



# PENKO Engineering BV

The Leading Experts In Weighing & Dosing

300kg-5000kg  
1000lbs-5000lbs

# 3510

## Stainless Steel Shear Beam Load Cell

### FEATURES

- Capacities 300–5000 kg, 1000–5000 lbs
- Stainless steel construction
- OIML R60 and NTEP approved
- Hermetically sealed to IP68 and IP69K
- Specially designed for harsh environment
- **Optional**
  - EEx ia IIC T6 hazardous area approval
  - FM approval available
  - 1100Ω impedance available



### APPLICATIONS

- Low profile platforms
- Pallet truck weighing
- Tank and silo weighing
- Harsh environment weighing
- Food industry weighing

profile platforms, pallet truck weighers, tanks and silos. The guide slots incorporated into the upper and lower mounting faces enable manufacturers to easily position the load cell.

Hermetically sealed against moisture, the construction of the Model 3510 in combination with a polyurethane dual shielded cable, enables continuous operation in harsh environments while maintaining a high operating specification.

### DESCRIPTION

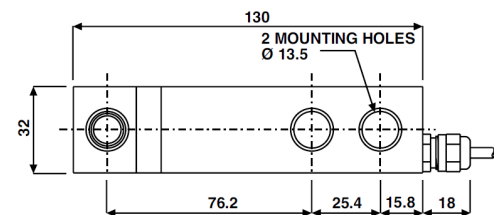
Model 3510 provides the weighing industry with the ultimate protection necessary for today's hostile environments in an economical low profile range suitable for platform scale manufacture.

Its low profile and all welded sealing combined with high accuracy makes this load cell ideally suited for low

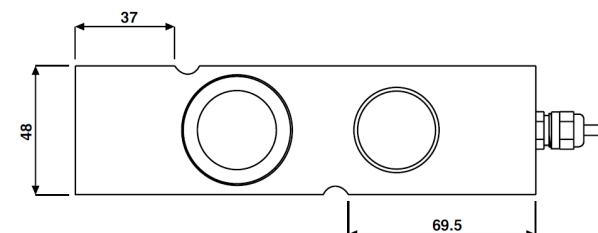
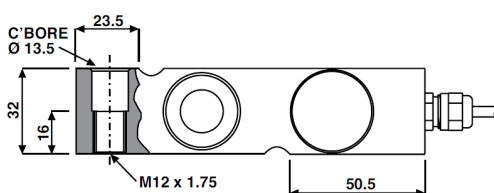
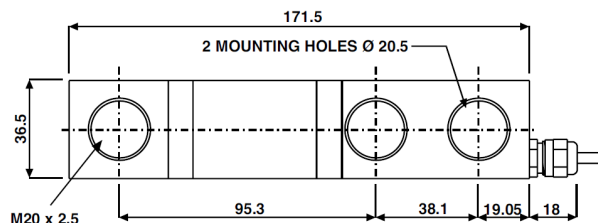
The two additional sense wires feed back the voltage reaching the load cell. Complete compensation of changes in lead resistance due to temperature change and/or cable extension, is achieved by feeding this voltage into the appropriate electronics.

### OUTLINE DIMENSIONS in millimeters

**DIMENSIONS FOR CAPACITIES 300, 500, 1000 and 2000 kg**



**DIMENSIONS FOR CAPACITIES 3000 and 5000 kg**



Standard end loading shown.

Options include:

- 'Through-hole' - plain or threaded.
- 'T-End' - supplied current and voltage matched for platforms.
- Imperial capacities can be manufactured with M12 or 1/2"-20 UNC threading

# Load cell 3510: 300kg-5000kg 1000lbs-4000lbs

# Technical Data

| SPECIFICATIONS                          |  |              |                     |                     |                         |
|---|--|--------------|---------------------|---------------------|-------------------------|
| PARAMETER                               | VALUE  |              |                     |                     | UNIT                    |
| Rated capacity—R.C. (E <sub>max</sub> ) | 300, 500, 750, 1000, 1200, 2000, 3000, 5000                |              |                     |                     | kg                      |
| Rated capacity—R.C. (E <sub>max</sub> ) | 1000, 1500, 2500, 4000                                     |              |                     |                     | lbs                     |
| NTEP/OIML accuracy class                | NTEP   | Non-Approved | C3                  | C6                  |                         |
| Maximum no. of intervals (n)            | 3000 single<br>5000 multiple                               | 1000         | 3000 <sup>(1)</sup> | 6000 <sup>(2)</sup> |                         |
| Y = E <sub>max</sub> /V <sub>min</sub>  | 12500  | 1400         | 12000               | 20000               | Maximum available 20000 |
| Rated output—R.O                        | 2.0 for kg and 3.0 for lbs                                 |              |                     |                     | mV/V                    |
| Rated output tolerance                  | 0.1  |              |                     |                     | ±% of rated output      |
| Zero balance                            | 2  |              |                     |                     | ±% of rated output      |
| Zero return, 30 min.                    | 0.015% for III/3000 Single<br>0.010% for III/5000 Multiple | 0.0300       | 0.0170              | 0.0083              | ±% of applied load      |
| Total error                             | 0.0200   | 0.0500       | 0.0200              | 0.0100              | ±% of rated output      |
| Temperature effect on zero              | 0.0023   | 0.0100       | 0.0023              | 0.0007              | ±% of rated output/°C   |
| Temperature effect on output            | 0.0010   | 0.0030       | 0.0010              | 0.00058             | ±% of applied load/°C   |
| Temperature range, compensated          | -10 to +40   |              |                     |                     | °C                      |
| Temperature range, safe                 | -30 to +80   |              |                     |                     | °C                      |
| Maximum safe central overload           | 150  |              |                     |                     | % of R.C.               |
| Ultimate central overload               | 300  |              |                     |                     | % of R.C.               |
| Excitation, recommended                 | 10   |              |                     |                     | VDC or VAC RMS          |
| Excitation, maximum                     | 15   |              |                     |                     | VDC or VAC RMS          |
| Input impedance                         | 380±10   |              |                     |                     | Ω                       |
| Output impedance                        | 355±5  |              |                     |                     | Ω                       |
| Insulation resistance                   | >2000  |              |                     |                     | MΩ                      |
| Cable length                            | 5  |              |                     |                     | m                       |
| Cable type                              | 6-wire, braided, polyurethane, dual floating screen        |              |                     |                     | Standard                |
| Construction                            | Stainless steel  |              |                     |                     |                         |
| Environmental protection                | IP68, IP69K  |              |                     |                     |                         |
| Recommended torque                      | 136.0 (3000 and 5000 kg—205.0)                             |              |                     |                     | N*m                     |

## WIRING SCHEMATIC DIAGRAM

