

BG Series Edgewise Single BarGraphs™

The Weschler BG Series Edgewise BarGraphs include several 6" size and DIN-size instruments for horizontal and vertical orientations. Bars are available in red, green or amber for easy viewing. Weschler BarGraphs combine the visual indication of an analog gauge with the precision of a digital instrument.

Digital displays are available with either 3½ or 4½ digit resolution. The 101 segment bar gives the operator a quick view of the measured signal and the control setpoints. Separate setpoint LEDs provide an added visual indication of control/alarm status. Signal direction is shown by two trend arrows. Setpoints and other parameters are easily entered from the front panel.

Weschler BarGraph instruments can be configured for a wide range of input signals. Retrofit sizes are available for most panel and switchboard meters in use today. These instruments satisfy the high quality standards of the utility, OEM and process control industries.

FEATURES

High resolution 101 segment LED bar array

Programmable functions

- Zero point location
- Setpoint location
- Hysteresis (setpoint, trend)
- Span and zero
- Digital display for engineering units
- Enable/disable front buttons
- I.D. selection for communication

Form-C relay outputs

- Normally Open
 - 5A, resistive @ 250V AC
 - 5A, resistive @ 28V DC
- Normally Closed
 - 3A, resistive @ 250V AC
 - 2A, resistive @ 28V DC

Peak and Valley hold

Trend indication for signal direction

Communication

RS-232, RS-485, SCADA, DCS

Analog retransmit

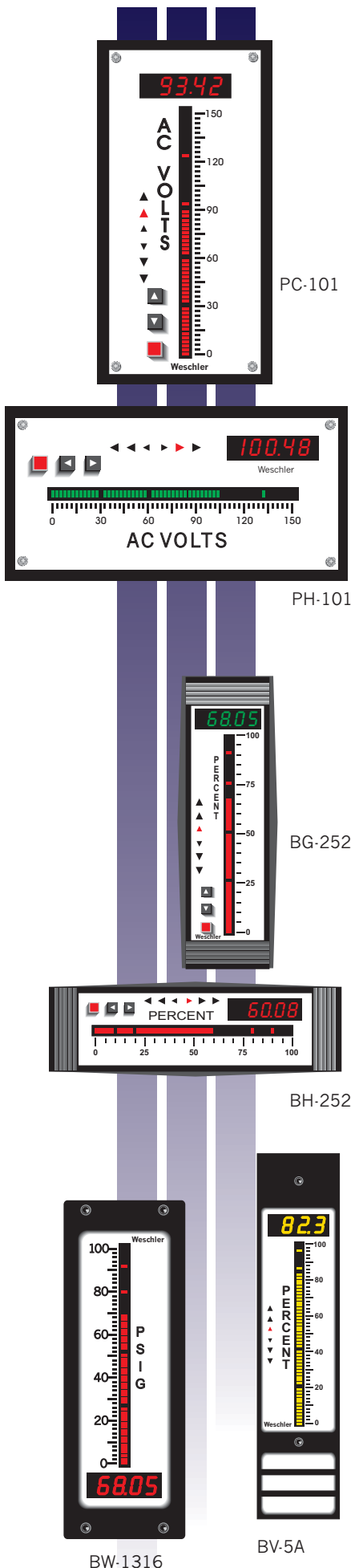
4-20, 10-50, 0-1mA DC
1-5, 0-1, 0-5V DC

Retrofit sizes for:

GE/Yokogawa 180,
Crompton 128,
Dixon SA/BB 101 (all models),
Dixon BJ101,
Hays Republic 3600/V5A,
Foxboro 65PP,
Weston 1316,
Sigma/International Instruments 1151

Versatile selection of inputs

DC	Up to 5A & 250V
AC	Up to 5A & 250V
Thermocouple	J, K, T
RTD	10Ω Cu or 100Ω Pt
Serial	ASCII
Frequency	Line or mag pickup
Process Control	mA, V



SPECIFICATIONS

Bar Display

101 segment LED
4.0" display
1% full scale resolution

Digital Display

3½ or 4½ digit LED
Height 0.3" (7.6mm)
Resolution
3½ digit 0.1% full scale
4½ digit 0.01% full scale
Linearity ±1 count

Response Time

DC <600msec full scale
AC <800msec full scale

Temperature

Operation 0° to 50°C, <95% RH
(non-condensing)
Storage -40° to 85°C

Input Isolation

AC Transformer isolated
(>50mA, 1V)
DC Differential

Setpoints

Up to 4 SPDT relays with form C contacts available. Hysteresis values of 0.5, 1.0, 2.0% of full scale, selectable (other values are available).
Optional: Field programmable 0-10% or latching

Sensor Power

24V DC excitation power @ 90mA

Retransmit Signals

4-20mA DC
0-1mA DC
10-50mA DC
1-5V DC

Communication

RS232
RS485

Power

120/240V AC ±15%
50/60/400 Hz (6 VA)
8-30V AC (3VA max)
4.5-9V DC (600mA max)
9-36V DC (300mA max)
18-75V DC (150mA max)
110-300V DC (35mA max) / 85-264V AC (47-440Hz, 7VA max)

Input Impedance

2Mohm @ >4V DC
30kohm @ 120V AC P.T.
0.1ohm @ 5A AC C.T.
250ohm @ 4-20mA DC
100ohm @ 10-50mA DC

Input Overload Ratings

200%, not to exceed 10A
200%, not to exceed 300V

Input Sensitivities [ANSI C39.1]

DC:
Current 50 microamp - 5A
Voltage 50mV - 250V
Accuracy 0.04% of full scale
± 1 count

AC RMS:
Current 1mA - 5A
Voltage 50mV - 250V
Accuracy 0.1% of full scale ± 1 count

Temperature:

Thermocouple °C °F
Type J -210 to 795 -346 to 1463
Type K -270 to 851 -454 to 1563
Type T -270 to 400 -454 to 752
Accuracy 0.1% of full scale ± 1 count
Linearity 50 point, 0.1%

RTD °C °F
100Ω Pt -260 to 700 -436 to 1292
Alpha 0.00385 & °C standard
Other Alpha ratings available
10Ω Cu -100 to 260 -148 to 500
Accuracy 0.2% of full scale ± 1 count

Frequency:

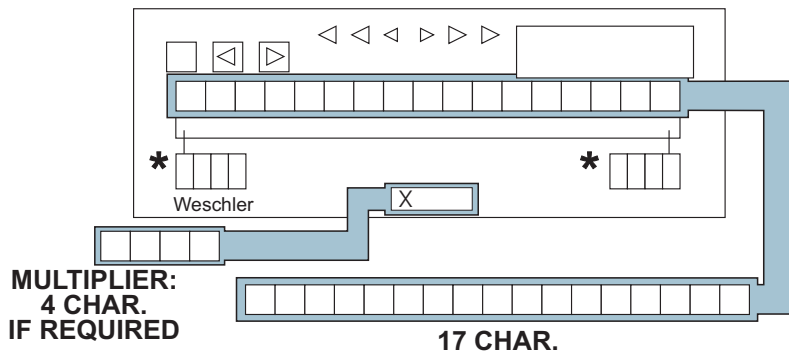
50Hz to 20kHz at 5 to 250V p-p
Accuracy 0.1% of full scale

Line Frequency (55 to 65 Hz):

Accuracy 0.01% of full scale

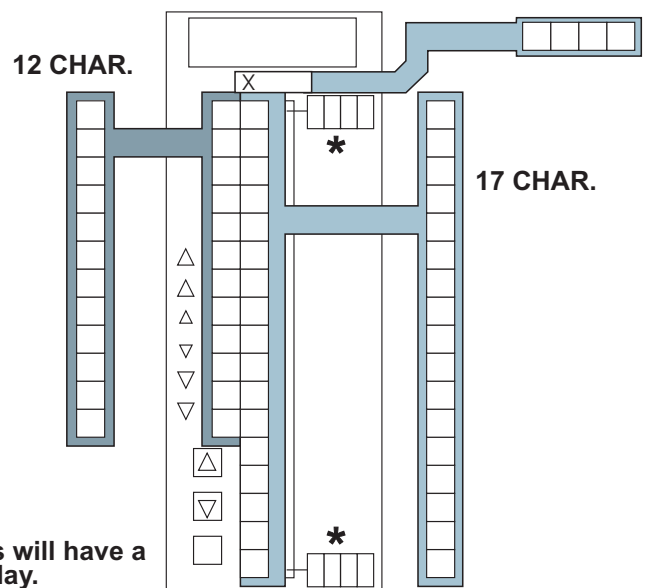
ARTWORK GUIDELINES

**BH-252 6" HORIZONTAL
PH-101 DIN HORIZONTAL**



* Numerical range
MAX. 4 Digits

**BG-252 6" VERTICAL
PC-101 DIN VERTICAL**



**Non-digital units will have a centered bar display.

ORDERING GUIDE

SAMPLE PART NUMBER (SEE BOTTOM OF PAGE FOR EXAMPLE)

2	B	3	N	1	A	A	M	1	F	A	P	T	A	X
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

PART NUMBER

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TYPE:

- 2 = BG252 6" Vertical BarGraph
- 5 = BH252 6" Horizontal BarGraph
- C = PC101 DIN Size Vertical BarGraph
- H = PH101 DIN Size Horizontal BarGraph
- 7 = BW1316 6" Vertical BarGraph
- A = BV5A 7.5" Vertical BarGraph

BAR ZERO POINT:

- B = Zero at Bottom
- H = Zero at 50% mid scale
- F = Zero at F.S.
- S = Special or off scale zero

DIGITAL DISPLAY:

- 3 = 3-1/2 digit Display
- 4 = 4-1/2 digit Display
- X = None
- S = Special

SETPOINTS:

- N = Hi/Lo
- H = Hi/Hi-Hi
- L = Lo/Lo-Lo
- 4 = Hi-Hi/Hi/Lo/Lo-Lo
- Y = Fail Safe Hi/Hi-Hi
- Z = Fail Safe Hi/Lo
- X = None

SETPOINT HYSTERESIS:

- 1 = 1% of F.S. (standard)
- 2 = 2% of F.S.
- 5 = 0.5% of F.S.
- X = Not required
- S = Special

INPUT TYPE:

- A = DC Volts
- B = DC Amps
- P = 4-20mA DC (input level AK)
- N = 1-5V DC (input level AV)
- M = 10-50mA DC (input level BA)
- C = AC Volts RMS
(Barrier terminal strip connections included)
- D = AC Amps RMS
(Barrier terminal strip connections included)
- F = Line Frequency
- Q = MAG Pickup Frequency
- T = Thermocouple
Specify J, K, T
- R = RTD: Specify 100 Ohm Pt 10 Ohm Cu
- S = Special
- U = Serial ASCII (requires com type A, B or C in Communication options)

LED COLOR:

- G = Green only
- A = Amber only
- X = Red only

- K = Conformal Coating
- T = Terminal Strip Connector
- A = Custom Artwork
- X = NA
- S = Special

- T = Trend Indicator
- X = NA

- P = Peak/Valley Hold
- X = NA

COMMUNICATION:

- A = RS232
- C = RS485 Bi-directional
- X = None

RETRANSMIT:

- A = 4-20mA DC into 250 ohms
 - B = 0-1mA DC into 1000 ohms
 - C = 1-5V DC
 - D = 0-1V DC
 - F = 4-20mA DC (isolated source*)
 - G = 0-1mA (isolated source*)
 - H = 10-50mA DC (isolated source*)
 - W = Excitation Power 24 VDC @ 90mA
 - X = None
- *isolated outputs must have AC power

POWER:

- 1 = 120V AC
- 2 = 240V AC
- A = 8-30V AC
- B = 9-36V DC
- C = 18-75V DC
- D = 110-300V DC / 85-264V AC
- E = 4.5-9VDC

INPUT LEVEL:

See input Level Matrix Guide

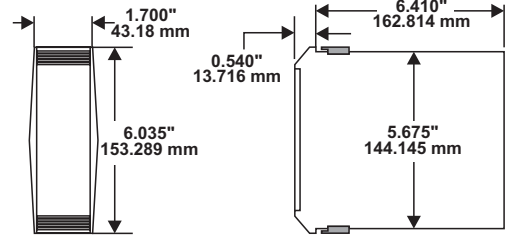
EXAMPLE:

2	B	3	N	1	A	A	M	1	F	A	P	T	A	X
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

(4) BG-252, (B) zero at bottom, (3) 3 1/2 digit, (N) Hi/Lo setpoint, (1) 1% of F.S. setpoint hysteresis, (A) DC volts input, (A-M) full scale is 0.05 volts, (1) 120 VAC 50/60 Hz power, (F) 4/20 mADC isolated retransmit, (A) RS232 communication, (P) peak/valley hold, (T) trend indicator, (A) custom artwork, (X) red led color

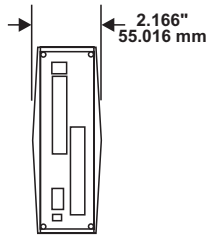
DIMENSIONS

BG-252 and BH-252

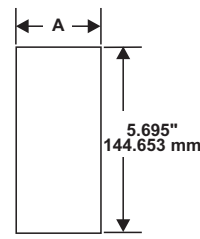


FRONT VIEW

SIDE VIEW



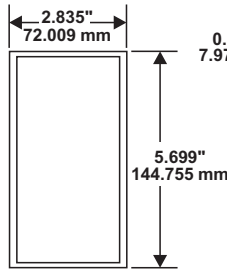
BACK VIEW



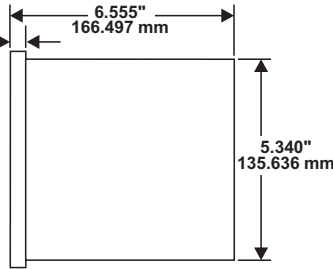
PANEL CUTOUT

Number of Instruments	A Inches	(Millimeters)
1	1.770	(44.958)
2	3.510	(89.154)
3	5.250	(133.350)
4	6.990	(177.546)

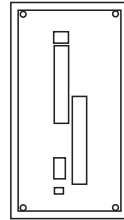
PC-101 and PH-101



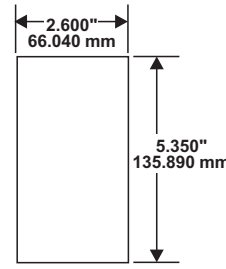
FRONT VIEW



SIDE VIEW

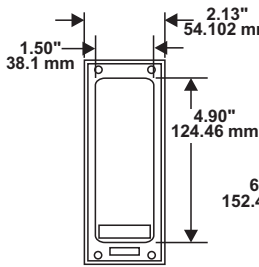


BACK VIEW

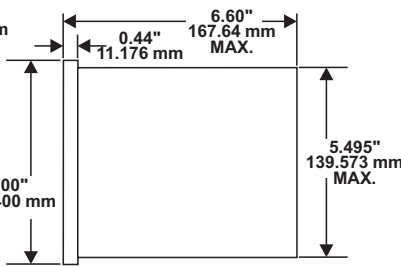


PANEL CUTOUT

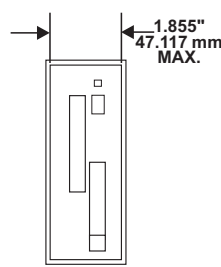
BW-1316



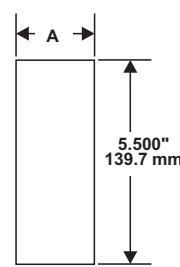
FRONT VIEW



SIDE VIEW



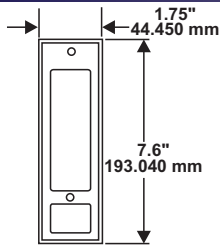
BACK VIEW



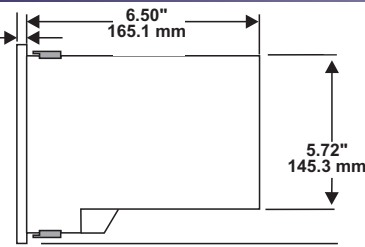
PANEL CUTOUT

Number of Instruments	A Inches	(Millimeters)
1	1.875	(47.625)
2	3.985	(102.219)
3	6.115	(155.321)
4	8.245	(209.423)

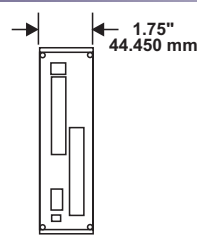
BV5A



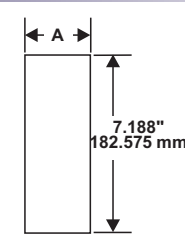
FRONT VIEW



SIDE VIEW



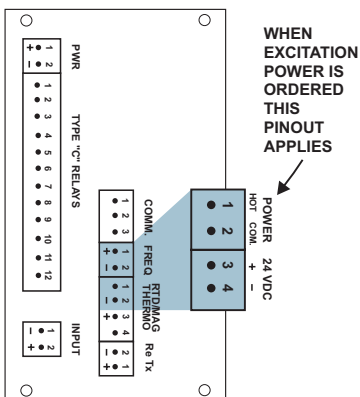
BACK VIEW



PANEL CUTOUT

Number of Instruments	A Inches	(Millimeters)
1	1.813	(46.050)
2	3.563	(90.500)
3	5.313	(134.950)
4	7.000	(177.800)

TERMINAL CONNECTIONS



WHEN EXCITATION POWER IS ORDERED THIS PINOUT APPLIES

INPUT

VOLTAGE / CURRENT
(1) Return Side (-) (2) Hot Side (+)

RTD

(1) - Source (2) - Sense
(3) + Sense (4) + Source

MAGNETIC PICKUP

(2) Lead 1 (-) (3) Lead 2 (+)

THERMOCOUPLE

Provided w / flying lead and plug.

AC LINE FREQUENCY

(1) Hot Side (+) (2) Return Side (-)
AC Inputs have 6/32" barrier lug connections.

POWER

(1) Hot Side (+) (2) Return Side (-)

COMMUNICATIONS

(1) Transmit (2) Common (3) Receive

EXCITATION POWER

(1) VAC (hot side)
(2) VAC (common)
(3) 24 VDC +
(4) 24 VDC -

RELAY CONTACTS*

(1) Hi/Hi N.O. (2) Hi/Hi C.
(3) Hi/Hi N.C. (4) Hi N.O.
(5) Hi C. (6) Hi N.C.
(7) Lo N.O. (8) Lo C.
(9) Lo N.C. (10) Lo/Lo N.O.
(11) Lo/Lo C. (12) Lo/Lo N.C.

* N.O. = Normally Open
N.C. = Normally Closed
C. = Common

Options and features vary by model. Contact factory for details and latest specifications.



**WESCHLER
INSTRUMENTS**
DIVISION OF HUGHES CORPORATION

16900 FOLTZ PARKWAY - CLEVELAND, OH 44149
Phone: (440) 238-2550 - Fax: (440) 238-0660
www.weschler.com e-mail: sales@weschler.com