



TX6356 Data Sheet

Sentro Humidity Sensor

Safety monitoring of humidity, in heavy-duty applications

Environments: Mining • Storage Areas • Process Plants • Utilities • Oil & Gas

Features

- High accuracy humidity sensor with calibrated input sensing modules
- Choice of output signals:
 - 0.4 to 2 V analogue
 - 4 to 20 mA analogue
 - 5 to 15 Hz analogue
 - Dual relay contacts normally open OR normally closed
 - RS485 addressable Modbus datacomms
- Large backlit LCD screen provides clear sensor information and diagnostic data
- Two programmable setpoints for inbuilt visual alarms
- Easy access terminal chamber with large, vibration secure, terminals for connecting heavy plant cables
- Sensing range: 10 to 90% RH non-condensing
- Sensing accuracy: +/- 5%

Benefits

- High strength, dual wall moulded housing for maximum impact protection
- Housing is dust and waterproof to IP65 - humidity sensor head is protected to IP54
- EMC conformity - pending
- Certified for use in hazardous areas

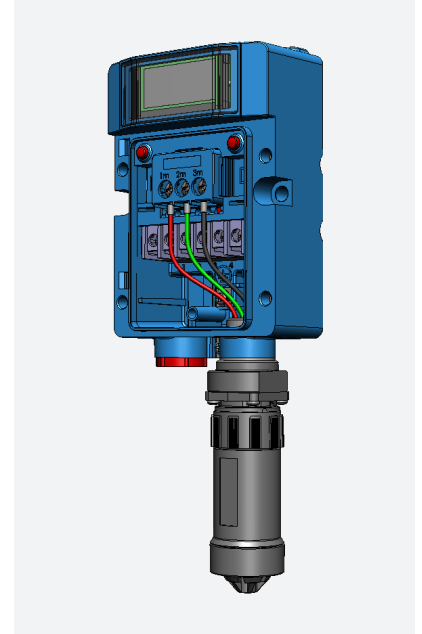


Humidity Sensing

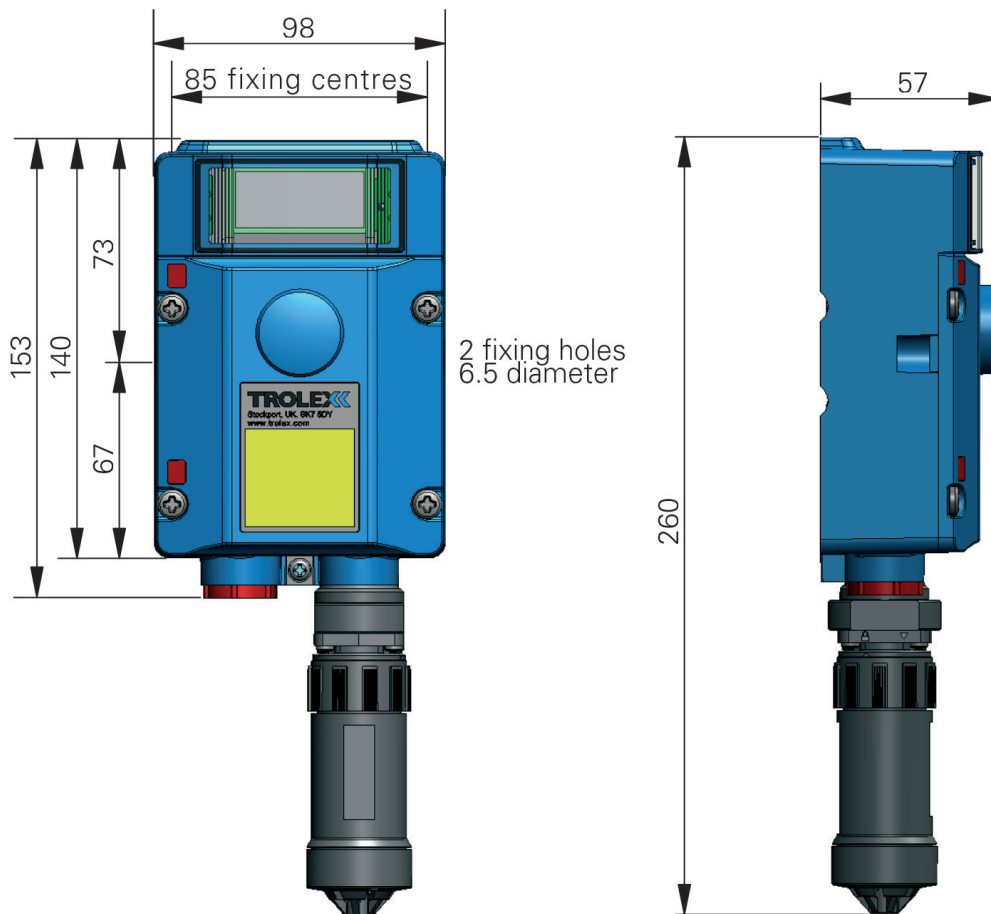
Heavy-duty, robust fixed point humidity sensor for safety monitoring of humidity in heavy-duty applications. Suitable for use in mining, storage areas, process plants, utilities and oil & gas. High accuracy humidity sensor with a choice of output signals, 0.4 to 2 V analogue, 4 to 20 mA analogue, 5 to 15 Hz analogue, dual relay contacts or RS485 addressable Modbus datacomms.

Large backlit LCD screen provides clear sensor information and diagnostic data. Two programmable setpoints for General and High alarm. Default values are entered during manufacture and these can be changed to preferred values. Inbuilt visual alarms are configured to operate when General and High alarms are activated. Easy access terminal chamber with large, vibration secure, terminals for connecting heavy plant cables.

Sensing range from 10 to 90% RH non-condensing with a sensing accuracy of +/- 5%. The sensing module stores all the necessary data about its type identification, sensing range and specific calibration. This data is automatically recognised by the Sentro when the sensing module is loaded into the module bay.



Dimensions



All dimensions in mm



TX6356 Data Sheet






Technical Data

	Underground Mining	General Purpose
Supply voltage:	12 V dc	24 V dc
Supply voltage range:	7.5 to 14.4 V dc	7.5 to 28 V dc
Current consumption:	TBA mA	TBA mA
Current consumption with backlight:	TBA mA	TBA mA
Output signal data:	0.4 to 2 V analogue output 4 to 20 mA analogue output 5 to 15 Hz output Dual relay contacts (normally open OR normally closed) RS485 datacomms output	4 to 20 mA analogue output Dual relay contacts (normally open OR normally closed) RS485 datacomms output
Display:	128 x 64 dot LCD screen with backlit illumination	
Visual alarm indicators:	Inbuilt visual alarm LEDs for General and High alarms. Programmable alarm set-points and options selectable from the setup menus	
Type of sensor:	Humidity sensor built into ruggedised housing. Sensor data is output to Sentro rModule. Sentro rModule stores service life and sensing element condition	
Operating Temperature Range:	-20 to +40°C	
Sensing Range:	10 to 90% RH, non-condensing	
Sensing Accuracy:	+/- 5%	
Storage Temperature Limits:	-20 to +60°C	
Housing Materials:	Reinforced polymer EMC protected and proof against surface electrostatic charge	
Protection Classification:	Housing dust and waterproof to IP65 Sensor head - protected to IP54	
Weight:	750 g	
Mounting:	Two 6.5 mm diameter fixing holes (Unistrut 6946 compatible)	

Underground Mining • Intrinsically Safe • Ex ia M1 • TX6356

Coal Mining • Water Utilities • Telecommunications




Output Signal Options

TX6356	3/4 wire. Remote powered - 0.4 to 2 V analogue output	
Supply voltage:	10 to 14 V	
Min. line load:	10 Kohm	
Supply current @ 12 V:	20 mA	
TX6356	3/4 wire. Remote powered - 4 to 20 mA analogue output	
Supply voltage:	10 to 14 V	
Max. line load:	220 ohm maximum @ 12 V dc	
Supply current @ 12 V:	48 mA	
TX6356	3/4 wire. Remote powered - 5 to 15 Hz output	
Supply voltage:	10 to 14 V	
Max. line load:	Opto isolated to 2 mA maximum	
Supply current @ 12 V:	20 mA	
TX6356	3/4 wire. Remote powered - Dual relay contacts	
Supply voltage:	10 to 14 V	
Supply current @ 12 V:	60 mA	
TX6356	3/4 wire. Remote powered - RS485 datacomms output	
Supply voltage:	10 to 14 V	
Line:	Modbus protocol	
Supply current @ 12 V:	25 mA	

General Purpose • Non-hazardous Areas • TX6356

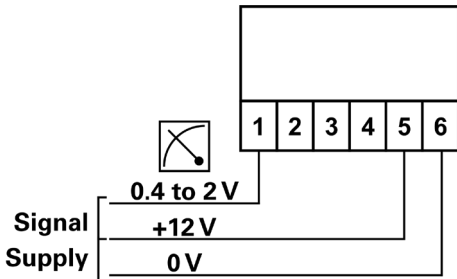
Storage Areas • Process Plants • Water & Power Utilities • Car Parks

Output Signal Options

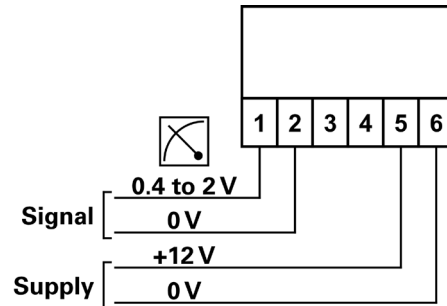
TX6356	3/4 wire. Remote powered - 4 to 20 mA analogue output	
Supply voltage:	18 to 28 V	
Max. line load:	500 ohm at 24 V	
Supply current:	40 mA	
TX6356	3/4 wire. Remote powered - Dual relay contacts	
Supply voltage:	20 to 28 V	
Supply current:	35 mA	
TX6356	3/4 wire. Remote powered - RS485 datacomms output	
Supply voltage:	14 to 28 V	
Line:	Modbus protocol	
Supply current:	40 mA	

Connections

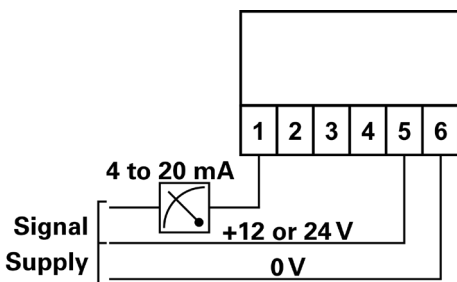
0.4 to 2 V • 3 Wire



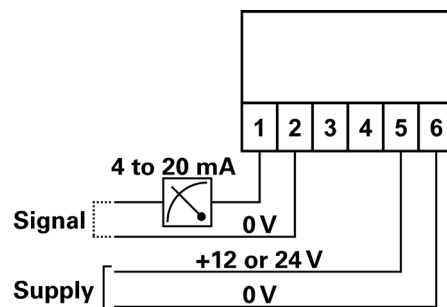
0.4 to 2 V • 4 Wire



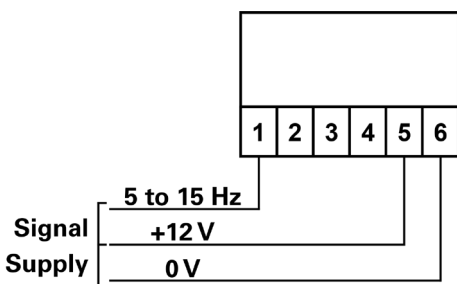
4 to 20 mA • 3 Wire



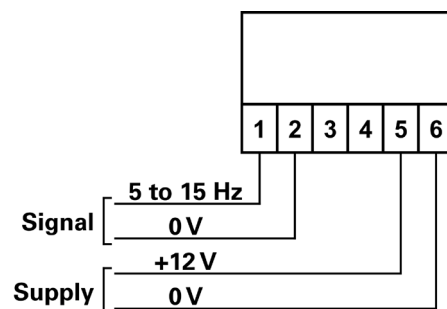
4 to 20 mA • 4 Wire



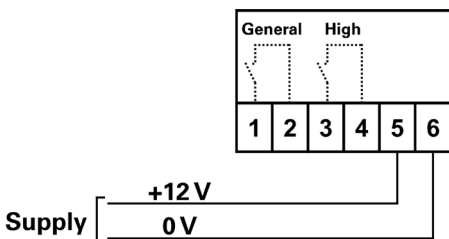
5 to 15 Hz • 3 Wire



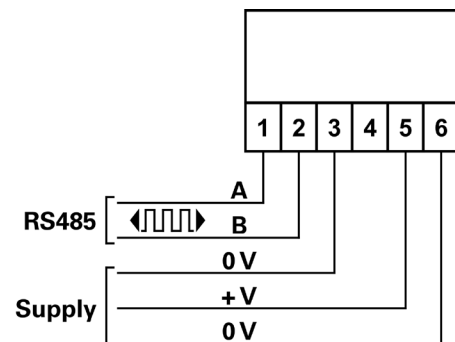
5 to 15 Hz • 4 Wire



Dual Relay Contacts



RS485 Modbus





TX6356 Data Sheet

Order Reference

TX6356.06.01	Sentro Humidity Sensor - Underground Mining - 4 to 20 mA output - 3/4 wire
TX6356.06.02	Sentro Humidity Sensor - Underground Mining - 0.4 to 2 V output - 3/4 wire
TX6356.06.03	Sentro Humidity Sensor - Underground Mining - 5 to 15 Hz output
TX6356.06.04	Sentro Humidity Sensor - Underground Mining - RS485 output
TX6356.06.05	Sentro Humidity Sensor - Underground Mining - Dual relay contact - normally closed
TX6356.06.06	Sentro Humidity Sensor - Underground Mining - Dual relay contact - normally open
TX6356.00.01	Sentro Humidity Sensor - General Purpose - 4 to 20 mA output - 3/4 wire
TX6356.00.04	Sentro Humidity Sensor - General Purpose - RS485 output
TX6356.00.05	Sentro Humidity Sensor - General Purpose - Dual relay contact - normally closed
TX6356.00.06	Sentro Humidity Sensor - General Purpose - Dual relay contact - normally open

Please contact the Trolex Sales Team for further information and advice:

+44 (0)161 483 1435

sales@trolex.com

Certification



Australia

Ex certified for use in underground mines: TX6356.06.xx

Ex Certificate Number: IECEX ITA 14.0006X

Ex ia I Ma (-20°C ≤ Ta ≤ + 40°C)

For applicable Conditions of Safe Use, refer to the Sentro Humidity User Manual TX6356-UM-EN

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Trolex Limited

Newby Road, Hazel Grove, Stockport, Cheshire SK7 5DY, United Kingdom
+44 (0)161 483 1435 sales@trolex.com www.trolex.com