

## FLOW

## Mettler-Toledo Thornton M300 Series

**Engineering Specification EN-0112**

The flow indicating transmitter shall provide flow and totalized flow indication, for one or four flow measurements, as specified, from compatible pulse type (paddle wheel, impeller, turbine or vortex) flow sensors. All measurements shall be made simultaneously, with indication, alarm and output signals available. The transmitter shall be capable of computing percent recovery from one or two pairs of flow signals of a reverse osmosis system, with the same indication, alarm and output capability.

Instrument security shall be provided by user-set two level security codes. It shall have an illuminated display with space for custom names and readable in direct sunlight or darkness. Menus shall be available in English, French, German, Italian and Spanish.

Three-mode PID control capability shall be provided with selectable output types of pulse frequency, pulse length and analog for one or two reagents.

The same model transmitter shall operate from 90-240 VAC and from 10-30 VDC, 4-wire power. It shall be provided in either a ¼ DIN case with hardware for NEMA 4X, IP65 sealed panel mounting, or in a ½ DIN NEMA 4X, IP65 case with optional kits for or pipe mounting. Connection to sensors shall be via supplied cables with connector at the sensors for convenient maintenance. The transmitter shall have plug-in terminals. The indicating transmitter shall be provided with four or eight alarm setpoints, assignable to four or eight relays, as specified. When operating on total flow measurements, these settings shall permit multiple batch control action. Total flow reset shall be accessible from the keypad or from remote contacts or discrete input signal.

Two or four 0/4-20 mA output signals, as specified, shall be assignable to any measurements. Output scaling shall be selectable as linear, bi-linear, logarithmic or auto-range (to provide high resolution at the low end of the range yet keep high measurements on-scale during upset, startup or calibration). A USB port shall also be provided for data acquisition and remote configuration.

The instrument shall be ISO9001 factory calibrated to NIST-traceable standards and be provided with a certificate of calibration.

The indicating transmitter and sensor(s) shall be Mettler-Toledo Thornton model M300 Instrument, with compatible conductivity sensors, as specified



# Engineering Specification

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