RTU7MC3-D – Communication Unit

Unit Description

The RTU7MC3-D is advanced universal communication unit, based on embedded computer with Linux core. The HW core is extended by ELVAC SW based on long time experience in power distribution field and protocols used in this area.

These all features offer to the user of this device very powerful tool for protocol conversion and communication between devices and SCADA system.

The device supports complete remote management, FW and OS updates.

Typical Applications

- main communication unit in substations and other energetics objects,
- protocol conversion from IEC 61850 to IEC 60870-5-104 in power distribution objects (or other protocol combinations),
- redundant (backup) communicator with SCADA,
- data concentrator,
- router.

Basic Features of Unit

- 2 × independent network interfaces 10/100 Mbps Ethernet, VLAN support,
- 2 × RS-485,
- 1 × RS-232 console port,

- LTE modem with two antennas, connector SMA,
- 4 × DI (dry contact),
- supported communication protocols – IEC 61850, IEC 60870-5-101, IEC 60870-5-103, IEC 60870-5-104, DNP3, HIOCom2, MODBUS TCP/RTU, DLMS, OPC UA, SNMP,
- L2TP, OpenVPN and IPSEC tunneling,
- secure communication according to IEC 62351-3 (TLS),
- web based configuration interface HTTP/HTTPS,
- NAT, Firewall functionality,
- user access control, RADIUS, RBAC,
- Syslog, NTP, SSH, SCEP,
- digitally signed FW,
- SQL data storage,
- user programmable logic, proprietary or according to IEC 61131-3 standard,
- built-in RTC,
- internal microSD socket for storage expansion,
- stand alone or DIN rail or panel mounting, possible horizontal or vertical placement.

RTU7MC3-D

Technical Specification

Power supply voltage	24 V DC ±20 % (or others after consultation with producer)
Max. input current	0.6 A DC
Input protection	1.35 A polyswitch
Mobile network interfaces	LTE (700/800/900/1800/2100 MHz) Dual-Band UMTS/HSPA+ (900/2100MHz) Dual-Band GSM (900/1800 MHz) LTE UE Cat. 1, GPRS Class 12, EDGE Class 12
Interfaces NET1, NET2	2 x Ethernet 10/100 Mbps (RJ-45), isolation 1 kV AC for 1 minute
Interface COM3	Console RS-232 (RJ-11)
Interfaces COM4, COM5	2 x RS-485 (screw type connector), isolation 1.5 kV AC for 1 minute
Memories	Flash 8 GB, RAM 256 MB
Another functions	4 x digital input (screw type connector), thermal sensor, RTC
Operating temperature	-25 °C ÷ +70 °C
Storage temperature	-30 °C ÷ +75 °C
Ambient relative humidity	≤ 95 % non-condensing
Dimensions	177 (W) x 68 (H) x 122 (D) – chassis including connectors and DIN rail holder, earthing screw M4 x 14
Ingress protection	IP20