

# Newlog 4 Mk.3

Pressure Regulation Station Monitoring



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When managing gas distribution and transmission networks it is an essential requirement to monitor and record key parameters throughout the system such as pressure regulating stations an critical node points.

Newlog 4 is an intrinsically safe, multi-purpose, data logger specifically designed for use in the gas industry.

- 128K memory.
- A programmable 8 character liquid crystal display gives immediate on site readings.
- Replaceable internal battery provides sufficient power for up to 5 years.
- Multiple pressure, temperature and flow inputs.
- Programmable alarm dial-out facility.
- Fully compatible with Technolog's PMAC software.



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## Pressure Regulation Station Monitoring

### Pressure Regulating Station Monitoring

Newlog 4 can be supplied with up to four integral sensors for recording pressure. One pressure input samples ten times each second and statistical data (min, max, mean and standard deviation) is stored at the logging interval. The remaining pressure inputs are sampled instantaneously at the logging interval.

Eight digital inputs (switch closure) are available for monitoring additional station parameters such as filter states, intruder alarms and maintenance switch keys.

Four control outputs are available for switching external devices. These could be used for example, to provide a control signal to change the outlet pressure of a pressure regulator.

### Temperature, Flow and 4-20 mA Inputs

Newlog 4 is also capable of accepting up to three inputs from external sensors. These can be Pt-100 temperature sensors or externally powered 4-20 mA inputs. A maximum of four analogue inputs (pressure temperature and 4-20 mA) are permitted. Two digital inputs may be configured for flow recording from pulse output meters.

### Critical Node Monitoring

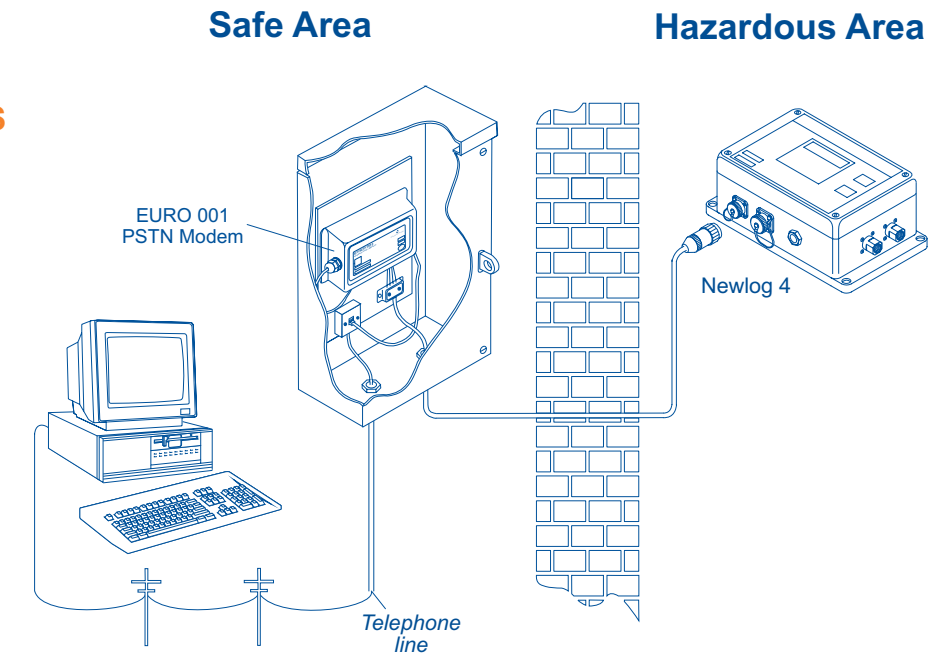
For monitoring low pressure (extremity) points in the network, a customised version of Newlog 4 is available which communicates via a modem and barrier unit.

To ensure a fast and economical roadside installation, the system can be supplied securely mounted into a tough, lockable stainless steel kiosk. Once installed, low-pressure alarms may be relayed to an office PC via the PSTN or GSM network.

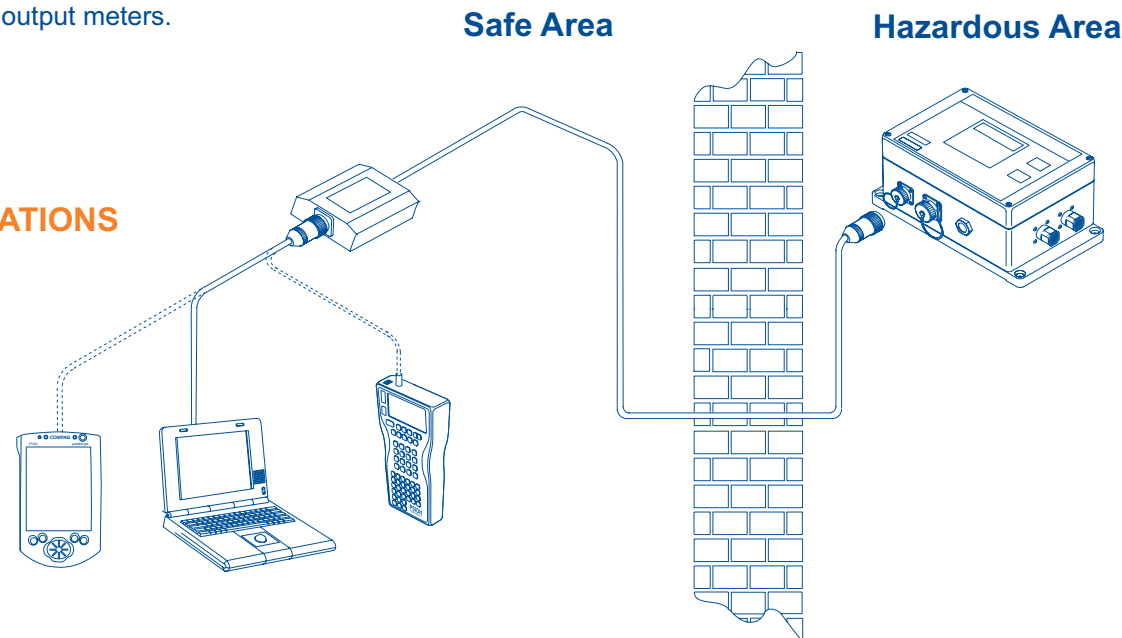
### Manual Data Retrieval

Data from Newlog 4 can be retrieved on site using either a laptop or hand held computer. For rapid downloading of data, Newlog 4 can be connected to a Technolog Fast Barrier Unit (FBU). This allows the Newlog 4 to be connected to non-intrinsically safe apparatus located in the safe area.

### REMOTE COMMUNICATIONS



### LOCAL COMMUNICATIONS



### Software

Newlog 4 is fully compatible with Technolog's Windows-based PMAC software. Features include:

- Data retrieval via the telephone network with automatic polling of remote sites
- Interactive help system guides the user through entire PMAC features. Displays data from multiple sites on common axis
- Data management with built-in archive/de-archive facilities
- Full site database maintenance facilities
- Data summaries: automatic calculation of min, max and mean flow totalisation
- Control of database facilities for relaying alarm condition programs to pagers
- Remote data access networking functions

### Remote Data Retrieval

Where site access is not possible or real time information is required, Newlog 4 can be connected to the telephone line using Technolog's modem/barrier hardware.

### Dial-Out Facility

In the event of an on-site alarm condition such as low pressure, blocked filter etc, Newlog 4 features three dial out numbers to ensure secure notification of an alarm condition.

### Display

Newlog 4 features a programmable eight character liquid crystal display. Messages include maximum and minimum pressure.

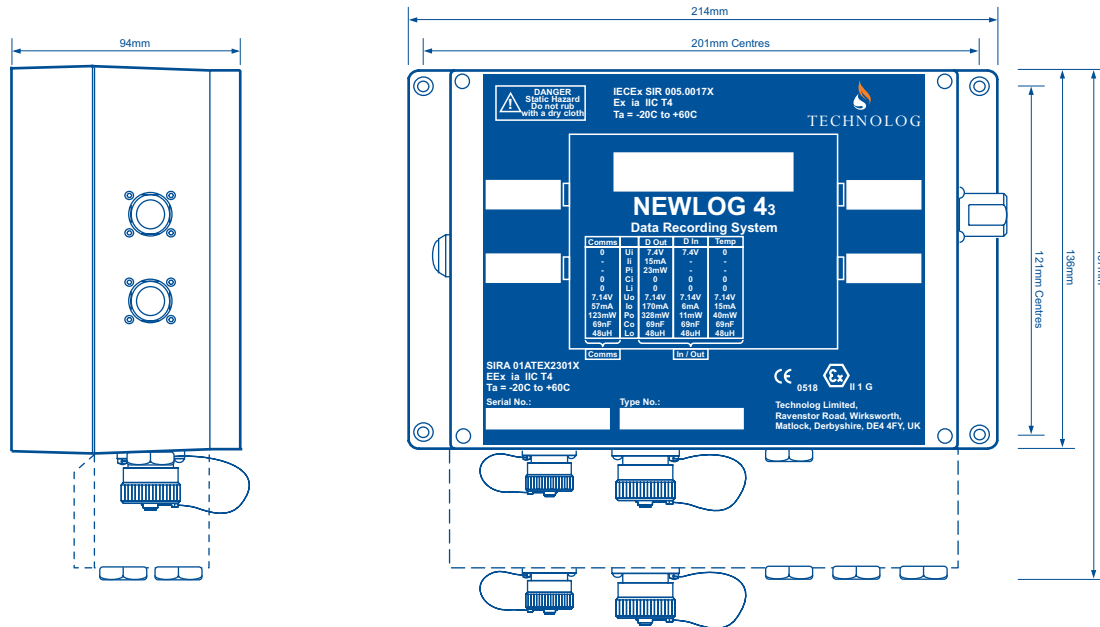
### Certification

Newlog 4 is certified intrinsically safe to both 'ATEX' & 'IECEX' standards.

# Technical Specifications



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## Intrinsic Safety

Certified Intrinsically safe EEx ia IIC T4.  
SIRA 01ATEX2301X - EEx ia IIC T4 (Ta = -20 to +60C).  
IECEx SIR 05.0017X - Ex ia IIC T4 (Ta = -20 to +60C).

## Protocol

Conforms to BG specification E5565 / DL120 and DL130

## Analogue Inputs

Pressure inputs: Up to 4 pressures in accordance with British Gas specification (10Hz statistical sampling on outlet giving 'Min.', 'Max.', 'Mean' and 'Standard Deviation' after each logging interval. Instantaneous sampling on inlet.)  
Temperature input: Up to 3 PRT 100 (3 wire) input.  
Analogue inputs: 4-20 mA current loop (externally powered)

## Digital Inputs

Channel types: 8 voltage - free inputs configurable for 'State' or 'Pulse' inputs  
State input: Switch closure or logic state  
Pulse input: Switch closure or logic pulses, maximum rate 10 per second (counted over and recorded at preset intervals) 32,000 maximum per logging interval (max of 2 inputs)

## Outputs

4 independent digital outputs for use with Technolog "Plus 4" pressure controller

## Data Storage

Type: solid state  
Size: 128k, allocated between channels as required (max 64K/channel)  
Data retention: 5 years (life of battery)

## Clock

Type: Crystal controlled calendar clock with leap year adjustment  
Accuracy: 5 minutes per year over operating temperature range

## Supply

Internally powered by an intrinsically safe, user - replaceable lithium battery module. Typical battery life 5 years.

## Recording

Programmable between 1 second and 12 hours  
Logging method: time based  
Data storage: rotating store or store until full

## Environmental

Operating temperature: -20°C to +50°C  
Protection classification: IP54

## Mechanical

Dimensions: 214 x 136 x 94 mm  
Weight: 2 kilograms

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