

# 10.3. Signal Conditioning Modules (SG-3000 Series)

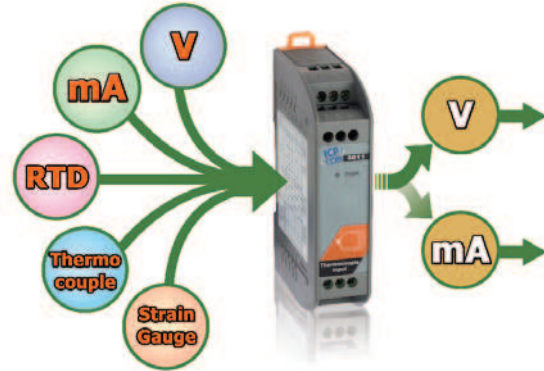
## Introduction

SG-3000 series signal conditioning modules are used to accept wide range of input signals, such as voltage, current, temperature (thermocouple and RTD) and provide 0 ~ 10 V<sub>dc</sub>, 0 ~ 20 mA, 4 ~ 20 mA output signals.

It gives following good features for industrial applications

- 3-way (power/input/output) isolation (1000 V<sub>dc</sub>)
- Wide operating temperature (-25 ~ +75°C)
- DIN-Rail mounting
- Input and output connectors on the opposite side
- Signal range configureable by switch

## Applications



## Description

Analog Conditioning Modules					
Models	SG-3011	SG-3013	SG-3016	SG-3071	SG-3081
Pictures					
<b>Analog Input</b>					
Channel	1	1	1	1	1
Wiring	Differential	2/3/4 wires	Differential	Differential	Differential
Signal	Thermocouple	RTD	Strain Gauge	Voltage	Current
Type	Type J, K, T, E, R, S, B, N, C, L, M, L2	Pt100 $\alpha=0.00385$ , Pt100 $\alpha=0.003916$ , Ni 120, Pt1000 $\alpha=0.00385$	$\pm 10$ mV, $\pm 20$ mV, $\pm 30$ mV, $\pm 50$ mV, $\pm 100$ mV	$\pm 5$ V, $\pm 10$ V	0 ~ 20 mA, 4 ~ 20 mA
Resolution	12-bit		-	-	-
Accuracy	$\pm 0.2\%$ of FSR	$\pm 0.1\%$ of FSR	$\pm 0.1\%$ of FSR	$\pm 0.1\%$ of FSR	$\pm 0.1\%$ of FSR
Input Impedance	1.8 M $\Omega$	-	-	1.6 M $\Omega$	250 $\Omega$
Excitation Voltage	-	-	0 ~ 10 V	-	-
<b>Analog Output</b>					
Channel	1	1	1	1	1
Type	0 ~ 10 V (Drive 10 mA Max.)	0 ~ 20 mA, 4 ~ 20 mA	0 ~ 20 mA	0 ~ 20 mA, 4 ~ 20 mA	0 ~ 20 mA, 4 ~ 20 mA
Output Capacity	<50 $\Omega$	<50 $\Omega$	<50 $\Omega$	<50 $\Omega$ (10 mA Max.)	<50 $\Omega$ (10 mA Max.)
<b>System</b>					
3-way Isolation	1000 V <sub>dc</sub>				
Power Input	10 ~ 30 V <sub>dc</sub>				
Power Consumption	1.44 W	1.2 W	1.44 W	1.8 W	1.61 W
Operating Temperature	-25 ~ +75°C				
Dimensions (W x H x D)	25 mm x 114 mm x 71 mm				

Power Conditioning Modules				
Models	PW-3090-24S	PW-3090-12S	PW-3090-5S	PW-3090-4824S-12
Pictures				Available soon
Input	18 ~ 30 V (non-regulated)	18 ~ 30 V (non-regulated)	18 ~ 30 V (non-regulated)	48 V (non-regulated)
Output	24 V @ 0.4 A (Max.)	12 V @ 0.8 A (Max.)	5 V @ 2 A (Max.)	24V @ 0.5 A (Max.)
Isolation	1000 V <sub>dc</sub>			
Efficiency	83% Typical			
Operating Temperature	-25 ~ +75°C			
Dimensions (W x H x D)	25 mm x 114 mm x 71 mm			