



# CMK-03 VOLUME CONVERTER

## DESCRIPTION AND FEATURES

The CMK-03 Volume Converter is battery-powered type I gas volume converter. Implementation of modern technologies, unique security systems, variety of versions and possibility of operation with external power supply, makes the CMK-03 Volume Converter functional and reliable.

Embedded LCD with 128x64px resolutions has a backlight - working either during operation on internal battery, or with external power supply. It gives clear and sharp picture in all ambient temperatures, during intense sunlight and in the dark.

The unique advantage of the CMK-03 is an easy access to all electrical signals (e.g. LF, HF, IN/OUT, COM), and battery replacement without the need of opening the housing. Battery is placed in the sealed chamber, protected by plastic screw cap. This solution eliminates any influence of ambient conditions onto internal electronic circuits – which strengthens the durability of CMK-03.

TUCHEL-type connector and OPTO-GAZ optical interface port on one of the serial ports enable to communicate with present and previous versions of converters destined for configuration and readouts.

One input for HF high frequency pulse transmitter (NAMUR), 6 programmable inputs and 4 bistable/pulse outputs, allow connection of numerous additional signals along with practical application in many technological processes. Optionally, the CMK-03 Volume Converter may be equipped with additional internal pressure transducer or external digital pressure transducer.

By implementation of innovative dedicated connection for operation with electronic gas meters (according to CYFRO-GAZ), or gas meters equipped with encoders, the CMK-03 can read the absolute value from the meter's index/counter, and check it against LF counter. Also, gas meter's work history readout is possible.

The CMK-03 Volume Converter is in accordance with technical requirements set in MID, ATEX and EMC directives.



## BASIC FUNCTIONAL INFORMATION

- Applied calculation methods: **AGA8, AGA NX-19, SGERG-88**
- Cooperation with chromatographs
- Additional internal pressure transducer or external digital transducer for process measurements (option)
- Industrial type connectors facilitating mounting and service
- Replacing batteries with no need to open any chamber thus exposing electrical parts to atmospheric conditions
- Extended event/alarm log; Registers changes of every configuration parameter
- Communication protocols: GAZ-Modem, M-Bus, **Modbus**
- Data base with **over 86 400 records** (10 minutes' logging interval for over 20 months)

## BASIC TECHNICAL DATA

- Ingress protection of casing IP65, optionally IP66/67
- Working conditions:  $-25^{\circ}\text{C} \div +55^{\circ}\text{C}$
- 128x64px LCD with backlight
- 3 independent RS-GAZ2 communication ports (RS-232 as option) including OPTO-GAZ
- ENCODER input for gas meters with mechanic counters
- CYFRO-GAZ input for gas meters with electronic counters
- HF (NAMUR) high frequency pulse input, LF low frequency input and LFb anti-fraud circuit input
- 6 pulse/binary inputs and 4 pulse/binary outputs
- Working time: 6 years in standard conditions or 11 years with expanded battery pack
- Real-time clock with accuracy not lower than 1 sec per 24 hours
- Dimensions: 160x210x65mm (6,3x8,3x2,6 inch) without connectors

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