

Inductive Proximity Sensors

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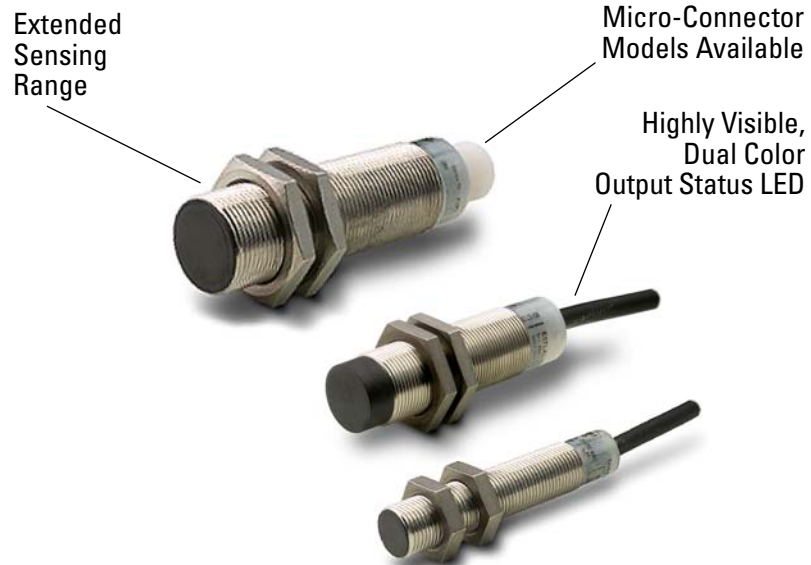
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The MySpeed sensor is one of first inductive sensors to feature built-in speed detection technology. This functionality allows the sensor to detect when the target RPM falls under a specified limit.

MySpeed is not just limited to rotating applications. By measuring the time between two detections, the sensor can fit in a wide variety of applications. When the time between two target detections exceed the rated millisecond limit, the sensor will activate.

Such a solution once required a sensor, PLC and programmed logic. Now, MySpeed can do it all. There is no need for costly engineering and installation time. MySpeed is a quick, drop-in solution available with different fixed speed limits, called activation points. Consolidate your controls and reduce engineering time with MySpeed, available in 12, 18 and 30 mm diameter models with either pre-wired cables or micro connectors.

Detect Target Slowdown or Stoppage with MySpeed sensors



Product Features

- Built-in speed detection technology activates the sensor when the target's rotational or lateral speed slows
- Reliably detect metal targets at up to three times range of conventional inductive proximity sensors
- Auto-configure output allows for automatic NPN or PNP
- Resistant to extreme temperature (-40°C) and high pressure washdown
- High electrical noise immunity of 20 V/m

Typical Applications

- Automotive
- Machine Tool
- Material Handling



Unless otherwise noted, the products contained in this document are not designed or intended for use in human safety applications.



Speed Detection

MySpeed detects speed by measuring time between two target detections.

Model Selection — MySpeed


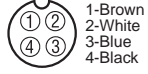
	Sensing Range	Shielding	Maximum Rated Target Speed ^①	Activation Point ^②	Connection Type	Catalog Number
3-Wire DC Sensors						
12 mm Diameter Standard Range Extended Range	4 mm	Shielded	2,175 rpm 27.5 mS	50 rpm or 1,200 mS	4-pin Micro DC Connector	E59-M12A105D01-D1S1 ⊕
					2-meter Cable	E59-M12A105C02-D1S1
				100 rpm or 600 mS	4-pin Micro DC Connector	E59-M12A105D01-D1S2 ⊕
					2-meter Cable	E59-M12A105C02-D1S2
				500 rpm or 120 mS	4-pin Micro DC Connector	E59-M12A105D01-D1S3 ⊕
					2-meter Cable	E59-M12A105C02-D1S3
				1,500 rpm or 40 mS	4-pin Micro DC Connector	E59-M12A105D01-D1S4 ⊕
					2-meter Cable	E59-M12A105C02-D1S4
	10 mm	Unshielded	1,125 rpm 53 mS	50 rpm or 1,200 mS	4-pin Micro DC Connector	E59-M12C110D01-D1S1 ⊕
					2-meter Cable	E59-M12C110C02-D1S1
				100 rpm or 600 mS	4-pin Micro DC Connector	E59-M12C110D01-D1S2 ⊕
					2-meter Cable	E59-M12C110C02-D1S2
				500 rpm or 120 mS	4-pin Micro DC Connector	E59-M12C110D01-D1S3 ⊕
					2-meter Cable	E59-M12C110C02-D1S3
18 mm Diameter Standard Range Extended Range	8 mm	Shielded	1,460 rpm 41 mS	50 rpm or 1,200 mS	4-pin Micro DC Connector	E59-M18A108D01-D1S1 ⊕
					2-meter Cable	E59-M18A108C02-D1S1
				100 rpm or 600 mS	4-pin Micro DC Connector	E59-M18A108D01-D1S2 ⊕
					2-meter Cable	E59-M18A108C02-D1S2
				500 rpm or 120 mS	4-pin Micro DC Connector	E59-M18A108D01-D1S3 ⊕
					2-meter Cable	E59-M18A108C02-D1S3
30 mm Diameter Standard Range Extended Range	15 mm	Shielded	900 rpm 66 mS	50 rpm or 1,200 mS	4-pin Micro DC Connector	E59-M30A115D01-D1S1 ⊕
					2-meter Cable	E59-M30A115C02-D1S1
				100 rpm or 600 mS	4-pin Micro DC Connector	E59-M30A115D01-D1S2 ⊕
					2-meter Cable	E59-M30A115C02-D1S2
				500 rpm or 120 mS	4-pin Micro DC Connector	E59-M30A115D01-D1S3 ⊕
					2-meter Cable	E59-M30A115C02-D1S3

① Sensor will not perform reliably if (a) target speed rotation exceeds the max rated rpm or (b) the time between target detections is less than the rated milliseconds.

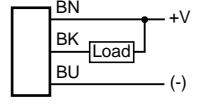
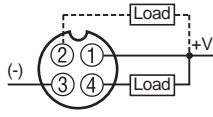
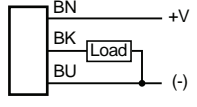
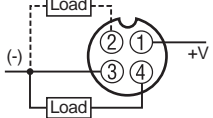
② The sensor will activate when (a) target rotation drops below the rated rpm, or (b) when the time between two target detections exceeds the milliseconds indicated.

⊕ See listing of compatible connector cables on **Page 3**.

Model Selection — Compatible Connector Cables

	Voltage Style	Number of Pins	Gauge	Length	Catalog Number			Pin Configuration/Wire Colors (Face View Female Shown)
					PVC Jacket	PUR Jacket	IRR PUR Jacket	
Standard Cables — Micro Style								
 Micro Style Straight Female	DC	4-pin 4-wire	22 AWG	6.0 feet (2m)	CSDS4A4CY2202	CSDS4A4RY2202	CSDS4A4IO2202	 1-Brown 2-White 3-Blue 4-Black

Wiring Diagrams (Pin numbers are for reference, rely on pin location when wiring)

Operating Voltage	Output	Cable Models	Connector Models (Face View Male Shown)
			Micro
3-Wire Sensors			
6 – 48V DC	N.O. (NPN)		
	N.O. (PNP)		

② Note: Pin numbers 2 and 4 are internally jumpered together. Either pin may be used.

Specifications — MySpeed

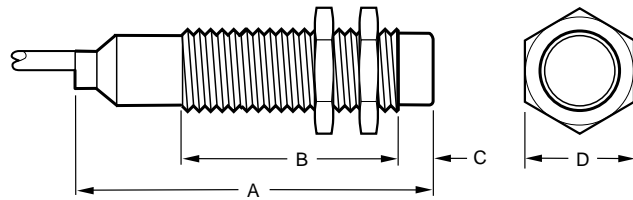
Description	3-Wire Sensors			
Input Voltage	6 – 48V DC			
Load Current	≤500 mA @ 6 – 30V DC; ≤300 mA @ 32 – 48V DC			
Leakage Current	≤150 μA			
Voltage Drop	≤2.5V DC			
Burden Current	≤15 mA			
Protection	Auto Reset			
Switching Hysteresis	< 15% Rated Sensing Distance			
Repeat Accuracy	Shielded models: < 1% Sensing Distance; Unshielded models: < 3% Sensing Distance			
Temperature Range	-40° to 158°F (-40° to 70°C)			
Material of Construction	303 Stainless steel; End bells: Polycarbonate; Face caps: Ryton®; Cable: AWM Style 20387 (PVC) ③			
Vibration and Shock	Vibration: 10 to 55 Hz, 1 mm Amplitude, IEC 60068-2-6; Shock: 30g, 11 mS per IEC 68-2-27			
Indicator LED	360° viewable LED			
Enclosure Ratings	NEMA 4, 4X, 6, 6P, 12 and 13 (IP67) ④			
Response Time	3-Wire Sensors			
	Shielded			Unshielded
	12 mm	18 mm	30 mm	12 mm
Factory Default Mode (20 V/m)	580 Hz	390 Hz	240 Hz	300 Hz

③ Ryton® is a registered trademark of Phillips Chemical (division of Phillips Petroleum).

④ Our products conform to NEMA tests as indicated, however, some severe washdown applications can exceed these NEMA test specifications.

Approximate Dimensions — MySpeed in Inches (mm)

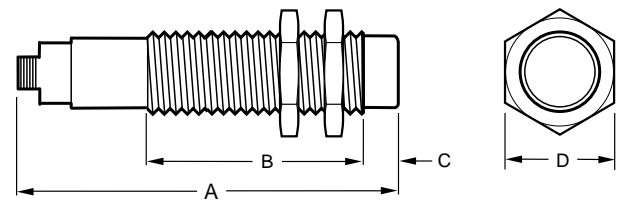
Cable Models



Cable Models

Size	Shielding	A	B	C	D
12 mm	Shielded	2.46 (62.4)	1.98 (50.3)	0.02 (0.5)	0.67 (17)
	Unshielded	2.46 (62.4)	1.64 (41.6)	0.36 (9)	0.67 (17)
18 mm	Shielded	2.54 (64.5)	2.00 (50.9)	0.02 (0.5)	0.94 (24)
30 mm	Shielded	2.74 (69.6)	2.13 (54.1)	0.03 (0.75)	1.41 (36)

Micro-Connector Models



Micro-Connector Models

Size	Shielding	A	B	C	D
12 mm	Shielded	2.71 (68.7)	1.98 (50.3)	0.02 (0.5)	0.67 (17)
	Unshielded	2.71 (68.7)	1.64 (41.6)	0.36 (9)	0.67 (17)
18 mm	Shielded	2.73 (69.3)	2.00 (50.9)	0.02 (0.5)	0.94 (24)
30 mm	Shielded	2.92 (74.1)	2.13 (54.1)	0.03 (0.75)	1.41 (36)