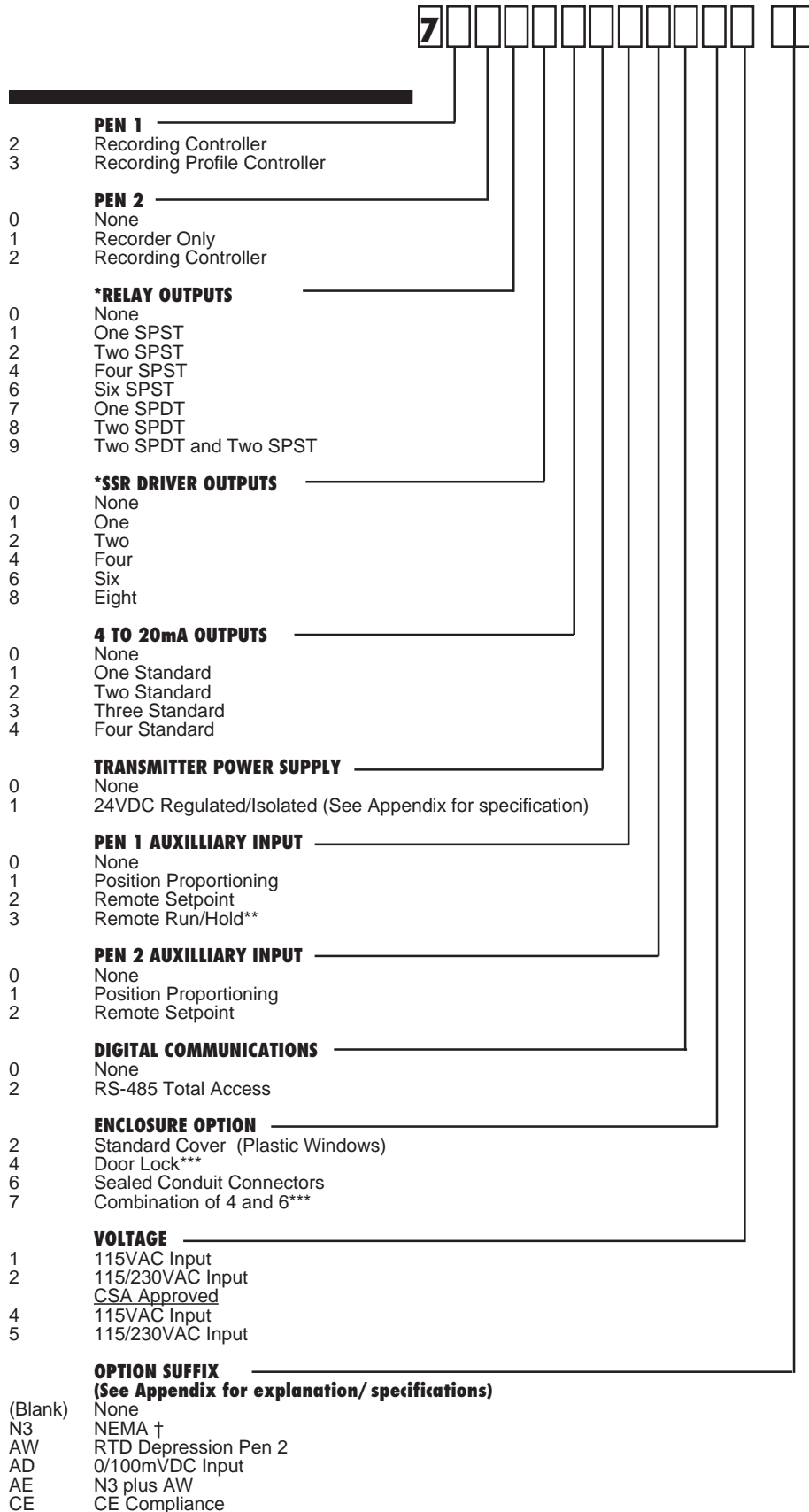


MRC 7000 SERIES RECORDING CONTROLLER/ PROFILER



INGENIEROS ASOCIADOS DE CONTROL S.L.

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* 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.

** Applies to Model 73XXXXXXXXXX.

*** 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.



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, Page 41.



DESCRIPTION

The MRC 7000 Recording Profiling Controller is a microprocessor based circular chart recorder capable of measuring, displaying, and recording up to two process variables from a variety of inputs. Applications include temperature, level, pressure, flow and others. The instrument can be specified as either a single or as a dual pen model. The second pen can be selected as a profile control or a single setpoint control.

Recording, control functions, alarm settings, profile entry, and other parameters are easily configured via the keys. All user configured data can be protected against unauthorized changes via the Enable mode security system and is protected against memory loss due to AC power failure by battery back-up.

The process sensor input for each pen is user configurable to directly connect to either thermocouple, RTD, mVDC, VDC, or mA DC inputs. Changes in input type can easily be made. Thermocouple and RTD linearization, as well as thermocouple cold junction compensation, are performed automatically. The instrument process variable inputs are isolated.

The instrument can be ordered to operate on either 115VAC or 230VAC power at 50/60 Hz. The 230 VAC option includes a switch for selecting either 230VAC or 115VAC operation. The instrument is housed in a plastic enclosure suitable for panel or surface mounting.

SPECIFICATIONS

Input

Thermocouple types	J, K, T, E, N, R, S, B, and C.
RTD	100 ohm(.00385 Ohm/Ohm/C)
Volts	0 to 5VDC, 1 to 5VDC.
Millivolts	0 to 25mVDC, 0 to 50mVDC, 10 to 50mVDC.
Remote Setpoint	0 to 5VDC
Remote Run/Hold	Dry contact closure
Milliamps	4 to 20mA DC, accommodated via 10 to 50mV or 1 to 5V input with the addition of the appropriate external shunt resistor.
Sensor Fault Detection	Displays "Hi" or "Lo" (10% above or below range) and sensor break "SnSr". Pen action on error condition is user configurable to 0 to 100% of chart span.

Outputs

Relay	SPST, SPDT 115VAC: 5.0A Resistive, 1/8HP, or 250VA 230VAC: 2/5A Resistive, 1/8HP or 250VA
SSR Driver	Open collector output Short circuit protected @ 100mA maximum Provides 4VDC at 20mA or 3VDC at 40mA
Current	0 to 20 or 4 to 20mA DC into 650 ohms max.

Alarms

Process Alarm	Direct (High) or Reverse (Low); -9999 to 9999
Deviation Alarm	Direct or Reverse -3000 to 3000 units
Deviation Band Alarm	Open within band or Closed within band, 1 to 3000 units
Alarm Hysteresis	0 to 300 units (width of hysteresis band).

Control Parameters

Proportional Band	1 to 3000 units
Manual Reset	-1500 to 1500 units
Auto Reset	0.0 to 100.0 repeats/minute
Rate (Derivative)	0.0 to 10.0 minutes
Cycle Time	1 to 240 seconds
Pos. Prop. Sensitivity	0.0 to 50.0%
On/Off Hysteresis	0 to 300 units (width of hysteresis band)
Output Position	-1000 to 1000 units
Control action	Direct or Reverse
Automatic Transfer	User selectable to transfer from manual to automatic control when setpoint is reached.
Anti-Reset Windup	Auto reset is disabled when the process is outside of the Proportional band.
Auto/Manual	Bumpless transfer
Manual Output	0 to 100%
Output Limiting	0 to 100%
Setpoint Limiting	- 9999

Profile Parameters

Programmable Profiles	8 user programmable profiles
Segments	1 to 6 segments per profile
Ramp and Soak	1 ramp and soak per segment
Profile Time Base	User selectable: hrs, min, sec, tenths
Profile Interrupt Action	User selectable
Profile Loop count	1 to 9999, 0 = Continuous
Profile End control	User selectable
Assured Soak	Available
Pen Profiling Config.	Pen 1 only, or Pen 1 and Pen 2
Remote Run/Hold	Optional
Event Output	3 possible event outputs per pen.

Performance

Same as the Recorder Version, see Page 19.

Record and Display

Chart	10 inch circular,
Chart Range	-9999 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.
Digital Displays	1 per pen, .56" high
Status Display	LED provided to indicate Out 1, Out 2, Alm1, Alm 2, Man, Ramp, Soak, Seg 1 thru Seg, 6, Process units

Agency Approvals

UL and CSA

Transmitter Power Supply

Provides up to 40mA @ 24VDC

Digital Communications

Type	RS-485 serial communication port. Half-duplex bi-directional comm.
Character Format	ASCII
Protocol	Per ANSI X3.28 subcategories 2.5 & A4
Configuration	User configurable to "Monitor" (read only) or "Normal" (read and write)
Bit Rate	User configurable to 300, 600, 1200, 2400, 4800, or 9600 bits per second.
Address	User configurable for each pen; 0 to 99



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