

Overview

ProSense Inductive Tube Sensors detect metallic objects as they pass through the sensor's detection zone. Their compact, low-profile cuboid housing mounts quickly via a built-in slot and the included cable ties, making them well suited for integration into automated assembly, vibratory feeder, and material handling systems.

Two operating principles are available: static (TIS models) for general-purpose detection where parts may be stationary or slow-moving, and dynamic (TID models) for applications where metallic contamination on the sensor face is a concern — the dynamic principle automatically suppresses the signal from metal buildups, responding only to passing parts.

Features

- Mounting hardware included
- IP67 protection rating
- Nickel-plated brass connectors
- Quick-disconnect—purchase cable separately



TIS-AP-1F



TID-AN-1H

Inductive Tube Sensors											
Part Number	Price	Sensing Method	Sensing Distance	Switching Output	Switching Frequency	Operation Mode	Connection	Wiring	Housing Size [W x L x H]	Weight lb [g]	Drawing Link
TIS-AP-1F	\$150.00	Static	14mm [0.55in]	PNP	10 Hz	N.O. output	3-pin M8 quick-disconnect	Diagram 1	20 x 70 x 12mm body [0.79 x 2.76 x 0.47in]	0.06 [27.22]	PDF
TIS-AN-1F	\$150.00			NPN				Diagram 2			PDF
TIS-AP-1H	\$150.00			PNP			4-pin M12 quick-disconnect with 40mm pigtail	Diagram 1		0.08 [36.29]	PDF
TIS-AN-1H	\$150.00			NPN				Diagram 2			PDF
TID-AP-1F	\$150.00	Dynamic		PNP			3-pin M8 quick-disconnect	Diagram 1		0.06 [27.22]	PDF
TID-AN-1F	\$150.00			NPN				Diagram 2			PDF
TID-AP-1H	\$150.00			PNP			4-pin M12 quick-disconnect with 40mm pigtail	Diagram 1		0.08 [36.29]	PDF
TID-AN-1H	\$150.00			NPN				Diagram 2			PDF

Note: Includes (2) 160mm nylon cable ties

Wiring Diagrams

Diagram 1

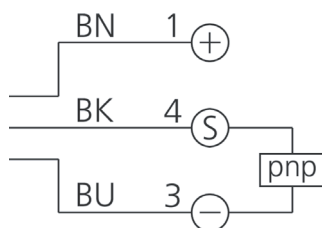
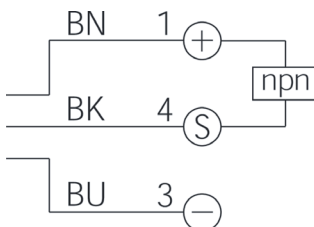
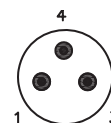


Diagram 2

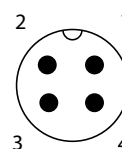


Connectors

M8 Connector



M12 Connector





Inductive Tube Sensors

Specifications		
Models	TIS (Static)	TID (Dynamic)
Operating Voltage	10–35 VDC	
No Load Current	15 mA max.	25 mA max.
Insulation Voltage Endurance	500V	
Switching Output	200 mA	
Voltage Drop	2V max.	
Pulse Stretching	100 ms	
Switching Distance	14mm	
Display	LED green - Operation LED yellow - Switching output	
Speed of Parts	35 m/s max.	0.3–35 m/s
Response Time	0.50 ms	0.20 ms
Shock/Vibration Load	IEC 60068-2-27:2009 30g, 11 ms, IEC 60068-2-6:2008 10–55 Hz, 30 min/axis, 1mm	
Operating Temperature	-25 to +70 °C [-13 to +158 °F]	
Protection Type	IP67	
Housing Material	Polycarbonate	
Agency Approval *	cULus, CE	

* To obtain the most current agency approval information, see the Agency Approval Compliance & Certifications Checklist section on the specific part number's web page.

Overview

ProSense RISD Inductive Ring Sensors detect small metallic parts as they pass through the sensor's central ring opening. The dynamic mode requires a minimum part speed of 0.1 m/s and delivers finer resolution than static mode, making it well suited for rapidly fed vibratory feeder applications where metallic debris on or near the ring could cause false triggers. Static mode accommodates slower-moving parts where continuous presence detection is needed.

Features

- High resolution
- Short response time
- Sensitivity adjustable
- Switchable between static and dynamic operating principle
- Metal connector
- Intelligent teach-in process
- IP67 protection rating
- Quick-disconnect—purchase cable separately

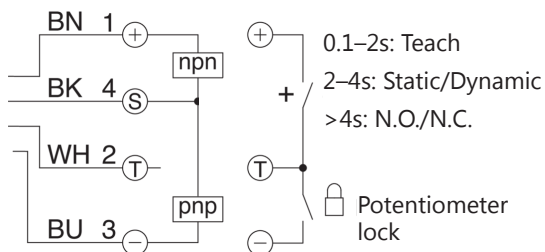


RISD-D06-A0-2H



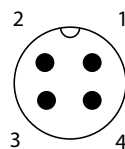
Inductive Ring Sensors											
Part Number	Price	Sensing Method	Sensing Distance Diameter Ø	Sensing Face	Switching Output	Switching Frequency	Operation Mode	Connection	Housing Size [W x L x H]	Weight lb [g]	Drawing Link
RISD-D06-A0-2H	\$156.00	Static Dynamic	6mm [0.24in]	Ring sensing	Push-pull NPN or PNP	50 Hz	N.O./N.C. selectable	4-pin M12 quick- disconnect	20 x 60 x 35mm body [0.79 x 2.36 x 1.38in]	0.134 [60.78]	PDF
RISD-D10-A0-2H	\$156.00		10mm [0.39in]							0.132 [59.87]	PDF
RISD-D15-A0-2H	\$156.00		15mm [0.59in]							0.128 [58.06]	PDF
RISD-D20-A0-2H	\$156.00		20mm [0.79in]							0.126 [57.15]	PDF
RISD-D25-A0-2H	\$156.00		25mm [0.98in]						20 x 65 x 44mm body [0.79 x 2.56 x 1.73in]	0.116 [52.62]	PDF
RISD-D30-A0-2H	\$187.00		30mm [1.18in]							0.144 [65.32]	PDF
RISD-D35-A0-2H	\$229.00		35mm [1.38in]							0.23 [104.33]	PDF
RISD-D50-A0-2H	\$244.00		50mm [1.97in]							0.37 [167.83]	PDF

Wiring Diagram



Connector

M12 Connector



Specifications	
Operating Voltage	10–30 VDC
No Load Current	30 mA max.
Insulation Voltage Endurance	500V
Switching Output	100 mA
Voltage Drop	2V max.
Pulse Stretching	Fixed 20 ms
Sensitivity Adjustment	Potentiometer
Display	LED green - Operation LED yellow - Switching output
Speed of Parts	35 m/s max.
	0.1 m/s min (dynamic)
Readiness Delay	300 ms max.
Shock/Vibration Load	IEC 60068-2-27:2009 30g, 11 ms, IEC 60068-2-6:2008 10–55 Hz, 30 min/axis, 1mm
Operating Temperature	-25 to +70 °C [-13 to +158 °F]
Permissible Relative Humidity	<95% (25 °C) / <90% (40 °C), non-condensing (increased humidity affects the sensor nominal resolution)
Protection Type	IP67
Housing Material	Polycarbonate
Agency Approval *	cULus, CE

* To obtain the most current agency approval information, see the Agency Approval Compliance & Certifications Checklist section on the specific part number's web page.

Detection Limits		
Part Number	Resolution steel ball (smallest object size)	Resolution steel ball (high functional reliability)
<u>RISD-D06-A0-2H</u>	0.5mm (dynamic), 1mm (static)	0.7mm (dynamic), 1.3mm (static)
<u>RISD-D10-A0-2H</u>	0.6mm (dynamic), 1.5mm (static)	0.9mm (dynamic), 2mm (static)
<u>RISD-D15-A0-2H</u>	0.8mm (dynamic), 2mm (static)	1.2mm (dynamic), 2.5mm (static)
<u>RISD-D20-A0-2H</u>	1mm (dynamic), 2.5mm (static)	1.7mm (dynamic), 3.5mm (static)
<u>RISD-D25-A0-2H</u>	1.2mm (dynamic), 3mm (static)	1.8mm (dynamic), 4mm (static)
<u>RISD-D30-A0-2H</u>	1.8mm (dynamic), 4mm (static)	2.5mm (dynamic), 5mm (static)
<u>RISD-D35-A0-2H</u>	2mm (dynamic), 4.5mm (static)	3.5mm (dynamic), 6.5mm (static)
<u>RISD-D50-A0-2H</u>	2.5mm (dynamic), 6mm (static)	5mm (dynamic), 9mm (static)