# M9.05

## Conductivity Monitor and Transmitter


aliaxis

# M9.05

**The FLS M9.05 conductivity monitor and transmitter is a powerful device designed for a wide range of applications, including ultrapure water production. A 4" wide full graphic display shows measured values clearly together with a lot of other useful information. Moreover, due to the multicolor bright backlight, measurement status can be determined easily also from very long distance. A tutorial software guarantees a mistake-proof and fast set up of every parameter. The measured values can be displayed as resistivity or TDS, depending on the needs. The freely settable cell constant allows all types of 2-cell conductivity probes to be used. Two 4-20 mA outputs allow conductivity and temperature values to be sent to remote external devices. Appropriate combination of digital outputs allows customised setups for any process to be controlled. The USB port on the back allows you to update the software with a wide range of customisation services as standard and on-demand.**

## CONDUCTIVITY MONITOR AND TRANSMITTER

### APPLICATIONS

- Water treatment and regeneration
- Industrial wastewater treatment and recovery
- Softening
- Filtration systems
- Desalination
- Production of demineralised water
- Reverse osmosis/EDI
- cooling monitoring
- Processing and manufacturing industry
- Chemical production

### MAIN CHARACTERISTICS

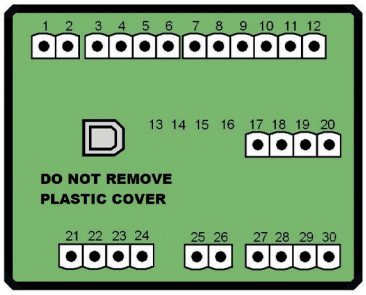
- Large graphic display
- Colour backlighting
- On-line help
- Temperature compensation dedicated to the production and use of ultrapure water (UPW)
- Freely settable cell constant
- Values in conductivity, resistivity, TDS
- Analogue output for temperature communication to remote devices
- Mechanical relay and solid state relay for external alarms and for the control of external devices
- USB port for software upgrade

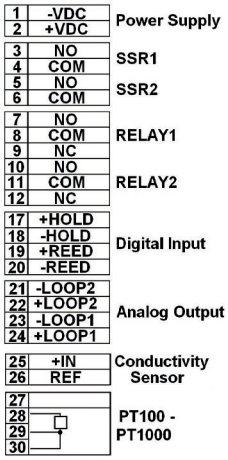
| TECHNICAL DATA | |
|---|---|
| General information | **Compatible sensors**: conductivity sensors and temperature sensors |
| | **Materials:**<br>– Case: ABS<br>– Display: PC<br>– Panel and wall gasket: silicone rubber<br>– 5-button keyboard: silicone rubber |
| | **Display:**<br>– LCD full graphic<br>– Backlight version: 3 - colours<br>– Backlighting activation: User adjustable with 5 levels of timing<br>– Update rate: 1 second<br>– Protection class: IP65 front |
| | **Conductivity input range:** 0.055÷200000 µS/cm (according to the applied cell constant) |
| | **Conductivity measurement accuracy:** ±2.0% of reading value |
| | **Temperature input range:** –50÷150°C (–58÷302°F) (with Pt100-Pt1000) |
| | **Temperature measurement resolution:** 0.1°C/°F (Pt1000); 0.5°C/°F (Pt100) |

| | |
|---|---|
| **Electrical data** | **Supply voltage:** from 12 to 24 VDC ±10% regulated |
| | **Max electrical consumption:** < 300 mA |
| | **2 current output:**<br>– 4-20 mA, isolated, fully adjustable and reversible<br>– Max loop impedance:800 Ω @ 24 VDC - 250 Ω @ 12 VDC |
| | **2 solid state relay outputs:**<br>– User selectable as ON-OFF, proportional frequency output, proportional pulses, timed pulses, off<br>– Optically isolated, 50 mA max sink, 24 VDC max pull-up voltage<br>– Max pulse/min: 300<br>– Hysteresis: user selectable |
| | **2 relay output:**<br>– User selectable as ON-OFF, proportional frequency output, proportional pulses, timed pulses, off<br>– Mechanical Single Pole Double Throw (SPDT) contact<br>– Expected mechanical life (min. operations): $10^7$<br>– Expected electrical life (min. operations): $10^5$ switching N.A./N.C. capacity 5 A/240 VAC<br>– Max pulse/min: 60<br>– Hysteresis: user selectable |
| **Environmental data** | **Operating temperature:** from –10°C to 70°C (from 14°F to 158°F) |
| | **Storage temperature:**from -30°C to +80°C (from -22°F to +176°F) |
| | **Relative humidity:** from 0 to 95% not condensing |
| **Standards & Approvals** | Manufactured under ISO 9001<br>Manufactured under ISO 14001<br>CE<br>RoHS Compliance<br>EAC |

# ELECTRICAL CONNECTIONS

Rear view of electrical connections



# PRODUCT CODES


## M9.05.PX - M9.05.WX

Conductivity Monitor and Transmitter

| Code | Mounting | Power supply | wires power Technology | Sensor Input | Output | Weight (gr.) |
|---|---|---|---|---|---|---|
| M9.05.P1 | Panel | 12 - 24 VDC | 3/4 wires | Conductivity<br>Temperature | 2*(4-20mA)<br>2*(S.S.R.)<br>2* (mech. relay) | 550 |
| M9.05.W1 | Wall | 12 - 24 VDC | 3/4 wires | Conductivity<br>Temperature | 2*(4-20mA)<br>2*(S.S.R.)<br>2* (mech. relay) | 650 |
| M9.05.W2 | Wall | 110 - 230 VAC | 3/4 wires | Conductivity<br>Temperature | 2*(4-20mA)<br>2*(S.S.R.)<br>2* (mech. relay) | 750 |

S.S.R: solid state relay / mech relay.: mechanical relay