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DPI620G

Genii advanced modular calibration system

Combines an advanced multi-function calibrator and HART/Foundation Fieldbus communicator with world-class pressure measurement and generation. ATEX, IECEx and ETL approved intrinsically safe versions are available for use in hazardous areas.

A flexible modular system

The Druck Advanced Modular Calibration System comprises of four system components to provide the multi-functionality to perform duties formerly requiring a wide range of different instruments. These system components are:

- DPI620G - Multi-function or electrical calibrator, HART/Fieldbus communicator
- PM620 series - Interchangeable pressure modules
- MC620G - Pressure module carrier
- PV62XG - Pressure generating base stations (including PV624 portable hybrid pressure controller base station)

Or for hazardous area:

- DPI620G-IS - Intrinsically safe multi-function calibrator, HART/Fieldbus communicator
- PM620-IS series - Intrinsically safe interchangeable pressure modules
- MC620-IS - Intrinsically safe pressure module carrier
- PV62X-IS - Intrinsically safe pressure generating base stations

PV62XG pressure station. The DPI620G securely attaches to the pressure stations when pressure generation and measurement is required.

Re-rangeable pressure measurement and generation from 2.5 mbar (1 inH_2O) to 1,000 bar (15,000 psi)

Features

- Multi-function capabilities: electrical, frequency, temperature and pressure
- Optional HART and Foundation Fieldbus communicators
- ATEX, IECEx and ETL approved for hazardous area use
- Modular re-rangeable and expandable concept
- Individual components can be used as stand-alone instruments
- Allows significant inventory reductions
- Simplifies training and improves operator safety
- Reduces cost of ownership
- Provided with one free 4Sight2 Lite as Freemium calibration software license
- *Bluetooth connectivity for wireless communication
- Full data logging and local documenting capabilities included

PM620(T-B/LP/T)

Interchangeable pressure modules from 2.5 mbar (1 inH_2O) to 1000 bar (15000 psi).

MC620G pressure module carrier.

Securely attaches to the DPI620G when single or dual pressure measurement is required.

DPI620G multifunction or electrical calibrator and communicator.

Measure and source mA, mV, V, ohms, frequency, RTDs and thermocouples

DPI 620 Genii advanced modular calibrator and HART/Foundation Fieldbus communicator

This ultra-compact basic electrical or electrical with frequency and temperature calibrator with full HART communicator and optional Foundation Fieldbus communicator provides simultaneous measurement and source capabilities 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.
- HART and Foundation Fieldbus digital communication with complete device description libraries, internal modems and free of charge upgrades.
- 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 such as CALIBRATOR, HART and Foundation Fieldbus.
- 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.
- Physical or *Bluetooth® wireless connection to a PV624 hybrid pressure controller base station.

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 up to 100 bar/1,500 psi pneumatic and 1,000 bar/15,000 psi hydraulic pressures.
- Interchangeable pressure modules from 2.5 mbar/1 inH2O to 1,000 bar/15,000 psi.

HART communicator - optional

- 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 15V).
- 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.

Foundation Fieldbus communicator - optional

- Fully featured fieldbus communicator for device configuration and calibration.
- Complete device description library.
- It's easy to upgrade Genii with free of charge software and latest DD library.

Documenting

The documenting application, provides advanced features for automating calibration procedures, calculating errors and interfacing with PCs and calibration and maintenance systems.

The DPI620G can record datalogging from 6 channels simultaneously by manually touching a record button or automatically at a user set interval. Data can be reviewed on screen or the data file can be transferred to a PC for further analysis.

Calibration procedures

Test procedures can be created and stored using the autonomous "Calibration Wizard". A single test procedure template can be run on multiple assets with live pass/fail error analysis and results for each asset saved individually in the internal storage of the DPI620G that can be locally viewed or transferred to a PC to support traceability.

With the test results exported to a PC, the data can be sorted or Druck provides a Calibration Certificate template for pressure to electrical device calibrations which transforms the results into a formatted professional-look certificate ready for printing or filing.

Compatable with calibration management software

4Sight2 is the new state-of-the-art, integrated, web-based calibration manager software

Maintains compliance with industry standards

- Provides a full-time and date stamped audit trail
- Significantly reduces your operating costs
- Provides automated paperless solutions
- Ensures that you are always ready for an audit
- Optional web hosting means no IT overhead

4Sight2 calibration and maintenance software gives you total control for all your calibration and maintenance tasks.

- Software
- Mobile solutions
- Workshop solutions
- Global service

4Sight2 calibration management software will help you comply with regulations, reduce running costs and improve process efficiency. As your calibration manager, its automated workflow, robust data and complete traceability will significantly reduce calibration and maintenance costs.

Please visit **druck.com/4sight2** for more information.

One free 4Sight2 Lite as freemium license is provided free of charge with each DPI620 Genii Hand-held Pressure Calibrator.

Technical specifications

DPI620G general 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)
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
Pressure safety	Pressure equipment directive - Class: Sound Engineering Practice (SEP)
Approved	CE and UKCA Marked
Size (L: W: H)	186 x 115.5 x 42.5 mm (7.3 x 4.5 x 1.7 in)
Weight	675g (1.5 lb) – battery included
Power supply	Lithium-polymer battery (Druck part number: IO620-Battery); Capacity: 4600 mAh (minimum), 4800 mAh (typical); Nominal voltage: 3.7 V. Charge temperature: 0° to 45°C (32° to 113°F) Discharge temperature: -10° to 50°C (14° to 122°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, Bluetooth® (B1 model)

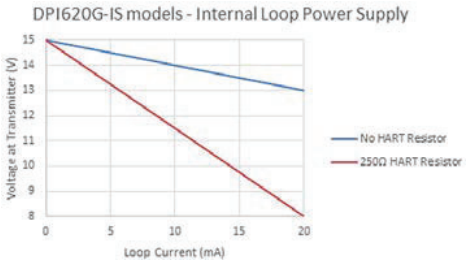
Intrinsically safe DPI620G-IS general specifications for hazardous area use	
Processor and memory	800 MHz Processor 512 MB 800 MHz SDRAM 8 GB internal flash memory
Display	Size: 110 mm (4.3 in) diagonal; 480 x 800 pixels LCD: Color display with touch-screen Protected by 2 mm toughened glass, impact tested in accordance with BS EN 61010-1:2010 (0.5kg object from 1 m)
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	IP54
Humidity	0 to 90% RH Non condensing
Shock/vibration	BS EN 61010-1; MIL-PRF-28800F for Class II equipment, 1 m drop tested
EMC	Electromagnetic compatibility: BS EN 61326-1
Electrical safety	Electrical – BS EN 61010-1
Pressure safety	Pressure equipment directive - Class: Sound Engineering Practice (SEP)
Approval	CE and UKCA Marked ATEX and IECEx intrinsically safe: Ex 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 (Druck part number: IO620G-IS-BATTERY); Capacity: 4000 mAh. Nominal voltage: 3.65 V. Charge temperature: 0° to 45°C (32° to 113°F) Discharge temperature: -10° to 50°C (14° to 12°F). Charge/discharge cycles: > 500 > 70% capacity. Safe area charging only using external charger IO620G-IS-CHARGER and universal mains adaptor 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[1] not applicable to DPI620G-B, DPI620G-H or DPI620G-IS versions	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) not applicable to DPI620G-B, DPI620G-H	RTD	Please refer to RTD specification table							CH1	
	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) not applicable to DPI620G-B, DPI620G-H	RTD	Please refer to RTD specification table							CH1	
	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 not applicable to DPI620G-B, DPI620G-H	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 for compatible devices							USB	

Source mode										
DC Voltage not applicable to DPI620G-B, DPI620G-H	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] not applicable to DPI620G-B, DPI620G-H	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 not applicable to DPI620G-B, DPI620G-H	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 DPI620G-IS models.
The DPI620G-B/H models support electrical single channel function only.
Specification applies, 45 to 65 Hz and between 10% and 100% of full scale.
Specification applies when calibration temperature is between 10 and 30°C.
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 IS versions) simultaneous reading windows as follows: CH1, CH2, P1, P2, IDOS (not IS versions), HART/Fieldbus).



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

Type	Temperature coefficient	Temperature range				Total uncertainty 10° to 30°C (50° to 86°F) for 1 year		
		°C		°F		Rdg	Tos	
		From	To	From	To	%	°C	°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				Total uncertainty 10° to 30°C (50° to 86°F) for 1 year		
		°C		°F		Rdg	Tos	
		From	To	From	To	%	°C	°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	32	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				Total uncertainty 10° to 30°C (50° to 86°F) for 1 year		
		°C		°F		Rdg	Tos	
		From	To	From	To	%	°C	°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 DPI 620 Genii uncertainties only values in () apply to DPI620G-IS models. Not applicable to the DPI620G-B or DPI620G-H.

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:

0.01 °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

Measuring temperatures		
Interface body RTD-INTERFACE-USB, RTD-INTERFACE-IS	**Operating temp range:** -10°C to +50°C	
M12 extension cable IO-RTD-M12EXT	**Operating temp range:** -25°C to +75°C (at probe end). RTD-INTERFACE end limited to -10°C to +50°C	
RTD Probe RTD-PROBE-USB, RTD-PROBE-IS (Interface supplied with probe)	**Operating temp range:** -50°C to +200°C using suitably rated M12 extension cable -10°C to +50°C if directly plugged into RTD-INTERFACE body	

Higher temperature applications:

The RTD-INTERFACE body is only rated as above. However it is common practice to use M12 mineral sheathed extension cables for medium temperature probes up to ~200°C and specialist welded contact cabled probes (into Druck supplied M12 connector IO-RTD-M12CON) for measuring up to 650°C.

Thermocouple measurement and simulation									
Type	Standard	Temperature range				Measurement		Simulation	
						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

Values in () apply to DPI620G-IS models

Not applicable to the DPI620G-B or DPI620G-H

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 to 30°C (50 to 86°F)

Add 0.01° CJ uncertainty/° outside of this ambient range

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PM620, PM620T-B, PM620LP & PM620T pressure modules

Features

- Fully interchangeable with no need for set-up or calibration
- Simple screw fit - hand tight no tools required
- Safe and hazardous area versions available

The PM620 series 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.

The PM620LP has a true differential measurement via a fitted barbed low pressure (LP) connector and is supplied with 1 x barbed high pressure (HP) connector to fit a PV624 test port, 1 x equalizing valve and 1M (3.3 ft) length of silicon twin tubing.

The PM620T in addition incorporates our unique range of TERPS resonant silicon pressure sensor technology. Providing up to four times greater stability and higher accuracy.

PM620

- Ranges from 70 mbar to 1,000 bar (1 to 15,000 psi)
- Total uncertainty from 0.025% FS

PM620T-B

- Ranges from 350 mbar to 3.5 bar abs (5 psi abs to 50 psi abs)
- Total uncertainty from 0.05% FS

PM620LP

- Ranges from 2.5 mbar diff to 25 mbar diff (1 to 10 inH_2O diff)
- Total uncertainty from 0.05% Span

PM620T

- Ranges from 350 mbar to 100 bar abs (5 psi abs to 1500 psi abs)
- Total uncertainty from 0.0125% FS

MC620G module carrier

Features

- 2 independent pressure channels
- Simple to re-range
- Pressure protection
- Safe and hazardous area versions available

The MC620 module carrier attaches to the head of the DPI620 to provide two independent pressure measurement channels. These can be fitted with any PM620/PM620T-B/ PM620T pressure module from 2.5 mbar to 1,000 bar (1 inH_2O to 15,000 psi). A simple screw fit means no tools are required and ensures both a high integrity pressure seal and a reliable digital interface. Even the pressure adapters are interchangeable and only require a finger tight fit.

The carrier is designed for pressure safety and will automatically seal if a module is not fitted or if the user attempts to remove it.

MC620G specification	
Maximum pressure	400 bar (5,800 psi) pneumatic 1,000 bar (15,000 psi) hydraulic
Pressure media	Compatible with stainless steel and nitrile seals
Pressure safety	Pressure equipment directive class SEP
Size and weight	80 mm x 100 mm x 110 mm, 640 g

MC620-IS specification (where different to MC620G)	
Size and weight	78 mm x 100 mm x 110 mm, 820 g

PM620-T/T-B

PM620LP

PM620 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 to 50°C (14 to 122°F)
Storage temperature	-20 to 70°C (-4 to 158°F)
Humidity	0 to 90% RH non condensing
Shock and vibration	BS EN 61010-1; MIL-PRF-28800F for Class II equipment, 1 m Drop Tested
EMC	BS EN 61326-1
Electrical safety	BS EN 61010-1
Pressure safety	Pressure equipment directive class SEP
Approval	CE marked
Size and weight	L. 56 mm, Dia. 44 mm, 106 g maximum

PM620-IS Pressure module specification (where different from PM620)	
Approval	CE and UKCA 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)

Gauge ranges (referenced to atmosphere)

		Media	NLH&R 20°C ± 2°C (68°F ± 4°F) 24 hr	Total uncertainty 20° C (+/- 2°) for 1 year	NLH&R 0° to 50°C (32° to 122°F) 24 hr	Total uncertainty 0° to 50°C (32° to 122°F) for 1 year
			Gauge	Gauge	Gauge	Gauge
bar	psi		%FS	%FS	%FS	%FS
±0.07	±1	1	0.025	0.040	0.030	0.047
±0.1	±1.45	1	0.020	0.037	0.027	0.045
±0.2	±3	1	0.020	0.037	0.027	0.045
±0.35	±5	2	0.020	0.037	0.025	0.044
±0.7	±10	2	0.015	0.035	0.020	0.041
±1	-14.5 to 15	2	0.015	0.035	0.020	0.041
-1 to 2	-14.5 to 30	2	0.015	0.020	0.020	0.025
-1 to 3.5	-14.5 to 50	2	0.010	0.017	0.020	0.025
-1 to 7	-14.5 to 100	2	0.010	0.017	0.020	0.025
-1 to 10	-14.5 to 150	2	0.005	0.014	0.020	0.025
-1 to 20	-14.5 to 300	2	0.005	0.014	0.020	0.025
0 to 35	0 to 500	2	0.005	0.014	0.020	0.025
0 to 70	0 to 1,000	2	0.005	0.014	0.020	0.025
0 to 100	0 to 1,500	2	0.005	0.014	0.020	0.025
0 to 135	0 to 2,000	2	0.005	0.014	0.020	0.025
0 to 200	0 to 3,000	2	0.005	0.012	0.020	0.025

NLH&R non-linearity, hysteresis and repeatability

❶ Compatible with non-corrosive gas/fluid

❷ Compatible with stainless steel

*The reading can be referenced to ambient air pressure via a software feature of the DPI620 Genii, allowing the same module to be switched between absolute and sealed gauge measurement.

DPI620 Genii pressure resolution: adjustable 4 to 7 digits. Uncertainty confidence level 95% (K=2)

Absolute ranges (referenced to vacuum)

		Media	NLH&R 20°C ± 2°C (68°F ± 4°F) 24 hr	NLH&R 20°C ± 2°C (68°F ± 4°F) 24 hr	Total uncertainty 20° C (+/- 2°)		NLH&R 0° to 50°C (32° to 122°F) 24 hr	NLH&R 0° to 50°C (32° to 122°F) 24 hr	Total uncertainty 0° to 50°C (32° to 122°F) for 1 year	
			Absolute	*Sealed gauge	Absolute	*Sealed gauge	Absolute	*Sealed gauge	Absolute	*Sealed gauge
bar	psi		%FS	%FS	%FS	%FS	%FS	%FS	%FS	%FS
0 to 7	0 to 100	2	0.015		0.037		0.036		0.050	
0 to 10	0 to 150	2	0.015	0.005	0.036	0.001	0.030	0.020	0.047	0.025
0 to 20	0 to 300	2	0.015	0.005	0.036	0.002	0.030	0.020	0.047	0.025
0 to 35	0 to 500	2	0.015	0.005	0.036	0.004	0.030	0.020	0.047	0.025
0 to 70	0 to 1,000	2	0.015	0.005	0.036	0.007	0.030	0.020	0.047	0.025
0 to 100	0 to 1,500	2	0.015	0.005	0.036	0.010	0.030	0.020	0.046	0.025
0 to 135	0 to 2,000	2	0.015	0.005	0.036	0.014	0.030	0.020	0.046	0.025
0 to 200	0 to 3,000	2	0.015	0.005	0.036	0.020	0.030	0.020	0.046	0.025
0 to 350	0 to 5,000	2	0.015	0.005	0.036	0.035	0.033	0.020	0.049	0.025
0 to 700	0 to 10,000	2	0.015	0.005	0.036	0.070	0.033	0.020	0.049	0.025
0 to 1000	0 to 15,000	2	0.015	0.005	0.036	0.100	0.033	0.020	0.049	0.025

PM620LP specification	
Maximum intermittent pressure	2 x FS
Maximum working pressure	110% FS
Maximum static pressure	250 mbarg (3.6 psig)
Sealing	IP 65 (protected against dust and jets ofwater)
Operating temperature	**** 10 to 30°C (50 to 86°F)
Storage temperature	-20 to 70°C (-4 to 158°F)
Humidity	0 to 90% RH non condensing
Shock and vibration	BS EN 61010-1; MIL-PRF-28800F for Class II equipment, 1 m Drop Tested
EMC	BS EN 61326-1
Electrical safety	BS EN 61010-1
Pressure safety	Pressure equipment directive class SEP
Approval	CE marked
Size and weight (exc barb connector)	L. 56 mm, Dia. 44 mm, 106 g maximum

Differential ranges (high pressure referenced to low pressure)					
		Media	NLH&R 20°C (68°F) 24 hr	NLH&R **** 10 to 30°C (50 to 86°F) 24 hr	Total uncertainty **** 10 to 30°C (50 to 86°F) for 1 year
			Differential	Differential	Differential
mbar	inH2O		% span	% span	% span
±2.5	±1	1	0.050	0.074	0.080
±12.5	±5	1	0.050	0.063	0.070
±25	±10	1	0.045	0.045	0.050

Note: PM620LP not available with hazardous area approval.

NLH&R non-linearity, hysteresis and repeatability

❶ Compatible with non-corrosive gas/fluid

*Zero required after HP/LP equalization & if the ambient temperature changes>2°C (36°F).

****Operating temperature for PM620LP 2.5 mbar (1 inH_2O) range is 20 to 30°C (68 to 86°F)

DPI620 Genii pressure resolution: adjustable 4 to 7digits. Uncertainty confidence level 95% (K=2)

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PM620T specification			
Maximum working pressure	110% FS	Approval	CE and UKCA Marked
Sealing	IP 65 (protected against dust and jets of water)	Size and weight	L. 56 mm, Dia. 44 mm, 106 g maximum
Operating temperature	-10 to 50°C (14 to 122°F)	RoHS	Compliant
Storage temperature	-20 to 70°C (-4 to 158°F)	Orientation stability	<0.2 mbar/g
Humidity	0 to 90% RH non condensing	Media compatibility	Media to be compatible with stainless steel
Shock and vibration	BS EN 61010-1; MIL-PRF-28800F for Class II equipment, 1 m drop tested	Resolution	Selectable - 4 to 7 digits
EMC	BS EN 61326-1	Uncertainty confidence level	95% (k=2)
Electrical safety	BS EN 61010-1		
Pressure safety	Pressure equipment directive class SEP		

PM620T-B Absolute ranges (referenced to vacuum)

Pressure range (absolute)		NLH&R 20°C ± 2°C (68°F ± 4°F) 24 hr	NLH&R 0° to 50°C (32° to 122°F) 24 hr	Total uncertainty 0° to 50°C (32° to 122°F) for 1 year
		Absolute	Absolute	Absolute
bar	psi	%FS	%FS	%FS
0.35	0 to 5	0.030	0.050	0.080
1.2	0 to 17	0.020	0.036	0.070
2	0 to 30	0.015	0.036	0.050
3.5	0 to 50	0.015	0.036	0.050

Note

PM620T-B not available with hazardous area approval or for use with 4Sight2 software.

PM620T Absolute ranges (referenced to vacuum)

Pressure range (absolute)		NLHR @ 25°C	NLHR @ -10°C to 50°C	Total uncertainty @ -10°C to 50°C
		Absolute	Absolute	Absolute
bar	psi	%FS	%FS	%FS
0.351	0 to 5	0.020	0.025	0.030
1.2	0 to 17	0.006	0.013	0.020
2	0 to 30	0.004	0.008	0.0125
3.51	0 to 50	0.004	0.008	0.0125
7	0 to 100	0.004	0.008	0.0125
20	0 to 300	0.004	0.008	0.0125
35	0 to 500	0.004	0.008	0.0125
70	0 to 1000	0.004	0.008	0.0125
100	0 to 1500	0.004	0.008	0.0125

Notes

1. All ranges except 350 mbar and 3.5 bar available with hazardous area approvals.

Hazardous area approvals	
Approval	Baseefa 16ATEX0012X IECEx BAS 10.0004X Ex II 1 G Ex ib IIC T4 Gb (-10 ≤ Ta ≤ +50°C)
EN60079-0	Electrical apparatus for potentially explosive atmospheres - general requirements.
EN60079-11	Electrical apparatus for potentially explosive atmospheres - intrinsic safety 'i'.

Notes

1. The reading can be referenced to ambient air pressure via a software feature of the DPI620 Genii, allowing the same module to be switched between absolute and sealed gauge measurement.
2. NLH&R Non-linearity, hysteresis and repeatability to reference standard.
3. Total uncertainty includes reference standard uncertainty, NLHR over specified range and 1 year drift.

The PV621, 622 and 623 manual pressure generating base stations

Features

- A uniquely capable, re-arrangeable and self-contained pressure test system
- Advanced pressure generation
  - 95% vacuum to 20 bar (300 psi) pneumatic
  - 95% vacuum to 100 bar (1,500 psi) pneumatic
  - 0 to 1000 bar (15,000 psi) hydraulic
- Stand-alone replacements for hand pumps
- Bench top use as comparators
- Safe and hazardous area versions available

There are three pressure generation stations: the PV621, a pneumatic pressure generator for pressures 95% vacuum to 20 bar (300 psi); the PV622, a pneumatic pressure generator for pressures 95% vacuum to 100 bar (1,500 psi); and the PV623, a hydraulic pressure generator for pressures up to 1,000 bar (15,000 psi). Each pressure station is designed for stand-alone operation as a pressure generator and can replace conventional hand pumps to provide greater efficiency and ease of use. They can also be used on the workbench as comparators.

PV621G, PV622G and PV623G specification	
Maximum pressure	PV621G 20 bar (300 psi) pneumatic PV622G 100 bar (1,500 psi) pneumatic PV623G 1,000 bar (15,000 psi) hydraulic
Pressure media	PV621G and PV622G non-corrosive gases, PV623G de-mineralized water or mineral oil (ISO viscosity grade < 22)
Operating temperature	-10° to 50°C (14° to 122°F) For water +4 to +50°C (39 to 122°F)
Storage temperature	-20 to 70°C (-4 to 158°F) (must be empty of water)
Shock and vibration	BS EN 61010-1; MIL-PRF-28800F for Class II equipment, 1 m drop tested
Pressure safety	Pressure equipment directive class SEP
Approval	CE and UKCA Marked
Size and weight	450 mm x 280 mm x 235 mm, PV621G 2.65 kg, PV622G 3.30 kg, PV623G 3.75 kg

PV621-IS, PV622-IS and PV623-IS specification (where different from above table)	
Maximum pressure	PV621-IS 20 bar (300 psi) pneumatic PV622-IS 100 bar (1,500 psi) pneumatic PV623-IS 1,000 bar (15,000 psi) hydraulic
Operating temperature	-10 to 40°C (14 to 104°F)
Approval	CE and UKCA Marked ATEX and IECEx intrinsically safe: Ex 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)

PV622G

PV622-IS

PV624 automatic/hybrid pressure controller base station

The PV624 within one portable base station is both a fully automatic controller and a hybrid pressure controller. Hybrid control combines the advantages of manual pressure generation with fully automatic pressure generation and control.

By utilising interchangeable PM620/PM620LP/PM620T pressure modules and connecting physically or wirelessly* via Bluetooth® with any Bluetooth® DPI620G electrical calibrator creates a uniquely capable, flexible, self-contained portable hybrid pressure controller**.

In hybrid mode the PV624 automatically selects between fast high volume manual pressure generation and fully automatic precise pressure generation to quickly achieve and accurately maintain a stable setpoint.

To achieve a fast time to up-scale pressure set points (or down-scale pressure set points for negative pressure ranges) the PV624 will automatically generate pressure for low pressure or for high pressure the hand pump is requested by the PV624 to be exercised for a portion of the pressure change before automatically isolating the hand pump and seamlessly engaging fully automatic pressure generation to set point.

Down-scale pressure set points (or up-scale pressure set points for negative pressure ranges) are quickly achieved with automatically controlled venting.

Once at set point the PV624 automatically generates and controls the pressure to combat the effect of adiabatic or minor leaks.

Pressure control turndown from high to ultra-low pressure

By simply changing the pressure module, the PV624 can generate and control pressure up to 20 bar (300 psi) using the unique hybrid control technology, or alternatively for the easy calibration of ultra-low pressure devices, the PV624 operates in full automatic mode and automatically generates and controls differential pressure up to +/- 55 mbar (22 inH2O).

Features

- Rangeable pressure generation from 2.5 mbar (1 inH_2O) FS to 20 bar (300 psi) FS
- In-the-field pressure range selection from the Genii PM620/PM620LP/PM620T pressure module family.
- In built barometer to enable accurate pseudo pressure measurements.
- Smart selection of low-pressure fully automatic pressure generation or high pressure/volume hybrid generation.
- Automatic pressure control range +/-55 mbar (22 inH_2O) into a 20 mL (0.7 fl oz) volume
- Hybrid pressure generation and control from -0.9 barg (-13 psig) to 20 barg (300 psig).
- Fully automatic pressure generation and control to accurately maintain setpoint.
- Minimise in-the-field leaks with quick-fit pressure adapters.
- Physical or *Bluetooth® wireless connection to a DPI620G electrical calibrator.
- In-the-field rechargeable battery pack replacement.
- Autonomous calibration wizard to store procedures and calibration data.

Combining any of the pressure base stations with a PM620, PM620T or PM620LP pressure module and the DPI620G calibrator creates a uniquely capable, self-contained pressure calibrator.

*Due to individual country radio licence requirements, Bluetooth® wireless technology may not be available in some countries. An up-to-date list of countries where with Bluetooth® wireless technology is licenced to be used in is available upon request from Druck. User will need both a Bluetooth® Genii & Bluetooth® PV624 to allow this.

**Safe area models , e.g DPI620G/L/PB/FF/FFPB, MC620G, PV621/2/3G, PV624 and PM620/T are not compatible with intrisically safe models, e.g. DPI620G-IS, PM620/T-IS, MC620-IS, PV621/2/3-IS and intrinsically safe models are not compatible with safe area models

***pseudo selection only available for PM620 1 bar/15psi gauge full-scale ranges or above and for 2bar/30psi absolute full-scale ranges and above.

PV624 specifications

Range and performance

Automatic pressure control range

+/-55 mbar (22 inH_2O) into a 20 mL (0.7 fl oz) volume

Hybrid pressure control range

-0.9 barg (-13 psig) to 20 barg (300 psig)

Compatible PM620, PM620LP & PM620T (FS) pressure ranges

Differential ranges: +/- 2.5 mbar (1 inH_2O), +/- 12.5 mbar (5 inH_2O), +/-25 mbar (10 inH_2O).

Gauge ranges: 0.07 bar (1 psi) 0.1 bar (1.45 psi) 0.2 bar (3 psi) 0.35 bar (5 psi) 0.7 bar (10 psi), 1bar (15 psi), 2 bar (30 psi), 3.5 bar (50 psi), 7 barg (100 psi), 10 barg (150 psi), 20 barg (300 psi).

Absolute ranges: 2 bar (30 psi), 3.5 bar (50 psi), 7 bar (100 psi), 10 bar (150 psi), 20 bar (300 psi).

Maximum over range pressure (without damage)

120%FS

Barometer pressure measurement range

800-1100 mbar abs

Barometer total uncertainty (24hr)

<0.5 mbar

Barometer drift/year

<0.33 mbar/yr typical

Pressure control stability

0.005% of PM620 series full scale ranges 25 mbar to 20 bar (10 inH_2O to 300 psi)

0.01% of PM620 series full scale ranges 12.5 mbar (5 inH_2O)

0.05% of PM620 series full scale ranges 2.5 mbar (1 inH_2O)

Speed to stable set point

0 barg to 2 barg (30 psig) +/-50 ppm into 15 ml volume <15 sec

0 barg to 20 barg (300 psig) +/-50 ppm into 50 ml volume <90 sec

Maximum compensated external leak rate at 20 barg (300 psig) with 50 mL volume

60mbar/min

PV624 General specification

Operating temperature

0 to +50 deg. C

Storage temperature

-20 to +70 deg. C

Ingress protection

IP54

Humidity

Up to 95% non-condensing

Shock/vibration

As per MIL-PRF-28800F (Class II equipment)

Altitude

Up to 3000m

EMC:

CE and UKCA approved IEC61326-1

Electrical safety:

CE and UKCA approved IEC61010

Pressure safety:

CE and UKCA approved Sound Engineering Practice

Test volume materials

Suitable for air

Approvals

CE marked, UKCA marked

Size (excl DPI620)

(L) 343 mm/13.5" x (W) 192 mm/7.6" x (H) 136 mm/5.4"

Weight (excl DPI620)

3.4 Kg/7.5 lb

Power supply

15V, 2A (30W)

Battery life (from 100% charge)

Min 8 hrs continuous usage (typical)

Battery charge time

8 hrs

Service

>5000 pressure cycles

Power failure protection

System lock and manual vent valve feature provided

Connectivity

USB client micro-USB (+Bluetooth® low energy for B1 option)

Pressure connection

Quick fit with G1/8 female + 1/8 NPT female adapter

Ordering information

Systems for safe area use**

Please order the following model numbers and part numbers as separate line items.

Model	Description	Bluetooth Connectivity	Measure pressure via PM620 & MC620/ PV62X	USB Sensors: pressure & RTD	IDOS Pressure sensors	Measure mA, mV, V	Source mA	24/28V Loop power	Source mV, V	Measure/ source frequency	Measure/ source resistance	Measure/ source temp (RTD/TC)	Multi channel▲ for simultaneous measurement/ source	External AC voltage probe	HART	Profibus	Fieldbus
DPI620G-B	Electrical calibrator		•	•	•	•	•	•					•				
DPI620G-B-B1	Electrical calibrator with Bluetooth	•	•	•	•	•	•	•					•				
DPI620G-H	Electrical calibrator & HART communicator		•	•	•	•	•	•					•		•		
DPI620G-H-B1	Electrical calibrator & HART communicator with Bluetooth	•	•	•	•	•	•	•					•		•		
DPI620G-L	Multifunction calibrator		•	•	•	•	•	•	•	•	•	•	•	•			
DPI620G-L-B1	Multifunction calibrator with Bluetooth	•	•	•	•	•	•	•	•	•	•	•	•	•			
DPI620G	Multifunction calibrator & HART communicator		•	•	•	•	•	•	•	•	•	•	•	•	•		
DPI620G-B1	Multifunction calibrator & HART communicator with Bluetooth	•	•	•	•	•	•	•	•	•	•	•	•	•	•		
DPI620G-PB	Multifunction calibrator & HART communicator with Profi Bus		•	•	•	•	•	•	•	•	•	•	•	•	•	•	
DPI620G-PB-B1	Multifunction calibrator & HART communicator with Profi Bus & Bluetooth	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
DPI620G-FF	Multifunction calibrator & HART communicator with Fieldbus		•	•	•	•	•	•	•	•	•	•	•	•	•		•
DPI620G-FF-B1	Multifunction calibrator & HART communicator with Fieldbus & Bluetooth	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•
DPI620G-FFPB	Multifunction calibrator & HART communicator with Profi Bus & Fieldbus		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
DPI620G-FFPB-B1	Multifunction calibrator & HART communicator with Profi Bus, Fieldbus & Bluetooth	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

The DPI620G are supplied with a rechargeable lithium polymer battery P/N IO620-BATTERY, universal mains adaptercharger P/N IO620-PSU, P/N IO620-AC 300 VAC true rms measurement probe (IO620-AC not supplied with the DPI620G-B or DPI620G-H), test leads calibration certificate, and quick reference guide.

p The DPI620G-B/H models have multifunction capability only when measuring/sourcing pressure or with the USB RTD.

Ordering information

Systems for safe area use**

Please order the following model numbers and part numbers as separate line items.

Model MC620G

Genii pressure module carrier

Supplied with G 1/8 female and 1/8 NPT female adapters (2 of each).

Model PM620, PM620T or PM620LP "pressure range" and "type"

Pressure module supplied with calibration certificate. Please state model number, pressure range and type gauge or absolute e.g., PM620 20 bar (300 psi) gauge (see pages 10, 11 & 12 for pressure ranges).

Model PV621G

Pneumatic pressure generation base station vacuum to 20 bar (300 psi)

Model PV622G

Pneumatic pressure generation base station vacuum to 100 bar (1,500 psi)

Model PV623G

Hydraulic pressure generation base station 0 to 1,000 bar (15,000 psi)

Model PV624-B0 or PV624-B1 (-B1 model has additional *Bluetooth connectivity)

Automatic/hybrid pressure controller base station. Automatic +/- 55 mbar (22 inH_2O)/hybrid from vacuum to 20 bar (300 psi).

The PV621G, 622G, 623G and 624 are supplied with G1/8 female and 1/8 NPT female adapters carry strap, and quick reference guide. The PV623G in addition includes a plastic refill bottle for hydraulic fluid. The PV624 includes AC power supply, rechargeable battery pack and dirt moisture trap.

Accessories for safe area use**

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

(P/N IO620-PSU) DPI620G Spare/replacement universal mains adapter. Input voltage 100 to 240 VAC 50/60 Hz Mains socket adapters are provided.

(P/N IO620-CHARGER) DPI620G Battery charging station

External battery charging station allows a spare battery to be charged independently of the DPI620G for minimum instrument down time. Power is provided by the standard mains adaptor (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 (full charge in 13 hours).

(P/N IO624-Battery) Rechargeable PV624 battery pack

A spare battery pack that can be easily exchanged in the field

(P/N IO624-CHGR-KIT-UK) PV624 external desktop battery charger

External charger for the PV624 battery pack with UK Plug

(P/N IO624-CHGR-KIT-EU) PV624 external desktop battery charger

External charger for the PV624 battery pack with EU Plug

(P/N IO624-CHGR-KIT-US) PV624 external desktop battery charger

External charger for the PV624 battery pack with US Plug

(P/N IO624-CHGR-KIT-AU) PV624 external desktop battery charger

External charger for the PV624 battery pack with Australia Plug

(P/N IO624-CHGR-KIT-CN) PV624 external desktop battery charger

External charger for the PV624 battery pack with China Plug

(P/N IO620-AC) Replacement AC voltage measurement probe

Attaches to the DPI620G, 30 V sockets to provide 300 VAC true rms measurement. Is supplied as standard with all new DPI620G.

(P/N IO620-CASE-1) DPI620G carrying case

Protective carrying case with belt loop, shoulder strap and large detachable pocket for test leads and accessories.

(P/N IO620-CASE-2) System carrying case

Protective carrying case for system components including the DPI620G, MC620G, PM620 modules, test leads, hose and adapters.

(P/N IO620-CASE-3) Pressure base station carrying case for safe area use

A protective carrying case with shoulder strap and large pocket for accessories. Also accommodates the assembled system including the DPI620G and PM620.

(P/N IO620-USB-PC) USB cable
Connects the DPI620G or DPI620G-IS to a PC

(P/N IO620-IDOS-USB) IDOS to USB converter

Allows connection of an IDOS universal pressure module to the DPI620G. P/N IO620-USB-PC is also required to connect the converter to the DPI620G USB port. (not compatible with DPI620G-IS)

(P/N IO620-USB-RS232) USB to RS 232 cable

Connects the DPI620G to an RS 232 interface (not compatible with DPI620G-IS)

Pressure relief valve

When fitted to a PV62X pressure station a relief valve protects the PM620 pressure module and the device under test from overpressure

Relief valve table

Part number	For use with	Factory setting		Adjustable range	
		bar	psi	bar	psi
IO620-PRV-P1	PV621G PV622G	1	15	0.2 to 1	3 to 15
IO620-PRV-P2	PV621G PV622G	5	100	3 to 7	45 to 100
IO620-PRV-P3	PV621G PV622G	30	435	16 to 32	230 to 460
IO620-PRV-P4	PV622G	60	870	30 to 60	435 to 870
IO620-PRV-P5	PV622G	100	1,500	60 to 100	870 to 1,500
IO620-PRV-P6	PV621G PV622G	3	45	1.1 to 3	16 to 45
IO620-PRV-P7	PV621G PV622G	12	170	6.1 to 12	90 to 170
IO620-PRV-P8	PV621G PV622G	18	260	12.1 to 18	175 to 260
IO620-PRV-H1	PV623G	50	725	10 to 50	145 to 725
IO620-PRV-H2	PV623G	200	3000	50 to 200	725 to 2,900
IO620-PRV-H3	PV623G	400	6000	200 to 400	2,900 to 5,800
IO620-PRV-H4	PV623G	700	10,000	300 to 700	4,350 to 10,000
IO620-PRV-H5	PV623G	1,000	15,000	600 to 1,000	8,700 to 15,000

(P/N IO620-RAK-5U) Rack mount kit

Enables the DPI620G to be mounted in a 5U 19" half rack.

(P/N IO620-RAK-8U) Rack mount kit

Enables the DPI620G to be mounted in a 8U 19" half rack.

(P/N IO620-RAK-MC) Rack mount kit

Enables the DPI620G + MC620 to be mounted in a 8U 19" half rack.

Accessories for safe area use**

Dirt moisture trap

Prevents contamination of the PV621, 622 and 624 pneumatic systems and cross contamination from one device under test to another. The IDT connects directly to the PV621, 622 and 624 pressure port and replicates the quick fit connection for compatibility with the hose and adapter kits.

Note: 1 off IO620-IDT621 dirt moisture trap supplied with PV624.

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

(P/N IO620-IDT622) Maximum working pressure 100 bar (1,500 psi)

Low pressure squeeze pump

An external squeeze pump to supplement low pressure generation (up to 950 mbar/13.5 psi) into large volumes when the PV624 is in hybrid mode. Supplied with "T" connector compatible with PM620LP twin tubing.

(P/N IO624-LP-PUMP) External low pressure squeeze pump

An external squeeze pump to supplement low pressure generation (up to 950 mbar/13.5 psi) into large volumes when the PV624 is in hybrid mode. Supplied with "T" connector compatible with PM620LP twin tubing.

PM620LP Low pressure tube

Flexible 6 mm (1/4") twin silicon tubing for use with the PM620LP pressure module "push fit" barbed pressure connectors.

(P/N IOHOSE-LP2) 2 m/6.56 ft low pressure pneumatic twin tube. Maximum pressure 500 mbar/7 psi

(P/N IO620-LP) Low pressure tube connector kit

Low pressure connector kit compatible with 6 mm (1/4") flexible twin silicon tubing.
Contains: 1 off high pressure barb to connect tube to PV62X/MC620G, 1 off valve to allow pressure eqalization of high and low pressure tube during set up and sensor zero, 3 off "T" connectors.

Pneumatic hose

Pneumatic hose terminated with quick fit connectors compatible with the test point adapters supplied with the PV62XG, MC620G and the adapter sets.

(P/N IOHOSE-NP1) 1 m/3.28 ft pneumatic hose.

Maximum pressure 20 bar/300 psi

(P/N IOHOSE-NP2) 2 m/6.56 ft pneumatic hose.

Maximum pressure 20 bar/300 psi

(P/N IO620-HOSE-P1) 1 m/3.28 ft pneumatic hose.

Maximum pressure 400 bar/5,800 psi

(P/N IO620-HOSE-P2) 2 m/6.56 ft pneumatic hose.

Maximum pressure 400 bar/ 5,800 psi

Hydraulic hose

A high pressure hydraulic hose rated to 1,000 bar (15,000 psi) and terminated with quick fit connectors compatible with the test point adapters supplied with the PV62XG, MC620G and the adapter sets. The hose is self sealing to avoid leakage when disconnected.

(P/N IO620-HOSE-H1) 1 m/3.28 ft hydraulic hose

(P/N IO620-HOSE-H2) 2 m/6.56 ft hydraulic hose

Intrinsically safe systems for hazardous area use**

Please order the following model numbers and part numbers as separate line items.

Model	Description	Measure pressure via PM620 & MC620/ PV62X	Connection for RTD accessory	Measure mA, mV, V	Source mA	15V Loop power	Source mV, V	Measure/ source frequency	Measure/ source resistance	Measure/ source temp (RTD/TC)	Multi channel for simultaneous measurement/ source	HART	Profi Bus	Fieldbus
DPI620G-IS-L	Multifunction calibrator	•	•	•	•	•	•	•	•	•	•			
DPI620G-IS	Multifunction calibrator & HART communicator	•	•	•	•	•	•	•	•	•	•	•		
DPI620G-IS-PB	Multifunction calibrator & HART communicator with Profi Bus	•	•	•	•	•	•	•	•	•	•	•	•	
DPI620G-IS-FF	Multifunction calibrator & HART communicator with Fieldbus	•	•	•	•	•	•	•	•	•	•	•		•
DPI620G-IS-FFPB	Multifunction calibrator & HART communicator with Profi Bus & Fieldbus	•	•	•	•	•	•	•	•	•	•	•	•	•

The DPI 620G-IS Series are supplied with a rechargeable lithium ion battery P/N IO620G-IS-BATTERY, universal mains adapter P/N IO620-PSU and charger P/N IO620G-IS-CHARGER, test leads, calibration certificate, and quick reference guide.

Intrinsically safe systems for hazardous area use**

(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)

Model MC620-IS

Pressure module carrier for DPI620G-IS series.

Supplied with G 1/8 female and 1/8 NPT female adaptors (2 of each)

Model PM620-IS or PM620T-IS "pressure range" and "type"

Intrinsically safe pressure module supplied with calibration certificate. Please state model number, pressure range and type gauge or absolute e.g., PM620-IS 20 bar (300 psi) gauge (see pages 10 and 12 for ranges)

Model PV621-IS

Intrinsically safe pneumatic pressure generating station vacuum to 20 bar (300 psi)

Model PV622-IS

Intrinsically safe pneumatic pressure generating station vacuum to 100 bar (1,500 psi)

Model PV623-IS

Intrinsically safe hydraulic pressure generating station 0 to 1,000 bar (15,000 psi)

The PV621-IS, 622-IS and 623-IS are supplied with G1/8 female and 1/8 NPT female adapters carry strap, and quick reference guide. In addition, the PV623-IS includes a plastic refill bottle for hydraulic fluid.

Accessories for hazardous area use**

(P/N IO620-CASE-2-IS) System carrying case

A protective carrying case for system components including the DPI620G-IS, MC620-IS, PM620-IS modules, test leads, hose and adapters.

(P/N IO620-CASE-3-IS) Pressure station carrying case for Hazardous area use

A protective carrying case with shoulder strap and large pocket for accessories. Also accommodates the assembled system including the DPI620G-IS and PM620(T)-IS.

Intrinsically safe systems for hazardous area use**

Dirt moisture trap

Prevents contamination of the PV621-IS and PV622-IS pneumatic systems and cross contamination from one device under test to another. The IDT connects directly to the PV621-IS and PV622-IS pressure port and replicates the quick fit connection for compatibility with the hose and adapter kits.

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

(P/N IO620-IDT622) Maximum working pressure 100 bar (1,500 psi)

Accessories

Pressure adapter set (for safe and hazardous area use)

A set of test point adapters to connect the tool less quick fit PV62XG, MC620G and the extension hoses to the device under test.

(P/N IO620-BSP) G1/8 male and G. male, G. female, G3/8 female and G. female

(P/N IO620-NPT) 1/8" male and ." male, ." female, 3/8" female, and ." female

(P/N IO620-MET) 14 mm and 20 mm female

(P/N IO620-COMP-NEW)

Comparator adapter (for safe and hazardous use)

Allows the PV62XG 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. Compatible with the test point adapters supplied with the PV62XG and the adapter sets.

(P/N IO620-BLANK) Blanking plug (for safe and hazardous use)

Allows the PV621G and 622G to be used as pressure generators independently of the DPI620G and PM620 by blanking the PV62XG pressure module port. Not required for the PV623G as the port is self-sealing.

(P/N IO620-104 ADAPT)

DPI 104 gauge adaptor (for safe and hazardous use)

Allows a DPI 104 digital pressure gauge to be connected to the PV62XG pressure module port in place of DPI620G and PM620 to provide a simple low cost pressure calibrator.

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920-654I

BHCS38672A (02/2026)