Bar-graph Indicator (Model 40005)

Masibus Model 40005 series provides economical, high visibility 101 segment bar-graph display for popular process signals. The scale measures a full 106mm for exceptional visibility over long distance at wide angle. A units-of-measure window allows the scale to be labeled.

Model 40005 Bar-Graph Indicator is a popular replacement for sight-glass or moving coil mechanical displays. With LEDs, there are no moving parts to wear & tear, visibility is excellent and the cost of maintenance is low. Bar-graph meters are an ideal means to display relative values, with no need to interpret numeric data. They are augmented by 4 digit digital display where absolute value is required.

Model 40005 is available in single channel slim line version and dual channel version. The aesthetically designed indicators display process variable on high resolution (1%) bar and full 4 digit numeric display in engineering units.

Model 40005 is equipped with additional features like transmitter power supply to excite field transmitter, isolated retransmission output for recorder and serial communication on RS 485 over MODBUS RTU protocol for PC based data acquisition and reporting system.

Model 40005 optionally provides two configurable alarm set point per channel with individual relays to annunciate operator for abnormal process condition.

The bar-graph housing is made of metallic enclosure and can be panel mounted also. When panel mounted the front of the display is sealed.

Features

- *Microprocessor based top of range digital bar-graph indicator*
- *Full 4 digit process display & 101 segment bar display*
- *Wide choice of inputs to select*
- *Square root extractor*
- *Fully configurable & programmable by front keypad*
- *Digital calibration*
- *Transmitter Power Supply*
- *Options :*
  - *Transmitter power supply*
  - *Retransmission output (Isolated)*
  - *RS 485 Serial communication*

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TECHNICAL SPECIFICATIONS	40005
Measured Input Signal	
Number of Inputs	1 or 2
Input Type, Measurement Range & accuracy	As per table 1
Sampling Period	500 mS
Burn out current	1.2 μA
Measuring current (RTD)	0.166 mA
Input resistance	TC / V : >1 M
Allowable lead-wire resistance	DC input voltage: 1K or less Effect from allowable signal source resistance: 0.01 % / 100 or less
Allowable leadwire resistance	15 / wire or less Effect from allowable lead wire resistance: 0.66°C / 10 or less
Allowable Input Voltage	TC / RTD: ±10V DC
	DC voltage: ±20V DC
Power supply	90 - 270VAC / 24 VDC
Noise Rejection Ratio	
Common Mode	> 100 dB (50 Hz)
Normal Mode	> 50 dB (50 Hz)
Reference junction compensation error	± 2 °C (10 to 55°C)
Applicable standard	ITS-90 or IPTS -68
Response time	
Input to relay o/p	< 5 Sec.
Input to Analog o/p	1 second or less, 63%(10 - 90%)
Resolution	14½ bits
24V DC Loop Power Supply for sensor	24 VDC ± 5% @ 100 mA
Retransmission Output	
Number of outputs	One per channel
Output Signal	4 to 20 mA (Isolated)
On-Load resistance	
For Current O/P	500 or Less
Output accuracy	± 0.25 % of span
Output Regulation	0.01% for full load change
Resolution	12 bits
Serial communication	RS 485(Modbus)

TECHNICAL SPECIFICATIONS	40005
Contact Output	
Usage	Alarm O/P
Number of relay contact outputs	Two per channel
Relay contact rating	230 Vac / 2Amp.
Relay Contact terminal	3 (NO, NC, Common)
Display Unit Specefication	
Process Value display	4- digit 7- segment Red LED (0.3")
Parameter display	Same PV display
Status Indicating lamp	Red LED's
Bar Display	
LED Bar	101
Resolution	1%
1st Bottom Bar Display	Under range
Construction/Installation/Wiiring	
Case	General purpose
Case material	MS powder coated with ABS moulded bezel
Case color	Dark Grey
Weight	Approx. 1.2 kg or less for single channel
	Approx. 1.7 kg or less for dual channel
Dimensions (single channel)	36(W) x 144(H) x 245(D) (all in mm)
Panel cut-out	33.5mm(W) X 138.5mm(H)
Dimensions (dual channel)	72(W) x 144(H) x 245(D) (all in mm)
Panel cut-out	68(W) x 138(H) (all in mm)

TABLE 1

Input Type		Range	Measurement Accuracy
Thermocouples	E	-200 to 1000 °C	±(0.1% of FS ± 1 count)
	J	-200 to 1200 °C	±(0.1% of FS ± 1 count)
	K	-200 to 1372 °C	±(0.1% of FS ± 1 count)
	T	-200 to 400 °C	±(0.1% of FS ± 1 count)
	B	450° to 1820 °C	±(0.1% of FS ± 1 count)
	R	0 to 1768 °C	±(0.1% of FS ± 1 count)
	S	0 to 1768 °C	±(0.1% of FS ± 1 count)
RTD	Pt-100	-199.9 to 850.0 °C	±(0.1% of FS ± 1 count)
Linear	0/1-5V	-1999 to 9999	±(0.1% of FS ± 1 count)
	0/4-20mA	-1999 to 9999	±(0.1% of FS ± 1 count)

ORDERING CODE

Model			No. of Input Type		Aux Power Supply		CH1 Display		CH2 Display		Mounting		Auxiliary o/p		
40005	X		X		XX		XX			XX	XX		X	X	X
	S	One	1	E	U1	90-270 VAC		PV	Bar		P0	Panel	Relay	Rx	RS485
	D	Two	2	J	A3	24VDC	RR	Red	Red	RR	W1	Wall-IP55	N	N	N
			3	K			RG	Red	Green	RG			N	N	Y
			4	T			GR	Green	Red	GR			N	Y	N
			5	B			GG	Green	Green	GG			N	Y	Y
			6	R									Y	N	N
			7	S									Y	N	Y
			9	Pt-100, 3W									Y	Y	N
			C	4-20mA									Y	Y	Y
			D	0-20mA											
			E	1-5VDC											
			F	0-5VDC											

X - Specify from table | Y - Yes | N - No | Rx - Retransmission

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