



## MODEL 140A INLINE AMPLIFIER

- Low Noise Inline Amplifier
- User Selectable Gain Settings
- Small Rugged Package
- Includes Auto-Zero Function

The Model 140A 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 140A offers a unique patented auto-zero function that allows the operator to zero the transducer offset voltage to within  $\pm 1.5\text{mV}$  either remotely or by pressing the on-board push button at the user's command, usually right before the taking of data. This feature removes any offset drift from the sensor for a more accurate measurement.

### APPLICATIONS

- Pressure and Level Indication
- Static Acceleration Testing
- Instrumentation Labs
- Load Monitoring
- Strain Measurement

### FEATURES

- Interface with mV Output Sensors
- $\pm 1.5\text{mV}$  Auto-Zero Function
- x10, x25, x50, x100 & x200 Gain Settings
- Wide Bandwidth to 100kHz
- 5 to 30Vdc Excitation Voltage

US Patent No. 8.823,364 B2 applies

## PERFORMANCE SPECIFICATIONS

All values are typical at  $\pm 24^{\circ}\text{C}$  and 12Vdc excitation unless otherwise stated. TE reserves the right to update and change these specifications without notice.

### PARAMETERS

#### DYNAMIC

Input Type	Differential
Input Range (V)	0.5 to (Vexc – 0.6), each input referenced to ground
User Selectable Gain Settings	x10, x25, x50, x100, x200
Bandwidth (-3dB)	DC to 100kHz
Noise ( $\mu\text{Vrms}/\sqrt{\text{Hz}}$ )	0.03 RTI + 2 RTO
Zero Output After Auto-Zero Actuation <sup>1</sup>	$\pm 1.5\text{mV}$ , referenced to 2.5V reference out
Input Range Limit for Auto-Zero Function	$\pm 10\text{Volts/gain}$

#### ELECTRICAL

Excitation Voltage (Vdc)	5 to 30
Reverse Polarity Protection	-20V, on excitation line
Quiescent Current (mA)	15
Reference Out (Vdc)	2.5 $\pm 0.05$ , referenced to ground
Output Voltage Limit (Vpk)	$\pm 2$ , referenced to 2.5V reference out
Gain Accuracy (%)	0.5
Output Impedance ( $\Omega$ )	<50
Insulation Resistance (M $\Omega$ )	>100 @ 50Vdc

#### ENVIRONMENTAL

Operating Temperature ( $^{\circ}\text{C}$ )	-20 to +70
Storage Temperature ( $^{\circ}\text{C}$ )	-20 to +70
Environmental Protection	IP50, Silicone Potted
Vibration (g)	20 pk from 50Hz to 2000Hz
Shock (g)	2000 pk with 3.6ms Haversine pulse

#### PHYSICAL

Case Material	Anodized Aluminum
Electrical Connector, Input	Binder Connector P/N 09-0478-00-07 (mates with Binder Connector P/N 99-0421-10-07)
Electrical Connector, Output	Binder Connector P/N 09-0098-00-05 (mates with Binder Connector P/N 99-0413-10-05)
Weight (grams)	34

<sup>1</sup> Auto-zero can be actuated using pushbutton or grounding remote auto-zero pin for minimum 2 sec. Multiple actuations may be required to achieve the  $\pm 1.5\text{mV}$  limit.

<sup>2</sup> Supply Out: 5.00  $\pm 0.10$  Vdc, <150 mamps current source, >5.2 Vdc excitation required.

<sup>3</sup> Excitation and common ground are direct connections from instrumentation end to transducer end.

### SUPPLIED ACCESSORIES

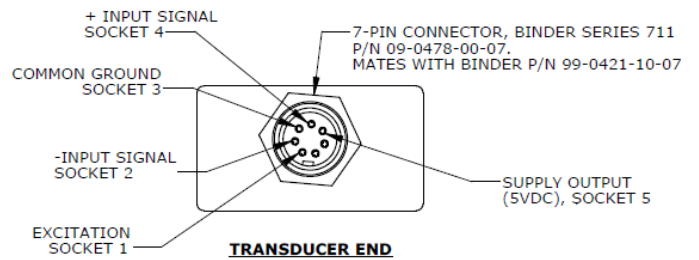
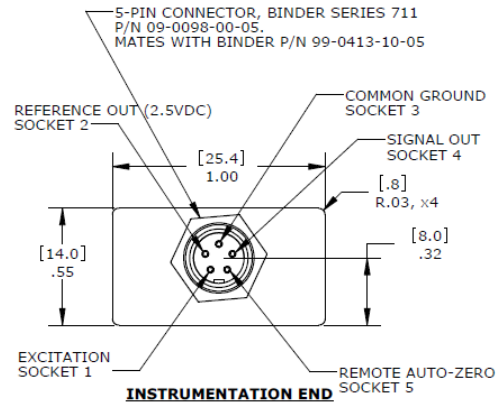
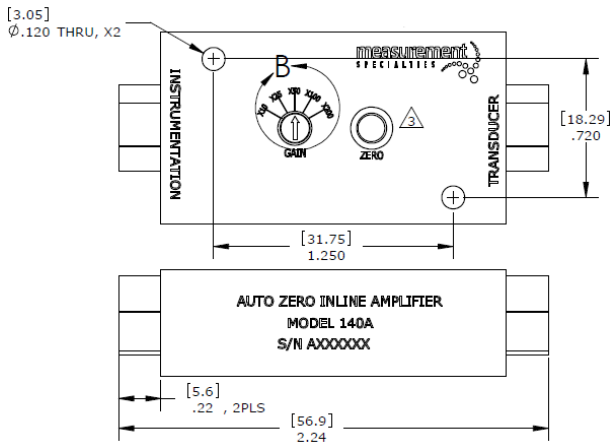
AC-G04393	1x Mating Connector Plug (Binder Connector P/N 99-0413-10-05)
AC-G05314	1x Mating Connector Plug (Binder Connector P/N 99-0421-10-07)

### OPTIONAL ACCESSORIES

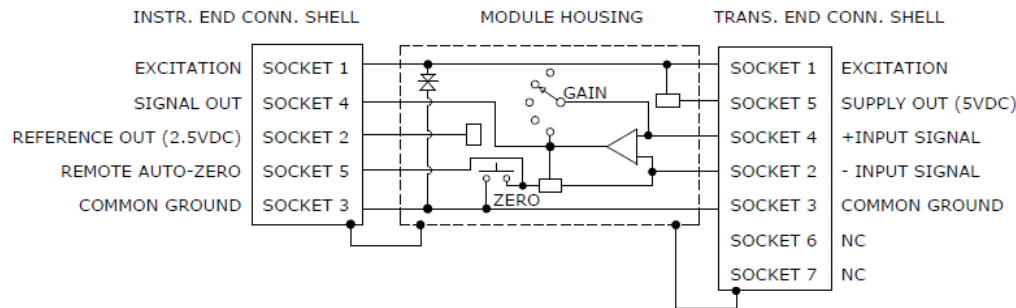
379-XXX	Cable Assembly, 5x #30 AWG, (XXX designates length in inches, 10ft standard)
---------	--

# MODEL 140A INLINE AMPLIFIER

## DIMENSIONS



## SCHEMATIC



## ORDERING INFORMATION

### Part Number

140A



株式会社 クローネ

■カタログに掲載してある製品の色は印刷インキの関係上、実際とは異なる場合があります。  
■製品のデザイン、仕様などは、予告なく変更する場合があります。

本 社：〒124-0023 東京都葛飾区東新小岩3丁目9番6号 TEL: (03) 3695-5431 / FAX: (03) 3695-5698  
大阪支店：〒530-0054 大阪市北区南森町2-2-9(南森町八千代ビル7F) TEL: (06) 6361-4831 / FAX: (06) 6361-9360  
e-mail: sales-tokyo@krone.co.jp URL: <https://www.krone.co.jp>

### TE.com/sensor solutions

Measurement Specialties, Inc., a TE Connectivity company.

Measurement Specialties, TE Connectivity, TE Connectivity (logo) and EVERY CONNECTION COUNTS are trademarks. All other logos, products and/or company names referred to herein might be trademarks of their respective owners.

The information given herein, including drawings, illustrations and schematics which are intended for illustration purposes only, is believed to be reliable. However, TE Connectivity makes no warranties as to its accuracy or completeness and disclaims any liability in connection with its use. TE Connectivity's obligations shall only be as set forth in TE Connectivity's Standard Terms and Conditions of Sale for this product and in no case will TE Connectivity be liable for any incidental, indirect or consequential damages arising out of the sale, resale, use or misuse of the product. Users of TE Connectivity products should make their own evaluation to determine the suitability of each such product for the specific application.

© 2015 TE Connectivity Ltd. family of companies All Rights Reserved.