

TMD500 Time Domain Module

The TMD500 Time Domain Module replaces the obsolete Foxboro H Line 66R lead/lag and special style process control instrument. The design of the TMD500 enables it to replace several H-Line 66R models by offering multi-functional options through jumper-configured selections and calibration adjustments on the main circuit board.

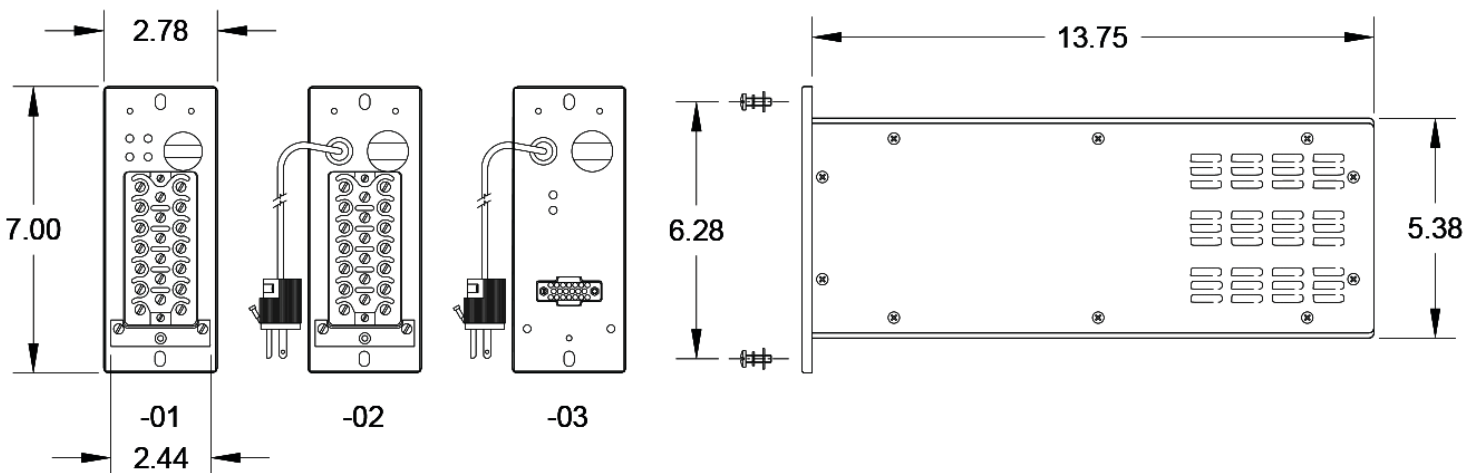
The TMD500 is capable of providing the following functions as determined by each individual application: Lead; Lag; Filter; Lead/Lag; and Impulse or Dynamic Compensator.

The Lead function is a unity gain differentiator with an adjustable period from 0.01 to 6 minutes, and has a 90° phase lead and provides a LaPlace transfer function of $\tau s / (\tau s + 1)$ or τs when used in conjunction with a feedback summer. The Lag function is a long-term unity gain filter with an adjustable period from 0.01 to 6 minutes, has a 90° phase lag and provides a LaPlace transfer function of $1 / (\tau s + 1)$. The Filter function has a unity gain low-pass filter with an adjustable period from 12.4 milliseconds to 12.4 seconds, and provides a LaPlace transfer function of $1 / (\tau s + 1)$.

After Scientech receives specifications and time plots from the customer, the appropriate electronic components are installed on the circuit board to match the specified curves. The customized module ships with the test data and accompanying curve plot that demonstrates conformity to the original module.



TMD500



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

NUSI 500 Series

Time Domain 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 voltages 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

HOW TO ORDER

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

Example: TMD500-06/07/08/09-04-08-03

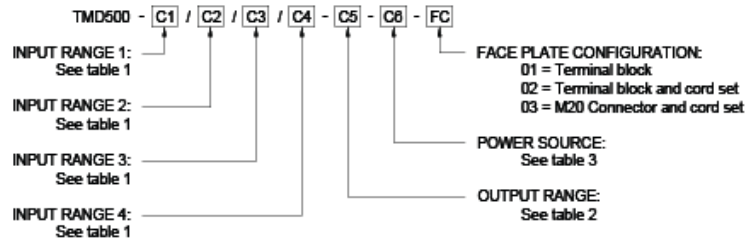


Table 1 — Input Range			Table 2 — Output Range		
Code	Input Range	Impedance Ω	Code	Output Range	Impedance Ω
00	Not Loaded		00	Not Loaded	
01	0 to 100 mVdc	100 M	01	0 to 100 mVdc	32.9
02	0 to 51 mVdc	100 M	02	0 to 51 mVdc	17.3
03	0 to 1 Vdc	100 M	03	0 to 1 Vdc	299
04	0 to 5 Vdc	100 M	04	0 to 5 Vdc	825
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	Table 3 — Power Source		
20	2 to 10 Vdc	427 k			
21	-2 to 2 Vdc	3.5 M	Code	Power	
22	-20 to 20 mA dc	249	00	Not Loaded	
23	N/A		01	$\pm 15 \pm 1$ Vdc	
24	1 to 2 Vdc	3.2 M	02	28 ± 2 Vdc	
25	0 to 4 Vdc	100 M	03	5 ± 0.25 Vdc	
26	10 to 32.4 mA dc	200	04	12 ± 1 Vdc	
27	4 to 10 mA dc	475	05	15 ± 1 Vdc	
28	0 to 10 V (Hi-Z)	1013	06	24 ± 2 Vdc	
29	0 to 120 Vdc	2.5 M	07	48 ± 2 Vdc	
30	Group 1 Selectable	Varies	08	85 to 132 Vac, 125 Vdc	
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			

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

CONTACT INFORMATION:

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