

AQUALOG SMART

AQUALOG SMART is a **compact RTU** designed specifically for **the water sector**, ideal for controlling stations with a limited number of quantities to monitor. Equipped with advanced and innovative features, it allows local automation of systems, supporting complex logic directly on board. The **Integrated Web Server** allows secure remote access, ensuring real-time monitoring and facilitating control and maintenance operations by operators. For immediate assessment of critical situations, a display is available (optional) that offers an intuitive and immediate view of key parameters.



Water reservoirs



Drinking water treatment plants



District metering areas



Pumping stations



Monitoring systems



Water quality samplers

Features	Values
Analogue inputs (AI)	8 inputs, 12-bit resolution, 4-20 mA / 0-10 Vdc (with the possibility of converting them into digital inputs)
Digital inputs (DI)	3 inputs, 10-30 Vdc, opto-isolated and with ESD protection ± 15 kV, configurable as status inputs or meter inputs
Digital outputs (DO)	2 outputs, 10-30 Vdc, opto-isolated and with ESD protection ± 15 kV
Expandability	Up to 320 DI, 128 DO, 64 AI, 32 AO via modular I/O systems
Communication vector	External Modem/Router, typical channels GSM/GPRS-LAN 4G/5G/wired (other communication technologies available upon request)
Protocol	Modbus RTU/TCP Master/Slave, IEC 62056-2, IEC 60870-5-101, IEC 60870-5-104, Siemens S7
Local communication	1 Ethernet port (LAN TCP/IP), 1 RS485 serial port, 1 RS232 serial port, 1 configurable RS485/422 serial port
Case	IP 20
HMI	Local LCD 7" colour touch screen display (optional)
Power supply	10 – 30 Vdc
Typical absorption	1 - 4 W
Expandable memory	USB, Micro SD CARD (on request)
Environmental conditions	from -20°C to + 70°C
Dimensions	125x85x40 (mm)

Table 1 Features

Features and Approvals

Features	Values
Automation	PLC EMBEDDED compliant with standard IEC 61131-3
User messages	SMS / email
Alarms	Warning and management of alarms and events generated by exceeding thresholds and/or reaching physical/logical states
Datalogging	Data acquisition and logging with the following features: Basic acquisition time: 1" Basic storage time: 5' - 1h Maximum number of variables that can be acquired: 10000 Maximum number of samples stored: 6000000 Sample processing: instantaneous, min, max, average
OPC connectivity	Supported via OPC SERVER
Configuration	Through the integrated WEB server or through the Rainbow Configurator SW
User Application	Using languages in a LINUX environment
Operating system	LINUX embedded

Table 2 Features and values

AQUALOG SMART is CE marked and complies with Directive 2014/30/EU (Electromagnetic Compatibility).



EMC

AQUALOG SMART competitive advantages



Hydraulic valve adjustment according to 6 modes



Pump regulation



Dedicated algorithms for pressure optimization and energy efficiency



Multimedia and multi-access connectivity



Reduced energy consumption



Modular and scalable I/O configuration



Extended programmability through Embedded PLC



VPN-based encrypted communication