

DESCRIPTION

The MRC 7800 Flow Recorder is a microprocessor based, circular chart recorder capable of measuring, displaying, recording, and totaling flow process variables. In addition to scalable linear conversion, three square root extraction algorithms are available, as well as variable exponent to accurately convert head to flow for Parshall flumes and weirs.

Totalization is available on each pen and can be done on a per second, minute, hour, or day basis. Decimal positioning is available and independent for the process values and totals. Low cutoff is provided. The totals can be reset to zero via the keypad or remote contact closure. When totalization is ordered, an optional datalogging feature is available.

One pen units are available with two displays so the total can be continuously displayed in addition to the process value. On two pen units, the unit can be configured to combine the flow rates and totals for display and preset usage.

Recording functions, alarm settings, and other parameters are easily entered via the front keypad. All user data can be protected from unauthorized changes by the Enable Mode security system and is protected against loss from AC power failure by battery back-up.

The process input for each pen is user configurable to directly connect to either mVDC, VDC or mA DC inputs. Changes in input type are easily accomplished. The unit's process input is isolated from the rest of the unit. The unit can be ordered for either 115VAC or 230VAC power at 50/60 Hz. The 230 VAC option includes a switch for changing back and forth between 230VAC and 115VAC. The unit is housed in a plastic enclosure suitable for panel or surface mounting.

RECORDERS

SPECIFICATIONS

Input

Volts	0 to 5VDC, 1 to 5VDC.
Millivolts	0 to 100mV, rangeable
Milliamps	4 to 20mADC, 0 to 20mADC
Transmitter Fault Detection	Displays SnSr for sensor or transmitter break. Outputs go off. Fault detection is not functional for zero based voltage and milliamp inputs.

Outputs

Alarm Output: Relay	SPST, SPDT 115VAC: 5.0A Resistive, 1/8HP, 250VA 230VAC: 2.5A Resistive, 1/8HP, 250VA
SSR Driver	Open collector output. Short circuit protected @ 100mA maximum Provides 4VDC @ 20mA or 3VDC @ 40mA
Process Value Output	0 to 20 or 4 to 20mADC into 650 ohms max.

Alarms

Process Alarm	0 to 9999 units
Alarm Hysteresis	0 to 1000 units

Performance

Measurement Error Limit	mVDC and VDC -0.25% of scaled span plus 1 Least Significant Digit
Ambient Temperature Error	0.01% of span per degree C deviation from 25 C
Scan Rate	1 scan per second
Display Decimal Positions	None, One, Two, or Three.
Noise Rejection	Normal mode, 85dB min. at 60Hz or greater. Common mode, 90dB minimum, 115VAC maximum.
Line Voltage	115/230VAC -10%, 50/60 Hz
Power Consumption	25VA maximum
Operating Temperature	0 to 55 F, 32 to 141 F
Storage Temperature	-40 to 65 C, -40 to 149 F
Humidity	0 to 90% RH, non condensing
Dimensions	13.19" H x 15.13" W x 3.63" D
Weight	20 pounds maximum

Record and Display

Chart	10 inch circular
Chart Range	0 to 9999 units
Chart Drive	DC stepper motor
Chart Rotation	User configurable from 0.1 to 999.9 hours per revolution.
Pen Type	Disposable Fiber tip
Pen Color	Pen 1 - Red, Pen 2 - green.

Display

Digital Displays	Two possible, one per installed pen each having four 7 segment digits measuring 0.56" high with red LEDs. Eight 7 segment digits with totalization.
Alarm Display	Two alarms per pen; ALRM1 and ALRM2; red LEDs

Agency Approvals

UL and CSA

Transmitter Power Supply

Provides up to 40mA of current at 24VDC.