	NPN-NO	L1AC30C10H	L1AC30C16H	L1AC30C22H	L1AD30C15H	L1AD30C25H	L1AD30C40H
	NPN-NC	L1AC30D10H	L1AC30D16H	L1AC30D22H	L1AD30D15H	L1AD30D25H	L1AD30D40H
	PNP-NO	L1AC30A10H	L1AC30A16H	L1AC30A22H	L1AD30A15H	L1AD30A25H	L1AD30A40H
	PNP-NC	L1AC30B10H	L1AC30B16H	L1AC30B22H	L1AD30B15H	L1AD30B25H	L1AD30B40H
	NPN-NO+NC	L1AC30F10H	L1AC30F16H		L1AD30F15H	L1AD30F25H	
	PNP-NO+NC	L1AC30E10H	L1AC30E16H		L1AD30E15H	L1AD30E25H	
PBT Case	NPN-NO	L1MC30C10H	L1MC30C16H	L1MC30C22H	L1MD30C15H	L1MD30C25H	L1MD30C40H
	NPN-NC	L1MC30D10H	L1MC30D16H	L1MC30D22H	L1MD30D15H	L1MD30D25H	L1MD30D40H
	PNP-NO	L1MC30A10H	L1MC30A16H	L1MC30A22H	L1MD30A15H	L1MD30A25H	L1MD30A40H
	PNP-NC	L1MC30B10H	L1MC30B16H	L1MC30B22H	L1MD30B15H	L1MD30B25H	L1MD30B40H
	NPN-NO+NC	L1MC30F10H	L1MC30F16H		L1MD30F15H	L1MD30F25H	
		PNP-NO+NC	L1MC30E10H	L1MC30E16H		L1MD30E15H	L1MD30E25H

General Data

Housing size	M30mm			M30mm		
Installation type	Shielded			Non-shielded		
Sensing distance(Sn: mm)	10mm	16mm	22mm	15mm	25mm	40mm
Standard sensing object	Steel 30x30x1mm	Steel 48x48x1mm	Steel 66x66x1mm	Steel 45x45x1mm	Steel 75x75x1mm	Steel 120x120x1mm
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	Nickel plated brass/PBT Resin			Nickel plated brass/PBT Resin		
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	<1.5VDC	<2.0VDC	<2.0VDC	<1.5VDC	<2.0VDC	<2.0VDC
Switching frequency	300Hz	150Hz	100Hz	150Hz	100Hz	100Hz
Response time	0.5ms/0.5ms	1ms/1ms	1ms/1ms	1ms/1ms	1ms/1ms	1ms/1ms
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		

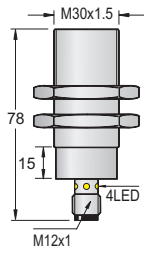
Mechanical Data

Sensing surface material	PBT			PBT		
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	4 Pin M12 connector			4 Pin M12 connector		
Weight	Approx. 121g			Approx. 111g		

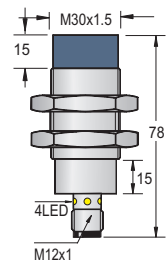


Features

- M30mm diameter
- Sn=10mm,16mm,22mm,shielded
15mm,25mm,40mm,non-shielded
- Nickel plated brass housing case
PBT Resin housing case
- NPN, PNP Output
- NO, NC, NO+NC Function
- M12 connector version
- Short circuit protection
- Overload protection
- Reverse polarity protection
- IP67 Protection



(Unit: mm)



(Unit: mm)

		Shielded			Non-Shielded		
		Standard Sn	Extended Sn	Long Sn	Standard Sn	Extended Sn	Long Sn
Brass Case	NPN-NO	L1AE30C10H	L1AE30C16H	L1AE30C22H	L1AF30C15H	L1AF30C25H	L1AF30C40H
	NPN-NC	L1AE30D10H	L1AE30D16H	L1AE30D22H	L1AF30D15H	L1AF30D25H	L1AF30D40H
	PNP-NO	L1AE30A10H	L1AE30A16H	L1AE30A22H	L1AF30A15H	L1AF30A25H	L1AF30A40H
	PNP-NC	L1AE30B10H	L1AE30B16H	L1AE30B22H	L1AF30B15H	L1AF30B25H	L1AF30B40H
	NPN-NO+NC	L1AE30F10H	L1AE30F16H	L1AE30F22H	L1AF30F15H	L1AF30F25H	L1AF30F40H
	PNP-NO+NC	L1AE30E10H	L1AE30E16H	L1AE30E22H	L1AF30E15H	L1AF30E25H	L1AF30E40H
PBT Case	NPN-NO	L1ME30C10H	L1ME30C16H	L1ME30C22H	L1MF30C15H	L1MF30C25H	L1MF30C40H
	NPN-NC	L1ME30D10H	L1ME30D16H	L1ME30D22H	L1MF30D15H	L1MF30D25H	L1MF30D40H
	PNP-NO	L1ME30A10H	L1ME30A16H	L1ME30A22H	L1MF30A15H	L1MF30A25H	L1MF30A40H
	PNP-NC	L1ME30B10H	L1ME30B16H	L1ME30B22H	L1MF30B15H	L1MF30B25H	L1MF30B40H
	NPN-NO+NC	L1ME30F10H	L1ME30F16H	L1ME30F22H	L1MF30F15H	L1MF30F25H	L1MF30F40H
	PNP-NO+NC	L1ME30E10H	L1ME30E16H	L1ME30E22H	L1MF30E15H	L1MF30E25H	L1MF30E40H

General Data

Housing size	M30mm			M30mm		
Installation type	Shielded			Non-shielded		
Sensing distance(Sn: mm)	10mm	16mm	22mm	15mm	25mm	40mm
Standard sensing object	Steel 30x30x1mm	Steel 48x48x1mm	Steel 66x66x1mm	Steel 45x45x1mm	Steel 75x75x1mm	Steel 120x120x1mm
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	Nickel plated brass/PBT Resin			Nickel plated brass/PBT Resin		
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	<1.5VDC	<2.0VDC	<2.0VDC	<1.5VDC	<2.0VDC	<2.0VDC
Switching frequency	300Hz	150Hz	100Hz	150Hz	100Hz	100Hz
Response time	0.5ms/0.5ms	1ms/1ms	1ms/1ms	1ms/1ms	1ms/1ms	1ms/1ms
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

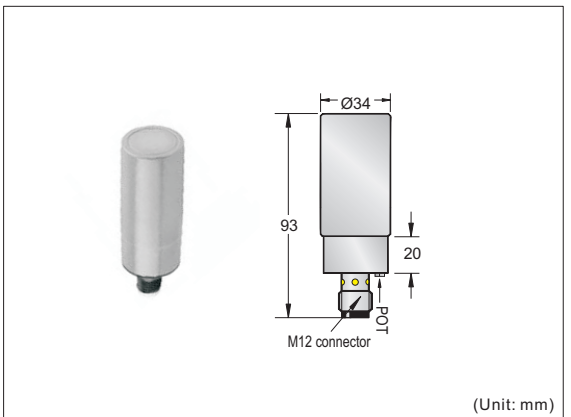
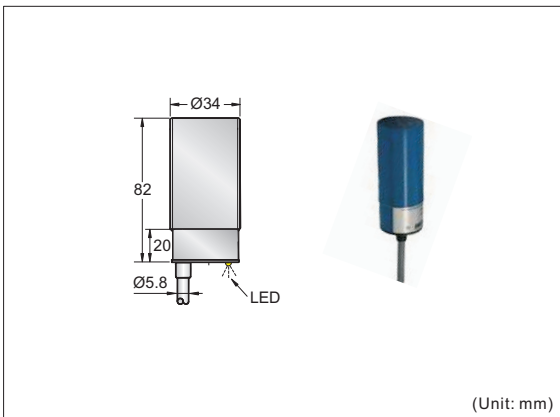
Sensing surface material	PBT			PBT		
Protection	IP67			IP67		
Shock rating	Shock, half-sinus, 30gn, 11ms			Shock, half-sinus, 30gn, 11ms		
Vibration rating	55Hz, 1mm ampl., 3x30min.			55Hz, 1mm ampl., 3x30min.		
EMC	IEC 60947-5-2			IEC 60947-5-2		
Accessory	2 nuts			2 nuts		
Connection	4 Pin M12 connector			4 Pin M12 connector		
Weight	Approx. 187g			Approx. 179g		



Features

- Ø34mm diameter
- Sn=15mm, 25mm, 40mm, non-shielded
- PBT Resin housing case
- NPN, PNP Output
- NO, NC, NO+NC Function
- Cable version
- M12 connector version
- Short circuit protection
- Overload protection
- Reverse polarity protection
- IP67 Protection

CE



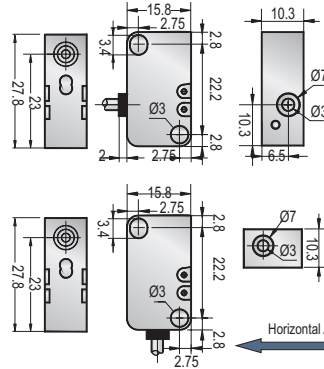
		Non-Shielded			Non-Shielded		
		Standard Sn	Extended Sn	Long Sn	Standard Sn	Extended Sn	Long Sn
Brass Case	NPN-NO						
	NPN-NC						
	PNP-NO						
	PNP-NC						
	NPN-NO+NC						
	PNP-NO+NC						
PBT Case	NPN-NO	L1ND34C15A	L1ND34C25A	L1ND34C40A	L1ND34C15H	L1ND34C25H	L1ND34C40H
	NPN-NC	L1ND34D15A	L1ND34D25A	L1ND34D40A	L1ND34D15H	L1ND34D25H	L1ND34D40H
	PNP-NO	L1ND34A15A	L1ND34A25A	L1ND34A40A	L1ND34A15H	L1ND34A25H	L1ND34A40H
	PNP-NC	L1ND34B15A	L1ND34B25A	L1ND34B40A	L1ND34B15H	L1ND34B25H	L1ND34B40H
	NPN-NO+NC	L1ND34F15A	L1ND34F25A		L1ND34F15H	L1ND34F25H	
	PNP-NO+NC	L1ND34E15A	L1ND34E25A		L1ND34E15H	L1ND34E25H	

General Data							
Housing size	Ø34mm			Ø34mm			
Installation type	Non-shielded			Non-shielded			
Sensing distance(Sn: mm)	15mm	25mm	40mm	15mm	25mm	40mm	
Standard sensing object	Steel 45x45x1mm	Steel 75x75x1mm	Steel 120x120x1mm	Steel 45x45x1mm	Steel 75x75x1mm	Steel 120x120x1mm	
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	PBT Resin			PBT Resin			
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	<1.5VDC	<2.0VDC	<2.0VDC	<1.5VDC	<2.0VDC	<2.0VDC	
Switching frequency	300Hz	150Hz	100Hz	150Hz	100Hz	100Hz	
Response time	0.5ms/0.5ms	1ms/1ms	1ms/1ms	1ms/1ms	1ms/1ms	1ms/1ms	
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	PBT			PBT			
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	Brackets			Brackets			
Connection	2m PVC cable (Ø5.8 3x0.5mm ² /4x0.5mm ²)			4 Pin M12 connector			
Weight	Approx. 251g			Approx. 162g			

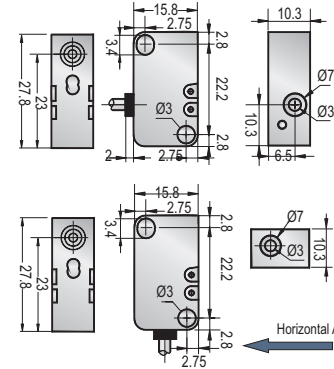


Features

- Q16x28mm diameter
- Sn=1mm, 2mm, 4mm, shielded
2mm, 4mm, 6mm, non-shielded
- PBT Resin housing case
- NPN, PNP Output
- NO, NC, Function
- Cable version
- Short circuit protection
- Overload protection
- Reverse polarity protection
- IP67 Protection



(Unit: mm)



(Unit: mm)

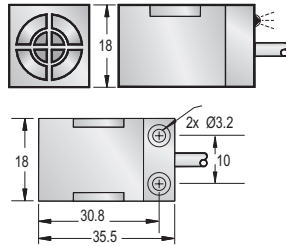
		Shielded			Non-Shielded		
		Standard Sn	Extended Sn	Long Sn	Standard Sn	Extended Sn	Long Sn
Vertical Active Face	NPN-NO	L1ES16C01A	L1ES16C02A	L1ES16C03A	L1EX16C02A	L1EX16C04A	L1EX16C06A
	NPN-NC	L1ES16D01A	L1ES16D02A	L1ES16D03A	L1EX16D02A	L1EX16D04A	L1EX16D06A
	PNP-NO	L1ES16A01A	L1ES16A02A	L1ES16A03A	L1EX16A02A	L1EX16A04A	L1EX16A06A
	PNP-NC	L1ES16B01A	L1ES16B02A	L1ES16B03A	L1EX16B02A	L1EX16B04A	L1EX16B06A
	NPN-NO+NC						
	PNP-NO+NC						
Horizontal Active Face	NPN-NO	L1ET16C01A	L1ET16C02A	L1ET16C03A	L1EY16C02A	L1EY16C04A	L1EY16C06A
	NPN-NC	L1ET16D01A	L1ET16D02A	L1ET16D03A	L1EY16D02A	L1EY16D04A	L1EY16D06A
	PNP-NO	L1ET16A01A	L1ET16A02A	L1ET16A03A	L1EY16A02A	L1EY16A04A	L1EY16A06A
	PNP-NC	L1ET16B01A	L1ET16B02A	L1ET16B03A	L1EY16B02A	L1EY16B04A	L1EY16B06A
	NPN-NO+NC						
	PNP-NO+NC						

General Data							
Housing size	Q16x28mm			Q16x28mm			
Installation type	Shielded			Non-shielded			
Sensing distance(Sn: mm)	1mm	2mm	3mm	2mm	4mm	6mm	
Standard sensing object	Steel 16x16x1mm	Steel 16x16x1mm	Steel 16x16x1mm	Steel 16x16x1mm	Steel 16x16x1mm	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	PBT Resin			PBT Resin			
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	<1.5VDC	<2.0VDC	<2.0VDC	<1.5VDC	<2.0VDC	<2.0VDC	
Switching frequency	2000Hz	2000Hz	1000Hz	2000Hz	1000Hz	500Hz	
Response time	0.1ms/0.1ms	0.1ms/0.1ms	0.2ms/0.2ms	0.1ms/0.1ms	0.2ms/0.2ms	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			
Mechanical Data							
Sensing surface material	POM			POM			
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 (Ø3 3x0.15mm ²)			2m PVC cable (Ø3 3x0.15mm ²)			
Weight	Approx. 55g			Approx. 55g			



Features

- Q18x18mm diameter
- Sn=5mm, non-shielded
- PBT Resin housing case
- NPN, PNP Output
- NO, NC, Function
- Cable version
- Short circuit protection
- Overload protection
- Reverse polarity protection
- IP67 Protection



Non-Shielded

Standard Sn Extended Sn Long Sn

Brass Case	NPN-NO					
	NPN-NC					
	PNP-NO					
	PNP-NC					
	NPN-NO+NC					
	PNP-NO+NC					
PBT Case	NPN-NO	L1EF08C05A				
	NPN-NC	L1EF08D05A				
	PNP-NO	L1EF08A05A				
	PNP-NC	L1EF08B05A				
	NPN-NO+NC					
	PNP-NO+NC					

General Data

Housing size	Q18mm					
Installation type	Non-shielded					
Sensing distance (Sn: mm)	5mm					
Standard sensing object	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%					
Housing material	PBT Resin					
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	<1.5VDC					
Switching frequency	500Hz					
Response time	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					

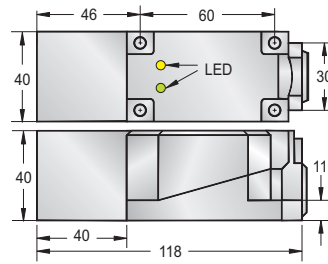
Mechanical Data

Sensing surface material	POM					
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 (Ø4 3x0.34mm ²)					
Weight	Approx. 58g					

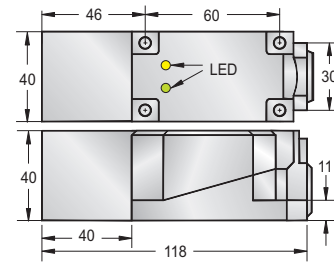


Features

- Q40x40x18mm dimension
- Sn=15mm, 25mm, shielded 20mm, 30mm, 40mm, non-shielded
- 5-Way rotatable sensing head
- PBT Resin housing case
- NPN, PNP output
- NO, NC, NO+NC Function
- Short circuit protection
Overload protection
Reverse polarity protection
- PG connector version
- IP67 Protection



(Unit: mm)



(Unit: mm)

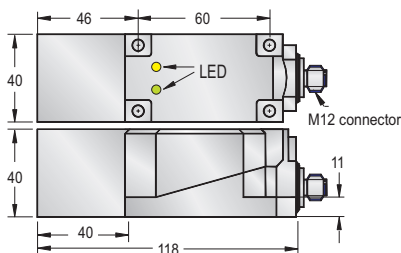
		Shielded			Non-Shielded		
		Standard Sn	Extended Sn	Long Sn	Standard Sn	Extended Sn	Long Sn
Brass Case	NPN-NO						
	NPN-NC						
	PNP-NO						
	PNP-NC						
	NPN-NO+NC						
	PNP-NO+NC						
PBT Case	NPN-NO	L1EE40C15T	L1EE40C25T		L1EF40C20T	L1EF40C30T	L1EF40C40T
	NPN-NC	L1EE40D15T	L1EE40D25T		L1EF40D20T	L1EF40D30T	L1EF40D40T
	PNP-NO	L1EE40A15T	L1EE40A25T		L1EF40A20T	L1EF40A30T	L1EF40A40T
	PNP-NC	L1EE40B15T	L1EE40B25T		L1EF40B20T	L1EF40B30T	L1EF40B40T
	NPN-NO+NC	L1EE40F15T	L1EE40F25T		L1EF40F20T	L1EF40F30T	L1EF40F40T
	PNP-NO+NC	L1EE40E15T	L1EE40E25T		L1EF40E20T	L1EF40E30T	L1EF40E40T

General Data							
Housing size	Q40x40mm			Q40x40mm			
Installation type	Shielded			Non-shielded			
Sensing distance(Sn: mm)	15mm	20mm		20mm	30mm	40mm	
Standard sensing object	Steel 45x45x1mm	Steel 60x60x1mm		Steel 60x60x1mm	Steel 90x90x1mm	Steel 120x120x1mm	
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	PBT Resin			PBT Resin			
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	<1.5VDC	<2.0VDC		<1.5VDC	<2.0VDC	<2.0VDC	
Switching frequency	100Hz	100Hz		100Hz	100Hz	100Hz	
Response time	1ms/1ms	1ms/1ms		1ms/1ms	1ms/1ms	1ms/1ms	
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	PBT			PBT			
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	Cable Terminal with PG Connector			Cable Terminal with PG Connector			
Weight	Approx. 250g			Approx. 250g			

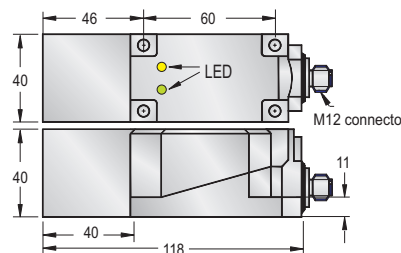


Features

- Q40x40x18mm dimension
- Sn=15mm, 25mm, shielded 20mm, 30mm, 40mm, non-shielded
- 5-Way rotatable sensing head
- PBT Resin housing case
- NPN, PNP output
- NO, NC, NO+NC Function
- Short circuit protection
Overload protection
Reverse polarity protection
- M12 connector version
- IP67 Protection



(Unit: mm)



(Unit: mm)

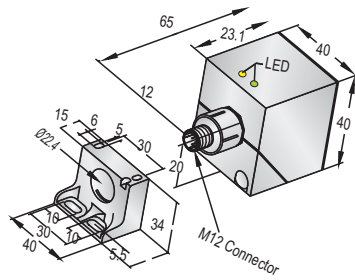
		Shielded			Non-Shielded		
		Standard Sn	Extended Sn	Long Sn	Standard Sn	Extended Sn	Long Sn
Brass Case	NPN-NO						
	NPN-NC						
	PNP-NO						
	PNP-NC						
	NPN-NO+NC PNP-NO+NC						
PBT Case	NPN-NO	L1EE40C15H	L1EE40C25H		L1EF40C20H	L1EF40C30H	L1EF40C40H
	NPN-NC	L1EE40D15H	L1EE40D25H		L1EF40D20H	L1EF40D30H	L1EF40D40H
	PNP-NO	L1EE40A15H	L1EE40A25H		L1EF40A20H	L1EF40A30H	L1EF40A40H
	PNP-NC	L1EE40B15H	L1EE40B25H		L1EF40B20H	L1EF40B30H	L1EF40B40H
	NPN-NO+NC	L1EE40F15H	L1EE40F25H		L1EF40F20H	L1EF40F30H	L1EF40F40H
	PNP-NO+NC	L1EE40E15H	L1EE40E25H		L1EF40E20H	L1EF40E30H	L1EF40E40H

General Data							
Housing size	Q40x40mm			Q40x40mm			
Installation type	Shielded			Non-shielded			
Sensing distance(Sn: mm)	15mm	20mm		20mm	30mm	40mm	
Standard sensing object	Steel 45x45x1mm	Steel 60x60x1mm		Steel 60x60x1mm	Steel 90x90x1mm	Steel 120x120x1mm	
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	PBT Resin			PBT Resin			
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	<1.5VDC	<2.0VDC		<1.5VDC	<2.0VDC	<2.0VDC	
Switching frequency	100Hz	100Hz		100Hz	100Hz	100Hz	
Response time	1ms/1ms	1ms/1ms		1ms/1ms	1ms/1ms	1ms/1ms	
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	PBT			PBT			
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	4 Pin M12 connector			4 Pin M12 connector			
Weight	Approx. 262g			Approx. 262g			

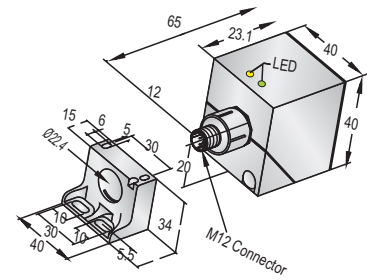


Features

- Q40x40x65mm dimension
- Sn=15mm, 25mm, shielded 20mm, 30mm, 40mm, non-shielded
- 5-Way rotatable sensing head
- PBT Resin housing case
- NPN, PNP output
- NO, NC, NO+NC Function
- Short circuit protection
- Overload protection
- Reverse polarity protection
- M12 connector version
- IP67 Protection



(Unit: mm)



(Unit: mm)

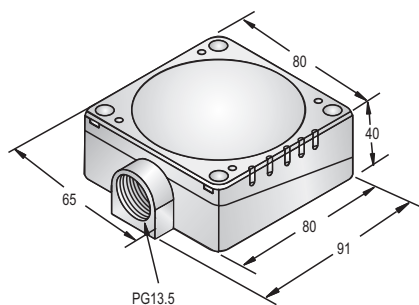
		Shielded			Non-Shielded		
		Standard Sn	Extended Sn	Long Sn	Standard Sn	Extended Sn	Long Sn
Brass Case	NPN-NO						
	NPN-NC						
	PNP-NO						
	PNP-NC						
	NPN-NO+NC						
	PNP-NO+NC						
PBT Case	NPN-NO	L1EC40C15H	L1EC40C25H		L1ED40C20H	L1ED40C30H	L1ED40C40H
	NPN-NC	L1EC40D15H	L1EC40D25H		L1ED40D20H	L1ED40D30H	L1ED40D40H
	PNP-NO	L1EC40A15H	L1EC40A25H		L1ED40A20H	L1ED40A30H	L1ED40A40H
	PNP-NC	L1EC40B15H	L1EC40B25H		L1ED40B20H	L1ED40B30H	L1ED40B40H
	NPN-NO+NC	L1EC40F15H	L1EC40F25H		L1ED40F20H	L1ED40F30H	L1ED40F40H
	PNP-NO+NC	L1EC40E15H	L1EC40E25H		L1ED40E20H	L1ED40E30H	L1ED40E40H

General Data							
Housing size	Q40x40mm			Q40x40mm			
Installation type	Shielded			Non-shielded			
Sensing distance(Sn: mm)	15mm	20mm		20mm	30mm	40mm	
Standard sensing object	Steel 45x45x1mm	Steel 60x60x1mm		Steel 60x60x1mm	Steel 90x90x1mm	Steel 120x120x1mm	
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	PBT Resin			PBT Resin			
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	<1.5VDC	<2.0VDC		<1.5VDC	<2.0VDC	<2.0VDC	
Switching frequency	100Hz	100Hz		100Hz	100Hz	100Hz	
Response time	1ms/1ms	1ms/1ms		1ms/1ms	1ms/1ms	1ms/1ms	
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	PBT			PBT			
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	4 Pin M12 connector			4 Pin M12 connector			
Weight	Approx. 170g			Approx. 170g			

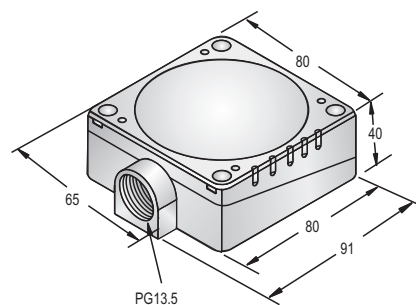


Features

- Q80x80x40mm dimension
- Sn=40mm, shielded
50mm, non-shielded
- PBT Resin housing case
- NPN, PNP output
- NO,NC,NO+NC Function
- Short circuit protection
Overload protection
Reverse polarity protection
- PG connector version
- IP67 Protection



(Unit: mm)



(Unit: mm)

		Shielded			Non-Shielded		
		Standard Sn	Extended Sn	Long Sn	Standard Sn	Extended Sn	Long Sn
Brass Case	NPN-NO						
	NPN-NC						
	PNP-NO						
	PNP-NC						
	NPN-NO+NC						
	PNP-NO+NC						
PBT Case	NPN-NO	L1EE80C40T			L1EF80C50T		
	NPN-NC	L1EE80D40T			L1EF80D50T		
	PNP-NO	L1EE80A40T			L1EF80A50T		
	PNP-NC	L1EE80B40T			L1EF80B50T		
	NPN-NO+NC	L1EE80F40T			L1EF80F50T		
	PNP-NO+NC	L1EE80E40T			L1EF80E50T		

General Data

Housing size	Q80x80mm			Q80x80mm		
Installation type	Shielded			Non-shielded		
Sensing distance(Sn: mm)	40mm			50mm		
Standard sensing object	Steel 120x120x1mm			Steel 150x150x1mm		
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	PBT Resin			PBT Resin		
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	<1.5VDC			<1.5VDC		
Switching frequency	100Hz			100Hz		
Response time	1ms/1ms			1ms/1ms		
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	PBT			PBT		
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	Cable Terminal with PG13.5 Connector			Cable Terminal with PG13.5 Connector		
Weight	Approx. 262g			Approx. 262g		