

SOFREL YDRIX

Smart Remote Terminal Unit for telemetry and process control of water networks

Pumping stations

Water tanks

wastewater treatment plants

Drinking water treatment plants

Wastewater lifting stations



PRODUCT BENEFITS

- **Extended remote control and monitoring functions**
 - Monitoring of network installations and alarms management
 - Continuous monitoring and data processing
 - Automated process control via an integrated workbench
 - Wastewater lifting station control
 - Sensor power supply and management
 - Remote control and intersite (M2M) communication
- **Continuity and security of communication**
 - Communication link redundancy
 - Certificate management
 - Integrated VPN
- **Simplicity**
 - SetIT smart software for RTU configuration, diagnostic and log monitoring
 - Integrated modem
 - User management and role based access control software

PRODUCT FEATURES

- 4G/3G/2G modem and 2 Ethernet ports
- Standard protocols
- Reliability and robustness
- Integrated web server
- Cybersecurity (VPN, Firewall, encryption...)

BENEFITS OF WORKING WITH LACROIX SOFREL

- A 50-years-old company, leader in water market and specialist in telecommunication
- Pre-project studies by water and telemetry specialists
- Free technical assistance service
- A local presence via an extensive network of certified partners
- A wide range of products (data loggers, RTUs, SCADA, sensors...)
- Products made in France and Germany guaranteed for 3 years

MAIN CHARACTERISTICS:



Integrated modems



Simplicity



Integrated VPN



IEC 61131-3
Automation
workbench



3 years
Guarantee



Centralized
user & access
management

Technical and functional characteristics

HARDWARE :

Compact housing

| | |
|-------------------------------------|--|
| Integrated I/O | 6DI - 2AI - 4DO |
| Modems and communication interfaces | Integrated 2G/3G/4G modem - 2 Ethernet LAN TCP/IP ports - RS485 or RS485 i - RS232 - USB connector |
| Power supply | Supply voltage 24 VDC, -15% +20% max. 35 VDC momentarily, power failure < 15 VDC |
| Connectors | Screw terminals MSTB 4-pole - 0,2 to 2,5 mm ² |
| Dimensions W x H x D | 68 x 105 x 115 mm |
| Installation | DIN-EN 60715 TH35 |
| Operating temperature | -20° to +70 °C |

Technical characteristics

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|------------------|--|
| Inputs / Outputs | DI (Digital Input): acquisition time 1 ms, pulses >1 ms AI (Analog Input): 0-20mA/4-20mA, 16bits resolution, sensor powering DO (Digital Output): relay output normally open/closed, 30 V max. 1 A DC, isolated 1.5 kV AC AO (Analog Output): 0-20 mA current output |
| Communication | LTE modem 4G, 3GPP rell1 Cat1, MISO, FOTA 2 Ethernet LAN TCP/IP, 10/100BaseTx, auto-MDIX, auto-negotiation, firewall 1 RS-485 interface, galvanically isolated 1 RS-232/V.24 interface USB 2.0 host 480 Mbit/s (configuration/archive synchronisation via USB stick) |

Extensions

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|----------------------------------|---|
| I/O Expansion Modules (optional) | Additional modules: 8DI - 4AI - 8DI/2AI - 8DO - 4AO |
|----------------------------------|---|

FUNCTIONS :

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|--------------------------|---|
| Information management | Up to 2000 information |
| Automation workbench | Programming languages: Ladder - ST - FBD - SFC (Grafcet). Compliant to IEC 61131-3 Automation workbench Tuning tools: Simulator - Debugger - Graphical analysis - Online à remote debug System & water libraries: HW (Clock, traces...), calculations: average flowrate, derivative. etc, PID, sensor default management, cyclic and time based actuator control... |
| Lifting station control | Process control: Control of up to 4 pumps, time out management, grease & deposit prevention, failure and pump switching management, start/stop actuator control Hydraulic efficiency: calculation of average input flowrate, volume calculation from flowrate, overflow monitoring |
| Alarm management | Trough DNP3 or IEC 60870-5/104 - SMS - E-mail |
| Protocol support | ModBus RTU, ModBus TCP, IEC-60870-5/104, DNP3 Level 3, NTP, Syslog, SOFREL data logger |
| Communication redundancy | Automatic switching from one communication link to a back up one |
| Security | VPN protocols IPsec IKEv1, IPsec IKEv2, OpenVPN Secured communication through a VPN server |
| Intersite communication | SOFREL data loggers |
| SCADA compatibility | Trough DNP3 or IEC-60870-5/104 |
| Built-in web server | Archives (alarm, operational message) - processing data - values modification |

CERTIFICATIONS :

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|-------------------|--|
| Electric safety | EN 62368-1 |
| Telecommunication | RED, ETSI EN 301 511 (2G), ETSI EN 301 908-1 & ETSI EN 301 908-2 (3G & 4G) |
| EMC | ETSI EN 301 489-1, ETSI EN 301 489-52, EN 55032: class B device |
| Environment | DIN EN IEC 63000:2019 : RoHS |

