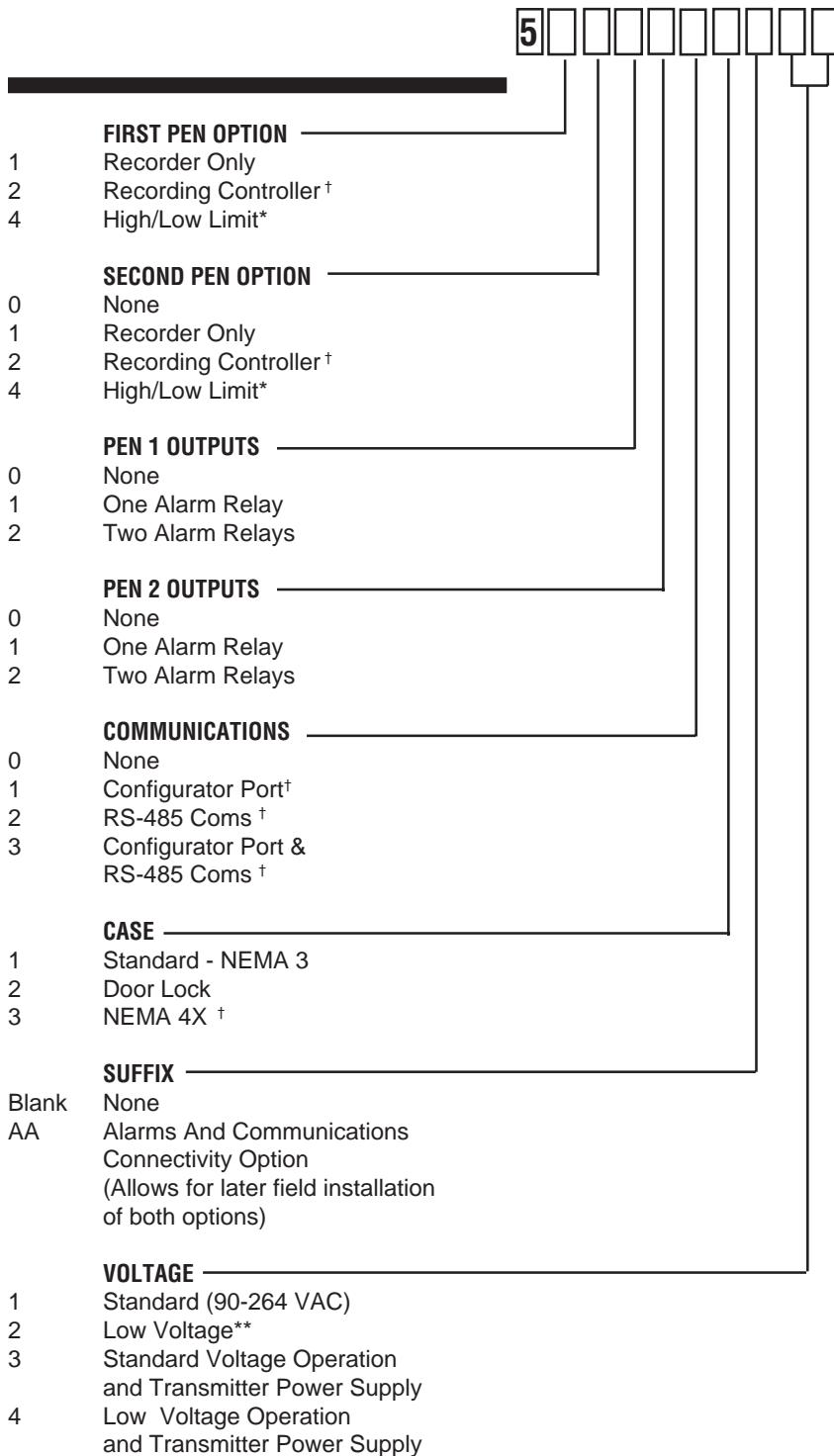


# MRC 5000 SERIES RECORDER CONTROLLER



\* 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
Sensor Fault Action	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
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### POWER REQUIREMENTS

Line Voltage	90-264 VAC, 50/60 Hz Optional: 20-50 VAC, 50/60 Hz or 22-65 VDC
Power Consumption:	18 VA Maximum

### CONSTRUCTION

Enclosure	Injection molded Noryl case and cover with acrylic window
NEMA Rating	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