

# Product catalogue

Load measurement and monitoring solutions



# Innovation | Excellence | Delivery

## Scotload's calibration and repair service is available for both Scotload own and third party products

- We have unrivaled experience in calibrating load equipment and we also offer a popular in-house repair service.
- We recognise that repairs often need to be completed urgently in order to get operations back on track. In addition to our usual rapid turnaround, we also offer a fast track service if required.
- We welcome third party products in addition to our own, and all equipment receives the same high standard of care.
- We have a range of testbeds with load capacities up to 1700 tonnes. All equipment is controlled under our quality management system, and our in-house testbeds are all fully certified and traceable to UKAS standards.

With in-house expertise and a wealth of resources available we provide a quick resolution for your technical issues.

Scotload has an enviable reputation for technical innovation and meeting challenging objectives through the delivery of creative and cost effective solutions. We work with you to fully understand your application and monitoring objectives using our significant experience to deliver improved operational performance.

## Stock available for immediate dispatch

We maintain a large quantity of stock which is available for both hire and sale and can be dispatched within minutes. We package all of our products with the greatest of care ensuring your equipment is delivered safely and provide fast and flexible delivery options anywhere in the world.

## Tailored monitoring solutions

Our highly skilled team of professionals have the expertise required to support your needs during all phases of your project. We offer bespoke product design and manufacturing for specific client requirements and we can also provide a complete project management capability to manage delivery to time, quality and cost, while ensuring compliance to the highest of safety regulations.

## Installation and commissioning

Scotload's dedicated engineers provide support with preparatory tasks, installation, site testing and commissioning. Upon receipt of requirements and requested dates, a single point of contact will issue a quotation and comprehensive pre-site check-list.

## Hire fleet

We have a generous stock of products available for hire with new items being added regularly. Our hire service is ideal for both short and long term loans of equipment, cutting out the need for large up-front purchase costs.

Due to continuous development, Scotload reserves the right to change specifications without notice.





# Hazardous area load measurement

Scotload is a specialist in load measurement solutions for hazardous areas with a range of products and solutions available for Zones 0,1 and 2.

All of our hazardous area products are supplied with full **ATEX** and **IECEx** certifications to **EN/IEC 60079** standards. Our team are also highly knowledgeable in working with **UL**, **Kosha** and other hazardous area classifications worldwide.

We have a wide range of Zone 1 and 2 products available ex-stock for immediate dispatch. Our experienced team is on hand to offer guidance and support to customers looking for a safe and compliant, off-the-shelf or bespoke solution for these demanding environments.

## SmartLoad 1Ex® and 2Ex® wireless technology

We have developed a range of wireless products which incorporate our SmartLoad® technology (including in-sensor data logging) and are fully compliant to the very latest ATEX and IECEx standards.

This technology has been developed with a range of display options including handhelds which can also be used in the relevant hazardous areas. These systems are fully flexible, working with all the safe area SmartLoad® products and software packages.



## Safety is our number one priority. All Scotload products are rigorously tested and inspected.

Safety and reliability are critical factors in the lifting industry and we operate to **ISO 9001:2008** accredited quality management system to ensure product excellence. Our products have been designed using the latest finite element analysis software to optimise strength by design, resulting in industry leading factors of safety. The safety factors have been proven through real life destructive testing of all products, giving our customers confidence in case of an unintentional overload event.

All products are proof load tested individually prior to dispatch. Our hazardous area products are fully certified by **SGS Baseefa** - the leading, internationally recognised certification body for explosion protected equipment, delivering **IECEx**, **ATEX** and **DSEAR** standards to customers around the world.

We are also members of **LEEA** - Lifting Equipment Engineers Association - the leading representative body for the lifting industry worldwide.

## A revolution in load measurement

# SmartLoad®

### Improve your workplace safety, reduce downtime and lower costs.

Our innovative and award winning SmartLoad® technology can be retrofitted to your existing equipment, removing the need for expensive full system upgrades.

#### The handset:

- Only one handset required to connect to links, shackles and other load cells
- Automatically detects all cells in range
- Live simultaneous display of multiple cells
- Displays average and total readings
- Intuitive menu driven flexible display
- Optional start / stop logging from handset
- Peak reading and tare display
- Increased range
- Reduced interference
- Variable overload audio alarm
- Individual load cell naming facility

#### The load cell transmitter:

- On-board intelligence
- On-board memory
- Retrofit to existing load cells
- Date and time stamp for all usage events
- Peak readings recorded and logged
- Overload events recorded and logged
- Variable sample rates to suit application
- Low power for long battery life
- Calibration records held on transmitter



### Scotload's ground-breaking SmartLoad® monitoring technology provides users with total system control and flexibility.

SmartLoad® uniquely incorporates intelligence and memory directly on the load cell itself, increasing functionality while enhancing the efficiency and safety of your lifting operations.

SmartLoad® delivers a standard technology platform for use across a range of products. Requiring only one handset to connect links, shackles and other load cells, it reduces operational costs. Fully compatible with existing equipment, SmartLoad® can also be retrofitted, removing the need for expensive full system upgrades.

Utilising the latest wireless technology for increased range and improved signal reliability, SmartLoad® provides assurance, improves data accuracy and enhances workplace safety as well as reducing downtime.

#### Features and benefits of SmartLoad®:

- **Logging function** controlled from handset - no need for on-site laptop
- **Safety assurance** - automated overload monitoring
- Uniquely incorporates intelligence on load cells and handsets giving **total system control and flexibility**
- Significantly **increased range** and **signal reliability** over existing industry standard technology
- No training required - simple **'plug-and-play'** system
- No pairing required - **'select and connect'** technology
- Avoids downtime and unnecessary wastage - built in **system redundancy**
- Easily integrated with existing monitoring systems



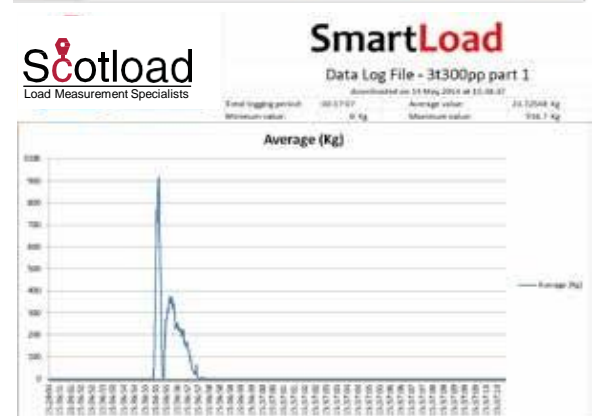
## SmartLoad® software is available from entry level viewing to advanced detailed analysis depending on your requirements.

Our intelligent SmartLoad® software automatically detects all load cells in range with no pairing required for instant display of results.

With four options to choose from, Scotload can provide a data logging or analysis system to suit your load testing needs, including the ability to calibrate your own equipment. Results are automatically exported into Excel and reports are displayed in an easy to understand format for immediate sharing.

### Features and benefits of SmartLoad® logging software:

- Displays live readings of up to 128 cells simultaneously
- Real-time trace provides overview of the last 100 readings for trend analysis
- Monitors peak readings from each device
- Instant overload notification
- Automatic updates - remotely upgrades cell and handset firmware
- Downloadable event logs and cell reading data (Excel-compatible)
- Controllable cell operating speeds and overload limits
- Remote control cell logging
- Monitors battery life of remote cells, avoiding downtime and unnecessary wastage



## SmartLoad® software versions:

**Viewer:** This entry level option enables PCs to be used like a handset and facilitates firmware upgrades to load cells and displays.

**Logging:** Adds load monitoring data logging functionality to the viewer software and can view multiple load cells at once.

**Calibration:** This option features the ability for operators to calibrate their equipment and reset overload events.

**Asset management:** This advanced software package includes all functionality designed for full fleet management of your load monitoring equipment.

\*Extra charge applies for log chart customisation

|  | Viewer | Logging         | Calibration | Asset management |
|--|--------|-----------------|-------------|------------------|
| Single cell view                             | X      |                 | X           |                  |
| View up to 128 cells                         |        | X               |             | X                |
| Overload warning reset                       |        |                 | X           | X                |
| Set safety overload limit                    |        |                 | X           | X                |
| View calibration certificate                 | X      | X               | X           | X                |
| Update firmware                              | X      | X               | X           | X                |
| Calibrate load cells                         |        |                 | X           | X                |
| Can wake / sleep cells                       | X      | X               | X           | X                |
| Predefined logging speed profiles            |        | X               |             | X                |
| Adjustable logging speed parameters          |        | Separate option |             | X                |
| Start / stop logging                         |        | X               |             | X                |
| View / download log files                    |        | X               |             | X                |
| Customised log chart with customer branding* |        | X               |             | X                |
| View / download event log                    |        | X               |             | X                |
| Delete / reset event log                     |        |                 |             | X                |
| Adjustable alarm limit                       | X      | X               | X           | X                |
| Change cell names                            | X      | X               | X           | X                |
| View / reset peak reading                    | X      | X               | X           | X                |

## Load monitoring displays | Available with SmartLoad® technology

**Scotload has a wide range of load monitoring indicators and handsets to match both high performance and budget requirements.**

From standard battery powered hand held collectors to wireless units, mains powered indicators and hazardous area approved displays, Scotload has a solution to meet any load measurement application.

### Intuitive SmartLoad® displays

Menu driven with flexible displays, Scotload's handsets incorporate our innovative and award winning SmartLoad® technology. Fully intuitive, they require no training so are suitable for immediate use.

#### Options

- Available with SmartLoad® technology
- Cabled or wireless
- Hazardous area Zone 1 and 2
- Handset and / or permanent display
- Signal boosters available for extended wireless range

#### Features and benefits

- No pairing required - automatically scans for all local cells
- Increased range and reduced interference
- Live simultaneous display of multiple cells
- Average and total readings displayed
- Intuitive menu driven flexible display
- Start / stop logging from handset (depending on option)





# Load pins | Available with SmartLoad® technology

Scotload’s long-lasting load pins deliver high accuracy under the most challenging of operations.

Harsh environments are our speciality. Manufactured from high tensile stainless steel, our load pins are suitable for hazardous area and subsea applications, and can be easily retrofitted into existing systems.

We provide an in-house calibration service up to 1700 tonnes, traceable to national standards, as well as a customised design service to suit specialised requests.

## Options

- Available with SmartLoad® technology
- Cabled or wireless
- Hazardous area Zone 0, 1 and 2
- X-Y gauging available
- Radial or axial cable exit

## Features and benefits

- Internally gauged, fully welded and hermetically sealed
- Short lead time
- Easily retrofitted
- Highly accurate
- In-house custom design and manufacturing

## Scotload load pins are manufactured to suit our customers specific requirements



| Typical specifications         | mV/V output               | mA output   | Wireless output  |
|--------------------------------|---------------------------|-------------|------------------|
| Rated load                     | As required               |             |                  |
| Proof load                     | 150% of rated load        |             |                  |
| Non linearity                  | < ± 1% of full scale      |             |                  |
| Non repeatability              | < ± 0.01% of fullscale    |             |                  |
| Zero balance                   | < ± 0.01% of fullscale    |             |                  |
| Environmental protection       | IP67 / IP68               |             |                  |
| Safety factor                  | As required               |             |                  |
| Operating temperature          | -25°C to +70°C            |             |                  |
| Storage temperature            | -30°C to + 80°C           |             |                  |
| Output signal                  | mV/V                      | 4-20mA      | Wireless         |
| Electrical connection          | 4 core                    | 2 or 3 wire | N/A              |
| Cable connection               | Gland or connector        |             | N/A              |
| Cable length                   | 5m as standard            |             | N/A              |
| Recommended excitation voltage | 10V                       | N/A         | N/A              |
| Maximum excitation voltage     | 15V                       | N/A         | N/A              |
| Recommended supply voltage     | N/A                       | 24V         | N/A              |
| Maximum excitation voltage     | N/A                       | 30V         | N/A              |
| Bridge resistance              | 700 Ohm                   | N/A         | N/A              |
| Sensitivity                    | 1.0mV/V to 2.0V/V nominal | N/A         | N/A              |
| Data logging                   | N/A                       | N/A         | On load cell     |
| Battery type                   | N/A                       | N/A         | 2 or 4 x AA      |
| Active battery life            | N/A                       | N/A         | Up to 350 hours  |
| Standby battery life           | N/A                       | N/A         | Up to 1700 hours |
| Telemetry frequency            | N/A                       | N/A         | 2.4Ghz ISM       |
| System range                   | N/A                       | N/A         | Up to 350m       |
| Sampling rate                  | N/A                       | N/A         | 10Hz (500Hz max) |

### Crane load pins


Specially designed to be incorporated into many locations within a crane structure, depending on its layout. They can be retrofitted, replacing any existing load bearing pins with ease, and we can also supply a complete crane weighing and overload system with the addition of a display / indicator.

### Subsea load pins


Specially developed to withstand harsh offshore and subsea applications. Environmentally sealed to IP67 as standard with higher ratings available on request, our subsea load pins can be fitted with wet mateable connectors and are pressure tested to suit different depths.

### Industrial load pins

Specially designed to withstand the harsh conditions found in industrial environments including extreme temperatures, dust, moisture and vibration.



SmartLoad® load pins are available for use in hazardous area Zones 0, 1 and 2





# Load links | Available with SmartLoad® technology

## Scotload’s cost effective load links enable accurate and reliable load monitoring.

Our links are designed to minimise stress concentrations and maximise strength. The design incorporates features which increases reliability, reduces the risk of damage and ensures ease of use.

Manufactured from high tensile, aerospace grade anodised aluminium, our load links are suitable for use across all industry sectors including marine and offshore. They are fully Finite Element Analysis (FEA) optimised and destructively tested.

We have a range of links in stock, up to 500 tonnes for purchase or hire, and ready for immediate dispatch. Larger capacities are available on request and all of our load links are supplied with full calibration and proof load certificates.




### Options

- Available with SmartLoad® technology
- Cabled or wireless
- Hazardous area Zone 1 and 2
- Built in display - Visilink


### Features and benefits

- Industry leading safety factor
- In link data logging
- In stock available for immediate dispatch
- Latest wireless technology
- Internal antenna
- Compatible with SmartLoad® COG system
- Corrosion resistant design
- Use with any SmartLoad® hand held or wall mounted display

| Typical specifications         | mV/V output        |  | mA output              | Wireless output  |
|--------------------------------|--------------------|--|------------------------|------------------|
| Rated load                     |                    |  | As required            |                  |
| Proof load                     |                    |  | 150% of rated load     |                  |
| Non linearity                  |                    |  | < ± 0.25% of fullscale |                  |
| Non repeatability              |                    |  | < ± 0.05% of fullscale |                  |
| Zero balance                   |                    |  | < ± 0.05% of fullscale |                  |
| Environmental protection       |                    |  | IP67 / IP68            |                  |
| Safety factor                  |                    |  | 5x minimum             |                  |
| Operating temperature          |                    |  | -25°C to +70°C         |                  |
| Storage temperature            |                    |  | -30°C to + 80°C        |                  |
| Cable connection               | Gland or connector |  |                        | N/A              |
| Cable length                   | 5m as standard     |  |                        | N/A              |
| Output signal                  | mV/V               |  | 4-20mA                 | Wireless         |
| Electrical connection          | 4 core             |  | 2 or 3 wire            | N/A              |
| Recommended excitation voltage | 10V                |  | N/A                    | N/A              |
| Maximum excitation voltage     | 15V                |  | N/A                    | N/A              |
| Recommended supply voltage     | N/A                |  | 24V                    | N/A              |
| Maximum excitation voltage     | N/A                |  | 30V                    | N/A              |
| Bridge resistance              | 1000 Ohm           |  | N/A                    | N/A              |
| Sensitivity                    | 1.5mV/V nominal    |  | N/A                    | N/A              |
| Data logging                   | N/A                |  | N/A                    | On load cell     |
| Battery type                   | N/A                |  | N/A                    | 2 x AA           |
| Active battery life            | N/A                |  | N/A                    | Up to 200 hours  |
| Standby battery life           | N/A                |  | N/A                    | Up to 1400 hours |
| Telemetry frequency            | N/A                |  | N/A                    | 2.4Ghz ISM       |
| System range                   | N/A                |  | N/A                    | Up to 350m       |
| Sampling rate                  | N/A                |  | N/A                    | 10Hz (500Hz max) |



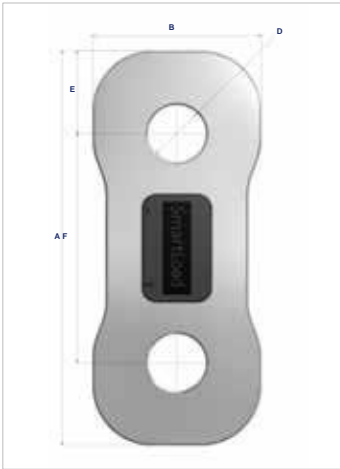
SmartLoad® load links are available for use in hazardous area Zones 1 and 2



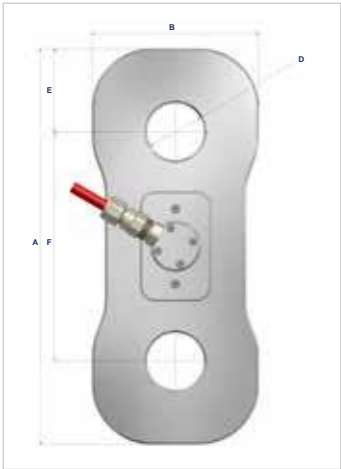




Wireless load link



Cabled load link



Load links typical dimensions - bespoke design available on request

|                         |          |          |          |          |          |          |          |          |          |          |          |          |          |          |
|-------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Product code (wireless) | TEN 9250 | TEN 9251 | TEN 9252 | TEN 9253 | TEN 9254 | TEN 9255 | TEN 9256 | TEN 9257 | TEN 9258 | TEN 9259 | TEN 9260 | TEN 9261 | TEN 9262 | TEN 9263 |
| Product code (cabled)   | TEN 9627 | TEN 9628 | TEN 9629 | TEN 9630 | TEN 9631 | TEN 9632 | TEN 9633 | TEN 9634 | TEN 9635 | TEN 9636 | TEN 9637 | TEN 9638 | TEN 9639 | TEN 9640 |
| Load rating (tonnes)    | 3.25     | 5        | 12.5     | 25       | 35       | 50       | 75       | 120      | 150      | 200      | 250      | 300      | 400      | 500      |
| Weight (kg)             | 1.3      | 1.8      | 3.5      | 7        | 10.8     | 17.3     | 29.5     | 56.5     | 78.9     | 122      | 158      | 203      | 304      | 408      |
| A mm                    | 230      | 250      | 300      | 350      | 400      | 450      | 480      | 550      | 620      | 730      | 790      | 860      | 1020     | 1120     |
| B mm                    | 74       | 84       | 108      | 144      | 168      | 202      | 244      | 270      | 290      | 340      | 390      | 430      | 520      | 560      |
| C mm                    | 24       | 32       | 50       | 65       | 75       | 90       | 110      | 141      | 161      | 170      | 189      | 189      | 205      | 230      |
| D mm                    | 20       | 26       | 40       | 52       | 58       | 71       | 84       | 97       | 110      | 133      | 143      | 153      | 178      | 188      |
| E mm                    | 37       | 37       | 54       | 72       | 84       | 101      | 122      | 130      | 150      | 180      | 200      | 225      | 270      | 310      |
| F mm                    | 156      | 176      | 192      | 206      | 232      | 248      | 236      | 290      | 320      | 370      | 390      | 410      | 480      | 500      |
| G mm (wireless)         | 50       | 48       | N/A      | N/A      | N/A      | N/A      | N/A      | N/A      | N/A      | N/A      | N/A      | N/A      | N/A      | N/A      |
| G mm (cabled)           | 81       | 79       | 81       | 96       | 106      | 121      | 141      | 172      | 192      | 201      | 220      | 220      | 236      | 261      |

Visilinks | Includes SmartLoad®technology

Scotload’s Visilink load cells include a clear visual display within the load cell itself.

Features and benefits:

- SmartLoad®technology
- Can be controlled via the load cell menu
- Can be used with SmartLoad®wireless displays
- Logging capabilities
- Can be used with SmartLoad®software packages



| Typical specifications   | Display only                                    | With wireless   |
|--------------------------|---|-----------------|
| Rated load               | As required                                     |                 |
| Proof load               | 150% of rated load (dependent on rope capacity) |                 |
| Non linearity            | < ± 0.25% of full scale                         |                 |
| Non repeatability        | < ± 0.05% of full scale                         |                 |
| Zero balance             | < ± 0.05% of full scale                         |                 |
| Environmental protection | IP67 / IP68                                     |                 |
| Safety factor            | 5x  |                 |
| Operating temperature    | -25°C to +70°C                                  |                 |
| Storage temperature      | -30°C to + 80°C                                 |                 |
| Battery type             | 2 x AA  |                 |
| Viewing area             | 30.78 x 25.02 mm                                |                 |
| Screen resolution        | 160 x 128                                       |                 |
| Pixel density            | 141 PPI   |                 |
| Display technology       | OLED  |                 |
| Battery life (active)    | 65 - 240hours*                                  | 60 - 200 hours* |
| Battery life (standby)   | ~ 6 months                                      |                 |
| Telemetry frequency      | N/A   | 2.4GHz          |
| System range             | N/A   | 250 m           |
| Sampling rate            | 1 - 5Hz   | 0.1 - 20Hz      |

\* Depending on screen brightness



# Load shackles | Available with SmartLoad® technology

Scotload’s robust load shackles are ideal for lifting and weighing applications where there is limited headroom.

Our load shackles are manufactured from GN or Van Beest shackles as standard, but other manufacturers are available on request.

We provide a fully stainless steel construction (excluding bow) up to 85 tonnes as standard, and fully stainless steel construction for 120 tonnes and above upon request.

We have a large range of shackles available in stock up to 1000 tonnes for purchase or hire, and ready for immediate dispatch. Larger capacities are available on request and all of our load shackles are supplied with full calibration and proof load certificates.

## Options



- Available with SmartLoad® technology
- Cabled or wireless
- Hazardous area Zone 1 and 2
- Subsea - with ROV / diver mateable connectors
- Bow or D type

## Features and benefits

- Internally gauged, fully welded and hermetically sealed
- Robust construction
- Internal antenna
- In stock available for immediate dispatch
- Stainless steel centralising load bobbin supplied as standard
- Robust stainless steel protection cage for electronics

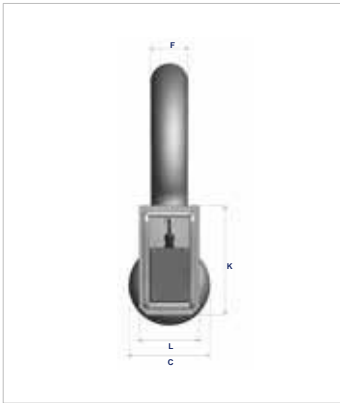
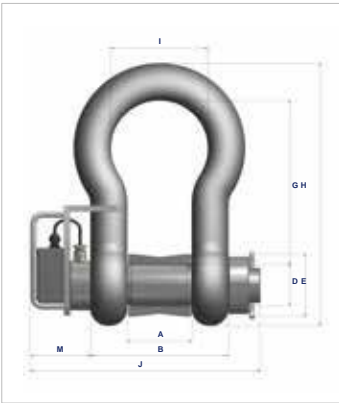


| Typical specifications         | mV/V output             | mA output   | Wireless output  |
|--------------------------------|-------------------------|-------------|------------------|
| Rated load                     | As required             |             |                  |
| Proof load                     | 150% of rated load      |             |                  |
| Non linearity                  | < ± 1% of full scale    |             |                  |
| Non repeatability              | < ± 0.01% of full scale |             |                  |
| Zero balance                   | < ± 0.01% of full scale |             |                  |
| Environmental protection       | IP67 / IP68             |             |                  |
| Safety factor                  | 3x                      |             |                  |
| Operating temperature          | -25°C to +70°C          |             |                  |
| Storage temperature            | -30°C to + 80°C         |             |                  |
| Cable connection               | Gland or connector      |             | N/A              |
| Cable length                   | 5m as standard          |             | N/A              |
| Output signal                  | mV/V                    | 4-20mA      | Wireless         |
| Electrical connection          | 4 core                  | 2 or 3 wire | N/A              |
| Recommended excitation voltage | 10V                     | N/A         | N/A              |
| Maximum excitation voltage     | 15V                     | N/A         | N/A              |
| Recommended supply voltage     | N/A                     | 24V         | N/A              |
| Maximum excitation voltage     | N/A                     | 30V         | N/A              |
| Bridge resistance              | 700 Ohm                 | N/A         | N/A              |
| Sensitivity                    | 2.0mV/V nominal         | N/A         | N/A              |
| Data logging                   | N/A                     | N/A         | On load cell     |
| Battery type                   | N/A                     | N/A         | 4 x AA           |
| Active battery life            | N/A                     | N/A         | Up to 350 hours  |
| Standby battery life           | N/A                     | N/A         | Up to 1700 hours |
| Telemetry frequency            | N/A                     | N/A         | 2.4Ghz ISM       |
| System range                   | N/A                     | N/A         | Up to 350m       |
| Sampling rate                  | N/A                     | N/A         | 10Hz (500Hz max) |

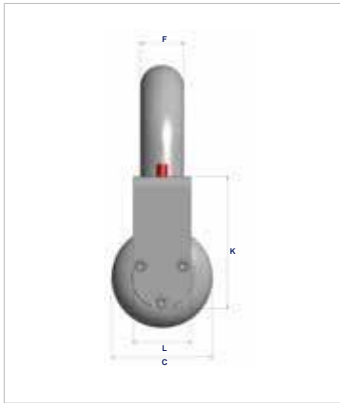
SmartLoad® load shackles are available for use in hazardous area Zones 1 and 2



Wireless load shackle



Cabled load shackle



Load shackles typical dimensions - bespoke design available on request

|                         |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Product code (wireless) | 9660  | 9661  | 9662  | 9663  | 9664  | 9665  | 9666  | 9667  | 9668  | 9669  | 9670  | 9671  | 9672  | 9965  | 9966  | 9967  | 9968  | 9969  |
| Product code (cabled)   | 10269 | 10270 | 10271 | 10272 | 10273 | 10274 | 10275 | 10276 | 10277 | 10278 | 10279 | 10280 | 10281 | 10282 | 10283 | 10284 | 10285 | 10286 |
| Load rating (tonnes)    | 8.5   | 12    | 17    | 25    | 35    | 55    | 85    | 120   | 150   | 200   | 300   | 400   | 500   | 600   | 700   | 800   | 900   | 1000  |
| Approx weight bow (kg)  | 2.6   | 4.9   | 8.2   | 14.2  | 19.9  | 39.6  | 62    | 110   | 160   | 235   | 340   | 560   | 685   | 880   | 980   | 1100  | 1280  | 1460  |
| Approx weight D (kg)    | 2.5   | 4.5   | 7.6   | 12.9  | 17.4  | 35.3  | 53    | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   |
| A mm                    | 43    | 51    | 60    | 74    | 83    | 105   | 127   | 150   | 170   | 180   | 205   | 230   | 255   | 285   | 310   | 310   | 330   | 350   |
| B mm                    | 93    | 115   | 136   | 164   | 183   | 235   | 273   | 328   | 374   | 420   | 465   | 560   | 615   | 675   | 720   | 730   | 770   | 810   |
| C mm                    | 59    | 72    | 88    | 103   | 111   | 145   | 162   | 200   | 230   | 260   | 305   | 350   | 570   | 405   | 435   | 435   | 465   | 480   |
| D mm                    | 28    | 35    | 42    | 50    | 57    | 70    | 83    | 95    | 108   | 140   | 150   | 175   | 185   | 205   | 217   | 217   | 230   | 240   |
| E mm                    | 44    | 50    | 63    | 88    | 88    | 114   | 125   | 152   | 165   | 190   | 254   | 254   | 300   | 300   | 330   | 330   | 355   | 355   |
| F mm                    | 25    | 32    | 38    | 45    | 50    | 65    | 75    | 89    | 102   | 120   | 130   | 165   | 180   | 195   | 205   | 210   | 220   | 230   |
| G mm (bow)              | 95    | 115   | 146   | 178   | 197   | 260   | 329   | 380   | 400   | 500   | 600   | 680   | 700   | 700   | 700   | 700   | 700   | 750   |
| G mm (D)                | 85    | 94    | 127   | 149   | 171   | 203   | 339   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   |
| H mm (bow)              | 164   | 201   | 249   | 300   | 331   | 433   | 527   | 617   | 671   | 813   | 958   | 1108  | 1158  | 1200  | 1231  | 1236  | 1268  | 1290  |
| H mm (D)                | 154   | 180   | 230   | 271   | 305   | 376   | 427   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   |
| I mm (bow only)         | 68    | 83    | 99    | 126   | 138   | 180   | 190   | 238   | 275   | 290   | 305   | 325   | 350   | 375   | 400   | 400   | 420   | 420   |
| J mm (wireless)         | 224   | 274   | 304   | 338   | 361   | 410   | 454   | 482   | 535   | 615   | 665   | 762   | 817   | 912   | 957   | 967   | 1011  | 1020  |
| J mm (cabled)           | 159   | 209   | 242   | 276   | 297   | 347   | 391   | 440   | 493   | 550   | 600   | 695   | 750   | 845   | 890   | 900   | 944   | 953   |
| K mm (wireless)         | 200   | 200   | 200   | 200   | 200   | 210   | 220   | N/A   | N/A   | 176   | 203   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   |
| K mm (cabled)           | 110   | 119   | 131   | 136   | 160   | 180   | 205   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   |
| L mm (wireless)         | 100   | 100   | 100   | 100   | 100   | 110   | 120   | N/A   | N/A   | 80    | 100   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   |
| L mm (cabled)           | 50    | 50    | 50    | 60    | 75    | 88    | 100   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   | N/A   |
| M mm (wireless)         | 119   | 119   | 119   | 119   | 121   | 118   | 118   | 92    | 92    | 115   | 115   | 117   | 122   | 127   | 127   | 127   | 127   | 127   |
| M mm (cabled)           | 54    | 55    | 57    | 57    | 57    | 55    | 55    | 50    | 50    | 50    | 50    | 50    | 55    | 60    | 60    | 60    | 60    | 60    |

Subsea load shackles | Includes SmartLoad® technology

Scotload’s subsea load shackles are available as a ‘D’ or ‘Bow’ shackle body with load centralising bobbins, ROV / diver mateable connectors, displays and signal conditioning units with a robust carry case.

Specially designed for use in underwater applications, our load shackles are supplied with wet mateable connectors and deep sea protection, so they are unaffected by the outside water pressure whilst remaining sensitive in the intended load measuring direction.



Pillar compression load cells | Available with SmartLoad® technology

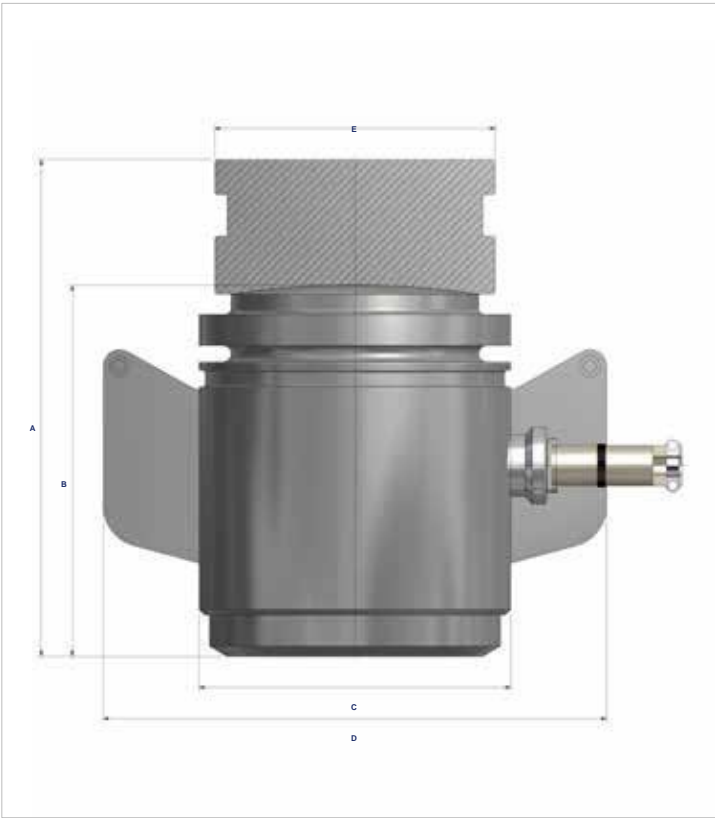
Scotload’s pillar compression load cells are highly adaptable with a robust construction for use in harsh environments.

Manufactured from high tensile stainless steel, each load cell is designed with a domed loading top to greatly reduce the effect of offset loads.

The load cell cable is fitted through an integral connector to allow for on-site mating and removes the need for handling large lengths of cable whilst positioning the load cells.

We provide an in-house calibration service up to 1700 tonnes, traceable to national standards, as well as a customised design service to suit specialised requests. We maintain a range of stock available to buy or hire and ready for immediate dispatch.

Pillar compression load cell



Pillar compression load cell typical dimensions

| Product code         | 7510-100 | 7510-200 | 7510-300 | 7510-500 | 7510-700 | 7510-1000 |
|----------------------|----------|----------|----------|----------|----------|-----------|
| Load rating (tonnes) | 100      | 200      | 300      | 500      | 700      | 1000      |
| Weight (kg)          | 8.5      | 18       | 28       | 75       | 86       | 160       |
| A mm                 | 170      | 215      | 240      | 320      | 350      | 400       |
| B mm                 | 127      | 163      | 179      | 248      | 281      | 315       |
| C mm                 | 100      | 126      | 151      | 216      | 216      | 272       |
| D mm                 | 184      | 210      | 244      | 320      | 320      | 246       |
| E mm                 | 86       | 112      | 136      | 196      | 196      | 246       |

Options

- Available with SmartLoad® technology
- Cabled or wireless
- Hazardous area Zone 0, 1 and 2
- Subsea - with ROV / diver mateable connectors
- Bespoke design
- Optional loading cap

Features and benefits

- Robust construction
- Long design life
- Highly accurate
- Fully welded and hermetically sealed
- Compatible with SmartLoad® COG system
- Larger sizes include built in handles for ease of positioning

| Typical specifications         | mV/V output              | mA output   | External wireless interface     |
|--------------------------------|--------------------------|-------------|---------------------------------|
| Rated load                     | As required              |             |                                 |
| Proof load                     | 150% of rated load       |             |                                 |
| Non linearity                  | < ± 0.15% of full scale  |             |                                 |
| Non repeatability              | < ± 0.05% of full scale  |             |                                 |
| Zero balance                   | < ± 0.05% of full scale  |             |                                 |
| Environmental protection       | As required              |             | IP66                            |
| Safety factor                  | As required              |             |                                 |
| Operating temperature          | -20°C to +60°C           |             |                                 |
| Storage temperature            | -30°C to + 80°C          |             |                                 |
| Cable connection               | Gland or connector       |             | N/A                             |
| Cable length                   | 5m as standard           |             | N/A                             |
| Output signal                  | mV/V                     | 4-20mA      | Wireless<br>(Input signal mV/V) |
| Electrical connection          | 4 core                   | 2 or 3 wire | N/A                             |
| Recommended excitation voltage | 10V                      | N/A         | N/A                             |
| Maximum excitation voltage     | 15V                      | N/A         | N/A                             |
| Recommended supply voltage     | N/A                      | 24V         | N/A                             |
| Maximum excitation voltage     | N/A                      | 30V         | N/A                             |
| Bridge resistance              | 700 Ohm                  | N/A         | N/A                             |
| Sensitivity                    | 1.5mV/V - 2.0V/V nominal | N/A         | N/A                             |
| Data logging                   | N/A                      | N/A         | In interface                    |
| Battery type                   | N/A                      | N/A         | 3 x D                           |
| Active battery life            | N/A                      | N/A         | Up to 500 hours                 |
| Standby battery life           | N/A                      | N/A         | Up to 1700 hours                |
| Telemetry frequency            | N/A                      | N/A         | 2.4Ghz ISM                      |
| System range                   | N/A                      | N/A         | Up to 350m                      |
| Sampling rate                  | N/A                      | N/A         | 10Hz (500Hz max)                |



SmartLoad® load cells are available for use in hazardous area Zones 0, 1 and 2







Diaphragm compression load cells | Available with SmartLoad® technology

Scotload’s diaphragm load cells are ideal for a range of structural and industrial applications where height may be limited.

Manufactured from high tensile stainless steel, our highly accurate diaphragm load cells have a low profile and a high resistance to offset loads.

The standard fixing arrangement includes six counter bored holes with an optional base plate, which allows the load to become an integral part of the structure they are monitoring. They can also be supplied with tapped holes for more specialised installations.

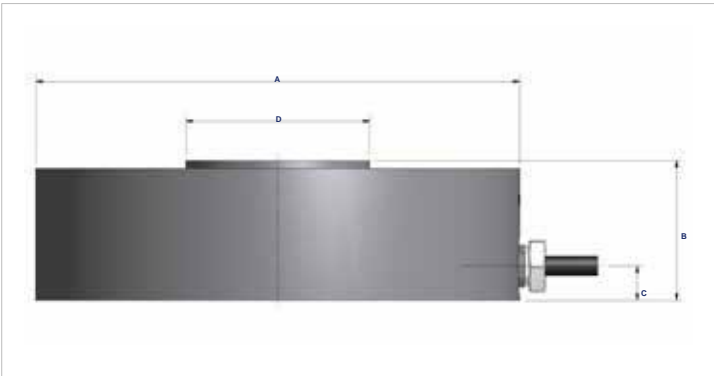
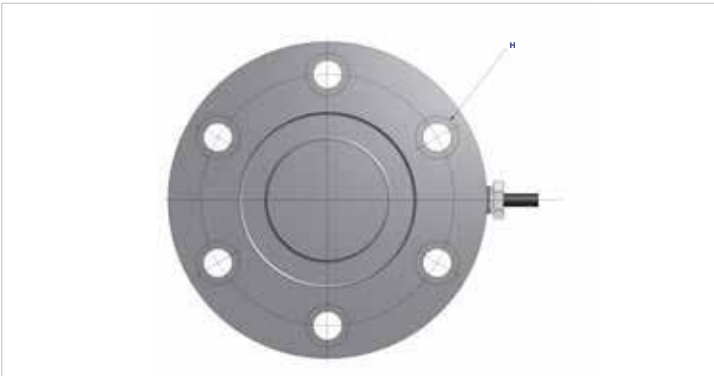
Options

- SmartLoad® technology
- Cabled or wireless
- Hazardous area Zone 0, 1 and 2
- Subsea
- Bored or tapped holes
- Optional base plate

Features and benefits

- Can be retrofitted
- High resistance to offset loads
- Versatile - ideal for applications where height may be limited
- High safety factor
- Fully welded and hermetically sealed
- Compatible with SmartLoad® COG system

Diaphragm compression load cell



Diaphragm compression load cell typical dimensions

| Product code         | DIA 2800                                    | DIA 3356                                      | DIA 3357                                      |
|----------------------|---|---|---|
| Load rating (tonnes) | 0.1 to 20                                   | 10 to 50                                      | 40 to 100                                     |
| A mm                 | 112   | 150   | 184   |
| B mm                 | 25  | 45  | 53  |
| C mm                 | 11  | 12  | 12  |
| D mm                 | 50  | 60  | 70  |
| Hole H               | Tosuit 6 x M6 SKT<br>CAP screws on 98 P.C.D | Tosuit 6 x M12 SKT<br>CAP screws on 122 P.C.D | Tosuit 6 x M16 SKT<br>CAP screws on 146 P.C.D |

| Typical specifications         | mV/V output            | mA output   | External wireless interface     |
|--------------------------------|------------------------|-------------|---------------------------------|
| Rated load                     | As required            |             |                                 |
| Proof load                     | 150% of rated load     |             |                                 |
| Non linearity                  | < ± 0.25% of fullscale |             |                                 |
| Non repeatability              | < ± 0.05% of fullscale |             |                                 |
| Zero balance                   | < ± 0.05% of fullscale |             |                                 |
| Environmental protection       | IP68                   |             | IP66                            |
| Safety factor                  | As required            |             |                                 |
| Operating temperature          | -20°C to +60°C         |             |                                 |
| Storage temperature            | -30°C to + 80°C        |             |                                 |
| Cable connection               | Gland or connector     |             | N/A                             |
| Cable length                   | 5m as standard         |             | N/A                             |
| Output signal                  | mV/V                   | 4-20mA      | Wireless<br>(Input signal mV/V) |
| Electrical connection          | 4 core                 | 2 or 3 wire | N/A                             |
| Recommended excitation voltage | 10V                    | N/A         | N/A                             |
| Maximum excitation voltage     | 15V                    | N/A         | N/A                             |
| Recommended supply voltage     | N/A                    | 24V         | N/A                             |
| Maximum excitation voltage     | N/A                    | 30V         | N/A                             |
| Bridge resistance              | 1000 Ohm               | N/A         | N/A                             |
| Sensitivity                    | 1.5mV/V nominal        | N/A         | N/A                             |
| Data logging                   | N/A                    | N/A         | In interface                    |
| Battery type                   | N/A                    | N/A         | 3 x D                           |
| Active battery life            | N/A                    | N/A         | Up to 500 hours                 |
| Standby battery life           | N/A                    | N/A         | Up to 1700 hours                |
| Telemetry frequency            | N/A                    | N/A         | 2.4Ghz ISM                      |
| System range                   | N/A                    | N/A         | Up to 350m                      |
| Sampling rate                  | N/A                    | N/A         | 10Hz (500Hz max)                |

SmartLoad® load cells are available for use in hazardous area Zones 0, 1 and 2

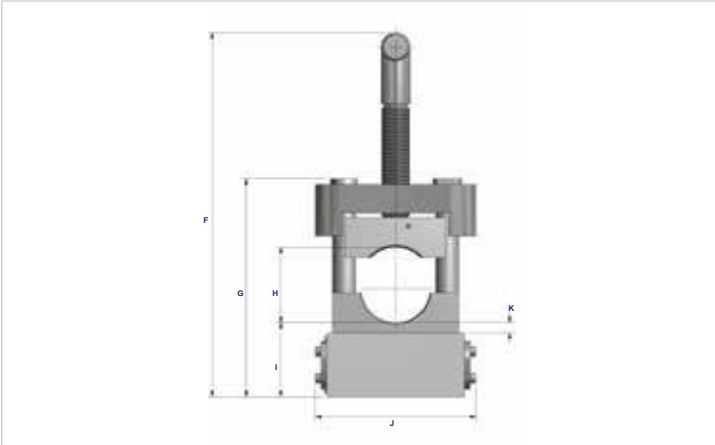
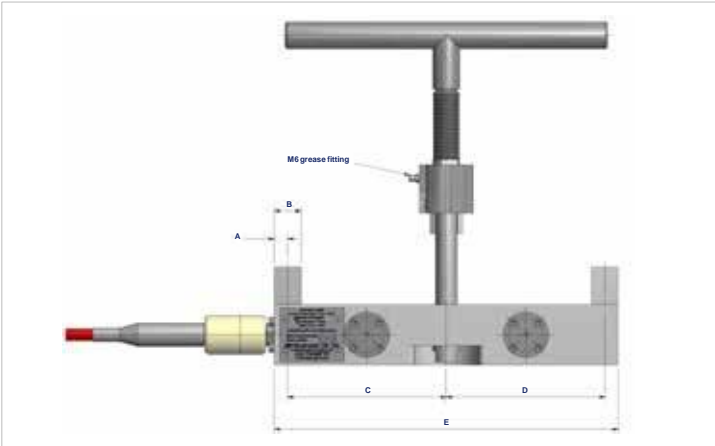
Static line monitor | Available with SmartLoad® technology

Scotload’s static line monitors are ideal for use in harsh environments where a fixed means of measurement is impractical.

Manufactured from high tensile aluminium or stainless steel, our static line monitors can be customised to suit various rope sizes. They provide accurate readings to ensure that loads remain within safe working limits.

We have a range of stock available for purchase or hire, ready for immediate dispatch, as well as a popular in-house calibration service up to 100 tonnes, traceable to national standards.

Static line monitor



| Static line monitor typical dimensions |         |
|--|---------|
| A mm                                   | 12.5    |
| B mm                                   | 2.5     |
| C mm                                   | 147.5   |
| D mm                                   | 147.5   |
| E mm                                   | 320     |
| F mm                                   | 319     |
| G mm                                   | 191     |
| H mm                                   | 66(Max) |
| I mm                                   | 66      |
| J mm                                   | 140     |
| K mm                                   | 9       |

Options

- Available with SmartLoad® technology
- Cabled or wireless
- Hazardous area Zone 1 and 2
- Aluminium or stainless steel construction

Features and benefits

- Easy to transport
- Robust construction
- Simple to use



| Typical specifications     | mA output                                       | External wireless interface |
|----------------------------|---|-----------------------------|
| Rated load                 | As required                                     |                             |
| Proof load                 | 200% of rated load (dependent on rope capacity) |                             |
| Rope diameter              | 22mm to 50mm                                    |                             |
| Operating temperature      | -20°C to +60°C                                  |                             |
| Storage temperature        | -30°C to +80°C                                  |                             |
| Environmental protection   | IP67  | IP66                        |
| Output signal              | 4-20mA  | Wireless                    |
| Electrical connection      | 2 or 3 wire                                     | N/A                         |
| Cable connection           | Gland and connector                             | N/A                         |
| Cable length               | 5m as standard                                  | N/A                         |
| Recommended supply voltage | 24V   | N/A                         |
| Maximum supply voltage     | 30V   | N/A                         |
| Data logging               | N/A   | In interface                |
| Battery type               | N/A   | 3 x D                       |
| Active battery life        | N/A   | Up to 500 hours             |
| Standby battery life       | N/A   | Up to 1700 hours            |
| Telemetry frequency        | N/A   | 2.4Ghz ISM                  |
| System range               | N/A   | Up to 350m                  |
| Sampling rate              | N/A   | 10Hz (500Hz max)            |

Ex

SmartLoad® line monitors are available for use in hazardous area Zones 1 and 2

Ex

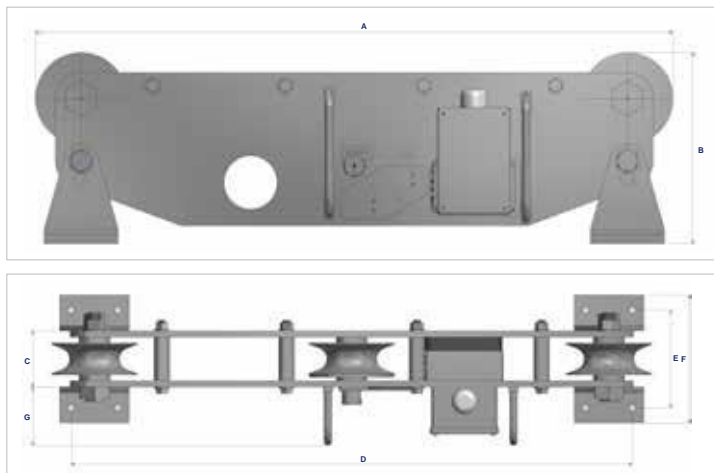
## Running line monitor | Available with SmartLoad® technology

**Scotload's running line monitors' rugged design makes them ideal for operation in extreme environments.**

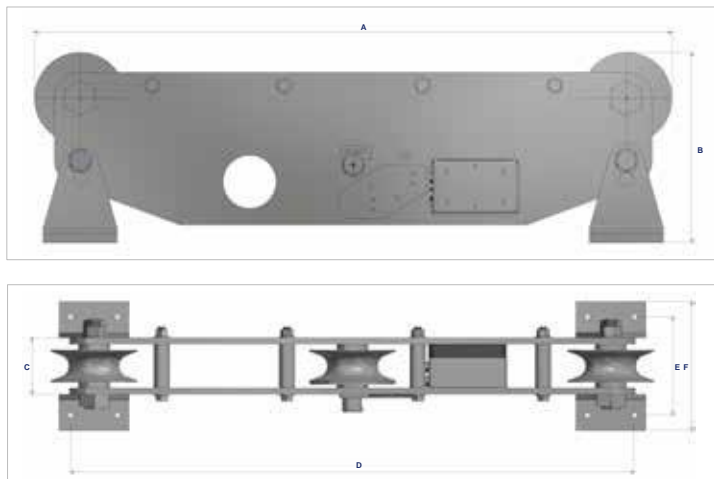
Specially designed to be corrosion resistant in harsh marine environments, our running line monitors suit various rope sizes and capacities depending on your needs.

We maintain a range of stock available for purchase or hire, ready for immediate dispatch. We provide a popular in-house calibration service up to 100 tonnes, traceable to national standards, as well as bespoke design and manufacturing to suit more specific requests.

### Wireless running line monitor



### Cabled running line monitor



### Options

- Available with SmartLoad® technology
- Cabled or wireless
- Hazardous area Zone 1 and 2
- Various display options
- Mains or battery powered indicators
- Three or five roller system
- Customised system design service

### Features and benefits

- Robust stainless steel protection cage for electronics
- Corrosion resistant design
- In stock available for immediate dispatch

| Typical specifications     | mA output  | Wireless output  |
|----------------------------|--|------------------|
| Rated load                 | As required  |                  |
| Proof load                 | 200% of rated load (dependent on rope capacity)                  |                  |
| Rope diameter              | 10mm to 125mm  |                  |
| Non linearity              | < ± 1% of full scale   |                  |
| Non repeatability          | < ± 0.01% of full scale  |                  |
| Zero balance               | < ± 0.01% of full scale  |                  |
| Environmental protection   | IP66   |                  |
| Operating temperature      | -20°C to +60°C   |                  |
| Storage temperature        | -30°C to + 80°C  |                  |
| Output signal              | 4-20mA (load)<br>Pulsed output, quadrature mode (distance/speed) | Wireless         |
| Electrical connection      | 8 core (load and distance/speed)                                 | N/A              |
| Cable connection           | Gland and connector  | N/A              |
| Cable length               | 5m as standard   | N/A              |
| Recommended supply voltage | 24V  | N/A              |
| Maximum supply voltage     | 30V  | N/A              |
| Data logging               | N/A  | On RLM           |
| Battery type               | N/A  | 3 x D            |
| Battery life (active)      | N/A  | Up to 350 hours  |
| Battery life (standby)     | N/A  | Up to 1700 hours |
| Telemetry frequency        | N/A  | 2.4GHz ISM       |
| System range               | N/A  | Up to 350m       |
| Sampling rate              | N/A  | 10Hz (500Hz max) |

### Running line monitor typical dimensions - bespoke design available on request

| Product code (wireless)     | 10049   | 10050   | 10051   | 10052   |
|-----------------------------|---------|---------|---------|---------|
| Product code (cabled)       | 10070   | 10071   | 10072   | 10073   |
| Model type                  | Model 1 | Model 2 | Model 3 | Model 4 |
| Sheave sizes available (mm) | 10 - 25 | 22 - 28 | 32 - 40 | 42 - 48 |
| A mm                        | 722     | 810     | 963     | 1028    |
| B mm                        | 250     | 270     | 297     | 331     |
| C mm                        | 62      | 90      | 90      | 95      |
| D mm                        | 601     | 785     | 899     | 936     |
| E mm                        | 112     | 146     | 148     | 153     |
| F mm                        | 162     | 186     | 188     | 193     |
| G mm (wireless only)        | 95      | 95      | 95      | 95      |



**SmartLoad® line monitors are available for use in hazardous area Zones 1 and 2**



## Centre of gravity system | Available with SmartLoad® technology

**Scotload's centre of gravity (COG) system facilitates the safe lifting and transportation of structures and loads, where it is difficult to determine the centre of gravity by calculation.**

Our accurate, reliable and robust COG system minimises the risk of incidents during lifting operations. A lift's centre of gravity is often the single most undervalued property of a load. Given the opportunity, if the COG is not centralised, or the load is close to its limit, rotation can occur and the integrity of your lift and the safety of your personnel are put at risk.

### Integration with SmartLoad® technology

Integrating our award winning SmartLoad® technology, the system comprises load cells which weigh and automatically calculate your lift's centre of gravity. Our custom designed software can display the COG as the lift is in progress. The lift load data is then stored and available to download for analysis and reporting.

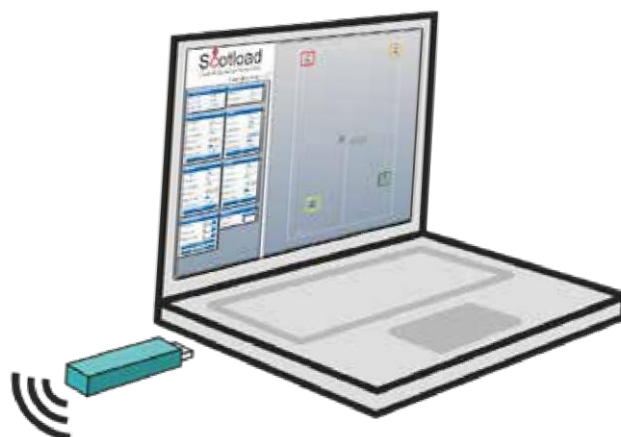
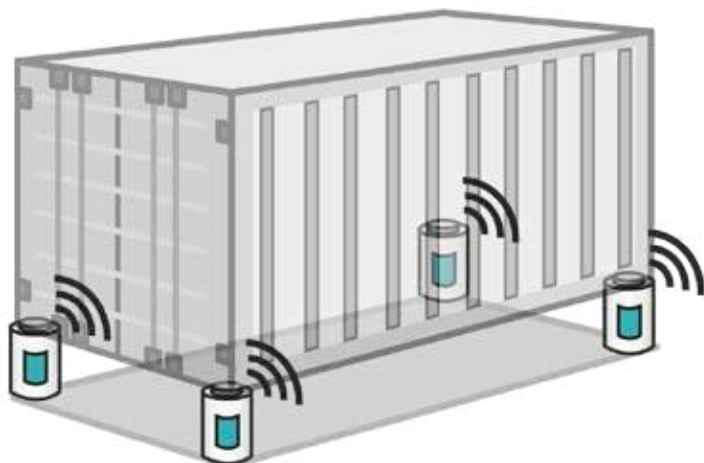
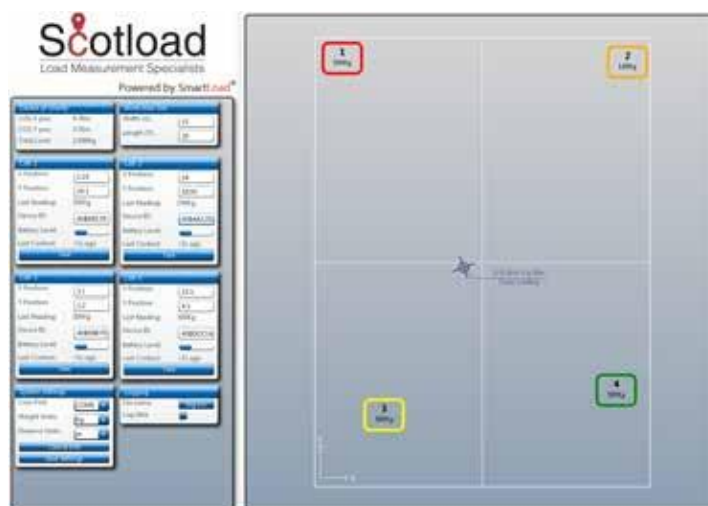
The flexibility of our SmartLoad® technology means that the COG software can be used with your existing SmartLoad® load cells, removing the need for expensive full system upgrades.

#### Options

- Available with SmartLoad® technology
- Cabled or wireless
- Hazardous area Zone 0, 1 and 2

#### Features and benefits

- Live COG indication
- Accurate, reliable and robust
- Determines both weight and centre of gravity
- Facilitates safe lifting
- Simple and intuitive set up and design
- Can be used with multiple load cells and configurations





[www.scotload.com](http://www.scotload.com)  
[www.metesco.nl](http://www.metesco.nl)

Our websites for all  
the required information



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