GE
Sensing

Features

- Single, dual or differential readings

- Wide probe compatibility for general measurement and specialist applications

- Advanced Cold Junction compensation virtually eliminates errors due to ambient temperature changes

- Data logging with adjustable period or manual recording

- Large backlit display, menu driven interface

- RS232 interface for PC or serial printer

- Robust and weatherproof

- Compact, simple to use, easy to carry

- Convenient, one-handed operation

- Secure grip, impact resistant, elastomer protected

- Plug/play connector for Intelligent Digital Output Sensor (IDOS™) Universal Measurement Modules

Applications

- Temperature test and measurement

- Batch sampling and environmental monitoring

- Comparison test against reference sensor

- Laboratory standard

The DPI 800 Series is a complete range of advanced, robust and simple to use hand-held instruments. Highly cost effective, these tools are ideal for test/calibration of many popular process parameters. Advanced features and technical innovations address more applications in less time and deliver results you can rely on.

DPI 820
Druck Dual Input Thermometer

DPI 820 is a Druck product. Druck has joined other GE high-technology sensing businesses under a new name— GE Industrial, Sensing.

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DPI 820 Specifications

Type	DPI 800	DPI 802	DPI 811	DPI 812	DPI 820	DPI 821	DPI 822	DPI 832	DPI 841	DPI 842
	P	P	RTD	RTD	°F (°C)	TC	TC	mA/V	Hz	Hz
Indicator (measure pressure)	✓	✓								
Calibrator (measure or source)			✓	✓		✓	✓	✓	✓	✓
Thermometer (dual input T1, T2, T1 - T2)					✓					
Dual Capability										
mA measure with 24 V loop power		✓		✓			✓	✓		✓
Switch test		✓		✓			✓	✓		✓
HART resistor		✓		✓			✓	✓		✓
IDOS Universal Measurement Modules	❶	❶	❶	❶	❶	❶	❶	❶	❶	❶
Features										
Programmable step and ramp output			✓	✓		✓	✓	✓	✓	✓
Hold, scaling, max/min/avg, filter, alarm, tare	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
25 pressure units, flow scaling, leak test	✓	✓	❷	❷	❷	❷	❷	❷	❷	❷
1000 point data memory, RS232	❸	❸	❸	❸	✓	❸	❸	❸	❸	❸
Applications										
Measurement and monitoring	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Indicator, controller and recorder testing	✓	✓	✓	✓		✓	✓	✓	✓	✓
Transmitter maintenance and calibration		✓		✓			✓	✓		✓
Process loop set-up and maintenance		✓		✓			✓	✓		✓
Switch, trip and safety system testing		✓		✓			✓	✓		✓

❶ *Optional (please refer to IDOS datasheet)* ❷ *When fitted with IDOS pressure module*
❸ *Optional (please refer to accessories IO800E)*

Temperature Test and Measurement
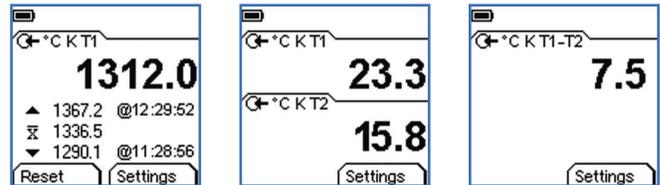
DPI 820 Dual Input Thermometer
Two sensor inputs, T1 and T2, allow individual measurement or simultaneous comparisons. For differential applications; e.g. heating boiler bypass, T1 minus T2 can be displayed

Interchangeable Probes and Wide Thermocouple Compatibility
Allow general temperature measurement or the use of special sensors for demanding applications; e.g. high temperature, hygienic and aggressive media

Advanced Features
Hold, maximum/minimum/average, (with time stamp), tare (offset) and damping filter facilitate system checks and troubleshooting

Temperature Data Logging, Analysis and Documentation

Periodic Data Logging
Records processes and systems over time

Manual Logging
Record screen snapshots for batch sampling and environmental monitoring. All data is date/time stamped.

Review Data
On-screen or upload to a PC via RS232 interface (see accessories for lead). No software purchase is necessary as standard Microsoft® applications provide data transfer (HyperTerminal) and analysis (Excel). Alternatively, print directly to a compatible serial printer.

Data Logging

Memory: 1000 single or 750 dual reading screens with date and time

Header Tag: 6 user characters to identify groups of readings

RS232: 19.2 k baud, 8 data bits, 1 stop bit, no parity, Xon/Xoff

Data Output: Comma separated ASCII

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DPI 820 Specifications

IDOS Flexibility

Intelligent Digital Output Sensor (IDOS)
Universal Pressure Modules are available from 10 in H_2O to 10,000 psi (25 mbar to 700 bar).

Total Flexibility
IDOS modules can be used with any compatible instrument; for example, a DPI 820 thermometer can become a fully featured pressure indicator or can read pressure and temperature simultaneously.

Plug and Play
Modules are interchangeable between instruments, requiring no set-up or instrument calibration.

Please refer to IDOS UPM data sheet.

DPI 820 specifications
Accuracy includes operation from 50°F to 86°F (10°C to 30°C), one year stability and calibration uncertainty.

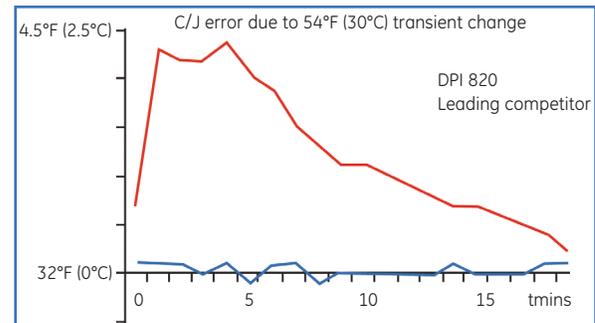| Type	Standard	*Accuracy	Range
K	IEC 584	1.1°F (0.6°C)	-454°F to 2498°F (-270°C to 1370°C)
J	IEC 584	0.9°F (0.5°C)	-346°F to 2192°F (-210°C to 1200°C)
T	IEC 584	0.6°F (0.3°C)	-454°F to 752°F (-270°C to 400°C)
B	IEC 584	1.8°F (1.0°C)	122°F to 3308°F (50°C to 1820°C)
R	IEC 584	1.8°F (1.0°C)	-58°F to 3216°F (-50°C to 1769°C)
S	IEC 584	2.5°F (1.4°C)	-58°F to 3216°F (-50°C to 1769°C)
E	IEC 584	0.7°F (0.4°C)	-454°F to 1832°F (-270°C to 1000°C)
N	IEC 584	1.1°F (0.6°C)	-454°F to 2372°F (-270°C to 1300°C)
L	DIN 43710	0.6°F (0.3°C)	-328°F to 1652°F (-200°C to 900°C)
U	DIN 43710	0.6°F (0.3°C)	-328°F to 1112°F (-200°C to 600°C)
C		1.8°F (1.0°C)	32°F to 4208°F (0°C to 2320°C)
D		1.8°F (1.0°C)	32°F to 4523°F (0°C to 2495°C)

Accuracies quoted for mid range and do not include sensor error

Temperature Coefficient
14°F to 50°F, 86°F to 122°F; 0.005°F/°F
(-10°C to 10°C, 30°C to 50°C; 0.01°C/°C)

Unique Cold Junction Compensation
Virtually eliminates ambient temperature errors. (Patent pending). 0.4°F (0.2°C) maximum error for 86°F (30°C) change in ambient temperature

Thermocouple connectors
Mini-jack sockets for T1 and T2 inputs

DPI 800 Series Common Specification

Operating Temperature
14°F to 122°F (-10°C to 50°C)

Storage Temperature
-4°F to 158°F (-20°C to 70°C)

Humidity
0% to 90% non-condensing, Def Stan 66-31m 8.6 Cat III

Shock and vibration
BS EN61010:2001, Def Stan 66-31, 8.4 Cat III

EMC
BS EN61326-1:1998 + A2:2001

Safety
Electrical BS EN61010:2001. CE marked

Display
Graphic LCD with backlight. Resolution 99999

Size (l x w x h) and Weight
7.1 in x 3.3 in x 2 in (180 mm x 85 mm x 50 mm), 14 oz (400 g)

Batteries
3 AA alkaline, >80 hours use

DPI 820 Specifications

Accessories

IO800A
Soft fabric carrying case with accessory pocket

IO800B
Belt clip, wrist strap/hanging loop and bench stand

IO800C
NiMh batteries with charger (charged externally)

IO800D
RS232 lead: DPI 800 to PC 9 way 'D' type

Ordering Information

Please state the model number DPI 820 and accessories as separate items.

Each unit is supplied with batteries, calibration certificate, user guide and two general purpose type 'K' bead thermocouples range -103°F to 482°F (-75°C to 250°C) Class I.

Related Products

GE is a world leader in the design and manufacture of pressure, temperature and electrical field calibrators, laboratory/workshop calibration equipment and pressure sensors.

CE

www.gesensing.com