



LC500G Load Cell

Instruction Manual



EN

MI 850A296 1 E

LC500G
LC500G-S1

About these operating instructions

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These load cell devices must not be installed or used in a machine or system that does not comply with the machinery directive 2006/42/EC.

These load cell devices were designed and manufactured to be installed as Partly Completed Machinery into a machine or partly completed machine.

The instructions must be read and used by all persons who have the responsibility of installing and maintaining these load cell devices.

These instructions must be retained and incorporated in the technical documentation for the machine or partly completed machinery into which the load cell device was installed.

CE marking

Only the 2006/42/EC Machinery directive applies to these devices and they are not marked with the CE sign.

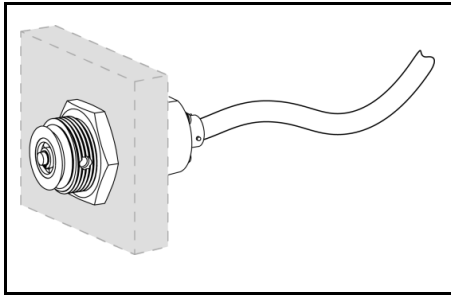
Electromagnetic Compatibility (EMC)

The load cell device is inherently benign in terms of electromagnetic compatibility and the EMC directive has not been applied. The electromagnetic compatibility of the load cell device can only be assessed in connection with the entire electrical installation including the control. The machine builder who installs this partly completed machinery into a machine is responsible for compliance with the EMC directive.

Language

These are the original instructions, written in English.

Product overview



The LC-500G load cell is used on machines or in systems to monitor the tension in a single strand via a pulley mounted to a shaft that is inserted into the load cell. The load cell is designed to be mounted through the vertical face of a machine side frame or vertical bracket. The load cell is compatible with all MAGPOWR Tension Readouts and Controls.

Available models

Model No. Force rating for both models is 500 g [1.1 lb]

LC500G Supplied with a MAGPOWR pulley and shaft assembly inserted into the load cell.

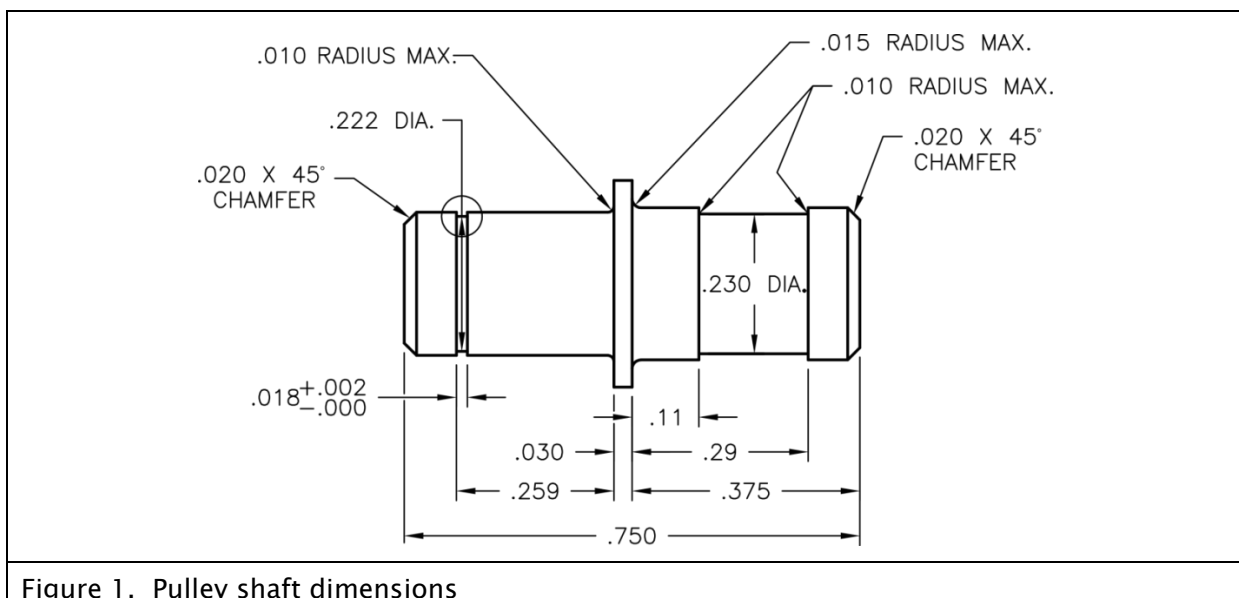
LC500GS1 Use with customer-supplied pulley and shaft.

Supplying your own pulley and/or shaft

Item	Part No.
Shaft	PN 29L703A2301
Pulley	PN 29L511A13
Snap ring	PN 29L700A2851
Bearing	PN 29L30A391

1. Use the dimensions for the shaft shown in Figure 1.
2. The pulley must be kept close to the load cell body.
3. The part of the shaft that is inserted into the load cell also acts as an overload stop for the load cell.

Shaft assembly parts can also be purchased from Maxcess.



Safety



The content of these instructions must be read and followed. All national, state, and local requirements for installation, accident prevention and environmental protection must be followed.

To ensure safe and problem free installation of the load cell device, the load cell must be properly transported and stored, professionally installed and placed in operation. Proper operation and maintenance will ensure a long service life of the device. Only persons who are acquainted with the installation, commissioning, operation and maintenance of the system and who possess the necessary qualifications for their activities may work on the load cell. Note: The safety information may not be comprehensive.

The safety instructions and symbols described in this section are used to avoid possible dangers for users and to prevent material damage



SIGNAL WORD

Source of danger and its results.
Avoiding dangers.

The signal word **WARNING** refers to the danger of moderate to severe bodily injuries or death.

The signal word **CAUTION** refers to the danger of slight to moderate bodily injuries or material damage.

Symbols used



WARNING/CAUTION – General danger or important note
Reference to general hazards that may result in bodily injuries or damage to device or material.



WARNING/CAUTION – Danger due to crushing
Reference to danger of injury caused by crushing.

Basic safety information

Proper use

- The load cell devices are intended to be used on machines or systems to monitor the tension in a strand via a single strand pulley attached to the load cell.
- Indoor operation.

Improper use

- Operation outside the technical specifications
- Operation in an Ex-area or intrinsically safe area without a proper barrier.
- Any other use than the proper use shall be deemed inappropriate.

Installation and commissioning

- Any load cell device which is damaged must not be installed or put into operation.
- Only perform installation, maintenance or repair tasks on the load cell device when the machine has been stopped and is secured from being turned on.
- Only perform installation, maintenance or repair tasks on the load cell device when there is no electrical power in the system.
- The load cell device must be securely mounted before being placed in operation.
- No modifications may be made to the load cell device.
- Do not place electrical cables under mechanical strain.



Maintenance and repair

WARNING – Danger of injury from crushing.

Maintenance and repair tasks on the load cell device must be performed only when the machine has been stopped and has been secured from being turned on again.

Decommissioning

The load cell must be disposed of in accordance with all the applicable national, state and local regulations.

Installation



CAUTION – Possible damage to load cell.
Do not hammer on the load cell.



CAUTION – Possible damage to load cell.
Do not disassemble the load cell. There are no serviceable parts inside.



WARNING – Danger of injury from crushing.
Maintenance and repair tasks on the load cell device must be performed only when the machine has been stopped and has been secured from being turned on again.

1. Select a clean flat surface where the wrap angle of the web does not change.
2. The force direction arrow on the load cell must bisect the wrap angle of the strand and point in the **same or opposite direction as the resultant force** as shown in Figure 2.
3. Secure supplied jam nuts tightly to either side of mounting surface to ensure that the load cell body cannot rotate. Tighten to 12 in-lb (1.36 Nm) of torque – maximum.
4. If using customer supplied pulley and shaft, insert shaft assembly into load cell and tighten the set screw on the side of load cell to lock shaft in place.
5. Connect the load cell, using shielded cable, to the MAGPOWR readout or control. (Schematic on page 4-1.)

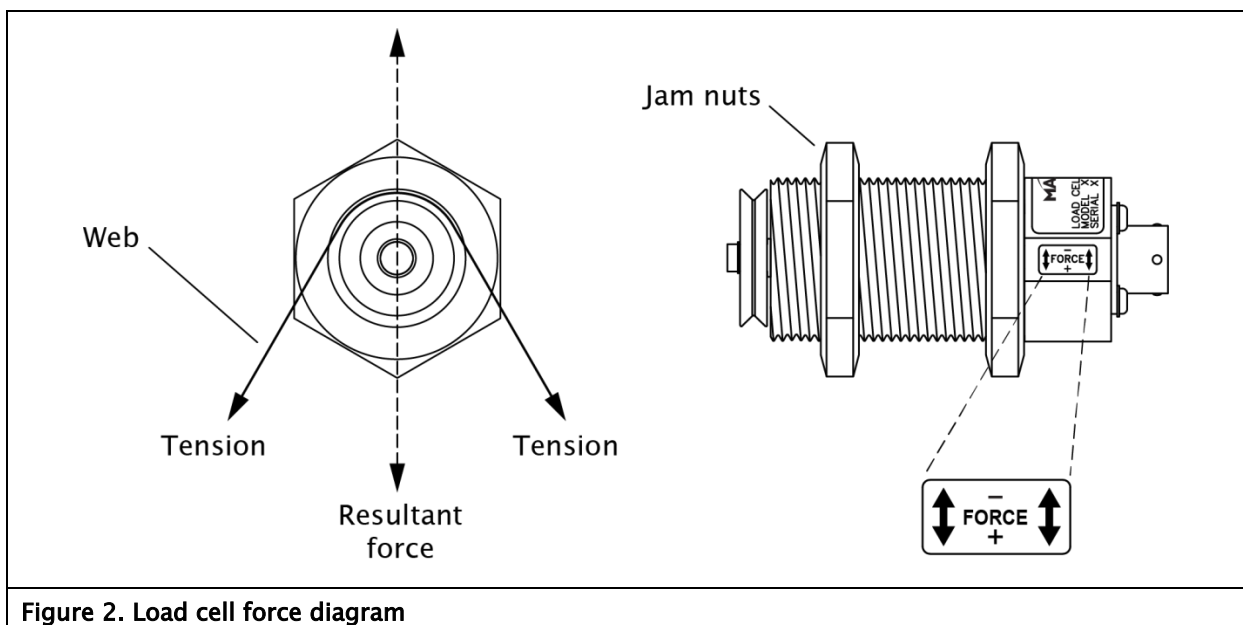
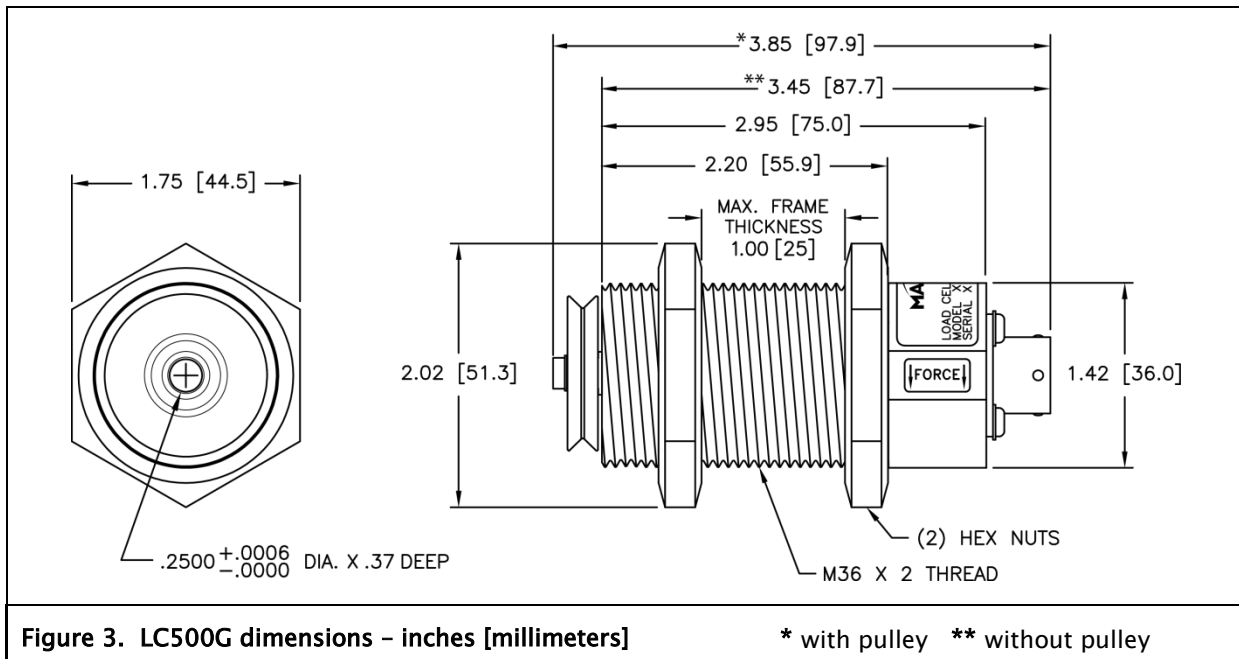


Figure 2. Load cell force diagram

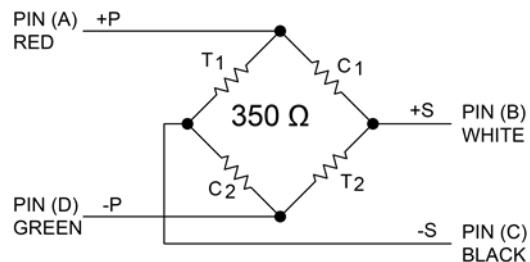
Maintenance

There is no maintenance required for the LC500G.

Specifications



Gage Resistance	350 ohm
Gage Type	Metal foil, full bridge
Excitation Voltage	10 VDC nominal
Output Signal	21 mVDC nominal at full load rating
Operating Temperature	-30 to 95 °C [-22 to 203 °F]
Temperature effect on zero	0.02% of rating per °C [0.036% of rating per °F]
Combined non-linearity and hysteresis	0.5% of full scale maximum
Repeatability	0.2% of full scale maximum
Deflection at full load	0.508 mm [0.020 in.]
Climate Class	3K3 (EN60721)
Cable Connector	MAGPOWR mating cable Series SCE, or mating connector Part #12B193-6



Service requests and replacement parts

To request service or to get replacement parts, contact one of the following addresses:

Fife Corporation
222 West Memorial Rd.
Oklahoma City, OK, 73114,
USA
Phone: 1.405.755.1600
Fax: 1.405.755.8425
Web: www.maxcessintl.com

Fife-Tidland GmbH
Max-Planck-Strasse 8 OR Siemensstrasse 13-15
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