

- 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)
- 3 analog 0–5 V DC inputs with configurable alarm thresholds and hysteresis, possibility of conversion up to 2 analog 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)
- Internal temperature measurement
- 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 access to mains 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/counter inputs (adopted to work with potential free contacts) and 3 analogue inputs allowing measuring of parameters like pressure, temperature, level etc. 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).



5DI/2DO

3AI



RS-485
MODBUS.RTU

4G



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: - 3 alkaline batteries (6 alkaline batteries) or - 3 lithium batteries (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 |

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 millimeters)

