

# Single or Dual automatic tri-color bargraph meter with Serial I/O replaces T.A. Bailey "RY" series

P6



## Green

Bargraph display denotes value is within normal operating parameters. Notice the alarm marks (Yellow & Red). The bargraph can be programmed to change to the color of the alarm marks or only the portion beyond the alarm marks can change. Alternately, the alarm pointers can be disabled and the bargraph will still change to the pre programmed colors. Flashing the bargraph is easily configured and controlled with the alarm settings. Bargraph color and Alarm color is user programmable Red, Yellow or Green.

## FEATURES:

- ◆ Replaces Bailey "RY" series
- ◆ 18 bit Delta-Sigma A/D converter
- ◆ 1, 2 or 3 analog input channels. Control each bargraph separately or perform complex math functions.
- ◆ Math Functions: user definable polynomials and 25 point linearization tables
- ◆ 10-32VDC or 90-265VAC Power, 10 Watts maximum
- ◆ Optional Isolated RS-232C/422/485 Serial communications
- ◆ Optional Isolated excitation to power your Sensors/Transducers
- ◆ Custom face plate markings available
- ◆ Bargraph displays are programmable to change color at the limits or as a continuous color display
- ◆ Front panel replaceable scale plate
- ◆ All metal construction



## Yellow

Bargraph display indicates value is just outside the normal operating parameters. Notice that the danger alarms (red) are still visible. These give an indication of how far from the danger zone you actually are. If programmed, the bargraph can flash at this alarm and relays can be triggered to turn equipment on or off.

## RED

Bargraph display shows value is outside the normal operating parameters. Notice that the warning alarms are still visible. These give an indication of how far from the intermediate zone you actually are. If programmed, the bargraph can flash at this alarm and outputs can be triggered to turn equipment on or off. The HI-Q also has a feature known as the "PANIC" setting. When enabled, this will cause the relays to switch to a user programmed state (open or close) and the analog output to jump to the predetermined setting. This is extremely useful for taking control of a process in the event of a failure.



# Specifications

## A/D CONVERTER

- Bi-polar 18-Bit Delta-Sigma A/D converter
- Accuracy:  $\pm 0.01\%$  of Full Scale
- Linearity:  $\pm 0.01\%$  of Full Scale
- Zero offset: Automatic/Programmable
- SPAN: User Programmable for any reading
- F.S.Input Voltage Range: User selectable with internal jumpers
- Sampling Rate: 16 conversions per second (62.5mS), 100 per second available on request.
- Input Type: DC with internal signal conditioners for RMS, thermocouple, RTD, Strain-Gage or Watts available.
- Input Bias: 50pA
- C.M.V.:  $\pm 2\text{VDC}$  max (when powered by 5VDC)
- CMR:  $>90\text{dB}$
- Averaging (Weighted): None to 40. Adjustable band method for quick response
- Input Impedance:  $>100\text{K}$  for voltage inputs  
 $<1\text{K}$  for current inputs.  
See ordering information for details.

## POWER INPUTS

- 10-32VDC or 9-36VAC Isolated to 500V minimum
- 90-265VAC or 100-300VDC Isolated to 500V minimum
- Power Consumption 10Watts Maximum

## ENVIRONMENTAL

- Operating Temperature..... -10 to 60 Degrees C
- Storage Temperature.....-40 to 70 Degrees C
- Humidity.....5% to 95% non-condensing

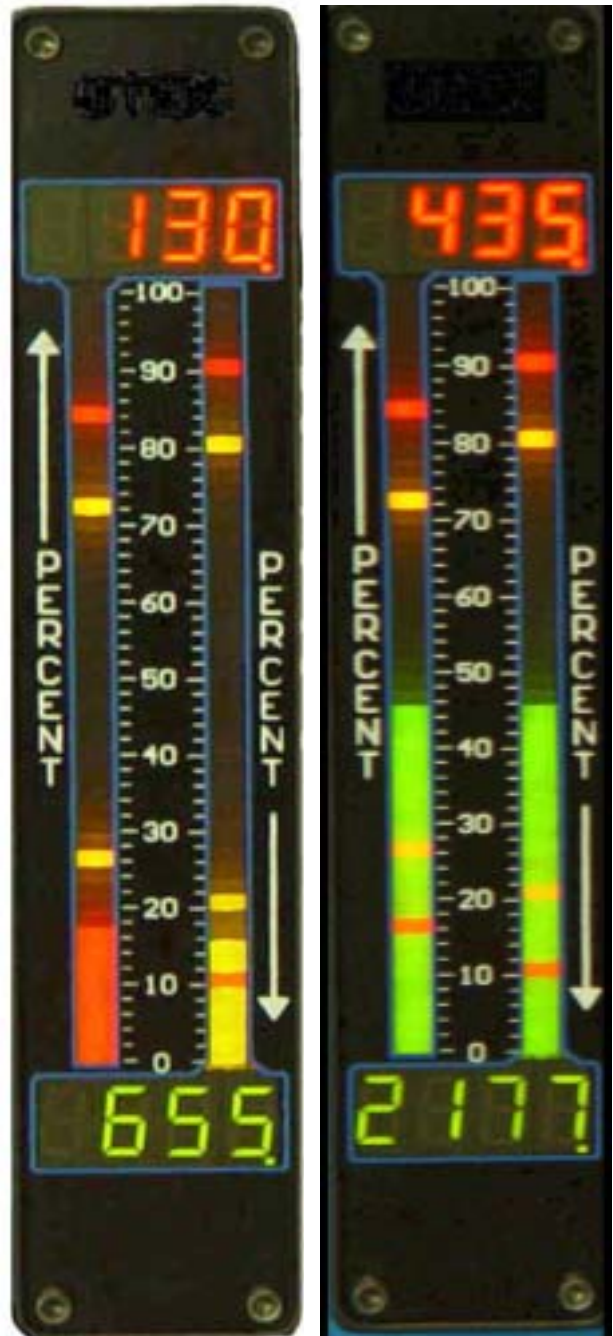
## DISPLAY

- Bargraphs.....51 segment tri-color LED
- Numeric...4 digit (9999 to -1999) uni-color LED, 0.32" tall high visibility type.
- Face Plate.....Lexan with epoxy ink printed on front

## Designed to meet

- Radiated Emissions MIL-STD-461
- Radiated Susceptibility MIL-STD-462
- Conducted Emissions MIL-STD-461
- Conducted Susceptibility MIL-STD-462
- Fast Transient
- Shock & Vibration MIL-STD-901 & MIL-STD-167
- MTBF calculated at 100,000 hours per MIL-HDBK
- Optional EMI / RFI mesh.

## ACTUAL SIZE



### ORDERING INFORMATION (04-2013)



#### BARGRAPH/DIGITAL

0 ..... 1 Each  
1 ..... 2 Each

#### BAR-DIGITAL COLOR (2)

0 ..... STD. GRN-RED  
1 ..... BLUE-RED  
9 ..... Custom

#### SERIAL I/O

0 ..... Isolated RS232C  
1 ..... Isolated RS232C/485  
2 ..... Isolated RS232C/422  
9 ..... Custom

#### POWER INPUT

1 ..... 10-32VDC  
2 ..... 90-265VAC  
9 ..... Custom

#### SIGNAL INPUTS

00 ..... None

#### ANALOG INPUTS (1 Channel)(3)

10 ..... VDC (1MΩ)  
11 ..... mADC  
12 ..... 4-20mA Current Loop(25Ω)  
14 ..... VRMS (1MΩ)  
15 ..... mARMS  
17 ..... Strain-Gage (>200<400Ω)  
18 ..... Strain-Gage (>1K<5KΩ)  
20 ..... Resistance (50KΩ)  
21 ..... Temperature RTD  
22 ..... Temperature Thermocouple  
25 ..... mVDC (1MΩ)  
29 ..... Custom (Factory #)

#### ANALOG INPUTS (2 Channels)

30 ..... VDC (1 megohm)  
31 ..... mADC  
32 ..... 4-20mA Current Loop (25Ω)  
33 ..... Watts DC (1M-0.1Ω)  
34 ..... VRMS (1MΩ)  
35 ..... mARMS  
36 ..... Watts RMS (1M-0.1Ω)  
41 ..... Temperature RTD  
42 ..... Temperature TC  
47 ..... mVDC (1MΩ)  
49 ..... Custom (Factory #)

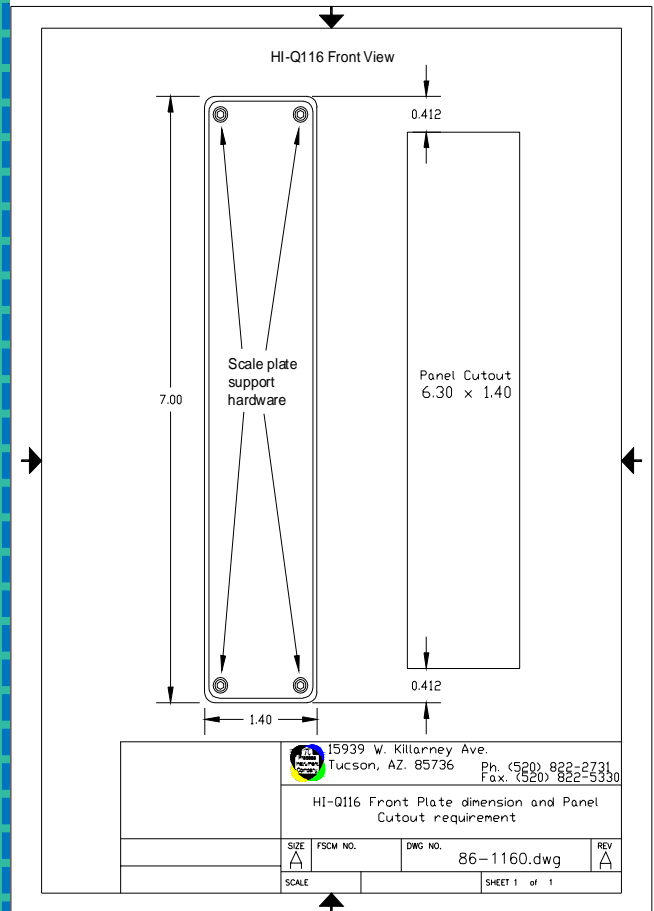
#### ANALOG INPUTS (3 Channels)

50 ..... VDC (1MΩ)  
51 ..... mADC  
52 ..... 4-20mA Current Loop (25Ω)  
53 ..... V RMS (1MΩ)  
54 ..... mA RMS  
55 ..... Temperature RTD  
69 ..... Custom (Factory #)

#### HOUSING DEPTH (5)

0 ..... 8" Deep  
9 ..... Custom

### MECHANICAL



#### NOTES

1. Contact sales for Custom Scales/Overlays
2. 30V Compliance is for ..... external Transmitters/ Transducers
3. Volt & Amp Ranges are Internally Selectable .5, 5, 10 & 50VDC, 1, 5, 20mADC, Shipped with .5V or 1mA Unless Specified.
4. Mixed Inputs (V&A, Temp & 4-20, Etc.) Available

