



IUPM / IUPMP (IDOS)

Druck Universal Pressure Modules

Features

- Pressure ranges from 25 mbar to 700 bar (10 in H₂O 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

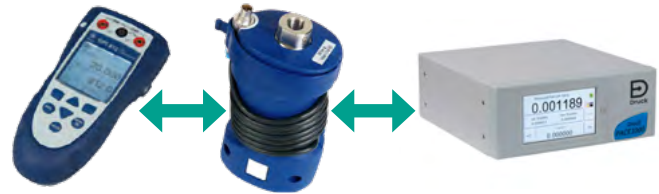
Intelligent Digital Output Sensor (IDOS) Universal Pressure Modules are available from 25 mbar to 700 bar (10 in H₂O to 10,000 psi).

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

*Optional feature

IUPM/IUPMP pressure ranges

Pressure Range	G/D	G	A	Media + -	*Accuracy %FS	
					Standard (S)	Premium (P)
25 mbar (±10 in H ₂ 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 H₂O to 10 psi)

Stability 0.01% reading/year (0.03% for ranges 25 to 350 mbar/10 in H₂O 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)						
		Gauge (G)	Absolute (A)	Differential (L)		
	25 mbar / 10 inH ₂ O / 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					
	BSP	G1/8 Female				
	NPT	1/8 NPT Female				
	Calibration unit					
	Bar					
	psi					
	hPa					
	kPa					
	inH₂O					
	mbar					
	MPa					
	Instrument set up					
	W1	UK and Europe				
	W2	USA				
	W3	Japan				
	W4	Asia				
	W5	Other countries				
	Option					
	A	Negative Calibration (Premium version only)				
IUPM	-	BSP	Bar	W1	A	(Example model numbers)

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.