TEK 822 Cellular Propane Exi (ATEX/C1D1)

With flexible sensor/meter connection options, the battery powered Intrinsically safe Cellular LPG/Propane Exi logger is suitable for monitoring fuel tanks levels and flow rate.

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

Tanks
- Fixed or mobile
- Vented or pressurised
- Underground
- Tank size limited only by the capability of the sensor connected
- Spot and continuous inventory measurement
- Configurable reporting schedule and alarms

Benefits

- Accurate, reliable tank level reporting to server monitoring application
- Highly configurable server reporting interval from hourly to once per month
- 28 slot logger with configurable logging interval
- Optimise delivery or collections
- Programmable Alarms
  - High level
  - Low levels
  - Rate of level change (fill or drain)
- Reports local temperature, radio signal strength and
- battery level
- External antenna option for underground locations
- Remote re-configurability
- Plug and play installation
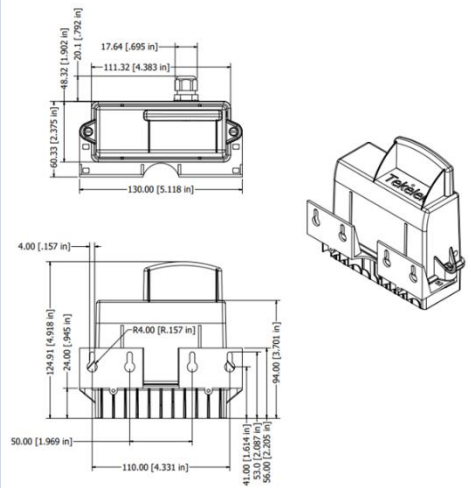- Mounting/attachment options – wall/pole

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Specification	

Characteristic	LPG logger NB-IoT/CAT-M1/4G/2G
Dimensions	
Weight	350g/0.77lbs
Housing Material	Moulded plastic, 2-part, material Glass Reinforced Polyamide, UV resistant.
Operating Temperature	-30°C to +50°C / -22°F to 122°F
Storage Temperature	0°C to 30°C / 32°F to 86°F
Humidity	0 – 100% RH
Environmental Protection	IP68
Communication	LTE CAT-M1 or NB-IoT or 2G With GPS.
Radio Frequency (Modem dependent)	BG96	LTE FDD (Cat M1 & Cat NB1): B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B26/B28 LTE TDD (Cat M1): B39 EGPRS: 850/900/1800/1900MHz
	BG95	LTE FDD (Cat M1): B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B26/B27/B28/B66/B85 LTE FDD (Cat NB2): B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B28/B66/B71/B85 EGPRS: 850/900/1800/1900MHz
GNSS (GPS) (Modem dependent)	BG96	GPS, GLONASS, BeiDou/Compass, Galileo, QZSS
	BG95	GPS, GLONASS, BeiDou, Galileo, QZSS
Pressure sensor	Pressure sensors from various manufacturers operating from 5V supply may be connected. 0V to 5V ratiometric with programmable scaling
Dial-gauges	5V Rochester Senior/Junior Twinsite/R3D (Rochester DS-1318.pdf compatible as standard)
Accuracy/resolution	10-bit A/D resolution, Accuracy is dependent on the gauge used
2 x Pulse counter inputs option	2 x volt free switch inputs with pull up resistors to 5V

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Accuracy/resolution	10-bit A/D resolution, Accuracy is dependent on the gauge used
Loop current measurement option	120 ohm internal load. 4-20mA measurement possible with external energising source.
Serial data	Serial data support is possible – Contact factory
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	Up to 10 years*
Safety	Class I, Div 1, Gr A D T4 Class I, Div 1, Gr C D T4 Class I Zone 0 AEx ia IIB T4 Ga Class I Zone 0 AEx ia IIC T4 Ga SGSNA/22/CA/00014X BA22UKEX0189X II 1G Ex ia IIC T4 Ga Ta = -30°C to +55°C II 1G Ex ia IIB T4 Ga Ta = -30°C to +55°C II 1G Ex ia IIC T4 Ga Ta = -30°C to +50°C II 1G Ex ia IIB T4 Ga Ta = -30°C to +50°C SGS22ATEX0060X & IECEx BAS 22.0034X Complies with UL 913
Conformance	CE, IECeX, RoHS, REACH, RED
RoHS 2 Directive (2011/65/EU) & Delegated Directive RoHS 3 (EU) 2015/863	This Directive lays down rules on the restriction of the use of hazardous substances in electrical and electronic equipment (EEE) with a view to contributing to the protection of human health and the environment, including the environmentally sound recovery and disposal of waste EEE.
REACH Compliance	ICES-003 Issue 6 Class B Digital Apparatus emissions requirement (Canada) CFR 47 FCC Part 15 Subpart B Class B emissions requirements (USA)
FCC Compliance	ICES-003 Issue 6 Class B Digital Apparatus emissions requirement (Canada) CFR 47 FCC Part 15 Subpart B Class B emissions requirements (USA)
Manual Activation	Magnetically activated reed switch / Audible buzzer / Internal LED
Installation	Plug and play installation. Shipped pre-configured with customer supplied SIM card and Rochester gauge installed

* Based on 1 communication per day and good network coverage

Configuration/Specification Options

External connection	IP68 Cable gland (side or bottom) / IP68 bulkhead connector
Server radio communications	PTCRB (AT&T) & Verizon approvals. FCC, RED, CE approvals
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	Makes a TCP connection to the server over 2G, NB-IoT or CAT-M1 cellular network and delivers its payload using a proprietary Tekelek binary
Fixing/Mounting	Screw mounts (4), tie wrap, & pole mount features are standard.

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