TX6386
Data Sheet

High Visibility Methane Monitor
Safety monitoring of methane gas hazards in mining and tunnelling

Environments: Mining • Tunnelling • Mineral extraction and monitoring • Hazardous areas
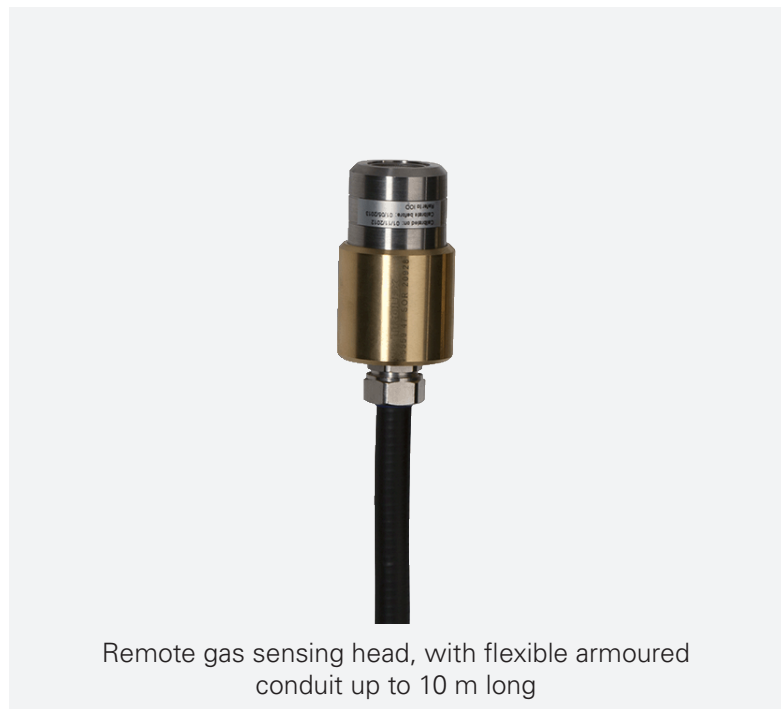
Features

- High-accuracy, catalytic combustion gas sensor

- High-visibility safety monitoring of methane gas hazards in mining and tunnelling applications

- High-visibility illuminated display

- High-strength moulded housing

- Arduous duty in exposed locations

- Convenient and secure zero and span calibration

- Ex ia Group I approved to operate with standard approved 12 V dc mining power supplies

- Available with a directly mounted gas sensing module, or with a remote gas sensing head, with flexible armoured conduit up to 10 m long

TX6386 with directly mounted gas sensing head

Benefits

- Quick-release gas sensing head means quick replacement and maintenance

- High-brightness seven-segment LED display readout with 20 mm characters coupled with the proven Trolex gas sensing technology, gives high-visibility information of gas concentration even in totally dark conditions

- Robust housing is sealed against dust and moisture to IP65 standard and is EMC protected

- Remote gas sensing head for convenient mounting where space to fit sensors is restricted

- Two adjustable set-point output contacts with LED status indicators for controlling local plant equipment and alarm warning devices

Australia

Remote gas sensing head, with flexible armoured conduit up to 10 m long

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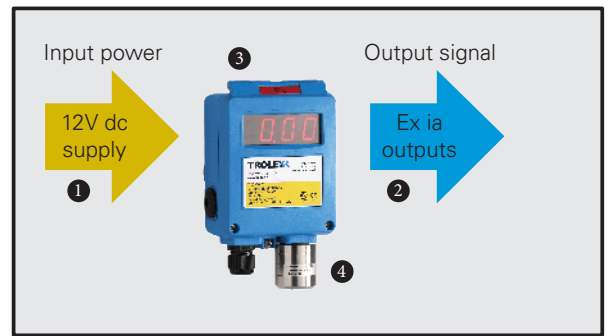**TROLEX**

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Functional Overview

The robust moulded polymer housing of the gas sensor is dustproof and waterproof. It uses a poison-resistant catalytic combustion sensor to monitor flammable gases present in the atmosphere.

The sensor responds to most flammable gases and vapours to varying degrees and is normally calibrated to methane in terms of % volume.

The relatively large mass of the sensing element assures a long and reliable operating life with exceptional stability, even in conditions of high vibration. The natural life of the sensor is about five years depending upon the monitoring conditions and it can be quickly replaced and serviced at the end of its operating life.

You can easily view gas concentration on the bright light emitting display, even in extremely low ambient light conditions.

Trolex can provide calibration for other flammable gases.

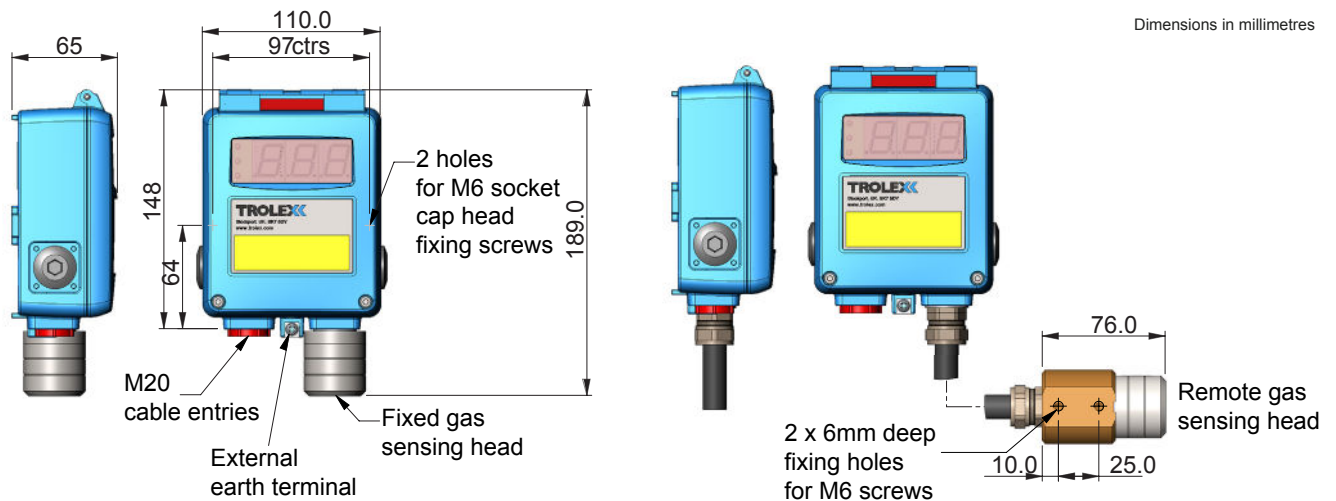**Hazardous area**

Technical Information

❶	Supply:	8.5 to 14.4 V dc	
	Current consumption:	160 mA (typical)	
❷	Output:	2 normally open contacts (held closed when system is healthy)	
	Alarm output contacts:	Contact rating:	Maximum current: 1 A
			Maximum voltage: 230 V ac
		Suitable for switching approved intrinsically safe circuits	
		RL1: Independently adjustable setpoint for warning alarm	
		RL2: Independently adjustable setpoint for high alarm	
	Electrical connections:	4 mm barrier / clamp terminals	
		2 x M20 x 1.5 cable entries	
	Display:	7 segment, high brightness LED	
	Ambient temperature limits:	-10 to +40°C	
	Humidity:	95% non-condensing	
	Storage temperature limits:	-20 to +60°C	
	Ambient pressure limits:	1 bar ± 100 mbar absolute	
	Vibration limits (BS2011):	10 to 100 Hz:	0.25 mm peak
		100 to 600 Hz:	2 g peak
❸	Housing materials:	Housing:	Polycarbonate / ABS
		Gas sensor:	Direct: Machined stainless steel
			Remote: Machined stainless steel and brass
		Gas sensor connection: Flexible armoured conduit, PVC coated	
	Protection classification:	Housing:	IP65
		Gas inlet port:	IP54
	Weight:	450 g	
	Impact limits:	20 joules (housing)	

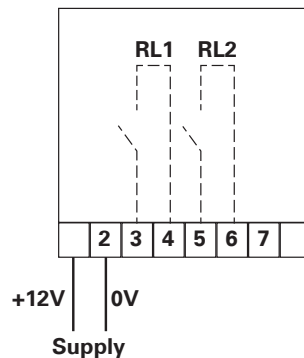## ❹ Gas Sensing Module

Sensing range:	0 to 4% v/v. Calibrated for Methane (CH_4)
Sensing principle:	Catalytic combustion
Linearity:	Linear: 0 to 3% v/v ± 0.2% v/v: 3 to 4% v/v
Drift :	± 0.25% v/v per month (at 25°C)
Response time (T90)*:	< 20 seconds
Warm up time:	< 5 minutes in air or 1% v/v CH_4 (to 95% stated accuracy)
Operating life:	> 5 years**

*T90 = Time to 90% of final value: ** In clean air

Dimensions

Dimensions in millimetres

65

110.0
97ctrs

148

64

189.0

2 holes
for M6 socket
cap head
fixing screws

M20
cable entries

External
earth terminal

Fixed gas
sensing head

2 x 6mm deep
fixing holes
for M6 screws

76.0

10.0   25.0

Remote gas
sensing head

Connections

RL1   RL2

2 3 4 5 6 7

+12V   0V

Supply

RL1:   Setpoint 1 - Warning alarm
RL2:   Setpoint 2 - High alarm

Note: Contacts shown in the alarm or
de-energised condition.

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Order Reference

TX6386.83   High visibility methane monitor with directly mounted gas sensing module.

TX6386.84   High visibility methane monitor with remote gas sensing module.

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

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Certifications

Ex certified for Group I applications:

Europe:
Ex Certificate Number: Baseefa 12ATEX0060
Certification Code: I M1 Ex ia I Ma

ATEX directive 94/9/EC

Australia (IECEx):
Ex Certificate number: IECEx TSA 11.0047X
Certification Code: Ex ia I Ma

Russia (Customs Union):
Ex Certificate number: TC RU C-GB.ГБ05.B.00356
Certification Code: PO Ex ia I Ma

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