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परीक्षण प्रमाण पत्र - **TEST CERTIFICATE**

[FORM NO.: CIMFR: DQM: FLP02: F-02]
(Flame & Explosion Lab.)

I.D No. 654/12

CODE NO FLP/256/12-13

FIRST SCHEDULE

[For association with the report of test sent (under cover of this office Letter No CIMFR/TC/P/11674 Dated 10th January, 2013) to M/s. Trolex Ltd., Newby road, Hazel Grove, Stockport, SK7 5 DY UK, in respect of testing as regards to intrinsic safety of the equipment mentioned below submitted by them for testing]

NAME & DESCRIPTION OF THE APPARATUS: The name of the apparatus is **TX9042 Programmable Sensor Controller.**

The Programmable Sensor Controller Type TX9042 provides signal conditioning and monitoring for up to 8 transducers. Each transducer is connected via a dedicated Input PCB which provides the signal conditioning. A programmable microprocessor circuit monitors the conditioned signals to provide local display, monitoring and control signals, and digital data transmission.

The electronic circuitry, comprising up to 13 PCBs (Power Supply module, Display PCB, Control PCB, Input PCB, Comms Module and up to 8 Input Modules), is housed in a moulded plastic enclosure which is itself housed in a stainless steel outer enclosure that provides facilities such as gland entries for restraining incoming cables. This enclosure has been assessed as providing a degree of protection of not less than IP54.

The Control PCB carries the microprocessor circuitry and the control relays and is mounted in the centre of the moulded enclosure; mounted over this, fixed to the top of the enclosure and connected to the Control PCB by a flat ribbon connector, is the Display PCB. An LCD is fitted on the Display PCB along with a connector to interface with a membrane keypad moulded into the top of the unit; the relay status LEDs and a Piezo-electric buzzer are also mounted on the Display PCB.

Optional data link circuitry is fitted into a small daughter board (Digital Comms, RS485 Comms) which has pins for connection into the Control PCB.

Beneath the Control PCB is fitted an Input PCB which carries up to eight transducer 'Input Modules' which can be selected from the following list and which may be fitted in any position on the Input PCB. Each Input Module is a small PCB fitted with input terminals and signal processing circuitry.

The Input Modules comprise:

- DC Analogue Input (that can be configured for voltage, current or temperature input)
- Digital Input (with an option of Vortex input)
- Digital Input (Fail safe)
- AC (RMS) Analogue Input
- Thermocouple Input
- Strain Gauge Input
- Flow Sensor Input
- Alternative Flow Sensor Module (Variation 1)

JSB