



MacR6-Z0-P

Battery gas pressure monitor with integrated GSM modem registering up to 2 pressures simultaneously

MacR6-Z0-P is simplified pressure monitoring device recording parameters as following: gas pressures, status of digital binary inputs. That data can be transmitted directly to SCADA system. Estimated life time of the device is more than 5 years on one standard, commonly used battery. Ready to use almost instantly after installation, only required action is to configure the pressure limits and location using dedicated Android application. When programmed pressure thresholds are out of range it autonomically informs gas station service.

MacR6-Z0-P features

- GSM /GPRS operation in 2G or 3G networks
- D-size lithium battery supplied device. More than 5 years of work on single battery
- Local LCD display and NFC interface for diagnostics
- Optical interface according to IEC 62056 for configuration
- High-accuracy measurement of pressure and temperature
- Warning and alarm pressure exceeding limits
- Effective and economic solution

Technical specification

Dimensions	124mm x 85mm x 40mm
Weight	0,7kg
Housing material	Polycarbonate enclosure
Relative humidity	Max 95% at temp. 55°C
Ambient temperature range	-30÷55°C
Housing protection class	IP66 in accordance with requirements of EN 60529 (for outdoor installation)
Ex classification	Ex II 1 G Ex ia IIA T4 Ga (with integrated modem), FTZU16 ATEX 0051X
Display	Graphic LCD with status icons
Power supply	Replaceable lithium 17Ah battery, operation time: 10 years - report once a week, 5 years - report once a day
Transmission ports	• Optical Interface IEC 62056-21, • NFC interface IEC 14443 (option) • Built-in a quad-band GSM modem operating in 2G (optionally 3G) network. GSM 2G 850, 900, 1800, 1900 GSM 3G 900, 2100 MHz
Transmission protocols	Support of TCP, UDP, FTP, NTP, HTTPS transmission protocols
Environment conditions class (Mechanical / Electromagnetic)	M2/E2
Registration periods	• Data registered periodically: recording interval from 1 up to 60 minutes – 19000 records • Hourly data: more than 1 year • Daily data: more than 1 year • Monthly data: more than 40 years • Events memory: approximately 200 records
Inputs/sensors	2 digital inputs (1xLF, 1xTS) • LF inputs, potential free, frequency 0÷5 Hz, reed contact • Tamper protection switch (normally closed) • Hall sensors to cooperate with gas meter, monitoring positions • Accelerometer sensor • Cover opening sensor • Gauge pressure ranges: 0÷7kPa/ 0÷30 kPa/ 0÷700 kPa Absolute pressure ranges: 90÷250 kPa/ 90÷700 kPa • Pressure sensor p2 (optional)–absolute or gauge 0÷10 MPa • External pressure sensors is ended with metric screw M12 x 1.5 (Ermeto) thread • Pt1000 class A temperature sensors 2-wire, diameter 5,7mm, Maximum permissible errors
Control outputs	2 digital outputs: - 1x configurable binary or LF, Counters replication: Vm ,E - 1x configurable binary

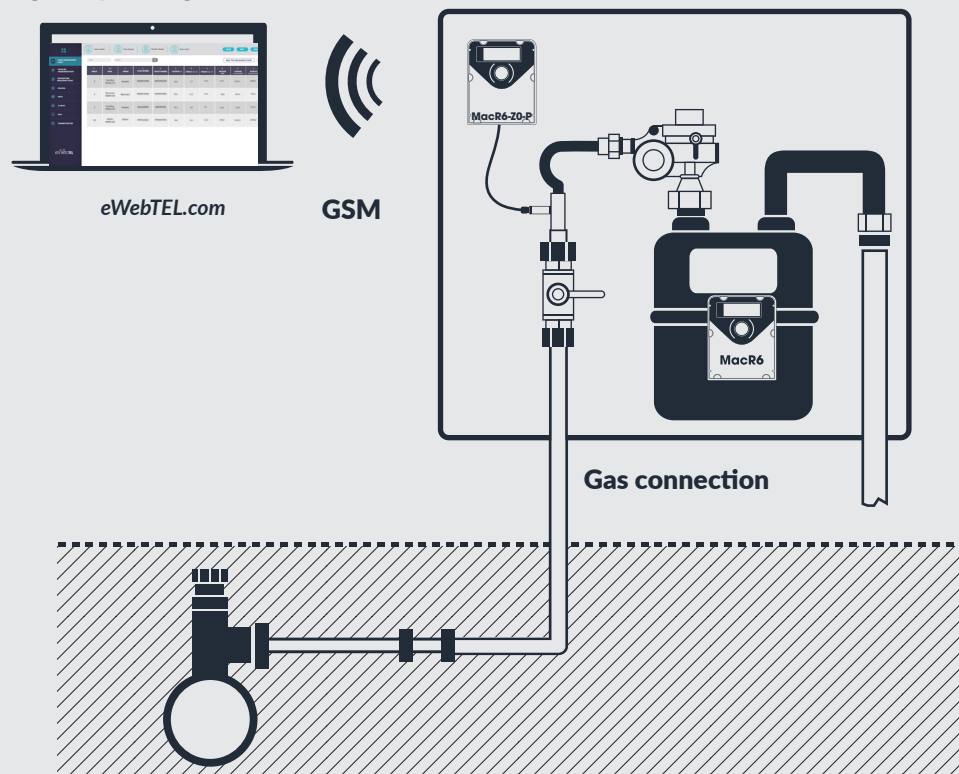


Gas

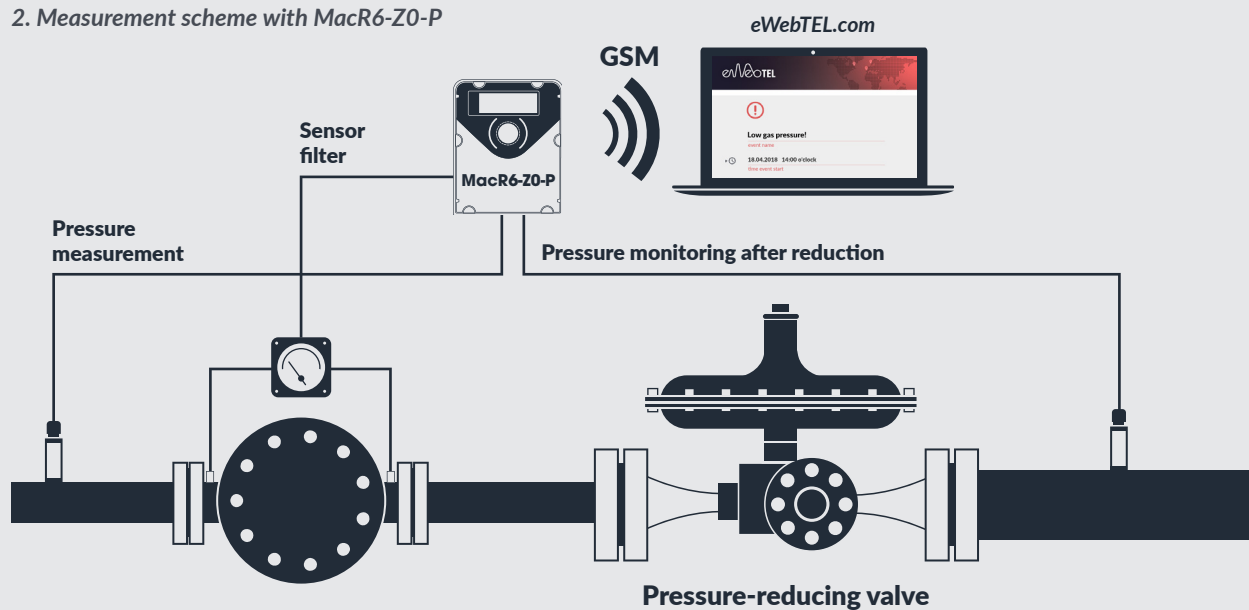


Application

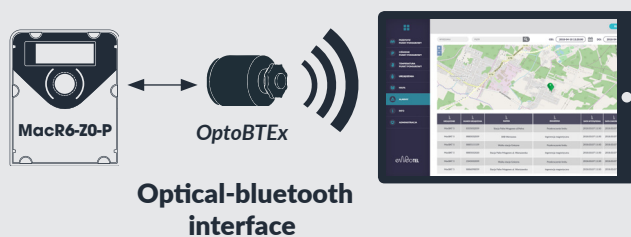
1. Monitoring the tip of the gas network with MacR6-Z0-P



2. Measurement scheme with MacR6-Z0-P



3. Local readout and configuration with OptoBTEx



4. Local readout and configuration with NFC



MacR6-Z0-P accessories



Antenna GSM/GPRS

Magnetic mounting base, SMA male connector, 1.5M cable

Features:

- Frequency: 900/1800MHz
- Input impedance (ohms): 50
- VSWR: ≤ 1.5
- Polarization Type: Vertical
- Gain (dBi): 3
- Cable Type: RG174



OptoBTEx | Optical-bluetooth interface

A wireless transmitter of data from compatible devices. The transmission is performed through Bluetooth 2.1+EDR Class 2 standard. Data is transmitted to a compatible device, which has IEC 62056-21 standard and the readout software installed (usually a mobile device running MS Windows or Android operating system). OptoBTEx does not modify data and wireless communication is performed in Bluetooth 2.1+EDR Class 2 standard.



MacR6 holder | For horizontal or vertical installation

Universal MacR6 holder allowing for horizontal or vertical installation on pipeline using cable ties. Montage holes allowing for installation on flat surfaces using screws. Possibility of sealing the device along with the holder to prevent from dismounting. Durable construction resistant to impacts and weather conditions.



Data loggers configurator | Application

Application designed for mobile devices with the Android system (smartphones, tablets). It is available for free download from Google play.



eWebTEL | Software

System eWebTEL is a platform aggregating measurement data intended for comprehensive supervision over monitored gas network. It enables to graphically visualize data sent from the resolvers, manometers and recorders, geo-location of devices. It also allows to overview history of recorded data and generation of reports concerning: monthly gas consumption along with hour peaks by particular receivers or group of receivers, history of gas consumption by particular receivers or group of receivers, failure occurrences and times, history of parameter values defining a condition of gas network.