

B3 Series DIP-Switch Configurable Two-Wire Transmitters

- Input type and range selectable with the internal DIP switches and fine calibration using the front potentiometers.
- Wide supply voltage range 12-45 Vdc
- Eliminates noise and prevents ground loops with 1500 Vac isolation between input and output
- 2000 Vac isolation

M-System's B3 Series are DIN rail mounted, input configurable two-wire transmitters with 1500 Vac isolation between input and output.

The input type & range are easily programmable with internal DIP switches and front potentiometers, not needing any special computer knowledge to program.

For example, after setting the internal SW1 and SW2 for selecting an overall range, gain and offset, using a DC input simulator as a reference, the B3FV could be adjusted to 0 to 10 V range by simply applying desired minimum and maximum input levels and turning the respective front potentiometer.

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

For the most basic isolation applications, the Model B3VS/2 dual channel isolator is an economical solution. The B3VS/2 houses two transmitters in the series' standard enclosure, accepting and providing independently isolated 4-20 mA signals.

All B3 Series transmitters are CE marked and are designed to meet or exceed UL and CSA requirements. Approvals are pending.



MODEL	FUNCTION
B3HU	Universal temperature input, HART
B3PU	Universal temperature input, PROFIBUS-PA NEW
B3FV	DC mV, V, mA input
B3FT	Thermocouple input
B3FR	RTD input
B3FP	Frequency input
B3VS/1	Single-channel 4-20 mA isolator
B3VS/2	Dual-channel 4-20 mA isolator

SPECIFICATIONS

Input type	DC mV, V, mA	Thermocouple	RTD	Frequency
Model No.	B3FV	B3FT	B3FR	B3FP
Selectable input	-30 to +30 mA ±100V	K, E, J, T, R, N	Pt 100, Ni 120 Cu 10 @25°C	Open collector, Voltage pulse Two-wire current, Max. 100 kHz
Output	4-20 mA (600Ω at 24V)			
Supply voltage	12-45 Vdc			
Accuracy	±0.1%	±0.2% (K/J), ±0.3% (T/E/N) ±0.4% (R) typical	±0.2% (±0.3% for Ni 120)	±0.1% typical
Response (0-90%)	≤0.5 sec.	≤0.5 sec.	≤0.5 sec.	≤0.5 sec. + pulse cycle
Operating temp	-40 to +85°C (-40 to +185°F)			
Insulation resistance	≥100MΩ with 500 Vdc			
Dielectric strength	2000 Vac @1 minute (input to output to ground)			
CE marking	Yes			