

BG TriColor AC Power Circular BarGraphs

ACP3

Watt, VAR and Power Factor Meters for Single and Three Phase Systems

These Weschler BG TC Circular BarGraphs are optimized for AC power measurements. The ACP3 models include self contained CT (Current Transformers) and PT (Potential Transformers) plus 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.

Weschler BarGraphs combine the visual indication of an analog meter with the precision of a digital instrument. Large digits and a wide viewing angle allow operators to easily monitor the signal from a distance.

The ACP3 Watt and Varmeters can replace analog instruments such as the Weschler/Westinghouse KP-241, KP-261, KV-241 and KV-261. The analog backplate option duplicates the Westinghouse terminal stud connections. The BG-241 and BG-261 panel footprint and mounting also match other 4½" and 8¾" switchboard meters such as the GE AB40, DB40, AB16 and DB16.

ACP3 BarGraph instruments are housed in a rugged steel case. They are designed for long life in utility switchboards and other control applications. Installation is also simplified with the ACP3 series.

FEATURES

**Large, high resolution
50 segment LED bar array**

**5 digit display with resolution
to 0.01%**

Field programmable functions

Zero and full scale point location
Setpoint type (Hi or Low)
Hysteresis & latching
Setpoint time delay
16 step dimming
Digital display for engineering units
Enable/disable front buttons
I.D. selection for communication
Bar form
Peak / Valley enable
Color zones
Over-range/Under-range flashing
Lamp test

Peak and Valley hold

**Trend indication for signal
direction**

Form-C relay outputs

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

Communication

RS232/485, SCADA, DCS

Analog retransmit

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

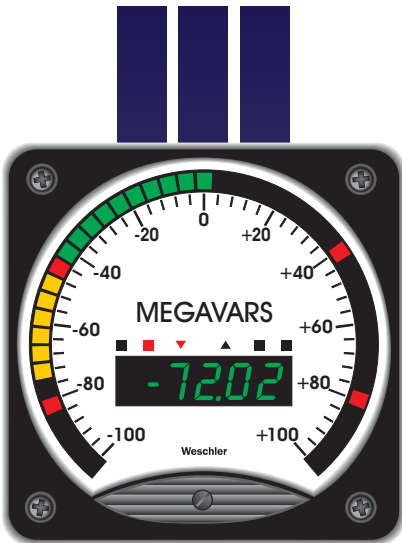
Retrofit sizes for:

GE/Yokogawa AB/DB 40, 4½" and
AB/DB 16 8¾" switchboard
meters

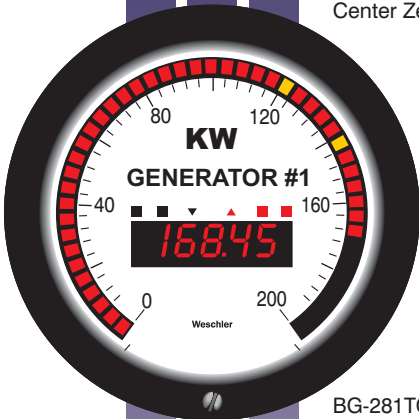
Crompton 075/07, 4½" and
8¾" switchboard meters

Ashcroft, Heise 8" gauges
Dixon BW051/P

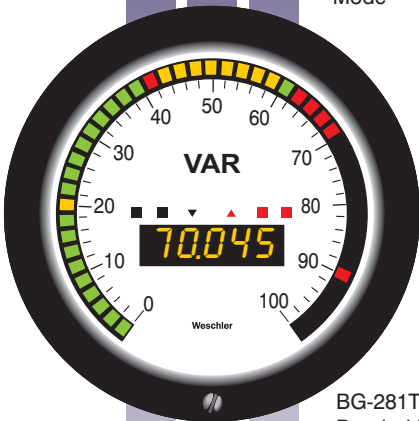
Weschler K241, K261



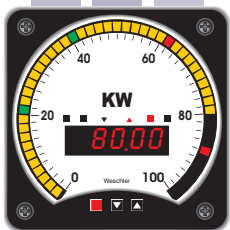
BG-261TC
Center Zero



BG-281TC
Solid Bar
Mode



BG-281TC
Banded Bar
Mode



BG-241TC



**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

SPECIFICATIONS

Bar Display

50 segment LED
2% full scale resolution
Circular display:

BG-241	285°
BG-261/281	255°

Digital Display

5 digit -9999 to 99999
Resolution 0.01% full scale
Linearity ±1 count

Height

BG-241	0.4" (10.16mm)
BG-261/281	0.8" (20.32mm)

Response Time

AC <800msec full scale

Temperature

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

Setpoints

Four SPDT relays with form C contacts available.
Hysteresis 0.00-10.00% FS or latching.
Time delay 0-10 sec.

Retransmit Signals

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

Communication

RS232
RS485 (2-wire)

Power

120/240V AC ±10% (13VA)
12, 24, 28, 48, 250V DC ±10% (8W)

110-250V DC (8W),
85-264V AC (13VA)

Input Impedance

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

Input Isolation

AC Transformer isolated (>50mA, 1V)

Input Overload Ratings

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

Input Range (RMS)

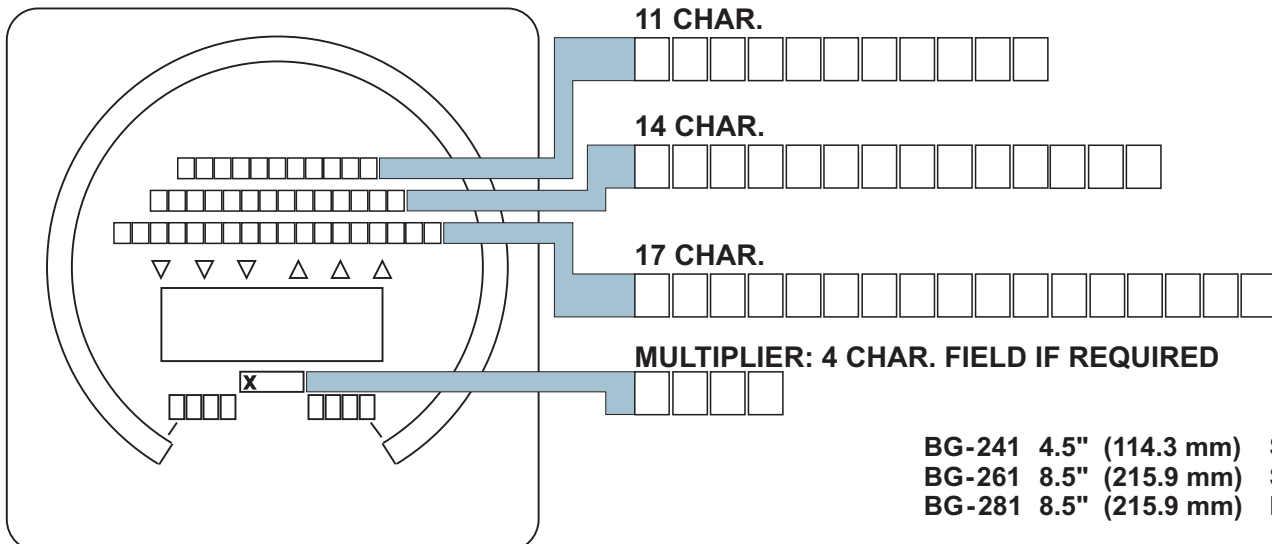
	MIN - MAX
Current	1mA - 5A AC
Voltage	50mV - 250V AC

Accuracy

Watt, VAR ±0.5% of full scale
Power Factor ±0.1 PF

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



BG-241	4.5" (114.3 mm)	SQUARE
BG-261	8.5" (215.9 mm)	SQUARE
BG-281	8.5" (215.9 mm)	ROUND

ORDERING GUIDE

Specify scale markings and legend when ordering

TriColor ACP3

PART NUMBER

<p>TYPE:</p> <p>4 = BG241 4-1/2" Square BarGraph 6 = BG261 8-3/4" Square BarGraph 8 = BG281 8" Circle BarGraph</p> <p>BAR ZERO POINT:</p> <p>B = Zero at Bottom H = Zero at 50% mid scale F = Zero at F.S. S = Special /off scale zero</p> <p>DIGITAL DISPLAY:</p> <p>R = Red Y = Yellow G = Green S = Special</p> <p>SETPOINT RELAYS:</p> <p>4 = 4 Relays X = No relays S = Special order</p> <p>SETPOINT HYSTERESIS:</p> <p>P = Programmable S = Special X = Not required</p> <p>INPUT TYPE:</p> <p>L = Watts single phase H = Watts three phase V = VARs single phase Z = VARs three phase Y = VARs three phase for external phase shifter (4-wire only) G = Power factor (display 1.00 max, specify lag on right or left)</p> <p>Specify: CT ratio _____ Full scale Watts value _____ PT ratio _____ External phase shifter _____ System Delta <input type="checkbox"/> or WYE <input type="checkbox"/></p>	<p>BAR COLOR:</p> <p>T = TriColor</p> <p>B = Analog Backplate K = Conformal Coating A = Custom Artwork Y = Spraytight Front (BG241/261) X = None S = Special</p> <p>T = Trend Indicator X = NA</p> <p>P = Peak/Valley Hold X = NA</p> <p>COMMUNICATION:</p> <p>A = RS232 C = RS485 Bi-directional X = None</p> <p>RETRANSMIT:</p> <p>C = 1-5V DC (or 0-5V on request) D = 0-1V DC F = 4-20mA DC G = 0-1mA DC W = Excitation Power 24 VDC @ 90mA S = Special X = None</p> <p>POWER:</p> <p>1 = 120V AC ±10% 50/60Hz 2 = 240V AC ±10% 50/60Hz 4 = 12V DC ±10% * 6 = 250VDC ±10% 7 = 24V DC ±10% 8 = 28V DC ±10% 9 = 48V DC ±10% U = 110-250V DC / 85-264V AC, 50-440Hz</p> <p style="text-align: right;">*Max ambient 45°C</p> <p>INPUT LEVEL:</p> <p>12 = Single phase two wire 1 element 13 = Single phase three wire 2 element 33 = Three phase three wire 2 element 34 = Three phase four wire 2½ element 3E = Three phase four wire 3 element</p>
---	---

EXAMPLE:

4	B	Y	4	P	H	3	3	1	F	A	P	T	A	T
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

(4) BG-241, (B) zero at bottom, (Y) Yellow digits, (4) 4 relays, (P) Programmable setpoint hysteresis, (H) Watts input, (33) 3 phase, 3 wire, (1) 120 VAC 50/60 Hz power, (F) 4-20 mA DC isolated retransmit, (A) RS232 communication,

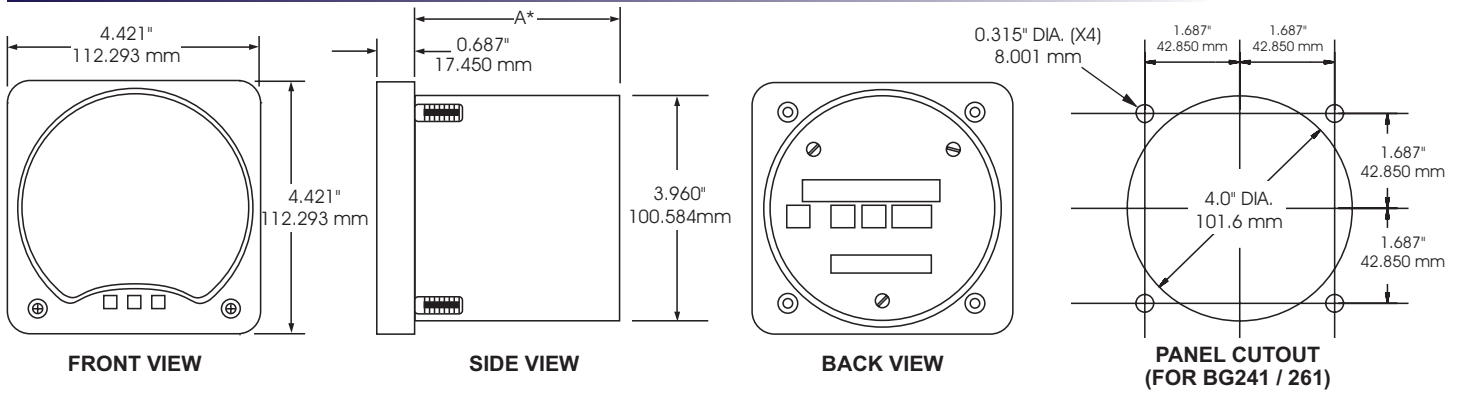
Options and features vary by model. Contact factory for details and latest specifications.

WESCHLER INSTRUMENTS

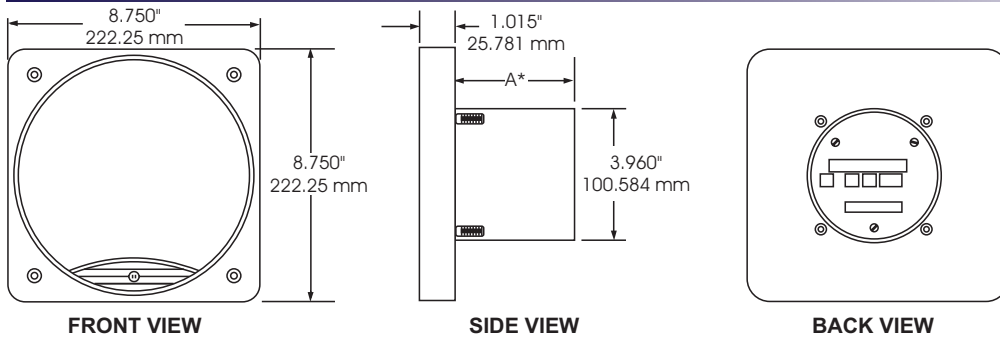
16900 FOLTZ PARKWAY - CLEVELAND, OH 44149
 Phone: (440) 238-2550 - Fax: (440) 238-0660
 www.weschler.com e-mail: sales@weschler.com

DIMENSIONS

BG-241



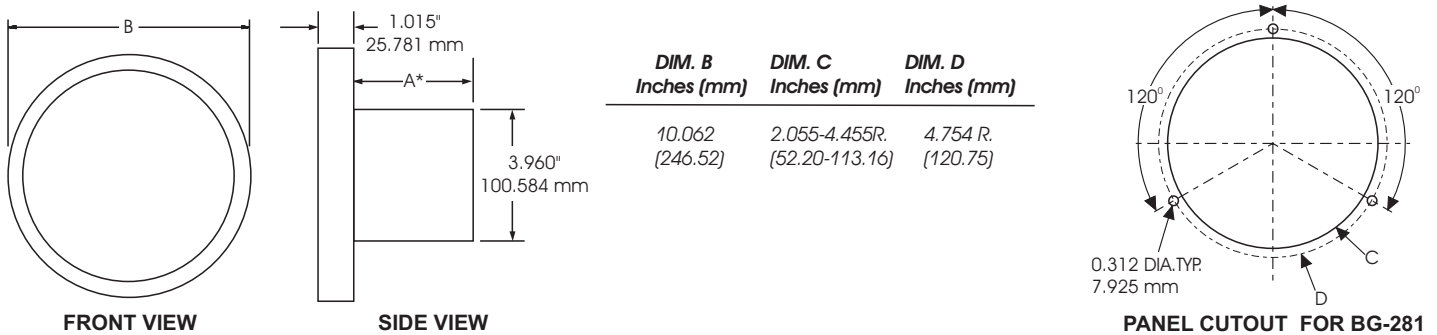
BG-261



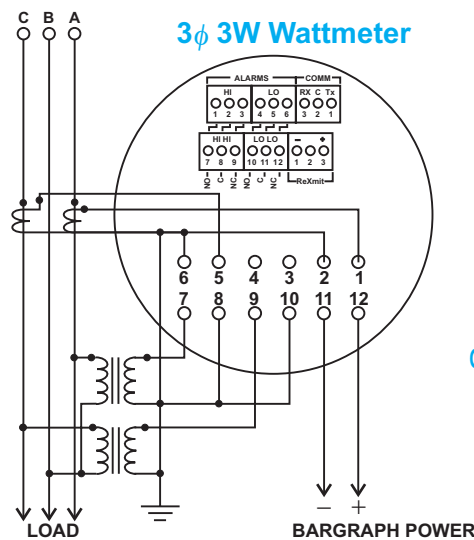
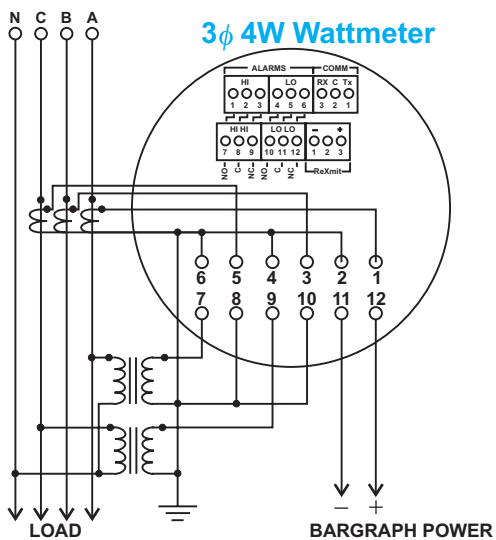
*Case Depth	inches	A	mm
Extended	5.150		126.17

Mounting Torque Requirements
65-70 inch-pounds maximum.

BG-281



TERMINAL CONNECTIONS



AC connections
are screw terminals

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