HTM electronics

Professional Series
Inductive Proximity Sensors

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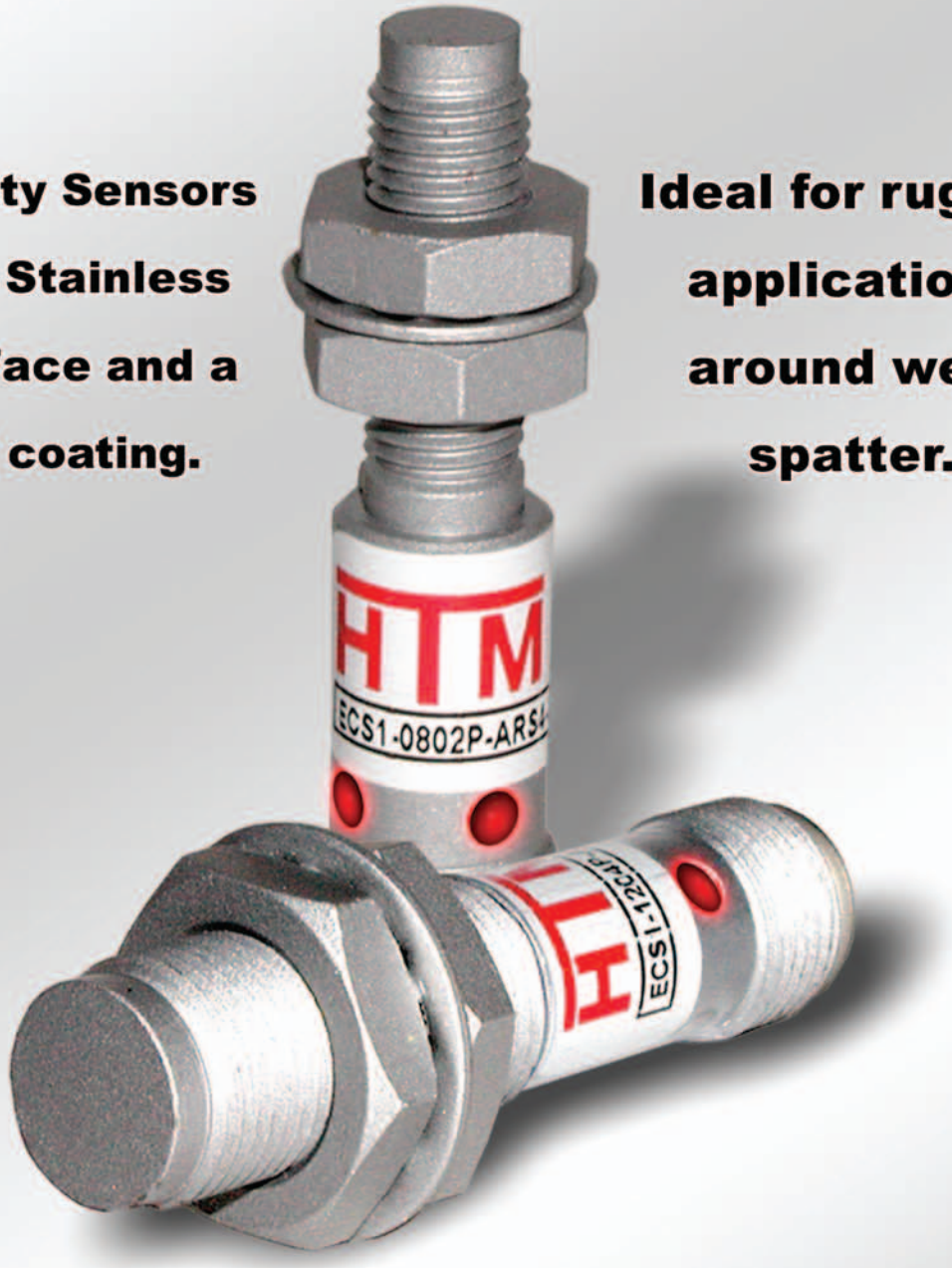
HTM electronics

MetalHead

with SpatterGuard

Proximity Sensors with a Stainless Steel Face and a PTFE coating.

Ideal for rugged applications around weld spatter.



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HTM electronics

SpatterGuard Proximity Sensors

Weld Slag Build-up

Our MetalHead Proximity Sensors stand up to the harshest industrial environments

Weld Slag Resistant

Our MetalHead Proximity Sensors with SpatterGuard are just as tough, but resist slag build-up near welding applications.

Selection & Ordering Information

Barrel	M8	M12	M18	M30
Long Sensing Distance		6 mm	10 mm	
Part Numbers				
DC 3 wire 10-30V PNP N.O.		LCS1-1206P-ARU4-PTFE	LCS1-1810P-ARU4-PTFE	
DC 3 wire 10-30V NPN N.O.		LCS1-1206N-ARU4-PTFE	LCS1-1810N-ARU4-PTFE	
Sensing Distance	2 mm	4 mm	8 mm	15 mm
Part Numbers				
DC 3 wire 10-30V PNP N.O.	ECS1-0802P-ACS3-PTFE	ECS1-1204P-ARU4-PTFE	ECS1-1808P-ARU4-PTFE	ECS1-3015P-ARU4-PTFE
DC 3 wire 10-30V NPN N.O.	ECS1-0802N-ACS3-PTFE	ECS1-1204N-ARU4-PTFE	ECS1-1808N-ARU4-PTFE	ECS1-3015N-ARU4-PTFE
Housing Material	PTFE Coated Stainless Steel			
Diagrams (units in mm)				

Call: 800-644-1756 8651 Buffalo Avenue, Niagara Falls, NY 14304 www.htm-sensors.com

Model Selection Guide

Feature #	1	2	3	4	5	6	7	8	9	10	11
Model #	L	C	M	1	12	06	P	A	R	U	4

1. Type:
F: Inductive L: Long Range W: Weld Field Immune E: Extended Range

2. Housing:
C: Cylindrical Q: Square

3. Housing Material:
M: Chrome-Plated Brass S: Stainless Steel Tube & Face U: Stainless Steel Tube

4. Mounting:
1: Shielded 2: Non-shielded

5. Housing Style:
Threaded Body Diameter (eg.18 = 18mm diameter tube)

6. Sensing Distance:
Range in millimeters (eg. 02 = 2mm range)

7. Output Function:
N: NPN P: PNP A: AC C: DC 2-wire U: AC/DC

8. Output:
A: Normally Open B: Normally Closed S: NO/NC Selectable

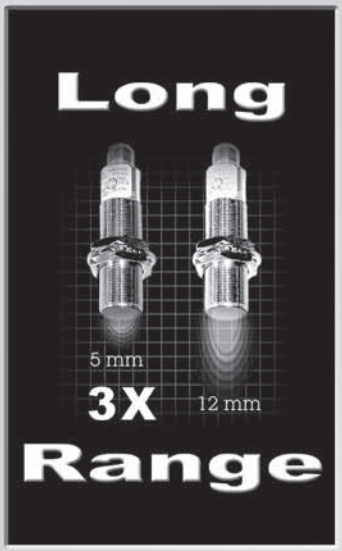
9. Connection:
2: 2 wire 3: 3 wire 4: 4 wire 5: 5 wire C: Connector (M8 Pico Series)
R: Connector (M12 Micro Series) U: Connector (½-20 Micro AC Series)
Z: Mini Series

10: Protection:
S: Short body with short circuit protection U: With short circuit protection
L: Without short circuit protection

11. Cable Length or Number of Connector Pins:
Cable Type: 2 = 2 meters, 5 = 5 meters, 10 = 10 meters
Connector Type: 2 = 2 pin, 3 = 3 pin, 4 = 4 pin, 5 = 5 pin

12. Sensor Placement or Special Function:
FE: Ferrous only sensing Y: Sensor body & output wire is 90°
NFE: Non-ferrous sensing PTFE: PTFE coated to resist weld slag build-up

Our Sensors Don't Just Work, They Work Harder



Long Range Inductive Proximity Sensors

HTM LONG RANGE inductive proximity sensors can achieve sensing ranges up to three times greater than ordinary inductive proximity sensors with a maximum range of 40mm.

Our most popular 12mm sensor has a 6mm shielded range! This allows you to mount the sensor further away from the target to be sensed, thus reducing the likelihood of damage due to impact and abrasion.

The HTM LONG RANGE sensors are available in sizes from 6mm to 30mm, and are available either pre-wired or quick disconnect..

MetalHead™ Inductive Proximity Sensors

The HTM MetalHead series are manufactured from a solid piece of stainless steel. This ultra-rugged series provides extreme protection against abuse due to contact, abrasion, chips, wash-down, corrosion, and shock. Double range versions further extend the life of these reliable, long-lasting sensors.

HTM MetalHead sensors are available in PNP, NPN, DC 2-wire, AC, and AC/DC configurations. M8, M12, M18 and M30 sizes are available with quick-disconnect, pre-wired cable, or custom length pigtail connections.

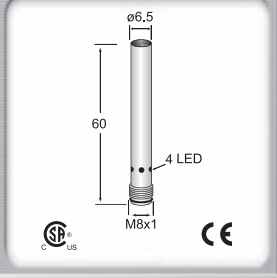
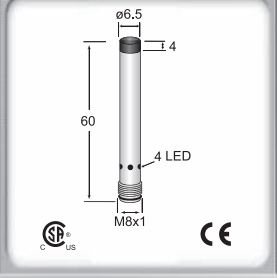
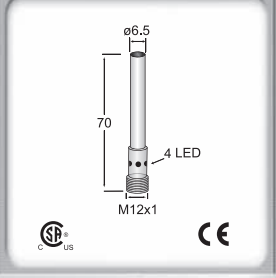
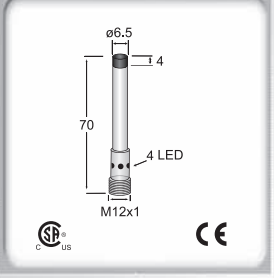
Weld Field Immune Proximity Sensors

HTM Weld Field Immune Sensors are designed for use in welding facilities or where strong DC and AC magnetic fields are present.

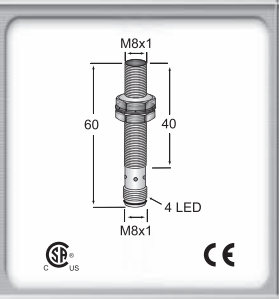
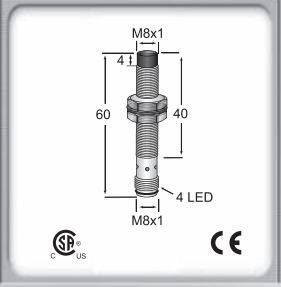
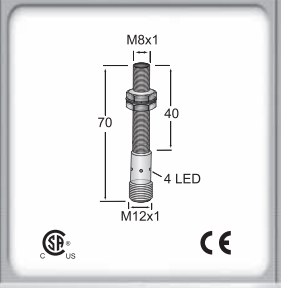
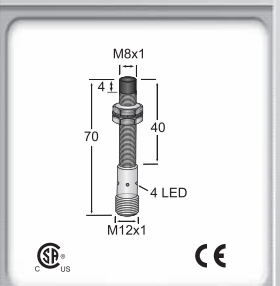
The sensors have a PTFE coating to prevent slag build-up and an ETFE face to prevent flash burn-in. The sensors are highly reliable in high current applications due to a special circuit and core configuration.

The HTM Weld Field Immune series are available in standard 8mm, 12mm, 18mm and 30mm diameters, as well as several square type sizes for every application. PNP, NPN, and AC/DC models are available in either pre-wired or quick disconnect.

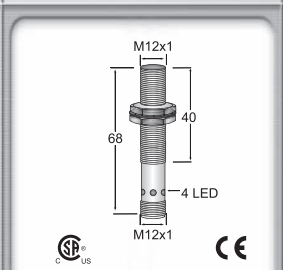
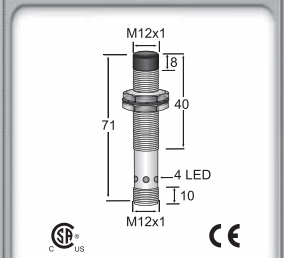
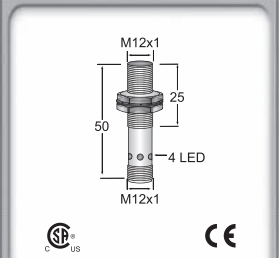
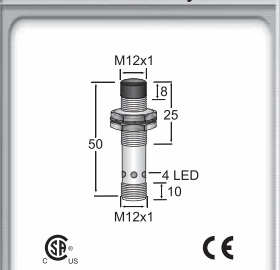
Long Range - ø6.5

	ø6.5	ø6.5	ø6.5	ø6.5
Sensing Distance	3 mm	6 mm	3 mm	6 mm
Operating Voltage	10-30 VDC		10-30 VDC	
Ripple	<10%		<10%	
No Load Current	<10mA		<10mA	
Max. Load Current	200mA		200mA	
Leakage Current	<0.01mA		<0.01mA	
Surge Current	-		-	
Min. Load Current	-		-	
Voltage Drop	<2 V		<2 V	
Switching Frequency	1 KHz		1 KHz	
Response Time	0.1ms/0.1ms		0.1ms/0.1ms	
Switching Hysteresis	<15% (Sr)		<15% (Sr)	
Repeat Accuracy	<1.0% (Sr)		<1.0% (Sr)	
Protection Category	IP67		IP67	
Operating Temperature	-25°C - +70°C		-25°C - +70°C	
Temperature Drift	<10% (Sr)		<10% (Sr)	
Short Circuit Protection	Yes		Yes	
Overload Trip Point	220mA		220mA	
Time Delay Before Availability	<10ms		<10ms	
Shock / Vibration	IEC 60947-5-2, Part 7.4.1 & 7.4.2		IEC 60947-5-2, Part 7.4.1 & 7.4.2	
Material Active Face	POM		POM	
Housing Material	Stainless Steel		Stainless Steel	
Part Numbers	Shielded	Unshielded	Shielded	Unshielded
DC 3 wire 10-30V NPN N.O.	LCU1-D0603N-ACU3	LCU2-D0606N-ACU3	LCU1-D0603N-ARU4	LCU2-D0606N-ARU4
DC 3 wire 10-30V NPN N.C.	LCU1-D0603N-BCU3	LCU2-D0606N-BCU3	LCU1-D0603N-BRU4	LCU2-D0606N-BRU4
DC 3 wire 10-30V PNP N.O.	LCU1-D0603P-ACU3	LCU2-D0606P-ACU3	LCU1-D0603P-ARU4	LCU2-D0606P-ARU4
DC 3 wire 10-30V PNP N.C.	LCU1-D0603P-BCU3	LCU2-D0606P-BCU3	LCU1-D0603P-BRU4	LCU2-D0606P-BRU4
Diagrams (units in mm)				
				

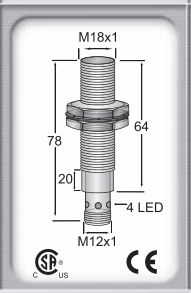
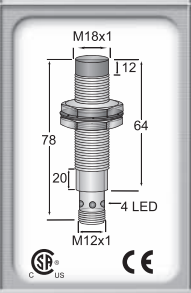
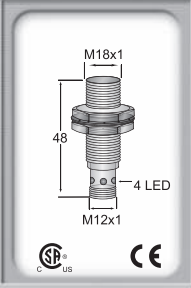
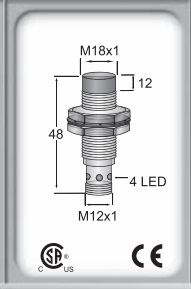
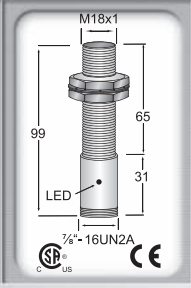
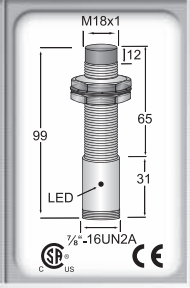
Long Range - M8

	M8	M8	M8	M8
Sensing Distance	3 mm	6 mm	3 mm	6 mm
Operating Voltage	10-30 VDC		10-30 VDC	
Ripple	<10%		<10%	
No Load Current	<10mA		<10mA	
Max. Load Current	200mA		200mA	
Leakage Current	<0.01mA		<0.01mA	
Surge Current	-		-	
Min. Load Current	-		-	
Voltage Drop	<2V		<2V	
Switching Frequency	1 KHz	1 KHz	1 KHz	1 KHz
Response Time	0.1ms/0.1ms	0.1ms/0.1ms	0.1ms/0.1ms	0.1ms/0.1ms
Switching Hysteresis	<15% (Sr)		<15% (Sr)	
Repeat Accuracy	<1.0% (Sr)		<1.0% (Sr)	
Protection Category	IP67		IP67	
Operating Temperature	-25°C - +70°C		-25°C - +70°C	
Temperature Drift	<10% (Sr)		<10% (Sr)	
Short Circuit Protection	Yes		Yes	
Overload Trip Point	220mA		220mA	
Time Delay Before Availability	<10ms		<10ms	
Shock / Vibration	IEC 60947-5-2, Part 7.4.1 & 7.4.2		IEC 60947-5-2, Part 7.4.1 & 7.4.2	
Material Active Face	POM		POM	
Housing Material	Stainless Steel		Chrome-plated Brass	
Part Numbers	Shielded	Unshielded	Shielded	Unshielded
DC 3 wire 10-30V NPN N.O.	LCU1-0803N-ACU3	LCU2-0806N-ACU3	LCM1-0803N-ARU4	LCM2-0806N-ARU4
DC 3 wire 10-30V NPN N.C.	LCU1-0803N-BCU3	LCU2-0806N-BCU3	LCM1-0803N-BRU4	LCM2-0806N-BRU4
DC 3 wire 10-30V PNP N.O.	LCU1-0803P-ACU3	LCU2-0806P-ACU3	LCM1-0803P-ARU4	LCM2-0806P-ARU4
DC 3 wire 10-30V PNP N.C.	LCU1-0803P-BCU3	LCU2-0806P-BCU3	LCM1-0803P-BRU4	LCM2-0806P-BRU4
Diagrams (units in mm)				
				

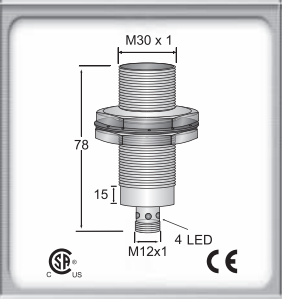
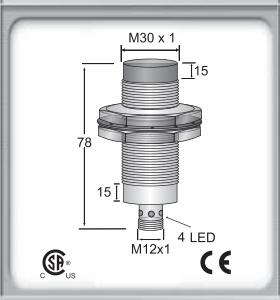
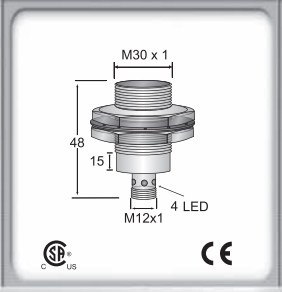
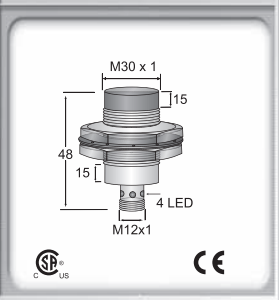
Long Range - M12

	M12	M12	M12	M12
Sensing Distance	6 mm	10 mm	6 mm	10 mm
Operating Voltage	10-30 VDC		10-30 VDC	
Ripple	<10%		<10%	
No Load Current	<10mA		<10mA	
Max. Load Current	200mA		200mA	
Leakage Current	<0.01mA		<0.01mA	
Surge Current	-		-	
Min. Load Current	-		-	
Voltage Drop	<2V		<2V	
Switching Frequency	1 KHz	500 Hz	1 KHz	500 Hz
Response Time	0.1ms/0.1ms	0.2ms/0.2ms	0.1ms/0.1ms	0.2ms/0.2ms
Switching Hysteresis	<15% (Sr)		<15% (Sr)	
Repeat Accuracy	<1.0% (Sr)		<1.0% (Sr)	
Protection Category	IP67		IP67	
Operating Temperature	-25°C - +70°C		-25°C - +70°C	
Temperature Drift	<10% (Sr)		<10% (Sr)	
Short Circuit Protection	Yes		Yes	
Overload Trip Point	220mA		220mA	
Time Delay Before Availability	<10ms		<10ms	
Shock / Vibration	IEC 60947-5-2, Part 7.4.1 & 7.4.2		IEC 60947-5-2, Part 7.4.1 & 7.4.2	
Material Active Face	PBT		PBT	
Housing Material	Chrome-plated Brass		Chrome-plated Brass	
Part Numbers	Shielded	Unshielded	Shielded	Unshielded
DC 3 wire 10-30V NPN N.O.	LCM1-1206N-ARU4	LCM2-1210N-ARU4	LCM1-1206N-ARS4	LCM2-1210N-ARS4
DC 3 wire 10-30V NPN N.C.	LCM1-1206N-BRU4	LCM2-1210N-BRU4	LCM1-1206N-BRS4	LCM2-1210N-BRS4
DC 3 wire 10-30V PNP N.O.	LCM1-1206P-ARU4	LCM2-1210P-ARU4	LCM1-1206P-ARS4	LCM2-1210P-ARS4
DC 3 wire 10-30V PNP N.C.	LCM1-1206P-BRU4	LCM2-1210P-BRU4	LCM1-1206P-BRS4	LCM2-1210P-BRS4
Diagrams (units in mm)			Short Body	Short Body
				

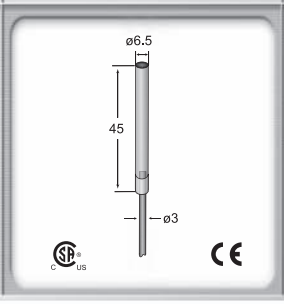
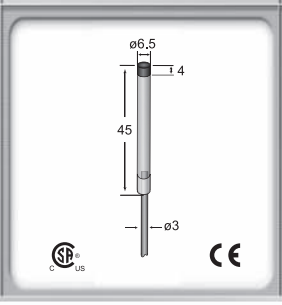
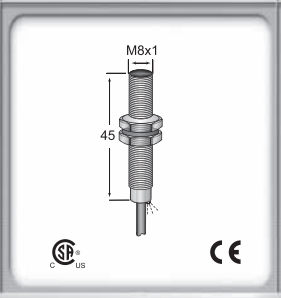
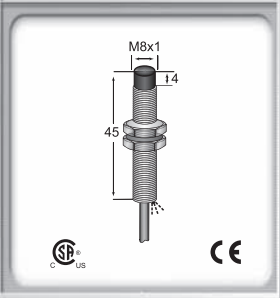
Long Range - M18

	M18	M18	M18	M18	M18	M18
Sensing Distance	12 mm	20 mm	12 mm	20 mm	12 mm	20 mm
Operating Voltage	10-30 VDC		10-30 VDC		10-30 VDC	
Ripple	<10%		<10%		<10%	
No Load Current	<10mA		<10mA		<10mA	
Max. Load Current	200mA		200mA		200mA	
Leakage Current	<0.05mA		<0.05mA		<0.05mA	
Surge Current	-		-		-	
Min. Load Current	-		-		-	
Voltage Drop	<2V		<2V		<2V	
Switching Frequency	300 Hz	100 Hz	300 Hz	100 Hz	300 Hz	100 Hz
Response Time	0.5ms/0.5ms	1ms/1ms	0.5ms/0.5ms	1ms/1ms	0.5ms/0.5ms	1ms/1ms
Switching Hysteresis	<15% (Sr)		<15% (Sr)		<15% (Sr)	
Repeat Accuracy	<2.0% (Sr)		<2.0% (Sr)		<2.0% (Sr)	
Protection Category	IP67		IP67		IP67	
Operating Temperature	-25°C - +70°C		-25°C - +70°C		-25°C - +70°C	
Temperature Drift	<10% (Sr)		<10% (Sr)		<10% (Sr)	
Short Circuit Protection	Yes		Yes		Yes	
Overload Trip Point	220mA		220mA		220mA	
Time Delay Before Availability	<10ms		<10ms		<10ms	
Shock / Vibration	IEC 60947-5-2, Part 7.4.1 & 7.4.2		IEC 60947-5-2, Part 7.4.1 & 7.4.2		IEC 60947-5-2, Part 7.4.1 & 7.4.2	
Material Active Face	PBT		PBT		PBT	
Housing Material	Chrome-plated Brass		Chrome-plated Brass		Chrome-plated Brass	
Part Numbers	Shielded	Unshielded	Shielded	Unshielded	Shielded	Unshielded
DC 3 wire 10-30V NPN N.O.	LCM1-1812N-ARU4	LCM2-1820N-ARU4	LCM1-1812N-ARS4	LCM2-1820N-ARS4	LCM1-1812N-AZU4	LCM2-1820N-AZU4
DC 3 wire 10-30V NPN N.C.	LCM1-1812N-BRU4	LCM2-1820N-BRU4	LCM1-1812N-BRS4	LCM2-1820N-BRS4	LCM1-1812N-BZU4	LCM2-1820N-BZU4
DC 3 wire 10-30V PNP N.O.	LCM1-1812P-ARU4	LCM2-1820P-ARU4	LCM1-1812P-ARS4	LCM2-1820P-ARS4	LCM1-1812P-AZU4	LCM2-1820P-AZU4
DC 3 wire 10-30V PNP N.C.	LCM1-1812P-BRU4	LCM2-1820P-BRU4	LCM1-1812P-BRS4	LCM2-1820P-BRS4	LCM1-1812P-BZU4	LCM2-1820P-BZU4
Diagrams (units in mm)			Short Body	Short Body		
						

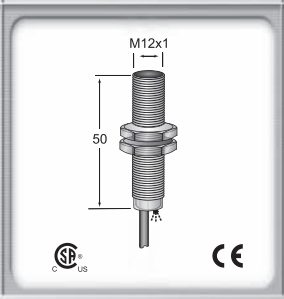
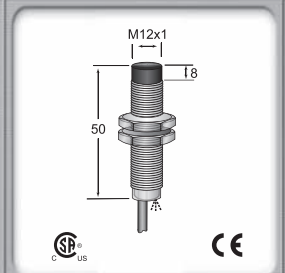
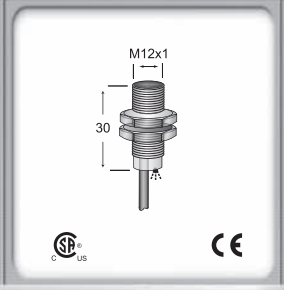
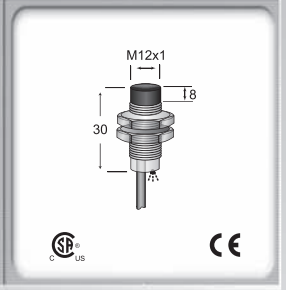
Long Range - M30

	M30	M30	M30	M30
Sensing Distance	22 mm	40 mm	22 mm	40 mm
Operating Voltage	10-30 VDC		10-30 VDC	
Ripple	<10%		<10%	
No Load Current	<10mA		<10mA	
Max. Load Current	200mA		200mA	
Leakage Current	<0.01mA		<0.05mA	
Surge Current	-		-	
Min. Load Current	-		-	
Voltage Drop	<2V		<2V	
Switching Frequency	300 Hz	100 Hz	300 Hz	100 Hz
Response Time	0.5ms/0.5ms	1ms/1ms	0.5ms/0.5ms	1ms/1ms
Switching Hysteresis	<15% (Sr)		<15% (Sr)	
Repeat Accuracy	<1.0% (Sr)		<1.0% (Sr)	
Protection Category	IP67		IP67	
Operating Temperature	-25°C - +70°C		-25°C - +70°C	
Temperature Drift	<10% (Sr)		<10% (Sr)	
Short Circuit Protection	Yes		Yes	
Overload Trip Point	220mA		220mA	
Time Delay Before Availability	<10ms		<10ms	
Shock / Vibration	IEC 60947-5-2, Part 7.4.1 & 7.4.2		IEC 60947-5-2, Part 7.4.1 & 7.4.2	
Material Active Face	PBT		PBT	
Housing Material	Chrome-plated Brass		Chrome-plated Brass	
Part Numbers	Shielded	Unshielded	Shielded	Unshielded
DC 3 wire 10-30V NPN N.O.	LCM1-3022N-ARU4	LCM2-3040N-ARU4	LCM1-3022N-ARS4	LCM2-3040N-ARS4
DC 3 wire 10-30V NPN N.C.	LCM1-3022N-BRU4	LCM2-3040N-BRU4	LCM1-3022N-BRS4	LCM2-3040N-BRS4
DC 3 wire 10-30V PNP N.O.	LCM1-3022P-ARU4	LCM2-3040P-ARU4	LCM1-3022P-ARS4	LCM2-3040P-ARS4
DC 3 wire 10-30V PNP N.C.	LCM1-3022P-BRU4	LCM2-3040P-BRU4	LCM1-3022P-BRS4	LCM2-3040P-BRS4
Diagrams (units in mm)			Short Body	Short Body
				

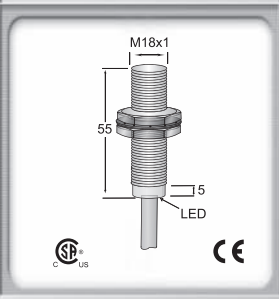
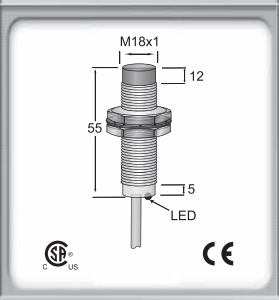
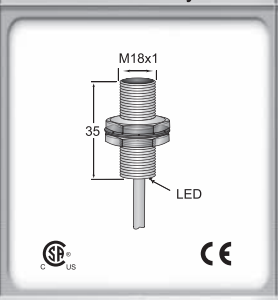
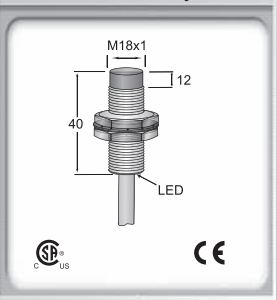
Long Range - ø6.5 - M8

	ø6.5	ø6.5	M8	M8
Sensing Distance	3 mm	6 mm	3 mm	6 mm
Operating Voltage	10-30 VDC		10-30 VDC	
Ripple	<10%		<10%	
No Load Current	<10mA		<10mA	
Max. Load Current	200mA		200mA	
Leakage Current	<0.01mA		<0.01mA	
Surge Current	-		-	
Min. Load Current	-		-	
Voltage Drop	<2.0V		<2.0V	
Switching Frequency	1 KHz	1 KHz	1 KHz	1 KHz
Response Time	0.1ms/0.1ms	0.1ms/0.1ms	0.1ms/0.1ms	0.1ms/0.1ms
Switching Hysteresis	<15% (Sr)		<15% (Sr)	
Repeat Accuracy	<1.0% (Sr)		<1.0% (Sr)	
Protection Category	IP67		IP67	
Operating Temperature	-25°C - +70°C		-25°C - +70°C	
Temperature Drift	<10% (Sr)		<10% (Sr)	
Short Circuit Protection	Yes		Yes	
Overload Trip Point	220mA		220mA	
Time Delay Before Availability	<10ms		<10ms	
Shock / Vibration	IEC 60947-5-2, Part 7.4.1 & 7.4.2		IEC 60947-5-2, Part 7.4.1 & 7.4.2	
Material Active Face	POM		POM	
Housing Material	Stainless Steel		Stainless Steel	
Part Numbers	Shielded	Unshielded	Shielded	Unshielded
DC 3 wire 10-30V NPN N.O.	LCU1-D0603N-A3U2	LCU2-D0606N-A3U2	LCU1-0803N-A3U2	LCU2-0806N-A3U2
DC 3 wire 10-30V NPN N.C.	LCU1-D0603N-B3U2	LCU2-D0606N-B3U2	LCU1-0803N-B3U2	LCU2-0806N-B3U2
DC 3 wire 10-30V PNP N.O.	LCU1-D0603P-A3U2	LCU2-D0606P-A3U2	LCU1-0803P-A3U2	LCU2-0806P-A3U2
DC 3 wire 10-30V PNP N.C.	LCU1-D0603P-B3U2	LCU2-D0606P-B3U2	LCU1-0803P-B3U2	LCU2-0806P-B3U2
Diagrams (units in mm)				
				

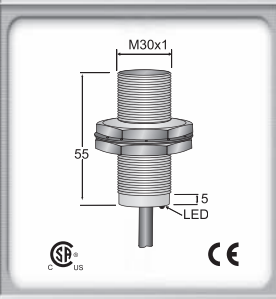
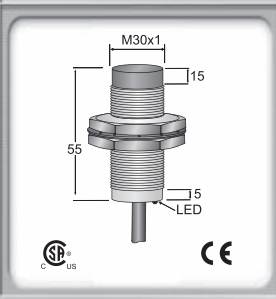
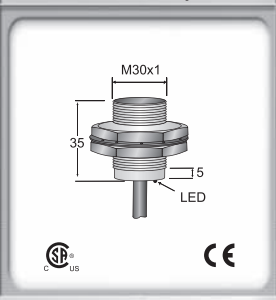
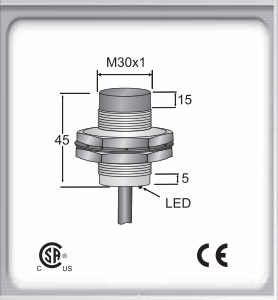
Long Range - M12

	M12	M12	M12	M12
Sensing Distance	6 mm	10 mm	6 mm	10 mm
Operating Voltage	10-30 VDC		10-30 VDC	
Ripple	<10%		<10%	
No Load Current	<10mA		<10mA	
Max. Load Current	200mA		200mA	
Leakage Current	<0.01mA		<0.01mA	
Surge Current	-		-	
Min. Load Current	-		-	
Voltage Drop	<2.0V		<2.0V	
Switching Frequency	1 KHz	500 Hz	1 KHz	1 Hz
Response Time	0.1ms/0.1ms	0.2ms/0.2ms	0.1ms/0.1ms	0.1ms/0.1ms
Switching Hysteresis	<15% (Sr)		<15% (Sr)	
Repeat Accuracy	<1.0% (Sr)		<1.0% (Sr)	
Protection Category	IP67		IP67	
Operating Temperature	-25°C - +70°C		-25°C - +70°C	
Temperature Drift	<10% (Sr)		<10% (Sr)	
Short Circuit Protection	Yes		Yes	
Overload Trip Point	220mA		220mA	
Time Delay Before Availability	<10ms		<10ms	
Shock / Vibration	IEC 60947-5-2, Part 7.4.1 & 7.4.2		IEC 60947-5-2, Part 7.4.1 & 7.4.2	
Material Active Face	POM	PBT	POM	PBT
Housing Material	Chrome-plated Brass		Chrome-plated Brass	
Part Numbers	Shielded	Unshielded	Shielded	Unshielded
DC 3 wire 10-30V NPN N.O.	LCM1-1206N-A3U2	LCM2-1210N-A3U2	LCM1-1206N-A3S2	LCM2-1210N-A3S2
DC 3 wire 10-30V NPN N.C.	LCM1-1206N-B3U2	LCM2-1210N-B3U2	LCM1-1206N-B3S2	LCM2-1210N-B3S2
DC 3 wire 10-30V PNP N.O.	LCM1-1206P-A3U2	LCM2-1210P-A3U2	LCM1-1206P-A3S2	LCM2-1210P-A3S2
DC 3 wire 10-30V PNP N.C.	LCM1-1206P-B3U2	LCM2-1210P-B3U2	LCM1-1206P-B3S2	LCM2-1210P-B3S2
Diagrams (units in mm)			Short Body	Short Body
				

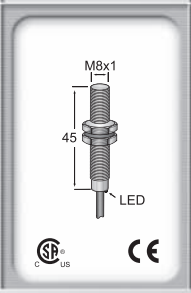
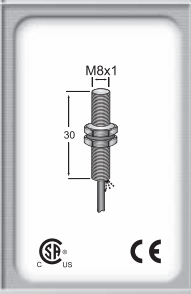
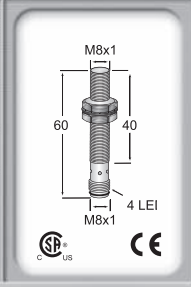
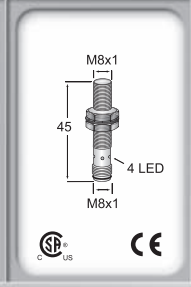
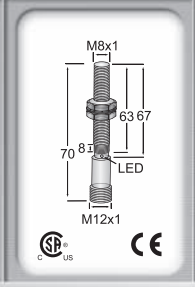
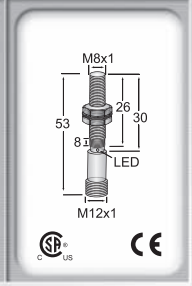
Long Range - M18

	M18	M18	M18	M18
Sensing Distance	12 mm	20 mm	12 mm	20 mm
Operating Voltage	10-30 VDC		10-30 VDC	
Ripple	<10%		<10%	
No Load Current	<10mA		<10mA	
Max. Load Current	200mA		200mA	
Leakage Current	<0.01mA		<0.01mA	
Surge Current	-		-	
Min. Load Current	-		-	
Voltage Drop	<2.0V		<2.0V	
Switching Frequency	300 Hz	100 Hz	1 KHz	1 KHz
Response Time	0.5ms/0.5ms	1.0ms/1.0ms	0.1ms/0.1ms	0.1ms/0.1ms
Switching Hysteresis	<15% (Sr)		<15% (Sr)	
Repeat Accuracy	<1.0% (Sr)		<1.0% (Sr)	
Protection Category	IP67		IP67	
Operating Temperature	-25°C - +70°C		-25°C - +70°C	
Temperature Drift	<10% (Sr)		<10% (Sr)	
Short Circuit Protection	Yes		Yes	
Overload Trip Point	220mA		220mA	
Time Delay Before Availability	<10ms		<10ms	
Shock / Vibration	IEC 60947-5-2, Part 7.4.1 & 7.4.2		IEC 60947-5-2, Part 7.4.1 & 7.4.2	
Material Active Face	PBT		PBT	
Housing Material	Chrome-plated Brass		Chrome-plated Brass	
Part Numbers	Shielded	Unshielded	Shielded	Unshielded
DC 3 wire 10-30V NPN N.O.	LCM1-1812N-A3U2	LCM2-1820N-A3U2	LCM1-1812N-A3S2	LCM2-1820N-A3S2
DC 3 wire 10-30V NPN N.C.	LCM1-1812N-B3U2	LCM2-1820N-B3U2	LCM1-1812N-B3S2	LCM2-1820N-B3S2
DC 3 wire 10-30V PNP N.O.	LCM1-1812P-A3U2	LCM2-1820P-A3U2	LCM1-1812P-A3S2	LCM2-1820P-A3S2
DC 3 wire 10-30V PNP N.C.	LCM1-1812P-B3U2	LCM2-1820P-B3U2	LCM1-1812P-B3S2	LCM2-1820P-B3S2
Diagrams (units in mm)			Short Body	Short Body
				

Long Range - M30

	M30	M30	M30	M30
Sensing Distance	22 mm	40 mm	22 mm	40 mm
Operating Voltage	10-30 VDC		10-30 VDC	
Ripple	<10%		<10%	
No Load Current	<10mA		<10mA	
Max. Load Current	200mA		200mA	
Leakage Current	<0.01mA		<0.01mA	
Surge Current	-		-	
Min. Load Current	-		-	
Voltage Drop	<2.0V		<2.0V	
Switching Frequency	300 Hz	100 Hz	1 KHz	1 KHz
Response Time	0.2ms/0.2ms	0.5ms/0.5ms	0.1ms/0.1ms	0.1ms/0.1ms
Switching Hysteresis	<15% (Sr)		<15% (Sr)	
Repeat Accuracy	<1.0% (Sr)		<1.0% (Sr)	
Protection Category	IP67		IP67	
Operating Temperature	-25°C - +70°C		-25°C - +70°C	
Temperature Drift	<10% (Sr)		<10% (Sr)	
Short Circuit Protection	Yes		Yes	
Overload Trip Point	220mA		220mA	
Time Delay Before Availability	<10ms		<10ms	
Shock / Vibration	IEC 60947-5-2, Part 7.4.1 & 7.4.2		IEC 60947-5-2, Part 7.4.1 & 7.4.2	
Material Active Face	PBT		PBT	
Housing Material	Chrome-plated Brass		Chrome-plated Brass	
Part Numbers	Shielded	Unshielded	Shielded	Unshielded
DC 3 wire 10-30V NPN N.O.	LCM1-3022N-A3U2	LCM2-3040N-A3U2	LCM1-3022N-A3S2	LCM2-3040N-A3S2
DC 3 wire 10-30V NPN N.C.	LCM1-3022N-B3U2	LCM2-3040N-B3U2	LCM1-3022N-B3S2	LCM2-3040N-B3S2
DC 3 wire 10-30V PNP N.O.	LCM1-3022P-A3U2	LCM2-3040P-A3U2	LCM1-3022P-A3S2	LCM2-3040P-A3S2
DC 3 wire 10-30V PNP N.C.	LCM1-3022P-B3U2	LCM2-3040P-B3U2	LCM1-3022P-B3S2	LCM2-3040P-B3S2
Diagrams (units in mm)			Short Body	Short Body
				

Metal Head™ - M8

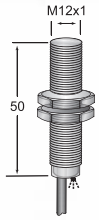
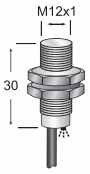
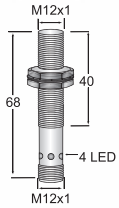
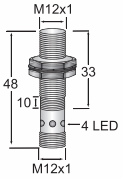
	M8		M8		M8	
Standard Sensing Distance	1mm		1mm		1mm	
Extended Sensing Distance	**2mm**		**2mm**		**2mm**	
Operating Voltage	10-30 VDC		10-30 VDC		10-30 VDC	
Ripple	<10%		<10%		<10%	
No Load Current	<10mA		<10mA		<10mA	
Max. Load Current	200mA		200mA		200mA	
Leakage Current	<0.01mA		<0.01mA		<0.01mA	
Surge Current	-		-		-	
Min. Load Current	-		-		-	
Voltage Drop	<1.5V		<1.5V		<1.5V	
Switching Frequency	2 KHz		2 KHz		2 KHz	
Response Time	0.1ms		0.1ms		0.1ms	
Switching Hysteresis	<15% (Sr)		<15% (Sr)		<15% (Sr)	
Repeat Accuracy	<1.0% (Sr)		<1.0% (Sr)		<1.0% (Sr)	
Protection Category	IP67		IP67		IP67	
Operating Temperature	-25°C - +70°C		-25°C - +70°C		-25°C - +70°C	
Temperature Drift	<10% (Sr)		<10% (Sr)		<10% (Sr)	
Short Circuit Protection	Yes		Yes		Yes	
Overload Trip Point	220mA		220mA		220mA	
Time Delay Before Availability	<10ms		<10ms		<10ms	
Shock / Vibration	IEC 60947-5-2, Part 7.4.1 & 7.4.2		IEC 60947-5-2, Part 7.4.1 & 7.4.2		IEC 60947-5-2, Part 7.4.1 & 7.4.2	
Material Active Face	Stainless Steel (0.5mm)		Stainless Steel (0.5mm)		Stainless Steel (0.5mm)	
Housing Material	Stainless Steel		Stainless Steel		Stainless Steel	
Part Numbers	Shielded	Shielded	Shielded	Shielded	Shielded	Shielded
DC 3 wire 10-30V NPN N.O.	FCS1-0801N-A3U2	FCS1-0801N-A3S2	FCS1-0801N-ACU3	FCS1-0801N-ACS3	FCS1-0801N-ARU4	FCS1-0801N-ARS4
DC 3 wire 10-30V NPN N.C.	FCS1-0801N-B3U2	FCS1-0801N-B3S2	FCS1-0801N-BCU3	FCS1-0801N-BCS3	FCS1-0801N-BRU4	FCS1-0801N-BRS4
DC 3 wire 10-30V PNP N.O.	FCS1-0801P-A3U2	FCS1-0801P-A3S2	FCS1-0801P-ACU3	FCS1-0801P-ACS3	FCS1-0801P-ARU4	FCS1-0801P-ARS4
DC 3 wire 10-30V PNP N.C.	FCS1-0801P-B3U2	FCS1-0801P-B3S2	FCS1-0801P-BCU3	FCS1-0801P-BCS3	FCS1-0801P-BRU4	FCS1-0801P-BRS4
DC 2 wire 10-60V N.O.	FCS1-0801C-A3U2	FCS1-0801C-A3S2	FCS1-0801C-ACU3	FCS1-0801C-ACS3	FCS1-0801C-ARU4	FCS1-0801C-ARS4
DC 2 wire 10-60V N.C.	FCS1-0801C-B3U2	FCS1-0801C-B3S2	FCS1-0801C-BCU3	FCS1-0801C-BCS3	FCS1-0801C-BRU4	FCS1-0801C-BRS4
Extended Range						
DC 3 wire 10-30V NPN N.O.	ECS1-0802N-A3U2	ECS1-0802N-A3S2	ECS1-0802N-ACU3	ECS1-0802N-ACS3	ECS1-0802N-ARU4	ECS1-0802N-ARS4
DC 3 wire 10-30V NPN N.C.	ECS1-0802N-B3U2	ECS1-0802N-B3S2	ECS1-0802N-BCU3	ECS1-0802N-BCS3	ECS1-0802N-BRU4	ECS1-0802N-BRS4
DC 3 wire 10-30V PNP N.O.	ECS1-0802P-A3U2	ECS1-0802P-A3S2	ECS1-0802P-ACU3	ECS1-0802P-ACS3	ECS1-0802P-ARU4	ECS1-0802P-ARS4
DC 3 wire 10-30V PNP N.C.	ECS1-0802P-B3U2	ECS1-0802P-B3S2	ECS1-0802P-BCU3	ECS1-0802P-BCS3	ECS1-0802P-BRU4	ECS1-0802P-BRS4
DC 2 wire 10-60V N.O.	ECS1-0802C-A3U2	ECS1-0802C-A3S2	ECS1-0802C-ACU3	ECS1-0802C-ACS3	ECS1-0802C-ARU4	ECS1-0802C-ARS4
DC 2 wire 10-60V N.C.	ECS1-0802C-B3U2	ECS1-0802C-B3S2	ECS1-0802C-BCU3	ECS1-0802C-BCS3	ECS1-0802C-BRU4	ECS1-0802C-BRS4
Diagrams (units in mm)		Short Body		Short Body		Short Body
						

LONG RANGE

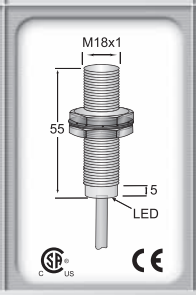
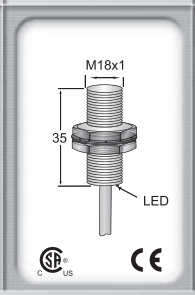
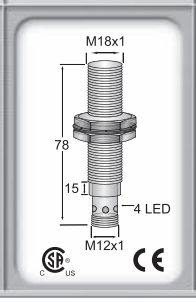
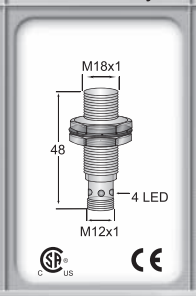
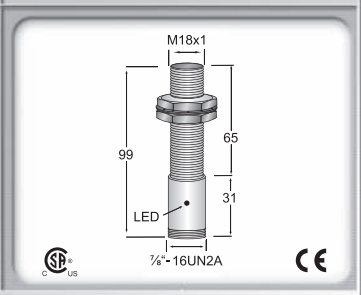
METALHEAD™

WELD FIELD IMMUNE

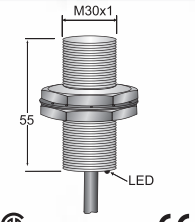
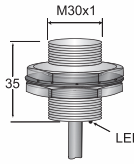
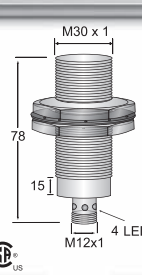
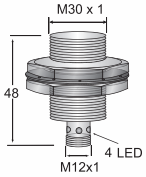
Metal Head™ - M12

	M12	M12	M12	M12
Standard Sensing Distance	2mm	2mm	2mm	2mm
Extended Sensing Distance	**4mm**	**4mm**	**4mm**	**4mm**
Operating Voltage	10-30 VDC	10-30 VDC	10-30 VDC	10-30 VDC
Ripple	<10%	<10%	<10%	<10%
No Load Current	<10mA	<10mA	<10mA	<10mA
Max. Load Current	200mA	200mA	200mA	200mA
Leakage Current	<0.01mA	<0.01mA	<0.01mA	<0.01mA
Surge Current	-	-	-	-
Min. Load Current	-	-	-	-
Voltage Drop	<1.5V	<1.5V	<1.5V	<1.5V
Switching Frequency	2 KHz	2 KHz	2 KHz	2 KHz
Response Time	0.1ms	0.1ms	0.1ms	0.1ms
Switching Hysteresis	<15% (Sr)	<15% (Sr)	<15% (Sr)	<15% (Sr)
Repeat Accuracy	<1.0% (Sr)	<1.0% (Sr)	<1.0% (Sr)	<1.0% (Sr)
Protection Category	IP67	IP67	IP67	IP67
Operating Temperature	-25°C - +70°C	-25°C - +70°C	-25°C - +70°C	-25°C - +70°C
Temperature Drift	<10% (Sr)	<10% (Sr)	<10% (Sr)	<10% (Sr)
Short Circuit Protection	Yes	Yes	Yes	Yes
Overload Trip Point	220mA	220mA	220mA	220mA
Time Delay Before Availability	<10ms	<10ms	<10ms	<10ms
Shock / Vibration	IEC 60947-5-2, Part 7.4.1 & 7.4.2	IEC 60947-5-2, Part 7.4.1 & 7.4.2	IEC 60947-5-2, Part 7.4.1 & 7.4.2	IEC 60947-5-2, Part 7.4.1 & 7.4.2
Material Active Face	Stainless Steel (0.5mm)	Stainless Steel (0.5mm)	Stainless Steel (0.5mm)	Stainless Steel (0.5mm)
Housing Material	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
Part Numbers	Shielded	Shielded	Shielded	Shielded
DC 3 wire 10-30V NPN N.O.	FCS1-1202N-A3U2	FCS1-1202N-A3S2	FCS1-1202N-ARU4	FCS1-1202N-ARS4
DC 3 wire 10-30V NPN N.C.	FCS1-1202N-B3U2	FCS1-1202N-B3S2	FCS1-1202N-BRU4	FCS1-1202N-BRS4
DC 3 wire 10-30V PNP N.O.	FCS1-1202P-A3U2	FCS1-1202P-A3S2	FCS1-1202P-ARU4	FCS1-1202P-ARS4
DC 3 wire 10-30V PNP N.C.	FCS1-1202P-B3U2	FCS1-1202P-B3S2	FCS1-1202P-BRU4	FCS1-1202P-BRS4
DC 2 wire 10-60V N.O.	FCS1-1202C-A3U2	FCS1-1202C-A3S2	FCS1-1202C-ARU4	FCS1-1202C-ARS4
DC 2 wire 10-60V N.C.	FCS1-1202C-B3U2	FCS1-1202C-B3S2	FCS1-1202C-BRU4	FCS1-1202C-BRS4
Extended Range				
DC 3 wire 10-30V NPN N.O.	ECS1-1204N-A3U2	ECS1-1204N-A3S2	ECS1-1204N-ARU4	ECS1-1204N-ARS4
DC 3 wire 10-30V NPN N.C.	ECS1-1204N-B3U2	ECS1-1204N-B3S2	ECS1-1204N-BRU4	ECS1-1204N-BRS4
DC 3 wire 10-30V PNP N.O.	ECS1-1204P-A3U2	ECS1-1204P-A3S2	ECS1-1204P-ARU4	ECS1-1204P-ARS4
DC 3 wire 10-30V PNP N.C.	ECS1-1204P-B3U2	ECS1-1204P-B3S2	ECS1-1204P-BRU4	ECS1-1204P-BRS4
DC 2 wire 10-60V N.O.	ECS1-1204C-A3U2	ECS1-1204C-A3S2	ECS1-1204C-ARU4	ECS1-1204C-ARS4
DC 2 wire 10-60V N.C.	ECS1-1204C-B3U2	ECS1-1204C-B3S2	ECS1-1204C-BRU4	ECS1-1204C-BRS4
Diagrams (units in mm)		Short Body		Short Body
				

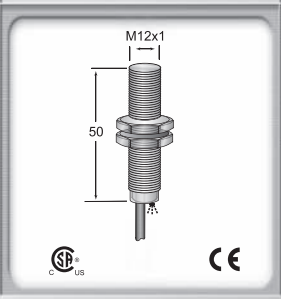
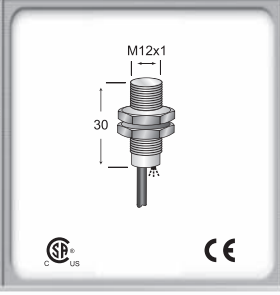
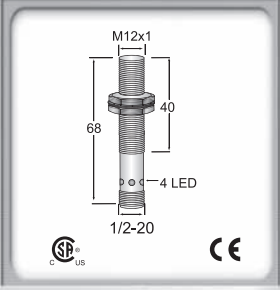
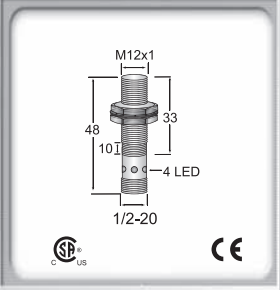
Metal Head™ - M18

	M18	M18	M18	M18	M18
Sensing Distance	5mm		5mm		5mm
Extended Sensing Distance	**8mm**		**8mm**		**8mm**
Operating Voltage	10-30 VDC		10-30 VDC		10-30 VDC
Ripple	<10%		<10%		<10%
No Load Current	<10mA		<10mA		<10mA
Max. Load Current	200mA		200mA		200mA
Leakage Current	<0.01mA		<0.01mA		<0.01mA
Surge Current	-		-		-
Min. Load Current	-		-		-
Voltage Drop	<1.5V		<1.5V		<1.5V
Switching Frequency	1 KHz / 500 Hz		1 KHz / 500 Hz		1 KHz / 500 Hz
Response Time	0.2ms / 0.5ms		0.2ms / 0.5ms		0.2ms / 0.5ms
Switching Hysteresis	<15% (Sr)		<15% (Sr)		<15% (Sr)
Repeat Accuracy	<1.0% (Sr)		<1.0% (Sr)		<1.0% (Sr)
Protection Category	IP67		IP67		IP67
Operating Temperature	-25°C - +70°C		-25°C - +70°C		-25°C - +70°C
Temperature Drift	<10% (Sr)		<10% (Sr)		<10% (Sr)
Short Circuit Protection	Yes		Yes		Yes
Overload Trip Point	220mA		220mA		220mA
Time Delay Before Availability	<10ms		<10ms		<10ms
Shock / Vibration	IEC 60947-5-2, Part 7.4.1 & 7.4.2		IEC 60947-5-2, Part 7.4.1 & 7.4.2		IEC 60947-5-2, Part 7.4.1 & 7.4.2
Material Active Face	Stainless Steel (0.8mm)		Stainless Steel (0.8mm)		Stainless Steel (0.8mm)
Housing Material	Stainless Steel		Stainless Steel		Stainless Steel
Part Numbers	Shielded	Shielded	Shielded	Shielded	Shielded
DC 3 wire 10-30V NPN N.O.	FCS1-1805N-A3U2	FCS1-1805N-A3S2	FCS1-1805N-ARU4	FCS1-1805N-ARS4	FCS1-1805N-AZU4
DC 3 wire 10-30V NPN N.C.	FCS1-1805N-B3U2	FCS1-1805N-B3S2	FCS1-1805N-BRU4	FCS1-1805N-BRS4	FCS1-1805N-BZU4
DC 3 wire 10-30V PNP N.O.	FCS1-1805P-A3U2	FCS1-1805P-A3S2	FCS1-1805P-ARU4	FCS1-1805P-ARS4	FCS1-1805P-AZU4
DC 3 wire 10-30V PNP N.C.	FCS1-1805P-B3U2	FCS1-1805P-B3S2	FCS1-1805P-BRU4	FCS1-1805P-BRS4	FCS1-1805P-BZU4
DC 2 wire 10-60V N.O.	FCS1-1805C-A3U2	FCS1-1805C-A3S2	FCS1-1805C-ARU4	FCS1-1805C-ARS4	FCS1-1805C-AZU4
DC 2 wire 10-60V N.C.	FCS1-1805C-B3U2	FCS1-1805C-B3S2	FCS1-1805C-BRU4	FCS1-1805C-BRS4	FCS1-1805C-BZU4
Extended Range					
DC 3 wire 10-30V NPN N.O.	ECS1-1808N-A3U2	ECS1-1808N-A3S2	ECS1-1808N-ARU4	ECS1-1808N-ARS4	ECS1-1808N-AZU4
DC 3 wire 10-30V NPN N.C.	ECS1-1808N-B3U2	ECS1-1808N-B3S2	ECS1-1808N-BRU4	ECS1-1808N-BRS4	ECS1-1808N-BZU4
DC 3 wire 10-30V PNP N.O.	ECS1-1808P-A3U2	ECS1-1808P-A3S2	ECS1-1808P-ARU4	ECS1-1808P-ARS4	ECS1-1808P-AZU4
DC 3 wire 10-30V PNP N.C.	ECS1-1808P-B3U2	ECS1-1808P-B3S2	ECS1-1808P-BRU4	ECS1-1808P-BRS4	ECS1-1808P-BZU4
DC 2 wire 10-60V N.O.	ECS1-1808C-A3U2	ECS1-1808C-A3S2	ECS1-1808C-ARU4	ECS1-1808C-ARS4	ECS1-1808C-AZU4
DC 2 wire 10-60V N.C.	ECS1-1808C-B3U2	ECS1-1808C-B3S2	ECS1-1808C-BRU4	ECS1-1808C-BRS4	ECS1-1808C-BZU4
Diagrams (units in mm)		Short Body		Short Body	
					

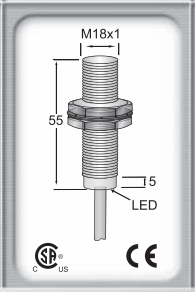
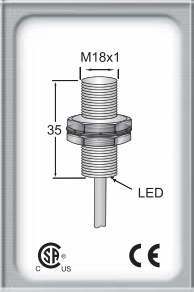
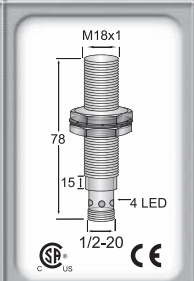
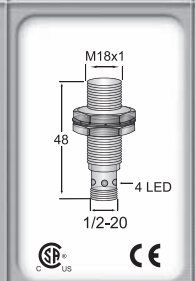
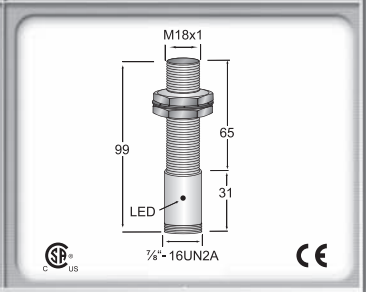
Metal Head™ - M30

	M30	M30	M30	M30
Sensing Distance	10mm	10mm	10mm	10mm
Extended Sensing Distance	**15mm**	**15mm**	**15mm**	**15mm**
Operating Voltage	10-30 VDC	10-30 VDC	10-30 VDC	10-30 VDC
Ripple	<10%	<10%	<10%	<10%
No Load Current	<10mA	<10mA	<10mA	<10mA
Max. Load Current	200mA	200mA	200mA	200mA
Leakage Current	<0.01mA	<0.01mA	<0.01mA	<0.01mA
Surge Current	-	-	-	-
Min. Load Current	-	-	-	-
Voltage Drop	<1.5V	<1.5V	<1.5V	<1.5V
Switching Frequency	1 KHz / 150 Hz	1 KHz / 150 Hz	1 KHz / 150 Hz	1 KHz / 150 Hz
Response Time	0.2ms / 1ms	0.2ms / 1ms	0.2ms / 1ms	0.2ms / 1ms
Switching Hysteresis	<15% (Sr)	<15% (Sr)	<15% (Sr)	<15% (Sr)
Repeat Accuracy	<1.0% (Sr)	<1.0% (Sr)	<1.0% (Sr)	<1.0% (Sr)
Protection Category	IP67	IP67	IP67	IP67
Operating Temperature	-25°C - +70°C	-25°C - +70°C	-25°C - +70°C	-25°C - +70°C
Temperature Drift	<10% (Sr)	<10% (Sr)	<10% (Sr)	<10% (Sr)
Short Circuit Protection	Yes	Yes	Yes	Yes
Overload Trip Point	220mA	220mA	220mA	220mA
Time Delay Before Availability	<10ms	<10ms	<10ms	<10ms
Shock / Vibration	IEC 60947-5-2, Part 7.4.1 & 7.4.2	IEC 60947-5-2, Part 7.4.1 & 7.4.2	IEC 60947-5-2, Part 7.4.1 & 7.4.2	IEC 60947-5-2, Part 7.4.1 & 7.4.2
Material Active Face	Stainless Steel (0.8mm)	Stainless Steel (0.8mm)	Stainless Steel (0.8mm)	Stainless Steel (0.8mm)
Housing Material	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
Part Numbers	Shielded	Shielded	Shielded	Shielded
DC 3 wire 10-30V NPN N.O.	FCS1-3010N-A3U2	FCS1-3010N-A3S2	FCS1-3010N-ARU4	FCS1-3010N-ARS4
DC 3 wire 10-30V NPN N.C.	FCS1-3010N-B3U2	FCS1-3010N-B3S2	FCS1-3010N-BRU4	FCS1-3010N-BRS4
DC 3 wire 10-30V PNP N.O.	FCS1-3010P-A3U2	FCS1-3010P-A3S2	FCS1-3010P-ARU4	FCS1-3010P-ARS4
DC 3 wire 10-30V PNP N.C.	FCS1-3010P-B3U2	FCS1-3010P-B3S2	FCS1-3010P-BRU4	FCS1-3010P-BRS4
DC 2 wire 10-60V N.O.	FCS1-3010C-A3U2	FCS1-3010C-A3S2	FCS1-3010C-ARU4	FCS1-3010C-ARS4
DC 2 wire 10-60V N.C.	FCS1-3010C-B3U2	FCS1-3010C-B3S2	FCS1-3010C-BRU4	FCS1-3010C-BRS4
Extended Range				
DC 3 wire 10-30V NPN N.O.	ECS1-3015N-A3U2	ECS1-3015N-A3S2	ECS1-3015N-ARU4	ECS1-3015N-ARS4
DC 3 wire 10-30V NPN N.C.	ECS1-3015N-B3U2	ECS1-3015N-B3S2	ECS1-3015N-BRU4	ECS1-3015N-BRS4
DC 3 wire 10-30V PNP N.O.	ECS1-3015P-A3U2	ECS1-3015P-A3S2	ECS1-3015P-ARU4	ECS1-3015P-ARS4
DC 3 wire 10-30V PNP N.C.	ECS1-3015P-B3U2	ECS1-3015P-B3S2	ECS1-3015P-BRU4	ECS1-3015P-BRS4
DC 2 wire 10-60V N.O.	ECS1-3015C-A3U2	ECS1-3015C-A3S2	ECS1-3015C-ARU4	ECS1-3015C-ARS4
DC 2 wire 10-60V N.C.	ECS1-3015C-B3U2	ECS1-3015C-B3S2	ECS1-3015C-BRU4	ECS1-3015C-BRS4
Diagrams (units in mm)		Short Body		Short Body
				

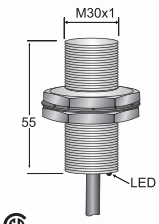
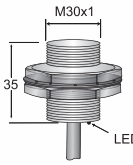
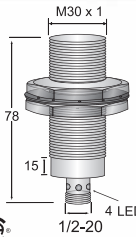
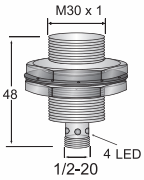
Metal Head™ - M12

	M12	M12	M12	M12
Sensing Distance	2mm		2mm	
Extended Sensing Distance	**4mm**		**4mm**	
Operating Voltage	20-250 VAC, 50-60 Hz; 10-30 VDC		20-250 VAC, 50-60 Hz; 10-30 VDC	
Ripple	DC Ripple <10%		DC Ripple <10%	
No Load Current	<2.5mA		<2.5mA	
Max. Load Current	100mA		100mA	
Leakage Current	<2.5mA		<2.5mA	
Surge Current	2.2A for 20ms		2.2A for 20ms	
Min. Load Current	5mA		5mA	
Voltage Drop	<=10 VAC; <=8 VDC		<=10 VAC; <=8 VDC	
Switching Frequency	25 Hz AC; 40 Hz DC		25 Hz AC; 40 Hz DC	
Response Time	10ms/10msms		10ms/10msms	
Switching Hysteresis	<15% (Sr)		<15% (Sr)	
Repeat Accuracy	<1.0% (Sr)		<1.0% (Sr)	
Protection Category	IP67		IP67	
Operating Temperature	-25°C - +70°C		-25°C - +70°C	
Temperature Drift	<10% (Sr)		<10% (Sr)	
Short Circuit Protection	Yes		Yes	
Overload Trip Point	-		-	
Time Delay Before Availability	-		-	
Shock / Vibration	IEC 60947-5-2, Part 7.4.1 & 7.4.2		IEC 60947-5-2, Part 7.4.1 & 7.4.2	
Material Active Face	Stainless Steel (0.5mm)		Stainless Steel (0.5mm)	
Housing Material	Stainless Steel		Stainless Steel	
Part Numbers	Shielded	Shielded	Shielded	Shielded
AC/DC 2 wire 20-250V, N.O.	FCS1-1202U-A3U2	FCS1-1202U-A3S2	FCS1-1202U-AUU3	FCS1-1202U-AUS3
AC/DC 2 wire 20-250V. N.C	FCS1-1202U-B3U2	FCS1-1202U-B3S2	FCS1-1202U-BUU3	FCS1-1202U-BUS3
Extended Range.				
AC/DC 2 wire 20-250V, N.O.	ECS1-1204U-A3U2	ECS1-1204U-A3S2	ECS1-1204U-AUU3	ECS1-1204U-AUS3
AC/DC 2 wire 20-250V. N.C	ECS1-1204U-B3U2	ECS1-1204U-B3S2	ECS1-1204U-BUU3	ECS1-1204U-BUS3
Diagrams (units in mm)		Short Body		Short Body
				

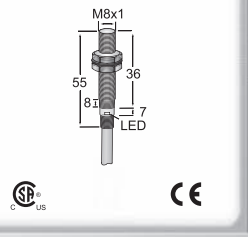
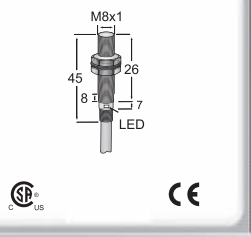
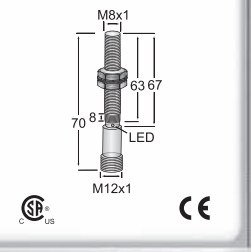
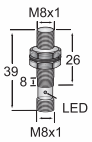
Metal Head™ - M18

	M18	M18	M18	M18	M18
Sensing Distance	5mm		5mm		5mm
Extended Sensing Distance	**8mm**		**8mm**		**8mm**
Operating Voltage	20-250 VAC, 50-60 Hz; 10-30 VDC		20-250 VAC, 50-60 Hz; 10-30 VDC		20-250 VAC, 50-60 Hz; 10-30 VDC
Ripple	DC Ripple <10%		DC Ripple <10%		DC Ripple <10%
No Load Current	<2.5mA		<2.5mA		<2.5mA
Max. Load Current	200mA		200mA		100mA
Leakage Current	<2.5mA		<2.5mA		<2.5mA
Surge Current	2.2A for 20ms		2.2A for 20ms		2.2A for 20ms
Min. Load Current	5mA		5mA		5mA
Voltage Drop	<=10 VAC; <=8 VDC		<=10 VAC; <=8 VDC		<=10 VAC; <=8 VDC
Switching Frequency	25 Hz AC; 40 Hz DC		25 Hz AC; 40 Hz DC		25 Hz AC; 40 Hz DC
Response Time	10ms/10ms		10ms/10ms		10ms/10ms
Switching Hysteresis	<15% (Sr)		<15% (Sr)		<15% (Sr)
Repeat Accuracy	<1.0% (Sr)		<1.0% (Sr)		<1.0% (Sr)
Protection Category	IP67		IP67		IP67
Operating Temperature	-25°C - +70°C		-25°C - +70°C		-25°C - +70°C
Temperature Drift	<10% (Sr)		<10% (Sr)		<10% (Sr)
Short Circuit Protection	Yes		Yes		Yes
Overload Trip Point	-		-		-
Time Delay Before Availability	-		-		-
Shock / Vibration	IEC 60947-5-2, Part 7.4.1 & 7.4.2		IEC 60947-5-2, Part 7.4.1 & 7.4.2		IEC 60947-5-2, Part 7.4.1 & 7.4.2
Material Active Face	Stainless Steel (0.5mm)		Stainless Steel (0.5mm)		Stainless Steel (0.5mm)
Housing Material	Stainless Steel		Stainless Steel		Stainless Steel
Part Numbers	Shielded	Shielded	Shielded	Shielded	Shielded
AC/DC 2 wire 20-250V, N.O.	FCS1-1805U-A3U2	FCS1-1805U-A3S2	FCS1-1805U-AUU3	FCS1-1805U-AUS3	FCS1-1805U-AZU3
AC/DC 2 wire 20-250V. N.C.	FCS1-1805U-B3U2	FCS1-1805U-B3S2	FCS1-1805U-BUU3	FCS1-1805U-BUS3	FCS1-1805U-BZU3
Extended Range					
AC/DC 2 wire 20-250V, N.O.	ECS1-1808U-A3U2	ECS1-1808U-A3S2	ECS1-1808U-AUU3	ECS1-1808U-AUS3	ECS1-1808U-AZU3
AC/DC 2 wire 20-250V. N.C.	ECS1-1808U-B3U2	ECS1-1808U-B3S2	ECS1-1808U-BUU3	ECS1-1808U-BUS3	ECS1-1808U-BZU3
Diagrams (units in mm)		Short Body		Short Body	
					

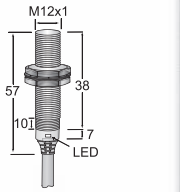
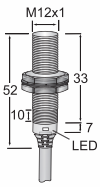
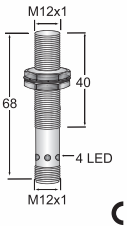
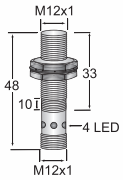
Metal Head™ - M30

	M30	M30	M30	M30
Sensing Distance	10mm		10mm	
Extended Sensing Distance	15mm		15mm	
Operating Voltage	20-250 VAC, 50-60 Hz; 10-30 VDC		20-250 VAC, 50-60 Hz; 10-30 VDC	
Ripple	DC Ripple <10%		DC Ripple <10%	
No Load Current	<2.5mA		<2.5mA	
Max. Load Current	200mA		200mA	
Leakage Current	<2.5mA		<2.5mA	
Surge Current	2.2A for 20ms		2.2A for 20ms	
Min. Load Current	5mA		5mA	
Voltage Drop	<=10 VAC; <=8 VDC		<=10 VAC; <=8 VDC	
Switching Frequency	25 Hz AC; 40 Hz DC		25 Hz AC; 40 Hz DC	
Response Time	10ms/10ms		10ms/10ms	
Switching Hysteresis	<15% (Sr)		<15% (Sr)	
Repeat Accuracy	<1.0% (Sr)		<1.0% (Sr)	
Protection Category	IP67		IP67	
Operating Temperature	-25°C - +70°C		-25°C - +70°C	
Temperature Drift	<10% (Sr)		<10% (Sr)	
Short Circuit Protection	Yes		Yes	
Overload Trip Point	-		-	
Time Delay Before Availability	-		-	
Shock / Vibration	IEC 60947-5-2, Part 7.4.1 & 7.4.2		IEC 60947-5-2, Part 7.4.1 & 7.4.2	
Material Active Face	Stainless Steel (0.5mm)		Stainless Steel (0.5mm)	
Housing Material	Stainless Steel		Stainless Steel	
Part Numbers	Shielded	Shielded	Shielded	Shielded
AC/DC 2 wire 20-250V, N.O.	FCS1-3010U-A3U2	FCS1-3010U-A3S2	FCS1-3010U-AUU3	FCS1-3010U-AUS3
AC/DC 2 wire 20-250V. N.C.	FCS1-3010U-B3U2	FCS1-3010U-B3S2	FCS1-3010U-BUU3	FCS1-3010U-BUS3
Extended Range				
AC/DC 2 wire 20-250V, N.O.	ECS1-3015U-A3U2	ECS1-3015U-A3S2	ECS1-3015U-AUU3	ECS1-3015U-AUS3
AC/DC 2 wire 20-250V. N.C.	ECS1-3015U-B3U2	ECS1-3015U-B3S2	ECS1-3015U-BUU3	ECS1-3015U-BUS3
Diagrams (units in mm)				
				

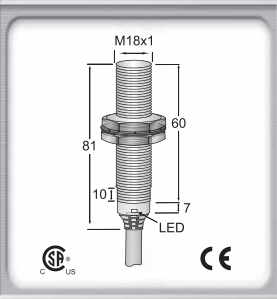
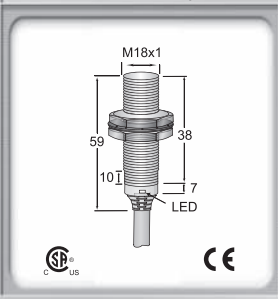
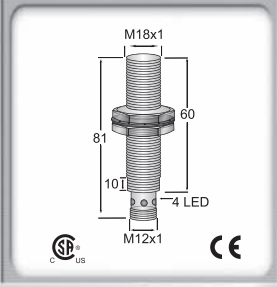
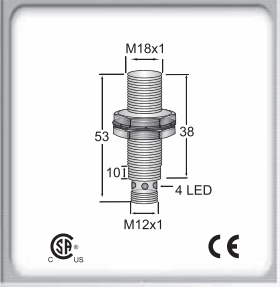
WELD FIELD IMMUNE - M8

	M8	M8	M8	M8
Sensing Distance	1 mm	1 mm	1 mm	1 mm
Operating Voltage	10-30 VDC		10-30 VDC	
Ripple	<10%		<10%	
No Load Current	<10mA		<10mA	
Max. Load Current	200mA		200mA	
Leakage Current	<0.01mA		<0.01mA	
Surge Current	-		-	
Min. Load Current	-		-	
Voltage Drop	<1.5V		<1.5V	
Switching Frequency	2 KHz		2 KHz	
Response Time	0.1ms/0.1ms		0.1ms/0.1ms	
Switching Hysteresis	<15% (Sr)		<15% (Sr)	
Repeat Accuracy	<1.0% (Sr)		<1.0% (Sr)	
Protection Category	IP67		IP67	
Operating Temperature	-25°C - +70°C		-25°C - +70°C	
Temperature Drift	<10% (Sr)		<10% (Sr)	
Short Circuit Protection	Yes		Yes	
Overload Trip Point	220mA		220mA	
Time Delay Before Availability	<10ms		<10ms	
Shock / Vibration	IEC 60947-5-2, Part 7.4.1 & 7.4.2		IEC 60947-5-2, Part 7.4.1 & 7.4.2	
Material Active Face	ETFE		ETFE	
Housing Material	PTFE Coated Brass		PTFE Coated Brass	
Part Numbers	Shielded	Shielded	Shielded	Shielded
DC 3 wire 10-30V NPN N.O.	WCM1-0801N-A3U2	WCM1-0801N-A3S2	WCM1-0801N-ARU4	WCM1-0801N-ACS3
DC 3 wire 10-30V NPN N.C.	WCM1-0801N-B3U2	WCM1-0801N-B3S2	WCM1-0801N-BRU4	WCM1-0801N-BCS3
DC 3 wire 10-30V PNP N.O.	WCM1-0801P-A3U2	WCM1-0801P-B3S2	WCM1-0801P-ARU4	WCM1-0801P-ACS3
DC 3 wire 10-30V PNP N.C.	WCM1-0801P-B3U2	WCM1-0801P-B3S2	WCM1-0801P-BRU4	WCM1-0801P-BCS3
Diagrams (units in mm)		Short Body		Short Body
				

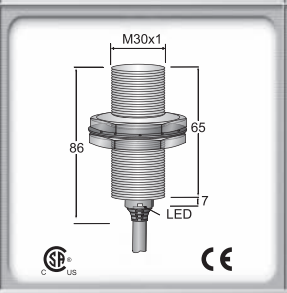
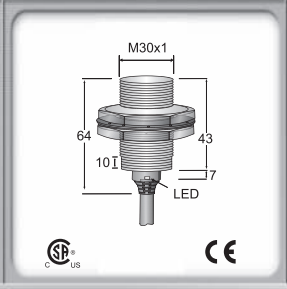
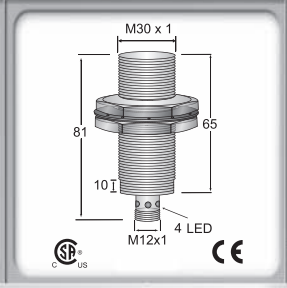
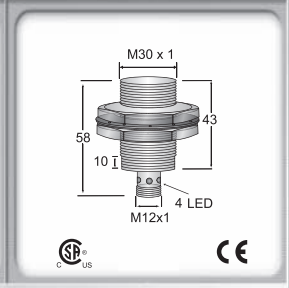
WELD FIELD IMMUNE - M12

	M12	M12	M12	M12
Sensing Distance	2 mm	2 mm	2 mm	2 mm
Operating Voltage	10-30 VDC		10-30 VDC	
Ripple	<10%		<10%	
No Load Current	<10mA		<10mA	
Max. Load Current	200mA		200mA	
Leakage Current	<0.01mA		<0.01mA	
Surge Current	-		-	
Min. Load Current	-		-	
Voltage Drop	<1.5V		<1.5V	
Switching Frequency	2 KHz		2 KHz	
Response Time	0.1ms/0.1ms		0.1ms/0.1ms	
Switching Hysteresis	<15% (Sr)		<15% (Sr)	
Repeat Accuracy	<1.0% (Sr)		<1.0% (Sr)	
Protection Category	IP67		IP67	
Operating Temperature	-25°C - +70°C		-25°C - +70°C	
Temperature Drift	<10% (Sr)		<10% (Sr)	
Short Circuit Protection	Yes		Yes	
Overload Trip Point	220mA		220mA	
Time Delay Before Availability	<10ms		<10ms	
Shock / Vibration	IEC 60947-5-2, Part 7.4.1 & 7.4.2		IEC 60947-5-2, Part 7.4.1 & 7.4.2	
Material Active Face	ETFE		ETFE	
Housing Material	PTFE Coated Brass		PTFE Coated Brass	
Part Numbers	Shielded	Shielded	Shielded	Shielded
DC 3 wire 10-30V NPN N.O.	WCM1-1202N-A3U2	WCM1-1202N-A3S2	WCM1-1202N-ARU4	WCM1-1202N-ARS4
DC 3 wire 10-30V NPN N.C.	WCM1-1202N-B3U2	WCM1-1202N-B3S2	WCM1-1202N-BRU4	WCM1-1202N-BRS4
DC 3 wire 10-30V PNP N.O.	WCM1-1202P-A3U2	WCM1-1202P-B3S2	WCM1-1202P-ARU4	WCM1-1202P-ARS4
DC 3 wire 10-30V PNP N.C.	WCM1-1202P-B3U2	WCM1-1202P-B3S2	WCM1-1202P-BRU4	WCM1-1202P-BRS4
Diagrams (units in mm)		Short Body		Short Body
				

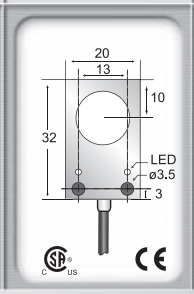
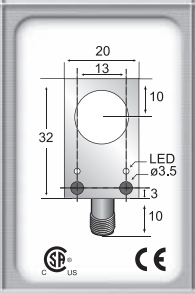
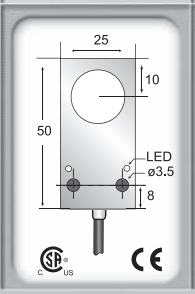
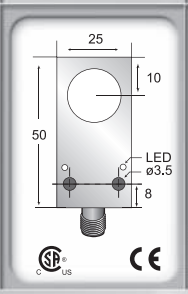
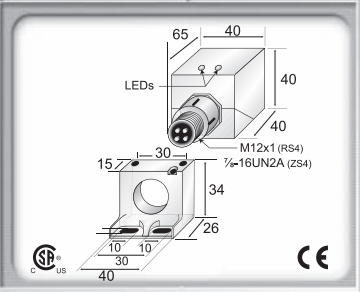
WELD FIELD IMMUNE - M18

	M18	M18	M18	M18
Sensing Distance	5 mm	5 mm	5 mm	5 mm
Operating Voltage	10-30 VDC		10-30 VDC	
Ripple	<10%		<10%	
No Load Current	<10mA		<10mA	
Max. Load Current	200mA		200mA	
Leakage Current	<0.01mA		<0.01mA	
Surge Current	-		-	
Min. Load Current	-		-	
Voltage Drop	<1.5V		<1.5V	
Switching Frequency	1 KHz		1 KHz	
Response Time	0.2ms/0.2ms		0.2ms/0.2ms	
Switching Hysteresis	<15% (Sr)		<15% (Sr)	
Repeat Accuracy	<1.0% (Sr)		<1.0% (Sr)	
Protection Category	IP67		IP67	
Operating Temperature	-25°C - +70°C		-25°C - +70°C	
Temperature Drift	<10% (Sr)		<10% (Sr)	
Short Circuit Protection	Yes		Yes	
Overload Trip Point	220mA		220mA	
Time Delay Before Availability	<10ms		<10ms	
Shock / Vibration	IEC 60947-5-2, Part 7.4.1 & 7.4.2		IEC 60947-5-2, Part 7.4.1 & 7.4.2	
Material Active Face	ETFE		ETFE	
Housing Material	PTFE Coated Brass		PTFE Coated Brass	
Part Numbers	Shielded	Shielded	Shielded	Shielded
DC 3 wire 10-30V NPN N.O.	WCM1-1805N-A3U2	WCM1-1805N-A3S2	WCM1-1805N-ARU4	WCM1-1805N-ARS4
DC 3 wire 10-30V NPN N.C.	WCM1-1805N-B3U2	WCM1-1805N-B3S2	WCM1-1805N-BRU4	WCM1-1805N-BRS4
DC 3 wire 10-30V PNP N.O.	WCM1-1805P-A3U2	WCM1-1805P-A3S2	WCM1-1805P-ARU4	WCM1-1805P-ARS4
DC 3 wire 10-30V PNP N.C.	WCM1-1805P-B3U2	WCM1-1805P-B3S2	WCM1-1805P-BRU4	WCM1-1805P-BRS4
.				
Diagrams (units in mm)		Short Body		Short Body
				

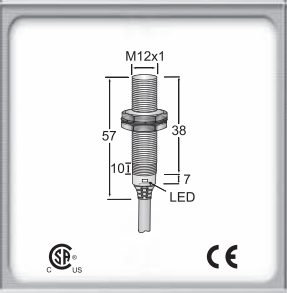
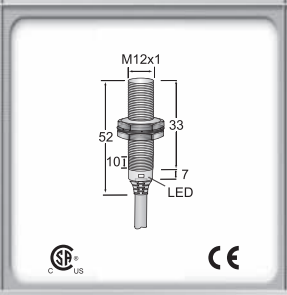
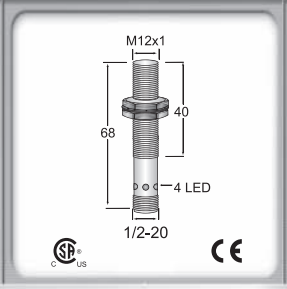
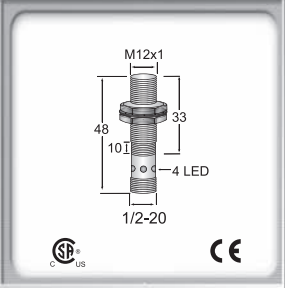
WELD FIELD IMMUNE - M30

	M30	M30	M30	M30
Sensing Distance	10 mm	10 mm	10 mm	10 mm
Operating Voltage	10-30 VDC		10-30 VDC	
Ripple	<10%		<10%	
No Load Current	<10mA		<10mA	
Max. Load Current	200mA		200mA	
Leakage Current	<0.01mA		<0.01mA	
Surge Current	-		-	
Min. Load Current	-		-	
Voltage Drop	<1.5V		<1.5V	
Switching Frequency	300 Hz		300 Hz	
Response Time	0.5ms/0.5ms		0.5ms/0.5ms	
Switching Hysteresis	<15% (Sr)		<15% (Sr)	
Repeat Accuracy	<1.0% (Sr)		<1.0% (Sr)	
Protection Category	IP67		IP67	
Operating Temperature	-25°C - +70°C		-25°C - +70°C	
Temperature Drift	<10% (Sr)		<10% (Sr)	
Short Circuit Protection	Yes		Yes	
Overload Trip Point	220mA		220mA	
Time Delay Before Availability	<10ms		<10ms	
Shock / Vibration	IEC 60947-5-2, Part 7.4.1 & 7.4.2		IEC 60947-5-2, Part 7.4.1 & 7.4.2	
Material Active Face	ETFE		ETFE	
Housing Material	PTFE Coated Brass		PTFE Coated Brass	
Part Numbers	Shielded	Shielded	Shielded	Shielded
DC 3 wire 10-30V NPN N.O.	WCM1-3010N-A3U2	WCM1-3010N-A3S2	WCM1-3010N-ARU4	WCM1-3010N-ARS4
DC 3 wire 10-30V NPN N.C.	WCM1-3010N-B3U2	WCM1-3010N-B3S2	WCM1-3010N-BRU4	WCM1-3010N-BRS4
DC 3 wire 10-30V PNP N.O.	WCM1-3010P-A3U2	WCM1-3010P-B3S2	WCM1-3010P-ARU4	WCM1-3010P-ARS4
DC 3 wire 10-30V PNP N.C.	WCM1-3010P-B3U2	WCM1-3010P-B3S2	WCM1-3010P-BRU4	WCM1-3010P-BRS4
Diagrams (units in mm)		Short Body		Short Body
				

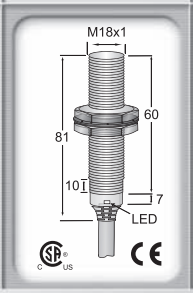
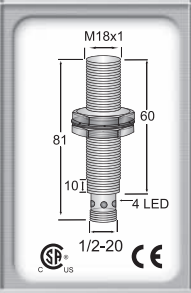
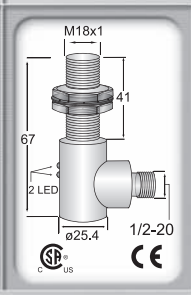
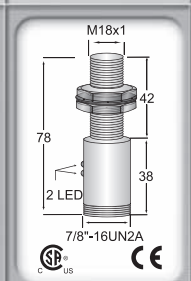
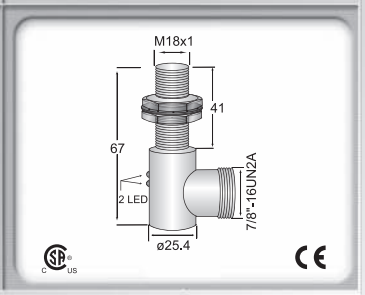
WELD FIELD IMMUNE - RECTANGULAR

	Q20x32x10	Q20x32x10	Q25x50x10	Q25x50x10	Q40s	
Sensing Distance	5 mm	5 mm	5 mm	5 mm	15 mm	25 mm
Operating Voltage	10-30 VDC		10-30 VDC		10-30 VDC	
Ripple	<10%		<10%		<10%	
No Load Current	<10mA		<10mA		<10mA	
Max. Load Current	200mA		200mA		200mA	
Leakage Current	<0.01mA		<0.01mA		<0.01mA	
Surge Current	-		-		-	
Min. Load Current	-		-		-	
Voltage Drop	<1.5V		<1.5V		<1.5V	
Switching Frequency	1 KHz		1 KHz		1 KHz	
Response Time	0.2ms/0.2ms		0.2ms/0.2ms		0.2ms/0.2ms	
Switching Hysteresis	<15% (Sr)		<15% (Sr)		<15% (Sr)	
Repeat Accuracy	<1.0% (Sr)		<1.0% (Sr)		<1.0% (Sr)	
Protection Category	IP67		IP67		IP67	
Operating Temperature	-25°C - +70°C		-25°C - +70°C		-25°C - +70°C	
Temperature Drift	<10% (Sr)		<10% (Sr)		<10% (Sr)	
Short Circuit Protection	Yes		Yes		Yes	
Overload Trip Point	220mA		220mA		220mA	
Time Delay Before Availability	<10ms		<10ms		<10ms	
Shock / Vibration	IEC 60947-5-2, Part 7.4.1 & 7.4.2		IEC 60947-5-2, Part 7.4.1 & 7.4.2		IEC 60947-5-2, Part 7.4.1 & 7.4.2	
Material Active Face	ETFE		ETFE		ETFE	
Housing Material	PTFE Coated Brass		PTFE Coated Brass		PTFE Coated Brass	
Part Numbers	Shielded	Shielded	Shielded	Shielded	Shielded	Unshielded
DC 3 wire 10-30V NPN N.O.	WQM1-2005N-A3U2T	WQM1-3205N-ACU3	WQM1-2505N-A3U2T	WQM1-2505N-ACU3	WQP1-4015N-ARS4	WQP2-4025N-ARS4
DC 3 wire 10-30V NPN N.C.	WQM1-2005N-B3U2T	WQM1-3205N-BCU3	WQM1-2505N-B3U2T	WQM1-2505N-BCU3	WQP1-4015N-BRS4	WQP2-4025N-BRS4
DC 3 wire 10-30V PNP N.O.	WQM1-2005P-A3U2T	WQM1-3205P-ACU3	WQM1-2505P-A3U2T	WQM1-2505P-ACU3	WQP1-4015P-ARS4	WQP2-4025P-ARS4
DC 3 wire 10-30V PNP N.C.	WQM1-2005P-B3U2T	WQM1-3205P-BCU3	WQM1-2505P-B3U2T	WQM1-2505P-BCU3	WQP1-4015P-BRS4	WQP2-4025P-BRS4
Diagrams (units in mm)						
						

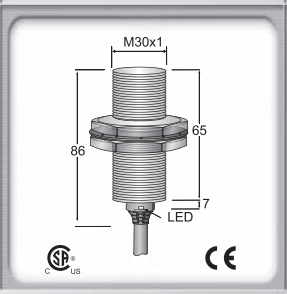
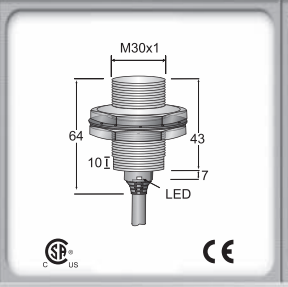
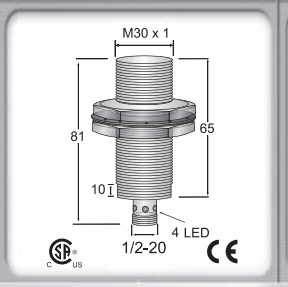
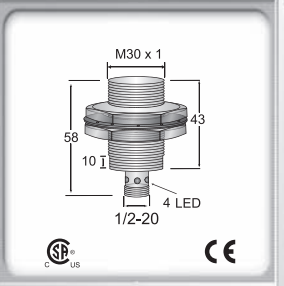
WELD FIELD IMMUNE - M12

	M12	M12	M12	M12
Sensing Distance	2 mm	2 mm	2 mm	2 mm
Operating Voltage	20-250 VAC, 50-60 Hz; 20-250 VDC		20-250 VAC, 50-60 Hz; 20-250 VDC	
Ripple	DC Ripple <10%		DC Ripple <10%	
No Load Current	<2.5mA		<2.5mA	
Max. Load Current	100mA		100mA	
Leakage Current	<2.5mA		<2.5mA	
Surge Current	2.2A for 20ms		2.2A for 20ms	
Min. Load Current	5mA		5mA	
Voltage Drop	<=10 VAC; <=8 VDC		<=10 VAC; <=8 VDC	
Switching Frequency	25 Hz AC; 40 Hz DC		25 Hz AC; 40 Hz DC	
Response Time	10ms/10ms		10ms/10ms	
Switching Hysteresis	<15% (Sr)		<15% (Sr)	
Repeat Accuracy	<1.0% (Sr)		<1.0% (Sr)	
Protection Category	IP67		IP67	
Operating Temperature	-25°C - +70°C		-25°C - +70°C	
Temperature Drift	<10% (Sr)		<10% (Sr)	
Short Circuit Protection	No		No	
Overload Trip Point	-		-	
Time Delay Before Availability	-		-	
Shock / Vibration	IEC 60947-5-2, Part 7.4.1 & 7.4.2		IEC 60947-5-2, Part 7.4.1 & 7.4.2	
Material Active Face	ETFE		ETFE	
Housing Material	PTFE Coated Brass		PTFE Coated Brass	
Part Numbers	Shielded	Shielded	Shielded	Shielded
AC/DC 2 wire 20-250 VAC N.O.	WCM1-1202U-A3U2	WCM1-1202U-A3S2	WCM1-1202U-AUU3	WCM1-1202U-AUS3
AC/DC 2 wire 20-250 VAC N.C.	WCM1-1202U-B3U2	WCM1-1202U-B3S2	WCM1-1202U-BUU3	WCM1-1202U-BUS3
Diagrams (units in mm)		Short Body		Short Body
				

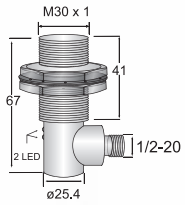
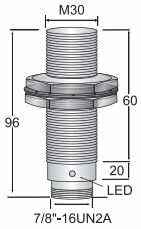
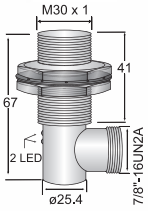
WELD FIELD IMMUNE - M18

	M18	M18	M18	M18	M18
Sensing Distance	5 mm	5 mm	5 mm	5 mm	5 mm
Operating Voltage	20-250 VAC, 50-60 Hz; 20-250 VDC		20-250 VAC, 50-60 Hz; 20-250 VDC		20-250 VAC
Ripple	DC Ripple <10%		DC Ripple <10%		-
No Load Current	<2.5mA		<2.5mA		<1.8mA
Max. Load Current	100mA		100mA		400mA
Leakage Current	<2.5mA		<2.5mA		<1.8mA
Surge Current	2.2A for 20ms		2.2A for 20ms		5A (20ms)
Min. Load Current	5mA		5mA		5mA
Voltage Drop	<=10 VAC; <=8 VDC		<=10 VAC; <=8 VDC		<8 VAC @ 400mA
Switching Frequency	25 Hz AC; 40 Hz DC		25 Hz AC; 40 Hz DC		<25Hz
Response Time	10ms/10ms		10ms/10ms		10ms/10ms
Switching Hysteresis	<15% (Sr)		<15% (Sr)		<15% (Sr)
Repeat Accuracy	<1.0% (Sr)		<1.0% (Sr)		<1.0% (Sr)
Protection Category	IP67		IP67		IP67
Operating Temperature	-25°C - +70°C		-25°C - +70°C		-25°C - +70°C
Temperature Drift	<10% (Sr)		<10% (Sr)		<10% (Sr)
Short Circuit Protection	No		No		No
Overload Trip Point	-		-		-
Time Delay Before Availability	-		-		-
Shock / Vibration	IEC 60947-5-2, Part 7.4.1 & 7.4.2		IEC 60947-5-2, Part 7.4.1 & 7.4.2		IEC 60947-5-2, Part 7.4.1 & 7.4.2
Material Active Face	ETFE		ETFE		ETFE
Housing Material	PTFE Coated Brass		PTFE Coated Brass		PTFE Coated Brass
Part Numbers	Shielded	Shielded	Shielded	Shielded	Shielded
AC/DC 2 wire 20-250 VAC N.O.	WCM1-1805U-A3U2	WCM1-1805U-AUU3	WCM1-1805U-AUU3Y/2	WCM1-1805U-AZL3/2	WCM1-1805U-AZL3Y/2
AC/DC 2 wire 20-250 VAC N.C.	WCM1-1805U-B3U2	WCM1-1805U-BUU3	WCM1-1805U-BUU3Y/2	WCM1-1805U-BZL3/2	WCM1-1805U-BZL3Y/2
Diagrams (units in mm)					
					

WELD FIELD IMMUNE - M30

	M30	M30	M30	M30
Sensing Distance	10 mm	10 mm	10 mm	10 mm
Operating Voltage	20-250 VAC		20-250 VAC	
Ripple	-		-	
No Load Current	<1.8mA		<1.8mA	
Max. Load Current	400mA		400mA	
Leakage Current	<1.8mA		<1.8mA	
Surge Current	5A (20ms)		5A (20ms)	
Min. Load Current	5mA		5mA	
Voltage Drop	<8 VAC @ 400mA		<8 VAC @ 400mA	
Switching Frequency	<25Hz		<25Hz	
Response Time	10ms/10ms		10ms/10ms	
Switching Hysteresis	<15% (Sr)		<15% (Sr)	
Repeat Accuracy	<1.0% (Sr)		<1.0% (Sr)	
Protection Category	IP67		IP67	
Operating Temperature	-25°C - +70°C		-25°C - +70°C	
Temperature Drift	<10% (Sr)		<10% (Sr)	
Short Circuit Protection	No		No	
Overload Trip Point	-		-	
Time Delay Before Availability	-		-	
Shock / Vibration	IEC 60947-5-2, Part 7.4.1 & 7.4.2		IEC 60947-5-2, Part 7.4.1 & 7.4.2	
Material Active Face	ETFE		ETFE	
Housing Material	PTFE Coated Brass		PTFE Coated Brass	
Part Numbers	Shielded	Shielded	Shielded	Shielded
AC/DC 2 wire 20-250V N.O.	WCM1-3010U-A3U2	WCM1-3010U-A3S2	WCM1-3010U-AUU3	WCM1-3010U-AUS3
AC/DC 2 wire 20-250V N.C.	WCM1-3010U-B3U2	WCM1-3010U-B3S2	WCM1-3010U-BUU3	WCM1-3010U-BUS3
Diagrams (units in mm)		Short Body		Short Body
				

WELD FIELD IMMUNE - M30

	M30	M30	M30
Sensing Distance	10 mm	10 mm	10 mm
Operating Voltage	20-250 VAC	20-250 VAC	20-250 VAC
Ripple	-	-	-
No Load Current	<1.8mA	<1.8mA	<1.8mA
Max. Load Current	400mA	400mA	400mA
Leakage Current	<1.8mA	<1.8mA	<1.8mA
Surge Current	5A (20ms)	5A (20ms)	5A (20ms)
Min. Load Current	5mA	5mA	5mA
Voltage Drop	<8 VAC @ 400mA	<8 VAC @ 400mA	<8 VAC @ 400mA
Switching Frequency	<25Hz	<25Hz	<25Hz
Response Time	10ms/10ms	10ms/10ms	10ms/10ms
Switching Hysteresis	<15% (Sr)	<15% (Sr)	<15% (Sr)
Repeat Accuracy	<1.0% (Sr)	<1.0% (Sr)	<1.0% (Sr)
Protection Category	IP67	IP67	IP67
Operating Temperature	-25°C - +70°C	-25°C - +70°C	-25°C - +70°C
Temperature Drift	<10% (Sr)	<10% (Sr)	<10% (Sr)
Short Circuit Protection	No	No	No
Overload Trip Point	-	-	-
Time Delay Before Availability	-	-	-
Shock / Vibration	IEC 60947-5-2, Part 7.4.1 & 7.4.2	IEC 60947-5-2, Part 7.4.1 & 7.4.2	IEC 60947-5-2, Part 7.4.1 & 7.4.2
Material Active Face	ETFE	ETFE	ETFE
Housing Material	PTFE Coated Brass	PTFE Coated Brass	PTFE Coated Brass
Part Numbers	Shielded	Shielded	Shielded
AC/DC 2 wire 20-250V N.O.	WCM1-3010U-AUU3Y/2	WCM1-3010U-ALZ3/2	WCM1-3010U-AZL3Y/2
AC/DC 2 wire 20-250V N.C.	WCM1-3010U-BUU3Y/2	WCM1-3010U-BLZ3/2	WCM1-3010U-BZL3Y/2
Diagrams (units in mm)			
			

Sensor Cables

Low Cost and Reliable 5 Meter Length Female Cables

Pico

For M8 DC Connectors

Micro AC

For 1/2 x 20 UNF AC Connectors

Micro DC

For M12 DC Connectors

Mini

For 7/8"x16 UNF Connectors

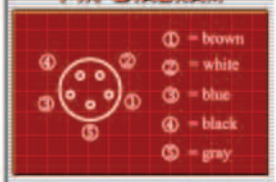
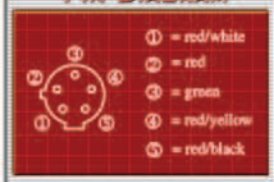
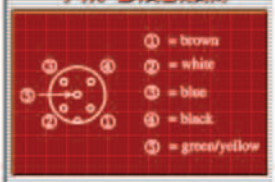
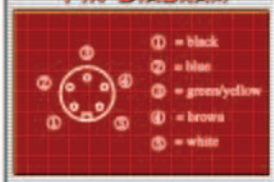
3 Pin Connector Types

Pico	Micro AC	Micro DC	Mini
Pin Diagram	Pin Diagram	Pin Diagram	Pin Diagram
① = brown ③ = blue ④ = black	① = yellow/green ② = black ③ = blue	① = brown ③ = blue ④ = black	① = brown ② = yellow/green (black for /B models) ③ = blue
Straight Model #: C-FS3TZ-V075	Straight Model #: U-FS3TA-V315	Straight Model #: R-FS3TZ-V075	Straight Model #: Z-FS3PA-V025
90° Angled Model #: C-FA3TZ-V075	90° Angled Model #: U-FA3TA-V315	90° Angled Model #: R-FA3TZ-V075	90° Angled Model #: Z-FA3PA-V025

4 Pin Connector Types

Pico	Micro AC	Micro DC	Mini
Pin Diagram	Pin Diagram	Pin Diagram	Pin Diagram
① = brown ② = white ③ = blue ④ = black	① = red/black ② = red/white ③ = red ④ = green	① = brown ② = white ③ = blue ④ = black	① = brown ② = white ③ = blue ④ = black
Straight Model #: C-FS4TZ-V075	Straight Model #: U-FS4TA-V315	Straight Model #: R-FS4TZ-V075	Straight Model #: Z-FS4PA-V025
90° Angled Model #: C-FA4TZ-V075	90° Angled Model #: U-FA4TA-V315	90° Angled Model #: R-FA4TZ-V075	90° Angled Model #: Z-FA4PA-V025

5 Pin Connector Types

Pico	Micro AC	Micro DC	Mini
Pin Diagram	Pin Diagram	Pin Diagram	Pin Diagram
 ① = brown ② = white ③ = blue ④ = black ⑤ = gray	 ① = red/white ② = red ③ = green ④ = red/yellow ⑤ = red/black	 ① = brown ② = white ③ = blue ④ = black ⑤ = green/yellow	 ① = black ② = blue ③ = green/yellow ④ = brown ⑤ = white
Straight Model #: C-FS5TZ-V075	Straight Model #: U-FS5TA-V315	Straight Model #: R-FS5TZ-V075	Straight Model #: Z-FS5PA-V025
90° Angled Model #: C-FA5TZ-V075	90° Angled Model #: U-FA5TA-V315	90° Angled Model #: R-FA5TZ-V075	90° Angled Model #: Z-FA5PA-V025

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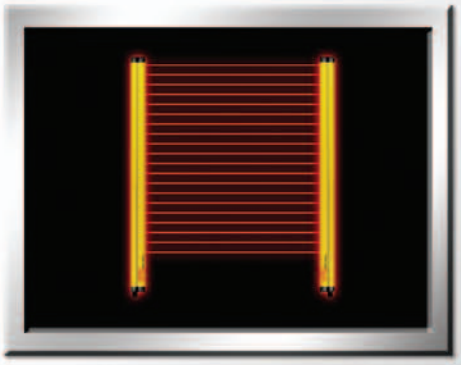

Category 4 Safety
Category 2 Safety
Finger Protection (14mm)
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