LOADGARD®

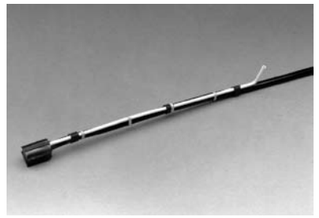
Automatic Tonnage Monitors

For press machine monitoring, Helm HT-400 sensors are mounted directly to the frame for accurate measurement of compression or tension forces. An industry standard since 1968, all HT-400 sensors are manufactured to within 1% and may be interchanged without recalibration of the machine.

Helm load cells and monitoring systems are used in many secondary forming operations including assembly, staking and riveting. Contact your Helm representative for additional information or visit our website at: www.helminstrument.com.

PU sensor kit from last printing.

All Helm sensor kits include required quantity of HT-400-35 sensors (35 foot cable length standard), T-21 protection boxes, WS cover plates and weld or drill mounting hardware.



Model SG-573
In-Die/Station Monitoring

Model T-2640
Die Cast/Injection Molding

SPECIFICATIONS

Number of channels.....Two or Four

Power Requirements .....24 volts DC or 110 volt AC

Sensor Inputs .....Two or Four Helm Strain Gage sensors

Operating Range .....Single stroke to 1000 strokes per minute

Instrument Gain .....Selectable from 50 to 7000

Output Relays.....Two independently wired relays for capacity and selected alarm functions. Each relay rated at 24 VDC, 1/2 Amp. 110 VAC system supplied with two 24-volt dry contact relays.

A to D.....12 bit

A to D Sample Rate.....100 microseconds

Display Resolution.....Up to .1% full scale

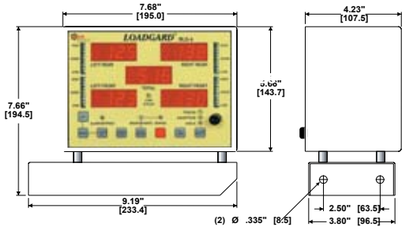
Overall Accuracy.....1% full scale

ORDERING INFORMATION

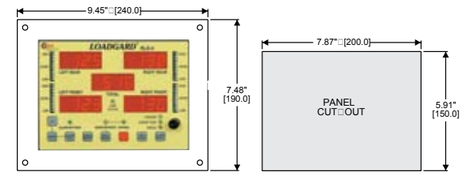
Power/Mounting Options	Two Channel	Four Channel
110 volt AC with bracket	RLG-2AC	RLG-4AC
110 volt AC with flange	RLG-2AC-FL	RLG-4AC-FL
24 volt DC with bracket	RLG-2DC	RLG-4DC
24 volt DC with flange	RLG-2DC-FL	RLG-4DC-FL

Sensor Installation Kits

Drill/Tap Installation	L2--DB	L4-DB
Weld/Pad Installation	L2-WB	L4-WB



Bracket Mount



Flange Mount

Helm Instrument Company, Inc.
361 West Dussel Drive
Maumee, OH 43537
419/893-4356 Phone
419/893-1371 Fax

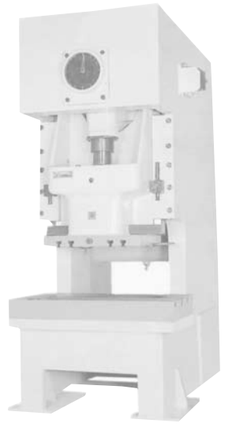
Visit our Web Site at: www.helminstrument.com
or E-Mail us at: sales@helminstrument.com

LOADGARD®

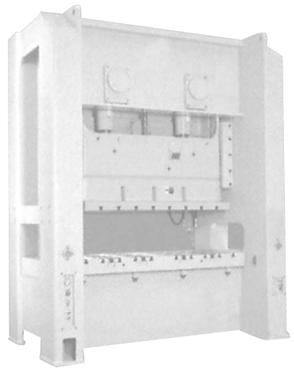
Models RLG-2 / RLG-4

RLG-2 Two Channel

RLG-4 Four Channel



Automatic Tonnage Monitors



HELM

Force Measurement Systems · Process Control · Factory Automation

LOADGARD®

RLG...The New Standard in Tonnage Monitors

Applications

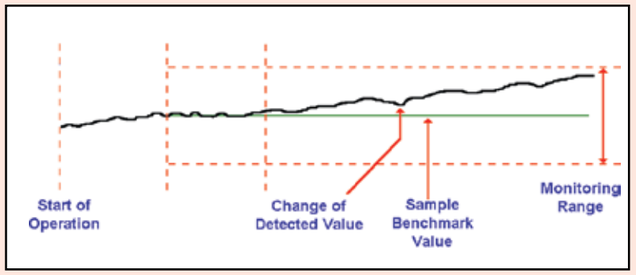
- Punch Presses
- Forging Machines
- Transfer Presses
- High Speed Stamping
- Assembly Operations
- Link Drive Presses
- In-Die Force Monitoring
- Thread Rolling

Features

- Two or Four Channel, Strain Gage input
- 24 volt DC or 110 volt AC power input
- Three selectable alarming methods:
  – High-Low Trend – Adaptive Learn – Area Under the Curve
- Built-in machine capacity alarms
- Reverse (snap-thru) load alarm. Factory set at 20%
- Ethernet communication port - optional
- Backed by over 45 years of experience

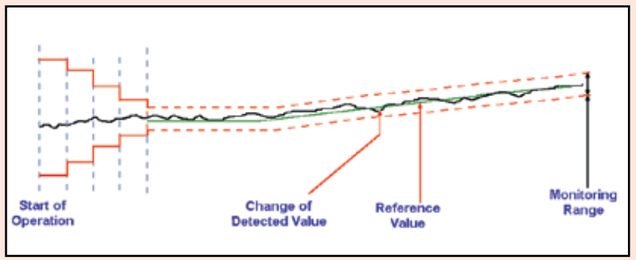
Select the Alarming Method for your Application

TREND



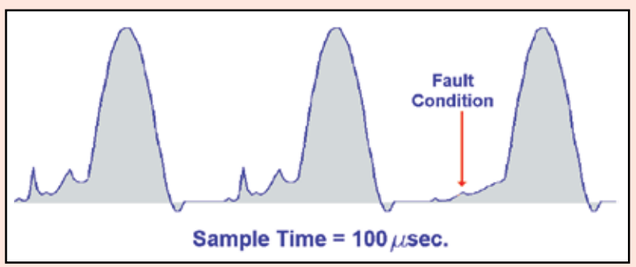
Invented by Helm over 25 years ago, Trend alarming allows you to establish the quality window that the process must operate within. Limits are selectable from 5% to 45%, in 5% increments. Once the forming process begins, the Trend alarms are automatically set above and below the sample benchmark value. Machine shutdown is activated if the forming force varies outside the monitoring range.

ADAPTIVE LEARN

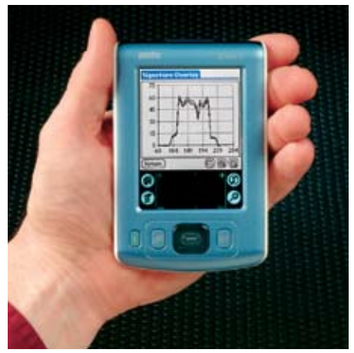


Changes in material thickness, hardness or temper are quickly detected with this alarming method. Upper and lower limits are continuously adjusted during the production run based on the average tonnage developed over the last 100 machine strokes. Adaptive learn alarming is ideal for high speed forming operations and guarantees precision tonnage control.

AREA UNDER THE CURVE



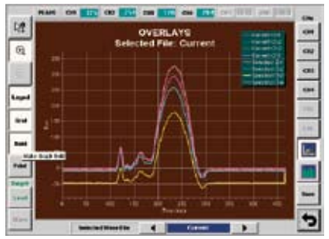
Utilizing Helm signature analysis techniques, this alarming method continuously monitors the energy curve developed while each part is formed. If any area of the forming signature changes, machine stop is initiated. Area under the curve monitoring does not require a resolver or other external timing device. Applications include presses performing deep draw or stretch forming operations and machines using nitrogen die cylinders.



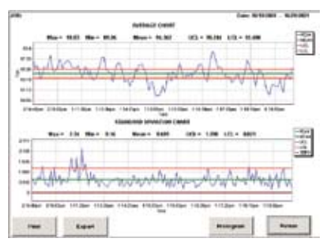
The RLG includes infrared technology for capturing tonnage and signature information on your Palm® handheld. Current tonnage readings, the last 200 overload events and 1000 tonnage signatures are stored in the RLG. Each overload is displayed with a date and time stamp and the tonnage signatures are viewed in real time or retrieved from the history file.

Add these networking options to your RLG for displaying:

- Tonnage Values
- Alarm History
- Current and Stored Load Signatures
- SPC Charts

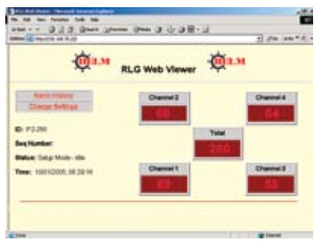


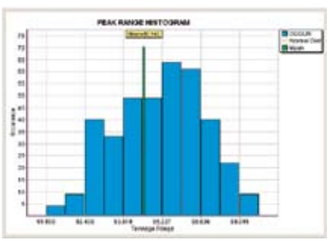
✓ **Mariner AD – for quick interface with laptops**



✓ **Ethernet-Firstmate Module – for connecting to your plantwide network**

✓ **Web-View Module – for browser based access on your LAN or the Internet**





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