aquaSub

Groundwaters Monitoring Unit

ADASA

INNOVATIVE SOLUTIONS
FOR WATER & ENVIRONMENT

aquaSub is a groundwater control system that is capable of integrating different types of probes, giving great flexibility to make the necessary measurements for each application.

It is marked by its communication system GSM / GPRS, which minimizes costs and improves communication

STRUCTURE SYSTEM

- aquaSub: groundwater control unit.
- UCR OPC Driver: communications management software. All information sent and received by aquaSub equipment is stored by the UCR OPC Driver and can be managed through any control center using standard OPC communications.

The main advantage of the aquaSub equipment is the low cost and ease of installation with the various power modes, GSM / GPRS communication and the equipment flexibility for the integration of different probes.

OPERATION

The proposed system ensures:

- Monitoring, recording and reporting the level and quality water in aquifers, allowing assessment on available resources, effects of exploitation and detection of pollution episodes.
- Integration of almost all types of probes available on the market, giving it flexibility to meet the needs of each facility and presenting the results in a single front-end communication (OPC Driver UCR) to facilitate the integration of the probes to the operating system.
- Definition of the reading frequency of the various probes independently connected to the computer.
- Transmission of information in real or deferred time, as needed and depending on the feed-in system.
- Reduction of installation costs through power management and communication system.

NOTEWORTHY CHARACTERISTICS

- Communication GSM/GPRS.
- MODBUS master function for reading multiple probes.
- Analog inputs for reading voltage and / or current probes and power management of them.
- System power management to minimize consumption of the equipment itself and associated probes to maximize the system's autonomy.
- Versatile Power System with integrated SLA battery charger.
- High data storage capacity.
- 8 years autonomy (see conditions).

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GENERAL CHARACTERISTICS

Temperature Range: -30ºC to +60ºC

Protection Degree: IP66

External Power: (Limited power source)
Nominal: 12Vdc
Tolerance: +7,2Vdc ... +20Vdc
Maximum current: 0.5 A

Power solar panel
Voltage nominal panel 12Vdc
Maximum current load 150mA
Nominal voltage battery 12 Vdc
Float Voltage 13.8 Vdc
Protections Reverse polarity, overvoltage and temperature compensation

Internal Power: (limited power source)
Batteries 8 Lithium Batteries
(4 groups of 7,2V in parallel)

Power Output: (Optional)
Nominal voltage/current 24Vdc / 100mA y 5Vdc / 50mA
Activation Set up activation time to minimize consumption
Protection Short circuit

Pulse Inputs:
No. Meters: 4 meters
Minimum Pulse: 1 ms
Maximum frequency: 65535 pulses / registration period or 10Hz
Cable Maximum length: 100m
Alarm generation: Configurable by overcoming number of pulses

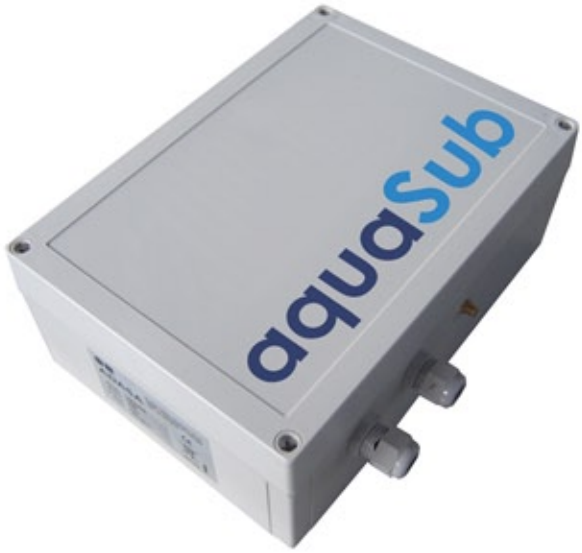
Smart Meters (Opcional)
Bus CZBus (3 wires, SEL, SDATA, GND)
Frames A Type
No. Meters: 4 meters
Reading time: 60 seconds
Cable Maximun length: 20m

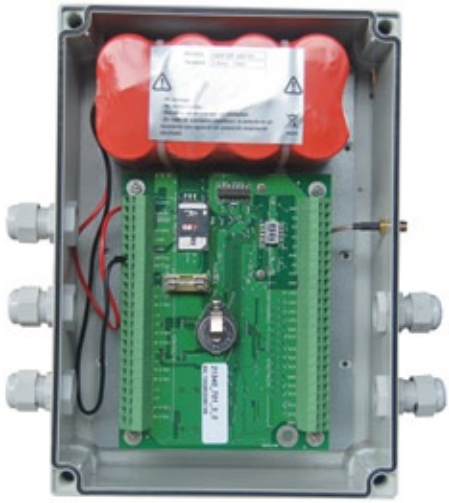
Digital Inputs :
No.Inputs 8
Filtering period 1… 60 seconds
Alarm generation Set up by overcoming number of pulses

Analog inputs:
No.Inputs 4
Range 0…25 mA / 0…10V
Accuracy 1%
Alarm generation: Set up by low and/or high level
Protection: Over current and over voltage to 24Vdc

Communications:
RS232 - 3.3V
RS232 - 12V (optional)
RS485 (optional)
USB (optional) Menu display / configuration (ANSI)
MODBUS Master
MODBUS Slave

Modem GSM / GPRS **GSM - MODBUS Protocol** (slave)
- GSM – (ASCII)
- GSM – Menu display/ configuration (ANSI)
- GSM – Sending alarms via SMS
- GPRS – MODBUS IP Protocol
- GPRS – Proprietary Protocol (ASCII)





Adasa reserves the right to modify the technical features.

ADASA

www.adasaproducts.adasasistemas.com
adasaproducts@adasasistemas.com

SPAIN
C/ José Agustín Goytisolo 30-32
08908 Hospitalet de Llobregat
(Barcelona)
T +34 93 264 06 02
F +34 93 264 06 56

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UNE 166002:2006 R&D and innovation Management
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