



# IUPM / IUPMP (IDOS)

## Druck Universal Pressure Modules

### Features

- Pressure ranges from 25 mbar to 700 bar (10 in H<sub>2</sub>O to 10,000 psi)
- 0.05% full scale (FS) all-inclusive accuracy
- Optional 0.01% FS premium accuracy
- Fully interchangeable; no set-up
- Impact resistant, elastomer protected
- Robust, weatherproof and simple to use

### Applications

- Remote pressure sensor for (IDOS) compatible instruments e.g DPI800 series and PACE
- Applications: test, measurement, monitoring and calibration
- Expands instrument ranges and capability

The IDOS Universal Pressure Modules (IUPM / IUPMP) are robust and simple to use.

Highly accurate IDOS are housed in tough functional cases, providing dependability along with plug and play connectivity.

They provide a cost effective solution for expanding instrument ranges, adding pressure measurement capability and addressing more applications.

## Specification

### Compatible products

The DPI 800 Series of robust, highly reliable and simple to use hand-held indicators and calibrators address a broad range of applications with the following features:

	DPI 800	DPI 802	DPI 880
Features	P	P	Multi-function
Indicator (measure pressure)	✓	✓	✓
Calibrator (measure or source)			✓
Thermometer (dual input T1, T2, T1-T2)			✓
mA measure with 24 V loop power		✓	✓
Switch test		✓	✓
HART resistor		✓	✓
Programmable step and ramp output		✓	✓
Hold, scaling, max/min/avg, filter, alarm, tare	✓	✓	✓
25 pressure units, flow scaling, leak test	✓	✓	①
1000 point data memory, RS232	②	②	②
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		✓	✓

① Optional (please refer to IUPM / IUPMP (IDOS) datasheet), ② Optional.

### IDOS flexibility

Intelligent Digital Output Sensor (IDOS) Universal Pressure Modules are available from 25 mbar to 700 bar (10 in H<sub>2</sub>O to 10,000 psi).

### Total flexibility

IUPM/IUPMP modules can be used with any compatible instrument for range expansion or to become a fully featured pressure calibrator.

### Instrument range expansion

Simply achieved by adding modules.



DPI 800 Series

IUPM/IUPMP

PACE 1000

### PACE 1000 pressure indicator

A high precision, simple to use bench or panel mounted indicator suitable as a secondary standard.

Features	Applications
• Accuracies of up to 3Pa/0.03mbar	• Sensor calibration
• Barometer*	• Instrument calibration
• RS232, IEEE connectivity, Ethernet and USB as standard	• Test/measurement
• Analog output, V and mA*	• System monitoring
• Aeronautical option providing Airspeed, Altitude and Mach indications	• Automated production test and calibration
• Maximum/minimum and average	• Pressure data logging
• Filter, scaling and tare	• Leak testing
• 25 pressure units plus 5 user specific	• Weather monitoring (e.g wind tunnels)
• Leak test	

\*Optional feature

### IUPM/IUPMP pressure ranges

Pressure Range	G/D	G	A	Media		*Accuracy %FS	
				+	-	Standard (S)	Premium (P)
25 mbar (±10 in H <sub>2</sub> O)	✓			②	③	0.1	0.03
70, 200, 350, or 700 mbar (±1, 3, 5, or 10 psi)	✓			②	③	0.075	0.03
350 mbar (5 psi)			✓	②		0.1	N/A
-1 to 1 or 2 bar (-15 to 15 or 30 psi)	✓			②	③	0.05	0.01
2 bar (30 psi)			✓	②		0.075	N/A
-1 to 3.5, 7, 10 or 20 bar (-15 to 50, 100, 150 or 300 psi)		✓		①		0.05	0.01
7, 20 bar (100, 300 psi)			✓	①		0.075	N/A
35, 70, 100, 135, 200 bar (500, 1000, 1500, 2000 or 3000 psi)		✓		①		0.05	0.01
350 or 700 bar (5000 or 10,000 psi) sealed gauge		✓		①		0.05	N/A

G = gauge, A = absolute, G/D = gauge/differential; calibrated referenced to atmosphere maximum line pressure 30 psi (2 bar). ① Stainless steel compatibility, ② Non-corrosive gas, ③ Non-corrosive gas. (N/A = not available). Accuracy assumes regular zero correction.

## Specifications

### \*IUPM Standard Accuracy

Total accuracy including calibration uncertainty, operation over 0°C to 50°C over (32°F to 122°F) and one year stability. Negative calibration included.

### \*IUPMP Premium Accuracy

Precision over 18°C to 28°C (65°F to 82°F). For operation from 5°C to 45°C (41°F to 113°F) 0.014% full scale (FS), 0.075% for ranges 25 to 700 mbar (10 in H<sub>2</sub>O to 10 psi)

Stability 0.01% reading/year (0.03% for ranges 25 to 350 mbar/10 in H<sub>2</sub>O to 5 psi)

Calibration uncertainty 50 ppm of reading.  
Negative calibration optional

### Overpressure (maximum transient/intermittent pressure)

350 mbar (5 psi) and below 4 x FS  
700 mbar to 700 bar (10 to 10,000 psi) 2 x FS  
Maximum working pressure: 1.1 x FS

### Pressure Connections

G 1/8 female; M5 reference on G ranges above 2 bar (30 psi) 1/8 NPT female; 10-32 UNF reference on G ranges above 2 bar (30 psi)

### Electrical Connection

1 m (3 ft) cable with locking instrument connector

### Operating Temperature

-10°C to 50°C (14°F to 122°F)

### Storage Temperature

-20°C to 70°C (-4°F to 158°F)

### Humidity

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

### Shock and Vibration

BS EN61010

Def Stan 66-31, 8.18 and 8.6 Cat III.

### EMC

EN 61326-1

### Electrical Safety

EN 61010-1

### Pressure Safety

Pressure Equipment Directive – Class: Sound Engineering Practice (SEP)

### Approvals

CE marked

### Size

130 mm x 60 mm x 45 mm (5 in x 2.3 in x 1.7 in)

### Weight

240 to 325 g (53 to 71 lbs)

## Options

### (A) Negative Calibration

IUPM/IUPMP module ranges 20 bar (300 psi) and below.

Please refer to pressure range table for ranges and accuracies.

## Ordering Information

The IUPM and IUPMP are supplied with a user guide and calibration certificate as standard.

### Model type

IUPM	Universal Pressure Module Standard accuracy
IUPMP	Universal Pressure Module Premium accuracy



**Pressure range and reference type;** (Mandatory to select only one e.g. 03L for each configuration)

	<b>Gauge (G)</b>	<b>Absolute (A)</b>	<b>Differential (L)</b>
25 mbar / 10 inH2O / 2.5 kPa	-	-	008L
70 mbar / 1 psi / 7 kPa	-	-	01L
200 mbar / 3 psi / 20 kPa	-	-	02L
350 mbar / 5 psi / 35 kPa	-	03A	03L
700 mbar / 10 psi / 70 kPa	-	-	04L
1 bar / 15 psi / 100 kPa	-	-	05L
2 bar / 30 psi / 200 kPa	-	07A	07L
3.5 bar / 50 psi / 350 kPa	08G	-	-
7 bar / 100 psi / 700 kPa	10G	10A	-
10 bar / 150 psi / 1000 kPa	11G	-	-
20 bar / 300 psi / 2 MPa	13G	13A	-
35 bar / 500 psi / 3.5 MPa	14G	-	-
70 bar / 1000 psi / 7 MPa	16G	-	-
100 bar / 1500 psi / 10 MPa	165G	-	-
135 bar / 2000 psi / 13.5 MPa	17G	-	-
200 bar / 3000 psi / 20 MPa	18G	-	-
350 bar / 5000 psi / 35 MPa	20G	-	-
700 bar / 10000 psi / 70 MPa	22G	-	-

### Pressure connection

<b>BSP</b>	G1/8 Female
<b>NPT</b>	1/8 NPT Female

### Calibration unit

Bar  
psi  
hPa  
kPa  
inH2O  
mbar  
MPa

### Instrument set up

0,2198 in	UK and Europe
W2	USA
W3	Japan
W4	Asia
W5	Other countries

### Option

A Negative Calibration (Premium version only)

IUPM      -      BSP      Bar      W1      A

Druck offers a portfolio of high accuracy, high performance test and calibration equipment in safe or hazardous area (IS) variants that are ideal for the calibration and adjustment of Druck's pressure sensors.