



# Get Rid of the Pesky Zero Offset

**Zero it out when you need to...**

The MEAS Model 140 inline DC amplifier module is truly an advancement in sensor signal conditioning. Our patent pending technology allows you to get rid of those pesky zero offsets from your pressure transducer, load cell, or accelerometer locally or remotely - right before you start taking data. Finally, the zero means zero reference. As a result, you can now apply more gain to the sensor output for maximum signal to noise ratio without wasting voltage span in your data acquisition front end. The amplifier module offers five manual gain settings from 10x to 200x, with gain accuracy of  $\pm 0.5\%$  and bandwidth to 100kHz. It weighs 33 grams and small enough to fit inside your palm.

# Model 140 Inline DC Amplifier

The Model 140 is a remote in-line DC amplifier designed to be used with bridge type mV output transducers. The amplifier features five user selectable gain settings with a gain accuracy of  $\pm 0.5\%$  and offers a wide bandwidth to 100kHz. The Model 140 offers a unique auto-zero function (patent pending) that allows the operator to zero the transducer offset voltage to within  $\pm 1.5\text{mV}$  either remote actuation or by pressing the on-board push button at the user's command, usually right before the taking of data. Connections to the sensor and the data acquisition hardware are through a commonly available connector.



## DYNAMIC

Input Type	Differential
Input Range (V)	0.5V to (Excitation Voltage - 0.6V), each input referenced to ground
User Selectable Gain Settings	x10, x25, x50, x100, x200
Bandwidth (-3dB)	DC to 100kHz
Noise (nV/ $\sqrt{\text{Hz}}$ )	17 RTI + 2000 RTO
Zero Output After Auto-Zero Actuation	$\pm 1.5\text{mV}$ , referenced to 2.5V reference out
Limit for Auto-Zero Function	$\pm 10\text{Volts}$ divided by gain setting

## ELECTRICAL

Excitation Voltage (Vdc)	5 to 30
Quiescent Current (mA)	15
Reference Out (Vdc)	$2.5 \pm 0.5$ , referenced to ground
Output Voltage Limit (Vpk)	$\pm 2$ , referenced to 2.5V reference out
Gain Accuracy (%)	0.5
Output Impedance ( $\Omega$ )	<50

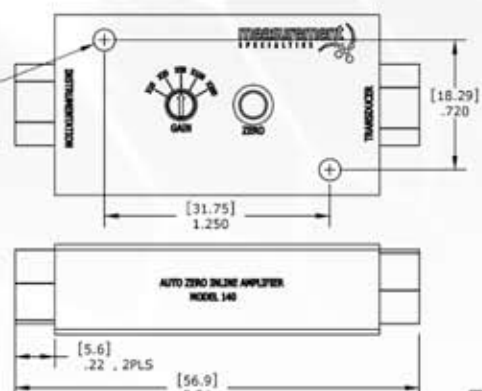
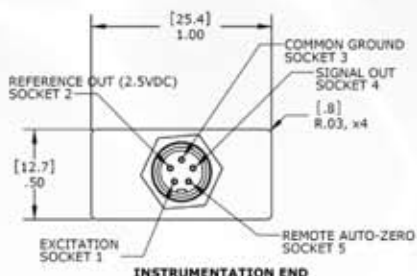
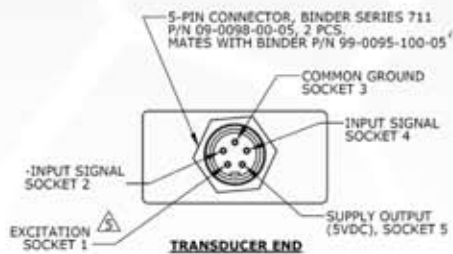
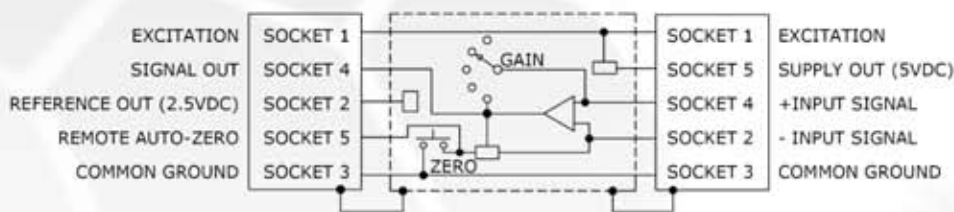
## ENVIRONMENTAL

Operating Temperature ( $^{\circ}\text{C}$ )	-20 to 70
Humidity	Environmentally Sealed
Shock (g)	2000 pk with 3.6ms Haversine pulse

## PHYSICAL

Case Material	Anodized Aluminum
Electrical Connector, Input	Binder Connector P/N 09-0098-00-05 (mates with Binder Connector P/N 99-0095-100-05)
Electrical Connector, Output	Binder Connector P/N 09-0098-00-05 (mates with Binder Connector P/N 99-0095-100-05)
Weight (grams)	33

**Optional accessories:** Model 379-XXX Cable Assembly, 5x #30 AWG, (XXX designates length in inches, 10ft standard)



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