



## Description

Time Electronics MTEG digital pressure gauge modules for calibration benches, offering a high accuracy solution to pressure calibration with excellent resolution, stability and features to aid the testing process.

Gauges are available with accuracy up to 0.02 % of full scale, with simple controls and various features for improved usability. If a control centre module is fitted to the CalBench, each MTEG connects to it internally and the user can utilise the manual control application or EasyCal software.

Additionally, regulated versions (RMTEG) are available for pneumatic modules up to 300 bar. These modules enable a convenient method for pressure calibration with only a single hose connection to the device under test. All regulated modules have a dual function front panel pressure port for precision output or measurement.

## Specifications

<b>Ranges</b> .....	Vacuum to 700 bar. See page 2 for available models and ranges.
<b>Pressure types</b> .....	Gauge / Absolute / Compound.
<b>Regulated versions (RMTEG)</b> .....	Available up to 300 bar pneumatic, dual function with regulated and measure modes. 2 needle valves enable isolation for measure only mode. Measure modes are suitable for use with benchtop pumps (optional extras).
<b>Accuracy</b> .....	0.02 or 0.05 % FS. See page 2 for further details.
<b>Pressure units</b> .....	Total of 11 pressure units possible: Pa, kPa MPa, Kg/cm <sup>2</sup> , mmH <sub>2</sub> O, inH <sub>2</sub> O, mmHg, inHg, PSI, mbar, bar. Some units are not enabled depending on range.
<b>Over pressure warning</b> .....	120 %.
<b>Measure speed</b> .....	Display rate: 3 readings per second (default setting). Adjustable from 10 readings per second to 1 reading every ten seconds.
<b>Display</b> .....	LCD with backlight, pressure values displayed up to 5 digits with 15 mm character height and analogue dial graph 25 mm wide.
<b>Resolution</b> .....	5 digits.
<b>Analogue dial graphic</b> .....	Includes pressure swing, % indication, low/high alarm.
<b>Peak detection</b> .....	Maximum and minimum peak values can be displayed.
<b>Ambient temperature measurement</b> .....	From -10 °C to 50 °C, resolution 0.1 °C.
<b>Pressure port</b> .....	Minimess test point with check valve. Hoses supplied, and configured to work with ordered manifolds or pumps.
<b>Environmental</b> .....	Operating temperature: -10 °C to 50 °C (14 °F to 122 °F). Compensation temperature: -10 °C to 50 °C (14 °F to 122 °F). Storage temperature: -20 °C to 70 °C (-4 °F to 158 °F). Relative humidity: < 95 %.
<b>Module width</b> .....	MTEG (indicator): 150mm. RMTEG (with regulator): 250mm

## Features

- Pressure ranges up to 700 bar (10,000 psi)
- Gauge, absolute and compound modules
- Regulated versions available up to 300bar
- 0.02 % or 0.05 % FS accuracy
- Easy-to-read display with 5 digit resolution
- Unique self-protection capability technology
- 3 times per second measure speed
- Fully temperature compensated accuracy
- Internal communication to control centre module
- EasyCal software compatible

## EasyCal Calibration Software

MTEG modules can be used with 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.





## Pressure Ranges

### Gauge Pressure Modules

Media: Gas only from vac to 700 mbar. Gas or Liquid from 1 bar to 700 bar.  
Note: 0.02 % FS for gas media only on 1 bar and 2 bar modules  
Burst Pressure: Vac to 350 bar = 3x. 600 to 700 bar = 2x.

Module	Range (bar)	Range (psi)	Accuracy (% FS)	
MTEG-GVAC	-1 to 0 bar*	-15 to 0 psi	0.02	0.05
MTEG-G160mb	0 to 160 mbar	0 to 2 psi	-	0.05
MTEG-G350mb	0 to 350 mbar	0 to 5 psi	0.02	0.05
MTEG-G700mb	0 to 700 mbar	0 to 10 psi	0.02	0.05
MTEG-G1b	0 to 1 bar*	0 to 15 psi	0.02	0.05
MTEG-G2b	0 to 2 bar*	0 to 30 psi	0.02	0.05
MTEG-G3.5b	0 to 3.5 bar*	0 to 50 psi	0.02	0.05
MTEG-G5b	0 to 5 bar*	0 to 70 psi	0.02	0.05
MTEG-G7b	0 to 7 bar*	0 to 100 psi	0.02	0.05
MTEG-G10b	0 to 10 bar*	0 to 150 psi	0.02	0.05
MTEG-G20b	0 to 20 bar*	0 to 300 psi	0.02	0.05
MTEG-G35b	0 to 35 bar*	0 to 500 psi	0.02	0.05
MTEG-G40b	0 to 40 bar*	0 to 600 psi	0.02	0.05
MTEG-G60b	0 to 60 bar*	0 to 870 psi	0.02	0.05
MTEG-G70b	0 to 70 bar*	0 to 1000 psi	0.02	0.05
MTEG-G100b	0 to 100 bar*	0 to 1500 psi	0.02	0.05
MTEG-G140b	0 to 140 bar*	0 to 2000 psi	0.02	0.05
MTEG-G160b	0 to 160 bar*	0 to 2320 psi	0.02	0.05
MTEG-G200b	0 to 200 bar*	0 to 3000 psi	0.02	0.05
MTEG-G250b	0 to 250 bar*	0 to 3625 psi	0.02	0.05
MTEG-G300b	0 to 300 bar*	0 to 4350 psi	0.02	0.05
MTEG-G350b	0 to 350 bar*	0 to 5000 psi	0.02	0.05
MTEG-G600b	0 to 600 bar	0 to 8700 psi	0.02	0.05
MTEG-G700b	0 to 700 bar	0 to 10,000 psi	0.02	0.05

\* Regulated version available (RMTEG)

### Barometric Pressure Module

Module	Range (mbar)	Range (kPa)	Accuracy	
MTEG-BP	600 to 1100 kPa	60 to 110	0.4 mbar	40 Pa

## Ordering Information

How to Order: **Module Code/Accuracy** (eg. MTEG-G1b/0.2)  
Regulated Modules: RMTEG-####/Accuracy

### Options

- C202:** Traceable calibration certificate (Factory) for MTEG module
- C203:** Accredited calibration certificate (ISO 17025) for MTEG module

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

### Absolute Pressure Modules

Media = Gas only from 350 mbar to 3.5 bar. Gas or Liquid from 7 bar to 350 bar.  
Burst Pressure: 3x on all ranges.

Module	Range (bar)	Range (psi)	Accuracy (% FS)	
MTEG-A350mb	0 to 350 mbar	0 to 5 psi	0.1	
MTEG-A700mb	0 to 700 mbar	0 to 10 psi	0.1	
MTEG-A1b	0 to 1 bar*	0 to 15 psi	0.1	
MTEG-A2b	0 to 2 bar*	0 to 30 psi	0.1	
MTEG-A3.5b	0 to 3.5 bar*	0 to 50 psi	0.1	
MTEG-A7b	0 to 7 bar*	0 to 100 psi	0.05	0.1
MTEG-A10b	0 to 10 bar*	0 to 150 psi	0.05	0.1
MTEG-A20b	0 to 20 bar*	0 to 300 psi	0.05	0.1
MTEG-A35b	0 to 35 bar*	0 to 500 psi	0.05	0.1
MTEG-A70b	0 to 70 bar*	0 to 1000 psi	0.05	0.1
MTEG-A100b	0 to 100 bar*	0 to 1500 psi	0.05	0.1
MTEG-A200b	0 to 200 bar*	0 to 3000 psi	0.05	0.1
MTEG-A350b	0 to 350 bar	0 to 5000 psi	0.05	0.1

\* Regulated version available (RMTEG)

### Compound Pressure Modules

Media = Gas. Burst Pressure: 3x

Module	Range (bar)	Range (psi)	Accuracy (% FS)	
MTEG-C160mb	0 to ± 160 mbar	0 to ± 2 psi	0.02	0.05
MTEG-C350mb	0 to ± 350 mbar	0 to ± 5 psi	0.02	0.05
MTEG-C400mb	0 to ± 400 mbar	0 to ± 6 psi	0.02	0.05
MTEG-C600mb	0 to ± 600 mbar	0 to ± 9 psi	0.02	0.05
MTEG-C700mb	0 to ± 700 mbar	0 to ± 10 psi	0.02	0.05
MTEG-C1b	0 to ± 1 bar*	0 to ± 15 psi	0.02	0.05
MTEG-CV2b	-1 to 2 bar*	-15 to 30 psi	0.02	0.05
MTEG-CV4b	-1 to 4 bar*	-15 to 60 psi	0.02	0.05
MTEG-CV5b	-1 to 5 bar*	-15 to 70 psi	0.02	0.05
MTEG-CV6b	-1 to 6 bar*	-15 to 87 psi	0.02	0.05
MTEG-CV7b	-1 to 7 bar*	-15 to 100 psi	0.02	0.05
MTEG-CV10b	-1 to 10 bar*	-15 to 150 psi	0.02	0.05
MTEG-CV20b	-1 to 20 bar*	-15 to 300 psi	0.02	0.05
MTEG-CV25b	-1 to 25 bar	-15 to 360 psi	0.02	0.05
MTEG-CV40b	-1 to 40 bar	-15 to 600 psi	0.02	0.05

\* Regulated version available (RMTEG)

