

SENTRO X GAS DETECTION FOR UNDERGROUND ENVIRONMENTS.

Next-generation gas detection

PRODUCT BROCHURE





Available in General Purpose, ATEX, MASC, IECEx + NSW MDR Grp I certification options

GAS DETECTION BUILT ON OVER 65 YEARS OF TRUST.

Brought to you by the world's leading brand in gas detection for mines and tunnels, SENTRO X is our most advanced and efficient gas detection system yet.

Designed in PC/ABS polymer to give you an incredibly tough and smart unit, the SENTRO X and interchangeable gas blocs (gBlocs) are the only components you need to get your gas detection system up and running.

16 pre-calibrated high stability toxic and flammable gas modules with instant swap-out capability, 0.4 to 2 V or 4 to 20mA selectable output, RS485 and Ethernet, and a high resolution OLED graphical display give you all the flexibility and control you need in the most hazardous industrial environments.

Pure simplicity combined with exceptional performance, SENTRO X is the future of gas detection for general purpose applications and Group I mines and tunnels.



Request a demo today



PURE SIMPLICITY.

- » The universal control unit, the SENTRO X Controller, combines with any of our gBlocs - 16 pre-calibrated high stability gas modules to instantly create a fully flexible and low maintenance system. Instantly swap them out for calibration in a matter of seconds.
- » The SENTRO X Remote Sensor also combines with all the standard gBlocs to instantly create remote sensing capability for detection in the most arduous and high-to-reach locations.
- » The removable front cover gives you direct access to your Relay and Ethernet cards, even in hazardous areas, installed with simple push-fit connectors. No wiring and no tools required.
- » Installation couldn't be more simple. 2 x external M8 fixing holes for the SENTRO X Controller and 2 x external M6 fixing holes for the Remote Head. Unistrut compatible.
- » The OLED display screen provides clear information in both dark and bright environments, and the simple, intuitive menu system is accessed through a completely waterproof 3-button keypad.
- » The optional fully-integrated AV alarm provides high intensity LEDs and Piezo Audible alarm cutting through even the noisiest environment.
- » Compact, lightweight and incredibly tough. IP65.





THE gBLOC.

A revolution in the way gas detection systems are created.

The gBloc is the heart of the SENTRO X gas detection system.

Electrochemical, pellistor and infrared gBlocs cover the full range of toxic and flammable gases typically present in mining and tunnelling environments, and every gBloc is instantly swappable with any SENTRO X base unit - which automatically identifies and configure the module when it's inserted.

Pre-calibration of gBlocs in a safe and clean environment then allows you to simply and instantly swap-out the gBloc in the field, with zero down-time and no gaps in analytical data.

Remote sensing capability is created by simply combining a gBloc with the Remote Sensor, via rBloc, connected to the same standard SENTRO X Controller.

gBlocs store full data including calibration data, historical data, default gas type settings and advanced analytics.

Your gas detection system can now be reconfigured, recalibrated, deployed and maintained with absolute ease.



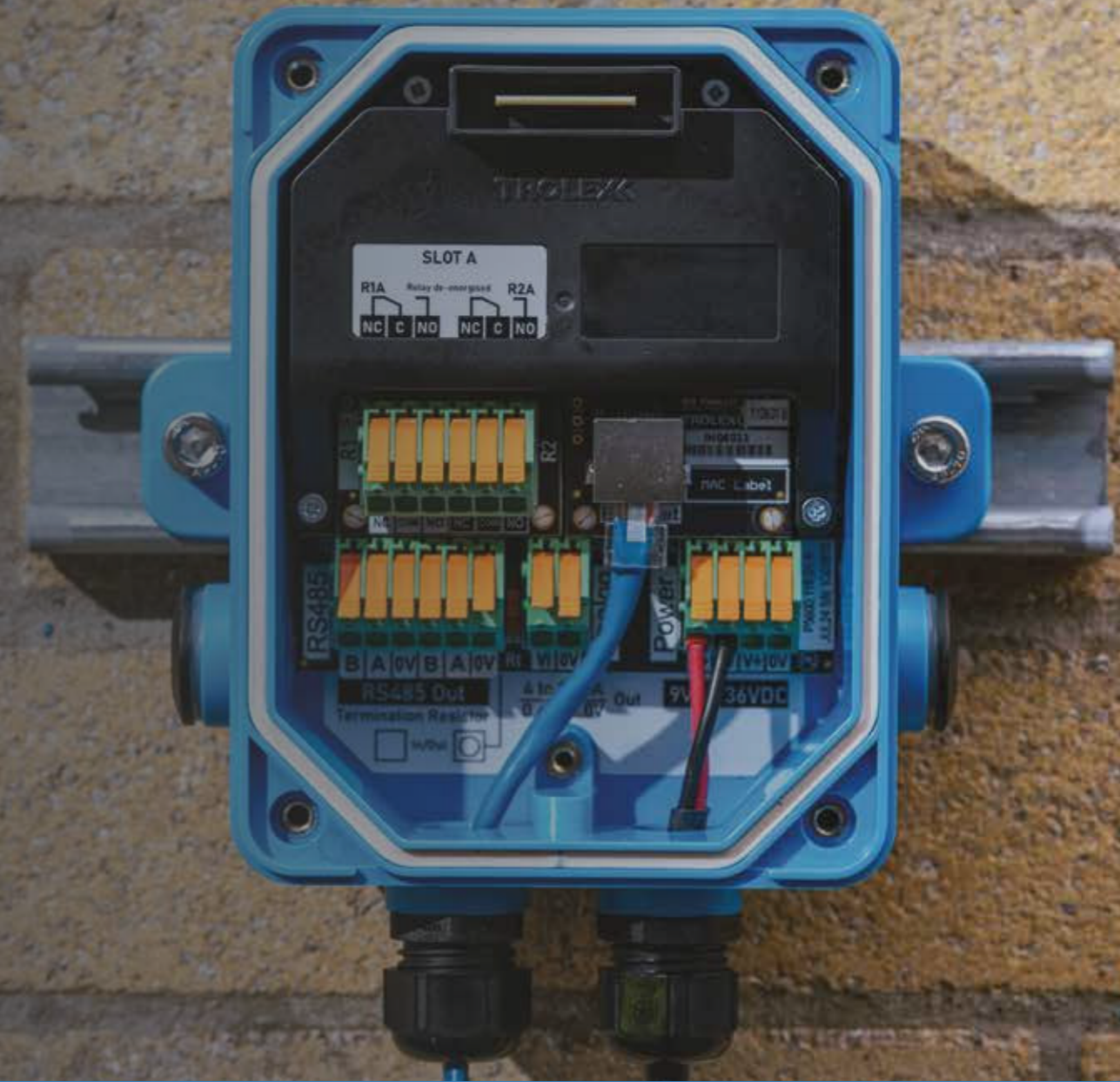
Previous	New
CO2	O2
Infrared	Electrochem
5.00%v/v	25.0%v/v
Remove	Confirm



**Contact Technical Services
to discuss your individual
gas monitoring requirements**



INPUT/OUTPUT OPTIONS FOR ENHANCED CONNECTIVITY.



16 to 30 V dc Power Input

For General Purpose environments applications.

9 to 16 V dc Power Input

Designed for connection to an intrinsically safe power supply to ensure your unit can operate in Group I hazardous underground environments.

4 to 20 mA + 0.4 to 2.0 V Output

Industry-standard analogue outputs provide scaled measurements to external devices within your site-safety network.

RS485 MODBUS Connectivity

Standard 4-wire RS485 signal transmitting extensive device registers for 2-way sensor communications, enabling total customisation of your SCADA and control systems.

Ethernet MODBUS TCP/IP

Configure your SENTRO X with ethernet capabilities to connect the device to your Local Area Network (LAN).

Relay Outputs

Expand device functionality with up to 4 switching relays, enabling control of external intrinsically safe circuits.



NOW AVAILABLE

POWER-OVER-ETHERNET

Designed to set new benchmarks in safety and efficiency for hazardous environments, by streamlining data retrieval and analysis.

With the addition of Power-Over-Ethernet (PoE) technology for the General Purpose option, SENTRO X combines cutting edge innovation with practical solutions to meet the demanding needs of a wide range of industrial environments.

POWER-OVER-ETHERNET: WHAT YOU SHOULD KNOW

- » Available for General Purpose versions only
- » Simplified installation
- » Uninterrupted operation
- » MODBUS integration
- » Enhanced safety
- » Low maintenance costs

Please refer to the General Purpose user manual (TX6310-UM-EN · P5600.1606) for SENTRO X PoE technical requirements.





ORDER REFERENCE



SENTRO X CONTROLLER - TX6310.

The main control unit within the SENTRO X Gas Detector suite, housing the central intelligence of the gas detection system.

Designed to the rugged standards for direct operation in underground hazardous areas and heavy industrial applications.

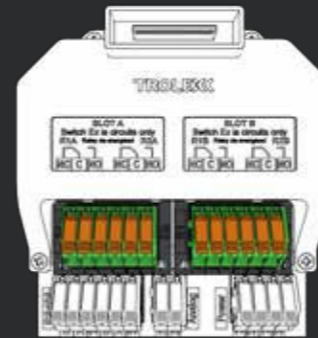


SENTRO X A/V ALARM

Combination of high intensity LEDs and a Piezo Audible alarm, sweeping across a band of frequencies for maximum penetration in noisy environments.

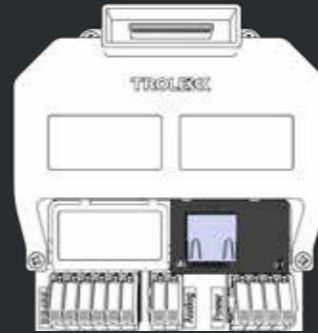
Also dust and waterproof to IP65.

A/V Alarm certified to GP, ATEX + IECEx Grp I



DUAL RELAY CARD

SENTRO X Controller can be fitted with a Dual Relay Card output with each relay having encapsulated electrically isolated output contacts for controlling external approved intrinsically safe devices. 2 x Relay Cards can be fitted giving the option of 4 x Relay outputs.



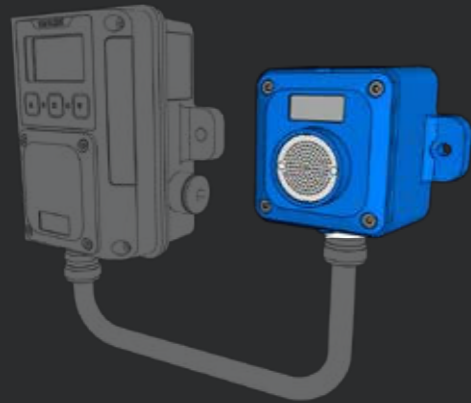
ETHERNET CARD

For direct communications, the Ethernet Card can be specified in your SENTRO X and comes in 2 options with your Intrinsically Safe or General Purpose variant.

PoE only available on GP

SENTRO X CONTROLLER ORDER OPTIONS - TX6310.xx.xx.xx

Option	Certification	Option	Cover	Option	A/V Alarm	Option	Extension card
00	GP	01	Gas inlet	00	Not fitted	00	None
01	ATEX Grp I	02	Blank cover	01	Fitted	01	1 x Dual Relay
05	MASC Grp I					02	2 x Dual Relay
06	IECEx Grp I					03	1 x Ethernet
						04	1 x Dual Relay + 1 x Ethernet



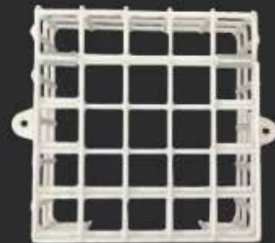
SENTRO X REMOTE SENSOR · TX6320.

Constructed to the same ruggedised standards as the SENTRO X Controller, for hard-to-reach areas (up to 10 m away from Controller).

Remote housing can be equipped with any standard gBloc in the range and uses the identical gas inlet cover with the same stainless-steel grille and moisture resistant membrane.

REMOTE SENSOR ORDER OPTIONS · TX6320.xx.xxx

Option	Certification	Option	Flex conduit/cable
00	General Purpose	000	Not fitted
01	ATEX Grp I	050	5 m
05	MASC Grp I	100	10 m
06	IECEX Grp I		



REMOTE SENSOR CAGE

If your application requires increased protection a quick fit safety cage is available to protect your Remote Sensor in even the harshest environments.

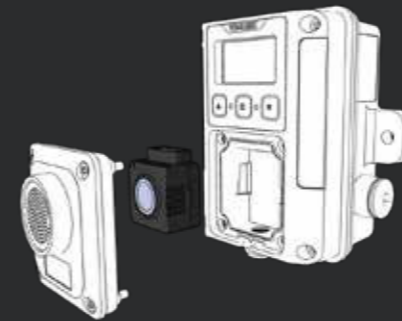
REMOTE SENSOR CAGE ORDER OPTION

Option	Description
P5600.4002	Remote Head Cage

gBLOC ORDER OPTIONS · TX6301.xx.xxx

Option	Description	Option	Description
00	General Purpose	020*	CO 0 to 50.0 ppm
01	ATEX Grp I	022	CO 0 to 250 ppm
05	MASC Grp I	024	CO 0 to 500 ppm
06	IECEX Grp I	025	CO 0 to 500 ppm (low x-H ₂)

gBloc · TX6301.



Pre-calibrated smart gBloc sensors can be inserted into the SENTRO X Controller or the Remote Sensor.

Various gas types and ranges are available for oxygen, toxic and flammable gases.

gBlocs must be ordered separately from SENTRO X + Remote Sensor.


*gBloc type option available in NSW MDR certification.

026	CO 0 to 1000 ppm
030	H ₂ 0 to 1000 ppm
040	H ₂ S 0 to 50.0 ppm
050	NH ₃ 0 to 50.0 ppm
051	NH ₃ 0 to 200 ppm
052	NH ₃ 0 to 500 ppm
060	NO 0 to 50.0 ppm
070	NO ₂ 0 to 10.0 ppm
071	NO ₂ 0 to 20.0 ppm
072	NO ₂ 0 to 100 ppm
080*	O ₂ 0 to 25.0% v/v
090	SO ₂ 0 to 20.0 ppm
100	CH ₄ 0 to 4.00% v/v
101*	CH ₄ 0 to 5.00% v/v
102	CH ₄ 0 to 100% LEL (4.4%)
104*	CH ₄ 0 to 5.00% v/v IR
105	CH ₄ 0 to 100% LEL (4.4%) IR
107	CH ₄ 0 to 100% v/v IR
112*	CO ₂ 0 to 5.00% v/v IR
113	CO ₂ 0 to 100% v/v IR




rBLOC · TX6302.


rBloc interface connection to permit cable termination of the Remote Sensor to the SENTRO X Controller.



DELTA BLOC · TX6304.

The Delta Bloc is a manually operated testing Bloc that's to be used for SENTRO X setup and operation verification.

It allows you to manually change the gas values for maintenance and calibration routines.



TEST GAS HOOD

Push fit onto the gas inlet port of the SENTRO X for gas application test routines.

Accepts standard flexible 6 mm OD plastic flexible tubing and is vented to atmosphere.

rBLOC OPTIONS · TX6302.xx

Option	Description
00	General Purpose
01	ATEX Grp I
05	MASC Grp I
06	IECEX Grp I

DELTA BLOC OPTIONS · TX6304.xx

Option	Description
00	General Purpose
01	ATEX Grp I
05	MASC Grp I
06	IECEX Grp I

TEST GAS HOOD · P5600.xxxx

Part code	Description
4000	1 Pack
4001	10 Pack

SPARE PARTS · P5600.xxx

Part code	Description
130	gBloc cover
131	rBloc cover



TECHNICAL SPECIFICATION

Operating temperature	-20 °C to +40 °C
Storage temperature limits	-20 °C to +60 °C
Humidity	90% RH non-condensing
Housing materials	Reinforced PC/ABS polymer EMC protected and proof against surface electrostatic charge
Ingress protection	TX6310. SENTRO X Controller: IP65 TX6320. Remote Sensor: IP65 Gas Inlet Port: IP65 A/V Alarm fitted: IP65
Net weight	TX6310. SENTRO X Controller: 775 g (maximum weight) TX6320. Remote Sensor: 215 g
Mounting	TX6310. SENTRO X Controller: • 2 x M8 fixing holes (unistrut compatible) TX6320. Remote Sensor: • 2 x M6 fixing holes (unistrut compatible)
Connections	TX6310. SENTRO X Controller: • 4 x threaded M20 cable entries provided with 2 x PVC cable glands and 2 x blanking plugs • 1 x threaded M16 cable entry (for Remote Sensor) TX6320. Remote Sensor: • M16 cable entry provided with stainless steel cable gland (for connection to SENTRO X Controller)
Information display	Graphic OLED
Certification	General Purpose, ATEX Grp I, CAT. M1, MASC I.A. Grp I, EPL Ma and IECEx Grp I, EPL Ma (See section 8 'Certification and Conformity' of TX6310-UM-EN · P5600.1600 for full details)

Please refer to the Group I + General Purpose user manuals for specific electrical details.

SPEAK TO US ABOUT TROLEX GAS DETECTION.

Trolex systems and products are trusted worldwide to detect gases, monitor other key environmental conditions and optimise machinery performance in mining, tunnelling and other hazardous occupational environments. They're intrinsically safe, carry independent accreditation and are at the forefront of safety and condition monitoring technology.

Contact a member of our sales experts who'll be able to support you with what safety instrumentation suits your operational needs.

Scan the QR code for full support on design and installation of unique gas detection + SCADA system or calibration requirements



Contact Technical Services

Contact Trolex Sales
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Find a local Distributor
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Become a Trolex Distributor
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Contact Trolex Marketing
marketing@trolex.com

At Trolex, we save lives.

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

Our aim is 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.

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