



- Ranges from -1 to 100bar
- Control speed: < 3 seconds
- Control stability: 0.003% of range
- Precision: 0.015% FS
- Accuracy: 0.025 % FS
- IntelliScale option for 0.025% IS-50 accuracy
- High speed regulation
- Calibrate transmitters, sensors, gauges
- Touch screen user interface
- EasyCal software compatible

DESCRIPTION

The 7030B is a high speed pressure controller/calibrator module suitable for wide workload calibration of pressure devices such as transmitters, sensors and gauges. Models can be configured for ranges from -1 to 100bar (-1 to 1,500psi), with a barometric reference option available for absolute pressure emulation. Additionally an IntelliScale option can be ordered to provide IS-50 accuracy of 0.025 % of reading in the upper half of the measuring range. This option also provides an enhanced accuracy on the lower 50% of the module range.

The 7030B user interface has an intuitive touch screen to enable fast and simple operation. EasyCal software can also be used with the unit to fully automate the calibration process, providing control and read back during testing applications.

Applications

With excellent control stability of 0.003%, precision of 0.015% and a 12 month uncertainty of 0.025% full scale (IS-50 optional), the 7030B is well suited for industrial calibration of pressure sensors and transmitters, or as a working standard for the control and calibration of all types of pressure gauges.

Functionality

The module features a colour touch-screen interface with user-friendly menus designed for simple operation, enabling users to quickly learn and master the operation and controls.

Depending on the application, the user can choose between three input functions:

1. Numeric keypad for the precise input of the pressure value (set point) which will be controlled.
2. The STEP key menu provides defined steps programmed in pressure increments or percent of full span to move the pressure set point across the range of the instrument under test. Step key values are user defined in the setup menu.
3. The JOG key menu provides a way for the operator to define small pressure steps up or down to reach a cardinal point on a dial gauge. The jog buttons increment the least significant digit by 1, 10 or 100 counts.

EasyCal Software

The 7030B is EasyCal Software compatible, enabling automatic calibration to increase speed and efficiency of work. EasyCal controlled calibration significantly decreases testing times, meaning less instrument downtime and faster turnaround. In addition EasyCal has features to manage and administrate both inventory and quality control, so it gives users the platform for their entire calibration program.

In a CalBench, EasyCal can be used on a control centre or 7051 module, that is conveniently positioned centrally in the primary console with the 7030B located to the side. This provides a solution that is both automated and ergonomic, ideal for workshops and laboratories that require an organized workspace.

7030B Specifications

TECHNICAL SPECIFICATIONS

Pressure ranges	-1 to +100bar (-1 to 1500psi) depending on range ordered (standard ranges listed below)
Pressure types	Absolute, gauge or bi-directional ranges
Precision	< 0.015% FS (0.015% IS with 7030INTSC option)
1 year Uncertainty	< 0.025% FS (0.025% IS-50 with 7030INTSC option)
IntelliScale Option (7030INTSC)	0.025% IS-50 Accuracy: 0.025 % of reading in the upper half of the measuring range, and 0.025% from 50% of max to the minimum range, ie 0.025% of 50% of the ordered range. <i>Note: IS-50 only available on bi-directional models 10bar & above, gauge & absolute models 1bar & above.</i> 0.015 % IS Precision - Defined as the max deviation between two measurements at one point under lab conditions, including linearity, hysteresis & repeatability of the measuring instrument.
Barometric Reference Option (7030BARO)	The barometric reference can be used to switch pressure types, absolute <=> gauge. With gauge pressure sensors, the measuring range of the sensors must begin with -1bar (-1psi) in order to carry out an absolute pressure emulation. Measuring range: 552 to 1,172mbar abs. (8 to 17psi abs) / Accuracy: 0.02 % of rdg
Pressure units	38 selectable and 2 programmable
Control stability	0.003% of range
Slew rate	3 seconds to stable flag (+/-0.025% full scale pressure) for a 10% pressure change typical into 150cc volume at pressures greater than 0.34bar (5psi). Larger volumes can lengthen this time. Controlling to pressures less than atmosphere can lengthen this time.
Control range	Maximum from 0 up to 100% FS
Overshoots	< 1 % FS in high speed mode
Test volume	50 to 1,000ccm (without throttle)
Pressure ports	Quick release (20bar and under), Minimes (above 20bar)
Filter elements	30 micron filter element included in each pressure port
Permissible pressure media	Clean dry non-corrosive gases
Wetted parts	Aluminium, brass, 316 and 316L stainless steel, Buna N, FPM/FKM, glass filled epoxy, RTV, Nylon
Overpressure protection	Safety relief valve
Screen	Colour LCD with touch-screen
Resolution	4 to 6 digits
Display update	4 values/sec
Warm-up time	approx. 15 minutes
Digital Interface	USB (RS-232 optional)
Command sentences	SCPI
Power Supply	100 to 230V AC, 50/60 Hz (as per CalBench supplied)
Supply port Pressure	Maximum 105 to 110% FS
Test port Pressure	Maximum 105% FS
Operating temperature	0 to 50°C
Storage temperature	0 to 70°C
Air humidity	5 to 95% (relative humidity without moisture condensation)
Compensated temperature range	15 to 45°C
Module Width	295mm (primary console fitting only)

ORDERING INFORMATION

7030B.....Automatic Pressure Calibrator Module (range required)

Standard Ranges (bar)	Vac to 2	Vac to 5	Vac to 10	Vac to 20	Vac to 35	Vac to 70	Vac to 100
Option Code	7101	7102	7103	7104	7105	7106	7107
<i>Custom Ranges (Contact Us)</i>	<i>Gauge pressure: 0 to 0.35 up to 0 to 100bar (0 to 5 up to 0 to 1,500psi) Bi-directional: -0.35 to +0.35 up to -1 to +100bar (-5 to +5 up to -15 to 1,500psi) Absolute pressure: 0 to 1 up to 0 to 101bar abs. (0 to 15. up to 0 to 1,515psi abs.)</i>						

7030BARO	Barometric Reference option for 7030 / 7030B
7030INTSC	IntelliScale option for 7030 / 7030B (available on bi-directional models 10bar & above, gauge & absolute models 1bar & above)
ECFLA	EasyCal Calibration Software (full user licence, accompanying calibrator discounted price)
C228	Factory (NPL Traceable) Calibration Certificate
C229	UKAS Calibration Certificate (ISO 17025)

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

Time Electronics Ltd, Unit 11 Sovereign Way, Botany Industrial Estate, Tonbridge, Kent, TN9 1RH. United Kingdom.

T: +44 (0) 1732 355993 F: +44 (0) 1732 770312 E: mail@timeelectronics.co.uk

www.timeelectronics.com

v1d 01/07/15