



N ALS-B

Description

- Ranges from 1 tonne to 400 tonne
- High tensile carbon steel construction
- Environmentally sealed to IP67
- Simple installation and operation
- Shackle and load pin fully certified
- Optional load centralising bobbin
- Can be supplied with amplified output
- Many other options available



Our range of load shackles are designed for lifting and weighing in rugged or harsh environments. The shackle pins are forged from high tensile stainless steel and are machined to an exacting specification. The basic shackle uses the Crosby G2130 (1 to 25te) and G2140 (40 to 400te) series.

This range of loads cells is proof loaded to 150% of the normal rated load, and is available in a range from 1 tonne to 400 tonne. The integral cable is normally enclosed in an armoured rubber hydraulic hose to give physical and environmental protection. The ALS-B is internally gauged and the whole instrumented area is sealed to IP67 to protect it in service.

They are simple to install and are available in standard shackle sizes. As an option, a rotating bobbin can be supplied to centralise the load and to minimise any point-load effects when the shackle is placed under load. We are also always happy to discuss any special requirements that can be accommodated.

The ALS-B series can be supplied on its own or combined with our extensive range of instrumentation to provide a complete load monitoring package.

Typical Applications

- Under-hook hoist/crane weighing
- Cable tension monitoring
- Towing/mooring Tension
- Crane safe load monitoring

Available options

- Special ranges and capacities up to 2000te
- Special electrical connections
- Integral signal conditioning
- Centralising load bobbin
- Subsea and offshore versions
- Lloyds, ABS or DNV witness testing
- TEDS option (when used with TR150 handheld display)
- ATEX version available (see ALS-A datasheet)

Specifications

| | |
|-----------------------------|---|
| Rated load (tonnes) | 1, 2, 3.25, 4.75, 6.5, 9.5, 12, 17, 25, 40, 55, 85, 120, 150 200, 300, 400 |
| Proof load | 150% of rated load |
| Ultimate breaking load | 300% of rated load |
| Output | Between 1.8mV and 3.6mV |
| Non-linearity | <±1% of rated load (typically) |
| Non-repeatability | <±0.1% of rated load |
| Excitation voltage | 10vdc recommended, 15vdc maximum |
| Bridge resistance | 350Ω |
| Insulation resistance | >500MΩ @ 500vdc |
| Operating temperature range | -20 to +70°C |

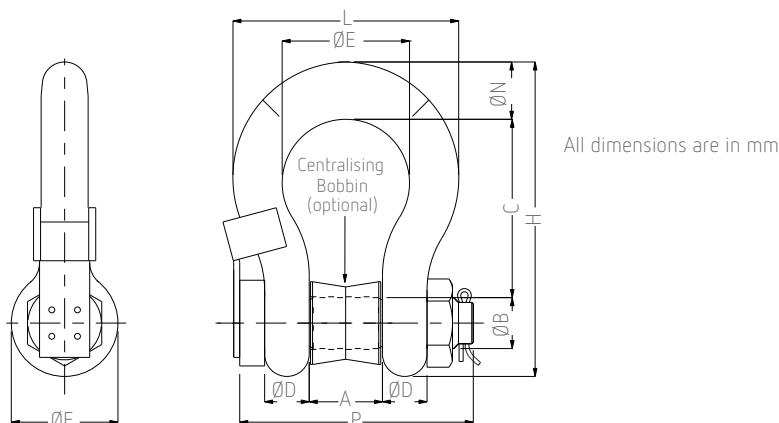
Specifications (continued)

| | | |
|--------------------------------|---|--------------------|
| Compensated temperature range | -10 to +50°C | |
| Zero temperature coefficient | <±0.01% of rated load / °C | |
| Span temperature coefficient | <±0.01% of rated load / °C | |
| Environmental protection level | IP67 | |
| Connection type | 10 metre 4 core screened PUR cable (glanded exit) | |
| Wiring connections | +ve supply: Red | -ve supply: Blue |
| | +ve signal: Green | -ve signal: Yellow |

Special options

| | |
|-------------------------------------|---|
| Special ranges | The ALS-B can be supplied in any range, between 1te and 400te and calibrated as required. Usually we will choose the nearest standard shackle size. We can also offer special design shackles up to 2000te. Please contact our design team for more details |
| Special electrical | The standard ALS-B cable exits the shackle pin via a gland and is restrained using the anti-rotation bracket. We can offer variations to the electrical connection method. For example, integral connectors, special cable length etc. For more details contact our office. |
| Integral signal conditioning | <p>We can offer various integral signal conditioning options:</p> <p>Analogue Signals 4-20mA 2-wire current output (7.5 to 30vdc supply) 4-20mA 3-wire current output (10 to 30vdc supply) 0-5vdc 3-wire voltage output (8.5 to 28vdc supply) 0-10vdc 3-wire voltage output (13 to 30vdc supply)</p> <p>Digital Signals RS232 digital - various protocols (5.4 to 18vdc supply) RS485 digital - various protocols (5.4 to 18vdc supply)</p> |
| Centralising bobbin | We can offer an optional centralising bobbin. This helps improve the overall accuracy in certain cable tension applications. The bobbin is shown pictorially in the drawing below. |
| Subsea or offshore | We are able to offer fully submersible versions, which are normally supplied with underwater mateable connectors. These versions can also be pressure tested by us and witnessed by a third party at any point through the manufacturing process. We regularly have ABS, Lloyds or DNV inspectors on site. |
| Radio telemetry | We have a version available that requires no cable connection, using radio telemetry to transmit data. There is a separate data sheet available for this product (TELSHACK-B). |

Dimensions



■ Dimensions (continued)

| Rating (tonnes) | A | ØB | C | ØD | ØE | ØF | H | L | ØN | P | Weight (kgs) | Resolution (tonnes) |
|-----------------|------|------|------|------|------|------|------|------|------|-----|--------------|---------------------|
| 1 | 16.8 | 11.2 | 36.6 | 9.65 | 26.2 | 23.1 | 63 | 44.2 | 9.65 | 90 | 2 | 0.001 |
| 2 | 20.6 | 16 | 47.8 | 12.7 | 33.3 | 30.2 | 83.5 | 58.5 | 12.7 | 97 | 2.3 | 0.002 |
| 3.25 | 26.9 | 19.1 | 60.5 | 16 | 42.9 | 38.1 | 106 | 74.5 | 17.5 | 96 | 2.8 | 0.005 |
| 4.75 | 31.8 | 22.4 | 71.5 | 19.1 | 51 | 46 | 126 | 89 | 20.6 | 111 | 3 | 0.005 |
| 6.5 | 36.6 | 25.4 | 84 | 22.4 | 58 | 53 | 148 | 102 | 24.6 | 122 | 3.2 | 0.005 |
| 9.5 | 46 | 31.8 | 108 | 28.7 | 74 | 68.5 | 190 | 131 | 31.8 | 156 | 5.2 | 0.01 |
| 12 | 51.5 | 35.1 | 119 | 31.8 | 82.5 | 76 | 210 | 146 | 35.1 | 171 | 8 | 0.01 |
| 17 | 60.5 | 41.4 | 146 | 38.1 | 98.5 | 92 | 254 | 175 | 41.1 | 201 | 12 | 0.02 |
| 25 | 73 | 51 | 178 | 44.5 | 127 | 106 | 313 | 225 | 57 | 236 | 18 | 0.02 |
| 40 | 73 | 50.8 | 178 | 44.5 | 127 | 106 | 313 | 225 | 57 | 236 | 18 | 0.05 |
| 55 | 82.5 | 57.2 | 197 | 50.8 | 146 | 122 | 347 | 258 | 61 | 269 | 25 | 0.05 |
| 85 | 105 | 69.9 | 267 | 66.5 | 184 | 148 | 455 | 324 | 79.2 | 351 | 45 | 0.1 |
| 120 | 127 | 82.5 | 330 | 76 | 200 | 165 | 546 | 365 | 92 | 387 | 85 | 0.1 |
| 150 | 133 | 95.5 | 372 | 95.5 | 229 | 203 | 625 | 419 | 105 | 448 | 125 | 0.1 |
| 200 | 184 | 121 | 397 | 95.5 | 279 | 267 | 743 | 533 | 152 | 580 | 215 | 0.2 |
| 300 | 213 | 152 | 495 | 121 | 330 | 305 | 895 | 635 | 172 | 610 | 364 | 0.2 |
| 400 | 255 | 175 | 650 | 165 | 325 | 350 | 1078 | 655 | 165 | 700 | 520 | 0.5 |

Due to continuous product development, ALTHEN and partners reserve the right to vary the foregoing details without prior notice.

The information provided herein is to the best of our knowledge true and accurate, it is provided for guidance only. All specifications are subject to change without prior notification.

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