M400 4-wire Transmitter

Durable in Process, Smart in Analytics
M400 Multi-parameter Transmitter

ISM®

Robustness
– Touchscreen and soft keys offer convenient operation even for the harshest applications
– Rugged design for industrial environments and temperature extremes

Predictive Maintenance
– Advanced ISM functionality provides predictive maintenance tools to prevent unplanned shutdowns and reduce maintenance
– iMonitor™ display for ISM diagnostics information at a glance
– Real-time online monitoring via HART

Superior Flexibility
– Multi-parameter transmitter covers pH, oDO, CO_2 and TDL sensors
– Mixed-mode input for use with analog or digital ISM sensors
– Compatible with major asset management tools

Error-free Operation
– Fast commissioning and error-free startup thanks to Plug and Measure functionality
– Direct connection of sensors pre-calibrated via iSense™ software
– Safe and user-friendly sensor wiring
– Configuration via transmitter configuration tool or USB stick saves time

Reliable and Intelligent
for Advanced Process Control

The multi-parameter M400 transmitter series features Intelligent Sensor Management (ISM®) technology and covers pH/ORP, oxygen (dissolved or in gas), dissolved carbon dioxide, conductivity or GPro® 500 TDL depending on the model you choose.

The high contrast black and white touchscreen together with four soft keys, allows you to operate the transmitter in the harshest applications without compromising user ergonomics. The mixed-mode input functionality allows connection of analog or digital ISM sensors. Online diagnostics information lets you know when it is time to replace, maintain or calibrate sensors equipped with ISM technology. The HART communication protocol provides easy integration of sensor diagnostics into process control systems.

METTLER TOLEDO

Technical data of the M400 4-wire transmitter series

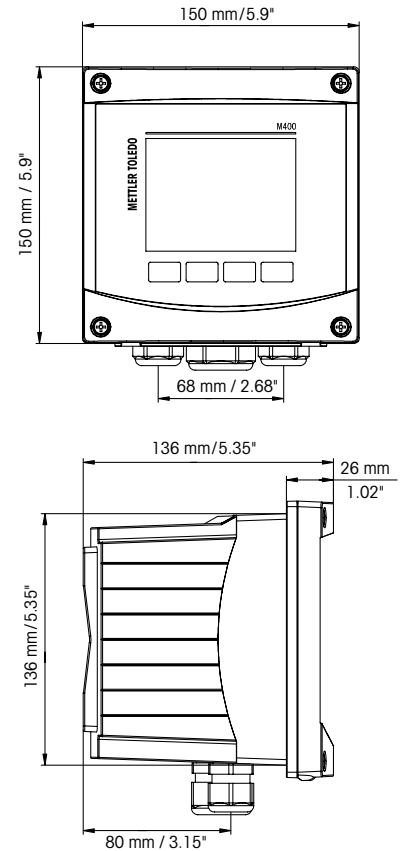|	
Power supply	100 to 240 V AC 50/60 Hz 10 VA 20 to 30 V DC 10 VA
Analog outputs	4 × 0/4 to 20 mA, 22 mA alarm, galvanically isolated (with HART)
Relays	2 SPDT, mechanical, 250 V AC or 30 V DC, 3 A 2 SPST, Reed, 250 V AC or 250 V DC, 0.5 A, 10 W
Digital inputs	2
Analog input [1]	1 × 0/4 to 20 mA
PID controller	1
User interface	4.0" TFT b/w touchscreen, 320 × 240 pixels
Languages	10 (English, German, French, Italian, Spanish, Portuguese, Russian, Japanese, Korean and Chinese)
USB interface	1 USB host: data logging, loading or saving configuration 1 USB device: software update interface
Ambient temperature	−20 to +50 °C (−4 to 122 °F)
Relative humidity	0 to 90 % non-condensing
Enclosure material	Aluminum die cast
Enclosure rating	IP 66/NEMA 4X
Approvals and certificates	CE, ATEX Zone II, cCSAus CI1 Div2

1) For M400 Type 2 and M400 Type 3 only

M400 parameter fit guide

	Type 1		Type 2		Type 3	
	Analog	ISM	Analog	ISM	Analog	ISM
pH/ORP	•	•	•	•	•	•
pH/pNa	–	•	–	•	–	•
UniCond 2-e/4-e	–	•	–	•	–	•
Conductivity 2-e	•	–	•	–	•	–
Conductivity 4-e	•	•	•	•	•	•
Amp. DO ppm/ppb/trace	–	–	•/•[1]/–	•/•[1]/–	•/•/•	•/•/•
Opt. DO ppm/ppb	–	–	–/–	•/•[1]	–/–	•/•
Amp. O_2 gas ppm/ppb/trace	–	–	–/–/–	–/–/–	•/•/•	•/•/•
Opt. O_2 gas ppm	–	–	–	–	–	•
Dissolved ozone	–	–	•	•	•	•
Dissolved carbon dioxide	–	–	•	•	•	•
CO_2 hi (thermal conductivity)	–	–	–	–	•	•
GPro 500 TDL	–	–	–	–	–	•

1) Thornton high performance DO sensor and pure water optical DO sensor only.

Ordering information

Transmitter	Order No.
M400 Type 1	30 374 111
M400 Type 2	30 374 112
M400 Type 3	30 374 113

Dimension Drawing M400

www.mt.com/pro

For more information

Sales and service:

CE

ISO 9001 certified   ISO 14001 certified

Management System certified according to ISO 9001 / ISO 14001