Portable electric pressure calibrator Model CPH6670

Applications

- Calibration service companies and service industry
- Measurement and control laboratories
- Quality assurance

Special features

- Measurement and electrical pressure generation at the touch of a button with integrated pump, from -0.9 ... +70 bar [-13 ... +1,015 psi]
- Accuracy: 0.02 % FS (incl. calibration certificate)
- Measurement of feedback loop from transmitters (analogue signal 4 ... 20 mA), and DC 24 V voltage supply to power transmitters
- Robust case design



Portable electric pressure calibrator, model CPH6670

Description

General information

The portable electric pressure calibrator model CPH6670 is a compact, portable pressure calibrator, which has been designed for mobile use as well as for stationary workshop and laboratory testing. An integrated electrical pump enables you to generate pressures from -0.9 bar [-13 psi] vacuum up to 70 bar [1,015 psi] and an integrated electrical module also enables you to supply transmitters or sensors with a current of max. 30 mA (voltage (idling) = DC 24 V), in addition to the traditional measurement of analogue signals in current and voltage.

Accuracy

Leveraging on latest Mensor's technological advantage, the reference sensor offers an accuracy of 0.02 % of full span. The temperature compensation of the built-in sensor safeguards the accuracy for applications in the field. Readings can be displayed in one of 24 standard units.

Features

With the portable electric pressure calibrator, not only are accurate pressure measurements possible, but also exact analogue signal measurements, as well as a DC 24 V voltage supply for test items are enabled. Pressure values and electrical measured values are simultaneously shown in the display.
The calibrator is integrated into a robust, as well as dust and splashproof transport case. Thus the mobile pressure calibrator is particularly suited to use in harsh industrial environments.
The external universal power supply unit is designed for an operating voltage of AC 100 ... 240 V.

Certified accuracy

For the CPH6670, the accuracy is certified by a SAC-SINGLAS factory calibration certificate which accompanies the instrument. On request, we can provide a DAkkS calibration certificate for this instrument.

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Data sheets showing similar products:
Portable process calibrator; model CPH7000; see data sheet CT 15.51
Portable multi-function calibrator; model CPH8000; see data sheet CT 18.03

Specifications

Measurement specifications	
Pressure measuring range	-0.9 ... +70 bar [-13 ... +1,015 psi]
Overpressure safety	1.1 times
Accuracy [1)]	0.02 % full span
Temperature compensation	0… 45 °C [32 ... 113 °F]
Measuring input, current	
Measuring range	0 ... 24 mA
Accuracy	0.015 % of full scale Load resistance not exceeding 750 Ω With or without internal DC 24 V loop power (short-circuit resistant)
Measuring input, voltage	
Measuring range	DC 0 ... 30 V
Accuracy	0.05 % of full scale
Switching function	NC or NO, non-voltage input

1) It is defined by the total measurement uncertainty, with the coverage factor (k = 2) and includes the intrinsic performance of the device, the measurement uncertainty of the reference device, long-term stability, influence of ambient conditions, drift and temperature effects over the compensated range with recommended zero point adjustment every 30 days.

Base device			
Display	4.3" TFT color touch screen		
Resolution	Up to 6 digits		
Display of engineering units	Adjustable via menu		
	mbar bar psi kPa HPa MPa kg/cm^2 Torr	mmH_2O (4 °C) mmH_2O (20 °C) inH_2O (4 °C) inH_2O (20 °C) cmH_2O (4 °C) cmH_2O (20 °C) mH_2O (4 °C) mH_2O (20 °C)	ftH_2O (4 °C) ftH_2O (20 °C) mmHg (0 °C) inHg (0 °C) cmHg (0 °C) inSW ftSW mSW
Warm-up time	Approx. 15 minutes		
Pressure supply	-0.9 ... +70 bar [-13 ... +1,015 psi] via integrated electric pump		
Connections			
Pressure connecton	⅛ NPT female thread with G ½ female swivel connector		
Switch test	2 x 4 mm socket for banana plugs		
Current and voltage	4 x 4 mm socket for banana plugs		
Connection method	2-wire 3-wire		
Permissible media	For dry, clean and non-aggressive gases		
Voltage supply and performance data			
Accu	Lithium-ion rechargeable battery		
Voltage	DC 16 V		
Battery runtime on full charge	Up to 8 hours (only measuring without pressure supply)		
Charging time	Approx: 7 hours		
Overvoltage category	II		
Housing			
Material	NK7 high impact polypropylene Nylon 66 304 stainless steel EPDM		
Front panel	Aluminium, laminated silkscreen		

Base device	
Ingress protection	IP54 (non-operating conditions)
Weight	Approx. 5.5 kg [12.13 lb]

Communication	
Interface	USB type A
USB	
USB specification	2.0

Power supply unit	
Operating Voltage	AC 100 ... 240 V, 50 ... 60 Hz
Output Voltage	DC 16.8 V
Rated output current	2,000 mA

Operating conditions	
Place of use	Mobile use For stationary workshop and laboratory testing
Operating altitude	≤ 2,000 m [6,562 ft] above sea level
Operating temperature	
Device	0 ... 45 °C [32 ... 113 °F]
Power supply unit	0 ... 40 °C [32 ... 104 °F]
Storage temperature range	
Device	-20 ... +60 °C [-4 ... +140 °F]
Power supply unit	-40 ... +85 °C [-40 ... +185 °F]
Humidity	
Device	35 ... 85 % relative humidity
Power supply unit	5 ... 95 % relative humidity
Condensation	
Device	Non-condensing
Power supply unit	Non-condensing
Pollution degree	2

Approvals

Logo	Description	Region
CE	**EU declaration of conformity**	European Union
	EMC Directive [1)] EN 61326 emission (group 1, class A) and immunity (portable test and measuring industrial equipment)	
	RoHS directive	
	Low voltage directive EN 61010, safety requirements for electrical equipment for measurement, control, and laboratory use	

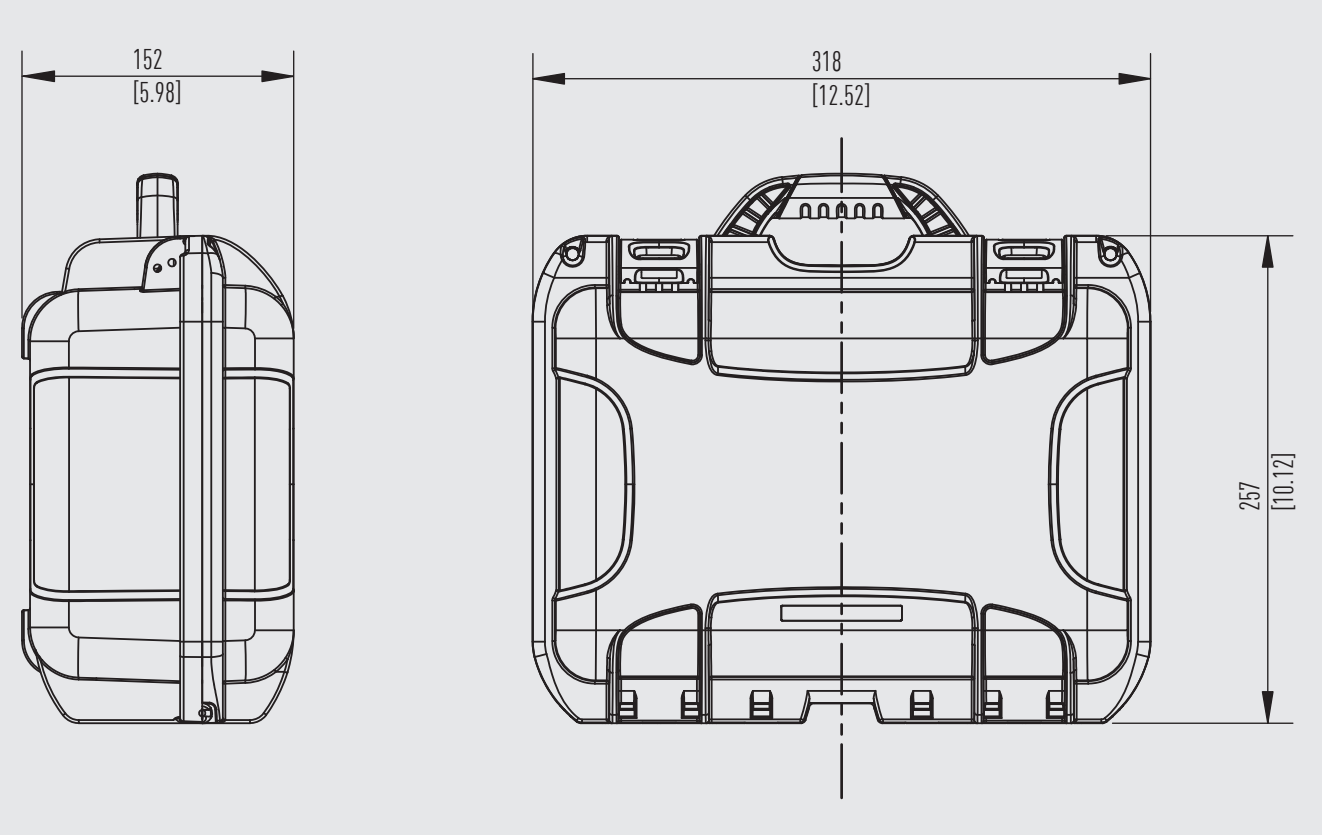
1) This is class A equipment for emitted interference and is intended for use in industrial environments. In other environments, e.g. residential or commercial installations, it can interfere with other equipment under certain conditions. In such circumstances the operator is expected to take the appropriate measures.

Certificates

Description	
Calibration	SAC-SINGLAS calibration certificate (accredited in accordance with ISO/IEC 17025) - Standard on factory Optional: DAkkS calibration certificate (traceable and accredited in accordance with ISO/IEC 17025)
Recommended recalibration period	1 year (dependent on conditions of use)

→ For approvals and certificates, see website

Dimensions in mm [in]



Accessories and spare parts

Description [1]	
	**Test cable set (banana plug to crocodile clip)** Consisting of: 1 x black cable 1 x red cable Length: 1 m [3.28 ft]
	Test cable set (banana plug to crocodile clip) Consisting of: 1 x black cable 1 x red cable Length: 1.5 m [4.92 ft]
	**Adapter set “Standard”** Consisting of: 1 x ½ NPT female thread to G ½ male thread 1 x ¼ NPT female thread to G ½ male thread 1 x G ¼ female thread to G ½ male thread
	**Seal set** Consisting of: 2 x G ¼ USIT seals Plastic box
	**Liquid filter** Consisting of: 1 x 316 stainless steel liquid filter G ½ male thread to G ½ female thread
	**USB interface cable**

1) The figures are an example and may, depending on the state of the art, change in design, material composition and representation.

Scope of delivery

- Portable electric pressure calibrator model CPH6670
- Operating instructions
- 1 x power supply unit
- 1 x carrying case
- 1 test cable set, 1 m [3.28 ft], red and black
- Adapter set consisting of ½ NPT female thread to G ½ male thread, ¼ NPT female thread to G ½ male thread, and G ¼ female thread to G ½ male thread
- Calibration certificate for pressure and electrical measurement

Ordering information
CPH6670 / Certificate / Power cord / Further approvals / Additional ordering information

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The specifications given in this document represent the state of the art at the time of publishing.
We reserve the right to make modifications to the specifications and materials.

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