



9000C Improved Specifications

Signal Isolator

Single (SOP) & Dual (DOP) Output
Aux (AP) & Loop (LP) Powered

Slim. Isolated. Reliable

Masibus 9000C Signal Isolator is slim yet rugged 4 wire and 2 wire isolator used for reliable isolation and attenuation of industry standard field signals. 9000C is available in single or dual output models, also with aux or loop powered.

9000C has higher noise rejection ratio that ensures accurate and noise free signal conditioning. Its slim DIN rail mount design occupies less space and reduces cost of overall installation.

DOP (AP) model 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 good protection to sensitive system parts against voltage spikes etc.

Model 9000C (AP) has built-in Transmitter Power Supply (TPS) to drive 2Wire field transmitters. An exceptional feature of extended universal power supply for the range of 20V to 265V DC or AC makes 9000C suitable for any Aux power supply available in field and thus providing easy to stock and easy to install.

9000C 'M' version model is further enhanced with switch selectable I/O configuration for I/O ranges 0/4-20mA, 0/1-5V and 0-10V. This feature allows user to have freedom to change 0/4-20mA, 0/1-5V and 0-10V I/O types, using side DIP switches available on the device and with minor calibration using front accessible trim-pots, depending upon field requirements, truly one model for all signals and all applications.

With 9000C (LP) Version, overall wiring can be reduced delivering same performance and overall power consumption can be reduced.

Dedicated 9000C 'H' model with HART pass through feature (AP only) compatible with 2 wire transmitter, allows HART signals to pass through both ways, for online configuration and diagnostics of HART transmitters.

Masibus' 9000C model offers excellent accuracy and stability for reliable operation in hostile environments and full isolation safely separates input channel, each output channel and the power supply.

Features

- Available in Aux Powered (AP) and Loop Powered (LP) options
- Slim DIN rail mount design of 12.5mm for single output and 17.5mm for dual output
- Rugged & accurate 4 wire and 2 wire Isolator
- Switch option for 0/4-20mA, 0/1-5V and 0-10V I/O selection
- Extended universal power supply range: 20V to 265V DC or AC (AP Model)
- Full three port isolation
- Up to 2 outputs with short circuit protection
- High CMRR and NMRR
- Negligible long term drift
- CE certified model option
- High output load driving capability
- Wide zero & span adjustment limits
- Front calibration facility via multi turn trimpots
- HART pass through model

Applications

- Field interface device
- Isolation of field signals
- Distribution of signals
- Translation of signals
- Factory automation SCADA
- DCS
- Impedance matching of transmitters and receiver instruments
- Powering of field transmitters

TECHNICAL SPECIFICATIONS

Input		Power Supply	
Input Type	Voltage / Current	AP Model	20 to 265V DC/AC 50-60Hz, ≤3W
	'L' Version: 4-20mA	LP Model	10 to 36VDC with reverse polarity protection
Input Range	'S' Version: 4-20mA 'M' Version: 0/4 to 20mA, 0/1 to 5V, 0 to 10VDC (DIP switch selection) 'H' Version: 4-20mA, HART Pass	Isolation	
Input Impedance		9000C Aux Powered Model	
Current Input	≤100 Ω (LP) ≤10 Ω (AP)	Between power to Input and Output	
Voltage Input	≥1 MΩ	Reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 3KVAC (For CE marked 9000C SOP 'S' and 'M' model)	
Temperature Coefficient	≤100 ppm/°C	Galvanic Isolation of 3KVAC for 1 minute (For CE marked and Non-CE model)	
CMRR	>100 dB	Between Input to Output	
NMRR	>70 dB	Functional insulation according to IEC/EN 61010-1, rated insulation voltage 1.5KVAC (For CE marked 9000C SOP 'S' and 'M' Model)	
		Galvanic Isolation of 1.5KVAC for 1 minute (For CE marked and Non-CE model)	
		Between Output to Output	
		Galvanic Isolation of 1.5KVAC for 1 minute (For Non-CE DOP model)	
		9000C-L Loop Powered Model	
		Galvanic Isolation of 1.5KVAC for 1 minute between Input and Output	
Output		Physical	
Output Type	Voltage / Current	Mounting Type	DIN Rail (35 mm)
LP Model	'L' Version: 4-20mA	Terminal Block	UL, CSA standard
	'S' Version: 4-20mA	Terminal Cable Size	2.5 mm ²
AP Model	'M' Version: 0/4 to 20mA, 0/1 to 5V, 0 to 10VDC (DIP switch selection) 'H' Version: 4-20mA HART Pass on o/p-1, 4-20mA Standard on o/p-2	Enclosure Material	PA66
Response Time	≤50ms	IP Rating	IP20
Accuracy	± 0.1% of FS	Size	
Output Load (LP)	R _{Load} = [(Loop Supply Voltage - 10)/0.021]Ω	SOP Model (in mm) (AP & LP Model)	12.5(W) x 100.2(H) x 115.2(D)
Output Load (AP)	mA: ≤750Ω@20mA (SOP Model) ≤550Ω@20mA (DOP/HART Pass Model) V: Current≤5 mA (e.g. for 0-5V: 5V/5mA ≥ 1 KΩ)	DOP Model (in mm) (AP Model)	17.5(W) x 100.2(H) x 115.2(D)
Output Loop Status LED	Green (AP, "S" version only)	"H" Version- SOP/DOP Models (in mm)	17.5(W) x 100.2(H) x 115.2(D)
Transmitter Power Supply (AP only)	24VDC (±10%) @20mA (SOP) 22VDC (±10%) @20mA (DOP)	Weight	
		SOP Model (AP & LP Model)	100 gms approx
		DOP Model (AP Model)	130 gms approx
		"H" Version	130 gms approx
		Environmental	
		Operating Temperature	0 to 55 °C
		Relative Humidity	30 to 95% RH (Non-Condensing)
		Protection	Conformal coating on PCB
		Directive Conformity	
		Electromagnetic Compatibility Directive 2014/30/EU	*IEC 61326-1 :2012
		Low Voltage Directive 2014/35/EU	*IEC 61010-1 :2010
		*Applicable only for CE marked 9000C SOP Aux Powered 'S' and 'M' Model.	

ORDERING CODE

AUX-POWERED MODELS

Model	Input Type	No of O/P	O/P Type	CE Compliance			
9000C	S	X	X	X			
		C	4-20mA	1	One	1	4-20mA
		2	Two	Y	YES*		

Model	Input Type	No of O/P	O/P Type		
9000C	H	X	X		
		C	4-20mA	1	One
		2	Two		

*CE Compliance is available in SOP (Single Output) models only. It is not applicable for DOP (Dual Output) and HART Pass models.

Model	Input Type	No of O/P	O/P Type-1	O/P Type-2	CE Compliance						
9000C	M	X	X	X	X						
		C	4-20mA	1	One	1	4-20mA	0	None	N	NO
		D	0-20mA	2	Two	2	0-20mA	1	4-20mA	Y	YES*
		E	1-5VDC			3	1-5VDC	2	0-20mA		
		F	0-5VDC			4	0-5VDC	3	1-5VDC		
		G	0-10VDC			5	0-10VDC	4	0-5VDC		
				5	0-10VDC						

LOOP POWERED MODEL

Model	Input Type	O/P Type-1	
9000C	L	X	X
		C	4-20mA