

### MTH500

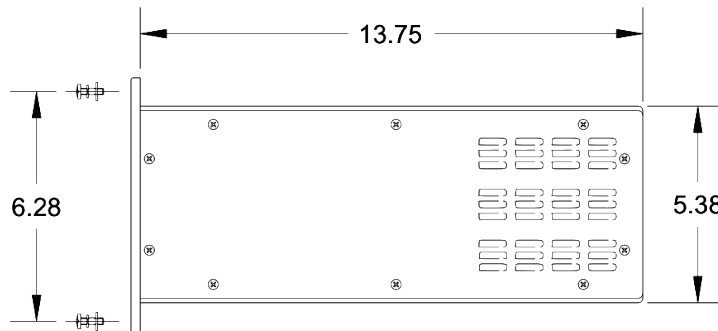
The MTH500 Math Module replaces the obsolete Foxboro H-Line 66C process control instrument. The design of the MTH500 allows it to replace several H-Line 66C models by offering multi-functional options through jumper-configurable selections and calibration adjustments on the main circuit board.

The MTH500 can function as a: Summer, Summer with Feedback, and Low Gain plus Bias Module. In the Summer configuration, it can accept up to four input signals plus an internally supplied constant value. Each channel is adjustable from a gain of 0.05 to 2 with an inversion option.

The Summer with Feedback configuration accepts two input signals plus a constant with a variable gain from 0.5 to 1.5 and inversion option. The Low Gain plus Bias accepts one input signal plus a constant with a variable gain of 0.05 to 2.2. The calibrated gain for each of these units is 0.1 to 1.1 and scalable at x1, x10, or x100. The output signal driver is a unity gain buffer with frequency compensation.



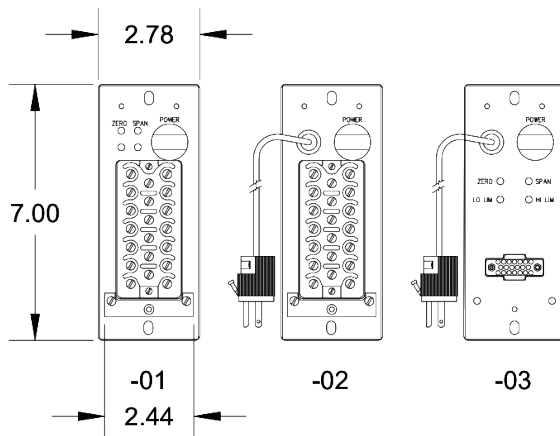
MTH500



PARTIAL MODE PANEL



FULL MODE PANEL



“-01” = Terminal Block; “-02” = Terminal Block w/ Power Cord ; “-03” = M 20 Connector w/ Power Cord

# NUSI 500 Series

## Math Module

### SPECIFICATIONS

Power Supply Voltage:	85 to 132 Vac, 47 to 440 Hz, or 110 to 170 Vdc
Voltage Effects:	Less than 0.01% change in output, cumulative for all the variations listed above
Power Consumption	8 W (nominal), 12 W, 24 VA (maximum) (using switching-type power supplies)
Dielectric Withstand:	3000 Vdc and 1000 Vac (RMS) from input to output 1000 Vdc and 1000 Vac (RMS) from input to case
Surge Withstand:	No damage when the waveform of IEEE 472-1974 is applied in common or transverse mode to any port
Electrical Qualification:	Plant protection, qualified to IEEE 323 1974/1983 and IEEE 344 1975/1987

### HOW TO ORDER

The model number and configuration typically should be specified as follows:

Example: **MTH500-30/00/00/00-08-08-03**

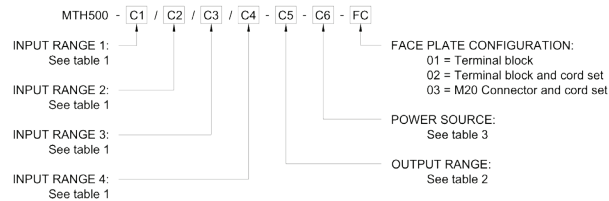


Table 1 — Input Range			Table 2 — Output Range		
Code	Input Range	Impedance $\Omega$	Code	Output Range	Impedance $\Omega$
00	Not Loaded		00	Not Loaded	
01	0 to 100 mVdc	100 M	01	0 to 100 mVdc	32.9
02	0 to 51 mVdc	100 M	02	0 to 51 mVdc	17.3
03	0 to 1 Vdc	100 M	03	0 to 1 Vdc	299
04	0 to 5 Vdc	100 M	04	0 to 5 Vdc	825
05	1 to 5 Vdc	5.2 M	05	1 to 5 Vdc	825
06	0 to 10 Vdc	400 k	06	0 to 10 Vdc	1000
07	4 to 20 mA dc	249	07	4 to 20 mA dc	1050 *
08	10 to 50 mA dc	100	08	10 to 50 mA dc	600 *
09	0 to 1 mA dc	50	09	0 to 180 mA dc	59.3
10	0 to 132 Vac	3.4 M	10	0 to 3.5 Vac	825
11	0 to 20 mA dc	249	11	0 to 20 mA dc	1050 *
12	0 to 50 mA dc	100	12	0 to 50 mA dc	600 *
13	50 to 10 mA dc	100	13	1 to 5 Vdc	249
14	Variable	1 M	14	10 to 44.29 mA dc	660 *
15	0 to 8 Vdc	428 k	15	N/A	
16	-10 to 10 Vdc	3.7 M	16	0 to 1 mA dc	30 k *
17	-2 to 15 Vdc	2.4 M	17	4 to 22.49 mA dc	1050 *
18	5 to 1 Vdc	100 M	18	10 to 56.22 mA dc	550 *
19	3.6 to 11.6 Vdc	477 k			
20	2 to 10 Vdc	427 k			
21	-2 to 2 Vdc	3.5 M			
22	-20 to 20 mA dc	249			
23	N/A				
24	1 to 2 Vdc	3.2 M			
25	0 to 4 Vdc	100 M			
26	10 to 32.4 mA dc	200			
27	4 to 10 mA dc	475			
28	0 to 10 V (Hi-Z)	1013			
29	0 to 120 Vdc	2.5 M			
30	Group 1 Selectable	Varies			
31	2, 4 or 10 Vdc	Varies			
32	0 to 2 Vdc	100 M			
33	0 to 3.45 Vdc	100 M			
34	1.08 to 5.4 Vdc	5.2 M			

Table 3 — Power Source	
Code	Power
00	Not Loaded
01	$\pm 15 \pm 1$ Vdc
02	$28 \pm 2$ Vdc
03	$5 \pm 0.25$ Vdc
04	$12 \pm 1$ Vdc
05	$15 \pm 1$ Vdc
06	$24 \pm 2$ Vdc
07	$48 \pm 2$ Vdc
08	85 to 132 Vac, 125 Vdc

\* These are not output impedances; these are the output drive capabilities of the current output models.

#### CONTACT INFORMATION:

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