Michigan Scientific Corporation

Signal Conditioning Amplifiers

Michigan Scientific Corporation Signal Conditioning Amplifiers are an ideal way to condition strain gauge or thermocouple signals for further processing. These units are commonly used to increase the resolution of the input signal and the signal-to-noise ratio. Often, electrical signals from sensors are too low to process directly, so amplification is required to increase voltage level for data acquisition.

Features

Thermocouple Amplifier:

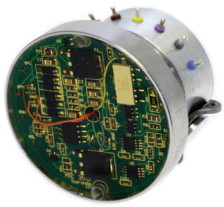
- Cold junction compensated
- Precision, low-noise, differential amplifier
- Signal is greatly immune to external noise sources
- High-level voltage signal output

Strain Gauge Amplifier:

- Highly accurate bridge excitation
- Provides high-level voltage signal output
- Externally adjustable shunt resistance
- Externally adjustable gain
- Precision, low-noise differential amplifier
- Remote bridge excitation on/off capability
- Remote shunt calibration capability

S-Series Slip Ring Assemblies with Integrated Amplifiers

S-Series Slip ring assemblies with integrated amplifiers are ideal for high-speed, high-vibration, or limited-space applications. Since the amplifier is built directly into the assembly, the unit is smaller, lighter, and has improved concentricity.



Amplifier Control Units

Amplifier Control Units provide control of the bridge excitation and shunt calibration of strain gauge amplifiers. They can also be used to provide power to thermocouple amplifiers.

PS-AC Remote Amplifier Control Unit

PS-DC Remote Amplifier Control Unit

STRAIN GAUGE

Model	AMP-SG-M1	AMP-SG-MH	AMP-SG-MH-BC	AMP-SG-U2	AMP-SG2-U2	AMP-SG3-U2
Number of Channels	1	1	1	1	2	3
Excitation	2.5 V-10 V	2.5 V-10 V	5 V-10 V	5 V-10 V	2.5 V-10 V	2.5 V-10 V
Gain Range	100-2,000 V/V	100-2,000 V/V	100-2000 V/V	100-2,000 V/V	100-2,000 V/V	100-2,000 V/V
Bandwidth	20 kHz	20 kHz	20 kHz	10 kHz	20 kHz	20 kHz
Minimum Bridge Resistance	120 Ω					

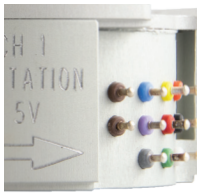
THERMOCOUPLE

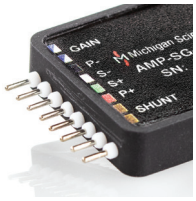
Model	AMP-TC	AMP-TC-M1	MicroTC
TC Type	K, J, T, E	K, J, T, E	K
Linear Range	—	—	-25 °C to 400 °C (-13 °F to 752 °F)
Non-Linear Range	-260 °C to 1,000 °C (-426 °F to 1,832 °F)	-260 °C to 1,000 °C (-426 °F to 1,832 °F)	-200 °C to 970 °C (-328 °F to 1,778 °F)
Channels per Unit	1-9	1-3	1
Bandwidth	1.56 kHz	1.16 kHz	2.35 kHz
Accuracy	±2 °C (±3.6 °F)	±3 °C (±5.4 °F)	±2 °C (±3.6 °F)

SPECIAL PRODUCTS

Model	SGA3A	SGA12A-PS	WIP	WFTAMP	TDM	S-Series
Number of Channels	3	3-12	1 (dual range)	6	1	1 or 2
Excitation	5 V-10 V	5 V-10 V	5 V-10 V	10 V	10 V	2.5 V-10 V
Gain Range	100-2,000 V/V	100-2,000 V/V	100-2,000 V/V	50-2,000 V/V	50-400 V/V	100-2,000 V/V
Bandwidth	20 kHz					
Minimum Bridge Resistance	120 Ω					







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