



# CUBE

XXXXXXXXXX



CUBE is a measurement and control system for TriOS sensors that have a sensor channel with RS-485 interface and Modbus RTU protocol. Depending on the version, this compact controller has interfaces for one or two sensors and offers an Ethernet interface, a USB port and 4 analog outputs (4 .. 20 mA). Two integrated relays can be used to trigger alarms or control external devices.

Thanks to its low power consumption, robust aluminum housing and versatile interfaces, the CUBE is ideal for all applications in environmental monitoring, drinking water and wastewater treatment plants and many other areas.

## Advantages

- For all TriOS sensors with Modbus RTU protocol
- Integrated data logger with service logbook
- Open Modbus RTU interface (server mode)
- Cost-effective alternative to analog measuring points
- USB interface
- TCP/IP interface

## Applications

- Environmental monitoring
- Drinking water monitoring
- Waste water treatment

## Technical specifications

### Power supply

<b>Power supply</b>	100 – 240 VAC, 50 – 60 Hz
<b>Power consumption</b>	Max. 25 W
<b>Protection class</b>	1
<b>Overvoltage category</b>	II

### Sensor interfaces

<b>Connection</b>	Depending on version: 1 or 2 x M12 industrial connectors for TriOS sensors
<b>Standard</b>	RS-485
<b>Protocol</b>	Modbus RTU

### Modbus RTU

<b>Server RTU</b>	Yes
<b>Client RTU</b>	Yes (at each sensor connection)
<b>Parameters</b>	Adjustable (default: 9600-8-N-1)

### Network / USB

<b>Standard</b>	Ethernet
<b>Ethernet connection</b>	1 x RJ-45
<b>Protocol</b>	TCP/IP, Modbus TCP
<b>USB PORT</b>	USB 2.0 (host), USB-C socket

### Analog interfaces

<b>Analog output</b>	4 x 4 .. 20 mA
<b>Load</b>	Max. 500 Ω
<b>Connection terminals</b>	1.5 mm <sup>2</sup> (AWG 16)
<b>Error indicator</b>	0 mA

## Switching input/output

<b>Switching input</b>	Switching input for NPN or PNP sensor, Connection terminals: 1.5 mm <sup>2</sup> (AWG 16)
<b>Control voltage</b>	24 VDC

## Relay outputs

<b>Electrical specification</b>	2 x relay changeover contact (SPDT) / 250 VAC, 2 A / 30 VDC, 2 A
<b>Connection terminals</b>	Max. 1.5 mm <sup>2</sup> (AWG16)

## Display

<b>Optical display</b>	4 inch capacitive touch display (480x480 pixels)
<b>Acoustic display</b>	Buzzer

## Data storage

<b>Storage medium</b>	Internal SD card, 8 GB
<b>Data export</b>	Via USB

## Environment

<b>Operating temperature</b>	0...+40 °C	~ +14 °F to +122 °F
<b>Storage temperature</b>	-20...+70 °C	~ -4 °F to +158 °F
<b>Relative humidity</b>	0...95 % (non-condensing)	
<b>Degree of protection</b>	IP65	

## Mechanics

<b>Dimensions (W/H/D)</b>	120 x 120 x 90 mm	~ 11" x 6.7" x 3.7"
<b>Weight</b>	approx. 1.5 kg	~ 8.2 lbs
<b>Housing material</b>	Anodized aluminium Front panel: glass	