

SentrO P

Open Protocol gas detector for direct integration with existing data networks

Environments: Mining • Tunnelling • Underground storage areas • Underground transportation

Features

- High accuracy gas detector with serial data output configured for open network integration, on newly installed or existing data networks
- Pre-calibrated plug-in gas sensing eModule can be replaced in seconds for ease of calibration and maintenance
- Large backlit LCD screen provides concise menu driven calibration guide and sensor diagnostics
- Two inbuilt LED alarm indicators for General and High alarm with programmable setpoints
- Auxiliary analogue output signal to drive a local audio visual alarm unit when required
- Power supply voltage data is transmitted over the RS485 Modbus for constant monitoring
- Available in two versions 12 V dc (intrinsically safe Mining and Tunnelling) and 24 V dc (General Purpose)
- MSHA IS certification pending - 12 V version - intrinsically safe Mining and Tunnelling

Benefits

- RS485 Modbus output permits up to 32 gas sensors to be networked on a single data cable for ease of installation and significant cost saving
- The high-brightness LCD screen provides clear readout even in low light conditions with the benefit of direct on-screen instructions and diagnostic data
- Heavy duty dual-wall housing gives maximum impact strength and is protected against dust and moisture to IP65 standards
- Large clamp terminals with convenient access for heavy duty mining cables
- EMC conformity
- Full intrinsic safety certification means that the front cover of the sensor may be removed at any time for calibration and servicing



Pending



SentrO eModule

Pre-calibrated plug-in gas sensing eModule can be replaced for rapid calibration and servicing - even with the power applied

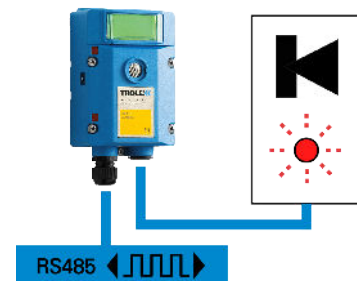
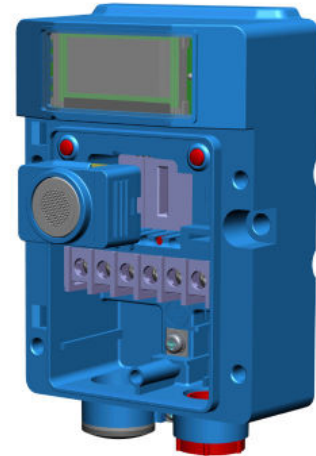
Functional Overview

The heart of the TX6353 SentrO P is the Sentro eModule, an intelligent standardised gas sensing module. Different eModules can sense different gas types and gas concentrations. Dynamic data is stored within the eModule, together with the condition of the gas sensing element and its service history.

You can easily service and calibrate the TX6353 SentrO P by simply changing the Sentro eModule. This can be done with the power still applied.

The SentrO P can be easily integrated into propriety information networks and can form part of a new data communication system using RS485 with Modbus protocol.

An independent analogue output signal available on each sensor can be used to trigger a local audio visual alarm when required.



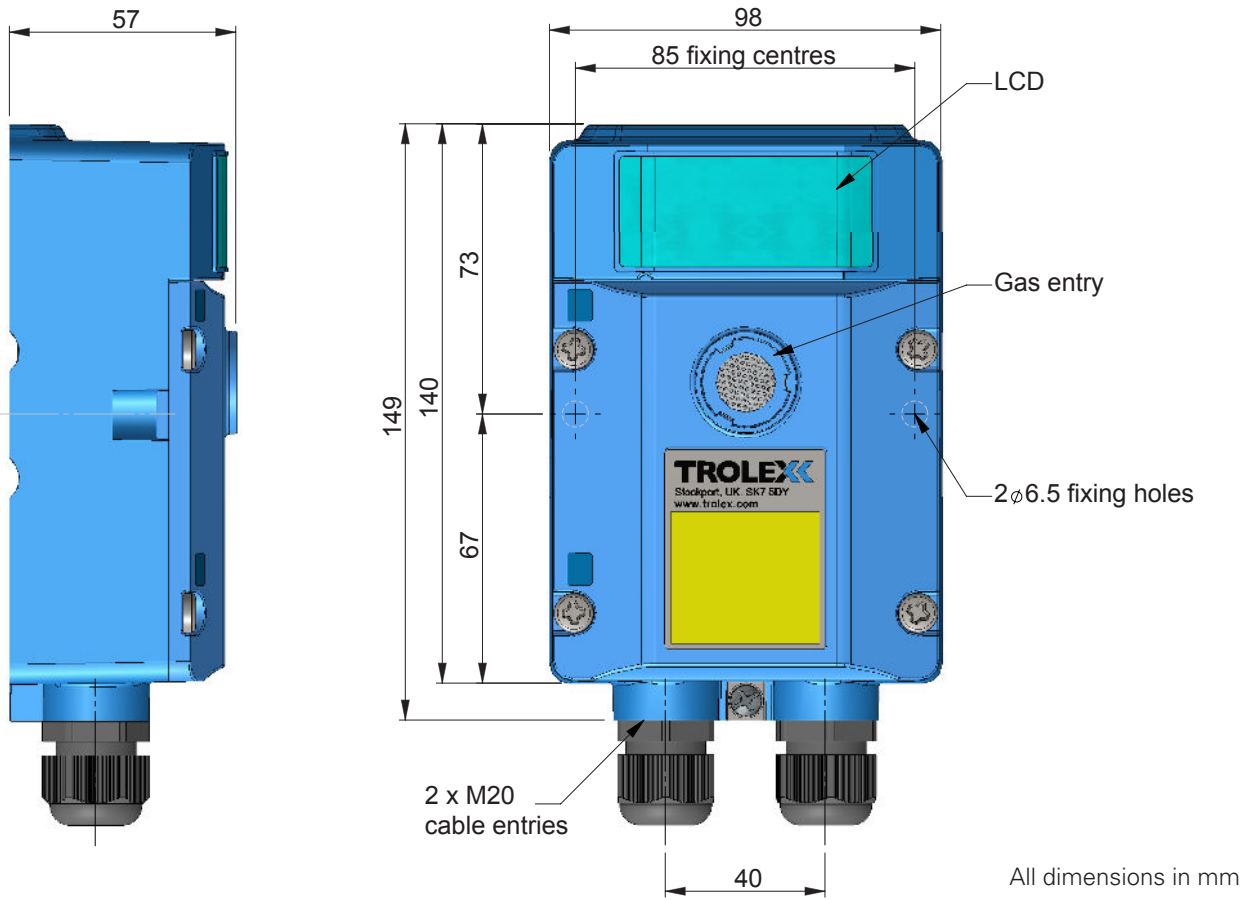
Technical Information

	TX6353.03 Intrinsically Safe Mining and Tunnelling	TX6353.04 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:	electrochemical cell 20 mA pellistor cell 55 mA	electrochemical cell 15 mA pellistor cell 30 mA
Current consumption with backlight:	electrochemical cell 25 mA pellistor cell 60 mA	electrochemical cell 20 mA pellistor cell 35 mA
The current consumption figures stated are typical at the given supply voltage. Higher peak currents may be drawn for very brief periods when low data rates (less than 4800 baud) and a large number of registers (more than fifteen) are requested over Modbus due to the extended time the line transmitter is operating.		
Output signal data:	RS485 Modbus protocol configured to customer requirements	
Auxiliary alarm output signal:	0.4 to 2.0 V analogue output signal proportional to the measured gas concentration value, for controlling a suitable local audio visual alarm unit	
	Power is also available for powering the audio visual alarm	
Display:	128 x 64 dot LCD screen with backlit illumination	
Visual alarm indicators:	Inbuilt visual alarm LEDs for General and High alarms. Programmable alarm setpoints and options selectable from the setup menus	
Type of sensor:	Various cell types built into ruggedised plug-in Sentro eModule housing. Calibrated and rationalised output data, stores data of service life and sensing element condition	
Gases detected:	Carbon monoxide at 0 to 50 ppm - electrochemical cell Hydrogen sulphide at 0 to 50 ppm - electrochemical cell Methane at 0 to 4% v/v - pellistor cell Nitric oxide at 0 to 50 ppm - electrochemical cell Nitrogen dioxide at 0 to 20 ppm - electrochemical cell Oxygen at 0 to 25% v/v - electrochemical cell	
Sentro eModule working life:	Minimum of 2 years (dependent upon eModule type and monitoring conditions)	
Operating temperature range:	-10 to +40 °C	
Humidity:	90% non-condensing	
Storage temperature limits:	-20 to +60 °C	
Housing materials:	Reinforced polymer EMC protected and proof against surface electrostatic charge	
Protection classification:	Dust and waterproof to IP65	
Weight:	550 g	

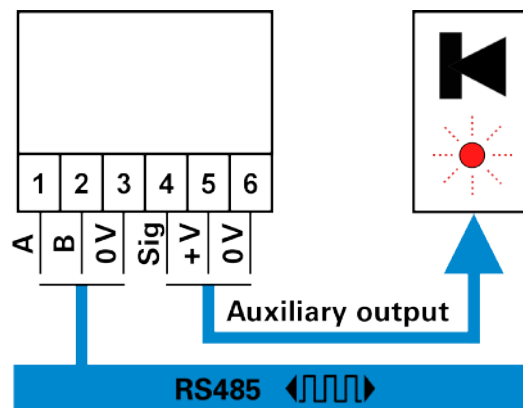


TX6353 Data Sheet

Dimensions



Connections





TX6353 Data Sheet

Order Reference

TX6353.03	Sentro P - 12 V dc - intrinsically safe Mining and Tunnelling
TX6353.04	Sentro P - 24 V dc - General Purpose
TX6350.03.250.50.DP	Sentro eModule 0 to 50 ppm carbon monoxide
TX6350.03.251.DP	Sentro eModule 0 to 50 ppm hydrogen sulphide
TX6350.03.246.DP	Sentro eModule 0 to 4% v/v methane - pellistor cell
TX6350.03.259.DP	Sentro eModule 0 to 50 ppm nitric oxide
TX6350.03.254.DP	Sentro eModule 0 to 20 ppm nitrogen dioxide
TX6350.03.257	Sentro eModule 0 to 25% v/v oxygen



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

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Certifications



Pennsylvania:
Pennsylvania Department of Environmental Protection - Bureau of Mine Safety Approved
Approval Number: BOTE 63-13 - 24 V version only



MSHA:
For use in areas where permissibility is not required. Unit must be de-energised under loss of mine ventilation.
IS certification pending - 12 V version only

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