





Features

- Wide Range of Input options: DC Input: mV, V, mA AC Input: 0 - 500V, 0 - 1A, 0 - 5A Sensor Conditioning: Thermocouple, RTD Position Feedback: Potentiometer.
- Output options: 1-5V, ±5V, ±10V, 0/4-20mA, ±20mA. Combination of outputs can be provided as per user requirement in multiple output type modules.
- Single, Dual & Triple Isolated Outputs available in standard products.
- Power Supply options:

Universal Supply : 90-270VAC, 50/60 Hz OR 100-250VDC. 24VDC Supply : 18-36V DC variation allowed





- Slim, compact & Aesthetic designs Single Input - Output : 22.5 mm Width. Dual & Triple Isolated Outputs: 45mm Width.
- Energy Efficient Modules. Power Consumption < 3 Watts in 24VDC operated modules.
- Fast Response options offered in selected types (Tr<1 mSec)
- Improved Noise Rejection & long-term stability
- 2 KV 3 Port Isolation.
- Operating Temp. Range: -10 to +60 Deg C
- Design conforms to the requirements of CE standards.







The SIM μ 3.0 Series Analog Signal Conditioning & Isolation modules find applications where it is of prime importance to ensure reliable performance as well as safety while interfacing input/output analog signals of sensitive electronic Control & Measurement Systems with field devices such as sensors and actuators. The use of signal conditioners with isolation allows direct interface of far away field mounted devices with analog I/O channels of DCS, PLC based Control Systems, AC/DC Electric Drives, Indicators, Recorders, etc.

These modules eliminate occurrences of faulty measurements in process control equipment caused by ground loops. They are also necessary to protect the measuring equipment from noise and transients generated due to inductive load switching and other unpredictable electrical disturbances occurring in the field.

The SIM μ 3.0 modules are characterized by their fast response; improved noise rejection, superior long-term stability, & wide DC power supply range. These features make them an attractive choice for AC & DC Drive systems as well as various Process Control applications.

Modules are available which accept DC Voltage, DC Current, RTD & Potentiometer signals from field devices. The input signal is filtered, amplified (if necessary), isolated, & converted into the required output form (0– 10V, 0–20mA, 4–20mA, ±20mA) with minimal internal delay and without loss of accuracy.





Single input & Multiple isolated outputs are also offered to aid the system engineering needs for connecting the same input signal to separate devices such as Process Controller & Recorder without compromising safety and accuracy of measurement.

The SIM μ 3.0 modules are offered in the versatile ME type housings, which are internationally accepted and aesthetically pleasing DIN Rail mounted enclosures. The compact size (Single Output: 22.5mm width & Dual/Triple Output: 45mm width) allows high packing density of signal conditioners in limited panel space. Eco-friendly energy efficient design greatly reduces total power consumption and thus reduces the combined heat generated in the enclosed panel spaces.

The SIM μ 3.0 Analog Signal Conditioning & Isolation Module designs comply with the requirement of CE standards.

Design As Per Electrical Compliance

EMC Standard: As per EN / IEC 61326 (1998) SAFETY Standard: As per IEC 61010-1

Enclosure Port		Power Supply AC/DC Port		
Port / Test Description	Compliance Standards	Port / Test Description	Compliance Standards	
Electrostatic Discharge (ESD)	IEC 61000 – 4 – 2	Conducted Emission	CISPR 16-1 & 16-2	
Radiated Susceptibility (RS)	IEC 61000 – 4 – 3	Conducted Susceptibility	IEC 61000 - 4 - 6	
Radiated Emission	CISPR 16-1 & 16 – 2	Electrical Fast Transients	IEC 61000 - 4 - 4	
		(EFT)		
		Surge	IEC 61000 – 4 – 5	





1. Power Supply			
24VDC Supply			
Power Supply Voltage	Typical: 24 V DC		
Power Supply Current	Tolerance: 18 – 36VDC		
Power Consumption	200 mA (max.)		
(Approx.)			
Universal Supply			
Down Cumply voltage	2 Watt (Single Output type)		
rower Suppry voltage	4 Watt (Dual Output type)		
	5 Watt (Triple Output type)		
Down Consumption	90 –270VAC; 50/60Hz OR		
rower Consumption	100-250VDC		
(Approx.)	9 VA		

2. Input signal				
DC Current or DC Voltage	0 – 20 mA or 4 – 20 mA or 0+10V DC			
Max. permissible Limit	For Current Input: 50 mA For Voltage Input + 15 V DC			
Breakdown Voltage	+ 50 V			
Input Resistance	For Current Input 100 Ohms. For Voltage input 100 K Ohms			

3. Output signal					
DC current or DC voltage	0 – 20 mA or 4 – 20 mA or 0+10V DC Single Output: Any one of above Dual Output: Any two of above Triple Output: Any two of above				
Output limit	For Current Output 30 mA For voltage Output ±15 V				
Max. load resistance	For Current Output < 500 Ohms For Voltage Output > 1K Ohms				
Response Time	Typically: 1 ms				

4. Accuracy data				
At 25 0 C ambient Temp.	$\pm 0.2\%$ of FS			
Limits over Temp. range	$\pm 0.3\%$ of FS			
Drift Temp. coefficient	\pm 0.005% / Deg. C			
Linearity	0.1 % of FS			

5. Ambient conditions	
Climatic rating	Design as per: As per IEC 60068 – 2-30
Operating temp.	-10 to + 60 Deg C
Storage temp.	- 20 to + 85 Deg C
Relative Humidity	R.H = 93 + 3 %,
Design as per Vibration Standard	Frequency: 10 – 150 Hz Displacement: 0.75 mm or acceleration: 1.5 g, No. of sweep/axis: 20, Axis: 3 (x, y & z)
Design as per Shock Standard	40g. 11 ms, half sine pulse & 18 shocks, 3 shock in each sense.
7. Installation Data	
Cooling	: Forced cooling not required
Cooling Material of housing	: Forced cooling not required : Polyamide PA 6.6
Cooling Material of housing	: Forced cooling not required : Polyamide PA 6.6 VO (UL 94).
Cooling Material of housing	: Forced cooling not required : Polyamide PA 6.6 VO (UL 94). Green Colour
Cooling Material of housing Mechanical Size	 : Forced cooling not required : Polyamide PA 6.6 VO (UL 94). Green Colour : For Single Input Single Output W - 22.5 X H - 100 X D - 110 mm
CoolingMaterial of housingMechanical SizeMounting	 : Forced cooling not required : Polyamide PA 6.6 VO (UL 94). Green Colour : For Single Input Single Output W - 22.5 X H - 100 X D - 110 mm For Single Input Dual/Triple Output
Cooling Material of housing Mechanical Size Mounting	 : Forced cooling not required : Polyamide PA 6.6 VO (UL 94). Green Colour : For Single Input Single Output W – 22.5 X H – 100 X D – 110 mm For Single Input Dual/Triple Output W – 45 X H – 100 X D – 110 mm 35 mm DIN Rail Mounted
CoolingMaterial of housingMechanical SizeMountingMounting position	 : Forced cooling not required : Polyamide PA 6.6 VO (UL 94). Green Colour : For Single Input Single Output W – 22.5 X H – 100 X D – 110 mm For Single Input Dual/Triple Output W – 45 X H – 100 X D – 110 mm 35 mm DIN Rail Mounted Horizontal OR Vertical.
CoolingMaterial of housingMechanical SizeMountingMounting positionConnectors	 : Forced cooling not required : Polyamide PA 6.6 VO (UL 94). Green Colour : For Single Input Single Output W – 22.5 X H – 100 X D – 110 mm For Single Input Dual/Triple Output W – 45 X H – 100 X D – 110 mm 35 mm DIN Rail Mounted Horizontal OR Vertical. Green Colour, 5.08 mm Pitch, 16 A

Analog Signal Conditioning & Isolation Modules

Address: 2 &3 'Vishwas', Karnik Road, off. Murbad Road, Kalyan (W) 421 301, Maharashtra, INDIA. Mobile No.: +91-9850811917.

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SIM μ 3.0 Series



Note:	For Single I/P & Singl O/P Width - 22.5 mm
	For Single I/P & Dual & Triple O/P Width - 45 mm
	Mounting: 35 mm DIN Rail Mounting

Terminal No.	Terminal Description		
For, Single I/P & Single O/P			
1	Not Connected		
2	Input +		
3	Input -		
4	Input -		
5	Output -		
6	Output +		
7	DC Supply + (24 V DC)		
8	DC Supply M (24 V DC)		
For, Single I/P & Dual / Triple O/P			
1	Not Connected		
2	Input +		
3, 4	Input -		
5	Output 1 -		
6	Output 1 +		
7	DC Supply + (24 V DC)		
8	DC Supply M (24 V DC)		
9	Output 2 -		
10	Output 2 +		
11	Output 3 +		
12	Output 3 -		



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Canopus INSTREEMENTS OPOWER ON OPOWER ON ZERO SIM u 3.0 1 2 3 4 Input + - -

Output

Supply

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-	+	+	М	-	+	+	-
0 / F	۲1	Sup	oly	0/ P	2	O/F	3
5	6	7	8	9	10	11	12
OPWR ON O//P 2 SPAN O//P 1 SPAN ZERO U//P 1 O//P 3 SPAN ZERO U//P 3 ZERO U//P							
1	2	3	4				
		Input	1				
	+	-	I -	1			

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Product Variants:

Input Range		Supply		
Input: Any one of following	Single Output	Second Output	Third Output	DC Supply/ AC Supply
1.DC Voltage Signal Isolators				
0 – 75 mV DC				
0 – 100 mV DC				
$0 - \pm 75$ mV DC				
$0 - \pm 100 \text{ mV DC}$	$0 - \pm 10$ VDC			24 VDC
0-1 VDC				(18-36VDC)
1-5 VDC	0-+10 VDC			
0 - 10 V DC				
0 – ±1 V DC	$0 - \pm 7.5 \text{ mADC}$			
0 – ±5 V DC		$0 \pm 10 \text{ V DC}$		
0 – ±10 V DC	$0 - \pm 10 \text{ mADC}$	0 = +10 V DC 0 = +10 V DC		
2.DC Current Signal Isolators	$0 - \pm 20 \text{ mADC}$	4 - 20 mA DC	0-+10 V DC	
0 – 10 mA DC			$0 - \pm 10 \text{V DC}$	
0 – 20 mA DC	0 – + 20 mADC		4 – 20 MA DC	
4 – 20 mA DC	4 20 m A D C			90-270VAC
$0 - \pm 5$ mA DC	4 – 20 mADC			,50/60Hz
$0 = \pm 1.5$ mA DC $0 = \pm 10$ mA DC				OD
0 ± 10 mADC $0 - \pm 20$ mADC				OK
				100-250VDC
3. Resistance Signal Isolators	0-+10 V DC			
	1 20 m A DC			
0 - 1 K Ohms	4 – 20 mA DC			
0 – 5 K Ohms 0 – 10 K Ohms	0 – 20 mA DC			





Ordering Info:

μ3.0	I/P Signal	O/P Signal	Supply	I/P Signal Range	O/P Signal Range	No. of O/P's (Extension required only when 2nd & 3rd O/Ps are available)
μ3.0	I/P	O/P	XXX	XX	XX	XX
	V	V	24 VDC: F2D	0 – 10 V: 10	0 – 10 V :10	V: 2nd O/P V: 0-10V
				0 – 75 mV: 75		2V: 2nd O/P V: 0-10V 3rd O/P V: 0-10V
μ3.0	mV					
			90-270 VAC: FU		4 – 20 mA :42	I: 2nd O/P I: 4-20mA
			OR	4 – 20 mA: 42		
	I	Ι	100-250 VDC			2I: 2nd O/P I: 4-20mA
				0 – 20 mA: 20	0 – 20 mA :20	3rd O/P I: 4-20mA
	R			0 – 10 K: 10		