

M700 pH/Multi-Parameter Transmitter For Adaptable Multi-Parameter Process Control



Feature Overview:

- Simultaneous measurement of pH and ORP
- Measures two parameters with temperature
- Supervisor password protection
- High resolution backlit display

Other Highlights

- Easy downloading of software upgrades
- Multiple calibration options
- Pipe, panel or wall mounting
- IP65/NEMA 4X waterproof enclosure

► www.mt.com/M700

The M700 is a multi-parameter transmitter for the process industry. It has a modular design equipped with three module slots so that it is configurable by the user with up to 2 measurement parameters plus a choice of communications. The transmitter can be configured to suit measurement requirements such as pH, dissolved oxygen, and temperature or pH, pH and temperature ... You decide! Measurement modules include pH, oxygen, oxygen traces, conductivity, and inductive conductivity. The transmitter has a high resolution backlit graphic display and is IP65/NEMA 4X waterproof for use in process environments. Two enclosures are available, one with polished stainless steel for the biopharmaceutical and food and beverage industries and a coated steel version for the chemical and waste-water industries.

Specifications

Performance

Measurement parameters	pH, ORP, rH, mV
Measuring range	pH: -2.0 to 16.00 ORP: -2000 to 2000 mV rH: 0.0 to 42.5
Measurement error	pH value: <0.1 % of range +0.01 pH units RP value: <0.1 % of measurement value +2 mV
Calibration	1, 2 or 3 point calibration, buffer recognition or manual entry
Calibration statistics	Recording of: zero, slope, response time
Nominal slope	25 to 61 mV/pH; calibration range 80 to 103%
Temperature input	Pt 100/Pt 1000/NTC 30 kΩ (selectable)
Temperature measuring range	-20 to 150 °C (-4 to 302 °F)
Temperature resolution	0.1 °C/1 °F
Temperature measurement error	0.2 % of measured value +0.5 K

General

Power supply (specify)	24 V AC/DC or 100 to 230 V AC
Frequency for AC	45 to 65 Hz
Module slots	3
Real time clock	Yes
Enclosure rating	IP65/NEMA 4X
Enclosure material	M700S: Polished stainless steel M700C: Coated steel
Ambient temperature	-20 to 55 °C (-4 to 131 °F)
Relative humidity	10 to 95 % non-condensing
Display	Custom graphic backlit LCD
Languages	6 (english, german, french, italian, spanish, swedish)
Measurement recorder	dual-channel process variables and event marking
Logbook	Records function activations, warning and failure messages with time/date indication

Intelligent Sensor Management (ISM)

ISM functionality allows "Plug and Measure" and Advanced Diagnostics. ISM simplifies the installation, handling and maintenance of measurement equipment. For more detailed information please see also the pages 12-13.

Ordering Information

Transmitters	Designation	Order Nr
Transmitter base, ss (no modules)	M700S	52 121 174
Transmitter base, ss, Ex, VPW*, 100...230 V AC	M700XS/VPW	52 121 175
Transmitter base, ss, Ex, 24 V AC/DC	M700XS/24V	52 121 176
Transmitter base, coated (no modules)	M700C	52 121 171
Transmitter base, coated, Ex, VPW*, 100...230 V AC	M700XC/VPW	52 121 172
Transmitter base, coated, Ex, 24 V AC/DC	M700XC/24V	52 121 173

* VPW=VariPoWer

Measurement Modules	Designation	Order Nr
pH measurement module	pH 2700	52 121 182
pH measurement module, Ex	pH 2700X	52 121 183
ISM pH measurement module	pH 2700i	52 121 261
ISM pH measurement module, Ex	pH 2700iX	52 121 262

Output Modules	Designation	Order Nr
Dual 0/4 to 20 mA output module	OUT 700	52 121 177
Dual 0/4 to 20 mA output module, Ex	OUT 700X	52 121 178
PID controller	PID 700	52 121 179
PID controller, Ex	PID 700X	52 121 180
PROFIBUS® PA	PA 700	52 121 210
PROFIBUS® PA, Ex	PA 700X	52 121 181
FOUNDATION fieldbus™	FF 700	52 121 280
FOUNDATION fieldbus™, Ex	FF 700X	52 121 281
EC 700, for EC 400 communication	EC 700	52 121 259
EC 700, for EC 400 communication, Ex	EC 700X	52 121 260

Installation Accessories	Order Nr
Pipe mount kit	52 121 208
Panel mount kit	52 121 209

Other Accessories	Order Nr
pH sensor simulator 112 (see page 67)	31 112 3003
VP simulator (see page 67)	52 120 939

Additional Software Functions	Designation	Order Nr
KI recorder	SW 700-001	52 121 198
Buffer sets to be entered (pH)	SW 700-002	52 121 199
Tolerance band recorder (pH)	SW 700-005	52 121 202
Current characteristic definable	SW 700-006	52 121 203
FDA 21 CFR Part 11 compliance support*	SW 700-007	52 121 196
5 loadable parameter sets	SW 700-102	52 121 192
Measurement recorder	SW 700-103	52 121 193
Extended logbook	SW 700-104	52 121 194
ISFET for pH 2700i	SW 700-012	52 121 274

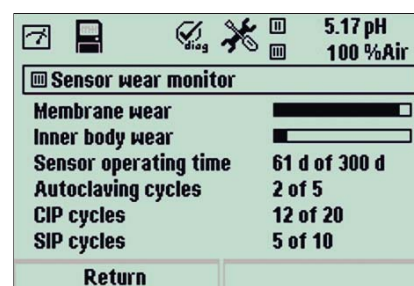
* Delivered with audit trail card

Call for details on software options for the M700

M700 pH module



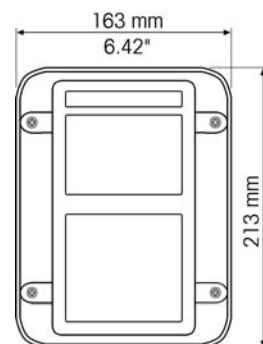
Real-time wear monitoring



M700C with modules in place



M700 front dimensions



M700 side dimensions

