DPI 620 PC

Pressure calibrator packages

This fully self-contained pressure test and calibration system combines world class pressure measurement and generation, signal measurements, loop power with accurate interchangeable pressure modules and available in safe and hazardous area approvals. Incorporating 4Sight2 calibration software provides you with a total calibration solution.

Druck
a Baker Hughes business

DPI 620 PC pressure calibrator packages

The DPI 620PC/SPC packages are the next generation in the DPI 600 family, which was first introduced in 1984. The DPI 600 family revolutionized test and calibration by providing all the tools for pressure generation and signal measurement in self-contained portable packages. The DPI 600 series soon became the industry workhorse and today it is simply known as the “Druck”.

Safe area packages:

- Pressure calibrator
- Pressure module 2, 7 or 20 bar (30, 100, 300 psi/200 kPa, 700 kPa or 2 MPa) options
- Pneumatic pressure generating station vacuum up to 20 bar (300 psi/2 MPa)
- Pressure relief valve
- 4Sight2 Lite calibration software

Hazardous Area packages:

- Intrinsically safe pressure calibrator
- Intrinsically safe pressure module 2, 7 or 20 bar (30, 100, 300 psi/200 kPa, 700 kPa or 2 MPa) options
- Intrinsically safe pneumatic pressure generating station vacuum up to 20 bar (300 psi/2 MPa)
- Pressure relief valve
- 4Sight2 Lite calibration software

The pressure calibrator securely attaches to the pressure station when pressure generation and measurement are required.

Features:

- Capabilities: electrical, frequency, temperature and pressure
- ATEX, IECEx and ETL approved for hazardous area use
- Pressure modules to expand your pressure range
- Pressure relief valve to protect pressure module from overpressure

4Sight2 calibration management software

4Sight2 is the next generation of calibration management software that provides full visibility of all your available assets, instruments, and resources that affect the maintenance, process efficiency and regulatory compliance of your site.

Features:

- English, Dutch, French, German, Italian, Portuguese and Spanish languages
- Perform automated calibrations using pressure calibrator
- Automates processes
- Automated calibration certificate generation
- Improve process efficiency and quality of data
- Easy access to audit trail and asset history
- Schedule calibrations and prevent downtime
- Define and control calibration routines and calibration procedures per plant and location
- Full visibility of your assets, instruments, and resources
- Available anywhere, anytime via the Internet
- Scalable from single use to global multi-site operation

DPI 620 PC pressure calibrator

This pressure calibrator can also provide simultaneous measurement and source capabilities for electrical, frequency and temperature for the setup, testing and calibration of most types of process instruments including transmitters, transducers, gauges/indicators, switches, proximity detectors, counters, RTDs, thermocouples and valve positioners.

Features:

- High resolution touch display and UI (user interface) supporting gestures and swipes for a flatter menu structure and greater ease of use
- ATEX and IECEx approved system for use in zone 1 and 2 classified hazardous areas
- ETL approved for use in class I zone 1 hazardous locations
- UI DASHBOARD to quickly launch applications
- TASK menu allows single touch configuration for common devices such as pressure and temperature transmitters, transducers, switches, and valve positioners. Most used and user configured tasks can be added to FAVOURITES.

UI dashboard applications calibrator:

- One touch selection of common tasks, e.g. P to I for a pressure transmitter
- Highest accuracy for measuring, sourcing and simulating electrical, frequency, temperature and pressure
- Simulate device inputs and measure outputs simultaneously
- Calculates errors between inputs/outputs
- Pressure system generates 20 bar (300 psi/2 MPa) pneumatic pressure
- Interchangeable pressure modules for expansion of pressure ranges

Documenting:

- Data log up to six channels simultaneously
- Automate calibration procedures and document as found and left results
- Store a complete plant database of procedures and results
- View standard office documents, including images, text files, spreadsheets and presentations
- Compatible with calibration management software

HART digital communication

- Complete device description libraries, internal modems and free of charge upgrades
- Measure and source analogue variables without secondary calibration equipment
- No power during shutdown? Genii provides loop power 24 V or 28 V (Genii-IS series 15 V)
- Need a 250 ohm resistor? Just select from the menu.
- It's easy to upgrade Genii with free of charge software and latest DD library
- View, change, clone and store device configurations
- Work off-line to create and change configurations
- Transfer device configurations to your PC

Technical specifications

Pressure calibrator specification for safe area use	
Processor and memory	800 MHz processor 512 MB 800 MHz SDRAM 4 GB internal flash memory 8 GB removable microSD card - provided as standard (Accepts cards up to 32 GB)
Display	Size: 110 mm (4.3 in) diagonal; 480 x 800 pixels LCD: Color display with touch-screen Protected by 2 mm toughened glass, impact tested in accordance with BS EN 61010-1:2010 (0.5 kg object from 1 m)
File viewers	A Windows® desktop is available for managing files, running third party applications and viewing simple images, word documents, excel spreadsheets, PDF files and powerpoint files
Languages	English {Default}, Chinese, French, German, Italian, Portuguese, Russian, Spanish, Dutch, Japanese
Operating temperature	-10° to 50°C (14° to 122°F)
Storage temperature	-20° to 70°C (-4° to 158°F)
Ingress Protection	IP55
Humidity	0 to 90% RH non condensing
Shock/vibration	BS EN 61010-1:2010; MIL-PRF-28800F for Class II equipment, 1 m drop tested
EMC	Electromagnetic compatibility: BS EN 61326-1:2006
Electrical safety	Electrical – BS EN 61010-1: 2010
Pressure safety	Pressure equipment directive - Class: Sound Engineering Practice (SEP)
Approved	CE marked
Size (L: W: H)	183 x 114 x 42 mm (7.2 x 4.5 x 1.7 in)
Weight	575 g (1.3 lb) – battery included
Power supply	Lithium-polymer battery (P/N IO620-BATTERY); Capacity: 5040 mAh (minimum), 5280 mAh (typical); Nominal voltage: 3.7 V. Charge temperature: 0° to 40°C (32° to 104°F) Discharge temperature: -20° to 60°C (-4° to 140°F). Note: For best battery performance, keep the temperature less than 60°C (140°F). Charge/discharge cycles: > 500 > 70% capacity
Duration	Measure functions (CH1): ≈ 12 hours continuous. Dual function, mA measure (CH2): ≈ 7 hours (24 V Source at 12 mA)
Connectivity	USB Type A, USB Type Mini B

Pressure calibrator specifications for hazardous area use (where different from safe area)	
Processor and memory	800 MHz processor 512 MB 800 MHz SDRAM 8 GB Internal flash memory
Ingress Protection	IP54
Approval	CE marked ATEX & IECEx intrinsically safe: Ⓔx II 2G Ex ib IIC T4 Gb (-10°C ≤ Ta ≤ +50°C) ETL intrinsically safe (US and Canada): Class I, Zone 1, AEx/Ex ib IIC T4 Gb (-10°C ≤ Ta ≤ +50°C)
Size (L: W: H)	183 x 114 x 55 mm (7.2 x 4.5 x 2.2 in)
Weight	1.1 kg (2.4 lb) – battery included.
Power supply	Lithium-ion battery (P/N IO620G-IS-BATTERY); Capacity: 4800 mAh. Nominal voltage: 3.75 V. Charge temperature: 0° to 40°C (32° to 104°F) Discharge temperature: -10° to 50°C (14° to 12°F). Charge/discharge cycles: > 500 > 70% capacity. Safe area charging only using external charger P/N: IO620G-IS-CHARGER and universal mains adaptor P/N: IO620-PSU. The battery is detached from the instrument using two thumb screws and mounted on the charger. The battery can be taken into a Hazardous Area without being connected to an instrument and can be attached and detached in the Hazardous Area. The battery has an LED indicator to show the charge state of the battery without having to turn the instrument on or when it is not attached to an instrument
Duration	Measure functions (CH1): ≈ 7 hours continuous. Dual Function, mA measure (CH2): ≈ 5 hours (Loop enabled at 12 mA)
Connectivity	USB Type Mini B (client)

Electrical measurement and source										
		NLH&R[1] ±1°C (2°F) for 24 hrs (note 2)		Total uncertainty 10° to 30°C (50° to 86°F) for 1 year (note 3)		Additional error -10° to 10°C (14° to 50°F) 30° to 50°C (86° to 122°F)		Resolution	Display reading window	
		%Rdg	+ %FS	%Rdg	+ %FS	%Rdg/°C	+ %FS/°C			
Measure mode										
DC voltage	Thermocouple	Please refer to Thermocouple specification table							CH1	
	TC mode -10 to 100 mV	0.0045	0.008	0.007 (0.009)	0.01	0	0.0005	0.001	CH1	
	+/- 200 mV	0.0045	0.004	0.01	0.005	0	0.0005	0.001	CH1	CH2
	+/- 2000 mV	0.004	0.003	0.0095 (0.01)	0.005	0	0.0005	0.01	CH1	CH2
	+/- 20 V	0.0025	0.002	0.0145	0.002	0	0.0005	0.00001	CH1	CH2
	+/- 30 V	0.0035	0.0035	0.0145	0.004	0	0.0005	0.0001	CH1	CH2
AC voltage (note 1) not applicable to DPI620G-IS-L	0 to 2000 mVAC	0.125	0.125	0.2	0.15	0.005	0.005	0.1	CH1	
	0 to 20 VAC	0.1255	0.125	0.2	0.15	0.005	0.005	0.001	CH1	
	0 to 300 VAC	1	0.06	1.5	0.1	0.05	0.005	0.01	CH1	
Current	+/- 20 mA	0.006	0.005	0.012 (0.016)	0.006 (0.0065)	0	0.0005	0.0001	CH1	CH2
	+/- 55 mA	0.005	0.005	0.016 (0.019)	0.005 (0.006)	0	0.0005	0.0001	CH1	CH2
Resistance (True, 4 wire)	RTD	Please refer to RTD specification table								
	0 to 400 Ω	0.0055 (0.006)	0.001 (0.002)	0.009	0.0012	0	0.0005	0.001	CH1	
	0 to 4000 Ω	0.0055 (0.006)	0.001 (0.002)	0.009	0.0012	0	0.0005	0.01	CH1	
Resistance (4 wire)	RTD	Please refer to RTD specification table								
	0 to 400 Ω	0.012	0.005	0.015	0.006	0	0.001	0.001	CH1	
	0 to 4000 Ω	0.0115	0.0045	0.015	0.006	0	0.001	0.01	CH1	
Frequency	0 to 1000 Hz	0.0003	0.0002	0.003	0.0002			0.0001	CH1	
	1 kHz to 50 kHz (5 kHz)	0.0003	0.0004	0.003	0.0004			0.00001	CH1	
	0 to 999999 CPM	Refer to range table above for equivalent frequency						0.01	CH1	
	0 to 999999 CPH	Refer to range table above for equivalent frequency						0.01	CH1	
	Trigger level	Automatic and adjustable 0 to 20 V						0.1		
	Trigger level	Automatic or manual setting 0 to 20 V						0.1		
Pressure	25 mbar to 1000 bar	Please refer to PM 620 pressure range table							P1	P2
IDOS external module		Please refer to IDOS UPM datasheet. Cable P/N IO620-IDOS-USB required							IDOS	
USB port		Please refer to Druck sensing for compatible devices								
Source mode										
DC voltage	TC mode	Please refer to thermocouple specification table								
	TC mode -10 to 100 mV	0.009	0.008	0.014	0.01	0	0.0005	0.001	CH1	
	0 to 200 mV	0.0045	0.004	0.01	0.005	0	0.0005	0.1	CH1	
	0 to 2000 mV	0.004	0.003	0.009	0.005	0	0.0005	0.1	CH1	
	0 to 20 V (12 V) @ 3 mA max.	0.006	0.002 (0.0035)	0.0145 (0.015)	0.002 (0.004)	0	0.0005	0.001	CH1	
Current	0.2 to 24 mA with ext. loop power	0.01	0.004	0.015	0.005	0	0.0005	0.001	CH1	CH2
	0.2 to 24 mA with int. loop power	0.01	0.004	0.015	0.005	0	0.0005	0.001		CH2
	Internal loop power		24/28V ±10% (15V ±10%; 100Ω output impedance)							
Resistance[2]	RTD	Please refer to RTD specification table							CH1	
	0 to 400 Ω (0.1 mA)	0.024(0.026)	0.0035 (0.0045)	0.03 (0.035)	0.0075 (0.012)	0	0.001	0.01	CH1	
	0 to 400 Ω (0.5 mA)	0.004	0.0025	0.008	0.003	0	0.001	0.01	CH1	
	400 to 2000 Ω (0.05 mA)	0.048	0.0035	0.06	0.006	0	0.001	0.01	CH1	
	2 k to 4 kΩ (0.05 mA)	0.048	0.0035	0.06	0.0045	0	0.001	0.01	CH1	
	Maximum input current	0-400 Ω 5 mA, 400-2000 Ω 1mA, 2000-4000 Ω 0.5 mA								
Frequency	0 to 1000 Hz	0.0003	0.00023	0.003	0.00023			0.1	CH1	
	1 kHz to 50 kHz (5 kHz)	0.0003	0.000074	0.003	0.000074			0.001	CH1	
	Output waveform	Square, positive swing up to 20 V (12V) adjustable, negative swing -120 mV (fixed) Sine and triangular, adjustable amplitude and offset within the limits -2.5 (-0.5) to +20 V (+12 V)								
	Square wave peak output	0 to 20 V +/-20 mV (3 mA maximum)								
	0 to 99999 CPM	Please refer to range table above for equivalent frequency						1	CH1	
	0 to 99999 CPH	Please refer to range table above for equivalent frequency						1	CH1	

Notes:

Values in () apply to hazardous area models

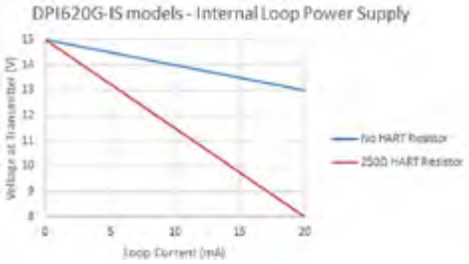
1. Specification applies, 45 to 65 Hz and between 10% and 100% of full scale

2. Specification applies when calibration temperature is between 10°C and 30°C

3. Total uncertainty includes reference standard uncertainty, NLH&R and typical long term stability for one year (K=2)

Multiple parameter display capability

The display can be configured to show a maximum of 6 (5 for hazardous area versions) simultaneous reading windows as follows: CH1, CH2, P1, P2, IDOS (not hazardous area versions), HART/Fieldbus.



"True Ohms" RTD measure mode (4-wire)

Type	Temperature coefficient	Temperature range °C From	To	°F From	To	Total uncertainty 10° to 30°C (50° to 86°F) for 1 year Rdg %	Tos °C	Tos °F
Pt 50	3.85	-200	850	-328	1562	0.012	0.05	0.09
Pt 100	3.85	-200	850	-328	1562	0.012	0.04	0.07
Pt 100	3.92	-200	850	-328	1562	0.012	0.04	0.07
Pt 200	3.85	-200	260	-328	500	0.01	0.03	0.051
		260	850	500	1562	0.15	0.077	0.14
Pt 500	3.85	-200	-60	-328	-76	0.01	0.026	0.044
		-60	0	-76	32	0.015	0.05	0.086
		0	850	32	1562	0.012	0.05	0.086
Pt 1000	3.85	-200	-150	-328	-238	0.009	0.024	0.04
		-150	0	-238	32	0.011	0.036	0.061
		0	850	32	1562	0.012	0.036	0.061
Cu 10	4.27	-200	0	-328	32	0	0.14	0.25
		0	260	32	500	0	0.17	0.3
D 100	6.18	-200	0	-328	32	0.01	0.035	0.06
		0	640	32	1184	0.012	0.035	0.06
Ni 100	6.72	-60	0	-76	32	0	0.026	0.047
		0	250	32	482	0	0.03	0.055
Ni 120	6.72	-80	0	-112	32	0	0.022	0.04
		0	270	32	518	0	0.028	0.05
		270	320	518	608	0	0.057	0.1

Standard RTD measure mode (4-wire)

Type	Temperature coefficient	Temperature range °C From	To	°F From	To	Total uncertainty 10° to 30°C (50° to 86°F) for 1 year Rdg %	Tos °C	Tos °F
Pt 50	3.85	-200	850	-328	1562	0.021	0.16	0.28
Pt 100	3.85	-200	0	-328	32	0.017	0.1	0.175
		0	850	32	1562	0.0215	0.1	0.174
Pt 100	3.92	-200	0	-328	32	0.017	0.1	0.175
		0	850	32	1562	0.0215	0.1	0.174
Pt 200	3.85	-200	0	-328	32	0.017	0.069	0.12
		0	260	32	500	0.018	0.069	0.12
		260	850	500	1562	0.033	0.33	0.6
Pt 500	3.85	-200	-60	-328	-76	0.0165	0.051	0.09
		-60	0	-76	32	0.017	0.16	0.29
		0	850	32	1562	0.024	0.16	0.28
Pt 1000	3.85	-200	-150	-328	-238	0.016	0.044	0.074
		-150	0	-238	32	0.018	0.1	0.175
		0	850	32	1562	0.0215	0.1	0.174
Cu 10	4.27	-200	0	-328	32	0.035	0.66	1.18
		0	260	32	500	0.01	0.66	1.18
D 100	6.18	-200	0	-328	32	0.019	0.1	0.174
		0	640	32	1184	0.02	0.1	0.174
Ni 100	6.72	-60	0	-76	21	0	0.071	0.13
		0	250	32	482	0.002	0.071	0.13
Ni 120	6.72	-80	270	-112	518	0	0.06	0.11
		270	320	518	608	0	0.2	0.36

RTD simulate mode (0.1 mA min, 0-400 Ω; 0.05 mA min, 400-4000 Ω)

Type	Temperature coefficient	Temperature range °C From	To	°F From	To	Total uncertainty 10° to 30°C (50° to 86°F) for 1 year Rdg %	Tos °C	Tos °F
Pt 50	3.85	-200	850	-328	1562	0.043 (0.052)	0.24 (0.35)	0.42 (0.63)
Pt 100	3.85	-200	850	-328	1562	0.04 (0.047)	0.16 (0.22)	0.28 (0.40)
Pt 100	3.92	-200	850	-328	1562	0.04 (0.047)	0.16 (0.22)	0.28 (0.40)
Pt 200	3.85	-200	260	-328	500	0.0345 (0.041)	0.12 (0.16)	0.21 (0.29)
		260	850	500	1562	0.087	0.28	0.50
Pt 500	3.85	-200	-60	-328	-76	0.33 (0.038)	0.095 (0.12)	0.169 (0.22)
		-60	850	-76	1562	0.078	0.23	0.41
Pt 1000	3.85	-200	-150	-328	-238	0.32 (0.037)	0.085 (0.11)	0.15 (0.20)
		-150	260	-238	500	0.0675	0.19	0.34
		260	850	500	1562	0.082	0.17	0.31
Cu 10	4.27	-200	260	-328	500	0	0.85 (1.40)	1.53 (2.52)
D 100	6.18	-200	640	-328	1184	0.38 (0.046)	0.16 (0.22)	0.28 (0.40)
Ni 100	6.72	-60	250	-76	482	0	0.12 (0.16)	0.22 (0.29)
Ni 120	6.72	-80	270	-112	518	0	0.11 (0.14)	0.20 (0.25)
		270	320	518	608	0	0.25	0.45

Notes:

- These figures relate to DPI620G-L uncertainties only Values in () apply to DPI620G-IS-L
- For RTD measure and source functions the uncertainty is given by Urtd = T(°C) x %Rdg + Tos (°C)
  or
  Urtd = T(°F) x%Rdg + Tos (°F) where T( ) is the measurement expressed in °C or °F

Measurement resolution:

- 1.1 °C/F
- Simulation resolution 0.1 °C/F

Excitation current:

- Measure mode 0 to 400 Ω 2.5 mA, 400 Ω to 4000 Ω 0.5 mA
- Simulate mode 0 to 400 Ω 5 mA max, 0.4 to 2 kΩ 1 mA max and 2 to 4 kΩ 0.5 mA max
- Simulate mode pulsed excitation current minimum duration 10 ms

Thermocouple measurement and simulation						Measurement		Simulation	
Type	Standard	Temperature range				Total uncertainty 10° to 30°C (50° to 86°F) for 1 year			
		°C		°F		°C	°F	°C	°F
		From	To	From	To				
B	IEC 584	250.00	500.00	482.00	932.00	4.00	7.20	4.00	7.20
		500.00	700.00	932.00	1,292.00	2.00	3.60	2.00	3.60
		700.00	1,200.00	1,292.00	2,192.00	1.50	2.70	1.50	2.70
		1,200.00	1,820.00	2,192.00	3,308.00	1.00 (1.10)	1.80 (1.98)	1.10	1.98
E	IEC 584	-270.00	-200.00	-454.00	-328.00	2.00	3.60	2.00	3.60
		-200.00	-120.00	-328.00	-184.00	0.50	0.90	0.50	0.90
		-120.00	1,000.00	-184.00	1,832.00	0.25	0.45	0.30	0.54
J	IEC 584	-210.00	-140.00	-346.00	-220.00	0.50	0.90	0.50	0.90
		-140.00	1,200.00	-220.00	2,192.00	0.30	0.54	0.40	0.72
K	IEC 584	-270.00	-220.00	-454.00	-364.00	4.00	7.20	4.00	7.20
		-220.00	-160.00	-364.00	-256.00	1.00	1.80	1.00	1.80
		-160.00	-60.00	-256.00	-76.00	0.50	0.90	0.50	0.90
		-60.00	800.00	-76.00	1,472.00	0.30 (0.40)	0.54 (0.72)	0.40	0.72
		800.00	1,370.00	1,472.00	2,498.00	0.50	0.90	0.60	1.08
L	DIN 43710	-200.00	-100.00	-328.00	-148.00	0.40	0.72	0.40	0.72
		-100.00	900.00	-148.00	1,652.00	0.25	0.45	0.30	0.54
N	IEC 584	-270.00	-200.00	-454.00	-328.00	7.00	12.60	7.00	12.60
		-200.00	-40.00	-328.00	-40.00	1.00	1.80	1.00	1.80
		-40.00	1,300.00	-40.00	2,372.00	0.40	0.72	0.50	0.90
R	IEC 584	-50.00	360.00	-58.00	680.00	3.00	5.40	3.00	5.40
		360.00	1,760.00	680.00	3,200.00	1.00	1.80	1.10	1.98
S	IEC 584	-50.00	70.00	-58.00	158.00	3.00	5.40	3.00	5.40
		70.00	320.00	158.00	608.00	1.50	2.70	1.50	2.70
		320.00	660.00	608.00	1,220.00	1.10	1.98	1.20	2.16
		660.00	1,740.00	1,220.00	3,164.00	1.00 (1.10)	1.80 (1.98)	1.20	2.16
T	IEC 584	-270.00	-230.00	-454.00	-382.00	3.00	5.40	3.00	5.40
		-230.00	-50.00	-382.00	-58.00	1.00	1.80	1.00	1.80
		-50.00	400.00	-58.00	752.00	0.30	0.54	0.30	0.54
U	DIN 43710	-200.00	-50.00	-328.00	-58.00	0.60	1.08	0.60	1.08
		-50.00	600.00	-58.00	1,112.00	0.30	0.54	0.30	0.54
C		0.00	1,600.00	32.00	2,912.00	0.80 (0.90)	1.44 (1.62)	1.00	1.80
		1,600.00	2,000.00	2,912.00	3,632.00	1.00 (1.10)	1.80 (1.98)	1.20	2.16
		2,000.00	2,300.00	3,632.00	4,172.00	1.40 (1.50)	2.52 (2.70)	1.70	3.06
D		0.00	100.00	32.00	212.00	1.10	1.98	1.10	1.98
		100.00	270.00	212.00	518.00	0.80	1.44	0.80	1.44
		270.00	1,200.00	518.00	2,192.00	0.60 (0.70)	1.08 (1.26)	0.70	1.26
		1,200.00	1,800.00	2,192.00	3,272.00	0.80 (0.90)	1.44 (1.62)	1.00	1.80

Notes:

- Values in () apply to hazardous area models
- Measurement resolution 0.01 °C/F
- Simulation resolution 0.1 °C/F
- Cold Junction (CJ) uncertainty 0.2°C (0.4°F) in ambient range 10°C to 30°C (50°F to 86°F)
- Add 0.01° CJ uncertainty/° outside of this ambient range

Optional RTD probes

RTD accuracy specification			
	NLH&R ±1°C (2°F) for 24 hrs (note 1)	Total uncertainty 10° to 30°C (50° to 86°F) for 1 year (note 2)	Additional error -10° to 10°C (14° to 50°F) 30° to 50°C (86° to 122°F)
0 to 400 Ω	0.012% Rdg + 0.005% FS	0.015% Rdg + 0.006% FS	0.001% FS/°C
Pt 100 - measured temp range -200 to 0°C		0.017% Rdg + 0.1°C	Excluding PT100 calibration error
Pt 100 - measured temp range 0 to 850°C		0.0215% Rdg + 0.1°C	Excluding PT100 calibration error

Notes:

1. NLH&R includes stability at ±2°C for 24 hours, at temperatures within 10°C to 30°C.
2. Total uncertainty includes 1 year drift

RTD general specifications		
Measuring temperatures	IO-RTD-PRB150	-50°C to 200°C (when used with appropriate extension cable)
	RTD-INTERFACE (BODY)	-10°C to 50°C
	RTD-PROBE	-10°C to 50°C when directly plugged in to RTD-INTERFACE -25°C to 75°C when using supplied cable
	SPECIALIST RTD PROBES (Not supplied by Druck)	The capability of the RTD-INTERFACE (resistance range) with a suitable extension cable and suitable probe is 0 to 400Ω which equates to -250°C to +650°C for a PT100 probe.
Dimensions	IO-RTD-PRB150 RTD-PROBE	Probe tip: Ø6.35 x 150mm probe total: Ø15 x 200mm
	RTD-INTERFACE	Body: Ø34 x 72mm length

PM620 pressure modules

The PM620 is the latest development in digital output sensor technology incorporating a number of key innovations to allow pressure re-ranging of compatible equipment. A simple screw fit makes both the pressure and electrical connections without the need for tools, sealing tape, cables or plugs and digital characterization allows interchangeability without set-up or calibration.

PM620/PM620S features:

- Accuracy from 0.005% FS
- Fully interchangeable with no need for set-up or calibration
- Simple screw fit - hand tight no tools required
- Safe and Hazardous Area versions available
- Additional ranges from 25 mbar to 1,000 bar (10 in H_2O to 15,000 psi/2.5 kPa to 100 MPa) - Please contact local sales for specification details

PM620 pressure module specification	
Maximum intermittent pressure	2 x FS
Maximum working pressure	110% FS
Sealing	IP 65 (protected against dust and jets of water)
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% RH non condensing
Shock and vibration	BS EN 61010-1:2010; MIL-PRF-28800F for Class II equipment, 1 m drop tested
EMC	BS EN 61326-1:2006
Electrical safety	BS EN 61010-1:2010
Pressure safety	Pressure equipment directive class SEP
Approval	CE marked
Size and weight	L. 56 mm, Dia. 44 mm, 106 g maximum

Gauge ranges (referenced to atmosphere)				
		NLH&R 20°C ± 2°C (68°F ± 4°F) 24 hr	NLH&R 0° to 50°C (32°F to 122°F) 24 hr	Total uncertainty 0° to 50°C (32°F to 122°F) for 1 year
		Gauge	Gauge	Gauge
bar	**psi**	**%FS**	**%FS**	**%FS**
-1 to 2	-14.5 to 30	0.015	0.020	0.025
-1 to 7	-14.5 to 100	0.010	0.020	0.025
-1 to 20	-14.5 to 300	0.005	0.020	0.025

PM620 hazardous area pressure module specification (where different from PM620)	
Approval	CE Marked ATEX & IECEx Intrinsically Safe: ⟨Ex⟩ II 1G Ex ia IIC T4 Ga (-10°C ≤ Ta ≤ +50°C) ETL Intrinsically Safe (US and Canada): Class I, Zone 1, AEx/Ex ia IIC T4 (-10°C ≤ Ta ≤ +50°C)

Notes:

- NLH&R non-linearity, hysteresis and repeatability
- Media compatible with stainless steel
- Pressure resolution: adjustable 4 to 7 digits.
- Uncertainty confidence level 95% (K=2)

PM620 TERPS pressure modules

Incorporates our unique range of TERPS resonant silicon pressure sensor technology. Providing up to four times greater stability and higher accuracy than current pressure measurement technologies.

PM620T/PM620TS features:

- Total uncertainty from 0.0125% FS
- Fully interchangeable with no need for set-up or calibration
- Temperature compensated accuracy from -10°C to 50°C (-14°F to 122°F)
- Simple screw fit - hand tight no tools required
- Safe and hazardous area versions available
- Ranges from 1.2 bar to 100 bar (17.5 psi to 1500 psi/2 kPa to 10 MPa)
  - Please refer to TERPS PM datasheet or contact local sales for specification details

Pressure generation

The pressure base is designed for stand-alone operation as a pressure generator and can replace conventional hand pumps to provide greater efficiency and ease of use. It can also be used on the workbench as comparators.

Combining any of the pressure stations with a pressure module and the calibrator creates a uniquely capable, self-contained pressure calibrator.

Features:

- A uniquely capable, re-rangeable and self contained pressure test system
- Advanced pressure generation 95% vacuum to 20 bar (300 psi/2 MPa) pneumatic
- Stand alone replacements for hand pumps
- Bench top use as comparators
- Safe and hazardous area versions available
- For additional pressure generating bases up to 1,000 bar (15,000 psi/100 MPa) - please contact local sales for specification details

Safe area pressure generation station	
Maximum pressure	20 bar (300 psi/2 MPa) pneumatic
Pressure media	Non-corrosive gases
Operating temperature	-10°C to 50°C (14°F to 122°F) for water +4°C to +50°C (39°F to 122°F)
Storage temperature	-20°C to 70°C (-4°F to 158°F) (must be empty of water)
Shock and vibration	BS EN 61010-1:2010; MIL-PRF-28800F for Class II equipment, 1 m drop tested
Pressure safety	Pressure equipment directive class SEP
Size and weight	450 mm x 280 mm x 235 mm, PV621G 2.65 kg

Intrinsically safe pressure generation station specification	
Maximum pressure	20 bar (300 psi/2MPa) pneumatic
Operating temperature	-10°C to 40°C (14°F to 104°F)
Approval	CE Marked ATEX and IECEx intrinsically safe: Ⓔx II 2G Ex ia IIC T4 Gb (-10°C ≤ Ta ≤ +40°C) ETL intrinsically safe (US and Canada): Class I, Zone 1, AEx/Ex ia IIC T4 (-10°C ≤ Ta ≤ +40°C)

Safe area pressure station

Hazardous area pressure station

Ordering information for safe area use

Please use the following part numbers when ordering a Safe Area variant:

- DPI620PC-2 bar g (30 psi/200 kPa) gauge
- DPI620PC-7 bar g (100 psi/700 kPa) gauge
- DPI620PC-20 bar g (300 psi/2 MPa) gauge

With HART:

- DPI620PC-H-2barg (30 psi/200 kPa) gauge
- DPI620PC-H-7barg (100 psi/700 kPa) gauge
- DPI620PC-H-20barg (300 psi/2 MPa) gauge

Each DPI620PC package is supplied with a DPI620 Genii safe area calibrator, pressure module (range as per above), PV621G pressure generation base with G1/8 female and 1/8 NPT female adapters, carry strap. Pressure relief valve, 4Sight2 Lite calibration software. Rechargeable lithium polymer battery, universal mains charger, 300 VAC true rms measurement probe, test leads, calibration certificate and quick reference guide.

Accessories for safe area use

(Please order accessories by part number as separate line items.)

(P/N IO620-BATTERY)
Spare/rechargeable lithium polymer battery (not compatible with DPI620G-IS-L models).

(P/N IO620-PSU)
Spare/replacement universal mains adapter Input voltage 100 to 240 VAC 50/60 Hz. Mains socket adapters are provided.

(P/N IO620-AC)
Replacement AC voltage measurement probe. Attaches to the safe area pressure calibrator, 30 V sockets to provide 300 VAC true rms measurement. Is supplied as standard.

(P/N IO620-CHARGER)
External battery charging station allows a spare battery to be charged independently of the safe area pressure calibrator for minimum instrument down time. Power is provided by the standard mains adapter (P/N I0620-PSU). A complete charge cycle takes approximately 6.5 hours. The charging station can be connected to a USB port to provide a top-up charge.

(P/N IO620-IDOS-USB)
IDOS to USB converter allows connection of an IDOS universal pressure module to the safe area pressure calibrator. P/N IO620-USB-PC is also required to connect the converter to the USB port. (not compatible with hazardous area package)

(P/N IO620-USB-RS232)
USB to RS 232 cable connects the safe area pressure calibrator to an RS 232 interface. (not compatible with hazardous area package)

Ordering information for hazardous area use

Please use the following part numbers when ordering a Intrinsically safe Hazardous Area variant:

- DPI620SPC-2 bar g (30 psi/200 kPa) gauge
- DPI620SPC-7 bar g (100 psi/700 kPa) gauge
- DPI620SPC-20 bar g (300 psi/2 MPa) gauge

With HART:

- DPI620SPC-H-2barg (30 psi/200 kPa) gauge
- DPI620SPC-H-7barg (100 psi/700 kPa) gauge
- DPI620SPC-H-20barg (300 psi/2 MPa) gauge

Each DPI620SPC package is supplied with a DPI620 Genii IS hazardous area calibrator, pressure module (range as per above), PV621-IS pressure generation base with G1/8 female and 1/8 NPT female adapters, carry strap. Pressure relief valve, 4Sight2 lite calibration software rechargeable lithium ion battery, universal mains adapter and charger, test leads, calibration certificate and quick reference guide.

Accessories for hazardous area use

(Please order accessories by part number as separate line items.)

(P/N IO620G-IS-BATTERY)
Spare/replacement rechargeable battery

(P/N IO620-PSU)
Spare/replacement universal mains adapter

(P/N IO620G-IS-CHARGER)
Spare/replacement charger (PSU not included)

Accessories

Note: unless otherwise stated the following accessories are suitable for hazardous area use.

(P/N IO620-USB-PC) USB cable connects the pressure calibrator to a PC.

Dirt moisture trap

Prevents contamination of the pneumatic pressure generation station and cross contamination from one device under test to another. The IDT connects directly to the pressure generation station pressure port and replicates the quick fit connection for compatibility with the hose and adapter kits.

P/N IO620-IDT621 - NEW: Maximum working pressure 35 bar (500 psi/2 MPa)

Pressure station carrying case

A protective carrying case with shoulder strap and large pocket for accessories. Also accommodates the assembled system.

P/N IO620-CASE-3: Safe area use
P/N IO620-CASE-3-IS: Hazardous area use

Pneumatic hose

Pneumatic hose terminated with quick fit connectors compatible with the test point adaptors and the adaptor sets supplied.

Safe area use:

P/N IOHOSE-NP1: 1 m/3.28 ft pneumatic hose. Maximum pressure 20 bar (300 psi/2 MPa)

P/N IOHOSE-NP2: 2 m/6.56 ft pneumatic hose. Maximum pressure 20 bar (300 psi/2 MPa)

P/N IO620-HOSE-P1: 1 m/3.28 ft pneumatic hose. Maximum pressure 400 bar (5,800 psi/40 MPa)

P/N IO620-HOSE-P2: 2 m/6.56 ft pneumatic hose. Maximum pressure 400 bar (5,800 psi/40 MPa)

Hazardous area use:

P/N IO620-HOSE-P1-IS: 1 m/3.28 ft pneumatic hose. Maximum pressure 400 bar (5,800 psi/40 MPa)

P/N IO620-HOSE-P2-IS: 2 m/6.56 ft pneumatic hose. Maximum pressure 400 bar (5,800 psi/40 MPa)

Pressure adapter set

A set of test point adapters to connect the tool less quick fit PV62G and the extension hoses to the device under test.

P/N IO620-BSP: G1/8 male and G¼ male, G¼ female, G3/8 female and G½ female.

P/N IO620-NPT: 1/8" male and ¼" male, ¼" female, 3/8" female, and ½" female.

P/N IO620-MET: 14 mm and 20 mm female.

(P/N IO620-COMP - NEW) Comparator adapter allows the pressure station to be used as a comparator. The adapter connects to the stations pressure port and provides two outlet ports for making gauge comparisons.

(P/N IO620-BLANK) Blanking plug allows the pressure generation station to be used as pressure generator independently of the calibrator and pressure module by blanking the pressure generation stations module port.

RTD PROBES

Enabling users to perform plug and play temperature measurement capability, displaying units as resistance or temperature.

The Interface only option allows users to use their own PT100 RTD probe. **RTD-INTERFACE** is supplied with a field-rewireable M12 connector to allow users to connect their own wire-ended RTD's.

P/N RTD-INTERFACE-USB for DPI620 Genii safe area calibrator

P/N RTD-INTERFACE-IS for DPI620 Genii IS hazardous area calibrator

The probe option comes with the interface and a 15 cm (6") class A PT100 probe.

P/N RTD-PROBE-USB for DPI620 Genii safe area calibrator

P/N RTD-PROBE-IS for DPI620 Genii IS hazardous area calibrator

All RTD-PROBE-xxx and RTD-INTERFACE-xxx come with a 2.9m cable.

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