



## 9000L 9000LE Signal Isolator



Stable



Robust



Accurate



HART Protocol  
Supported



Masibus 9000L and 9000LE Signal Isolators are compact yet rugged Isolators used for reliable isolation and transformation of industry Standard field signals. 9000L model is available in one input with one or two output. 9000LE is available in one and two channel input/output with isolation.

9000L series Isolators are highly accurate, have low drift, low Temperature coefficient, fast response, high noise rejection and housed in a compact DIN-Rail mount enclosure.

Model 9000L has Aux supply range of 20 to 265V AC/DC as a unique feature whereas model 9000LE has option of 2W Transmitter Input with HART pass through.

With dual output option, these models also acts as signal distributor. A typical application could be where the signal has to be distributed for indication on local panel, field control room, main control room or DCS system. The isolator provides a good protection for sensitive system parts against voltage spikes etc.

### Features

- Compact DIN-Rail mount design of 35mm for one and two output.
- 2W transmitter input in 9000LE with HART Pass
- Extended universal power supply range: 20V to 265V DC or AC for 9000L
- High KV 3 port isolation
- High Accuracy, low drift, low temperature effect
- Input and Output well protected
- Fast response suits all applications
- High CMRR and NMRR

### Applications

- Isolation of process field signals
- Signal isolation in VFD panels
- Distribution of signals in Automation Panels
- Protect Systems against Field over voltage/Lightning
- Convert/distribute signals
- Impedance matching of transmitters and receiver instruments
- Powering of field transmitters

# TECHNICAL SPECIFICATIONS

Input				Power Supply			
	9000L	9000L-M	9000LE		9000L / 9000L-M	9000LE	
Input Type	Current	Voltage/ Current	Current	Voltage	20 to 265V DC/AC, 45Hz-65Hz	20 to 35 VDC	
Input Range	4 to 20mA	0 to 10V DC 4 to 20mA	4 to 20mA	Power Consumption	≤5VA	With TPS: ≤1.3W/Channel Without TPS: ≤0.7W/Channel	
Input Impedance	≤100 Ω	Current i/p ≤100 Ω Voltage i/p ≥1 MΩ	≤30Ω	Power ON status LED		Red	
Temperature Coefficient	≤100 ppm/°C		≤50 ppm/°C	<b>Isolation (Withstanding voltage)</b>			
CMRR	> 100 dB			Between Power to Inputs and Outputs	At least 1.5 KV AC for 1 minute	Galvanic Isolation of 2KVAC for 1 minute	
NMRR	> 70 dB			Between Inputs to Outputs	At least 1.5 KV AC for 1 minute	Galvanic Isolation of 2KVAC for 1 minute	
<b>Output</b>				Between Output to Output	At least 1.5 KV AC for 1 minute	Galvanic Isolation of 2KVAC for 1 minute	
	9000L	9000L-M	9000LE	Between Input to Input	NA	Galvanic Isolation of 2KVAC for 1 minute	
Output Type	Current	Voltage/ Current	Current	Insulation Resistance	>20MΩ@500V DC between All terminals and grounding terminal.	>200MΩ@1000V DC between All terminals	
Output Range	4 to 20mA	4 to 20mA 0 to 10V DC	4 to 20mA	<b>Physical</b>			
Output Load Resistance	≤750Ω@20mA	Current o/p ≤750Ω Voltage o/p ≥2KΩ	≤500Ω@20mA	Mounting Type	DIN-Rail (35 mm)		
Accuracy	± 0.25% of FS		± 0.1% of FS	Terminal Block	UL,CSA standard		
Response Time	≤ 50mS		≤ 50uS	Terminal Cable Size	2.5mm <sup>2</sup>		
Transmitter Power Supply (Optional)	NA		Open circuit voltage: ≥ 24VDC Available voltage: ≥ 23VDC @ 4mA, ≥ 16VDC @ 20mA	Enclosure Material	ABS		
Communications supported	NA		HART pass supported in both channels*	IP Rating	IP20		
*HART Pass supported with 2W transmitter only				Dimension (in mm)	75(H) x 35(W) x 107(D)		
				Weight	≤ 200 g		
				<b>Environmental</b>			
				Operating Temperature	-20 to 60 °C		
				Storage Temperature	-30 to 70 °C		
				Relative Humidity	30 to 95% RH (Non-Condensing)		
				Protection	Conformal coating on PCB		

## Ordering Code

Model	No. of Channels	Transmitter Power Supply (TPS)	
9000LE	X	X	
	1 One	Y	Yes
	2 Two	N	No

Model	No of O/P
9000L	X
	1 One
	2 Two

Model	Input Type	O/P type-1	O/P type-2
9000L	M X	X	X
	C 4-20mA	1 4-20mA	0 None
	G 0-10V DC	5 0-10V DC	1 4-20mA 5 0-10V DC