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Features

- Measure and simulate RTDs
- Automatic detection of two-, three- and four-wire RTDs highlights faulty probes
- mA measure, switch test and 24V loop power
- Large backlit display, menu driven interface
- HART® loop resistor
- Robust and weatherproof
- Compact, simple to use, easy to carry
- Convenient, one-handed operation
- Secure grip, impact resistant, elastomer protection
- Plug and play connector for Intelligent Digital Output Sensor (IDOS™) Universal Measurement Modules

Applications

- Temperature test and maintenance
- Transmitter calibration
- Loop set-up and diagnostics
- Switch testing

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 811/812

Druck RTD Calibrator/ Loop Calibrator

DPI 811/812 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 811/812 Specifications

	DPI 800	DPI 802	DPI 811	DPI 812	DPI 820	DPI 821	DPI 822	DPI 832	DPI 841	DPI 842
Type	P	P	RTD		°F (°C)	TC		mA/V	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)*

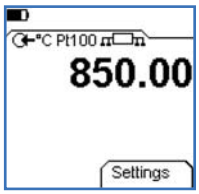
Temperature Test and Measurement

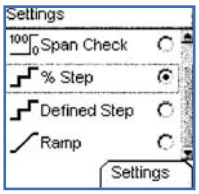
DPI 811 RTD Calibrator
Measures or simulates RTD sensor and is the ideal tool for checking probes, indicators, recorders and controllers

Automatic Detection of Two-, Three- and Four-Wires
Quickly detects faulty sensors and wiring

Pulsed RTD Transmitter Compatibility
Simulation mode

Advanced Features
Step, ramp, maximum/minimum/average hold and facilitate troubleshooting and system checks





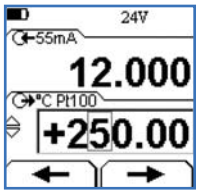
Temperature Instrumentation and Loop Maintenance

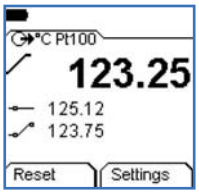
DPI 812 RTD Loop Calibrator
Provides simultaneous RTD output and mA measurement for transmitter/loop maintenance

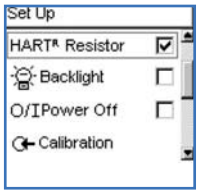
24V Loop Power Supply
Energizes transmitters and control loops

Automatic Switch Test
Captures open/closed trip values providing a fast and highly accurate "safety system" check

HART Resistor
Can be switched into the loop when required by a HART digital communicator and avoids the inconvenience of carrying a 250 Ω resistor







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 812 RTD loop calibrator can become a fully featured pressure calibrator.

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DPI 811/812 Specifications

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

Please refer to IDOS Universal Pressure Modules data sheet.

DPI 811 and DPI 812

Measure and Simulate	Standard	*Accuracy	Range
Pt 50 (385)	IEC 751	0.9°F (0.5°C)	-328°F to 1562°F (-200°C to 850°C)
Pt 100 (385)	IEC 751	0.45°F (0.25°C)	-328°F to 1562°F (-200°C to 850°C)
Pt 200 (385)	IEC 751	1.08°F (0.6°C)	-328°F to 1562°F (-200°C to 850°C)
Pt 500 (385)	IEC 751	0.72°F (0.4°C)	-328°F to 1562°F (-200°C to 850°C)
Pt 1000 (385)	IEC 751	0.36°F (0.2°C)	-328°F to 752°F (-200°C to 400°C)
D 100 (392)	JIS 1604-1989	0.45°F (0.25°C)	-328°F to 1202°F (-200°C to 650°C)
Ni 100	DIN 43760	0.36°F (0.2°C)	-76°F to 482°F (-60°C to 250°C)
Ni 120	MINCO 7-120	0.36°F (0.2°C)	-112°F to 500°F (-80°C to 260°C)
Ohms		0 to 4000	0.1 to 1.3 Ω

- **Accuracy includes operation over 50°F to 86°F (10°C to 30°C), one year stability and calibration uncertainty.*
- *Excitation: 0.2 to 0.5 mA measure 0.05 to 3 mA simulate*
- *Pulse excitation currents minimum duration 10 ms*

DPI 812 Only

Measure	Accuracy
0 to 55.000 mA	0.02% reading + 3 counts
Temperature coefficient	14°F to 50°F, 86°F to 122°F, 0.0011% FS/°F (30°C to 50°C, -10°C to 10°C, 0.002% FS °C)
Switch detection	Open and closed. 2 mA current
Loop power output	24V ±10% (35 mA maximum)
HART mA loop resistor	250 Ω (menu selection)
Electrical connectors	4 mm sockets

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 66-31, 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 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, >70 hours measure, >10 hours 24 mA source (24V @ 12 mA)

Accessories

IO800A
Soft fabric carrying case with accessory pocket

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

IO800C
NiMh batteries with charger, batteries charged externally

IO800E
Data logging upgrade and RS232 lead

Log data periodically (1 second to 23 hours 59 minutes 59 seconds) or manually by key press. **Review data** on-screen or upload to a PC via the RS232 interface.

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DPI 811/812 Specifications

No software purchase is necessary as standard Microsoft® applications provide data transfer (HyperTerminal) and analysis (Excel). Alternatively, print directly to a compatible serial printer. **Real time clock** with date. **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.

Ordering Information

Please state the model number DPI 811 or DPI 812 and accessories as separate items.

Each unit is supplied with batteries, calibration certificate, user guide and a set of electrical test leads.

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

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