



## PendoTECH® Dual Channel pH/Conductivity Monitor & Transmitter

### Background

Ideal as a process development tool, the Dual Channel pH/Conductivity Monitor & Transmitter provides a convenient bench-top dual channel measurement system along with the ability to interface each channel to an external data acquisition system, control system, or data logger via its transmitter function. For process development work it is designed for use with traditional electrochemical pH probes and conductivity two-wire probes with a Platinum Pt100 RTD or NTC 30 kΩ temperature measurement element. The monitor facilitates the calibration that is required for these types of probes. It's based on the Mettler Toledo Multiparameter M300 process transmitter series and offers exceptional measurement performance and a sophisticated user interface to handle the calibration routines. The high contrast black and white touch screen facilitates easy navigation and ensures a user-friendly operation. In addition to be able to measure pH on one channel and conductivity on the second channel, it may also be ordered as a dual pH or dual conductivity unit. Any pH probe with a BNC connector can be used with it and conductivity probes offered by PendoTECH (or others can be used however they must have the correct connector installed onto the cable). Additionally PendoTECH offers flow cells with 12 millimeter OD fittings into which the probes can be inserted for inline measurement. The outputs can be connected directly to the PendoTECH PressureMAT PLUS monitor with analog input channels or to any of the PendoTECH Process Control Systems via their analog inputs to complement the built in functionality of the control systems.



### Transmitter Details

The touch screen is a brilliant four inch TFT that gives clear display of important measurement information. It has a user friendly menu structure and quick access to settings. The enclosure is sealed water-tight to protect internal electronics. The probes connect conveniently to the wired connectors at the front. The power and analog outputs connect to the bottom panel and the power supply is included.



Product based on the M300 Process Transmitter Series with brilliant high contrast black & white touchscreen interface



pH Probe



COND5-TFF  
High resolution conductivity (0.001 - 500 μS)



COND2-TFF (0.1 - 100 mS)

A variety of pH and conductivity probes can be used





PendoTECH Process Development In-line pH Probe & Flow Cell PT-PH1 (probe only)



Flow cells with 12mm OD fittings for probes for inline measurement

## Product Details

The probes connect to the wired connectors accessible from the front of the unit. Cable accessories are available to connect to either a PendoTECH PressureMAT PLUS, a PendoTECH Process Control System and for other devices, a cable with flying leads is available. Analog outputs are three-pin M8 nano female receptacles with Pin 1 as + and Pin 3 as -. If using the M8 3 pin cord set, the color codes are as follows:

Pin		3-pos.
1	BN	
2	-	
3	BU	
4	BK	

The unit includes a 24VDC power supply (PMAT-PWR-WALL-24VDC) to plug into an electrical outlet with global plug blades:



Power Supply



Bottom Panel

## Technical Data of the M300 Process Transmitter Series

Power Supply	20 to 30VDC 10VA	
Analog Outputs	0/4 to 20mA, 22mA alarm, galvanically isolated	
Relays	2 SPST, mechanical, 250VAC or 30VDC, 3A	2 SPST, Reed, 250VAC or 250VDC, 0.5A, 10W
PID Controller	Yes	
User Interface	4.0" TFT b/w touchscreen, 320x240 pixels	
Languages	10 (English, German, French, Italian, Spanish, Portugese, Russian, Japanese, Korean and Chinese)	
USB Interface	1 USB host: data logging, loading or saving configuration	1 USB device: software update interface
Ambient Temperature	-10 to 50°C (+14 to +122°F)	
Relative Humidity	0 to 90% non-condensing	
Enclosure Rating	1/2 DIN: IP65 front	
Approvals and certificates	cULus, CE	

## 4-20mA Output Scaling

Default Output Settings - The output scaling is set by default to the values in the table. However, may be changed on the menu with interactive navigation.

Parameter	4mA Value	20mA Value
Conductivity	0.00	150.00
pH	0.00	14.00



Top Panel

HARDWARE/CABLES	
PDKT-ACCESS-PHCN-BOX	pH and conductivity Bench-Top monitor/transmitter for the interface of 2 probes-Does not include probes/flow cells.
PDKT-ACCESS-CNCN-BOX	Dual conductivity Bench-Top monitor/transmitter for the interface of 2 Conductivity probes-Does not include probes/flow cells.
PDKT-ACCESS-PHPH-BOX	Dual pH Bench-Top monitor/transmitter for the interface of 2 pH probes - Does not include probes/flow cells.
PDKT-UV-PCS	Cable from single wavelength photometer to PendoTECH TFF/DAQ, 2m
PDKT-UV-PMAT	Cable from single wavelength photometer to PMAT analog input, 2m
1406281	M8 3 pin male cordset, 2m, flying leads

PROBES/FLOW CELLS	
COND2-M300	Conductivity Probe K=1 with 100ohm Pt RTD for temperature measurement for M300 Process, epoxy (0.1 - 100 mS)
COND5-M300	Conductivity Probe K=0.105 with NTC 30 kO for temperature measurement, stainless steel (0.001 - 500 $\mu$ S). 6 ft / 1.8 m cable
PT-PH1	PendoTECH Single Use pH probe with BNC connector for Single Use Cell
PT-PH1-CELL	Flow Cell for PendoTECH Single Use pH Probe, 3/4inch SF inlet/outlet, PA12 Nylon
PT-PH1-CELL-025	Flow Cell for PendoTECH Single Use pH Probe, 1/4 inch hosebarb inlet/outlet, PA12 Nylon
PH-PILOT-CP	12mm OD pH probe for flow cell
PFC-RUA-L	Lab Scale pH and conductivity flow cell for 12mm OD probes with compression fitting- luer
PFC-RUA-012	Lab Scale pH and conductivity flow cell for 12mm OD probes with compression fitting- 1/8inch
PFC-RUA-025	Lab Scale pH and conductivity flow cell for 12mm OD probes with compression fitting- 1/4inch barb
PFC-RUA-5	Lab Scale pH and conductivity flow cell for 12mm OD probes with compression fitting- sanitary flange
PFC-RUA-B	Blank for Lab Scale pH and conductivity flow cell for 12mm OD probes