MT-718 PS – battery-operated, energy-efficient telemetry logger with IP68

MT-718 PS

- 2G/4G Cat. 1 or 2G/NB-IoT/LTE Cat. M1 packet transmission and SMS communication (subject to build option)
- 5 binary/counter inputs compatible with potential free contacts (eg. pulse outputs of flowmeters)
- 2 analog 0–5 V DC inputs with configurable alarm thresholds and hysteresis, possibility of conversion up to 2 analog a signals from 4–20 mA to 0–5 V DC
- 2 binary outputs
- Keyed 0–5 V DC power supply
- Standard 15/24 V DC power supply for external sensors
- Lid opening sensor (tampering protection)
- Built in pressure gauge 0 - 10 Bar (other ranges optional)
- Digital humidity sensor (internal)
- Intelligent data logger (8/16* MB Flash RAM with min. write interval of 1 sec., 30/65* k records capacity)
- Configurable schedules and events initiating measurements and data transmission
- RTC real time clock
- Battery power supply (alkaline or lithium batteries), replaceable
- Additional power input 3-8 VDC
- Optional external powering (MT-CPV)
- uProg – functionality extension script
- Built-in algorithms: PRV time, PRV flow, Geonor M-600,
- Hourly variable alarms
- Intelligent power management
- Battery charge consumption sensor
- Optional built-in OLED display
- USB-C port for local configuration
- RS-485 Interface supporting Modbus RTU protocol
- Optional BLE interface
- IP68 enclosure

- Enclosure available with cable glands or M12 connectors
- Communication with external GPS receiver (dedicated 5 V DC power output, supporting devices with CMOS TTL interface, RS-485 interface and NMEA protocol)
- External SMA antenna socket
- User friendly communication and configuration software
- Software for remote management over packet transmission or BLE
- Built-in MIM card (option) – 2 independent GSM networks providing transmission infrastructure redundancy
- Remote firmware upgrade

MT-718 is a new battery powered telemetry module for measuring and data logging. Like other modules of MT family the module is a cutting edge design characterized by advanced innovative solutions, easy to configure and integrate with data collecting and processing systems. The spontaneous on event-based or scheduled data transmission helps to minimize transmission costs and energy consumption extending battery life time. Simple compact design in plastic enclosure with IP 68 protection makes the module ideal for harsh environment with no acess to amins power supply (eg. water supply control wells and measurement chambers). Module can be powered with user replaceable battery or external battery pack set. Battery voltage is continuously monitored and reported along with measurement data. MT-718 is equipped with 5 binary/ coun-ter inputs (adopted to work with potential free contacts), 2 analogue inputs allowing measuring of parameters like pressure, temperature, level etc. The module has a pressure gauge with quick coupling allowing comfortable connection with pressure hose. Additionally, there is a built-in 4-20 mA to 0-5 VDC converter for 2 analog signals.

RS-485 interface supporting Modbus RTU and NMEA allows connecting external devices (including GPS receiver). Keyed voltage source powering analog inputs and voltage outputs for external sensors as well as advanced work modes of internal modem reduce energy consumption to absolute minimum. Measurement data may be logged with a precise time stamp in nonvolatile Flash memory according to configured schedule or when defined event occurs. Measurement data may be also presented on optional OLED display.

Besides measurements the module can report multiple alerts: tampering with enclosure, unauthorized opening of the chamber, long period of missing flow, crossing the predefined level or reaching the temperature threshold etc. MT-718 module's resources and functionality may be optimized for particular applications due to many available options (lithium or alkaline battery packs, M12 connectors, built-in OLED display, 2G/4G Cat. 1 or 2G/NB-IoT/LTE Cat. M1 modem version).

WARRANTY 3 YEARS

energy efficient

MIM option

SMS

GPS option

OLED option

5DI/2DO

2AI

IP68

RS-485 MODBUS.RTU

4G

option

MT-718 PS – battery-operated, energy-efficient telemetry logger with IP68

General

Dimensions (HxWxD)	151 x 125 x 90 mm
Weight (with batteries)	1,42 kg
Mounting type	4 holes Ø4, 127 x 108 mm
Operating temperature (alkaline batteries)	-20 do +55 °C
Operating temperature (lithium batteries)	-30 do +65 °C
Protection class	IP 68: 2m for 24h
Housing material	polycarbonate (UL94V-0)

Modem

Producer/Type	SIMCOM A7672E	SIMCOM SIM7070G
Region	Europe, Asia	global
2G	900, 1800 MHz	850, 900, 1800, 1900 MHz
4G (LTE Cat 1)	B1, B3, B5, B7, B8, B20	---
4G (LTE Cat M/Cat NB)	---	B1, B2, B3, B4, B5, B8, B12, B13, B14, B18, B19, B20, B25, B26, B27 (Cat M), B28, B66, B71 (Cat NB), B85
Antenna socket	50 Ω, SMA-F	

Power supply

Battery pack: - 6 alkaline batteries or - 6 lithium batteries	4.5 V/32 Ah 3.6 V/78 Ah
External supply voltage	3.0 – 8.0 V
Maximum current in pulse	< 3 A
Average current in the sleep state of the modem	< 250 uA

Analogue inputs AN1 – AN3 (potential, differential)

Measuring range	0 – 5 V
Input resistance	>600 kΩ typ.
Resolution	12 bit
Accuracy	± 0.5 %

Binary/counter inputs I1–I5

Contact polarization	3 V
Counting frequency	250 Hz max.
Minimum pulse length	2 ms

Integrated pressure gauge AN3

Measurement range	0 - 10 Bar
Temperature of medium	0 - 80 °C
Accurancy	0,5 %

NMOS Q1, Q2 outputs

Maximum voltage	30 V
Maximum current	250 mA
Switch off current	<50 μA
Resistance	1 Ω

Configurable voltage output Vo

Voltage range	0.0 – 5.0 V
Resolution	0.1 V
Accuracy	2%
Maximum current	100 mA

Voltage output Vh

Output voltage	15 V lub 24 V
Accuracy	5 %
Maximum current	50 mA

Voltage output Vs

Output voltage	(5.0 ± 0.1) V
Maximum current	100 mA

Logger

Memory type	FLASH
Memory capacity	8 / 16 MB (option)
Minimum recording interval	1 s
Number of records	30 000/ 60 000 (option)

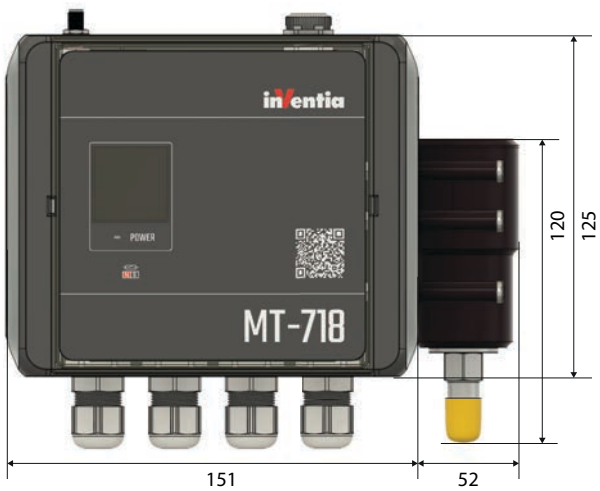
OLED display (option)

Technology	OLED RGB
Size (diagonal)	1.5"
Resolution	128 x 128

Serial interface

Type	RS-485
Transmission speed	1200 - 9600 bps
Protocol	MODBUS RTU Master
Number of data blocks supported	16

Drawings and dimensions (all dimensions in milimeters)



MT-718 PS

INVENTIA Sp. z o.o., Poleczki 23, 02-822 Warszawa, Poland, ph.: +48 22 545-32-00
inventia.online, agreus.pl, dataportal.pl, xway.pl
inventia@inventia.pl, info@inventia.pl

Revision 10.2024