



## Datasheet QA03-SMA

### Slurry Density & Massflow Analyser

#### Principle

Ultrasonic spectroscopy and thermal conductivity

#### Description

Model SMA is designed to monitor the density, flow and massflow of slurries in mineral processing industry, dredging, drilling and tunneling. The controller consists of an advanced industrial PLC based HMI, which offers great flexibility with advanced settings and clear screens and graphs for interaction with the user.

Depending on the settings, the standard measuring screen starts showing specific gravity, density, total suspended solids, flow, massflow, production and/or temperature. The user can select different start screens, like values or a cross meter in dredging applications. The controller communicates with the field transmitters by Modbus RTU and to the scada/dcs system with Modbus TCP/IP.



#### Features

- Control of ultrasonic and thermal massflow transmitters in the field
- Cross meter for dredging
- Data logging of monitored data
- Control sample taking and ID tracking
- Time trend graphs
- Echo scope functions
- Alarm screens
- Network connectivity
- GPRS/GSM Remote Monitoring Module (optional) access

#### Specification

Enclosure with power convertor, main processing board and HMI with high-end built-in PLC electronics, based on Linux.  
Density, Flow and Temperature ranges and accuracies: according to specifications of the connected probes  
Display screens: user selectable

#### Connectivity

Without IOM:

- Ethernet
- 2-wire RS485 Modbus RTU
- Modbus TCP/IP
- Optional: Hart, Fieldbus, Profibus DP and PA

Additional connectivity with IOM:

- (2x) 4-20 mA output and 2x mA input.
- (2x) 4-20 mA input for external flow meter, level meter, conductivity meter or density meter

## Mounting

- Strong and durable aluminum enclosure with powder coating.
- Remote mounting up to 100 meters from the measuring point.
  - Wall mounting without opening lid.

## Engineering specifications

Make: Arenal PCS BV, The Netherlands  
Process analyzer designed for continuous monitoring of slurry density and flow in mining, dredging and drilling applications, based on ultrasonic spectroscopy and thermal conductivity.

Weatherproof enclosure

QA03-SMA-C7E-VAC-XXX-IOM

- > Material: powder coated aluminum
- > Hinges on right (small) side
- > Dimensions: 330x200x120 mm
- > Protection degree: IP65
- > 4x M20x1,5 cable glands (power, analog output, relay contacts)
- > TFT Soft touch color display 7"
- > Software version: KWR-7QA03-522

Power supply:

- > Nominal: 100-240 Vac 50-60 Hz
- > Converter 24Vdc 42W
- > Terminals max 2,5 mm<sup>2</sup>

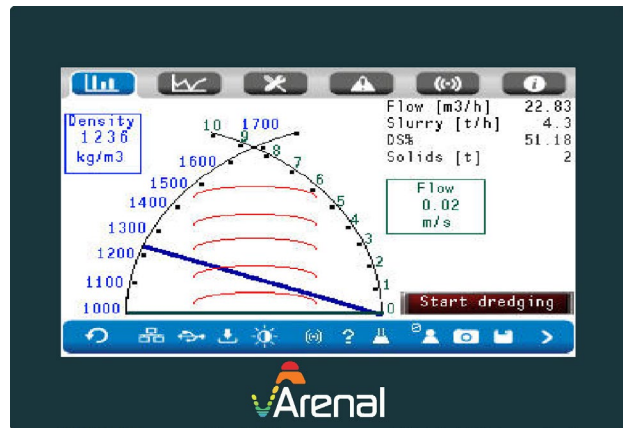
Communication:

- > (2x) 4-20 mA out galvanically isolated
- > (2x) 4-20 mA in galvanically isolated
- > Modbus TCP/IP

<b>Product variations</b>	<ul style="list-style-type: none"><li>• QA03-SDA-C7E-12V-XXX-XXX-PORT Portable Slurry Density Analyzer with embedded IO module. Suits the submersible or Open Channel Probe No Modbus TCP/IP available Mounted in a Pelican transportable waterproof case.</li></ul>
	<ul style="list-style-type: none"><li>• QA03-SMA-C7E-24V-XXX-IOM-DIN Slurry Massflow Analyzer, for applications with a flowmeter connected with IO module. Display for panel mount. Rest on DIN rail.</li></ul>
	<p>Many other variations available, like:</p> <ul style="list-style-type: none"><li>• GRP or coated steel plate enclosure</li></ul>



Portable analyzer



Dredging analyzer, to be mounted on DIN Rail

### Dimensional drawing

- QA03-SMA-C7E-VAC-IOM-XXX
- QA03-SMA-C7E-24V-IOM-XXX

