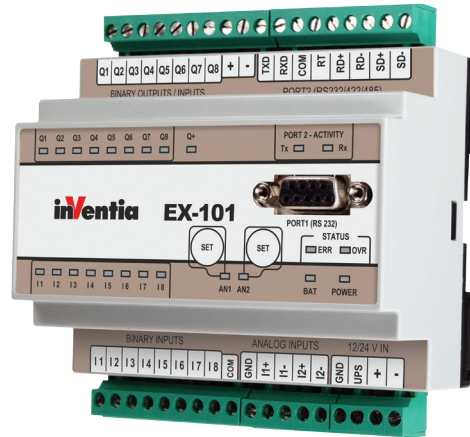


- Binary inputs and outputs
- Analog inputs 4-20 mA (2)
- Serial communication port for external devices (RS 232/422/485), isolated
- Data logger with 0,1 sec. resolution
- RTC Real Time Clock
- Programmable logic controller (PLC)
- Modbus RTU communication protocols
- Removable terminal blocks
- Easy configuration software



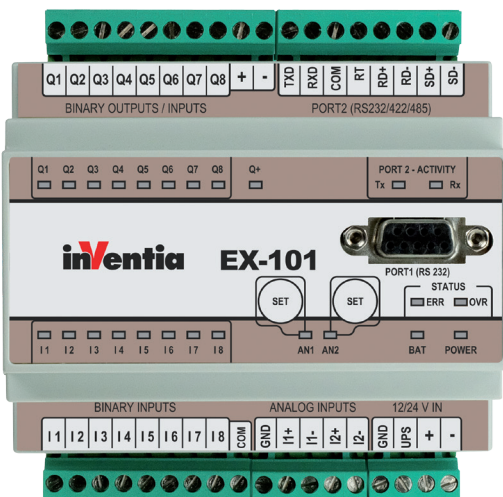
The EX-101 is a extension module for MT family of telemetry modules. It is optimized for use in advanced measurement systems equipped with 12/24V power source. Additionally, it can act as a universal I/O station with galvanically isolated RS232/485/422 Modbus RTU interface. The ability to run local control program allows to use EX-101 module as freely programmable PLC.

### Resources

- 8 optoisolated binary / counter inputs 24V DC (I1 – I8)
- 8 configurable binary outputs / inputs / counters 24 V DC (Q1 - Q8)
- 2 optoisolated analog inputs 4-20 mA (8 bit acc./10 bit res.) with configurable hysteresis and filtration
- Isolated serial port RS 232/485/422
- RTC with external synchronization functions
- Firmware Flash memory with local update capability

### Functionality

- All binary inputs can be configured as counters or frequency-to-analog converters (0-2kHz)
- Programmable control functions using I/O's and configurable, event triggered flags (data logging, output control)
- Unsolicited messaging
- Event triggered Data Logger
- Simple, multipoint alarm configuration for both binary and analog inputs
- Additional manual alarm level setting capability for analog inputs A1, A2 (front panel push buttons)
- External, optoisolated RS 232/422/485 serial port for data transmission
- Configurable access security - password
- DIN rail mounting
- Power supply 12/24V DC, 24 V AC
- Removable terminal blocks
- Diagnostic LED's (status, serial communication activity, I/O status)
- Local logging of measurement results
- Local execution of user program
- 4 programmatic clocks TMRx – Asynchronous and Synchronous
- Can be use like standalone programmable PLC
- Main power failure signalization – FS1\_UPS
- Support for external text or graphics modbus displays



8-16DI  
/O-8DO

2AI



DIN RAIL

RS-232

RS-232  
/422/485

EX-101

## General

Dimensions (length x width x height)	105 x 86 x 60 mm
Weight	300 g
Mounting	DIN Rail 35 mm
Operating temperature	-20 to +65°C
Protection class	IP40
Max. voltage at all connectors relative to device's GND.	60 Vrms max

## Power supply

Voltage range (DC) 12,24V	10,8 – 36 V
AC (24V)	18 – 26,4 Vrms
Input current (A) (for 12V DC)	Active 0,20
Input current (A) (for 24V DC)	Active 0,10

## Inputs I1 – I8

Input voltage range	-36 – 36 V
Input resistance	5,4 k $\Omega$
Input voltage ON (1)	> 9 V min.
Input voltage OFF (0)	> 3 V max.

## Inputs Q1 – Q8

Maximum input voltage	36 V
Input resistance	5,4 k $\Omega$ type
Input voltage ON	> 9 V min
Input voltage OFF	< 3 V max.

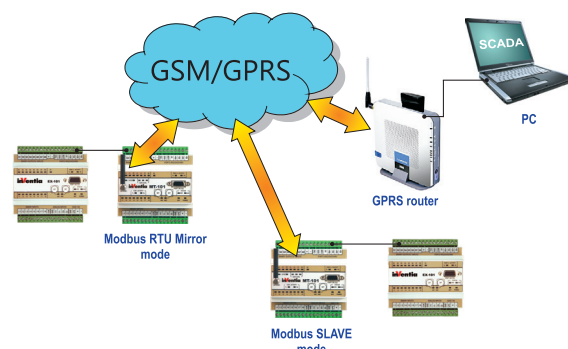
## Outputs Q1 – Q8

Recommended average current for single output	50 mA
Single output current	350 mA max.
Mean current for all outputs	400 mA max.
Voltage drop at 350mA	< 3,5 V max.
Off state current	< 0,2 mA max.

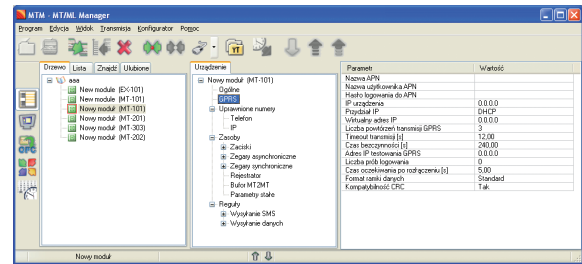
## Analog inputs A1, A2 (4 – 20 mA)

Input current	4 – 20 mA
Maximum input current	50 mA max.
Dynamic input impedance	25 $\Omega$ type
Voltage drop at 20mA	< 5 V max.
A/D converter	10 bits
Accuracy	+/-1,5 % max.
Nonlinearity	+/-1 % max.

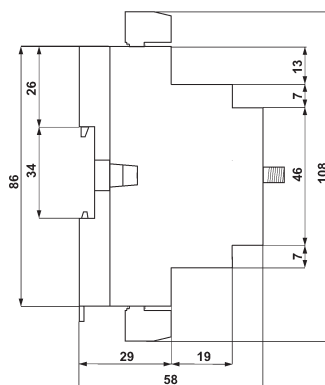
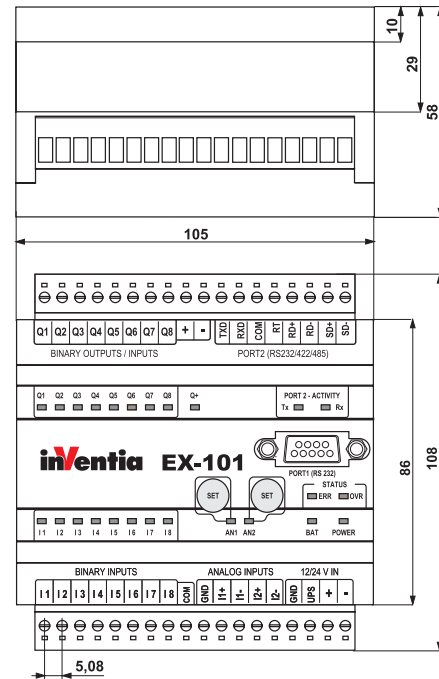
## Sample configuration



## Configuration utility



## Drawings and dimensions (in millimeters)



## Additional info:

**inventia**

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INVENTIA complies with ISO 9001:2008 certified Quality Management System!

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from the European Regional Development Fund resources.