



Display Messages

'OL' Physical overload	More than 120% of full-scale load is being applied to the transducer
'OL' Maximum reading overload (not physical)	The peak force reading was an overload
't-Err' Tare error	The zero function was performed while the transducer was in an overloaded state
'No Ao' No Auto off	Automatic power-off is disabled
'C-dEF' Calibration default	Invalid calibration data; please notify Mecmesin Corporation or an authorized representative for re-calibration

For a copy of the EC Declaration of Conformity please refer to the literature section of our website:

www.mecmesin.com

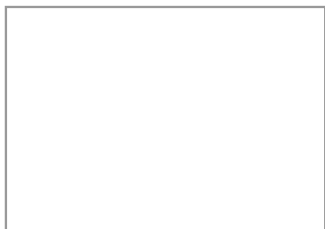
Declaration of Conformity supplied as standard, Calibration certificate available on request

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DISTRIBUTOR STAMP

431-051-V10

Mecmesin

Compact Force Gage



Operating Manual

Before Use

Thank you for choosing this Mecmesin Corporation instrument. With correct use it will give many years of accurate and reliable service.

Upon receiving the unit please check that no physical damage has occurred to the packaging material or the gage itself. If any damage is evident please notify Mecmesin Corporation immediately.

Fitting and Replacing Batteries

When the low battery symbol appears on the display, four new 1.5V AA batteries should be fitted. Rechargeable 1.2V batteries should not be fitted to the gage. To release the battery cover at the rear of the gage press the battery cover as indicated by the arrow and slide the cover upwards. Ensure all batteries are inserted the correct way round. Incorrect insertion of batteries can cause damage to the gage. To replace the battery cover slide it in from the top edge of the gage until it clicks into place.

If the gage is not going to be used for 3 months or more the batteries should be removed and stored separately. (Settings and calibration data will **not** be lost if batteries are removed).

Operating Instructions

Powering Up

The gage can be powered on by pressing the large 'ON/ZERO' key. After a short self-test during which the software version number and revision date are shown, the gage then displays the transducer's range before entering the main display mode.

After the self-test, and providing no load has been applied to the gage, the display will show zero, this is because the gage re-zeros itself as part of the self-test routine.



Following the self-test the display shows the actual force that is being applied to the gage's transducer. If a force is carefully applied via the sensing probe, the reading on the display will be seen to register this applied force.

Force Conventions & Symbols

Tensile forces on the compact gage are displayed as positive numbers with the symbol \blacklozenge . Compressive forces are displayed with negative numbers (a minus sign appears to the left of the digits), with the symbol \blacktimes .

Zeroing

During the operation of the gage it is often necessary to zero the display, for instance if you have added a fixture that you do not want to become part of the measured reading. This is achieved by pressing the 'ON/ZERO' key. When the gage is in the process of zeroing itself a row of segments on the top and bottom of the display will be seen to alternately blink once, when completed the display will read zero. This function will not be performed if the gage is currently in overloaded state.

Measurement Units

The gage is capable of displaying many different force units of measurement: newtons (N), kilonewtons (kN), gram-force (gf), kilogram-force (kgf), ounce-force (ozf), and pound-force (lbf).

To change the display units press the 'UNITS' key, the newly-selected units will be shown at the bottom of the display. Each successive press of this key will select the next available units until the gage returns to the original.

Max Readings

The gage detects and stores an independent maximum (peak) force in both tension and compression. By pressing the 'MAX' key, the highest tensile load detected will be displayed along with the tension symbol as described above.

Overload & Transducers

If the highest peak force was an overload the display will show 'OL'. If the transducer is currently still overloaded the display will show '-OL-' (with dashes), refer to display messages on the back of this leaflet.

Pressing the 'MAX' key a second time will now show the highest compressive load detected along with the compression symbol as described above.

Before carrying out a new test the gage must first be re-zeroed so that it is ready to detect the next maximum (peak force). Pressing the 'ON/ZERO' key will clear both tension and compression maximum readings then zero the display.

The transducer in the gage is a delicate mechanical device. Care should be taken when using the gage so as not to overload the transducer as this will cause IRREPARABLE DAMAGE.

In all display modes, forces greater than 120% of full scale will show an '-OL-' symbol and the corresponding compression or tension symbols on the display. If the display shows 'OL' (without dashes) in either of the two max modes, the transducer is not currently in overloaded state but has been overloaded at least once since the last ZERO operation. The gage keeps a record of all overloads applied. This record can only be cleared by trained Mecmesin Corporation staff or representatives.

'Auto Off' Function

When powered, the gage constantly keeps a record of time elapsed since the last key press in order to decide whether or not to power down automatically. If this function is not disabled and the low battery symbol is not showing, the gage will power down after approximately five minutes.

If the gage is being used for a long test the user may wish to disable the auto-off function. The auto-off function can be disabled when powering up the gage by holding down the 'ON/ZERO' key until the display shows 'No Ao'.

Low Battery

If the 'LOW BATTERY' symbol is showing, the gage will power-off unconditionally at intervals of one minute regardless of above setting and also regardless of any key presses. The gage may be re-powered but will power-off every one minute as long as the 'LOW BATTERY' symbol remains shown.

This feature has been designed into the gage to ensure the integrity of displayed readings. When the low battery symbol is showing, displayed readings may not be reliable. When this happens replace the old batteries with new ones.

Optional Extras

AC Power Adaptor

A 6V AC-DC power adaptor (fitted with a 1.3mm DC power plug with +6V DC on the centre conductor), can be plugged into the right-hand side of the gage. Connecting an incorrect power adaptor can cause damage to the gage.

Stand Mounting Plate

Enables the Compact Gage to be mounted to a Mecmesin Corporation test stand.

Accessories

A wide range of fixtures are available. *Supplied with small test hook, compression plate and extension rod.*

NOTE: Always use the extension rod to attach both the test hook, compression plate or other fixtures. Only tighten fixtures finger tight - DO NOT OVERTIGHTEN