



ATEX GSM Modem/Logger (TEK-643)

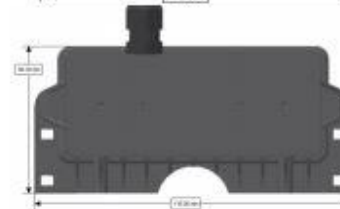
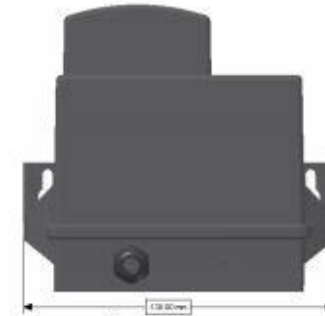
With flexible sensor/meter connection options, our battery powered ATEX GSM modem/logger is suitable for monitoring fuel tanks levels and flow rates.

Applications

- LPG/Propane tank dial-gauge position measurement
 - Rochester R3D/Twinsite Senior/Junior
- Pressure sensor based vented tank liquid level monitoring
 - Kerosene, Diesel, Gasoline
 - Oils/Waste Oils
 - Other hazardous/non hazardous
- Utility meters/Flow meters
 - Pulse output accumulation and reporting
 - Absolute encoder serial output protocols
- Tanks
 - Fixed or mobile
 - Vented or pressurised
 - Underground
 - Tank size limited only by the capability of the sensor connected
- Optimise delivery or collections
- Spot and continuous inventory measurement
- Configurable reporting schedule and alarms

Benefits

- Accurate, reliable tank level reporting to server monitoring application
- Data or SMS Communication (TEK586 data packet format)
- Highly configurable server reporting interval from every 2 hours to once per month
- 28 slot logger with configurable logging interval
- Programmable Alarms
 - High level
 - Low levels
 - Rate of level change (fill or drain)
- Reports local temperature, GSM RSSI, and battery level
- External antenna option for underground locations
- Remote re-configurability
- Easy to install and commission
- Mounting/attachment options – wall/pole/magnet
- CE Conformance and ROHS Compliant



Specification

Characteristic	TEK643 ATEX GSM Logger
Dimensions/Weight	130mm x 125mm x 61mm (excluding cable gland/external connector) / Weight 350g
Housing Material	Moulded plastic, 2-part, material Glass Reinforced Polyamide, UV resistant.
Operating Temperature	-30°C to +55°C
Storage Temperature	0°C to 30°C
Humidity	10 – 100% RH
Environmental Protection	IP68 (less if a pressure relief vent is fitted – rating dependent on vent rating)
GSM module options	2G GSM/GPRS 850/900/1800/1900MHz - Quad band 3G UMTS/HSDPA 900/2100MHz or 850/1900MHz 3G UMTS/HSPA+/WCDMA 900/2100MHz or 850/1900MHz or 800/850/900/1900/2100MHz GPS Option.
Pressure sensor	Pressure sensors from various manufacturers operating from 5V supply may be connected. 0V to 5V ratiometric or programmable compensated reduced span (other than 0-100%)
Dial-gauges	5V Rochester Senior/Junior Twinsite/R3D (Rochester DS-1318.pdf compatible as standard)
Accuracy/resolution	10-bit (1023) A/D resolution, Accuracy is dependent on the gauge used
2 x Pulse counter inputs	2 x volt free switch inputs with pull up resistors to 5V
Loop current measurement	120 ohm internal load. 4-20mA measurement possible with external energising source.
Serial data	Serial data formats are supported
Power requirements	Battery pack with standard cell sizes connected with a 2 wire harness included
Battery technology	3.6V Lithium Thionyl Chloride Exi "Bobbin type" construction
Battery life	Various depending on battery selected and usage. >> 10 years daily contact possible with D-cell
Safety	ATEX Zone II 1 G-Ex ia IIB T4 Ga [-30 < Ta < +55°C] and IECeX/Hazloc equivalents (A and C size cells only)
Conformance	CE, IEXeX, RoHs and others as required
Manual Activation	Magnetically activated reed switch when closed (or open) / Audible buzzer / Internal LED
Installation	Undoing 2 x captive screws give access to: <ul style="list-style-type: none"> • Std-SIM (25mm x 15mm x 0.76mm) holder • Battery power connection (shipped unconnected) • Connector for wiring Rochester R3D/Twinsite gauge/pressure sensor/pulse inputs • LED/buzzer (also audible when closed) • Mobile phone configuration & operational verification.

Configuration/Specification Options

External connection	IP68 Cable gland (side or bottom) / IP68 bulkhead connector, e.g. Switchcraft EN2 series. 4 positions.
Server radio communications	2G & 3G module options for targeted geography or global coverage. Prepared for 4G migration
Antenna	Internal with option for antenna coupler with SMA connector to allow connection of an external GSM antenna
Battery size	Several options up to a D cell size are available
Data Communications	Custom input serial and output data packet formats can be discussed for volume users
RF module option	1. ISM band short range communications for additional sensors.
Fixing/Mounting	Screw mounts (4), tie wrap, & pole mount features are standard. External magnets may be attached into self-tapping screw bosses.

