

## Data concentrator TELEM –GW6



Data Concentrator TELEM-GW6 is used for control and monitoring operations of a system from control center via IEC 60870-5-101, IEC 60870-5-104 data communication protocols and for data collection from lower level peripheral devices and control them using various data exchange protocols IEC 60870-5-101, IEC 60870-5-103, Modbus, Telem, EN 62056-21:2003, Spa-bus.

### Main features

- Cross-referencing of data exchange protocols
- Leased or dialed line communication to upper level local or remote SCADA system
- Optional fiber-optic, RS485/422 and RS232 connections expansion card
- Optional 8xRS232 connections expansion card
- Optional GPRS/GSM expansion card
- Built-in Ethernet connection, RS232 and RS485/422 ports
- USB port for configuration
- Real-time clock with back-up capacitor
- GPS time synchronization
- User friendly configuration tool
- Configurable remotely over data acquisition line
- Configuration is saved in CSV file, which can be easily modified by MS Excel software

### Data communication protocols

To upper level systems	IEC 60870-5-101 balanced or unbalanced, IEC 60870-5-104
To lower level devices	IEC 60870-5-101, IEC 60870-5-103, Telem, IEC 62056-21 (IEC 1107), Modbus standard, Modbus Satec, Modbus Crompton, Spa-bus, EN 62056-21:2003

### Communication ports

Communication ports may be freely configured for upper or lower level communication

- Built-in
  - 1x Ethernet connection with RJ45 connector
  - 1x RS232 full modem serial connection with RJ45 connector
  - 1x RS485/422 serial connection with RJ45 connector
  - 1x USB connection with Type B connector
- Expansion card 1
  - 1x Fiber-optic connection with ST or Versalink connectors
  - 1x RS232 with RTS, CTS handshake signal serial connection with RJ45 optically isolated connector
  - 1x RS485/422 serial connection with RJ45 optically isolated connector
  - 1x GPS Fiber-optic connection with Versalink connector
- Expansion card 2

- 8x RS232 with RTS, CTS handshake signals serial connections with RJ45 connectors
- Expansion card 3
  - 1x GSM/GPRS antenna connection with SMA connector
  - 1x GSM/GPRS SIM card slot

#### Data communication parameters

- 1 start bit
- Odd, even or no parity
- Communication rates from 300 to 115200 bit/sec
- Configurable RTS/CTS handshake for all RS232 ports.

#### Electrical characteristics of isolated input

Dielectric withstand	IEC 60255-5
Withstand to static discharge	IEC 61000-4-2
Withstand to surges, bursts	IEC 61000-4-4, 61000-4-5

#### Radio frequency compatibility

RF emission	IEC 55022 Class A
Immunity to RF fields	IEC 61000-4-3, 61000-4-6

#### Mechanical parameters

Degree of protection	IP 32
Dimensions (W x H x D)	~ 84 x 107 x 164
Ambient temperature in operation	-20...+50 °C
Weight	~ 1kg
Mounting	DIN rail

#### Power supply

Supply voltage range	10 to 32 V DC
Power consumption	< 8 VA

#### Configuration

The GW6 is adapted to specific application by using the configuration software tool GWS\_conf.exe. This tool is used for configuration of the communication ports, devices, measurement objects, and basic parameters. The logical formulas can be created using both digital and analog measurement objects as operators. Configuration parameters are saved in CSV format file, which can be modified by MS Excel software.

#### Typical application for electrical power station

