

M3L Series PC Programmable Transmitters

"ONE-STEP CAL" Programming Without Needing a PC is also available.

- Easy and precise field configurable I/O ranges
- Enhanced PC Configurator Software
- 1500 Vac isolation
- 18 mm (.71") thin profile DIN rail mounting

M-System's M3L Series is a DIN rail mounted, universal input transmitter with 1500 Vac isolation.

Ideal for Spare Parts Stock Reduction Programs, the M3L Series supports two methods for configuring the unit. The unit's DIP switches/control buttons simplify in-field configuration without using a PC. When identical multiple configurations are required, save yourself some time downloading the setting from PC software.

M3L Series is your safe bet when you are not sure of your final I/O signals.

Typical applications include eliminating ground loops in temperature measurement applications and providing an isolated interface to data acquisition and control systems.



MODEL	FUNCTION	
M3LU	Universal (DCmV, V, mA, T/C, RTD, Pot)	
M3LV	DC mV, V, mA input	
M3LT	Thermocouple input	
M3LR	RTD input	NEW
M3LM	Potentiometer input	NEW
M3LPA	Frequency input	
M3LLC	Strain gauge input	
M3LDY	Current loop supply	

SPECIFICATIONS

Input type	DC mV, V, mA	Thermocouple	RTD	Pot/Resistance	Frequency	Strain Gauge	Two-wire XMTR
Model No.	M3LU						
Model No.	M3LV	M3LT	M3LR	M3LM	M3LPA	M3LLC	M3LDY
Selectable input	0-20 mA ±1V ±10V	(PR), K, E, J, T B, R, S, C (WRe 5-26) N, U, L P (Platinel II)	Pt 100 - Pt 1000 Ni 100, Ni 120, Ni 508.4 Ni-Fe 604 Cu 10 @25°C	Pot: 80-4000 Ω 90 - 20k Ω (M3LM) Resist: 10-4000 Ω	Open collector Mechanical contact Voltage pulse Two-wire current RS-422 line driver Max. 100 kHz	0.0-1.0 mV/V 0.0-3.0 mV/V 0.0-10.0 mV/V 0.0-30.0 mV/V	0-20 mA
Excitation supply	----				4 V, 8 V, 12 V	0.1 to 10.0 V	24-28 Vdc
Maximum current					20mA	30mA	22mA
Selectable output	0-20 mA (min. 1mA span) ±2.5V (min. 250mV span) ±10V (min. 1V span)						
DC power input	10-32 Vdc				10-32 Vdc	10-32 Vdc	24 Vdc
AC power input	100-240 Vac (available only for M3LU)				100-240 Vac	----	----
Accuracy	•				•	±0.2%	•
Response (0-90%)	≤0.2 sec. with the optimum synch filter (M3LU)				•	≤10 msec.	≤1.0 sec.
Operating temp	-25 to +65°C (-13 to +149°F)						
Insulation resistance	≥100MΩ with 500 Vdc						
Dielectric strength	1500 Vac @1 minute (input to output or power to ground) 500 Vac @1 minute (output to power) Except AC powered M3LU: 2000 Vac @1 minute (input to output to power to ground)						
CE marking	Yes				Yes	Yes	Yes

*Depends upon the I/O types and ranges. Refer to the data sheet for the respective model for detail.

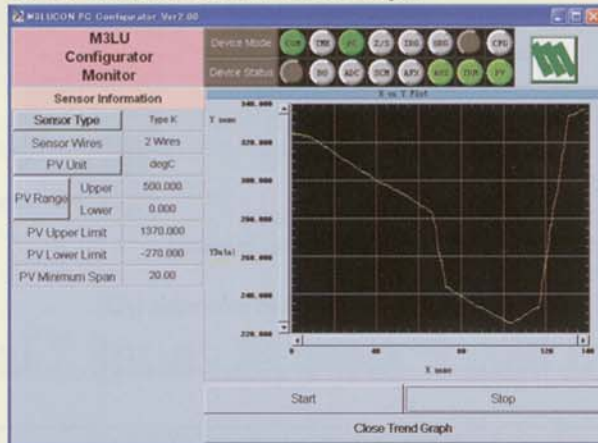
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Enhanced PC Configurator Software

PC Configurator is packed with advanced features such as:

- Parameter setting are easily configured with a help of bargraphs on the screen.
- Trend graph monitoring is also possible.
- Fixed analog output can be set and provided for simulation when conducting a loop test.
- 128-point linearization and custom thermocouple/RTD tables
- Fine calibration
- Save configuration files
- Input filter
- Diagnostics

Sensor Information with Trend Graph



PC Configuration

When you need to apply the same setting to multiple transmitters, downloading one setting from the PC is convenient. The PC Configurator Software is available to download at M-System web site.

Analog Output Calibration



File Management (Compare)

Exit	Read File	Write File	Upload	Download			
1	Compare	All Copy <<	>> All Copy	Compare			
Properties		File Configuration		Device Configuration			
Description	CHG	TC Type K - Temperature	<	>	00014361		
Tag No.	CHG	Sample 001	<	>	Sample 002		
Sensor Type	CHG	Type K	<	>	PT100		
Sensor Wires	CHG	2 Wires	<	>	4 Wires		
Sensor Unit	CHG	degC	<	>	degC		
PV Upper Range	CHG	500.000	degC	<	>	100.000	degC
PV Lower Range	CHG	0.000	degC	<	>	0.000	degC
PV Damping	CHG	0.000	Sec	<	>	0.000	Sec
Transfer Function	CHG	LINEAR	<	>	LINEAR		
Burnout Code	CHG	None	<	>	Upcall		
CJC Mode	CHG	CJC ON	<	>	CJC ON		
Term Unit	CHG	degC	<	>	degC		
AO Type	CHG	-10 to 10 V	<	>	-10 to 10 V		
AO Upper Range	CHG	5.000	V	<	>	5.000	V
AO Lower Range	CHG	1.000	V	<	>	1.000	V

"ONE-STEP CAL" Configuration

Both input type & range and output type & range are totally independent to each other, which makes the calibration easier and quicker than ever. Simply by pushing the front control buttons, "ONE-STEP CAL" programming is possible without requiring personnel to have any special knowledge to do so.

LED

The front LED's colors and flashing patterns help you easily identify the transmitter's status and confirm the setup actions in each step of Calibration Modes.

MODE Button

UP Button

DOWN Button

