

CMM500

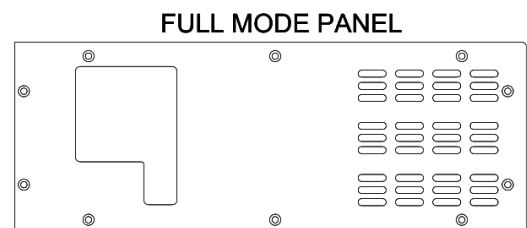
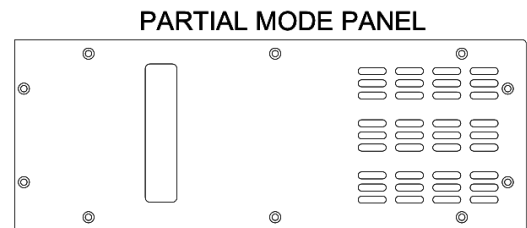
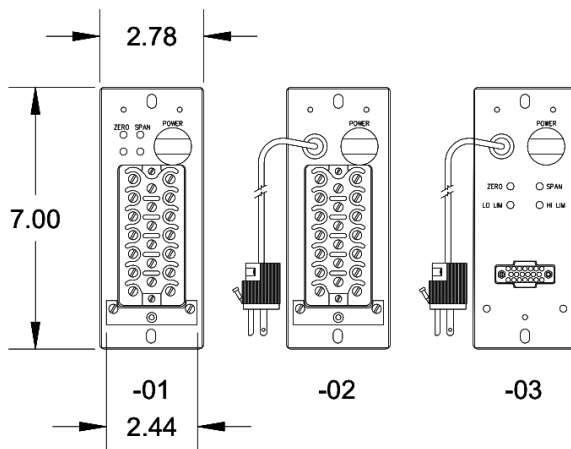
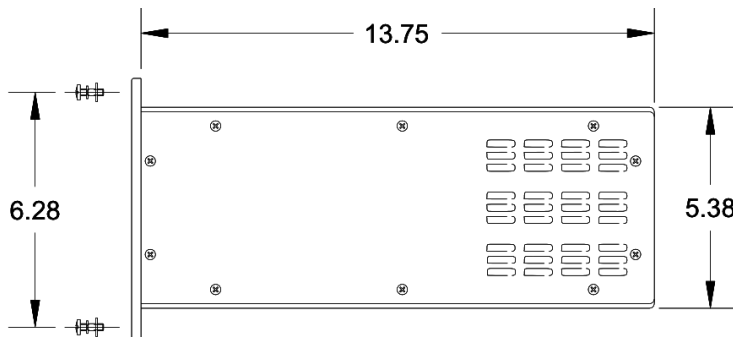
The CMM500 Complex Math Module replaces the obsolete Foxboro H-Line 66A and 66D process control instruments. The design of the CMM500 allows it to replace the Foxboro instruments by offering multi-functional options through jumper-configurable selections and calibration adjustments on the main circuit board.

The CMM500 can be configured to perform multiplication, division, squaring, or square root functions. When used as a multiplier, the module accepts two inputs that can be independently inverted, each having an adjustable scalar ranging from 0.02 to 1.0 and an overall variable gain from 1 to 10.

Division is accomplished by accepting two signal inputs (divisor must be positive) that can be scaled from 0.02 to 1.0 with an overall gain adjustment ranging from 10 to 100. Squaring is achieved by applying a signal to both inputs of a multiplier module, and square root extraction is performed in the division circuitry down to 0.05% of input span with an overall gain of 10.



CMM500



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

NUSI 500 Series

Complex Math Module

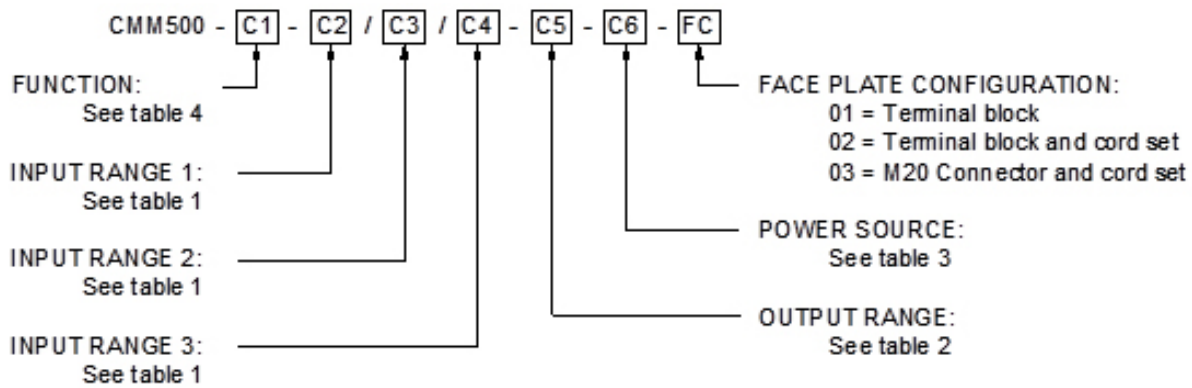
SPECIFICATIONS

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: **CMM500-3-06/07/08-04-08-03**



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CONTACT INFORMATION:

Curtiss-Wright Nuclear Division / I&C Products
1350 Whitewater Drive, Idaho Falls, ID, 83402 T: (208) 497.3333

Table 1 — Input Range			Table 2 — Output Range		
Code	Input Range	Impedance Ω	Code	Output Range	Impedance Ω
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	Table 3 — Power Source		
26	10 to 32.4 mA dc	200	Code	Power	
27	4 to 10 mA dc	475	00	Not Loaded	
28	0 to 10 V (Hi-Z)	1013	01	$\pm 15 \pm 1$ Vdc	
29	0 to 120 Vdc	2.5 M	02	28 ± 2 Vdc	
30	Group 1 Selectable	Varies	03	5 ± 0.25 Vdc	
31	2, 4 or 10 Vdc	Varies	04	12 ± 1 Vdc	
32	0 to 2 Vdc	100 M	05	15 ± 1 Vdc	
33	0 to 3.45 Vdc	100 M	06	24 ± 2 Vdc	
34	1.08 to 5.4 Vdc	5.2 M	07	48 ± 2 Vdc	
			08	85 to 132 Vac, 125 Vdc	
Table 4 — Function					
	Code	Equation	Function		
	00	Not Loaded			
	01	0 to 100 mVdc	100 M		
	02	0 to 51 mVdc	100 M		
	03	0 to 1 Vdc	100 M		
	04	0 to 5 Vdc	100 M		
	05	1 to 5 Vdc	5.2 M		
	06	0 to 10 Vdc	400 k		
	07	4 to 20 mA dc	249		
	08	10 to 50 mA dc	100		



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