

3110-3115

HEAVY COMPRESSION LOAD CELLS (VERY HIGH CAPACITIES)

High-capacity compression load cells.



Model 3115 - 3 MN



Features

- o Wide range of capacities: 30 kN (3 t) up to 50 MN (5.000 t)
- o Material: nickel-plated steel (3115) or stainless steel (3110)
- o Protection class: IP65
- o A whole range of mounting accessories is available
- o Cable length: see drawing table - CL (other lengths available on request)
- o Also available as standard reference load cells according to ISO 376 (classes 1, 0,5 and 00 - see specific data sheet 3115-ISO)

Most popular options



Ex i



Application(s)

SENSY's load cells 3110-3115 are perfectly designed for the following applications:

- Industrial force measurement, industrial process control (ISO 9000, ...),
- Primary transducer for universal testing machine, structure weighing.

Capacities

3110 - 3115: 30 - 50 - (75) - 100 - (150) - 200 - 300 - 500 kN
(0.75) - 1 - 1.5 - 2 - 3 - 5 - 7.5 - 10 - 15 - 20 - 30 - 40 - 50 MN

| Specifications | 0.25 % | 0.1 % | 0.05 % | 0.03 % | |
|-------------------------------------------------|--------------|--------------|--------------|--------------|-------------|
| Accuracy class | 0.25 % F.S.* | 0.1% F.S.* | 0.05 % F.S.* | 0.03% F.S.* | - |
| Combined error (non-linearity + hysteresis) | <± 0.25 | < ± 0.1 | <± 0.05 | <± 0.03 | % F.S.* |
| Repeatability error | <± 0.1 | <± 0.03 | <± 0.02 | <± 0.015 | % F.S.* |
| Creep error over 30 min. | <± 0.1 | <± 0.06 | <± 0.04 | <± 0.025 | % F.S.* |
| Reference temperature | 23 | 23 | 23 | 23 | °C |
| Compensated temperature range | -10...+45 | -10...+45 | -10...+45 | -10...+45 | °C |
| Service temperature range | -30...+70 | -30...+70 | -30...+70 | -30...+70 | °C |
| Storage temperature range | -50...+85 | -50...+85 | -50...+85 | -50...+85 | °C |
| Temperature coefficient of the sensitivity | <± 0.05 | <± 0.05 | <± 0.035 | <± 0.015 | % F.S./10°C |
| Temperature coefficient of zero signal | <± 0.035 | <± 0.035 | <± 0.03 | <± 0.023 | % F.S./10°C |
| Zero balance | ± 0.02 | ± 0.02 | ± 0.02 | ± 0.02 | mV/V |
| Nominal sensitivity | 1.5 | 1.5 | 1.5 | 1.5 | mV/V |
| Sensitivity tolerance | <± 0.3 | <± 0.3 | <± 0.3 | <± 0.2 | % |
| Input resistance | 350..700 ± 2 | 350..700 ± 2 | 350..700 ± 2 | 350..700 ± 2 | ohm(s) |
| Output resistance | 350..700 ± 2 | 350..700 ± 2 | 350..700 ± 2 | 350..700 ± 2 | ohm(s) |
| Insulation resistance (50 V) | > 5000 | > 5000 | > 5000 | > 5000 | Mohm(s) |
| Reference excitation voltage | 10 | 10 | 10 | 10 | VDC |
| Permissible nominal range of excitation voltage | 3...12 | 3...12 | 3...12 | 3...12 | VDC |
| Safe load limit | 150 | 150 | 150 | 150 | % F.S.* |
| Breaking load | >300 | >300 | >300 | >300 | % F.S.* |
| Permissible dynamic loading | 50 | 50 | 50 | 50 | % F.S.* |
| Static lateral force limit | 15 | 15 | 15 | 15 | % F.S.* |

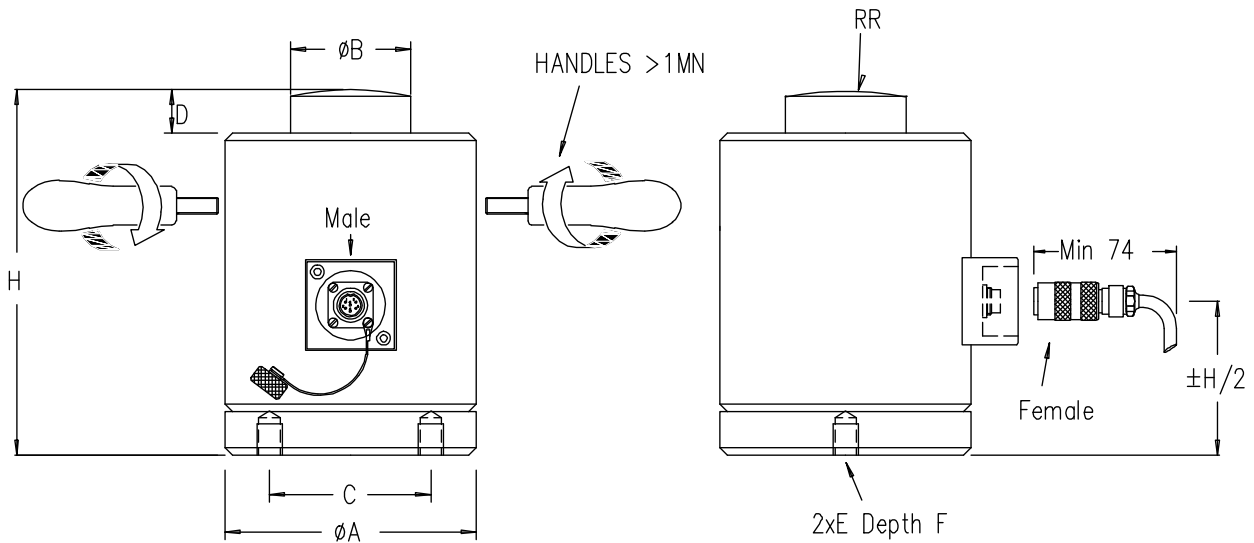
* F.S. : Full Scale.

Specifications subject to change without notice.



ISO 9001 certified

3110-3115 > STANDARD DIMENSIONS



| Ref. Item* | Capacities | ØA | ØB | C | D | E | F | H | RR | CL (m) | Max. Deflexion (mm) | Weight (kg) |
|------------|--------------|-----|-----|-----|----|-----|----|-----|------|--------|---------------------|-------------|
| 311x-A | 30 - 50 kN | 64 | 36 | 45 | 20 | M10 | 12 | 135 | 250 | 6 | 0.12 | 2 |
| 311x-B | 75 - 200 kN | 64 | 36 | 45 | 20 | M10 | 12 | 135 | 250 | 6 | 0.16-0.18 | 2.2 |
| 311x-C | 300 - 500 kN | 89 | 56 | 60 | 30 | M12 | 15 | 160 | 300 | 6 | 0.18-0.20 | 4.5 |
| 311x-D | 0.75 - 1 MN | 99 | 64 | 65 | 30 | M16 | 16 | 190 | 400 | 6 | 0.33-0.34 | 6 |
| 311x-E | 1.5 - 2 MN | 119 | 90 | 90 | 30 | M16 | 16 | 225 | 400 | 6 | 0.29-0.35 | 20 |
| 311x-F | 3 MN | 159 | 125 | 100 | 40 | M20 | 20 | 270 | 450 | 12 | ±0.4 | 42 |
| 311x-G | 5 MN | 205 | 160 | 125 | 50 | M20 | 35 | 350 | 500 | 12 | ±0.5 | 90 |
| 311x-H | 7.5 - 10 MN | 294 | 200 | 200 | 60 | M30 | 40 | 460 | 600 | 12 | ±0.7 | 243 |
| 311x-I | 15 MN | 330 | 250 | 250 | 65 | M30 | 40 | 510 | 800 | 12 | ±0.75 | 330 |
| 311x-J | 20 MN | 364 | 250 | 270 | 75 | M36 | 50 | 550 | 800 | 12 | ±0.8 | 446 |
| 311x-K | 30 MN | 445 | 300 | 300 | 75 | M36 | 50 | 660 | 1000 | 12 | ±1 | 770 |
| 311x-L | 40 MN | 495 | 360 | 330 | 90 | M36 | 50 | 730 | 1200 | 12 | ±1.1 | 1060 |
| 311x-M | 50 MN | 540 | 430 | 360 | 90 | M36 | 50 | 900 | 2000 | 12 | ±1.2 | 1587 |

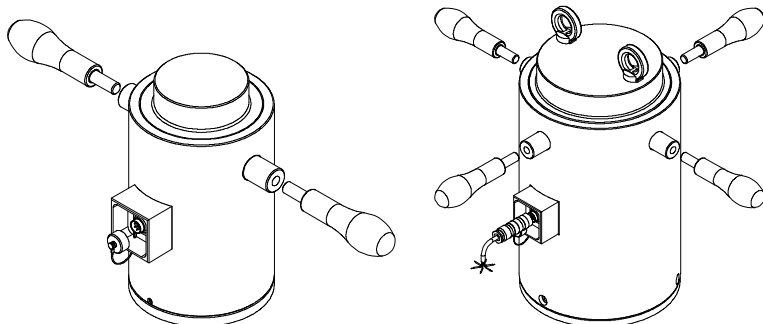
Note: 2 - 50 MN (200 - 5000 t) usually according to customer's design specifications.

*x=Material: 3110 - stainless steel; 3115 - alloy steel

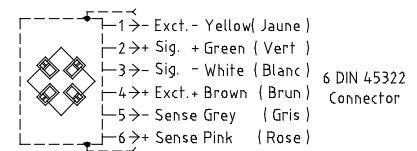
→ Other capacities and dimensions available on request

Dimensions in mm

Other views



Wiring



Standard : Cable screen not connected to transducer
Faradisation non connectée au capteur

Load direction

