TriBox3

Digital 4-channel display and control unit with integrated solenoid valve for pneumatic control

TriBox3 is a measurement and control system for all TriOS sensors. The device provides 4 sensor channels with selectable RS-232 or RS-485 function. In addition to Modbus-RTU, various other protocols are available. A built-in valve allows compressed air cleaning of the sensors. In addition, the TriBox3 offers various Interfaces, such as a IEEE 802.3 Ethernet Interface, a IEEE 802.11 b/g/n Interface, a USB port and 6 analog outputs (4...20 mA). An integrated relay can be used to trigger alarms or to control external devices. Low power consumption, a robust aluminium housing and multiple interfaces makes it suitable for all applications in the areas of environmental monitoring, drinking water and waste water treatment plants, and many other areas.

Benefits
- Open Modbus RTU communication
- For all digital TriOS sensors
- Low-cost alternative to analog measuring points
- Integrated data logger with Service logbook
- WiFi for communication via web browser
- USB interface
- TCP/IP interface
- Modbus RTU server

Technical Specifications

**ENERGY SUPPLY**

<table>
<thead>
<tr>
<th>Voltage supply</th>
<th>85...265 VAC, 50...60 Hz, 12...24 VDC (± 5%)</th>
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<tr>
<td>Power consumption</td>
<td>typical: 6 W, max: 50 W</td>
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**SENSOR INTERFACES**

| Connection | 4 x M12 industrial connectors for TriOS sensors |
| Standard | RS-232, RS-485 |
| Protocol | Modbus-RTU, TriOS |

**MODBUS RTU**

| Server RTU | Yes (on each sensor connection) |
| Client RTU | Yes (on each sensor connection) |
| Parameter | Adjustable (default: 9600-8-N-1) |
### MODBUS TCP
- **Server TCP**: Yes
- **TCP port**: Adjustable (default: 502)

### NETWORK/USB
- **Standard**: Ethernet, WiFi IEEE 802.11b/g/n
- **Connection**: 1 x RJ-45, built-in WiFi antenna
- **Protocol**: TCP/IP, Modbus TCP, VNC
- **Web Interface**: No
- **USB**: USB 2.0 (host), USB A socket

### ANALOG INTERFACES
- **Analog output**: 6 analog outputs, configurable: 4...20 mA
- **Load**: Max. 500 Ω
- **Connection terminals**: 1.5 mm² (AWG 16)
- **Error indicator**: 0 mA

### SWITCH INPUT/OUTPUT
- **Measuring trigger**: Triggers for global measurement (galvanically separated), control voltage: 10 - 26 VDC
  Terminal: 1.5 mm² (AWG 16)
- **Control voltage**: No

### RELAY OUTPUTS
- **Electrical specification**: 1 x relay switching contact (SPDT) (250 VAC, 2 A)/(30 VDC, 2 A)
- **Connection terminals**: Max. 2.5 mm² (AWG14)

### COMPRESSED AIR CLEANING
- **Valve**: Integrated

### DISPLAY
- **Display**: 7 inch capacitive touch screen (800 x 480 pixels)
- **LED**: 5 x status LED

### DATA STORAGE
- **Storage medium**: Internal 2 GB microSD card, direct log-in per USB stick possible
- **Data export**: Via USB 2.0 Host

### AMBIENT
- **Operating temperature**: 0...+40 °C
- **Storage temperature**: -20...+70 °C
- **Relative air humidity**: 0...95 % (non-condensing)
- **Protection type**: IP65

### MECHANICS
- **Dimensions**: 280 x 170 x 94 mm
- **Weight**: 3.7 kg
- **Materials**: Housing: aluminium die-cast alloy, front panel: acrylic glass (PMMA)