Description

The 8030B is an advanced pressure controller/calibrator suitable for wide workload calibration of pressure devices such as transmitters, sensors and gauges. The standard unit can be configured for multiple ranges from vacuum to 100 bar (1500 psi), integrating up to three high accuracy reference sensors for maximum workload coverage. Additionally a barometric reference option enables absolute pressure emulation. High range dual sensor versions up to 230 bar (3350 psi) are also available.

Due to its fully configurable design, the 8030B offers the maximum flexibility to end user requirements. Accuracy is 0.01 % FS for each internal sensor fitted, and control stability is 0.005 % FS of the active sensor range. This provides the necessary coverage for applications with outstanding accuracy, control and speed for testing applications.

Applications

With up to three sensors integrated into the module the user is always offered an optimal calibration solution over a very wide pressure range. The 8030B is suitable as a high performance pressure standard in process plants, factories and calibration labs. Routine testing of pressure instrumentation is made quick and simple, whether using the 8030B touch screen display or via EasyCal calibration software.

Functionality

The 8030B features a colour touch-screen interface with user-friendly menus designed for simple operation, enabling users to quickly learn and master the operation of the module. Manually specifying pressure set points is made simple with clearly defined controls on the display. The 8030 auto-ranging capabilities enable each sensor to be actuated as pressure increase or decreases, providing optimal control and accuracy when performing applications.

The 8030B is also supplied with a virtual control panel application that provides a simple user interface for remote operation on the CalBench control centre. Set and output pressure, and use the primary front panel buttons as per the module display.

The 8030B is supplied with a benchtop contamination trap as standard. Options include the 7165 compact compressor pumps that can supply pressure up to 70 bar. Vacuum pumps, manifolds, UUT stands, adaptor kits, fittings and hoses are also available to optimise user setups and applications.

Features

- Multi-range controller configurable from -1 to 100 bar
- Dual range high pressure versions to 230 bar
- Configured based on end user requirement
- Up to 3 precision sensors built-in
- Control stability 0.005 % FS (of active sensor)
- Auto-ranging capabilities
- Accuracy 0.01 % FS (of active sensor)
- Barometric reference option
- Touch screen user interface
- EasyCal software compatible
- Hydraulic version available

EasyCal Calibration Software

The 8030B can be controlled via Time Electronics EasyCal software to automate the calibration process. This provides increased speed of calibration and consistency of results. Produce traceable calibration certificates and test reports for quality standards with additional uncertainty information for ISO 17025 conformance.

Technical Specifications

Pressure ranges	–1 to 100 bar (1500 psi). Configured based on customer range requirement. High pressure models: 0 to 140 bar (2000 psi), 0 to 200 bar (3000 psi), 0 to 230 bar (3350 psi)
Internal sensors	3 in total plus 1 barometric reference. High pressure models: 2 in total plus 1 barometric reference.
Pressure types	Gauge, compound, absolute and differential.
Accuracy (per sensor)	0.01 % FS 0.03 % FS for low range and differential sensors (30 mbar to 300 mbar).
Precision	< 0.005 % FS.
Barometric reference option	Enables user to switch from gauge to absolute pressure. Measuring range: 800 to 1,200 mbar absolute. Accuracy: 0.01 % RDG.
Pressure units	23 selectable and 2 programmable.
Control stability	< 0.005 % FS of the active sensor.
Control time	< 10 s.
Pressure ports	Minimess type with hoses supplied. Quick release available.
Pressure media	Clean, dry, non-corrosive, non-combustible and non-oxidising gases.
Overpressure protection	150 % of the largest pressure range.
Screen	7 " TFT colour touch-screen (4 wire resistive).
Resolution	up to 6 digits (user selectable).
Response time	approx. 10 ms.
Warm-up time	approx. 10 minutes.
Communication interface	RS-232 and ethernet (connected inside the CalBench to control centre module if ordered)
Power supply	100 to 230 V AC, 50/60 Hz.
Supply port pressure	Maximum 105 to 110 % FS.
Test port pressure	Maximum 105 % FS.
Operating temperature	10 to 40 °C (50 to 104 °F).
Storage temperature	0 to 70 °C (32 to 158 °F).
Air humidity	0 to 95 % (relative humidity without moisture condensation).
Compensated temperature range	15 to 35 °C (59 to 95 °F).
Dimensions	W 315 x H 201 mm (Primary console fitting only).
Additional 8030 versions	Hydraulic version up to 1000 bar (see 8030B-H data sheet).
Supplied with	Contamination trap, hoses and user manuals.

Ordering Information

8030B	**Automatic Pressure Calibrator/Controller Module** Can be configured with up to 3 sensors and a barometric reference.
8030BARO	Barometric reference option for 8030B
7165	8030B compressor pump (17, 35, 50 & 70 bar versions available, range based on 8030B ordered)
7149	Electical vacuum pump
7161P	Quad port pneumatic manifold (for use up to 200 bar / 3000 psi)
ECFLA	EasyCal Calibration Software (full user licence, accompanying calibrator discounted price)
Calibration Certificates	Traceable calibration certificate (Factory) and Accredited calibration certificate (ISO 17025)

Additional options include instrument UUT stands, fittings, manifolds, pressure adaptor kits, hoses. Available upon request.

Due to continuous development Time Electronics reserves the right to change specifications without prior notice.

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