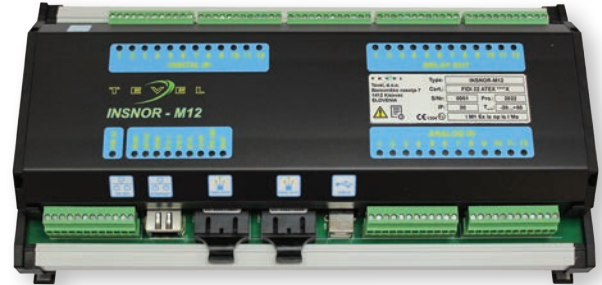


PROGRAMMABLE CONTROLLER TYPE *INSNOR-M12*



Programmable Controller type INSNOR-M12

The compact programmable controller type INSNOR-M12 is designed for data acquisition, processing, control, and transmission. Data can be transmitted in real-time over long distances via various buses, e.g. to a control center where it can be pre-processed, visualized, stored, and transmitted. The controller is designed according to the standards for use in coal mines endangered by methane and coal dust.

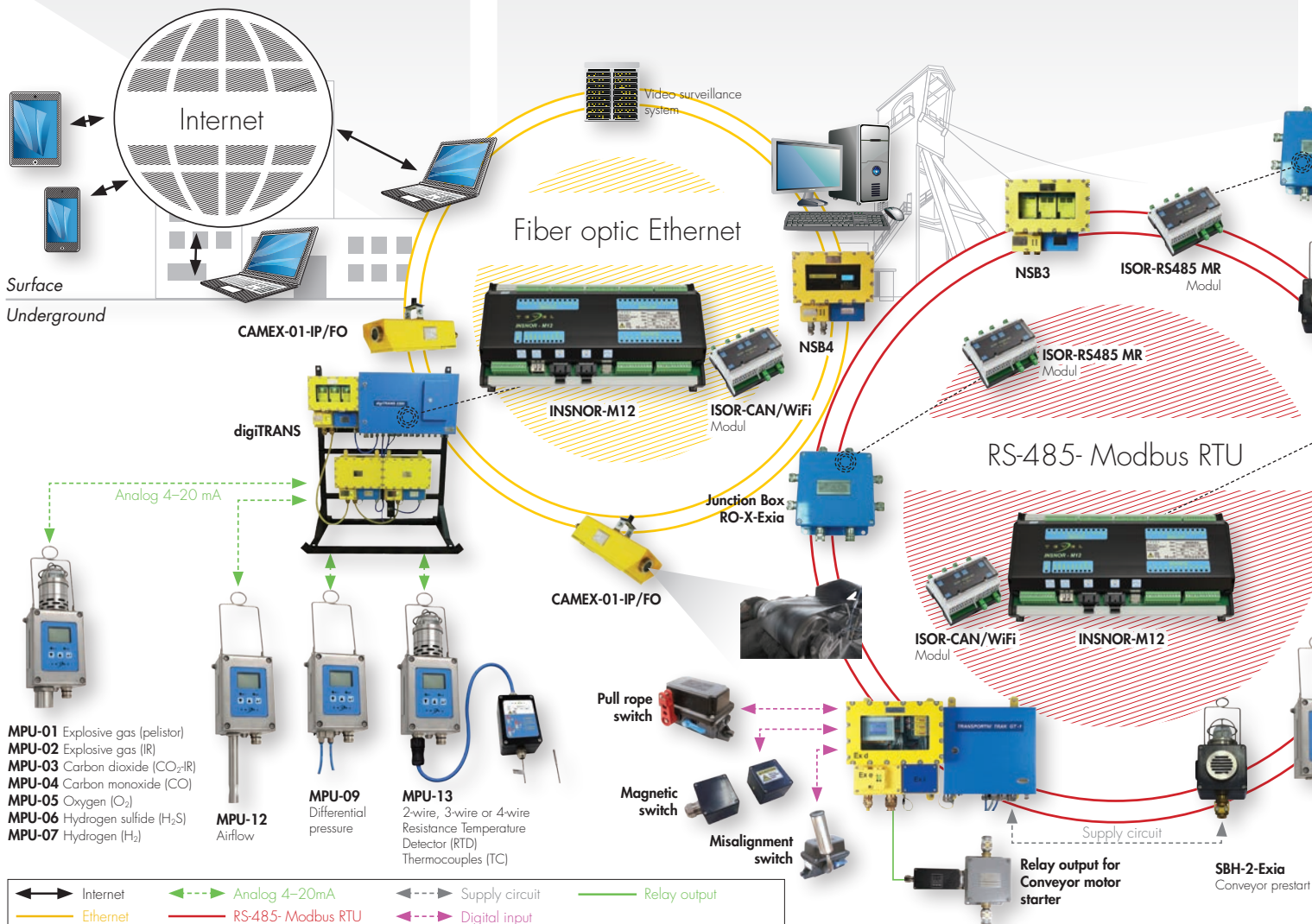


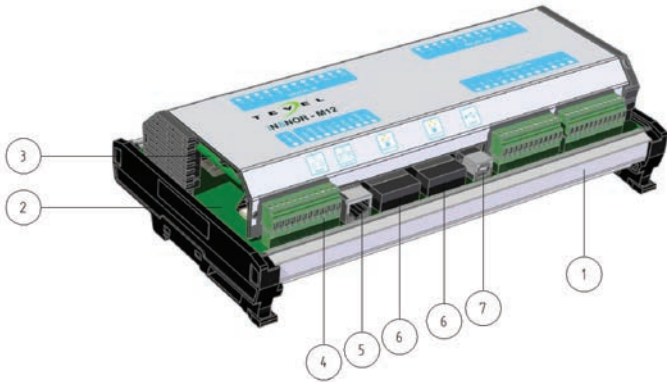
Easy installation on standard DIN rail 35.
The device must be installed in a housing with minimum Ingress Protection IP64.

INSNOR-M12 explosion marking:
I M1 Ex ia op is I Ma

The compact programmable controller INSNOR-M12 connection types:

- 12 Analog inputs (0.2-1 mA or 4-20 mA or 5-15 Hz)
- 12 Digital inputs ($U_{in}=0V \rightarrow$ Low (0) ; $U_{in}=3-15V \rightarrow$ High (1) ; $F_{max}=10kHz$)
- 12 Changeover Relays outputs ($U_{max}=30V$; $I_{max}=2A$; $P_{max}=30W$)
- Serial RS485 – Modbus RTU
- Serial CAN – open
- USB B-type
- Ethernet 10/100Mbps
- 2 Fiber Optic Transceivers (redundant mode), Duplex SC Port (up to 1.5km)





Basic device components

I.S. Programmable Controller type INSNOR-M12 consists of the following basic parts:

1. Device enclosure (PA basic + transparent PC cover, IP20)
2. Electronic CPU module
3. Electronic LED module (status indication)
4. Connection terminals
5. RJ45 Ethernet port
6. 2 Fiber Optics, Duplex SC Port
7. USB B-type port

Benefits:

- Compact design
- Simple configuration through the Ethernet or USB interface using a PC, tablet, or smartphone
- Easy programming with advanced PoKeys software

Technical specifications

Type: **INSNOR-M12**

Ex mark: **I M1 Ex ia op is I Ma**

Power supply voltage: $3 \times U_n = 12\text{VDC}$, $I_n = 300\text{mA}$

(Suitable with Tevels power supply unit **NSB4/x-ia**)

Digital inputs: $U_{\min} = 3\text{V}$

Analog inputs (3 options):

- Current input: $0.2 - 1\text{mA}$ ($R_{in} = 2\text{k}\Omega$)
- Current input: $4 - 20\text{mA}$ ($R_{in} = 180\Omega$)
- Frequency input: $5 - 15\text{Hz}$; $U_{\min} = 3\text{V}$

Relay outputs: SPDT switching contacts

($U_{\max} = 30\text{V}$, $I_{\max} = 2\text{A}$, $P_{\max} = 30\text{W}$)

RS485: Modbus RTU

CAN: Can open

Ethernet (RJ45)

USB B-type

2 Fiber Optic Transceivers, Duplex SC Port:

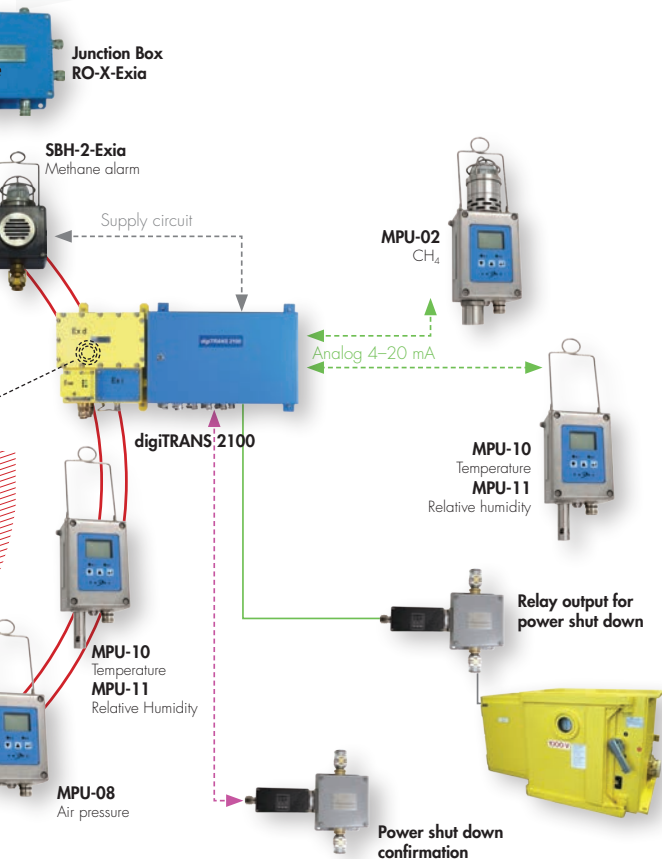
125 MBd MMF Transceiver for Fast Ethernet (100Base-FX)/ATM/FDDI (up to 15km)

Operating temperature range: -20°C to $+50^\circ\text{C}$

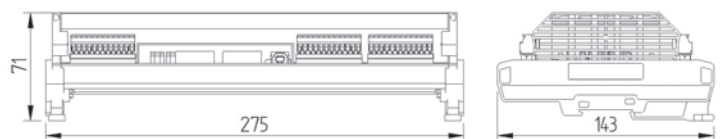
Relative humidity: 15 – 90% Rh (without condensation)

Dimension: $275 \times 143 \times 71$ (L x H x W in mm)

Weight: $< 1\text{ kg}$



External dimensions



OUR QUALITY – YOUR SAFETY



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