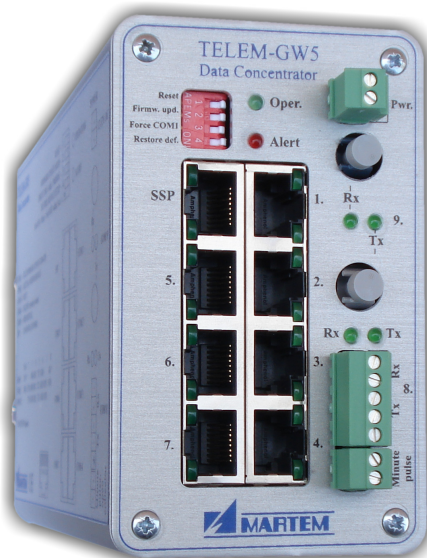# Data concentrator TELEM -GW5

Data Concentrator TELEM-GW5 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.

Main features

- Cross-referencing of data exchange protocols
- Leased or dialed line communication to upper level local or remote SCADA system
- Annunciation panel option
- Built in fiber-optic or Ethernet connection
- Real-time clock with back-up battery
- 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

Communication ports

Communication ports may be freely configured for upper or lower level communication
- 1 – RS-232 port for communication, firmware loading and 2 pins for connecting RS-458 GPS time synchronization
- 2 – Full RS-232 port for dial up modem connection
- 3…7 – RS-232 ports with RTS, CTS handshake signals
- 8 – Isolated RS-422/485 port
- 9 – Fiber-optic or Ethernet port (specified on order)

Data communication parameters

- 1 start bit
- Odd, even or no parity
- Communication rates from 300 to 38400 bit/sec
- Configurable RTS/CTS handshake for ports 2…6

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)	64 x 107 x 164
Weight	780 g
Mounting	DIN rail

Power supply

Supply voltage range	10 to 32 V DC
Power consumption	< 5 VA

Configuration

The GW5 is adapted to specific application by using the configuration software tool GW5_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