

के० ख० एवं ई० अ० सं० परीक्षण प्रकोष्ठ - CIMFR TESTING CELL
सीएसआईआर - केन्द्रीय खन एवं ईंधन अनुसंधान संस्थान

(वैज्ञानिक तथा आद्योगिक अनुसंधान परिषद्)



ORIGINAL COPY

CSIR-CENTRAL INSTITUTE OF MINING AND FUEL RESEARCH
ISO 9001 REGISTERED

FORMERLY : CENTRAL MINING RESEARCH INSTITUTE
(COUNCIL OF SCIENTIFIC & INDUSTRIAL RESEARCH)

बरवा रोड, धनबाद - 826015 (भारत) - BARWA ROAD, DHANBAD - 826015 (INDIA)

परीक्षण प्रमाण पत्र - **TEST CERTIFICATE**

[FORM NO.: CIMFR. DQM. FLP02: F-02]

(Flame & Explosion Lab.)

I.D No. 407/13

CODE NO FLP/99 D/13-14

FIRST SCHEDULE

[For association with the report of test sent (under cover of this office Letter No CIMFR/TC/P/HSSS Dated 24th December, 2014) to M/s. Trolex Ltd., Newby Road, Hazel Grove, Stockport, SK7 5DY, UK in respect of testing as regards intrinsic safety of the equipment mentioned below submitted by them for testing]

NAME & DESCRIPTION OF THE APPARATUS: The name of the apparatus is **TX9165.01 i Sentro 8 Sensor Station.**

The TX592x Series Vortex Gas Flow sensor/transmitters comprise three PCBs housed in an anti-static plastic enclosure. The Sentro 8 Sensor Station TX9165.01i is designed to monitor upto eight sensors, these are fully integrated into the sensor station to give direct monitoring of the toxic and flammable gas concentrations, ambient air temperature pressure and humidity, alternatively, the monitoring channels may be connected to remote sensors to measure airflow, pressure, vibratio, etc. The Sentro 8 can be programmed to control a number of output relays and give various audio and visual alarms.

The Sentro 8 Sensor Station TX9165.01i comprises a sub-assembly of several printed circuit boards (PCB) fitted behind a terminal guard, within an inner plastic enclosure. The sub-assembly is made from the main PCB, power PCB, Control PCB, Upper Interface PCB and Lower Interface PCB. An LCD display is mounted on the Control PCB. The enclosure provides a degree of ingress protection of IP54. External circuit connections are made in the terminal chamber. The terminals are fitted with a plastic cover to protect the live parts. Access into the terminal chamber is through the eight gland entries at the bottom of the housing.

There are eight intrinsically safe sensor TX6350e module flammable/Infrared/Toxic, TX9160 eModule climate and TX9160 rModule 4-20mA/0.4-2V/PT100/Namur.

The input supply to the above sensor/transmitter is fed through terminals T14 and T15 from certified & approved intrinsically safe suitable power supply or barrier or isolator.

The following condition is added as a result of this variation.

Where an external sensor is used with either a type Tx9160.01i.301 (4-20mA), TX9160.01i.303 (0.4-2V), TX9160.01i.321 (4-20mA Differential) or TX9160.01i.323 (0.4-2V Differential) rModule and it is powered from a separate intrinsically safe, the following conditions shall be met:

- No connection shall be made to rModule terminal 1m (power).
- The 0V of the external sensor power supply shall be connected to the 0V input of the equipment.
- The Ui presented by an externally powered sensor to any rModule, terminals 2m or 3m, shall not exceed the 14.4V.