

Programmable 4 & 7 Channel Scanner

Display and control up to 7 independent Thermocouple, Rtd, Thermistor, voltage, current or Millivolts Signals.

FEATURES

- Front keys programmable, including input type.
- Auto/manual scanning.
- Flexible scaling for current, voltage and millivolt.
- Min/Max display for each channel.
- Displays temperature in degrees C or F.
- Programmable channel display time.
- Multiple display modes.
- Three programmable alphabets for indicating engineering units e.g. PSI.
- Displays Rate, channel differentials, set-point deviation, channels with highest/lowest reading.
- Separate limit relay for each channel.
- Limits programmable as normally open, normally closed, latching or non latching.
- Security password for program changes.
- Retains program settings on power down.
- Built-in buzzer to sound alarm.
- Power line filter for high reliability
- Keeps track of process run time.
- Compact 1/8th DIN (cutout) enclosure.

DESCRIPTION

MPS series is a multi-channel scanner that packs a number of functions into one unit. Tasks that require multiple monitors can now be accomplished by using only a single unit. Signals from seven different transducers can be brought into screw terminals that are conveniently located on the back panel of the instrument. The unit automatically scans through each channel, displaying channel number and its process reading.

Signals from thermocouples, rtds and thermistors are linearized and can be displayed in degrees Centigrade or Fahrenheit. Current, voltage and millivolt signals are easily scaled for indicating the process in relevant engineering units. Since up to seven different processes can be displayed on a single scan-

ner, therefore, each channel can be given its own three alphabets long engineering units e.g. PSI, Ft, Yds, etc. This helps in differentiating between channels with different processes.

Only
\$495
Base Unit



Channels that do not have signals connected to them can be disabled and will not be scanned or displayed. Other channels are sequentially displayed for a programmed length of time. The hold feature allows for the display to be held indefinitely on any one channel.

MPS has multiple display modes and can be programmed to scan all channels, display channel with highest or lowest reading, process deviation from a pre-programmed setpoint, display differential between channels or just run as a timer.

Additional features include Min/Max readings and rate of change for all channels. Also provided as an option is a control relay or open collector output for each channel. A built-in buzzer provides an audio alarm whenever a limit is reached. Visual indication of relay output status is given by LEDs on the front panel. The unit has a power line filter designed in to provide trouble free operation in harsh industrial environment. A watch dog timer keeps track of any run away programs.

MPS and MPS PLUS MODELS

This series is offered in 2 different models: The basic model (MPS4/MPS7) accepts only one type of transducer signal on all four/seven inputs e.g. 4-20ma loop current, J thermocouple etc. Same scaling is applied universally to all channels for linear



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voltage or current signals. The plus version (SC4+/SC7+) has fully programmable inputs and each channel can be configured independently to accept thermocouples, 4-20ma or voltage signal. Thus one channel could be displaying temperature, while the second channel displays pressure (e.g. 4-20ma) and the third, liquid level (e.g. 0-10vdc). Also, each channel is scaled independently for SC4+/SC7+ models.



SPECIFICATIONS

INPUT TYPE:

Input types: J,K,T,E,R,S,B, RTD & Thermistor,
4-20ma, 0-50ma, 0-5vdc, 0-10vdc
Cold junction comp. error: +/- 1C Max (10 to 40C)
Open thermocouple indication: HELP displayed.

Custom inputs available: Consult factory

SCAN RATE/ DISPLAY TIME:

Fixed: Two channels per second.
Display time: Programmable from 1-9999 seconds.

RELIABILITY/ACCURACY:

Calibration: NIST traceable (temperature)
Resolution: 1 degree C or F , Thermistor = 0.1 C/F
Selectable display units:: Centigrade or Fahrenheit

ANALOG TO DIGITAL CONVERSION:

20,000 count A/D converter
Dual slope integrating converter.
Conversion rate: Seven conversions/sec (typical)

DISPLAY:

Red 7-segment LED display, 0.39 inch (10mm) height
Negative polarity indication. Over-range indication: HELP
Display test: Briefly indicates 8.8.8.8.8.8. on power up

ELAPSED TIME:

Displayed in hours, minutes & seconds. Format: HH.MM.SS

POWER OPTION:

120VAC -- 60 Hz (Standard) 220VAC -- 50 HZ (Optional)
8VDC -- 12VDC @ 900ma (optional)

RELAY/OPEN COLLECTOR OUTPUT:

Relays: Single pole single throw, 1 amp @ 28vdc or 0.5 amp @120vac

Open Collector output: 50ma maximum (internal 5vdc source).

DIMENSIONS:

Case: 3.60" x 1.75" x 6.7" (7.3" including connectors)
Bezel size: 4.40" x 2.25" x 0.45"

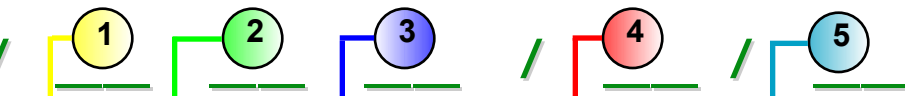
<u>TYPE</u>	<u>RANGE</u>	<u>ACCURACY</u>
J	-200 to 1190C	+ ₁ C+ ₁ cnt
K	-328 to 2174F	+2F+ ₁ cnt
	-170 to 1370C	+1C+ ₁ cnt
T	-274 to 2500F	+2F+ ₁ cnt
	-160 to 400C	+1C+ ₁ cnt
E	-256 to 752F	+2F+ ₁ cnt
	-185 to 915C	+1C+ ₁ cnt
R	-300 to 1675F	+2F+ ₁ cnt
	0C to 1600C	+3C+ ₁ cnt
S	32F to 2900F	+6F+ ₁ cnt
	0 to 1600C	+3C+ ₁ cnt
B	32 to 2900F	+6F+ ₁ cnt
	470 to 1800C	+3C+ ₁ cnt
RTD-385	900 to 3300F	+6F+ ₁ cnt
	-200 to 800C	+1C+ ₁ cnt
RTD-392	-328 to 1472F	+2F+ ₁ cnt
	-100 to 450C	+1C+ ₁ cnt
Thermistor	-148F to 842F	+2F+ ₁ cnt
	-8.0 to 100.0C	+0.5C+ ₁ ct
Current	17.2 to 212.0F	+1.0F+ ₁ ct
	1 to 30000	.05%+ ₁ cnt
Milli-volt	1 to 30000	.05%+ ₁ cnt
	1 to 30000	.05%+ ₁ cnt
Voltage	1 to 30000	.05%+ ₁ cnt
	1 to 30000	.05%+ ₁ cnt

Ordering Guide

To find a model number, fill in blanks 1, 2, 3, 4 and 5 with appropriate selection. Refer to ordering example below:

MPS4/MPS7

MPS4+/MPS7+



BM = J, K, T & E Thermocouples

R = 'R' type Thermocouple

S = 'S' type Thermocouple

B = 'B' type Thermocouple

TH = Thermistor

100MV = 100 Millivolt

RTD = RTD (.00385 &.00392)

1 = 4-20 Milliamp loop Current
2 = 0-50 Milliamp loop Current

3 = 0 - 5 VDC
4 = 0 -10VDC

5 = 120VAC
6 = 240VAC
7 = 15VDC

R = 4 Relays plus two audio/visual outputs
OC = 4 Solid State outputs (Open Collector)
Blank = No Output

Ordering Example: MPS7+/BM14/5/R -- Seven channel Scanner with J,K,T & E Thermocouple, 4-20ma and 0-10vdc inputs, 120vac Power and relay output option.