

IO624-LPA

Low Pressure Accessory

The **IO624-LPA** is an advanced low-pressure accessory module designed to extend the functionality of the PV624 when used in conjunction with the DPI620G modular calibrator. It provides fully automated precision differential low-pressure generation and control, improving efficiency and accuracy during low pressure calibration and testing procedures.

The **IO624-LPA** is a fully portable unit, integrating precision electronics, an internal low-pressure pump, and a rechargeable battery within a compact enclosure. For continuous operation and battery charging, the unit is supplied with an external mains-to-low-voltage power adapter.

Communication between the **IO624-LPA** and the **PV624** is achieved via a USB interface, ensuring reliable data transfer and seamless system integration. The module is housed in a rugged protective boot, equipped with integrated eyelets for securing the supplied carry strap, enhancing portability and ease of use in field applications.

Features

- Fast, precise low pressure generation at the push of a button, fully controlled through the DPI620G
- Works seamlessly with the DPI620G and PV624 via USB for smooth, integrated operation
- Fully portable, self-contained unit with built-in pump, electronics and rechargeable battery
- Rechargeable Li-ion battery supports all-day use, with mains power for charging and continuous operation
- Tough, compact design with protective boot and carry strap for easy field use
- Simple one-button operation with clear status indication for quick setup and use
- Delivers reliable low-pressure performance up to ±0.5 bar (7.25 psi / 50 kPa)
- Full data logging and local documenting capabilities included on DPI620G
- Provides calibration capability for ±2.5 mbar low-pressure sensors and switches as part of a complete system with the PV624

A flexible modular system

The Druck IO624-LPA forms part of a fully integrated pressure generation solution when used with the DPI620G and PV624, delivering true automated low-pressure control. Setpoints are entered directly on the DPI620G, which intelligently controls the system while the PV624 and IO624-LPA work together to generate, regulate and stabilise pressure without manual intervention. This combined solution removes the need for hand pumping, improves repeatability and significantly reduces operator effort, enabling fast, efficient calibration workflows.

The system provides precise and reliable fully automated pressure control up to ±0.5 bar (7.25 psi/ 50 kPa) using the Low Pressure Accessory, making it ideal for demanding low-pressure calibration applications.

These system components are:

- DPI620G - Multi-function or electrical calibrator, HART/ Fieldbus communicator
- PM620 series - Interchangeable pressure modules
- PV624 portable hybrid pressure controller base station
- IO624-LPA Low Pressure Accessory

This user selectable flexible system allows the choice of multiple DPI620G models to be used as a standalone electrical/multi-function calibrator, as a pressure reference with the addition of a pressure modules or as a self-contained pressure calibrator with a PV624 pressure base station, LPA Low pressure accessory and a pressure module.



DPI620G multifunction or electrical calibrator and communicator.

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



PM620(T-B/LP/T)

Interchangeable pressure modules from 2.5 mbar (1 inH_2O) to 20 bar (300 psi).



PV624 Hybrid pressure station.

The DPI620G quickly and securely connects to the PV624 for pressure generation and measurement, using either a direct wired interface or Bluetooth® wireless connectivity for convenient operation in the field.



IO624-LPA Low Pressure Accessory.

When connected to the PV624 provides fully automatic control up to +/-500 mbarg.

General specifications

	IO624-LPA	PV624	DPI620G
Operating temperature	0° to 50°C (32° to 122°F)	0 to +50 deg. C	-10° to 50°C (14° to 122°F)
Storage temperature	-20° to 70°C (-4° to 158°F)	-20 to +70 deg. C	-20° to 70°C (-4° to 158°F)
Ingress protection	IP 54	IP 54	IP 55
Humidity	0 to 90% RH non-condensing.	Up to 90% non-condensing	0 to 90% RH non-condensing.
Shock/vibration	As per MIL-PRF-28800F (Class II equipment), 1 m drop tested	As per MIL-PRF-28800F (Class II equipment), 1 m drop tested	As per MIL-PRF-28800F (Class II equipment), 1 m drop tested
EMC	BS EN 61326-1	BS EN 61326-1	BS EN 61326-1
Electrical safety	BS EN 61010-1	BS EN 61010-1	BS EN 61010-1
Test volume materials	Suitable for air	Suitable for air	N/A
Approvals	CE marked	CE marked	CE Marked
Size (L:W:H)	(L) 175 mm/6.9" x (W) 160 mm/6.3" x (H) 86 mm / 3.4"	(L) 343 mm/13.5" x (W) 192 mm/7.6" x (H) 136 mm/5.4"	186 x 115.5 x 42.5 mm (7.3 x 4.5 x 1.7 in)
Weight	1.50 kg	3.4 kg	0.67 kg – battery included
Power supply	Integral Lithium ion battery Mains adaptor P/N IO610E-PSU: 100 – 240V 50/60Hz AC, Output DC V=15V, 2A	Removeable Lithium ion battery (IO624-Battery) Mains adaptor P/N IO610E-PSU: 100 – 240V 50/60Hz AC, Output DC V=15V, 2A	Integral Lithium-polymer battery (IO620-Battery) Mains adaptor P/N: IO620-PSU : 100 – 240V 50/60Hz AC, Output DC V=5V, 2A
Battery life	From 100% charge Min 8 hrs continuous usage (typical)	From 100% charge Min 8 hrs continuous usage (typical)	From 100% charge Min 8 hrs continuous usage (typical)
Connectivity	USB C to Micro USB (Supplied with unit)	USB Micro B, Bluetooth®	USB Type A, USB Type Mini B, Bluetooth®

PM620, PM620T-B, PM620LP & PM620T pressure modules

Note: When used with the IO624-LPA low-pressure accessory, pressure generation is limited to 500 mbar.

Features

- Fully interchangeable with no need for set-up or calibration
- Simple screw fit - hand tight no tools required
- Low pressure modules have differential reference port fitting for true differential measurements



PM620-T/T-B

PM620LP

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 reference port and is supplied with 1 x barbed high pressure (HP) adapter to fit the PV624 test port.

The PM620T 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 20 bar (1 to 300 psi)
- Total uncertainty from 0.025% FS

PM620T-B

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

PM620LP

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

PM620T

- Ranges from 350 mbar to 20 bar abs (5 to 300 psi abs)
- Total uncertainty from 0.0125% FS

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)
Calibrated temperature range:****	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

**** Calibrated temperature for PM620LP 2.5 mbar (1 inH2O) range is 20 to 30°C (68 to 86°F)

Gauge ranges (referenced to atmosphere) PM620						
		Media	NLH&R 20°C ± 2°C (68°F ± 4°F) 24 hr	Total uncertainty 20°C ± 2°C 24 hr	Total uncertainty 0°C to 50°C (32°F to 122°F) 24 hr	Total uncertainty 0°C to 50°C (32°F 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	±4.5	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

NLH&R non-linearity, hysteresis and repeatability

1. Compatible with non-corrosive gas/fluid

2. 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) PM620										
		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

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)
Calibrated temperature range	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	MIL-PRF-28800F for Class II equipment, 1 m Drop Tested
EMC	BS EN 61326-1
Electrical safety	BS EN 61010-1
Pressure safety	Below PED lower applicability limit
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 PM620LP)					
		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	inH_2O		% 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

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)

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

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

Ordering information

To configure a complete low-pressure calibration system, please order the required components below as separate line items.

IO624-LPA low pressure accessory

Model	Description
IO624-LPA	Low Pressure Accessory



IO624-LPA

DPI620G Calibrator

Model	Description
DPI620GB-B1	Electrical calibrator with Bluetooth®
DPI620GH-B1	Electrical calibrator & HART communicator with Bluetooth®
DPI620GL-B1	Multifunction calibrator with Bluetooth®
DPI620G-B1	Multifunction calibrator & HART communicator with Bluetooth®



DPI620G



DPI620G-B

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-B1	Electrical calibrator with Bluetooth	•	•	•	•	•	•	•					•				
DPI620G-H-B1	Electrical calibrator & HART communicator with Bluetooth	•	•	•	•	•	•	•					•		•		
DPI620G-L-B1	Multifunction calibrator with Bluetooth	•	•	•	•	•	•	•	•	•	•	•	•	•			
DPI620G-B1	Multifunction calibrator & HART communicator with Bluetooth	•	•	•	•	•	•	•	•	•	•	•	•	•	•		

Remove the B1 suffix from the Model PN, if Bluetooth is not wanted.

The DPI620G is supplied with a rechargeable lithium polymer battery P/N IO620-BATTERY, universal mains adapter charger 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. The DPI620G-B/H models have multifunction capability only when measuring/sourcing pressure or with the RTD-INTERFACE-USB.

PV624 hybrid pressure controller

Model	Description
PV624-B0	Hybrid pressure station
PV624-B1	Hybrid pressure station with Bluetooth®

PV624 automatic/hybrid pressure controller base station. Automatic pressure generation +/- 70 mbar* (22 inH20) / hybrid pressure generation from -0.9 to 20 bar (300 psi). The PV624 includes AC power supply, rechargeable battery pack and dirt moisture trap.

*Within 20 ml volume.

PM620 Series Pressure Module

1. Specify model

- PM620
- PM620LP
- PM620T
- PM620T-B

2. Select the required pressure range from the pressure range tables on pages 4-6

Optional accessories

Please order accessories by part number as separate line items:

Part Number	Description	Additional information	
IO624-CASE-1	Transit Case for PV624,DPI620, IO624-LPA	(all items sold separately)	
IO610E-PSU	IO624-LPA Mains PSU 15Vdc 2A 2.5mm Coax	Included with IO624-LPA	
IO624-Battery	Rechargeable PV624 battery pack.	Included with IO624-LPA	
IO624-CHGR-KIT-AU	Battery Pack External Charger - AU Plug		
IO624-CHGR-KIT-CN	Battery Pack External Charger - CZ Plug		
IO624-CHGR-KIT-EU	Battery Pack External Charger - EU Plug		
IO624-CHGR-KIT-UK	Battery Pack External Charger - UK Plug		
IO624-CHGR-KIT-US	Battery Pack External Charger - US Plug		
IO620-CASE-3	Pressure Station Carry Case	A protective carrying case with shoulder strap and large pocket for accessories. Also accommodates an assembled system (DPI620G, PV624 and PM620)	
IO624-LP-PUMP	Low Pressure Squeeze Pump Kit	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.	
IOHOSE-LP2	Pneumatic Twin Tubing, 2m, Accessory	Flexible 6 mm (1/4") twin silicon tubing for use with the PM620LP pressure module “push fit” barbed pressure connectors.	
IO620-LP	Low Pressure 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 equalization of high and low pressure tube during set up and sensor zero, 3 off "T" connectors.	
IOHOSE-NP1	35 bar Hose Assembly 1 metre, Nylon Tube	1 m/3.28 ft pneumatic hose. Maximum pressure 35 bar/500 psi	
IOHOSE-NP2	35 bar Hose Assembly 2 metre, Nylon Tube	2 m/6.56 ft pneumatic hose. Maximum pressure 35 bar/500 psi	
IO620-BSP	Pressure Adaptor Set - BSP	G1/8 male and G. male, G. female, G3/8 female and G. female	
IO620-MET	Pressure Adaptor Set - Metric	1/8” male and .” male, .” female, 3/8” female, and .” female	
IO620-NPT	Pressure Adaptor Set - NPT	14 mm and 20 mm female	

UKAS calibration

We also offer UKAS accredited calibrations, please advise at the time of order placement if required.

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