

**TROLEX**



# SENTRO X

## GAS DETECTOR

Ex ia Group I M1

DATA SHEET

## 1. Product overview

Gas detection built on solid reliability and innovative design with a focus on simplicity of application, convenient installation and practical hot-swapping of pre-calibrated toxic, oxygen or flammable gas Blocs (gBlocs).

With automatic detection of gBlocs, **SENTRO X** operational performance is advanced through the combination of high accuracy gas detection and a range of functional outputs to support all system requirements.

An additional remote sensor housing is available to pair with the **SENTRO X Controller** to support sensing of hazardous gases in hard-to-reach or specific underground locations.

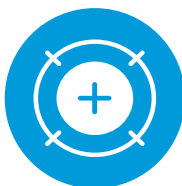


TX6310 **SENTRO X**  
**Controller**

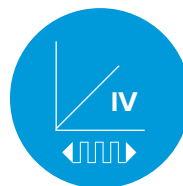
## 2. Key features



Plug-in, pre-calibrated gBlocs with a range of toxic, oxygen and flammable options



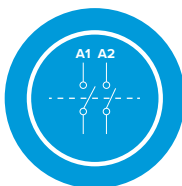
Hot-swap for instant calibration and maintenance requirements



Selectable choice of RS485, 4 to 20 mA or 0.4 to 2 V output signals, included as standard



OLED graphic display, clear and visible in both dark and bright environments



Optional Dual Relay for high and low alarms



Optional ethernet for wide area communications

(Power over ethernet available in GP)



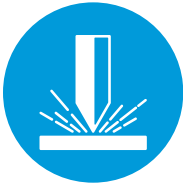
Available with integrated audio/visual alarm with configurable alerts



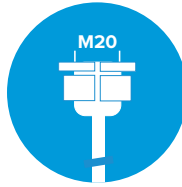
Waterproof keypad for functional set-up and manual calibration



Rugged and shock-resistant design with IP65 ingress protection rating



High vibration and impact resistance for use in heavy duty operating environments



Multiple M20 gland entries for ease of installation and cabling



Certified intrinsically safe for use in Group I M1 hazardous areas

### 3. TX6320 Remote Sensor

**SENTRO X** is remote sensor compatible, featuring a fully ruggedised remote head solution that allows the same gBlocs to be located in hard-to-reach, or arduous locations with a connection length of up to 10 meters.

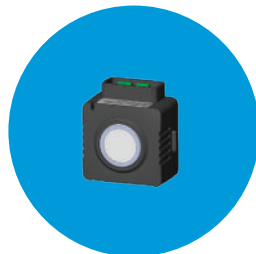
Versatile connecting terminals are used at both the **SENTRO X Controller** in the form of an rBloc and internally at the Remote Sensor for ease of installation of RS485 connections.



## 4. TX6301 gBlocs

The heart of the **SENTRO X** is the gBloc – an intelligent standardised gBloc that is fully interchangeable offering a choice of high stability toxic, oxygen or flammable gas detection options. Gas ID data is stored within the gBloc which is used for automatic configuration purposes, default gas type settings and the logging of calibration data.

gBlocs are pre-calibrated to allow the system to be refreshed and updated within a few seconds. Additional on-device maintenance sequences have been implemented to support streamlined maintenance routines to meet on-going mine site requirements.



Electrochemical cells for toxic gas and oxygen detection

Infrared technology provides long-term stability



Poison resistant catalytic combustion cells for flammable gases

## 5. Power supply

### Intrinsically safe supply

For Ex ia variants of the **SENTRO X**, a certified intrinsically safe supply should be used, delivering 9 V dc to 16 V dc.

### General Purpose (GP) supply

For GP variants of the **SENTRO X**, a power supply delivering between 9 V dc to 36 V dc should be used.

### Power Over Ethernet (PoE+) supply

The GP variant of the **SENTRO X**, fitted with a PoE card, can be powered directly from a suitable Ethernet switch. Supported voltage range PoE/PoE+: 44 to 57 V dc.

## 6. Audio-visual alarm

**SENTRO X Controller** can be fitted with an integral powerful red audio-visual alarm unit directly connected to the main internal processor for local area warning duty.

The unit contains a combination of high intensity LEDs and a Piezo Audible alarm, sweeping across a band of frequencies for maximum sound penetration in noisy environments. The housing of the alarm unit is dust and waterproof to IP65.



## 7. Standard outputs

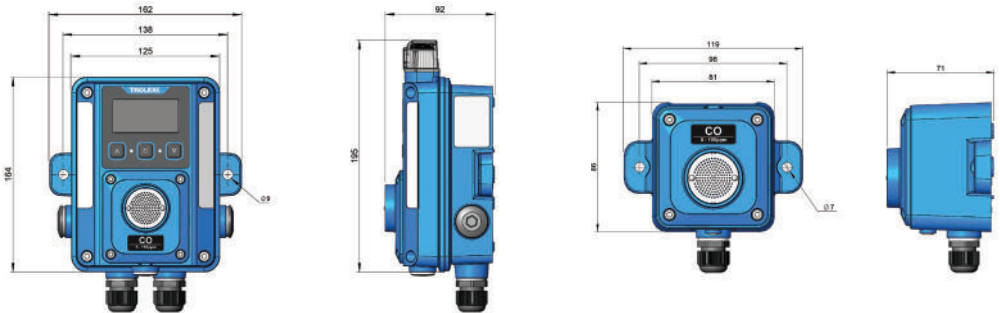
The **SENTRO X Controller** comes fitted with an RS485 interface and a selectable choice of 4 to 20 mA or 0.4 to 2 V output signals as standard.

**SENTRO X** can also be fitted with a choice of additional output cards which are available to further extend the switching and communications functionality of the Controller.

**SENTRO X** can be fitted with an intrinsically safe Ethernet card to support direct communications to ethernet systems. The Ethernet card carries a dedicated RJ45 connector for ease of installation.

**SENTRO X** can be fitted with Dual Relay card with each relay having encapsulated electrically isolated output contacts for controlling external approved intrinsically safe devices. Two cards can be fitted giving the option of four relay outputs.

## 8. Dimensions



Not fitted  
with A/V  
alarm

Fitted  
with A/V  
alarm

M6  
fixing screw

## 9. Order reference

### TX6310 · SENTRO X Controller

Option	Certification	Option	Variant	Option	A/V alarm	Option	Ext cards
00	General Purpose	01	Internal gas sensor	00	Not fitted	00	Not fitted
01	ATEX Grp I	02	Remote gas sensor (cover + rBloc	01	Fitted	01	1 x Dual Relay card
06	IECEX Aus Grp I					02	2 x Dual Relay card
						03	1 x Ethernet card
						04	1 x Dual Relay + 1 x Ethernet

### TX6320 · Remote Sensor

Option	Certification	Option	Cable length
00	General Purpose	000	Not fitted
01	ATEX Grp I	010	1 m
06	IECEX Aus Grp I	050	5 m
		100	10 m



If ordering a Remote head to retro fit to a Controller previously specified as an internal gas sensor please note a rBloc cover and rBloc should be ordered separately to complete your system.

## TX6301 · gBloc variants

Please quote product code TX6301[*CERTIFICATION OPTION*]. [*GAS OPTION*].

00 (GP)	01 (ATEX)	06 (IECEX)	Option	Gas	Range
✓	✓	✓	020	CO	0 - 50.0 ppm
✓	✓	✓	022	CO	0 - 250 ppm
✓	✓	✓	024	CO	0 - 500 ppm
-	✓	✓	025	CO	0 - 500 ppm Low X H2
-	✓	✓	026	CO	0 - 1000 ppm
-	✓	✓	030	H <sub>2</sub>	0 - 1000 ppm
✓	✓	✓	040	H <sub>2</sub> S	0 - 50.0 ppm
✓	✓	✓	050	NH <sub>3</sub>	0 - 50.0 ppm
✓	✓	✓	051	NH <sub>3</sub>	0 - 200 ppm
-	✓	✓	052	NH <sub>3</sub>	0 - 500 ppm
✓	✓	✓	060	NO	0 - 50.0 ppm
✓	✓	✓	070	NO <sub>2</sub>	0 - 10.0 ppm
✓	✓	✓	071	NO <sub>2</sub>	0 - 20.0 ppm
-	✓	✓	072	NO <sub>2</sub>	0 - 100.0 ppm
✓	✓	✓	080	O <sub>2</sub>	0 - 25.0% v/v

## TX6301 · gBloc variants (cont.)

Please quote product code TX6301.[CERTIFICATION OPTION].[GAS OPTION].

00 (GP)	01 (ATEX)	06 (IECEX)	Option	Gas	Range
✓	✓	✓	090	SO <sub>2</sub>	0 - 20.0 ppm
-	✓	✓	100	CH <sub>4</sub>	0 - 4.00% v/v
-	✓	✓	101	CH <sub>4</sub>	0 - 4.00% v/v
✓	✓	✓	102	CH <sub>4</sub>	0 - 100.0% LEL (4.4%)
-	✓	✓	104	CH <sub>4</sub>	0 - 5.00% v/v IR
✓	✓	✓	105	CH <sub>4</sub>	0 - 100% LEL (5.0%) IR
-	✓	✓	107	CH <sub>4</sub>	0 - 100% v/v IR
✓	✓	✓	112	CO <sub>2</sub>	0 - 5.00% v/v IR
✓	✓	✓	113	CO <sub>2</sub>	0 - 100% v/v IR

## TX6302 · rBloc

Option	Certification
00	General Purpose
01	ATEX Grp I
06	IECEX Aus Grp I

## Spare parts

Part	Part number
gBloc cover	P5600.130.SP
rBloc cover	P5600.131.SP
Sensing hood and pipe	P5600.4000
Sensing hood and pipe (10 pack)	P5600.4001



## 10. Technical specification

Operating temperature	-20 °C to 40 °C
Humidity	90% RH non-condensing
Storage temperature limits	-20 °C to 60 °C
Housing materials	Reinforced PC/ABS polymer EMC protected and proof against surface electrostatic discharge
Ingress protection	TX6310 Controller: IP65 TX6320 Remote sensor: IP65 Audio-visual alarm: IP65
Net weight	TX6310 Controller with A/V fitted: 775 g TX6320 Remote sensor: 215 g
Mounting	TX6310 Controller: 2 x M8 fixing holes (unistrut compatible) TX6320 Remote sensor: 2 x M6 fixing holes
Connections	4 x threaded M20 cable entries 1 x threaded M16 cable entry (for remote sensor)
Information display	Graphic OLED
Supply voltage	9 V to 16 V dc from an approved intrinsically safe source 9 V to 36 V dc (GP)
Power consumption	100 mA nominal / 160 mA with AV and alarm state 170 mA remote configuration / 230 mA with AV and alarm state
Certification	ATEX, IECEx Group I M1 (for full details refer to product user manual)

## 11. Disclaimer

The information provided in this document contains general descriptions and technical characteristics of the performance of the product. It is not intended as a substitute for and is not to be used for determining suitability or reliability of this product for specific user applications. It is the duty of any user or installer to perform the appropriate and complete risk assessment, evaluation and testing of the products with respect to the specific application or use. Trolex shall not be responsible or liable for misuse of the information contained herein. When instruments are used for applications with technical safety requirements, the relevant instructions must be followed.

All pertinent state, regional, and local safety regulations must be observed when installing and using this instrument. For reasons of safety and to help ensure compliance with documented system data, only Trolex or its affiliates should perform repairs to components.

Trolex Ltd. reserves the right to revise and update this documentation from time to time without obligation to provide notification of such revision or change. Revised documentation may be obtainable from Trolex.

Trolex Ltd. reserves the right, without notice, to make changes in equipment design or performance as progress in engineering, manufacturing or technology may warrant.



At Trolex, we save lives.

We believe that no person should risk their life to earn a living.

We aim to become the world's leading name in health and safety technology through pioneering products that provide real-world benefits to our customers whenever workers operate in hazardous environments.

**Enquiries**

[sales@trolex.com](mailto:sales@trolex.com)

**Telephone**

+44 (0) 161 483 1435

**Website**

[trolex.com](http://trolex.com)

**Trolex Ltd**

Newby Road, Hazel Grove

Stockport, Cheshire

SK7 5DY, United Kingdom

 [/company/trolexUK](https://www.linkedin.com/company/trolexUK)

 [/trolexUK](https://twitter.com/trolexUK)

 [/trolexUK](https://www.instagram.com/trolexUK)

 [/TrolexUK](https://www.facebook.com/TrolexUK)