

BG Series AC Power Circular BarGraphs™

These Weschler BG Series Circular BarGraphs are optimized for AC power measurements. The panel footprint, shape and mounting meet direct retrofit applications for 4½" and 8½" switchboard meters. The electronics housing is identical for both sizes.

Weschler BarGraphs combine the visual indication of an analog meter with the precision of a digital instrument. The 101 segment bars are available in red, green or amber for easy viewing. Large digits and a wide viewing angle allow operators to easily monitor the signal from a distance. The ACP BarGraph will resolve to 0.01% of full scale on the optional 3½, 4½ or 5 digit display.

The ACP series combine self contained CT (Current Transformers) and PT (Potential Transformers) with accurate solid state circuitry to measure both single and poly phase applications. A self-contained instrument provides better accuracy than a separate transducer and meter. Installation is also simplified with the ACP series.

Weschler BarGraph instruments satisfy the high quality standards of the utility, OEM and process control industries.

FEATURES

High resolution 101 segment LED bar array

3½, 4½ or 5 digit display with resolution to 0.01%

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, 0-5 V DC

Retrofit sizes for:

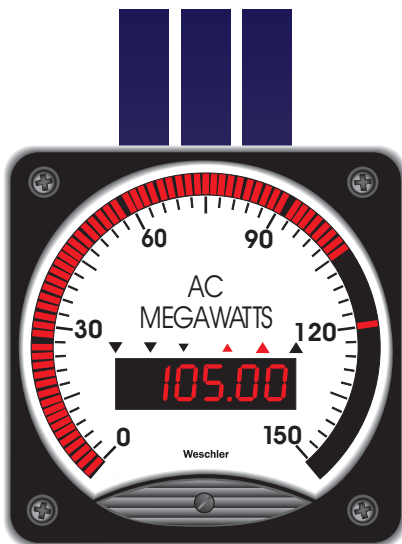
GE/Yokogawa AB/DB40 4½" and AB/DB16 8¾" switchboard meters

Crompton 075/077 4½" and 8¾" switchboard meters

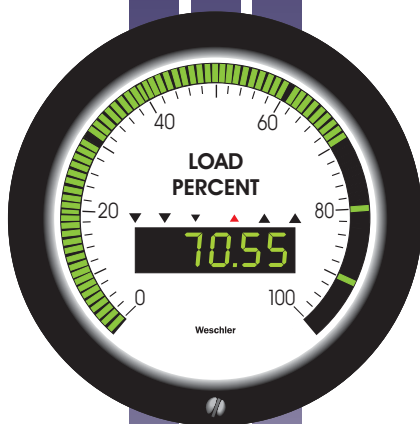
Ashcroft, Heise 6" and 8" gauges
Dixon BW051/P, Weschler K241

Power inputs for:

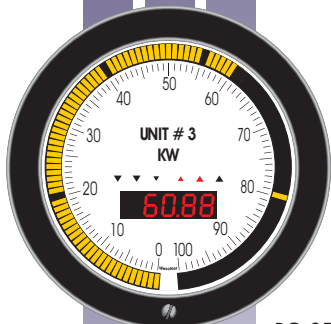
Single Phase, Poly Phase,
Watts, VARS, Power factor



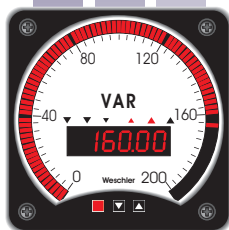
BG-261



BG-281



BG-251



BG-241

SPECIFICATIONS

Bar Display

101 segment LED
 1% full scale resolution
 Circular Displays:
 BG-241 285°
 BG-261/281 270°
 BG-251 270°/345°

Digital Display

3-1/2, 4-1/2 or 5 digit
 Linearity ±1 count
 Resolution
 3-1/2 digit 0.1% full scale
 4-1/2 digit 0.01% full scale
 5 digit 0.01% full scale
 Height
 BG-241 0.4" (10.16 mm)
 BG-261/281 0.8" (20.32 mm)
 BG-251 0.56" (14.22 mm)

Response Time

AC <800 msec full scale

Temperature

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

Input Isolation

AC Transformer isolated
 (>50 mA, IV)

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

Retransmit Signals

4-20 mADC
 0-1 mADC
 1-5 VDC
 10 - 50 mADC
 0-5 VDC

Communication

RS232, RS485

Power

120/240V AC ±15%
 50/60/400 Hz (6.0 VA)
 12, 24, 28, 48, 125 or 250V DC
 ±10% (3W)

Input Impedance

30kohm @ 120V AC P.T.
 0.1ohm @ 5A AC C.T.

Input Overload Ratings

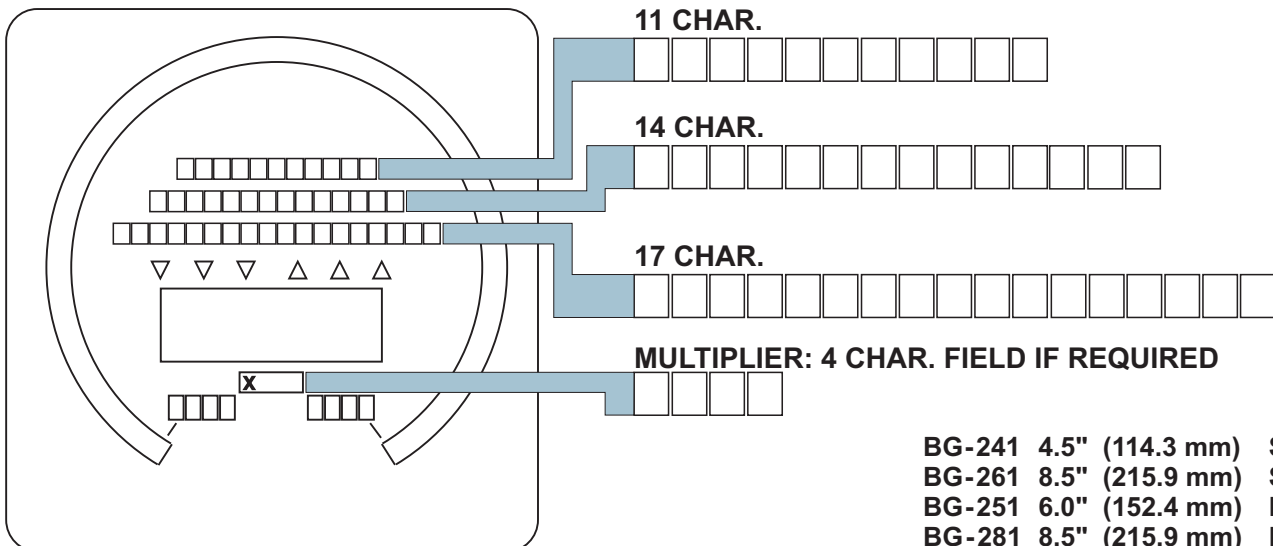
200%, not to exceed 10 A
 200%, not to exceed 300 V

Input Range (RMS)

	MIN	-	MAX
Current	1mA	-	5A AC
Voltage	50mV	-	250V AC
Accuracy	1% of full scale		

The Weschler ACP Power Series BarGraph is a self-contained instrument. Correct installation and connection is critical to the success of the application. Review the phaser diagrams to determine the proper configuration for your application, particularly in retrofit situations. Caution should be taken for VAR applications where historically many engineers have specified a Wattmeter, 90 degree phase shifter, and a VAR scaleplate. If your application has phase shifters in place and you wish to leave them in the circuit, you will need to order a WATT bargraph with a VAR scale.

ARTWORK GUIDELINES



ORDERING GUIDE

SAMPLE PART NUMBER

(SEE BOTTOM OF PAGE FOR EXAMPLE)

4	B	3	N	1	H	3	3	1	F	A	P	T	T	X
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PART NUMBER

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

TYPE:

- 4 = BG241 4-1/2" Square BarGraph
- 6 = BG261 8-1/2" Square BarGraph
- 8 = BG281 8" Circle BarGraph
- 3 = BG251 6" Circle BarGraph

BAR ZERO POINT:

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

DIGITAL DISPLAY:

- 3 = 3-1/2 digit Display
- 4 = 4-1/2 digit Display
- 5 = 5 digit Display
- X = Not required

SETPOINTS:

- N = Hi/Lo
- H = Hi/Hi-Hi
- L = Lo/Lo-Lo
- 4 = Hi-Hi/Hi/Lo/Lo-Lo
- Z = Fail Safe Hi/Lo
- X = None
- S = Special order
- P = Programmable Hi or Lo (includes 2 step dimming)

SETPOINT HYSTERESIS:

- 1 = 1% of F.S. (standard)
- 2 = 2% of F.S.
- 5 = 0.5% of F.S.
- X = Not required
- S = Special
- P = Programmable 0-10% or Latching (includes 2 step dimming)

INPUT TYPE:

- L = Watts single phase
- H = Watts poly phase
- Z = VARS poly phase
- G = Power factor
- CT ratio = _____
- PT ration = _____
- Delta
- WYE
- FS, Watts value _____

LED COLOR:

- G = Green only *
- A = Amber only *
- X = Red only
- M = Multi-color Display *
- B = Sunlight Readable *
*includes 2 step dimming

-
- K = Conformal Coating
- A = Custom Artwork
- X = NA

- 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 50/60Hz
- 2 = 240V AC 50/60Hz
- 4 = 12V DC
- 6 = 250VDC
- 7 = 24V DC
- 8 = 28V DC
- 9 = 48V DC
- 0 = 125V DC
- U = 120V AC / 125V DC

INPUT LEVEL:

- 12 = Single phase two wire 1EL1cc
- 13 = Single phase three wire 2EL2cc
- 33 = Three phase three wire 2EL 2cc
- 34 = Three phase four wire 2EL2 1/2cc

EXAMPLE:

4	B	3	N	1	H	3	3	1	F	A	P	T	T	X
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

(4) BG-241, (B) zero at bottom, (3) 3 1/2 digit, (N) Hi/Lo setpoint, (1) 1% of F.S. setpoint hysteresis, (H) Watts, poly phase, (33) Three phase three wire 2EL 2cc, (1)120 VAC 50/60 Hz power, (F) 4/20 mADC isolated retransmit, (A) RS232 communication, (P) peak/valley hold, (T) trend indicator, (T) terminal strip connector, (X) red led color

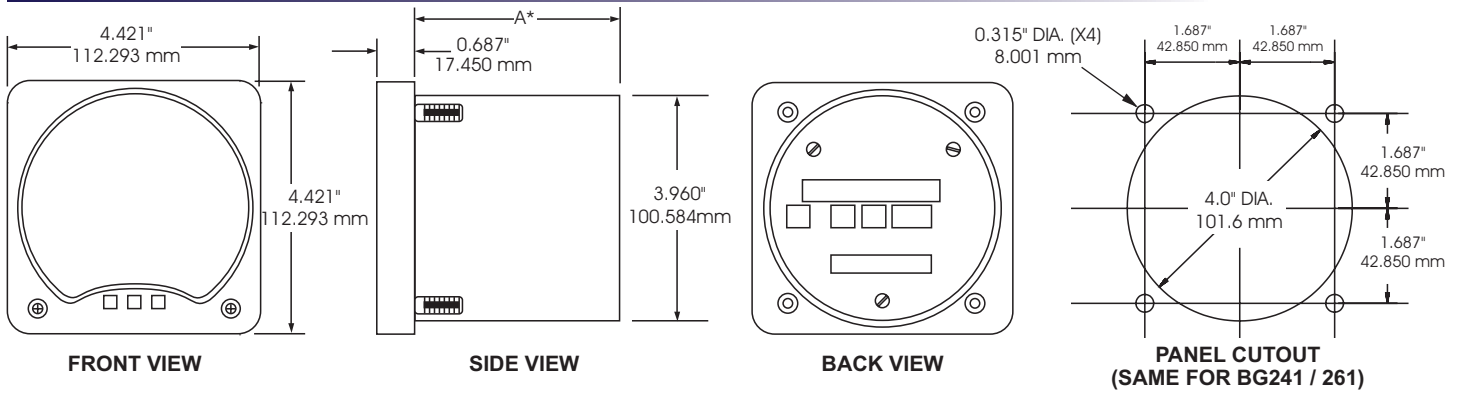


**WESCHLER
INSTRUMENTS**
DIVISION OF HUGHES CORPORATION

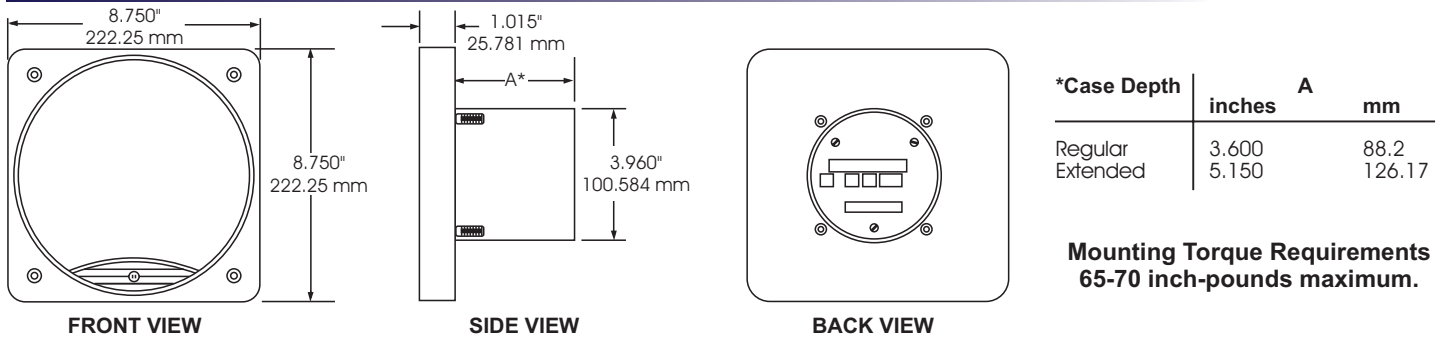
16900 FOLTZ PARKWAY - CLEVELAND, OH 44149
Phone: (440) 238-2550 - Fax: (440) 238-0660
www.weschler.com e-mail: sales@weschler.com

DIMENSIONS

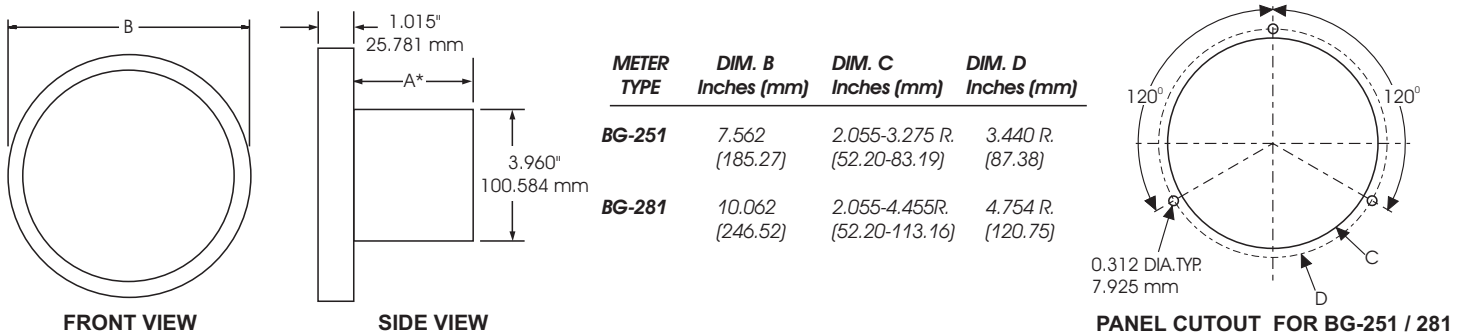
BG-241



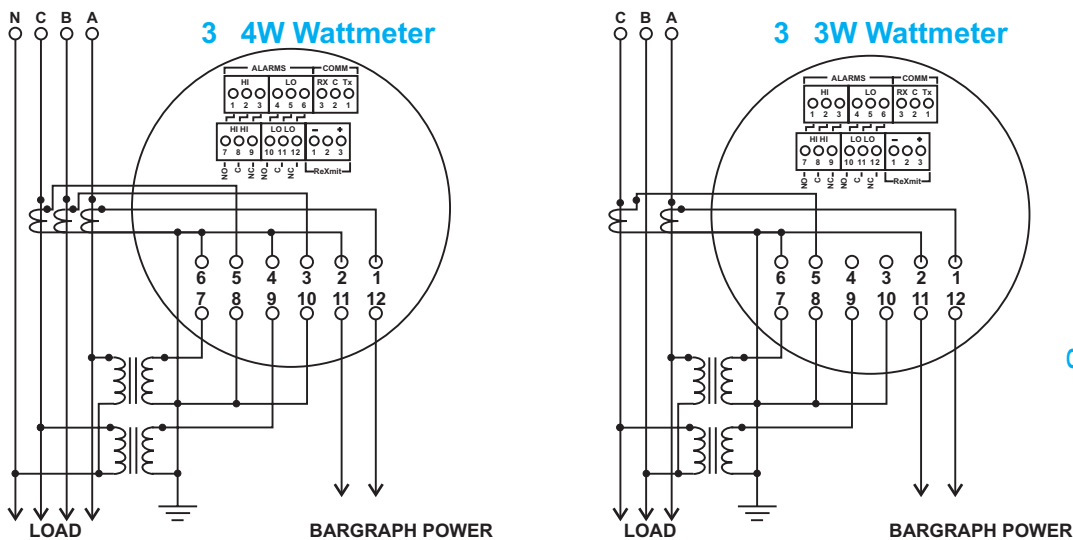
BG-261



BG-251 / 281



TERMINAL CONNECTIONS



AC connections are screw terminals

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

5/28/03