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M Plus LOG

IoT Gas Datalogger

Mlog Plus is a Gas Datalogger specifically designed to support IoT applications, such as distribute monitoring of reducing pressure stations along the gas network

MLog Plus is suitable for installation in ATEX Zone 0 classified areas, making it the ideal solution for a wide range of applications.

MLog Plus communicates with the centralised data collection system (SCADA) using communication protocols such as Modbus, IEC 60870-5-104 and optionally LoRaWAN.

Device configuration supports 2G GSM/GPRST and LoRAWAN communication modules for a seamless integration into Smaryt City cloud architectures.

MLog Plus is a battery operated very Low Power device with a typical battery lifetime of more than 5 years.
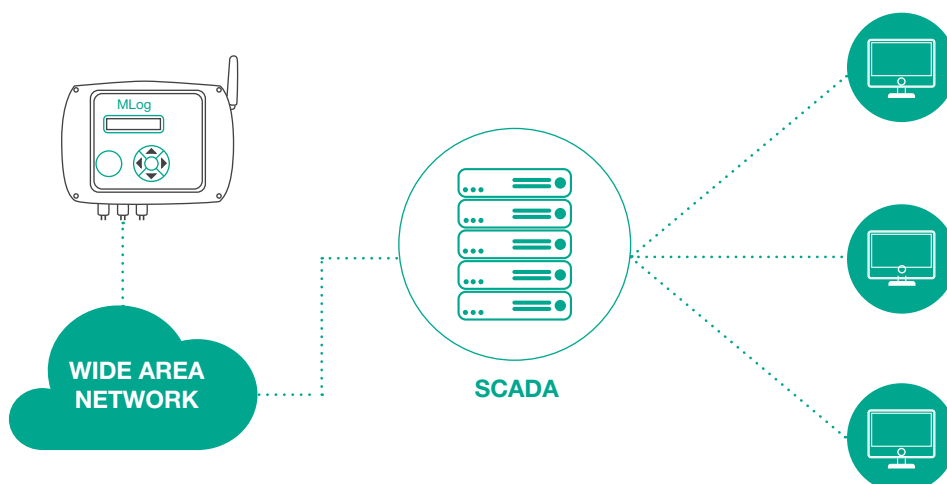
For energy demanding application, such as real time "always-on" communications, the device can be powered by the associated intrinsic safety barrier **MPower**.

MPower can then be powered by:

- AC Electricity Mains
- PV panels
- Microturbine systems

Installation and local setup are supported by user friendly local communication software RainBow, for timeless alignment to operational SCADA database.

MLog Plus operates over -25°C to + 60°C temperature range and supports acquisition of Pressure, Temperature and Digital Signals for a comprehensive monitoring of gas station parameters.

WIDE AREA NETWORK

SCADA

Technical characteristics

Pressure	Up to 3 inputs from pressure cells (different ranges from 0.8 ÷ 2 barA to 20 ÷ 80 barA)
Temperature	Up to 2 PT1000 inputs
Analog Inputs	2 inputs 0-5 V (optionally convertible to 4-20 mA)
Digital I/O	10 DI (8 voltage-free contacts and 2 for high-frequency counting <5KHz) 4 DO Open Collector
Expandability	Through RS485 port
Local communication ports	1 RS485 1 EN62056-21 optical port (ZVEI)
Remote communication	1 GSM/GPRS Modem option: LoRaWan Radio Modem
HMI	Integrated display: 2 x 20 Alphanumeric, 5 Keys
Rtc clock	Internal with back-up battery
Memory	4 MB FLASH
Power	• Primary LiSoCL2 battery (5 years) • Alternatively by means of external power supply MPower.
Accuracy	Pressure 0.3% FS, Temperature 0,2°C, Analog Inputs 0.3% FS
Environmental conditions	-25°C < T < + 60°C
Case	IP67
Certification	The device is certified according to the ATEX directive as follows: **Version A**: Battery Power, Integrated Modem **Version T**: External Power Supply, Integrated Modem ⟨Ex⟩ II 1 G Ex ia IIA T3 Tamb = -25°C ÷ +60 °C **Version B**: External Power Supply, without Modem for use with IIB gas group ⟨Ex⟩ II 1 G Ex ia IIB T3 Tamb = -25°C ÷ +60 °C CE

Functions

Data acquisition	Basic acquisition time: 1" - 15' Maximum number of variables that can be acquired: 10 Maximum number of samples stored: Average value 500 days - 4 values per hour
Pulse Acquisition	Up to 2 digital inputs
Communication Protocols	Modbus RTU, IEC 60870-5-104, LoRaWAN
Alarms	Generation of Alamrs and Events upon thresholds overtake or status change. Configurable for data calls or SMS notification.
SCADA integration	Communication Layer available on request
Local Setup	Local communication port by means of Win OS "RainBow" Software

* Specifications are subject to change without notice.