AMETEK®
DIXSON

TWO-YEAR WARRANTY
ISO 9001 CERTIFIED

BL101P/BL202P Programmable Bargraphs

(Class III-Commercial/Industrial Grade)

AMETEK Dixson "PRO" (PROgrammable) Series bargraphs are the preferred choice for new applications, or for replacement of switchboard meters, other common size indicators, and set point controllers. The "PRO" Series is feature-enhanced, and options are available to solve most common application problems. These models are easily configurable for maximum flexibility, and are also available in nuclear-qualified versions (AL101P/AL202P and SL101P/SL202P).

Application

AMETEK Dixson bargraphs are appropriate in any application where moving pointer meters have been used in the past, and in applications where greater accuracy, readability, and reliability are desirable. Signal sensitivities span ANSI C39.1 ranges, all conventional current loops, and voltage control signals. An optional RS-422 serial data bus allows for distributed control system applications. The instruments are suitable for local or remote, primary or redundant system indication.

The BL101P (single bar) BL202P (dual bar) are direct replacements for the Sigma 9270 non-DIN instrument. This simplifies retrofit into existing systems without panel modifications. A barrier strip connector that accepts spade or closed loop connector lugs is standard. Detachable terminal block connectors are optional and can be specified at time of order.

For control applications, the optional set point/relay module provides on/off and differential gap control and annunciation using three set points and two Form-C relays per input. The optional digital display reads to 10% over- and underrange.

The optional temperature measurement module makes the instrument a direct-reading indicator for E, J, K, and T thermoouples, or 100-ohm RTD, and an optional retransmission module simplifies distribution of the temperature parameter throughout the system.

User-programmablility provides maximum versatility and minimizes the need for spares. A solid-state design with no moving parts yields a highly reliable product, especially under adverse conditions. Features such as linearization, sensor power, retransmission, and min/max readings make the "PRO" Series the ideal choice for your application.

Features

- Brilliant red LED display for excellent visibility
- Minimum 88,000-hour MTBF
- Microprocessor-based design
- Programmable configuration using front panel switches or PC serial link
- Available with or without program switches on front
- Switch-selectable input signal ranges
- Auto-calibration algorithm
- Input signal linearization
- Min/max signal memory (peak/valley hold)
- Front panel mounting
- Underrange/overrange indication

Options

- Digital display with true minus-sign indication
- Green or amber LEDs
- On/off control via two set point relays
- Direct temperature measurement
- Two-wire, isolated retransmission
- RS-422 serial communication

BL101P/BL202P Specifications

Note: for ISA S67.04 and RP67.04 Part II, consult factory for models and assistance.

PHYSICAL CHARACTERISTICS

Number of segments in each bargraph channel	101
Resolution	1.0%

ENCLOSURE MATERIAL Metal

DIGITAL DISPLAY OPTION (True minus sign) –9999 to 9999

Number of digits in each digital display	4
Resolution	0.01% ± 1 count*

ENVIRONMENTAL CHARACTERISTICS

Operating temperature range (MIL-E16400G, Class 4)	0 to +60° C
Storage temperature range	–40 to +85° C

POWER REQUIREMENTS

Line voltage	115/230 VAC
Line frequency	50, 60, or 400 Hz
Line regulation	±10%
Power consumption (typical, depends upon options)	3.5/7.0 VA

SENSITIVITY RANGES (Reference ANSI C39.1 Std. Sensitivities)

STANDARD FULL SCALE INPUTS FROM ZERO (DIP-switch selectable):	
DC currents	500 µA to 50 mA
DC voltages	1 to 250 V
OPTIONAL FULL SCALE INPUTS FROM ZERO	
DC currents – factory configured	50 µA to 250 mA
Plug-in modules:	
RS-422	Serial Data Comm.
AC currents	1 mA to 1000 mA; 5 A
AC voltages	250 mV to 250 V
Thermocouple - Type E	–100 to +1000° C
Thermocouple - Type J	–18 to +760° C
Thermocouple - Type K	–18 to +1370° C
Thermocouple - Type T	–160 to +400° C
RTD (100-ohm platinum)	–200 to +850° C

DC INPUT PARAMETERS

Linearity	0.02% of span ± 1 count*
Accuracy	0.04% of span ± 1 count*†
Zero stability	<0.01% per °C
Gain stability	<0.02% per °C
Input impedance:	
For voltage inputs	>200 k ohms
For 4 to 20 mADC current inputs	100-ohm compliance resistor
For 10 to 50 mADC current inputs	40-ohm compliance resistor
For all other current inputs	Consult factory
Response time (typical)	175 ms
Overload (signal)	200% or 250 VDC maximum

AC INPUT PARAMETERS (true RMS-reading)

Linearity	0.4% of span **
Accuracy	0.5% of span **
Zero stability	<0.04% per °C
Gain stability	<0.04% per °C
Input impedance for voltage inputs	>200 k ohms
Response time (typical)	325 ms
Overload (signal)	200% or 250 VAC maximum

SET POINT OPTION (internal module)

Active set points (two per input)	LO, HI, LO/LO, or HI/HI
Setability	0.1%
Hysteresis	1.0%
Relay response time (typical):	
For DC inputs	350 ms
For AC inputs	650 ms
Relay contact ratings (two Form C):	3.0 A at 120 VAC 0.6 A at 125 VDC

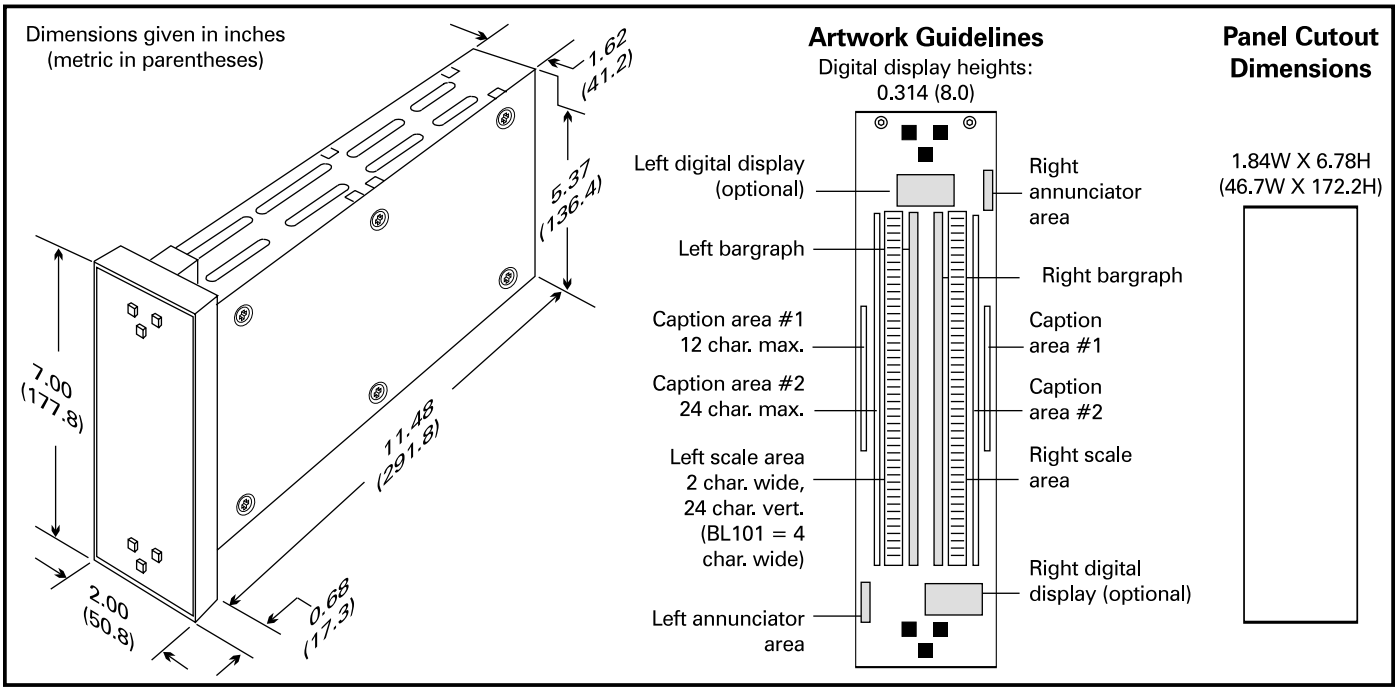
RETRANSMISSION ACCURACY (4 to 20 mA) ± 0.1%

LINEARIZATION

8th-order polynomial (nine terms). Refer to "PRO" Series Interface Kit.

* 1 count is defined as a ± unit value change of the right-most digit.
† Call factory for thermocouple, RTD, and square root input accuracy information.
** Except for first 5% of span.

BL101P/BL202P Dimensions



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