TECHNICAL AND GENERAL FEATURES

- AQUA CNT can be used for monitoring and control purposes in the control of pumps, water tanks or stations such as isolated sub-zone (DMA). Scenarios for all station types are available in the built-in software. Therefore, you can use the same device for pump control, or for tank or DMA monitoring.

- Easy to install with ergonomic design features, manual control on the front cover and easily controlled with LCD screen and membrane keypad for device status monitoring.

- It has an ABS polymer outer casing against corrosion. It is suitable for working at temperatures between -20C and +60C.

- Internally, there is DC uninterruptible power supply, battery charger and 12.8 Ah Lithium battery. It can work without energy for up to 48 hours with the internal battery.

- Supports Modbus TCP communication protocol. It has Internet IP filtering and APN support features to ensure communication security. In cases where communication is interrupted, it can archive system variables in its internal non-volatile memory and the value of connected sensors in its inputs. When the communication comes, the archived data can be accessed.

- It has CE Conformity Certificate with TS EN 61000-6-1 and TS EN 61000-6-3.

- Energy analyzers can communicate via RS485. External sensors can be fed from the battery with the 24VDC/500 mA output on the device.

- It has 3 x 16-bit analog inputs and 1 x 12-bit analog output.
It has 4 digital inputs and 2 relay digital outputs. 4-20mA analog inputs have internal overcurrent and voltage protection, digital inputs are optically isolated.

- The device has internal tank filling and pressure-based operation features:
- The tank filling feature controls the pump according to the lower and upper level information of the target tank. The device can communicate with the devices supporting Modbus TCP at the target feed point and read the target level information.
- In case of tank filling scenario, if communication with the target cannot be achieved, emergency scenarios become active.
These scenarios are;
- Study with imitation of the past tense.
- It is in the form of working and stopping at specified times.
- In the feature of working according to the pressure, the pump is controlled according to the target lower and upper pressure conditions.
- In the pressure PID mode, the pump-motor frequency is adjusted adaptively with the help of the frequency converter according to the set pressure value. Thanks to this feature, it can create constant constant pressure both in pumps that directly pump water into the network and even in agricultural irrigation applications.

- Hydrostatic water level sensor, pressure sensor and flowmeters can be connected to the analog inputs of the device. What type of sensor is connected to which input can be selected and adjusted remotely.

- Sensor supply can be turned off and on via SCADA, digital input states can be read. The relays on the device can be controlled via SCADA without the need for any scenario. The motor inputs and outputs connected to the device can be selected according to the user's request.

- It can work in harmony with 24V solar panels in facilities where there is no mains electricity. Thanks to the built-in battery and charge regulator, there is no need to use an additional battery, battery and regulator.
If the low power consumption mode is activated in AQUA CNT devices working with solar panels, when the battery drops below 40%, the device will start to work in sleep mode for 20 minutes and stay awake for 2 minutes.

ABOUT ENVEST

Since its inception in 2012, Envest has been providing universal, economic, user-friendly software and field devices using cloud technology, unlike traditional (high initial investment and operating cost) foreign-origin SCADA/Automation systems develops. The systems we develop under the Koru1000 brand sustainably manage all processes from the source of water to the end user.
AQUA CNT devices and software with different automatic water operating scenarios; In today's world where concepts such as Industry 4.0, the internet of things, big data and artificial intelligence come to the fore, we can smartly predict the future of water manages.
In today's world dominated by unlimited consumption, we act knowing that the resources we have are not unlimited as they seem. Based on the principle of sustainability, we offer modern water management systems to protect our world.

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If you can't measure it, you can't manage.

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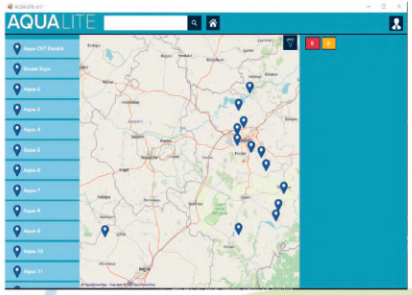
AQUA CNT

COMPACT TYPE
PUMP CONTROL
AND WATER
MONITORING DEVICE

AQUA CNT SOFTWARE

AQUA LITE desktop software available for AQUA CNT device owners.
You can download it from
www.envest.com.tr for free.



KORU1000 WMS V1.6 CLOUD BASED WATER MANAGEMENT SYSTEM

It is a software system developed to manage thousands of water facilities from a single screen.

With dozens of different industry protocols, including Modbus TCP and FINS, with different brands and PLCs and RTUs can communicate.

- It has a web-based control and monitoring interface.
- Redundant (co-redundant) can work.
- Can define unlimited tags.
- Can easily transfer trend graphs to pdf, excel or printer.
- It can make alarm definitions and receive them as SMS, e-mail and notification.
- It can perform energy efficiency analyzes in pumps.
- It can perform loss-leakage management with MNF and ILI accounts by following DMAs.

WHAT IS AQUA CNT?

The AQUA CNT 100 series is a deep well submersible pump and pumping station pump control, water distribution tank monitoring, isolated lower metering zone (DMA) pressure and flow monitoring, with software algorithms specific to agricultural irrigation and industrial pump use. You can easily integrate AQUA CNT devices with AQUA LITE software or Koru1000 WMS water management systems or all SCADA software packages compatible with MODBUS TCP.

GENERAL FEATURES

AQUA CNT 100-S

- Low Power Microcontroller
- LCD Display (64x128 Graphics) and Membrane Keypad
- GSM/GPRS Modem + External Antenna
- Battery Management Unit (DC UPS+ Charge)
- 14.8V 12.8A Lithium Battery
- 8 MB Internal Permanent Memory
- 3 Analog Inputs (16-bit), 1 Analog Output (12-bit)
- 4 Digital Inputs, 2 Digital Outputs (With Relay)
- Internal assignable I/O (input/output) table
- MODBUS TCP Master and Slave communication (up to 5 simultaneous connections)
- Internet IP Filtering and APN support
- RTC (real-time clock) update over GSM
- IP65 Protection Class
- 24 VDC Input Supply

AQUA CNT 100-F

- Built-in Ultrasonic Flowmeter (DN50-DN 700 diameter, 1% accuracy)
- Low Power Microcontroller
- LCD Display (64x128 Graphics) and Membrane Keypad
- GSM/GPRS Modem + External Antenna
- Battery Management Unit (DC UPS +Charge)
- 14.8V 12.8A Lithium Battery
- 8 MB Internal Permanent Memory
- 3 Analog Inputs (16-bit), 1 Analog Output (12-bit)
- 4 Digital Inputs, 2 Digital Outputs (With Relay)
- Internal assignable I/O (input/output) table
- MODBUS TCP Master and Slave communication (up to 5 simultaneous connections)
- Internet IP Filtering and APN support
- RTC (real-time clock) update over GSM
- IP65 Protection Class
- 24 VDC Input Supply

OPTIONAL PERIPHERALS

PRESSURE SENSOR

In the monitoring of inlet and outlet line pressures in well and lift pumps
Failure tracking of mechanical instruments
It is used in tracking loss and leakage and pressure control applications.
It has a measuring range up to 0-60 bar, a measurement accuracy of 0.3% and an analog output of 4-20 mA.

HYDROSTATIC LEVEL SENSOR

Monitoring of groundwater level
Warehouse level monitoring
It has a measuring range up to 0-500 m, a measurement accuracy of 0.3% and an analog output of 4-20mA.

ULTRASONIC FLOWMETER

Flow monitoring in well and lift pumps,
Warehouse entry and exit flow monitoring,
It is used for flow rate monitoring in proportional chlorination at chlorination points.
It has -12...+12 m/s measuring range, ±1% measurement accuracy, 4-20mA analog and Modbus 485 outputs.

ELECTROMAGNETIC FLOWMETER

Well outlet flow monitoring,
Warehouse entry and exit flow monitoring,
It is used for flow rate monitoring in proportional chlorination at chlorination points.
It has -12...+12 m/s measuring range, ±0.5 % measurement accuracy, 4-20mA analog and Modbus 485 outputs.

ENERGY ANALYZER

It is used to monitor electricity consumption in wells and pumping stations.
It provides 3-phase voltage and current measurement, power factor and harmonic measurement and has Modbus 485 output.

POWER SOURCE

It performs AC/DC conversion at high efficiency.
It has 2 x 24V DC output terminals (3 for negative phase) and universal input feature.

SOLAR PANEL

DMA is used in all storage and isolated sub-measuring zones where 24VDC electrical energy is required to activate AQUA CNT 100 serial devices.
It has 2x50 W output power.