



**GE Druck**

## **DPI 821 / 822**

### Thermocouple/Loop Calibrator

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.

- Measure and source T/Cs
- Advanced C/J compensation
- Temperature test and maintenance
- Transmitter calibration
- Loop set-up and diagnostics
- Switch verification

*Cold junction compensation eliminates transient errors (patent pending)*

*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 protected*



*Plug/play connector for IDOS Universal Measurement Modules*

# DPI 821/822

## Thermocouple/Loop Calibrator

| Features                                  | Pressure |         | Temperature |         |         |         |         |
|-------------------------------------------|----------|---------|-------------|---------|---------|---------|---------|
|                                           | DPI 800  | DPI 802 | DPI 811     | DPI 812 | DPI 820 | DPI 821 | DPI 822 |
| Indicator (measure)                       | ✓        | ✓       |             |         |         |         |         |
| Calibrator (measure or source)            |          |         | ✓           | ✓       |         | ✓       | ✓       |
| Thermometer (dual input and differential) |          |         |             |         | ✓       |         |         |
| mA measure with 24V loop power            |          | ✓       |             | ✓       |         |         | ✓       |
| Switch test                               |          | ✓       |             |         |         |         | ✓       |
| HART® resistor                            |          | ✓       |             | ✓       |         |         | ✓       |
| IDOS Universal Measurement Modules        | ①✓       | ①✓      | ①✓          | ①✓      | ①✓      | ①✓      | ①✓      |
| Programmable step and ramp output         |          |         | ✓           | ✓       |         | ✓       | ✓       |
| Hold, Max/Min/Avg, Filter, Alarm, Tare    | ✓        | ✓       | ✓           | ✓       | ✓       | ✓       | ✓       |
| 25 pressure units plus 5 user, Leaktest   | ✓        | ✓       | ②✓          | ②✓      | ②✓      | ②✓      | ②✓      |
| 1000 point data memory, RS 232            |          |         |             |         | ✓       |         |         |
| <b>Applications</b>                       |          |         |             |         |         |         |         |
| Measurement & monitoring                  | ✓        | ✓       | ✓           | ✓       | ✓       | ✓       | ✓       |
| Indicator, controller & recorder testing  | ✓        | ✓       | ✓           | ✓       | ✓       | ✓       | ✓       |
| Transmitter maintenance and calibration   |          | ✓       |             | ✓       |         |         | ✓       |
| Process loop set-up and maintenance       |          |         |             | ✓       |         |         | ✓       |
| Switch, trip and safety system testing    |          | ✓       |             | ✓       |         |         | ✓       |

① Optional please refer to IDOS datasheet. ② With IDOS pressure module connected.

### Temperature test and measurement

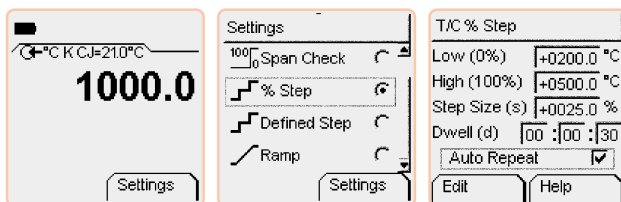
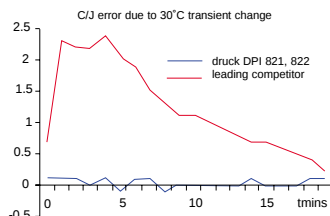
**DPI 821 Thermocouple Calibrator** measures or simulates sensors and is the ideal tool for checking probes, indicators and controllers.

#### Unique cold junction compensation

eliminates ambient temp. errors. (Patent pending).

#### Advanced features

Eg. Step, Ramp, Max/Min/Avg, Hold for system checks and troubleshooting.



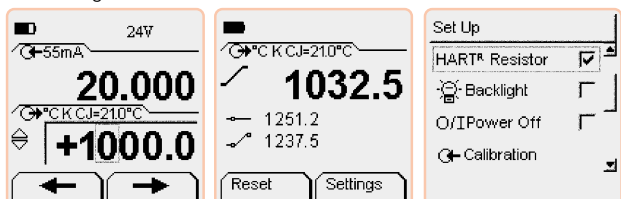
### Temperature instrumentation and loop maintenance

**DPI 822 Thermocouple Loop Calibrator** additionally provides simultaneous T/C output and mA measurement for transmitter and loop maintenance.

**24V loop power supply** energises 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 for a HART® digital communicator.



### flexibility

**IDOS** (Intelligent Digital Output Sensor) Universal Pressure Modules are available from 70 mbar to 200 bar.

**Total flexibility** means IDOS modules can be used with any compatible instrument, for example, a DPI 822 RTD loop calibrator can become a fully featured pressure calibrator.

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

Please refer to IDOS Universal Pressure Module datasheet.

| Type | Standard  | Range          | *Accuracy |
|------|-----------|----------------|-----------|
| K    | IEC 584   | -270 to 1370°C | 0.6°C     |
| J    | IEC 584   | -210 to 1200°C | 0.5°C     |
| T    | IEC 584   | -270 to 400°C  | 0.3°C     |
| B    | IEC 584   | 50 to 1820°C   | 1.0°C     |
| R    | IEC 584   | -50 to 1769°C  | 1.0°C     |
| S    | IEC 584   | -50 to 1769°C  | 1.4°C     |
| E    | IEC 584   | -270 to 1000°C | 0.4°C     |
| N    | IEC 584   | -270 to 1300°C | 0.6°C     |
| L    | DIN 43710 | -200 to 900°C  | 0.3°C     |
| U    | DIN 43710 | -200 to 600°C  | 0.3°C     |
| C    |           | 0 to 2320°C    | 1.0°C     |
| D    |           | 0 to 2495°C    | 1.0°C     |
| mV   |           | -10 to 100mV   |           |

### DPI 821 and 822

#### specification

**\*Accuracy:** Total accuracy for 1 year. (Best figure for range).

**Cold junction error:** 0.2°C max for 30°C change in ambient.

**Thermocouple connector:** Mini-jack socket.

#### DPI 812 only

**mA measure:** 0 to 55 mA 0.02% rdg + 3 counts.

Includes 1 yr stability. Outside 10 to 30°C add 0.002%FS/°C.

**24V loop power:** +/-10% (35 mA maximum).

**Switch detection:** Open and closed. 2 mA whetting current.

**HART® resistor:** Menu selectable 250 ohm resistor.

#### DPI 800 series common specification

**Operating temperature:** -10 to 50°C.

**Humidity:** 0 to 90% non-condensing (Def Stan 66-31, 8.6 cat III).

**Ingress protection:** IP 54 dust and splashing water.

**Shock and vibration:** Def Stan 66-31, 8.18 and 8.4 cat III.

**EMC:** EN61326-1 :1997 + A1 :1998 + A2: 2001.

**Safety:** Electrical EN61010:2001. CE marked.

**Display:** Graphic 48 X 48 mm LCD with backlight. 99999 resolution.

**Size and weight:** 180 x 85 x 50 mm, 500g.

**Batteries:** 3 x AA alkaline. > 80 hrs measure. > 10 hrs 24V source.

#### Accessories

**IO800A: Carry case:** Soft fabric case with accessory pocket.

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

**IO800C: NiMh batteries with charger:** Batteries charged externally.

#### Ordering information

Please state model number DPI 821 or 822 and accessories as separate items. Note: Each unit is supplied with batteries, calibration certificate and user guide. The DPI 822 includes a set of electrical test leads.

#### Related products

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

Continuing development can mean specification changes without notice Agent:



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