

MQ 800-RE

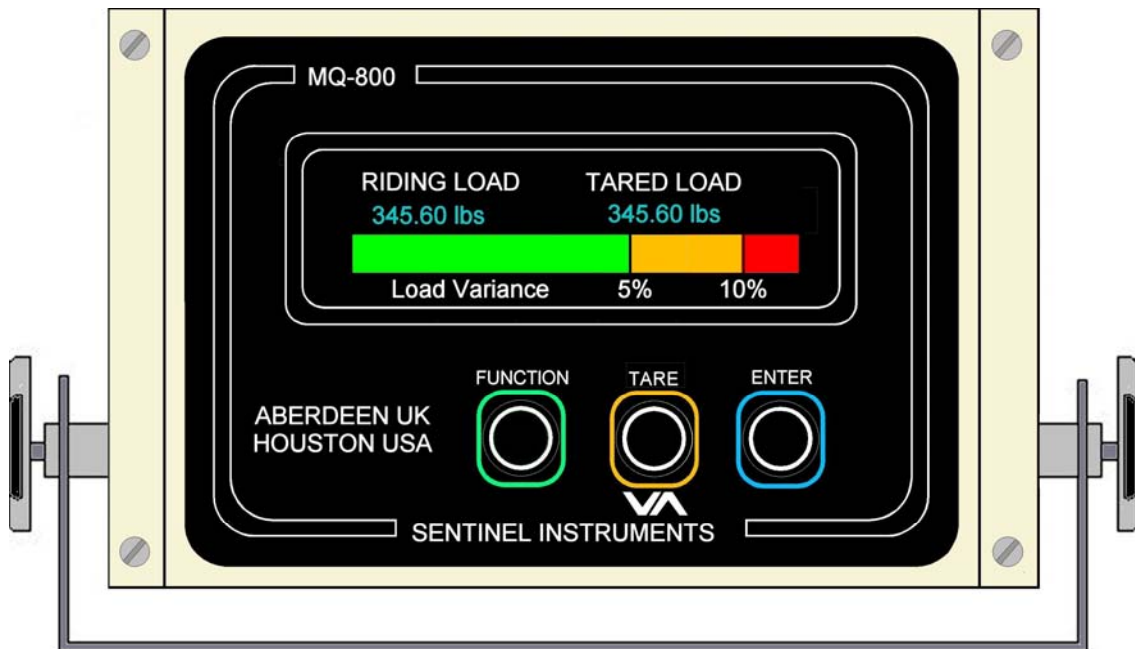
Patent Pending

**Man-Riding Winch Monitor
 with Remote E-Stop**

Guarding Your Load[®]

Operator friendly display with clear indication of Weight of Man and Tared Weight of Man plus graphical indication of danger load variance.

Installation and calibration is very simple and no cables are required with Telemetry.



Typical Display - MQ-800-RE

SENTINEL
The Load Management People[®]

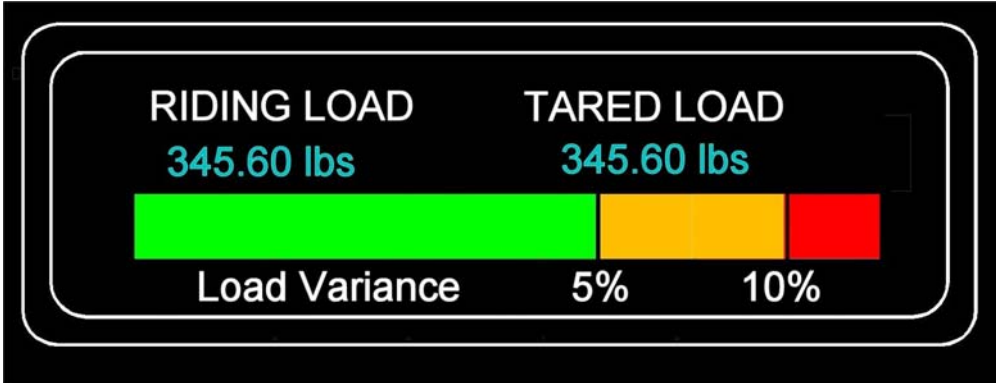
Proudly Serving the Petroleum Industry Since 1984.

- Rugged Construction
- Outstanding Accuracy
- Easy Maintenance
- Simple Diagnostics
- Solid State for Reliability

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System Operation

MQ-800-RE



The Man Riding Winch Monitor incorporates a telemetry load cell which is placed between the man-riding harness and the winch hoist line. This allows for measurement of the weight of the man and harness directly and accurately. Once the man is lifted off the drill floor or work platform, his weight and the harness weight are tared off. The display (above) indicates the actual weight and the tared weight of the rider. The system then monitors for any increase or decrease in the weight of the rider. In addition, the rider has the capability to emergency stop the winch by pressing a small hand-held Emergency Stop button built into a small enclosure he can carry in his pocket or clip to his work clothes.

A three color bar graph gives immediate indication of any increase or decrease in man riding weight due to snagging, set down, etc. At 5% (amber band) over tared load an audible alarm sounds, at 10% (red band) a cut off signal is sent to the winch control system to set the brake and inhibit hoisting.

Conversely, weight loss will automatically set the brake and inhibit hoist line payout unless the original weight is untared. During the weight loss condition, the color display flashes and provides the same indication of load variance.

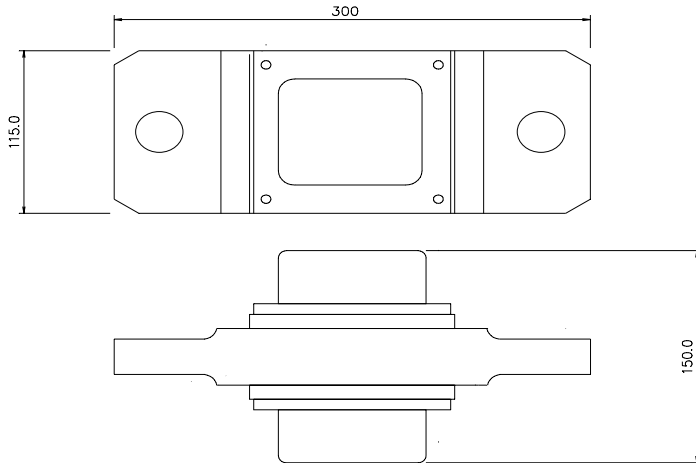
A series of menu options allows access to the system functions. Pressing the FUNCTION button will bring up a list of programming options. Page through the selections using the \uparrow \downarrow keys until the one required flashes. The selections are:

- 1. SELECT TARE
- 2. SELECT DIAGNOSTICS
- 3. SELECT VERSION (Manufacturer's Data)

A full suite of diagnostics allows the load cell output and all the signaling paths to be interrogated. Error codes announce any system malfunction and low battery of both the load cell and the display.

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Technical Specifications



Overall Dimensions of Load Cell



Hand-Held E-Stop

Rated Load, lbs.	2,205 (One Metric Tonne)
Electronics Overload Capacity:	1.5 x Rated Load (without zero shift)
Ultimate Breaking Load:	10 x Rated Load
Output:	1.0 mV/V at Rated Load (nominal)
Accuracy and Non-Linearity:	< ± 0.25 % of Rated Load
Non-Repeatability:	< ± 0.05% of Rated Load
Excitation Voltage:	10vdc recommended, 15vdc maximum
Bridge Resistance:	1000Ω
Insulation Resistance:	> 500MΩ @ 500vdc
Operating Temperature Range:	-20 to +80°C
Compensated Temperature Range:	-20 to +80°C
Zero Temperature Coefficient:	< ± 0.010% of Rated Load/°C
Span Temperature Coefficient:	< ± 0.010% of Rated Load/°C
Environmental Protection Level:	IP67 (NEMA 6), heavy power washing
Data Link:	Telemetry
Shackle Size:	Accommodates Crosby 3/4", 4-3/4 Ton, G209 Shackle

Sentinel reserves the right to alter system specifications to incorporate technical enhancements and software upgrades. Please contact your Sentinel dealer for a current list of product specifications
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Commercial Description

Item	Description
A	<p>One (1) Sentinel MQ-800-RE Man-Riding Winch Monitor, One Metric Tonne (2,205 lb) rated capacity, complete with the following components:</p> <ul style="list-style-type: none"> ○ Tension Load Cell, One Metric Tonne nominal load rating, non-hazardous area rated, complete with integral telemetry system for communication with base display, long-life battery package, and system electronics. ○ Winch Rider's Emergency Stop enclosure, incorporating emergency stop button, telemetry link to Tension Load Cell, battery supply, suitable for wearing in shirt pocket or on work clothes. ○ Winch Operators Remote Display, non-hazardous area rated, complete with four line vacuum fluorescent display (VFD), onboard computer, long-life battery package, mounting bracket, and technical features described in attached Technical Specification. ○ Display will also incorporate electrical relay with volt-free (form "C") contacts to enable control signaling to external winch control valve. ○ System components described about rated to IP67. ○ One-year factory parts and design warranty, covering all replacement parts, system design, and functionality. ○ One operator's Technical and Parts Manual, complete with "as-built" drawings of system.