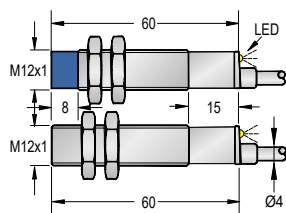
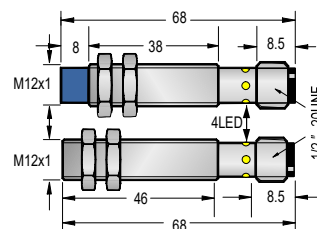


Features

- M12mm diameter
- Sn=2mm, shielded
4mm, non-shielded
- 20-250VAC/DC operating voltage
- Brass housing case
PBT Resin housing case
- NO, NC Function
- Cable version
3 Pin M12 connector version
- IP67 Protection



(Unit: mm)



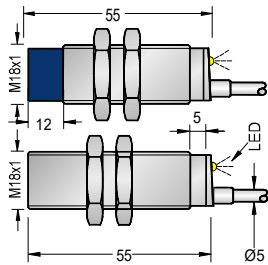
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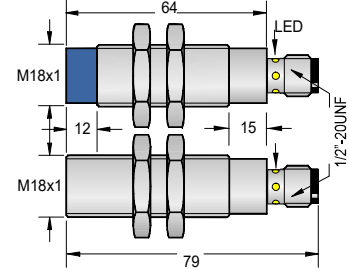
Connection		2m Cable		3 Pin M12 Connector	
Mounting		Shielded	Non-shielded	Shielded	Non-shielded
Brass Case	AC/DC-NO	L9AE12S02A	L9AF12S04A	L9AE12S02L	L9AF12S04L
	AC/DC-NC	L9AE12T02A	L9AF12T04A	L9AE12T02L	L9AF12T04L
PBT Case	AC/DC-NO	L9ME12S02A	L9MF12S04A	L9ME12S02L	L9MF12S04L
	AC/DC-NC	L9ME12T02A	L9MF12T04A	L9ME12T02L	L9MF12T04L
General Data					
Housing size		M12mm		M12mm	
Installation type		Shielded	Non-shielded	Shielded	Non-shielded
Sensing distance(Sn: mm)		2mm	4mm	2mm	4mm
Standard sensing object		Steel 12x12x1mm	Steel 12x12x1mm	Steel 12x12x1mm	Steel 12x12x1mm
Effective sensing distance (Sr: mm)		90 ... 110% of Sn		90 ... 110% of Sn	
Assured operating distance(Sa: mm)		0 ... 80% of Sn		0 ... 80% of Sn	
Hysteresis		<15%		<15%	
Housing material		Nickel plated brass/PBT Resin		Nickel plated brass/PBT Resin	
Operating voltage		20 ... 250VAC/DC		20 ... 250VAC/DC	
Electrical Data					
Rated operating voltage		110VAC		110VAC	
Repeated accuracy		±10%		±10%	
Surge current		2.2A(20ms)		2.2A(20ms)	
No load current		<2.5mA		<2.5mA	
Max. Load current		100mA		100mA	
Leakage current		<2.5mA		<2.5mA	
Voltage drop		<10VAC,8VDC		<10VAC,8VDC	
Switching frequency		25Hz/AC,40Hz/DC		25Hz/AC,40Hz/DC	
Response time		10ms/10ms		10ms/10ms	
Rated insulation voltage		250VAC		250VAC	
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		No		No	
Short-circuit protection		No		No	
Min. load current		2.5mA		2.5mA	
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 3/2x0.34mm²)		Micro-style 3 Pin M12 connector(½" -20UNF)	
Weight		Approx. 77g		Approx. 32g	

Features

- M18mm diameter
- Sn=5mm, shielded
8mm, non-shielded
- 20-250VAC/DC operating voltage
- Brass housing case
PBT Resin housing case
- NO, NC Function
- Cable version
3 Pin M12 connector version
- IP67 Protection



(Unit: mm)



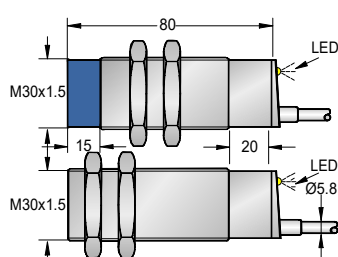
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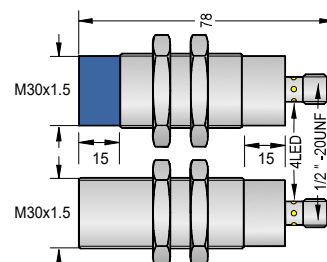
Connection		2m Cable		3 Pin M12 Connector	
Mounting		Shielded	Non-shielded	Shielded	Non-shielded
Brass Case	AC/DC-NO	L9AE18S05A	L9AF18S08A	L9AE18S05L	L9AF18S08L
	AC/DC-NC	L9AE18T05A	L9AF18T08A	L9AE18T05L	L9AF18T08L
PBT Case	AC/DC-NO	L9ME18S05A	L9MF18S08A	L9ME18S05L	L9MF18S08L
	AC/DC-NC	L9ME18T05A	L9MF18T08A	L9ME18T05L	L9MF18T08L
General Data					
Housing size		M18mm		M18mm	
Installation type		Shielded	Non-shielded	Shielded	Non-shielded
Sensing distance(Sn: mm)		5mm	8mm	5mm	8mm
Standard sensing object		Steel 18x18x1mm	Steel 18x18x1mm	Steel 18x18x1mm	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		Nickel plated brass/PBT Resin		Nickel plated brass/PBT Resin	
Operating voltage		20 ... 250VAC/DC		20 ... 250VAC/DC	
Electrical Data					
Rated operating voltage		110VAC		110VAC	
Repeated accuracy		±10%		±10%	
Surge current		2.2A(20ms)		2.2A(20ms)	
No load current		<2.5mA		<2.5mA	
Max. Load current		200mA		200mA	
Leakage current		<2.5mA		<2.5mA	
Voltage drop		<10VAC,8VDC		<10VAC,8VDC	
Switching frequency		25Hz/AC,40Hz/DC		25Hz/AC,40Hz/DC	
Response time		10ms/10ms		10ms/10ms	
Rated insulation voltage		250VAC		250VAC	
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		No		No	
Short-circuit protection		No		No	
Min. load current		5mA		5mA	
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 3/2x0.34mm ²)		Micro-style 3 Pin M12 connector(½" -20UNF)	
Weight		Approx. 162g		Approx. 70g	

Features

- M30mm diameter
- Sn=10mm, shielded
15mm, non-shielded
- 20-250VAC/DC operating voltage
- Brass housing case
PBT Resin housing case
- NO, NC Function
- Cable version
3 Pin M12 connector version
- IP67 Protection



(Unit: mm)



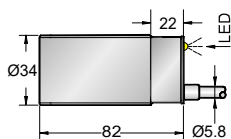
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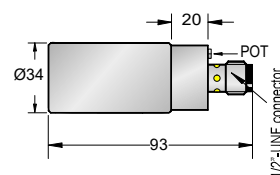
Connection		2m Cable		3 Pin M12 Connector	
Mounting		Shielded	Non-shielded	Shielded	Non-shielded
Brass Case	AC/DC-NO	L9AE30S10A	L9AF30S15A	L9AE30S10L	L9AF30S15L
	AC/DC-NC	L9AE30T10A	L9AF30T15A	L9AE30T10L	L9AF30T15L
PBT Case	AC/DC-NO	L9ME30S10A	L9MF30S15A	L9ME30S10L	L9MF30S15L
	AC/DC-NC	L9ME30T10A	L9MF30T15A	L9ME30T10L	L9MF30T15L
General Data					
Housing size		M30mm		M30mm	
Installation type		Shielded	Non-shielded	Shielded	Non-shielded
Sensing distance(Sn: mm)		10mm	15mm	10mm	15mm
Standard sensing object		Steel 30x30x1mm	Steel 45x45x1mm	Steel 30x30x1mm	Steel 45x45x1mm
Effective sensing distance (Sr: mm)		90 ... 110% of Sn		90 ... 110% of Sn	
Assured operating distance(Sa: mm)		0 ... 80% of Sn		0 ... 80% of Sn	
Hysteresis		<15%		<15%	
Housing material		Nickel plated brass/PBT Resin		Nickel plated brass/PBT Resin	
Operating voltage		20 ... 250VAC/DC		20 ... 250VAC/DC	
Electrical Data					
Rated operating voltage		110VAC		110VAC	
Repeated accuracy		±10%		±10%	
Surge current		2.2A(20ms)		2.2A(20ms)	
No load current		<2.5mA		<2.5mA	
Max. Load current		200mA		200mA	
Leakage current		<2.5mA		<2.5mA	
Voltage drop		<10VAC,8VDC		<10VAC,8VDC	
Switching frequency		25Hz/AC,40Hz/DC		25Hz/AC,40Hz/DC	
Response time		10ms/10ms		10ms/10ms	
Rated insulation voltage		250VAC		250VAC	
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		No		No	
Short-circuit protection		No		No	
Min. load current		5mA		5mA	
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 3/2x0.5mm ²)		Micro-style 3 Pin M12 connector(½" -20UNF)	
Weight		Approx. 248g		Approx. 147g	

Features

- Ø34mm diameter
- Sn=15mm, shielded
20mm, non-shielded
- 20-250VAC/DC operating voltage
- PBT Resin housing case
- NO, NC Function
- Cable version
3 Pin M12 connector version
- IP67 Protection



(Unit: mm)



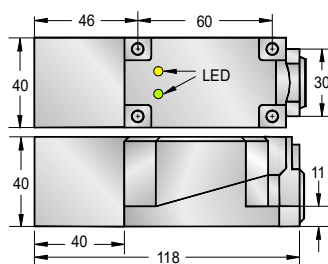
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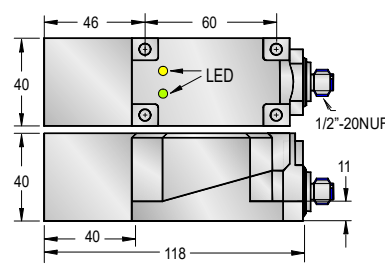
Connection		2m Cable		2m Cable	
Mounting		Shielded	Non-shielded	Shielded	Non-shielded
Brass Case	AC/DC-NO				
	AC/DC-NC				
PBT Case	AC/DC-NO	L8NE34S15A	L8NF34S20A	L8NE34S15L	L8NF34S20L
	AC/DC-NC	L8NE34T15A	L8NF34T20A	L8NE34T15L	L8NF34T20L
General Data					
Housing size		M30mm		M30mm	
Installation type		Shielded	Non-shielded	Shielded	Non-shielded
Sensing distance(Sn: mm)		15mm	20mm	15mm	20mm
Standard sensing object		Steel 45x45x1mm	Steel 60x60x1mm	Steel 45x45x1mm	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		PBT Resin		PBT Resin	
Operating voltage		20 ... 250VAC/DC		20 ... 250VAC/DC	
Electrical Data					
Rated operating voltage		110VAC		110VAC	
Repeated accuracy		±10%		±10%	
Surge current		2.2A(20ms)		2.2A(20ms)	
No load current		<2.5mA		<2.5mA	
Max. Load current		200mA		200mA	
Leakage current		<2.5mA		<2.5mA	
Voltage drop		<10VAC,8VDC		<10VAC,8VDC	
Switching frequency		25Hz/AC,40Hz/DC		25Hz/AC,40Hz/DC	
Response time		10ms/10ms		10ms/10ms	
Rated insulation voltage		250VAC		250VAC	
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		No		No	
Short-circuit protection		No		No	
Min. load current		5mA		5mA	
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		Bracket and nuts		Bracket and nuts	
Connection		2m PVC cable (Ø5.8 2x0.5mm ²)		Micro-style 3 Pin M12 connector(½" -20UNF)	
Weight		Approx. 250g		Approx. 162g	

Features

- Q40x40mm diameter
- Sn=15mm,shielded
20mm,non-shielded
- 20-250VAC/DC operating voltage
- PBT Resin housing case
- NO,NC,NO/NC Function
- PG connector version
3 Pin M12 connector version
- IP67 Protection



(Unit: mm)



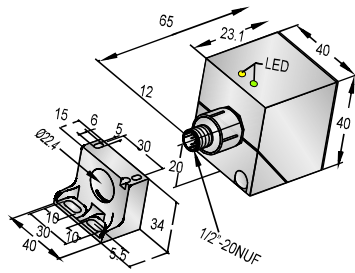
(Unit: mm)



Connection		Cable Terminal with PG Connector		3 Pin M12 Connector	
Mounting		Shielded	Non-shielded	Shielded	Non-shielded
PBT Case	AC/DC-NO	L9EE40S15T	L9EF40S20T	L9EE40S15L	L9EF40S20L
	AC/DC-NC	L9EE40T15T	L9EF40T20T	L9EE40T15L	L9EF40T20L
General Data					
Housing size		Q40x40mm		Q40x40mm	
Installation type		Shielded	Non-shielded	Shielded	Non-shielded
Sensing distance(Sn: mm)		15mm	20mm	15mm	20mm
Standard sensing object		Steel 45x45x1mm	Steel 60x60x1mm	Steel 45x45x1mm	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		PBT Resin		PBT Resin	
Operating voltage		20 ... 250VAC/DC		20 ... 250VAC/DC	
Electrical Data					
Rated operating voltage		110VAC		110VAC	
Repeated accuracy		±10%		±10%	
Surge current		2.2A(20ms)		2.2A(20ms)	
No load current		<2.5mA		<2.5mA	
Max. Load current		200mA		200mA	
Leakage current		<2.5mA		<2.5mA	
Voltage drop		<10VAC,8VDC		<10VAC,8VDC	
Switching frequency		25Hz/AC,40Hz/DC		25Hz/AC,40Hz/DC	
Response time		10ms/10ms		10ms/10ms	
Rated insulation voltage		250VAC		250VAC	
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		No		No	
Short-circuit protection		No		No	
Min. load current		5mA		5mA	
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		Micro-style 3 Pin M12 connector(½" -20UNF)	
Weight		Approx. 250g		Approx. 260g	

Features

- Q40x40mm diameter
- Sn=15mm, shielded
20mm, non-shielded
- 20-250VAC/DC operating voltage
- PBT Resin housing case
- NO, NC Function
- 3 Pin M12 connector version
- IP67 Protection



(Unit: mm)



Connection		3 Pin M12 Connector			
Mounting		Shielded	Non-shielded		
PBT Case	AC/DC-NO	L9NC40S15L	L9ND40S20L		
	AC/DC-NC	L9NC40T15L	L9ND40T20L		
General Data					
Housing size		Q40x40mm			
Installation type		Shielded	Non-shielded		
Sensing distance(Sn: mm)		15mm	20mm		
Standard sensing object		Steel 45x45x1mm	Steel 60x60x1mm		
Effective sensing distance (Sr: mm)		90 ... 110% of Sn			
Assured operating distance(Sa: mm)		0 ... 80% of Sn			
Hysteresis		<15%			
Housing material		PBT Resin			
Operating voltage		20 ... 250VAC/DC			
Electrical Data					
Rated operating voltage		110VAC			
Repeated accuracy		±10%			
Surge current		2.2A(20ms)			
No load current		<2.5mA			
Max. Load current		200mA			
Leakage current		<2.5mA			
Voltage drop		<10VAC,8VDC			
Switching frequency		25Hz/AC,40Hz/DC			
Response time		10ms/10ms			
Rated insulation voltage		250VAC			
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		No			
Short-circuit protection		No			
Min. load current		5mA			
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		PBT			
Protection		IP67			
Shock rating		Shock, half-sinus, 30gn, 11ms			
Vibration rating		55Hz, 1mm ampl., 3x30min.			
EMC		IEC 60947-5-2			
Accessory		/			
Connection		Micro-style 3 Pin M12 connector(½" -20UNF)			
Weight		Approx. 170g			