

MT 200 Datasheet

SINGLE-PARAMETER INSTRUMENT WITH ISOLATED MEASUREMENT, SUITABLE FOR MOST WATER-TREATMENT APPLICATIONS

General Information

The MT 200 Series systems are advanced controllers designed for single-parameter measurement.

Characterised by isolated measurement and full user programming autonomy, MT 200 instruments are compatible with most water-treatment applications.

The systems include an independent proportional control output, probe quality check and a variety of outputs.

Graphic Display and Keypad

MT 200 systems are equipped with a large 128 x 128-pixel backlit monochrome graphic display with graphic icons showing the status of the relay, analogue and digital outputs, washing cycle and alarms.

The display also presents simultaneous flashing values for numeric measurements, bar graph and temperature readings while five-key control enables instrument calibration and setup configuration.

Enclosure Box and Multi Power Supply

Wall mounting: IP65-rated ABS plastic with full box protection (144x144x122 mm).

Panel mounting: IP65-rated ABS plastic front panel (96x96x42 mm) and IP20-rated rear panel.

Mains powered (230Vac, 115Vac and 24Vac 50/60Hz) with consumption of 3.6VA through a linear power supply.

Current outputs and measure insulation

4÷20 mA current outputs.

Galvanised electrical measurement insulation allows devices to reject electrical noise found in heavy-industrial applications.

One independent programmable output measure with proportional routine regulation.

Relay Outputs

As well as on/off, timed and proportional (PWM) routine function setting, MT 200 units feature two independent relays, two set points, alarm remote and backwash probe which can all be set via software.

Solid State Relay (SSR)

One frequency output signal and one set point.

Snail Lock fixing system

Quick connection for panel-mounted version.



Applications

- Wastewater treatment
- CIP
- Fish farming
- Drinking water
- Cooling towers
- Boilers
- Reverse osmosis
- Galvanic industry
- Irrigation

Operating Specifications

Power supply:	230Vac, 115Vac or 24Vac 50/60Hz
Power consumption:	3.6 VA through a linear power supply
Relay outputs:	Mechanical 250Vac/5A, 30Vcc/3A

Alarm settings:

• Alarm functions	Reed logic, Reed delay, Block, Reed, Temperature
• Reed logic	Normally closed / Normally open
• Reed delay time	1÷3659 sec
• Block	Enable / disable
• Alarm temperature	Notify / hold

Note: for alarm repetition and probe washing, relay N. 2 is used with normally open contact. The alarm repetition is limited for the OFA and OverRange functions.

SSR (solid state relay)	2-SPST 60VAC, max 100 mA, bidirectional, NPN, PNP Frequency output: 0 to 400 pulse/min Pulse-on Duration: 100 msec
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Analogue outputs:

• Outputs	N.1 4-20 mA programmable
• Maximum load	500 ohm
• NAMUR alarm output	3.6 mA or 22 mA
• Hold alarm value	Yes / no

TDS function (for CD model only):

Outputs	ppm (parts per million) for cooling tower applications Ohm (resistivity) for reverse osmosis applications
Value range	0.3 to 2.0 ppm/μS

Available measures



Measure	Range	Nominal accuracy
pH	0 – 14 pH	± 0.01 pH
ORP	± 2,000 mV	± 5 mV
Electrical conductivity	0.054 – 200,000 µS	± 5 %
Dissolved oxygen	0 – 20 ppm	± 2 %
Flow rate	0 – 99,999 l/s	± 0.5 Hz
Amperometric chlorine	0 – 5 ppm	± 0.1 ppm
Potentiostatic chlorine	0 – 200 ppm	± 0.01 ppm
Peracetic acid	0 – 99,000 ppm	± 0.01 ppm
Hydrogen peroxide	0 – 99,000 ppm	± 0.01 ppm
Bromine	0 – 10 ppm	± 0.01 ppm
Ozone	0 – 99,000 ppm	± 0.01 ppm
Temperature	0 – 100°C	± 1°C

Technical features

Features	Description	
Single measure	From the above list	Single channel
Calibration	Single or double point	Wizard calibration routine
Temperature measure	Compensation measure or activation outputs	PT100 sensor or PT1000
Reed input	Hold function	Dry contact
Two-relay device	Normally open status	5A - 250V (dry contact)
One solid state relay	Output frequency signal	1 - 400 pulses/minute
One 4 - 20 mA channel	Output current analogue signal	500 ohm max load
Display	Backlit graphic display	128 x 128 pixel
Power supply	24 Vac; 115 Vac; 230 Vac	CE Class II (no earth connection required)
Enclosure box	96 x 96 mm 144 x 144 mm	Panel mounting - IP65 (front) Wall mounting - IP65

Technical Specifications

TECHNICAL SPECIFICATIONS FOR pH MEASURE

Measure Range	0.00 ÷ 14.00 pH
Resolution	± 0.01 pH
Accuracy	± 0.10 pH

TECHNICAL SPECIFICATIONS FOR ORP MEASURE

Measure Range	± 2.000 mV
Resolution	± 1 mV
Accuracy	± 5 mV

TECHNICAL SPECIFICATIONS FOR FLOWRATE MEASURE

Sensor	Hall, reed or push-pull sensor
Measure Range	0.5 Hz at 1500 Hz
Accuracy	± 0.5 Hz

TECHNICAL SPECIFICATIONS FOR INPUT mA MEASURE

Sensor	Current sensor with 2 or 3 wires
Measure Range	0-20 mA or 4-20 mA
Resolution	± 10 µA
Accuracy	± 0.01 ppm

TECHNICAL SPECIFICATIONS FOR T Cu/Pt CHLORINE AMPEROMETRIC MEASURE

Sensor	Cu/Pt chlorine amperometric probe
Measure Range	0 ÷ 5 ppm
Resolution	ww ± 0.01 ppm
Accuracy	± 0.10 ppm

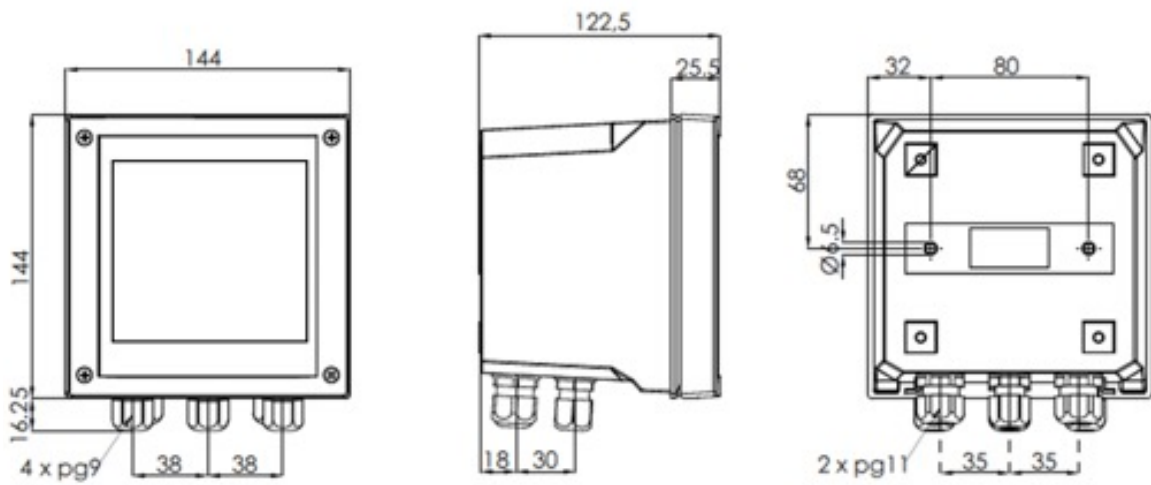
TECHNICAL SPECIFICATIONS FOR TEMPERATURE MEASURE

Sensor	PT100 / PT1000
Measure Range	0 ÷ 100 °C (+32 ÷ +212 °F)
Resolution	± 0.1 °C (°F)
Precision	± 1.0 °C (± 1.8°F)

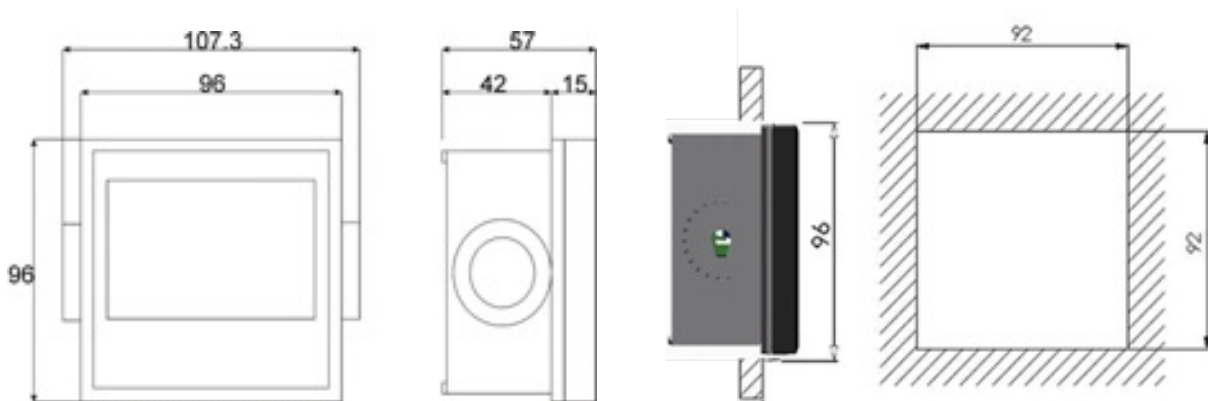
Technical specifications for the conductivity measure

Probes	Range
Range with C 0.01 cm-1 / K 100 sensor	0.005 µS/cm to 200 µS/cm (5 KΩ x cm to 200 MΩ x cm)
Range with C 0.10 cm-1 / K 10 sensor	0.05 µS/cm to 2 mS/cm (500 Ω x cm to 20 MΩ x cm)
Range with C 0.20 cm-1 / K 5 sensor	0.1 µS/cm to 4 mS/cm (250 Ω x cm to 10 MΩ x cm)
Range with C 1.00 cm-1 / K 1 sensor	0.5 µS/cm to 20 mS/cm (50 Ω x cm to 2 MΩ x cm)
Range with C 10.0 cm-1 / K 0.1 sensor	5 uS/cm to 200 mS/cm (5 Ω x cm to 200 KΩ x cm)
Range with C 20.0 cm-1 / K 0.05 sensor	10 µS/cm to 400 mS/cm (2,5 Ω x cm to 100 KΩ x cm)
Resolution Cond/Res	0.0001 / 0.001 / 0.01 / 0.1 / 1 (adjustable from menu)
Accuracy,Cond/Res	±5% on the measuring point
Maximum distance of the sensor	up to 50 m (up to 164 ft)
TDS Range	0.3 to 2.0 ppm/µS

General arrangements drawing



Wall mounting size (144x144x122,5 mm) - Dimensions and footprint for wall-mounted device.



Panel mounting size (96x96x42 mm) - Panel cutout and dimensions for snail lock system for panel-mounted device.

MT200 series key code

