

# Load cell with amplifier DLRx L002

## Features

- Voltage (DLRU) or current output (DLRI)
- Compact dimensions
- For tension (DLRI) and tension/compression (DLRU)
- Protection class IP 65
- Stainless steel



## Technical Data

|                               |                                                                         |                           |
|-------------------------------|-------------------------------------------------------------------------|---------------------------|
| Standard capacities           | 0...500 N<br>0...1000 N<br>0...2000 N                                   | 0...5000 N<br>0...10000 N |
| Output signal at FSR          | DLRU $\pm 10$ V<br>DLRI 4...20 mA                                       |                           |
| Linearity                     | 0,3% FS                                                                 |                           |
| Hysteresis                    | 0,3% FS                                                                 |                           |
| Non-repeatability             | < 0,1% FS                                                               |                           |
| Creep error                   | < 0,15% FS (after 30 min. with FS)                                      |                           |
| Zero balance                  | DLRU < 5 mV<br>DLRI < 8 $\mu$ A                                         |                           |
| Reset-Input active            | 5...33 VDC < 2 mA                                                       |                           |
| Reset-Input inactive          | < 1 VDC                                                                 |                           |
| Reset-Pulse                   | > 1 ms                                                                  |                           |
| Reset time                    | < 5 ms                                                                  |                           |
| Switching frequency           | 1000 Hz                                                                 |                           |
| Signal polarity               | DLRU bipolar (tension +10 V)<br>DLRI unipolar (tension 20 mA)           |                           |
| Noise                         | DLRU (0...5 kHz) < 5 mVpp<br>DLRI (0...5 kHz) < 8 $\mu$ A <sub>pp</sub> |                           |
| Compensated temperature range | 0...+70 °C                                                              |                           |
| Operating temperature range   | -20...+70 °C                                                            |                           |
| Storage temperature range     | -40...+85 °C                                                            |                           |
| Temperature effect zero       | < $\pm 0,02\%$ /K                                                       |                           |
| Temperature effect span       | < $\pm 0,03\%$ /K                                                       |                           |
| Bridge resistance             | Full bridge 350 $\Omega$                                                |                           |
| Isolation resistance          | > 3 G $\Omega$                                                          |                           |
| Excitation                    | DLRU 18...33 V<br>DLRI 14...33 V                                        |                           |
| Supply current                | DLRU < 60 mA<br>DLRI < 90 mA                                            |                           |
| – static load                 | 200% FS                                                                 |                           |
| – dynamic load                | 100% FS                                                                 |                           |
| Breaking load                 | 320% FS                                                                 |                           |
| Protection class              | IP 65                                                                   |                           |
| FS = Full scale output        |                                                                         |                           |

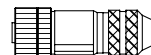
## Technical Data

|                    |                    |
|--------------------|--------------------|
| Cable              | 5 m, shielded, PUR |
| Load cell material | 1.4542             |

## Order Code

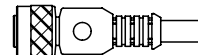
|            |              |          |            |          |                                              |
|------------|--------------|----------|------------|----------|----------------------------------------------|
| <b>DLR</b> | <b>L002.</b> | <b>B</b> | <b>TC/</b> | <b>/</b> | <b>Polarity</b>                              |
|            |              |          |            |          | <b>SP</b> Altered polarity                   |
|            |              |          |            |          | Option                                       |
|            |              |          |            |          | <b>C</b> Top cover                           |
|            |              |          |            |          | <b>CL10</b> 10 m cable length (5 m standard) |
|            |              |          |            |          | <b>CCL10</b> Combinations possible           |
|            |              |          |            |          | Load transmission                            |
|            |              |          |            |          | <b>TC</b> Tension/Compression (see drawing)  |
|            |              |          |            |          | Measuring range                              |
|            |              |          |            |          | <b>150</b> 0...500 N <b>250</b> 0...5000 N   |
|            |              |          |            |          | <b>210</b> 0...1000 N <b>310</b> 0...10000 N |
|            |              |          |            |          | <b>220</b> 0...2000 N                        |
|            |              |          |            |          | Combined error                               |
|            |              |          |            |          | <b>B</b> 0,3% Connection                     |
|            |              |          |            |          | <b>14C</b> 5-pin connector series M12 x 1    |
|            |              |          |            |          | Output                                       |
|            |              |          |            |          | <b>U</b> Voltage output $\pm 10$ V           |
|            |              |          |            |          | <b>I</b> Current output 4...20 mA            |

## Accessories (not included in delivery)



Series 713

Bushing, control side, 5-pin, Part No. 10135462



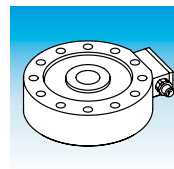
M12 x 1

Bushing with cable, control side, 5-pin

ES 34CP2B 5-pin (shielded) 2 m, PUR, (Part No. 10144720)

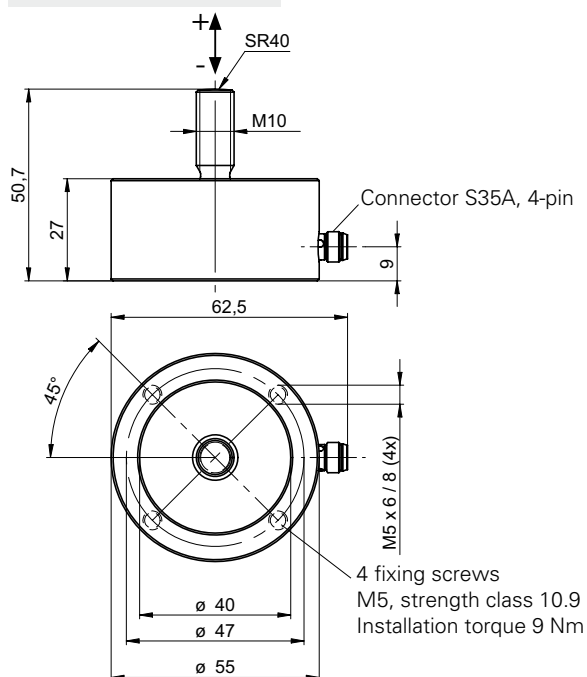
ES 34CP5B 5-pin (shielded) 5 m, PUR, (Part No. 10137485)

ES 34CP10B 5-pin (shielded) 10 m, PUR, (Part No. 10155587)

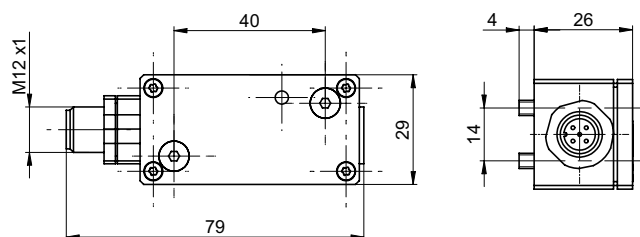


## Dimensions (mm)

### Load cell



### Amplifier DABx AD2T



## Electrical Connection

### DLRU

#### 14C



#### Pin

|         |                   |
|---------|-------------------|
| 1       | +Vs               |
| 2       | -V <sub>OUT</sub> |
| 3       | GND               |
| 4       | +V <sub>OUT</sub> |
| 5       | Reset             |
| Housing | ⏏                 |

### DLRI

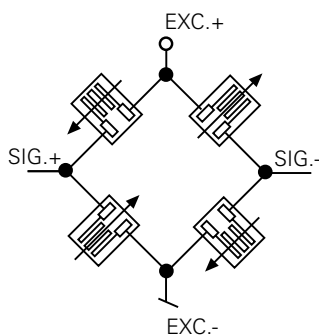
#### 14C



#### Pin

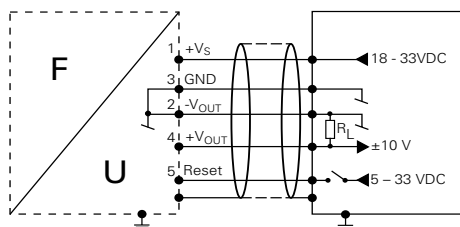
|         |                   |
|---------|-------------------|
| 1       | +Vs               |
| 2       | -I <sub>OUT</sub> |
| 3       | GND               |
| 4       | +I <sub>OUT</sub> |
| 5       | Reset             |
| Housing | ⏏                 |

### Bridge Circuit



## Wiring

### DLRU



### DLRI

