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

Bar-graph Indicator (Model 40005)

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Number of Inputs1 or 2UsageAlarm $0/P$ Input Type, Measurement Range & accuracyAs per table 1Number of relay contact outputsTwo per channelSampling Period500 mSRelay Contact terminal3 (No. NC, Common)Burn out current1.2 μ ADisplay Unit SpeceficationRelay Contact terminal3 (No. NC, Common)Measuring current (RTD)0.166 mADisplay Unit SpeceficationHore Status4 diglt 7- segment Red LED (0.3')Allowable lead-wire resistanceDC input voltage: 1K or lessProcess Value display4 - diglt 7- segment Red LED (0.3')Allowable lead-wire resistanceDS / wire or lessEffect from allowable ignal source resistance: 0.01 % / 100 or lessStatus findicating lamp terestistance: 0.01 % / 100 or lessAllowable lead-wire resistanceTO / RTD: ±10V DCConstruction/Installation/Wiiring ts Bottom Bar DisplayUnder rangeDe voltage: ±20V DCDo voltage: ±20V DCCaseGaneral purposeDe voltage: ±20V DCSourceGase colorMS powder coated with ABS moulded bozelNormal Mode> 100 dB (50 Hz)Mprox. 1.2 kg or less for single channel parle lead-with ABS moulded bozelApprox. 1.2 kg or less for single channelResponse timeInput to ralay ofp1 \$S-90 or IPTS -68Parle LetMasser decament parle lead-with V > 305.mm(M)Response timeInput to ralay ofp1 \$S-90 or IPTS -68Parle LetSisting Midded V > 305.mm(M)Response timeInput to ralay ofp1 \$S-90 or IPTS -68Parle LetContercercercercercercercer	TECHNICAL SPECIFICATIONS	40005	TECHNICAL SP	ECIFICATION	S	40005			
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Input to relay o/p Input to Analog o/p< 5 Sec.Panel cut-out $68(W) \times 138(H)$ (all in mm)Resolution14½ bits14½ bits TABLE 1 24V DC Loop Power Supply for sensor24 VDC \pm 5% @ 100 mAInput TypeRangeMeasurement AccuracyRetransmission Output0ne per channelJ-200 to 1000 °C \pm (0.1% of FS \pm 1 count)Number of outputsOne per channelK-200 to 1372 °C \pm (0.1% of FS \pm 1 count)Output Signal4 to 20 mA (Isolated)T-200 to 1372 °C \pm (0.1% of FS \pm 1 count)On-Load resistanceB450° to 1820 °C \pm (0.1% of FS \pm 1 count)For Current 0/P500 or LessR0 to 1768 °C \pm (0.1% of FS \pm 1 count)Output Regulation0.01% for full load changeRTDPt-100-199.9 to 850.0 °C \pm (0.1% of FS \pm 1 count)Linear0/1-5V-1999 to 9999 \pm (0.1% of FS \pm 1 count)	Response time		Dimensions (du	ual channel)		72(W) x 144(H) x 245(D) (all in mm)			
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Input TypeRangeMeasurement Accuracy24V DC Loop Power Supply for sensor24 VDC \pm 5% @ 100 mAInput TypeRangeMeasurement AccuracyRetransmission OutputThermocouplesE-200 to 1000 °C \pm (0.1% of FS \pm 1 count)Number of outputsOne per channelJ-200 to 1200 °C \pm (0.1% of FS \pm 1 count)Output Signal4 to 20 mA (Isolated)T-200 to 1372 °C \pm (0.1% of FS \pm 1 count)On-Load resistanceB450° to 1820 °C \pm (0.1% of FS \pm 1 count)For Current 0/P500 or LessR0 to 1768 °C \pm (0.1% of FS \pm 1 count)Output Regulation0.01% for full load changeRTDPt-100-199.9 to 850.0 °C \pm (0.1% of FS \pm 1 count)Linear0/1-5V-1999 to 9999 \pm (0.1% of FS \pm 1 count)	Input to Analog o/p	1 second or less, 63%(10 - 90%)							
PetronDurphe to the duppy for sensor $24 VBC \pm 3.6 \mathbb{C}$ for hirdThermocouplesE-200 to 1000 °C $\pm (0.1\% \text{ of FS} \pm 1 \text{ count})$ Retransmission OutputOne per channelJ-200 to 1200 °C $\pm (0.1\% \text{ of FS} \pm 1 \text{ count})$ Number of outputsOne per channelK-200 to 1372 °C $\pm (0.1\% \text{ of FS} \pm 1 \text{ count})$ Output Signal4 to 20 mA (Isolated)T-200 to 400 °C $\pm (0.1\% \text{ of FS} \pm 1 \text{ count})$ On-Load resistanceB450° to 1820 °C $\pm (0.1\% \text{ of FS} \pm 1 \text{ count})$ For Current 0/P500 or LessR0 to 1768 °C $\pm (0.1\% \text{ of FS} \pm 1 \text{ count})$ Output accuracy $\pm 0.25\%$ of spanS0 to 1768 °C $\pm (0.1\% \text{ of FS} \pm 1 \text{ count})$ Output Regulation0.01\% for full load changeRTDPt-100-199.9 to 850.0 °C $\pm (0.1\% \text{ of FS} \pm 1 \text{ count})$ Deschuiring12 bitsDifferenceRTDPt-100-199.9 to 9999 $\pm (0.1\% \text{ of FS} \pm 1 \text{ count})$	Resolution	14½ bits			_				
Hetransmission outputJ-200 to 1200 °C $\pm (0.1\% \text{ of FS} \pm 1 \text{ count})$ Number of outputsOne per channelK-200 to 1200 °C $\pm (0.1\% \text{ of FS} \pm 1 \text{ count})$ Output Signal4 to 20 mA (Isolated)T-200 to 400 °C $\pm (0.1\% \text{ of FS} \pm 1 \text{ count})$ On-Load resistanceB450° to 1820 °C $\pm (0.1\% \text{ of FS} \pm 1 \text{ count})$ For Current O/P500 or LessR0 to 1768 °C $\pm (0.1\% \text{ of FS} \pm 1 \text{ count})$ Output accuracy $\pm 0.25\%$ of spanS0 to 1768 °C $\pm (0.1\% \text{ of FS} \pm 1 \text{ count})$ Output Regulation0.01\% for full load changeRTDPt-100-199.9 to 850.0 °C $\pm (0.1\% \text{ of FS} \pm 1 \text{ count})$ Parcelution12 bitc12 bitc12 bitc12 bitc-1999 to 9999 $\pm (0.1\% \text{ of FS} \pm 1 \text{ count})$	24V DC Loop Power Supply for sensor	24 VDC ± 5% @ 100 mA		-	-				
Number of outputsOne per channelK-200 to $1372 \degree C$ $\pm (0.1\% \circ fFS \pm 1 \circ count)$ Output Signal4 to 20 mA (Isolated)T-200 to $1372 \degree C$ $\pm (0.1\% \circ fFS \pm 1 \circ count)$ On-Load resistanceB $450\degree to 1820 \degree C$ $\pm (0.1\% \circ fFS \pm 1 \circ count)$ For Current O/P500 or LessR0 to $1768 \degree C$ $\pm (0.1\% \circ fFS \pm 1 \circ count)$ Output accuracy $\pm 0.25\% \circ f span$ S0 to $1768 \degree C$ $\pm (0.1\% \circ fFS \pm 1 \circ count)$ Output Regulation0.01\% for full load changeRTDPt-100-199.9 to 850.0 \degree C $\pm (0.1\% \circ fFS \pm 1 \circ count)$ Parcelution12 bitcLinear0/1-5V-1999 to 9999 $\pm (0.1\% \circ fFS \pm 1 \circ count)$	Retransmission Output		mermocouples			()			
Output Signal 4 to 20 mA (Isolated) T -200 to 400 °C \pm (0.1% of FS \pm 1 count) On-Load resistance B 450° to 1820 °C \pm (0.1% of FS \pm 1 count) For Current 0/P 500 or Less R 0 to 1768 °C \pm (0.1% of FS \pm 1 count) Output accuracy \pm 0.25 % of span S 0 to 1768 °C \pm (0.1% of FS \pm 1 count) Output Regulation 0.01% for full load change RTD Pt-100 -199.9 to 850.0 °C \pm (0.1% of FS \pm 1 count) Parcelution 12 bitc Linear 0/1-5V -1999 to 9999 \pm (0.1% of FS \pm 1 count)	Number of outputs	One per channel				· · · · · · · · · · · · · · · · · · ·			
For Current 0/P500 or LessR0 to $1768 \degree C$ $\pm (0.1\% or FS \pm 1 count)$ Output accuracy $\pm 0.25\%$ of spanS0 to $1768 \degree C$ $\pm (0.1\% or FS \pm 1 count)$ Output Regulation0.01% for full load changeRTDPt-100-199.9 to $850.0 \degree C$ $\pm (0.1\% or FS \pm 1 count)$ Paragluign12 bitsLinear0/1-5V-1999 to 9999 $\pm (0.1\% or FS \pm 1 count)$	Output Signal	4 to 20 mA (Isolated)				· · · · · · · · · · · · · · · · · · ·			
Output accuracy $\pm 0.25\%$ of spanS0 to 1768 °C $\pm (0.1\% \text{ of FS} \pm 1 \text{ count})$ Output Regulation0.01\% for full load changeRTDPt-100-199.9 to 850.0 °C $\pm (0.1\% \text{ of FS} \pm 1 \text{ count})$ Paraclution12 bitsLinear0/1-5V-1999 to 9999 $\pm (0.1\% \text{ of FS} \pm 1 \text{ count})$	On-Load resistance			В	450° to 1820 °C	\pm (0.1% of FS \pm 1 count)			
Output accuracy \pm 0.25 % of spanRTDPt-100-199.9 to 850.0 °C \pm (0.1% of FS \pm 1 count)Output Regulation0.01% for full load changeLinear0/1-5V-1999 to 9999 \pm (0.1% of FS \pm 1 count)Parallelition12 bits	For Current O/P	500 or Less				· · · · · · · · · · · · · · · · · · ·			
Cutput Regulation 0.01% for full load change Linear $0/1-5V$ -1999 to 9999 $\pm (0.1\%$ of FS ± 1 count)	Output accuracy	± 0.25 % of span				· · · · · · · · · · · · · · · · · · ·			
Pacelution 12 bits Linear 0/1-5V -1999 to 9999 ± (0.1% of F5 ± 1 Count)	Output Regulation	0.01% for full load change				(/			
		12 bits	Linear	-1 -		(/			

ORDERING CODE

RS 485(Modbus)

Serial communication

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Model			No	No. of Input Type		Aux Power Supply		1 Display	CH2 Dis	play		Mounting		Auxiliary o/p	
40005	Х		X		XX		XX		XX		XX		Х	Х	Х
	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	Ν	N
			3	К			RG	Red	Green	RG			N	Ν	Y
			4	Т]		GR	Green	Red	GR			N	Y	N
			5	В	1		GG	Green	Green	GG			N	Y	Y
			6	R]								Y	Ν	N
			7	S									Y	Ν	Y
			9	Pt-100, 3W									Y	Y	N
			С	4-20mA									Y	Y	Y
			D	0-20mA											
			Ε	1-5VDC											
			F	0-5VDC	x	- Specify from table	Y - Ye	es N - No	Rx - Retransr	nission					

All specifications are subject to change without notice due technology reasons. Doc.ref.CB-2/4005/R2/0110