

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
- Reliability and robustness
- Integrated web server
- Cybersecurity (VPN, Firewall, encryption...)
- Standard protocols

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

INGENIERIA Y EQUIPOS
DE CONTROL



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 mm2
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

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 rel11 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

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

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 debugging System & water libraries: HW (Clock, traces...), calculations: average flowrate, derivative. etc, PID, sensor management, 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 :

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

