

RTU-LP-ST

RTU / DATALOGGER LOW POWER WITH GSM/GPRS MODEM AND BUILT-IN I/O

Highlights

- **Telemetry and data acquisition for technological plants and unattended remote sites**
- **Nr. 8 built-in I/O channels (4DI, 2AI, 2DO; 4 totalizers @ 32bit, max 1Hz)**
- **Quad-band GSM / GPRS modem 850/900/1800/1900 MHz**
- **Up to 3 years lifetime (High Capacity 13000 mA/h @ 10,8V Lithium Battery Pack)**
- **Loop powered power tranducers**
- **Temporary switch on for sending messages**
- **Log data, events, alarms sending via SMS / FTP**
- **Datalogger with 2MB internal flash memory**

RTU-LP-ST is a family of low consumption datalogger / RTU for telecontrol and data acquisition of unattended remote sites. The device integrates a Quad Band GSM / GPRS 850/900/1800/1900 MHz modem, nr. 8 I/O channels (4 digital inputs galvanically isolated with 4 totalizers, nr.2 analog voltage / current inputs, nr. 2 relay outputs 30 Vdc) and 2 MB of Flash memory for data logging.
The module can power external sensors (max. 100 mA) with automatic pre-start and can run autonomously up to 3 years with standard Li-Ion batteries of 13.000 mA / h @ 10,8 V. with 1 SMS transmission for day, all Inputs OFF, No Aux Power Output, NO RS232 communication).
Operating mode include sending log, events, alarms (via SMS or FTP Server), temporary modem switch on for sending messages and command / parameters receiving.
Also available is the IP65 enclosure for harsh environment application.
The basic configuration is via EASY RTU-LP software for PC Windows.

100% Made & Designed in Italy

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RTU-LP

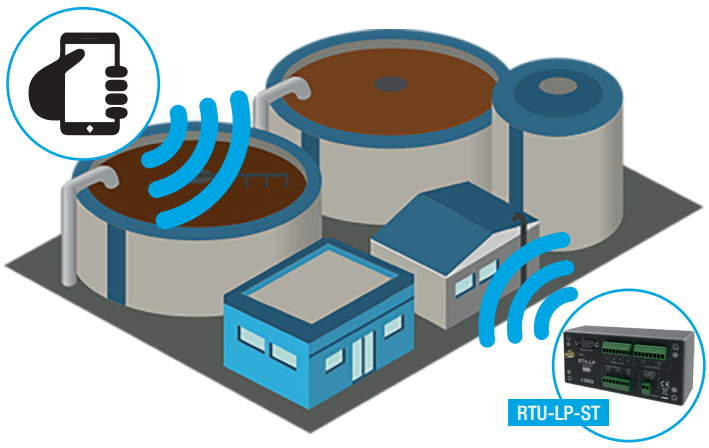


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TECHNICAL DATA

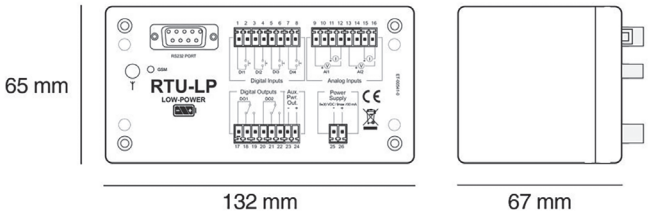
GENERAL DATA	
Power supply	8..30 Vdc
Power consumption	3,7 mW
Power transducers	Max 100 nA (with automatic pre-switch on)
Battery (optional)	Lithium-thionyl Chloride, 13.000 mA/h @ 10,8V
Lifetime	Up to 3 years (with 1 SMS transmission for day, all Inputs OFF, No Aux Power Output, NO RS232 communication)
Isolation	500 Vac
Protection degree	IP40
Operating temperature	-20..+70 °C
Storage temperature	-20..+85°C
Humidity	30..90% @40°C non condensing
Dimension (lxhxw)	132x65x67 mm (batteries not included)
Weigth	290 g
Case	ABS, black colour
Connections	DB9F connector for RS232 SMA-socket antenna connector Removable I/O terminals step 3,5 mm
COMMUNICATION, PROCESSING, MEMORY	
Serial port	Nr. 1 RS232 half duplex port
Modem	GSM/GPRS quad-band 850/900/1800/1900 MHz GPRS multi slot class 10, GPRS max. speed 86 kbps (DL) Coding scheme CS-1, CS-2, CS-3, CS-4
CPU	ARM 32 bit
Flash Memory (datalogger)	2 MB
EEPROM	64 kB
Clock	Ext. RTC; max error: 75 ppm (-20 – 70°C)
System protocols	ModBUS RTU, Ftp Client (sending log), SMS
I/O CHANNELS	
Digital Input	Nr. 4 channels isolated @1.500 Vac, sampling frequency for digital channels 1 Hz 4 totalizers @ 32 bits (max 1 Hz)
Analog Input	Nr.2 voltage/current channels protected against overvoltages and overcurrents Range: ±2 V, ±20 V, ±50 V, ±20 mA Resolution: 15 bit + sign Accuracy: 0,1% F.S. @ 20°C Input impedance: > 1 MOhm
Digital Output	Nr.2 bistable relay Rated value: 30 Vdc – 1 A max (resistive load)
SETTINGS & FUNCTIONS	
SMS Paramters	Yes
Configuration software	EASY RTU-LP
Data communication	Sending log data, events, alarms, I/O status via SMS / FTP Temporary modem switch on for sending data via SMS Receiving commands and parameters via SMS
Datalogger	Built-in Flash memory 2MB Max analog log sata rate 30 s Max digital log data rate 1 s
STANDARD	
Approvals	CE
Norms	EN61000-6-4, EN6100-6-2, EN 301511, EN 301489-1, EN 60950

APPLICATION NOTE



Water treatment plant telecontrol with battery low power GSM/GPRS device

DIMENSION



ORDER CODES

Code	Description
RTU / DATALOGGER	
RTU-LP-ST	Low power RTU, FTP version, 4DI, 2AI, 2DO, GSM antenna, DIN rail support
RTU-LP-ST1	Low power RTU, FTP version, 4DI, 2AI, 2DO, GSM antenna, DIN rail support single battery pack
RTU-LP-ST2	Low power RTU, FTP version, 4DI, 2AI, 2DO, GSM antenna, DIN rail support double battery pack
BATTERY	
BATT-S	Single battery pack 3 cell 11,1 V - 14,5 Ah
BATT-2S	Double battery pack 3 cell 11,1 V - 14,5 Ah
ANTENNAS	
A-GSM	Dual band swing GSM external antenna, cable 3,2 m, SMA
A-GSM-DIR-5M	GSM-DECT-UMTS directive compact antenna
A-GSM-OMNIDIR	GSM-UMTS-WIFI Omnidirectional Antenna
A-GSM-OMNIDIR-10	GSM-UMTS-WIFI Omnidirectional Antenna, L=10 m
A-GSM-QUAD	4G omnidirectional antenna, SMA-M. L=5mt
CABLES	
CS-DB9M-DB9F	RS232 straight thru programming cable (DB9M - DB9F)
CS-DB9M-DB9F-CR	Update firmware serial cable (DB9M / DB9F) for RTU-LP devices
OTHER ACCESSORIES	
BOX-RTU-IP65	IP65 junction box with fixing support
S117P1	RS232/USB, TTL/USB, RS485/USB asynchronous serial converter
S-DIN	RTU DIN rail guide support
SOFTWARE	
EASY RTU LP	RTU-LP devices software configurator

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