

Single automatic tri-color bargraph meter with Serial I/O replaces Chessel "700" series

HI-Q114

FEATURES:

- ◆ Replaces Chessel "700" series
- ◆ Full 4 digit LED numeric display, can be calibrated for any readings from -1999 to 9999.
- ◆ 18 bit Delta-Sigma A/D converter
- ◆ 1, 2 or 3 analog input channels.
- ◆ 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 display is programmable to change color at the limits or as a continuous color display
- ◆ Front panel replaceable scale plate
- ◆ All metal construction
- ◆ Exclusive "twist-lock" mounting system.

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.



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

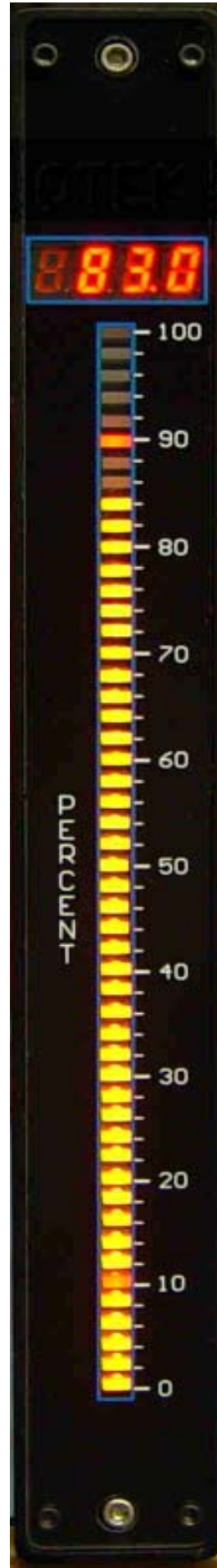
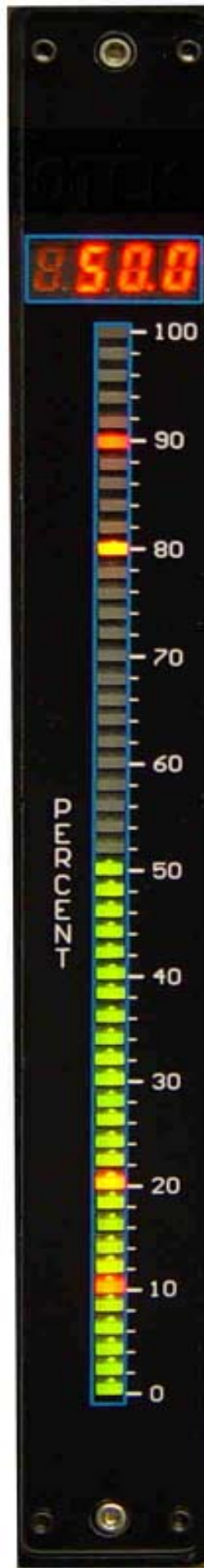
DISPLAY

- 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

QUALIFICATIONS

(N, M and S series only. Consult Factory)

- Meets EPRI TR102323 rev B
- Radiated Emissions MIL-STD-461
- Radiated Susceptibility MIL-STD-462
- Conducted Emissions MIL-STD-461
- Conducted Susceptibility MIL-STD-462
- Fast Transient
- Seismic IEEE 323 / 344
- Software V&V per IEEE
- Shock & Vibration MIL-STD-901 & MIL-STD-167
- MTBF calculated at 100,000 hours per MIL-HDBK
- Optional EMI / RFI mesh.



ORDERING INFORMATION (01/2003)



BAR-DIGITAL COLOR	
0	STD. GRN-RED
1	BLUE-RED

SERIAL I/O	
0	Non-Isolated RS232C
1	Isolated RS232C/485
2	Isolated RS232C/422

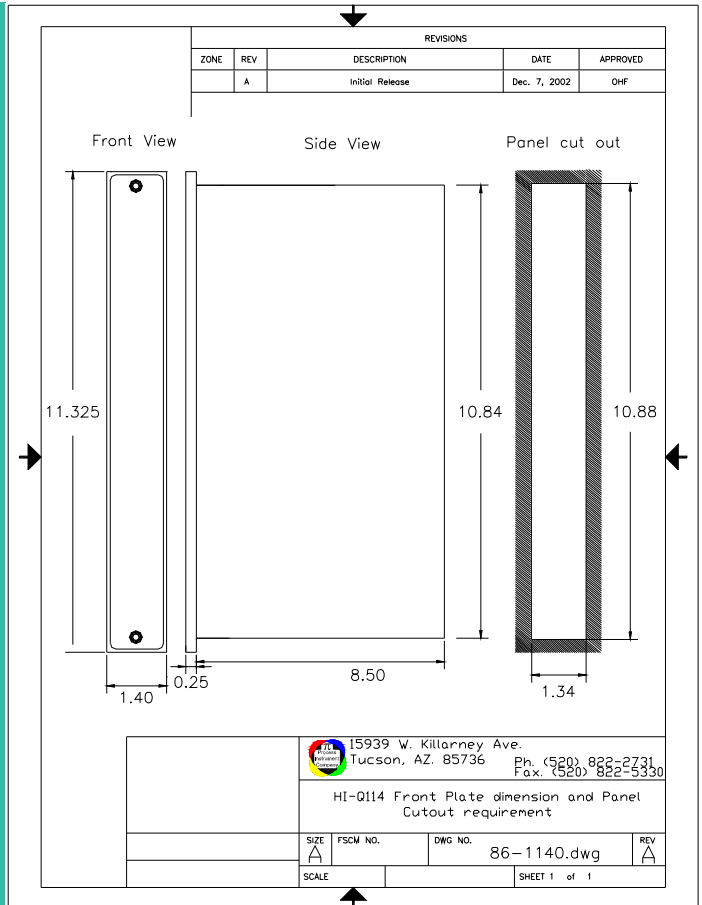
POWER INPUT	
1	10-32VDC
2	90-265VAC
9	Custom

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) (4)	
30	VDC(1MΩ)
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)(4)	
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



NOTES

1. Contact Pi for Custom Scales/Overlays
2. 30V Compliance is for External Transmitters/Transducers
3. Volt & Amp Ranges are Internal Range Selectable .5V, 5V, 10V & 50VDC, 1mA, 5mA & 20mADC, Shipped with .5V or 1mA Unless Specified.
4. Mixed Inputs (V&A, Temp & 4-20, Etc.) Available
5. 14.5" Deep Housing with Specific Connector Termination on Request