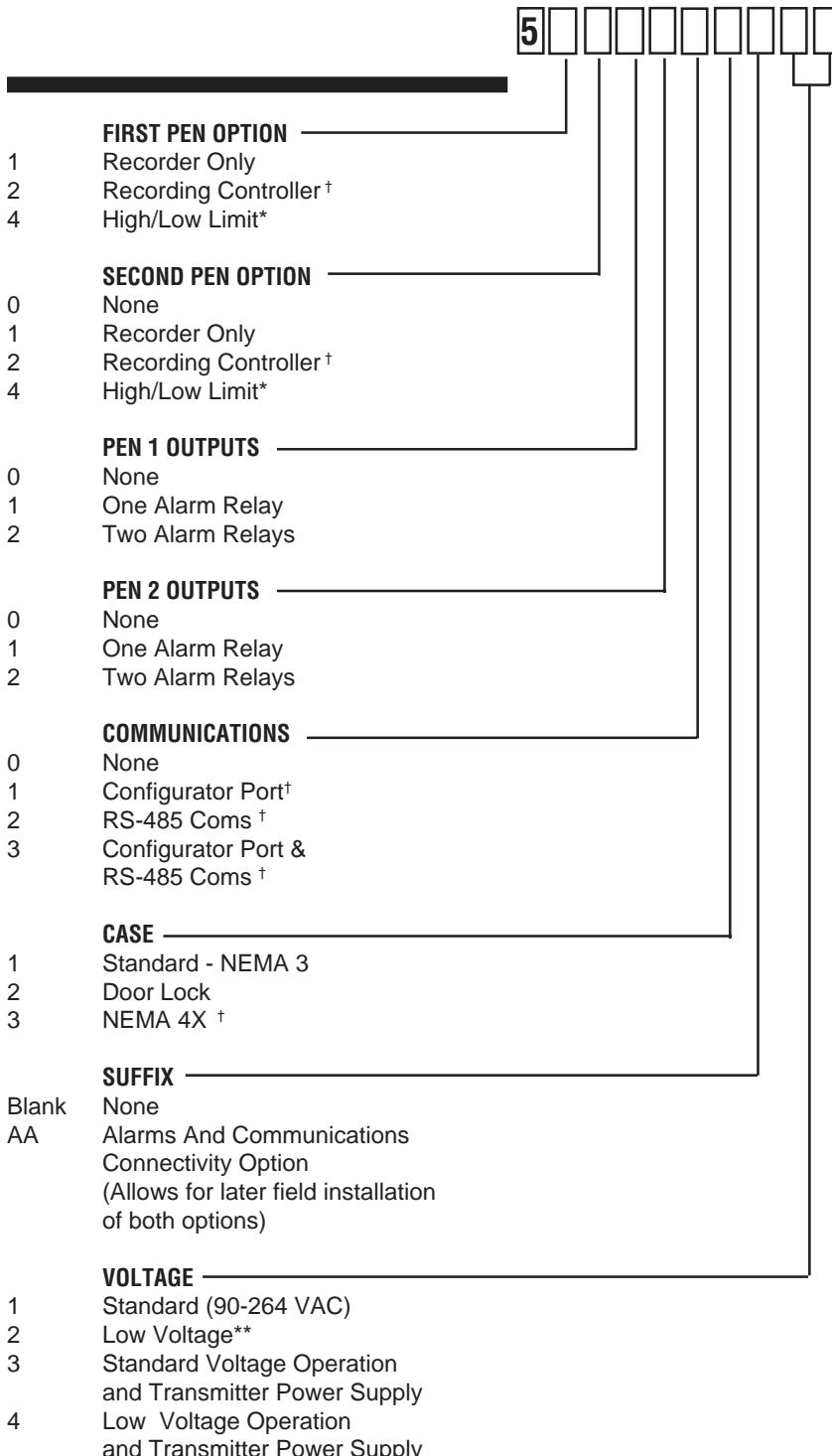


# MRC 5000 SERIES RECORDER CONTROLLER



\* Does not include a relay. Order relays in output options.

\*\* Low Voltage is 20-50 VAC or 22-65 VDC

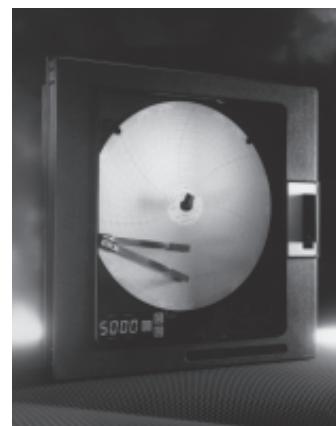
† Consult factory for availability, price To Be Determined

## WARRANTY

This instrument is backed by the Partlow comprehensive 3 year warranty. A complete warranty statement is published in the back of the product instruction manual. If you have further questions about warranties, please contact the Partlow factory.

## ORDERING INFORMATION

For pricing and additional ordering information, refer to Form 3265, Electronic Price Book.



## DESCRIPTION

Designed with the latest innovation in recording technology, enclosures, and functionality, the MRC 5000 is Slim, Trim, and Simple. Finding a place to install this recorder is easy, with its compact 2.5" panel depth and short 1.3" protrusion from the front of the panel. It can be panel or surface mounted. The cutout size for the MRC 5000 is the commonly utilized 12.7" square cutout. An optional adaptor plate provides convenient retrofitting of the MRC 5000 in Partlow MRC 7000 /ARC 4100 cutouts. A simple prompting scheme provides rapid access to all configuration data. Programming is simple enough that instructions are provided on a 4" x 6" card that can be stored in a pocket on the back of the wiring access panel. During normal operation, the display can show process value(s) or be blanked.

The MRC 5000 is housed in an injection molded Noryl enclosure which can be panel or surface mounted. Mounting brackets accompany the unit. Its design allows it to fit into the panel cutout of competitive products.

## SPECIFICATIONS

### INPUTS

Input Types/Range	Type	Range
Thermocouple	J	0 C to 760 C 0 F to 1400 F
	K	0 C to 1360 C 0 F to 2500 F
	T	-200 C to 400 C -330 F to 750 F
	R	200 C to 1650 C 400 F to 3000 F
	S	200 C to 1650 C 400 F to 3000 F
RTD	100 ohm Platinum .00385 ohms/ohm/ C	-140 C to 400 C -220 F to 750 F

Current DC 0 to 20mA, 4 to 20mA

Internal 4.7 ohm Shunt Resistor

Voltage DC 0 to 25mV, 0 to 50mV, 10 to 50mV, 0 to 5 V, 1 to 5 V

Impedance > 100M ohm for TC and mV inputs  
100K ohms for 5V inputs  
4.7 ohms for mA inputs

RTD Excitation Current 150 microamps, typical

Input Scan Rate 1 scan per second for non-RTD inputs  
1 scan per 1.2 seconds for RTD inputs

Input Correction Offset Adjustment, -999 to 999 units

Sensor Fault Detection Display goes to "SnSr" and pen goes upscale if a sensor break is detected  
No sensor break can be detected for zero based Volt and Milliamp ranges  
Display goes to "Hi" 10% above span.  
Display goes "Lo" 10% below span or zero, whichever is higher.

### RECORDING

Pen Type Disposable fiber tip  
Pen Color Pen 1 - Red  
Pen 2 - Green

Chart Size 10 inch

Chart Drive Stepper motor

Chart Rotation User configurable: 8 hours, 12 hours, 24 hours, 48 hours, or 7 days

Chart Span Bottom and top of span, -9999 to 9999 units

Chart Recording Accuracy 0.5% of chart span reference accuracy  
Chart Rotation Accuracy - 0.5% of rotation time, assuming all backlash removed

### OPERATOR INTERFACE

Display Four digit, 0.56" high, red, seven segment, LED display

Status Indicators Five red LED alarm status indicators, One green LED Pen 2 indicator

Keypad Three keys for programming and unit operation

Display Modes Normal: Process value(s) or blank

### ALARMS

Number Up to two process alarms for each of two inputs

Type Process high or low

Limit Device Optional high/low limits for each input with latching output

Normally open output latches open  
Red reset button included to the right of the display

Hysteresis Fully adjustable, 0 to 200 units, single sided

### Security

Alarm setpoint changes can be prohibited

Alarms work normally in "Hi" and "Lo" conditions

Alarm relays are deenergized in a "SnSr" sensor break condition

### RELAY OUTPUTS

Relays

SPDT, contacts rated 5 amps resistive at 115 VAC,  
2.5 amps resistive at 230 VAC, 1/8 HP at 230 VAC (single phase),  
250 VA at 115/230

### POWER REQUIREMENTS

Line Voltage

90-264 VAC, 50/60 Hz  
Optional: 20-50 VAC, 50/60 Hz or  
22-65 VDC

18 VA Maximum

### Power Consumption:

### CONSTRUCTION

Injection molded Noryl case and cover with acrylic window

NEMA 3 standard, NEMA 4X future option

Conduit Openings

Three openings on the right side

Mounting

Panel or wall

Overall Dimensions

14" wide X 14" high X 3.8" deep.  
(355.6mm X 355.6mm X 96.5mm)

Panel Cutout

12.7" wide X 12.7" high

(322.58mm X 322.58mm)

Panel Depth

2.5" (63.5mm)

Panel Protrusion

1.3" (33.0mm)

Weight

15lbs maximum

Retrofit

With adaptor plate, will fit Partlow

MRC

7000/ARC 4100 cutout

### ENVIRONMENTAL AND OPERATING CONDITIONS

Operating Temperature 0 C to 50 C (32 F to 122 F)

Storage Temperature -40 C to 65 C (-4 F to 149 F)

Humidity 10 to 90% RH, non-condensing

Vibration 0.3 to 100 Hz @ 0.2g

Mounting Position Up to 30° forward or backward tilt from vertical

Up to 10° side tilt from vertical

### DIGITAL COMMUNICATIONS

Configuration Port TTL levels

Communications Port RS-485 serial communications, Half-duplex

Protocol MODBUS RTU

Bit Rate 9600 bits per second

Parity Odd

Address User configurable - 1 to 247

### GENERAL REFERENCE DATA

Data Backup EEPROM for configuration parameters and calibration data

EEPROM for alarm setpoints

Warranty Two years

RECORDERS