



Patented

Universal Inputs:
 DC Voltage/Current, T/C, RTD,
 and Strain

- Accuracy: ±0.005% rdg
- 6-Digit Color Changing LED Display
- Up to 142 Readings Per Second
- 10 Point Linearization
- 4 Isolated Open Collector Output
- Isolated Analog Output Optional
- Four Relays Optional
- Optional Ethernet or RS-232/RS-485
- In-Line Calibration
- NEMA 4 Front Bezel

NEWPORT goes **BEYOND INFINITY®** with the all new **INF-B**. The NEWPORT INFINITY set the world standard for accuracy, performance and quality in digital panel meters. The all new **INF-B** raises the bar even higher with accuracy of up to ±0.005% of reading, and up to 142 readings per second.

The versatile NEWPORT **INF-B** handles a broad spectrum of dc voltage and current ranges, nine thermocouple types, multiple RTD's, and signals from strain gauge transducers such as load cells and pressure transducers, as well as potentiometric inputs. It also features ten point linearization of input signals, programmable by the user for custom applications.

Built-in excitation to power virtually any sensor or transmitter, and four isolated open collector outputs for control or alarms are standard. The big, bright, 6 digit patented LED display can be programmed to change color between **RED**, **AMBER**, and **GREEN** at any set point. The digits are 58% bigger than the typical display. Output options include: Isolated programmable analog voltage or current and four relays.

With the Serial Communications option, the user can select from a push-button menu between RS-232, RS-485, and either a straightforward ASCII protocol or MODBUS. With NEWPORT'S award-winning Ethernet/Internet option, the new **INF-B** connects directly to an Ethernet network and transmits data in standard TCP/IP protocol.

change color
 at any set point*



Totally Programmable Color Displays

The new **BEYOND INFINITY® INF-B** Meter has totally programmable color displays.

The display can be programmed to change color at any setpoint or alarm point.



RED
AMBER
GREEN



It is possible to monitor and control a process through a web browser from anywhere on the Internet.

Embedded Internet and Serial Communications

Featuring optional "Embedded Internet" (specify EI option) the **INF-B** connects directly to an Ethernet network and transmit data in standard TCP/IP packets, or even serve Web pages over a LAN or the Internet. The **INF-B** is also available with serial communications. With the **-C24** option, the user can select from the push-button menu between RS-232, RS-422, and RS-485, with straight forward ASCII commands or MODBUS.

Programmable Color Display

The NEWPORT **INF-B** has totally programmable color displays. The display can be programmed to change color at any set point or alarm point.

For example, the instrument can be programmed to display the process value in **GREEN** during warm-up, switching to **AMBER** to signal the normal operating range, and in **RED** to signal an alarm condition. The changes in color are quickly seen from a distance, and machine operators can intuitively react to changing conditions. The colors can be programmed to change back when the value drops back below the alarm point or to "latch" on until being reset by the operator.

The instrument can also be programmed to display only one unchanging color: **GREEN**, **AMBER**, or **RED**. This is a useful way to let an operator identify, at a glance, process values in three separate locations, or to display three different measurements such as Temperature, Pressure, and Flow. **INF-B** LED displays are considerably bigger, brighter and therefore more visible than displays for conventional instruments with the same DIN size.

QUALITY and TECHNOLOGY

The innovative NEWPORT® **INF-B** meters feature an extended five (5) YEAR warranty at no extra charge. The **INF-B** packs a wealth of power and features using COB (chip-on-board) and SMT (surface mount technology) assembly techniques and automation. Every **INF-B** instrument is thoroughly calibrated and tested at several stages throughout production. The **INF-B** offers the highest accuracy for industrial instrumentation at 0.005% of reading. The analog-to-digital conversion utilizes patented algorithms and smart filtering.

Universal Inputs

The innovative **INF-B** offers the broadest selection of signal inputs available on one industrial instrument. The choices are easily selected from the menu with front panel pushbuttons, or by serial or ethernet communications.



9 Thermocouple Types

The **INF-B** handles NINE (9) thermocouple types: K, J, T, E, R, S, B, N, and J DIN. The patented thermocouple linearization algorithms employed in the **INF-B** produce the highest standard of accuracy.

Most Accurate RTD Measurements

The **INF-B** works with the widest selection of RTD's and produces the most accurate RTD measurements. Handles 100 ohm Pt both 0.00385 and 0.00392 curves, any 6 to 6000 ohm NIST or DIN Pt and any linear RTD (10 ohm Cu, etc.). A choice of 2-, 3- and 4-wire RTD connections ensures the absolute highest degree of accuracy.

Process Voltage and Current

The NEWPORT® **INF-B** measures process voltage: 0-100 mV, 0-1 V, 0-10 V, 0-100 V (unipolar), ±50 mV, ±500 mV, ±5 V, ±50 V (bipolar) ranges, and process current: 0-20 mA or 4-20 mA.

Strain Gauge

The **INF-B** measure inputs from Load Cells, Pressure Transducers, and most any strain gauge sensor. Input can be linearized over 10 pts on ranges. 0-100 mV, 0-1 V, 0-10 V, 0-100 V (unipolar), ±50 mV, ±500 mV, ±5 V, ±50 V (bipolar), in addition to 0-20mA. Excitation for transducers of 10 Volt and 24 Volt is standard.

Analog Output

The optional analog output can be programmed within a range of 0-10 Vdc or 0-20 mA. It is selectable as a calibrated retransmission of the process value.

Built-in Excitation Standard

The **INF-B** comes standard with built-in excitation. You can capture and display both peak and valley levels of your input signals, an important feature for such applications as destructive and pressure testing. Five different kinds of excitation are available for sensors such as transmitters (24 Vdc @ 25 mA), strain gages (1.5 to 10 Vdc @ up to 60 mA max.), slide-wire potentiometers (1.25 Vdc @ 30 mA).

The **INF-B** displays feature unique 9-segment LED characters, which greatly improves alphanumeric representations. The 7-segment LED characters found on most instruments are adequate for presenting numbers, but not letters. Words are easier to read with the unique 9-segment LED characters on the **INF-B**, which makes operating and programming simpler and easier.

**INF-B 9 Segment LED Digits
(Bigger 17.3 mm Height)**

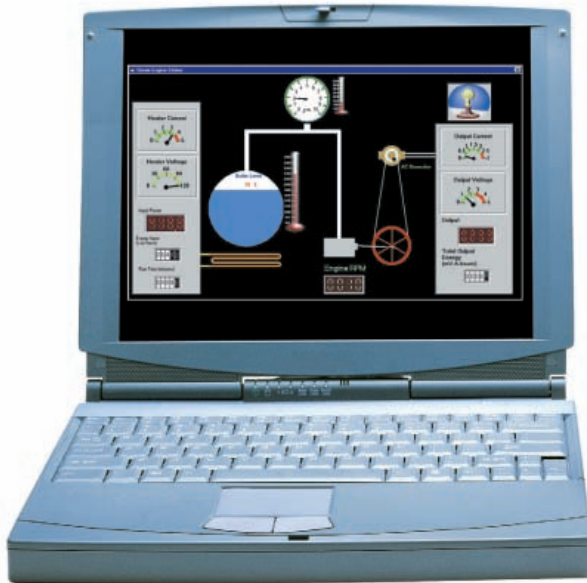
**Typical 7 Segment LED Digits
(Smaller 13.7 mm Height)**

1/8 DIN Ultra High Performance Meter

INF-B

Free Software

Free software is provided for easy set-up, configuration and data acquisition with the NEWPORT® INF-B.



Free ActiveX Controls

Free ActiveX Controls are provided for the INF-B, making it easy to integrate the INF-B with information systems using "ActiveX Containers" such as Microsoft Visual Basic and Microsoft Excel as well as with popular OLE and OPC compliant data acquisition, process control, and industrial automation software from NEWPORT®, GE Fanuc, Intellution, Rockwell Automation, Object Automation, iconics, and Wonderware among others.

Factory Setup and Configuration

Make installing your INF-B meter or controller easier by ordering it preconfigured by the factory. You specify the input types, scaling if applicable, set points, alarm points, etc. and we will program the instruments to your specific requirements in our calibration lab prior to shipment. For a checklist of factory setup parameters, please consult your NEWPORT® applications engineers.

SPECIFICATIONS

Accuracy: ±0.005% rdg
Span Temperature Coefficient: ±20 ppm
Power: 90 to 240 Vac
Normal Mode Rejection: 60 dB
Common Mode Rejection: 120 dB
Common Mode Voltage: 1500 V peak per Hv test
Resolution: 24-bit
Reading Rate: 7 to 142 sample/sec.
Display: red/amber/green 6-digit, 9-segment color changing, 17.3 mm (0.68"); H x 10.2 mm (0.40") W; 4 alarm indicators; °C, °F, & °K
Panel Cutout: 45 H x 92 mm W (1.772 x 3.622"); 1/8 DIN
Setpoint Outputs: four, isolated open collector; rated 150 mA at 1 V sink, 30 V open
Four Relay Option: (2) 5 A & (2) 3 A relays Form-C, SPDT
Analog Output: 0-5 V/1-5 V/ 0-10 V/0-20 mA/4-20 mA, user selectable; 354 Vp isolation; 14-bit resolution; 0.1% accuracy, 6 msec step response

Input Type

Sensor Type	Range	Accuracy*
J Iron Constantan	-210 to 760°C -346 to 1400°F 63.2 to 1673.2 K	0.2°C 0.3°F 0.2 K
K** Chromel Alumel	-250 to 1250°C -418 to 2282°F 23 to 977.2 K	0.2°C 0.3°F 0.2 K
T Copper Constantan	-270 to 400°C -454 to 752°F 3.2 to 673.2 K	0.2°C 0.3°F 0.2 K
E Chromel Constantan	-270 to 1000°C -454 to 1832°F 3.2 to 1273.2 K	0.2°C 0.3°F 0.2 K
R Pt/13%Rh Platinum	-50 to 1768°C -58 to 3214°F 223.2 to 2041.2K	0.2°C 0.3°F 0.2 K
S Pt/10%Rh Platinum	-50 to 1768°C -58 to 3214°F 223.2 to 2041.2K	0.2°C 0.3°F 0.2 K
B Pt/30%Rh Pt/6%Rh	+100 to 1820°C +212 to 3300°F 373.2 to 2093.2K	0.3°C 0.5°F 0.3 K
N OMEGALLOY*1 Nicrosil-Nisil	-270 to 1300°C -454 to 2372°F 3.2 to 1573.2K	0.2°C 0.3°F 0.2 K
J DIN Iron Constantan	-200 to 900°C -328 to 1652°F 73.2 to 1173.2K	0.6°C 1.0°F 0.6 K

Sensor Type	Range	Accuracy*
RTD 1 10 ohm Copper	-200 to 200°C -328 to 392°F 73.2 to 473.2 K	1.0°C 2.0°F 1.0 K
RTD 2 100 ohm Pt 0.00385	-200 to 900°C -328 to 1652°F 73.2 to 1173.2 K	0.2°C 0.3°F 0.2 K
RTD 3 100 ohm Pt 0.00392	-200 to 850°C -328 to 1562°F 73.2 to 1123.2 K	0.2°C 0.3°F 0.2 K

* Includes (All ±) Maximum Linearization Error

** For Type K: Temperatures over 1250°C, accuracy will be 0.4°C/0.8°F/0.4°K

Ethernet: Standards Compliance IEEE 802.3 10Base-T
 Protocols: TCP/IP, ARP, HTTPGET

RS-232/RS-422/RS-485/Telnet Simulation/Tunneling/ MODBUS:
 selectable from menu; both ASCII and MODBUS

Voltage Input Ranges: 0-100 mV, 0-1 V, 0-10 V, 0-100 V, ±50 mV, ±500 mV, ±5 V, ±50 V

Current Input Ranges: 0-20 mA, 4-20 mA

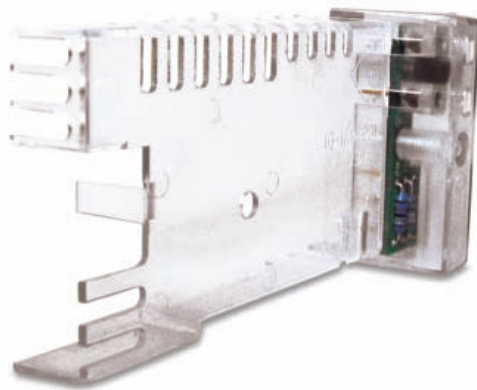
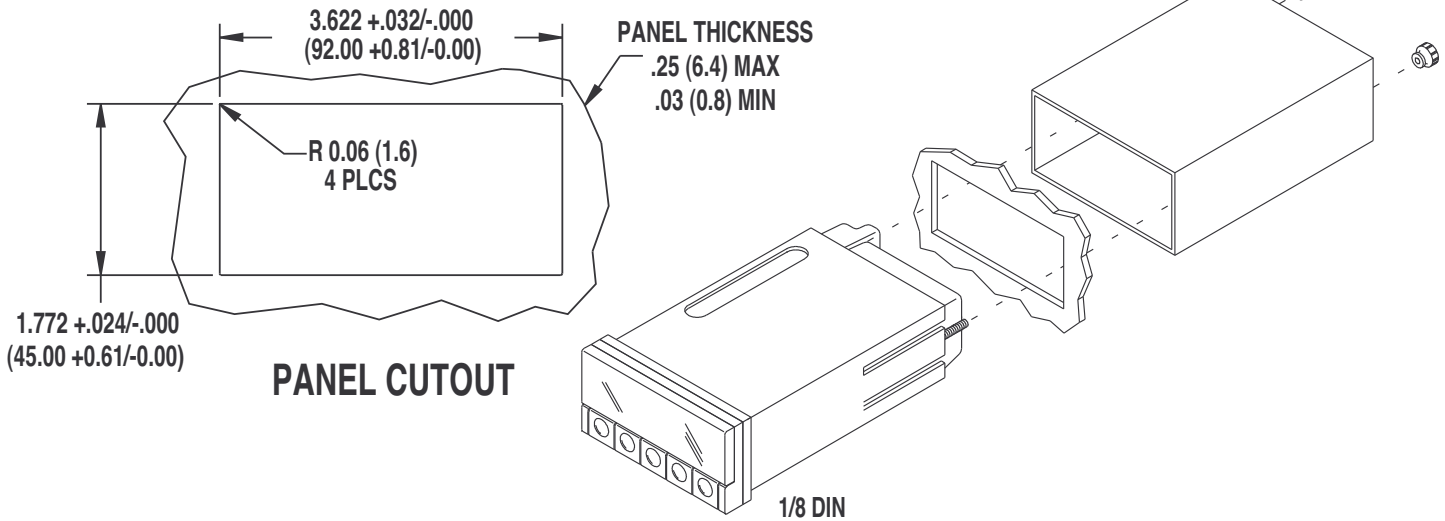
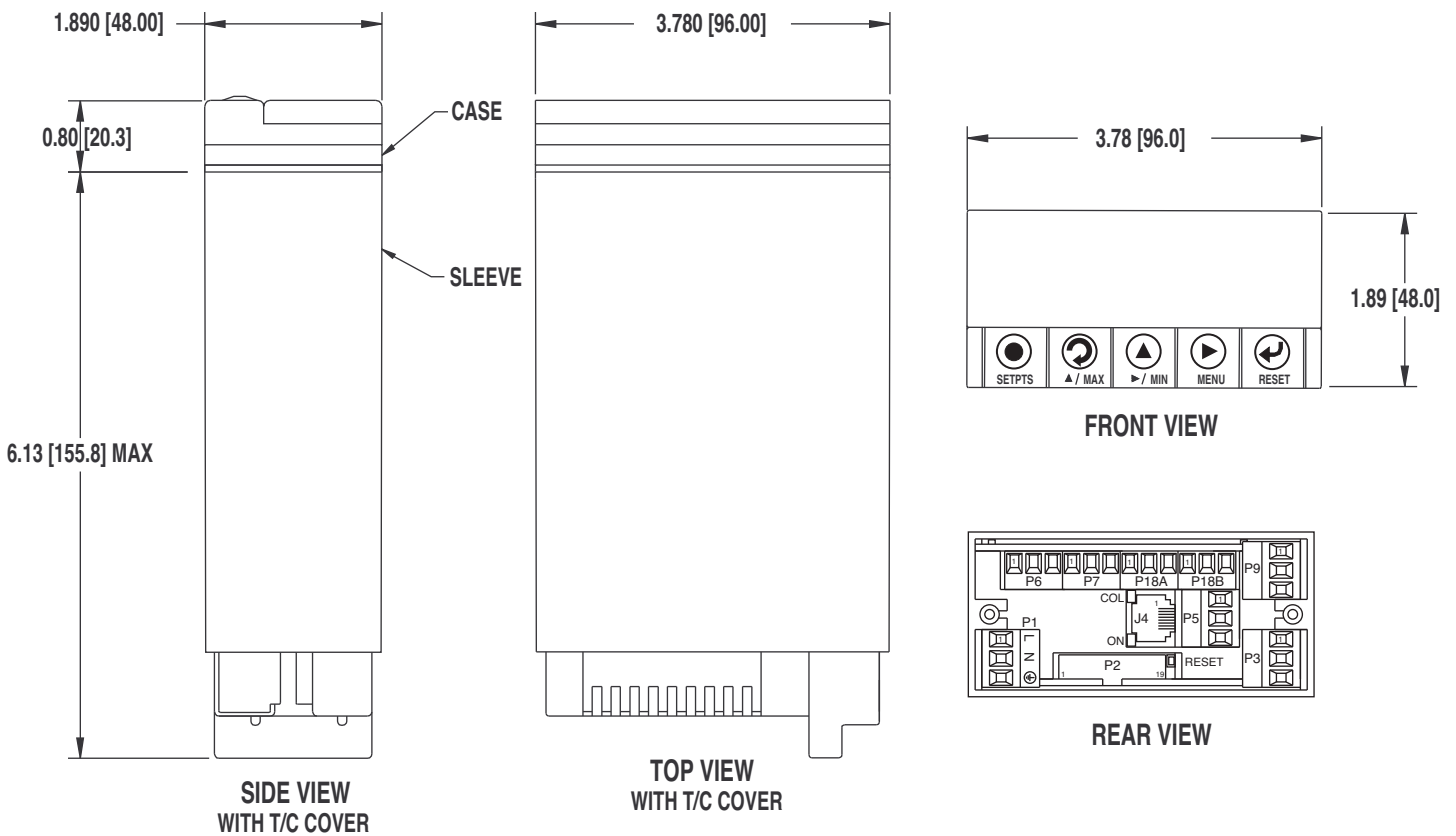
Polarity: unipolar/bipolar, programmable

Thermocouple Input Types: J, K, T, E, R, S, B, N, J DIN

RTD Input: any 6 ohm to 6 kohm NIST or DIN platinum and any linear RTD

RTD Connection: 2-, 3- or 4-wire

Sensor Excitation: 10 V at 30 mA; 24 V at 25 mA



Thermocouple Temperature Compensation Connector Kit

To Order (*Specify Model No.)	
Model	Description
INF-B	INFINITY® universal digital meter (suffix “-TC” required for thermocouple input)
-4R	Four Form-C SPDT relay output board (REL4-B)
-A	Isolated 14 bit analog output board (AN03-B)
-C24	Serial communications RS-232 + RS-485 + MODBUS* (RS24)
-DC	Low voltage power option 10 to 32 Vdc
-EI	Ethernet/Internet* (EI-B)
-TC	Thermocouple temperature compensation connector kit (TC-B)
,FS	Factory scaling (Example: INF-B,FS for bridge input 0-30 mV = 0-10.000, 10 Vdc)

Ordering Example: *INF-B-A-TC*, INFINITY® Universal Digital Meter with optional analog output, and Thermocouple Cold Junction Card.
 * Mutually exclusive; Can order one Communication/Ethernet Option per unit.
 All output options are on printed circuit boards that can be installed at the factory or in the field.