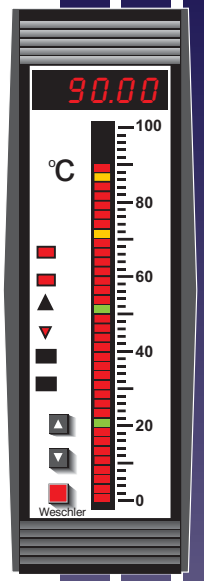
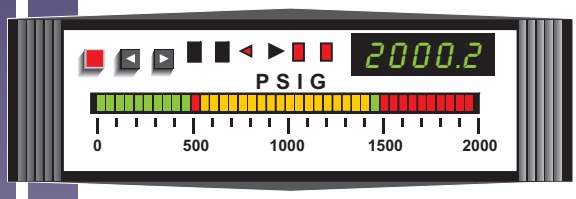
BG TC Series
TriColor BarGraphs ™

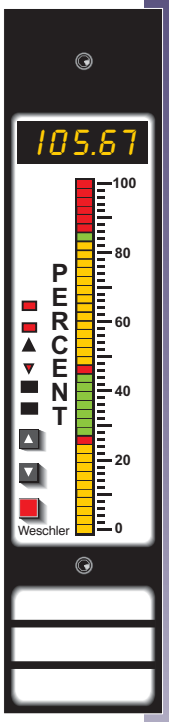


BG-252TC

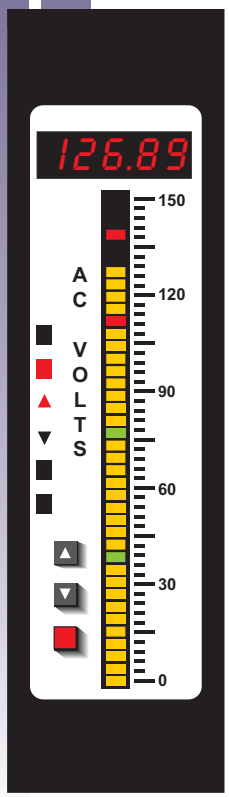
The Weschler Instruments BG "TC", TriColor BarGraphs provide the quickest way to spot problems in your process control panels with bright changing colors. Quick identification of trouble conditions can help prevent equipment damage or production loss, thus reducing down time and maintenance costs, and improving operational safety. Each 40 segment LED (Light Emitting Diode) of the BG TC family has the ability to illuminate as Red (Danger), Yellow (Caution), or Green (Safe condition). The bar color identification can be easily changed by the user, from the front pushbuttons or through a tamper safe mode. The fully programmable Weschler BG TC BarGraph™ fits the widest range of inputs and retrofits most edgewise switchboard and panel meters. Weschler's instruments satisfy the high quality standards set forth by the utility, OEM, and process control industries.



BH-252TC



BV-5ATC



BD-101TC

FEATURES

Large, high resolution 40 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

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
RS232/485, SCADA, DCS

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

Retrofit sizes for:
GE/Yokogawa 180,
Bailey draft gauges,
Crompton 128,
Dixson SA/BB 101 (all models),
Dixson BJ101, K051
Hays Republic 216, 3600/V5A,
Foxboro 65PP,
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	V, mA

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
40 segment LED
2.5% full scale resolution

Height
BG252, BH252, BV5A 4" (10.12mm)
BD101 10" (25.4mm)

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

Height
BG252, BH252, BV5A 0.3" (7.62mm)
BD101 0.56" (14.2mm)

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 0.00-10.00% FS or latching
Time delay 0-10 sec.

Sensor Power
24V DC excitation power @ 90mA

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

Communication
RS232
RS485 (2-wire)

Power
120/240V AC ±10%
50/60/400Hz (13VA)
12V DC ±10% (8W)
24V DC ±10% (8W)
28V DC ±10% (8W)
48V DC ±10% (8W)
250V DC ±10% (8W)
110-250V DC (8W)/85-264V AC, 50-440 Hz (13VA)

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

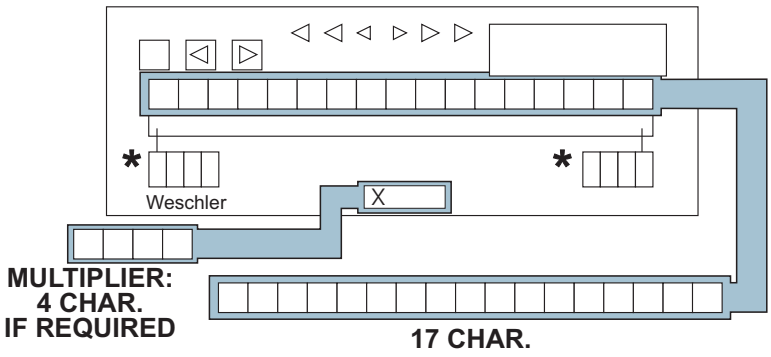
Alpha 0.00385 & °C standard
Other Alpha ratings available
10Ω Cu -100 to 260 -148 to 500
Accuracy 0.2% of full scale ± 1 count

Frequency:
50Hz to 20kHz at 5 to 250V p-p
Accuracy 0.1% of full scale ± 1 count

Line Frequency (55 to 65 Hz):
Accuracy 0.01% of full scale ± 1 count

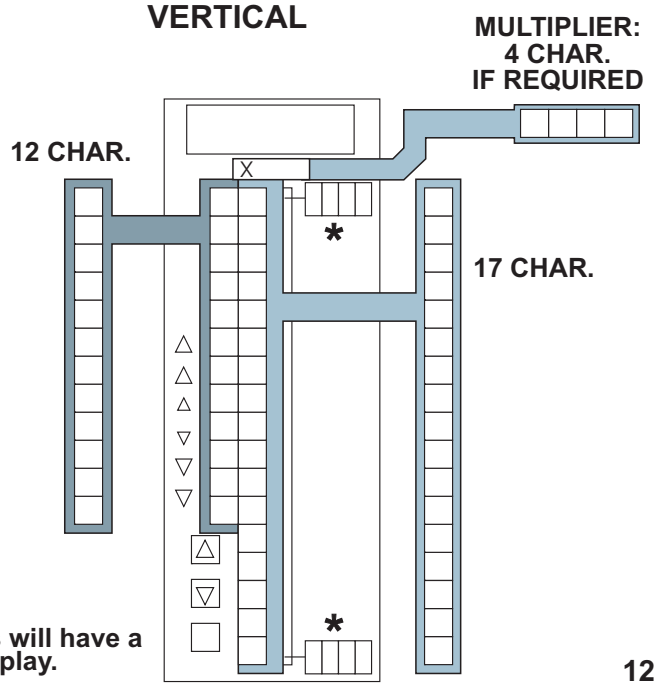
ARTWORK GUIDELINES

HORIZONTAL



* Numerical range
MAX. 4 Digits

VERTICAL



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

ORDERING GUIDE

SAMPLE PART NUMBER (SEE BOTTOM OF PAGE FOR EXAMPLE)

2	B	Y	4	P	A	A	M	1	F	A	P	T	X	T

PART NUMBER

TYPE:
2 = BG252 6" Vertical BarGraph
5 = BH252 6" Horizontal BarGraph
A = BV5A 7.5" Vertical BarGraph
K = BD101 10" Vertical 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:
R = Red
Y = Yellow
G = Green
S = Special

SETPOINT RELAYS:
4 = 4 relays
X = No relays
S = Special

SETPOINT HYSTERESIS.
P = Programmable 0-10% or latching
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 or ☐ 10 Ohm Cu
S = Special
U = Serial ASCII **(requires com. type A or C in Communication options)**

BAR COLOR:
T = TriColor

K = Conformal Coating
T = Terminal Strip Connector
A = Custom Artwork
X = None
S = Special

T = Trend Indicator
X = NA

P = Peak/Valley Hold
X = NA

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

RETRANSMIT:
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

POWER:
1 = 120V AC, 50/60 Hz
2 = 240V AC, 50/60 Hz
4 = 12V DC
6 = 250V DC
7 = 24V DC
8 = 28V DC
9 = 48V DC
U = 110-250V DC / 85-264V AC, 50-440 Hz

INPUT LEVEL:
See input Level Matrix Guide

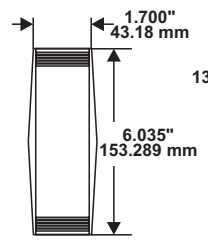
EXAMPLE:

2	B	Y	4	P	A	A	M	1	F	A	P	T	X	T

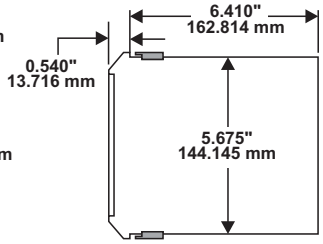
(**2**) BG-252, (**B**) zero at bottom, (**Y**) Yellow, (**4**) Four relays, (**P**) Programmable setpoint hysteresis, (**A**) DC volts input, (**AM**) full scale is 0.05 volts, (**1**)120 VAC 50/60 Hz power, (**F**) 4-20 mA DC isolated retransmit, (**A**) RS232 communication, (**P**) peak/valley hold, (**T**) trend indicator, (**X**) No option, (**T**) TriColor

DIMENSIONS

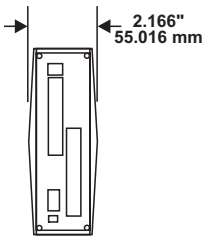
BG-252TC and BH-252TC



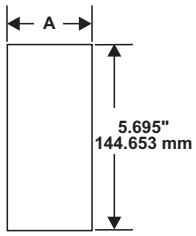
FRONT VIEW



SIDE VIEW



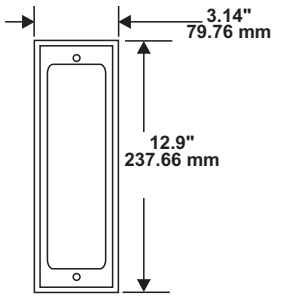
BACK VIEW



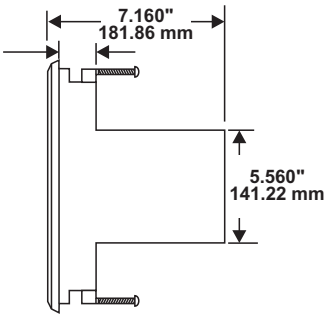
PANEL CUTOUT

Number of Instruments	A Inches	(Millimeters)
1	1.770	(45)
2	3.510	(89)
3	5.250	(133)
4	6.990	(178)
.	.....	.....
.	.....	.....
.	.....	.....
8	13.95	(354)

BD-101TC



FRONT VIEW



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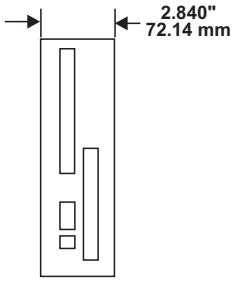
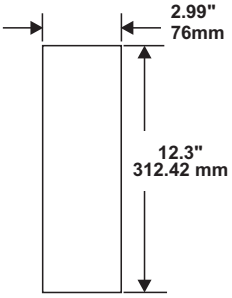
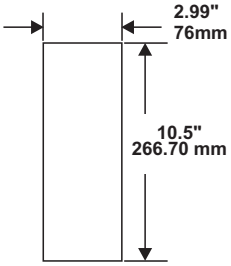


BACK VIEW

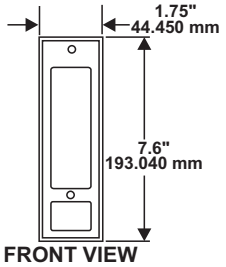


PANEL CUTOUT

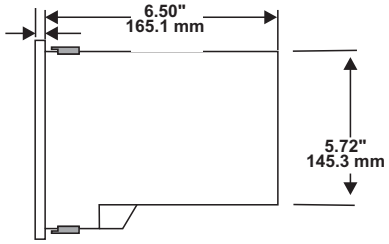


OPTIONAL MOUNTING

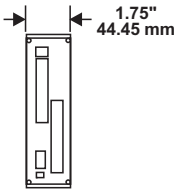
BV-5ATC



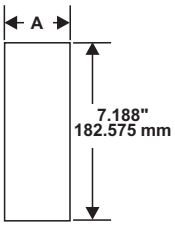
FRONT VIEW



SIDE VIEW



BACK VIEW



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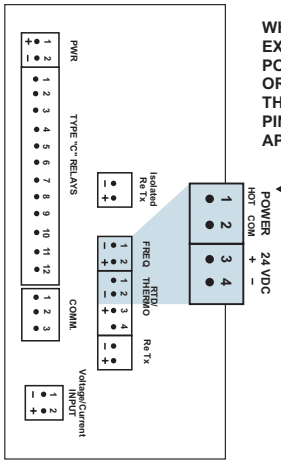
3	5.250	(133)
4	6.990	(178)
.	.	.
.	.	.
8	13.95	(354)

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

FREQUENCY/MAGNETIC PICKUP
(1) Lead 1 (–) (2) 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 (return)
(3) 24 VDC +

RELAY CONTACTS*
(1) AL 1 N.O. (2) AL 1 C.
(3) AL 1 N.C. (4) AL 2 N.O.
(5) AL 2 C. (6) AL 2 N.C.
(7) AL 3 N.O. (8) AL 3 C.
(9) AL 3 N.C. (10) AL 4 N.O.
(11) AL 4 C. (12) AL 4 N.C.

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

7/15/10

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

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