



# GLOROS XLE

Gas volume converter



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# GLOROS XLE

Gas volume converter



## Description of the device

**GLOROS XLE** converter is a microprocessor device used for measurement and gas volume registration after conversion to the base conditions (101.325 kPa and 0°C).

**GLOROS XLE** has got four independent, fully configurable serial interfaces 2 x RS-232, 2 x RS-422/485, interface for Ethernet 10/100 Mbit network and USB 2.0. Built-in GSM/GPRS modem allows to supervise the device remotely, enabling immediate detection of any irregularities.

Implemented protocols provide communication with chromatographs, thanks to which the device always reads the current gas composition. This type of information may be transferred to the surveillance system by embedded interfaces. A variety of implemented communication interfaces provides easy integration of the device with SCADA infrastructure and terminals reading archived data from the converter. The possibility of hardware configuration not only allows to adjust the converter to the actual client's needs, but also provides cooperation with numerous gas measurement systems.

The device is approved to cooperate with other intrinsically safe circuits located in zone 1 and 2, considered as areas threatened by explosion caused by gases, vapors, flammable mists and air mixtures, qualified as explosion groups IIA, IIB and IIC.

## Compliance with standards

Metrological properties:

- ZN-G-4001
- PN-EN 12405-1:2005
- PN-EN 12405/A1:2006

Intrinsic safety:

- PN-EN 50014:2004
- PN-EN 50020:2005
- PN-EN 60079-0:2006
- PN-EN 60079-11:2007

Level of electromagnetic interferences:

- PN-EN 55022:2000/A1:2003/A2:2004
- PN-EN 61000-6-3:2004
- ETSI EN 301 489-1 V1.6.1
- ETSI EN 301 489-7 V1.2.1

Resistance to overturning and vibrations:

- PN-EN 60068-2-64:2002(U)
- PN-EN 60068-2-31



## Functionality

- Measurement and registration of volume and measured flow, conversion of the flow and volume into base conditions and contract conditions defined by the user
- Cooperation with a numerous measurement sequences
- Cooperation with chromatographs
- Cooperation with an odorizing device
- Communication with the converter via serial interfaces RS-232, RS-422, RS-485, LAN, embedded GSM/GPRS/CSD modem using GazModem2, ModBus RTU, ModBUS ASCII, ModBus TPC protocols
- Ability to read and store converter's configuration and archival records via USB interface using Pen Drive storage
- Software safety assurance in accordance with WELMEC 72
- Authentication of read and saved configuration of the converter and archival data with SHA private key
- WWW interface for a preview of the most important parameters of the converter from the level of an internet browser
- Ability to send daily data from the converter at the provided e-mail address
- Ability to synchronize converter's clock from NTP server's time
- Algorithm SGERG-88 used to calculate gas compressibility factor - ability to implement any calculation algorithm
- Modular construction- any input and output card is equipped with its own set of connection terminals, what allows easy modification or extension of the device configuration
- High quality and reliability, the device is designed and manufactured in accordance with the certified quality system ISO 9001
- Included „GLOS XLE Konfigurator“ software allows to read and record converter's configuration via RS-232, RS-422, RS-485, GSM/GPRS/CSD, LAN interfaces and via Pen Drive storage

## Technical parameters

### Power supply:

230V AC, +10%-15% 50Hz -2% 24V DC +-2V - autonomous power supply

### Power consumption:

< 60W for 230V AC

< 2,5A for 24V DC

### Dimensions:

90 x 440 x 320 mm 2U in standard 19"

### Mass:

max 9,7 kg - in the complete configuration

### Degree of protection:

IP40

### Operating temperature:

od -10°C do +55°C

### Relative humidity:

up to 93% at +55°C, non-condensing

### Keyboard:

foil, with 16 buttons

### Display:

graphic LCD240x64 pixels

### EX label:

EX II (1) G [Ex ia] IIC

### Inputs for meter pulse:

NAMUR pulse,  $U_z = 12V : LF i 2x HF$ ; possible cooperation with a contraction output for LF analogue input 4-20 mA,  $U_z = 20V : P i T, REZ1, REZ2$

### Analogue inputs for a constriction meter:

4-20 mA,  $U_z = 20V : 4x \Delta P, P, T, REZ1, REZ2$

### Communication interfaces:

2 x RS-232, transmission rate up to 115200 b/s 2 x RS-422 or RS-485, transmission rate up to 115200 b/s, LAN 10/100 Mbit/s complies with IEEE 802.3 and IEEE 802.3u, USB 2.0, length of connection <3m

