



Time Electronics
Calibration, Test and Measurement

User Manual

7078 Auto-Ranging Digital Pressure Gauge

Version 2.0
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Time Electronics Ltd

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Nothing from this manual may be multiplied, or made public in any form or manner, either electronically or hard copy, without prior written consent from Time Electronics Ltd.

This also applies to any schematics, drawings and diagrams contained herein.

This manual provides operating and safety instructions for the Time Electronics product.

To ensure correct operation and safety, please follow the instructions in this manual.

Time Electronics reserves the right to change the contents, specifications and other information contained in this manual without notice.

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1 Introduction



The 7078 is a high-performance digital pressure gauge that has the ability to auto-range and maintain a 0.1 % of reading accuracy from vacuum to 200 bar. It eliminates the need for multiple gauges to span many different ranges, solving the problem of over ranging errors.

Both users and companies benefit by replacing several gauges with the 7078, with less maintenance and calibration required, saving both downtime and excessive costs.

In addition to precision the 7078 is designed for arduous use with shock proof componentry and an integrated rubber casing for increased durability. This makes the gauge ideal for laboratory or field calibration work.

The 7078 read in either gauge or absolute pressure, with 13 pressure units available for selection. Features include full noise immunity, timer for backlight, display of calibration due date, serial number and battery voltage.

To complement the gauge Time Electronics offer a range of pressure pumps. These include the 7090 and 7095 hand pumps, and the 7194A benchtop pneumatic pump (200 bar). The 7078 can also be used with pressure calibrators, dead weight testers.

2 Specifications

Range:

Vacuum to 200 bar (3000 psi) auto-ranging.

Accuracy:

± 0.10 % of reading, ± 0.01 % of FS, ± one least significant digit.

Pressure Units:

Bar, mBar, psi, kPa, mmHg, inHg, inH2O, mmH2O, kg/cm², BarAbs, psiAbs, mBarAbs, mmHgAbs.

Sensors:

Multiple piezo resistive sensors

Pressure Reading Capability:

Gauge and absolute pressure.

Protection:

Rugged, shock-proof design (protective rubber boot as standard).

Setback thread protects the port from damage in the event the unit is dropped.

Display:

Easy to read backlit colour display with full multi-line alphanumerics

Process Connection:

¼" NPT Male

Materials:

Stainless steel valve, rubber housing, electronic board, 3 x AA batteries

Power:

Powered by 3 AA batteries with 500 hours of rated battery life

Dimensions:

H165 x W115 x D55 mm

Weight:

0.88 kg

3 Operation

3.1 Operating Guidelines

- The 7078 is shipped with three (3) AA batteries already installed, ready to use.
- The 7078 has been compensated for temperatures ranging between 0°C and 40°C (0°F and 104°F).
- As the 7078 climbs in pressure, the display will decrease in resolution as it switches internal sensors.

3.2 Controls



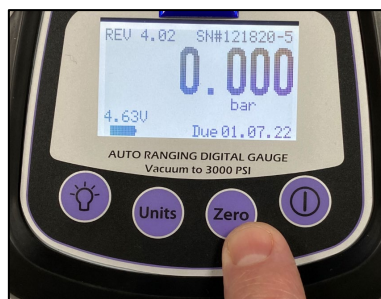
3.3 Operating Instructions

Note: Use PTFE thread tape seal on the 1/4" NPT threads prior to mounting the gauge onto a pressure source if required.

- Press the power button. The display will illuminate and show the following:
 1. The pressure reading (shown centrally in large digits).
 2. Pressure unit (underneath the pressure reading).
 3. Battery power level.
 4. Calibration due date.
 5. Gauge serial number.
 6. Software revision number.



- To Zero the gauge, press and hold the “Zero” button for one second.
Note: It is normal for the thousandths digit to rise and fall slightly after this is done.



- Using a pressure source, bring the pressure up to the desired level and wait a moment for it to stabilize before taking readings.
- If different pressure units are desired, press the “Units” button to cycle through the choices.



4 Maintenance and Repair

4.1 Maintenance

No routine maintenance is required. A periodic check of system calibration is recommended.

To change the batteries remove the back cover. Four screws allow access to the battery, a USB port for communications, software updates, and calibration.



4.2 Repair

NOTE: No repair work should be undertaken by the customer while the instrument is under warranty as such work may render the warranty invalid.

Certain precision components used in this instrument are not readily available and make repairs by the customer difficult if these components are damaged.

Overload conditions cause unit failure.

5 Warranty and Servicing

Warranty

The Time Electronics products carry a one-year manufacturer's warranty as standard.

Time Electronics products are designed and manufactured to the highest standards and specifications to assure the quality and performance required by all sectors of industry. Time Electronics products are fully guaranteed against faulty materials and workmanship.

Should this product be found to be defective, please contact us using the below details. Inform us of the product type, serial number, and details of any fault and/or the service required. Please retain the supplier invoice as proof of purchase.

This warranty does not apply to defects resulting from action of the user such as misuse, operation outside of specification, improper maintenance or repair, or unauthorized modification. Time Electronics' total liability is limited to repair or replacement of the product. Note that if Time Electronics determine that the fault on a returned product has been caused by the user, we will contact the customer before proceeding with any repair.

Calibration and Repair Services

Time Electronics offers repair and calibration services for all the products we make and sell. Routine maintenance by the manufacturer ensures optimal performance and condition of the product. Periodic traceable or accredited calibration is available.

Contacting Time Electronics

Online:

Please visit **www.timeelectronics.com** and select Support Request from the Contact links. From this page you will be able to send information to the Time Electronics service team who will help and support you.

By phone:

+44 (0) 1732 355993

By email:

mail@timeelectronics.co.uk

Returning Instruments

Prior to returning your product please contact Time Electronics. We will issue a return merchandise authorization (RMA) number that is to accompany the goods returning. Further instructions will also be issued prior to shipment. When returning instruments, please ensure that they have been adequately packed, preferably in the original packing supplied. **Time Electronics Ltd will not accept responsibility for units returned damaged.** Please ensure that all units have details of the service required and all relevant paperwork.

Send the instrument, shipping charges paid to:

Time Electronics Ltd

Unit 5, TON Business Park, 2-8 Morley Road,
Tonbridge, Kent, TN9 1RA.
United Kingdom.

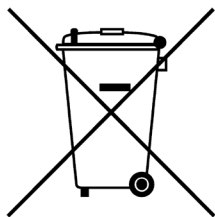
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Disposal of your old equipment



1. When this crossed-out wheeled bin symbol is attached to a product it means the product is covered by the European Directive 2002/96/EC.
2. All electrical and electronic products should be disposed of separately from the municipal waste stream via designated collection facilities appointed by the government or the local authorities.
3. The correct disposal of your old appliance will help prevent potential negative consequences for the environment and human health.
4. For more detailed information about disposal of your old appliance, please contact your city office, waste disposal service or return to Time Electronics.