

# FLS M9.06

pH/ORP Monitor and Transmitter



# FLS M9.06

The FLS M9.06 pH/ORP monitor and transmitter is a powerful device designed for a wide range of applications. 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. Calibration based on automatic buffer recognition and in-line adjustment allows accurate and reliable measurements to be obtained in any condition. The M9.06 monitor allows the diagnosis of electrode conditions with practical tips to optimise probe performance. The USB port on the back allows you to update the software with a wide range of customisation services as standard and on-demand.

## PH/ORP MONITOR AND TRANSMITTER

### APPLICATIONS

- Water treatment and regeneration
- Industrial wastewater treatment and recovery
- Scrubber control
- Neutralisation systems
- Heavy metal recovery
- Coating of metal surfaces
- Processing and manufacturing industry
- Chemical production
- Swimming pools and spas

### MAIN CHARACTERISTICS

- Large graphic display
- Colour backlighting
- On-line help
- Automatic recognition of buffers for pH
- In-line adjustment
- 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:** pH/ORP electrodes and temperature sensors

#### Materials:

- Case: ABS
- Display: PC
- Panel and wall gasket: silicone rubber
- 5-button keyboard: silicone rubber

#### Display:

- LCD full graphic
- Backlight version: 3 - colours
- Backlighting activation: User adjustable with 5 levels of timing
- Update rate: 1 second
- Protection class: IP65 front

**pH input range:**  $-2 \div 16$  pH (depending on the pH electrode applied)

**pH measurement resolution:**  $\pm 0.01$  pH

**ORP input range:**  $-2000 \div 2000$  mV (depending on the ORP probe applied)

**ORP measurement resolution:**  $\pm 1$  mV

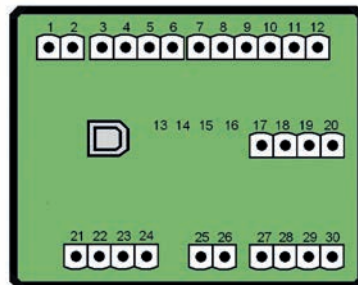
**Temperature input range:**  $-50 \div 150$  °C ( $-58 \div 302$  °F) (with Pt100-Pt1000)

**Temperature measurement resolution:**  $0.1$ °C/°F (Pt1000);  $0.5$ °C/°F (Pt100)

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

## ELECTRICAL CONNECTIONS

Rear view of electrical connections



1	-VDC	<b>Power Supply</b>
2	+VDC	
3	NO	<b>SSR1</b>
4	COM	
5	NO	<b>SSR2</b>
6	COM	
7	NO	<b>RELAY1</b>
8	COM	
9	NC	<b>RELAY2</b>
10	NO	
11	COM	
12	NC	
17	+HOLD	<b>Digital Input</b>
18	-HOLD	
19	+REED	
20	-REED	
21	-LOOP2	<b>Analog Output</b>
22	+LOOP2	
23	-LOOP1	
24	+LOOP1	
25	+IN	<b>pH-ORP Sensor</b>
26		
27	REF	<b>PT100 - PT1000</b>
28		
29		
30		

# PRODUCT CODES



## M9.06.P1 – M9.06.WX

pH/ORP Monitor and Transmitter

Code	Mounting	Power supply	wires power Technology	Sensor Input	Output	Weight (gr.)
M9.06.P1	Panel	12 - 24 VDC	3/4 wires	pH/ORP Temperature	2*(4-20mA) 2*(S.S.R.) 2* (mech. relay)	550
M9.06.W1	Wall	12 - 24 VDC	3/4 wires	pH/ORP Temperature	2*(4-20mA) 2*(S.S.R.) 2* (mech. relay)	650
M9.06.W2	Wall	110 - 230 VAC	3/4 wires	pH/ORP Temperature	2*(4-20mA) 2*(S.S.R.) 2* (mech. relay)	750

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