

Flow Controller

DESCRIPTION

The MRC 7800 Flow Controller is a microprocessor based circular chart recorder capable of measuring, displaying, recording and totaling flow process variables. Record functions, alarm settings and other parameters are easily configured from the front mounted keypad and self-prompting displays.

All user data can be protected from unauthorized changes by the Enable Mode security system. The MRC7800 is protected against loss of data from AC power failures by a standard battery backup system.

Applications for the MRC 7800 include process validation, trend analysis, regulatory compliance and product safety. Flow tracking is available with the optional totalizing capability.

MRC 7800™

*Proven Recording Reliability
Designed Specifically for Flow
Applications!*

APPLICATIONS:

- Process Validation, Trend Analysis, Regulatory Compliance, Product Safety
- Flow/Rate Tracking with optional totalizing capability

INDUSTRIES

Harsh water environments, sewage treatment, effluent flow, water treatment, etc.

FEATURES/BENEFITS

- Micro-based recording controller
- Two displays, allowing you to see critical process values at the same time
- Easy, straightforward programming—allows you to configure your recorder with a logical step-by-step process using a simple keypad
- High reliability—eliminates cost of process downtime
- Up to 8 relay or solid state outputs for use as totalizer presets
- Up to 4 analog outputs for process retransmission

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SPECIFICATIONS

STANDARD FEATURES

Modes: Digital; choice of Record or Diverse Record/Totalizer combination functions.

Display: One 4-digit display (std.); second display optional; 0.56" high, red, seven segment LED; 3 button keypad; automatic and decimal point positioning; **Decimal Positions:** None, one, two or three decimal places.

Status Indicators: 7 LED status indicators: Out 1, 2; one green LED pen 2 indicator; LED indicators ALRM1 and ALRM2.

Chart: 10" circular chart; 100 charts furnished with each instrument. Unless otherwise specified, charts shipped with instrument are 0–100 range. 24 hour rotation default setting.

Chart Drive: DC Stepper Motor.

Chart Rotation: User configurable from 0.1 and 999.9 hours per revolution.

Chart Range: Bottom and top of span –9999 to 9999 units.

Pen Type: One or two disposable fiber tip pen.

Pen Color: Pen 1 (red); Pen 2 (green).

Memory Backup: Battery; 5 year minimum life.

Construction/Enclosure: Injection molded Noryl case; acrylic window cover.

OPERATING CHARACTERISTICS

Operating Temp: 32° to 122°F (0° to 50°C).

Storage Temp: –40° to 149°F (–40° to 65°C).

Humidity: 0% to 90% non-condensing R.H.

Vibration: 0.5 to 100Hz @ 0.2g.

Electro Static Discharge: No effect from 5000V static charge over the entire area.

ELECTRICAL

Power Consumption: 25VA max.

Line Voltage: 115V or 230VAC ±10%, 50–60Hz.

INPUTS

Thermocouple: N/A.

RTD: N/A.

Volts: 0–5 VDC*; 1–5 VDC*.

DC Milliamps: 4–20mA, 0–20mADC.

DC Millivolts*: 0–100mV (can be scaled to any portion of this range).

* Accompanied by removal of a shunt resistor factory installed on the input terminals.

OUTPUTS

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 max; provides 4VDC @ 20mA or 3VDC @ 40mA.

Current: 0–20mA or 4–20mA; 0–650 ohm maximum load.

Process Alarm: Direct (High) or Reverse (Low); 0 to 9999 units.

Deviation Alarm: N/A.

Deviation Band Alarm: N/A.

Alarm Hysteresis: 0–300 units (width of hysteresis band).

PERFORMANCE

GENERAL:

Input Measurement Error: mA, mV, and VDC ±0.25% of scaled span or better typically; ±1 least significant digit @ 25°C.

Ambient Temperature Error: 0.01% of span per degree C deviation from 25°C.

Isolation: N/A.

Chart Accuracy: ±1% of chart span.

Noise Rejection: Common Mode: 90dB minimum; 24VAC maximum for RTD input; 115VAC max for other inputs. Normal Mode: 85dB minimum @ 60Hz or greater.

Transmitter Power Supply: Provides up to 42mA of current at 24 VDC.

COMMUNICATIONS INTERFACES

Communications Port: N/A

Protocol: N/A

Bit Rate: N/A

Address: N/A

RATINGS/AGENCY APPROVALS

Safety: UL 1092 File E67237; CSA Spec C22.2 File LR39885, CE EN61010-1 1993/1995.

Immunity: CE EN50082-1:1992

Emissions: CE EN55011:1991

Limit Device: N/A

Other: ISO 9002 registered.

PROTECTION

NEMA 3 optional

PHYSICAL DIMENSIONS

Width: 15.13" (384mm).

Depth: 3.63" (92mm).

Height: 13.19" (335mm).

Weight: 20 lbs (9.1kg).

Mounting/Mounting Position: Panel or wall.

OPTIONS/ACCESSORIES

24V DC power supply option.

115 or 230VAC input option.

Door lock and sealed conduit/connector option.

NEMA 3 protection optional.

Totalizing flow option.

WARRANTY

3 years.





PARTLOW™ brand

Flow Controller

MRC 7800'
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Recorders

MODELS

Code 1: Model	Code 2: Pen & Totalization Selction	Code 3: Relay (SPST) Outputs*	Code 4: SSR Driver Outputs*	Code 5: 4-20mA Outputs	Code 6: Transmitter Power Supply	Code 7: Data Logging Options	Required Zeros	Code 8: Enclosure Options	Code 9: Operating Voltage	Code 10: Option Suffix
78	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0 0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>
MRC7800 Flow Recorder	5 One Pen Recorder 6 One Pen Rec. w/ Totalization 7 Two Pen Recorder 8 Two Pen Rec. w/ Totalization 9 One Pen Recorder with Totalization and second display	0 None 1 One SPST 2 Two SPST 4 Four SPST 6 Six SPST 7 One SPDT 8 Two SPDT 9 Two SPDT and Two SPST	0 None 1 One 2 Two 4 Four 6 Six 8 Eight	0 None 1 One 2 Two 3 Three 4 Four Standard	0 None 1 24VDC Regulated /Isolated	0 None 1 Data Logged in Memory**		2 Standard Cover (Plastic Windows) 4 Door Lock*** 6 Sealed Conduit Connections 7 4 & 6 Combined***	1 115VAC 2 115/230VAC CSA APPROVED 4 115VAC 5 115/230VAC	BLANK - None N3 NEMA †

* Total quantity of SPST Relays and SSR Drivers must be less than or equal to eight. When SPDT Relays are included, the total must be less than or equal to six.

**Available only on units with totalization.

*** This option comes with a structural foam cover.

† N3 - NEMA type protection for wet environments.

NOTE: 4-20mA inputs are accommodated using the 1-5V input and a 250 ohm Shunt Resistor, P/N 64411701 (provided with the unit) or the 10-50mA input and a 2.5 ohm Shunt Resistor, P/N 64411702

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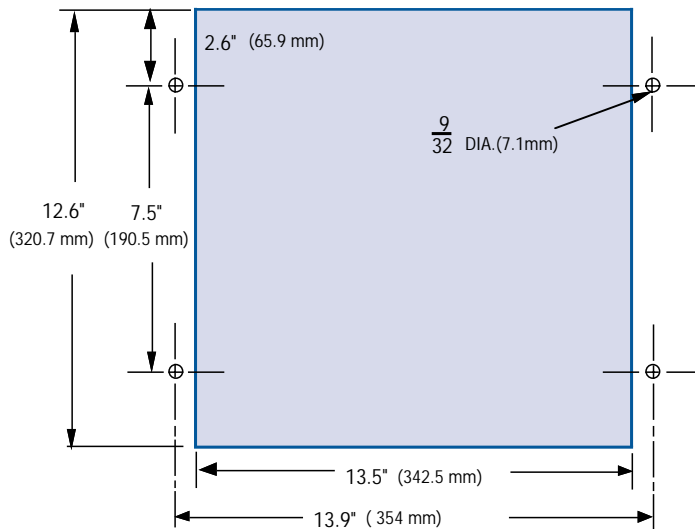
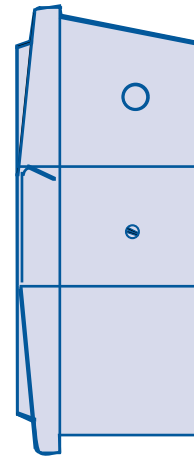
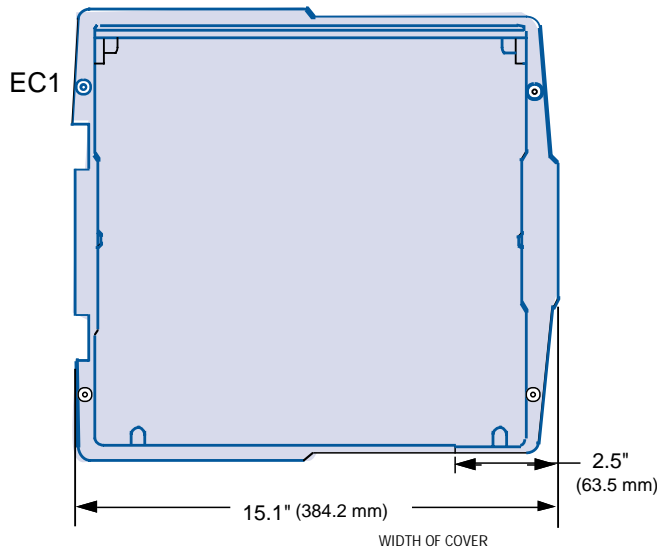
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DIMENSIONS



Panel cut-out for flush mounting

Made in USA.

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Partlow Brand MRC 7800 Data Sheet (5/05)



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**Partlow MRC 7800 Chart Recorder for Flow
ThermX Southwest 800-284-3769
www.thermx.com**