



FLAMMABLE GAS SENSOR/ TRANSMITTER

suitable for use in SIL 1 and SIL 2 applications, in accordance with any conditions or restrictions

with the option of using a remote mounted gas sensing-module in robust metal housing

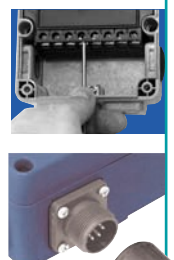
PLANT SAFETY PROTECTION
of **flammable gases** in heavy duty applications and general industrial applications



pre-calibrated, plug-in gas sensing modules

with standardised output signal for convenient replacement and servicing.

- Fixed gas monitoring for point source hazards and perimeter protection in arduous duty and exposed locations.
- Poison resistant CATALYTIC COMBUSTION sensors.
- Choice of analogue output signal:- 4 to 20 mA • 0.4 to 2 V • 5 to 15 Hz.
- Signal fix during calibration to prevent false alarms.
- The main circuit module inside the sensor housing can be removed from the housing for maintenance purposes.
- Special versions with weatherproof plug & socket connectors available.





technical details...

Operating Temperature Limits:	-10 to +40°C.
Storage Temperature Limits:	-20 to +60°C.
Ambient Pressure Limits:	1013 mbar ± 100 mbar absolute.
Humidity:	95% R H non-condensing.
Protection Classification:	Dust and waterproof to IP66. Gas inlet port to IP54.
Housing Material:	Reinforced Polymer - EMC protected and proof against electrostatic charge.
Nett Weight:	450 g.
Cable Entries:	M20 x 1.5.
Electrical Connections:	4 mm Barrier/clamp terminals.
Information Display:	Graphic LCD.
Impact Limits:	20 joules (Housing).

GAS SENSING MODULE

Plug-in module with retaining lock.

Standardised interface signal to enable easy interchange of modules.

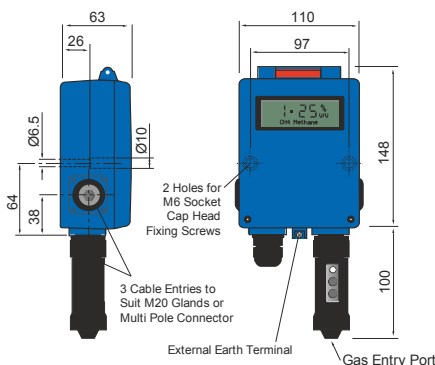
- Pushbutton calibration of ZERO and SPAN without the need to open the main housing.
- Security protected.
- Digitally controlled programming for accuracy and stability.



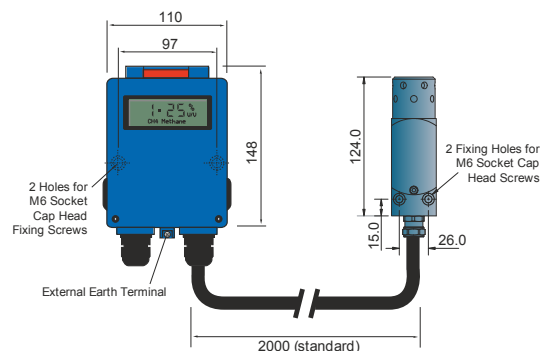
Measuring Range:	0 to 5% v/v CH ₄ . Calibrated to Methane – other flammable gas calibrations available to specification.
Linearity:	±1% 0 to 60% FULL SCALE ±5% from 60% up to 100% FULL SCALE
Maximum Drift @25°C:	±0.25% v/v per month.
Response Time (T90):	<20 secs.
Sensing Element Life:	>5 years in clean atmosphere.
Warm Up Time:	<5 mins in air or 1% v/v CH ₄ . (To 95% stated accuracy).
Signal Fix:	The output process signal is FIXED during calibration to prevent the initiation of false alarms.
Overrange Protection:	Automatic signal clamping to prevent ambiguous response when the gas concentration exceeds the normal working limit (5% v/v CH ₄). Automatic sensor protection against excess gas concentration.

dimensions...

TX6383 Flammable Gas Sensor/Transmitter



TX6383.84 Flammable Gas Sensor/Transmitter with Remote Gas Sensing Module



ALL DIMENSIONS IN MM





electrical details...

TX6383.01 GROUP I APPLICATIONS (12 V dc)

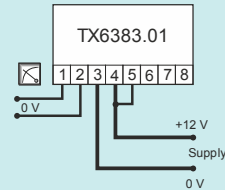


Output:	0.4 to 2 V	
Min Load	10 K ohms	
Supply	6.5 to 16.5 V dc	
Nominal Current	80 mA	

Output:	4 to 20 mA	
Max Load @ 12 V dc	140 ohms	
Supply	6.5 to 16.5 V dc	
Nominal Current	100 mA	

Output:	5 to 15 Hz	
Max Load	Opto isolated. 2 mA max	
Supply	6.5 to 16.5 V dc	
Max Current	80 mA	

Connections:



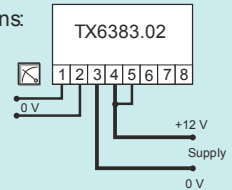
Ex Gas sensors located in a Group I hazardous area must be powered from an approved intrinsically safe source. Please see Trolex Installation and Operating Data for recommendations.

TX6383.02 GROUP II APPLICATIONS (24 V dc)

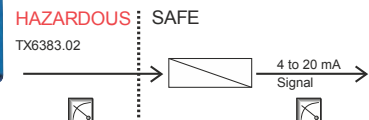


Output:	4 to 20 mA	
Max Load @ 24 V dc	240 ohms	
Supply	Minimum 6.5 V at the sensor supply terminals (3 and 4)	
Nominal Current	100 mA	

Connections:



Ex Gas sensors located in Group II hazardous area must be used in conjunction with approved safety barriers. Zener barriers or isolation barriers may be used. Please see Trolex Installation and Operating Data for recommendations.

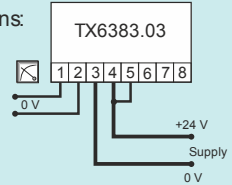


TX6383.03 GENERAL PURPOSE APPLICATIONS (24 V dc)

NOT FOR USE IN CLASSIFIED HAZARDOUS AREAS.

Output:	4 to 20 mA	
Min Load @ 24 V dc	240 ohms	
Supply	6.5 to 30 V dc	
Nominal Current	100 mA	

Connections:



certification & approval...



Group I TX6383.01 FLAMMABLE GAS SENSOR/TRANSMITTER: I M1 EEx ia I SIRA 01 ATEX 2299

Group II TX6383.02 FLAMMABLE GAS SENSOR/TRANSMITTER: II 2G EEx ia IIB T4 SIRA 01 ATEX 2300

Designed to comply with the following performance standards:

- BS EN61779 Part 1 and Part 2: 2000 FTZU 03 ATEX 0019X



Designed to comply with the requirements of the EC directive:

- EMC directive 89/336/EEC

ATEX
M 1
GROUP I & II
INTRINSICALLY
SAFE



order reference...

TX6383.01	FLAMMABLE GAS SENSOR/TRANSMITTER - SIL 1 & 2	Group I
TX6383.02	FLAMMABLE GAS SENSOR/TRANSMITTER - SIL 1 & 2	Group II
TX6383.03	FLAMMABLE GAS SENSOR/TRANSMITTER	General Purpose

Please specify:

OUTPUT	• 0.4 to 2 V output	(11)
	• 4 to 20 mA output - SIL 1 & 2	(12)
	• 5 to 15 Hz output	(13)

TYPE OF GAS	SYMBOL	RANGE	UNITS	% V/V at 100% LEL
Methane	CH ₄	4%	V/V	-
	CH ₄	5%	V/V	-
	CH ₄	100%	LEL	4.4
Ethylene	C ₂ H ₄	100%	LEL	2.3
Ethane	C ₂ H ₆	100%	LEL	2.4
Propane	C ₃ H ₈	100%	LEL	1.7
Propylene	C ₃ H ₆	100%	LEL	2.0
Butane	C ₄ H ₁₀	100%	LEL	1.4
Pentane	C ₅ H ₁₂	100%	LEL	1.1
Hexane	C ₆ H ₁₄	100%	LEL	1.0

TX6383.84 FLAMMABLE GAS SENSOR/TRANSMITTER with Remote Gas Sensing Module.

TX6383.84.01-SIL 1&2	Group I
TX6383.84.02-SIL 1&2	Group II
TX6383.84.03	General Purpose

- Fitted with 2 m flexible cable in a flexible armoured conduit.
- Maximum total cable length: 500 m
- 10 m max I.S. (Group I and Group II)

Please specify non-standard cable length, output signal and gas type.



trouble-free servicing...

Our 24 hour replacement and exchange service for gas sensing modules simplifies periodic plant maintenance.

Trox service contracts for gas sensors have been specifically structured to encompass complete after-care responsibility of installed sensors ensuring peace-of-mind and operational security.

TROLEX LIMITED

NEWBY ROAD, HAZEL GROVE, STOCKPORT,
CHESHIRE SK7 5DY, UK

+44 (0)161 483 1435

sales@trolex.com

www.trolex.com

Ex
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