

3100P

PENDULAR COMPRESSION LOAD CELLS

Compression load cells



Model 3100P - 20 t



Features

- o Canister, high-capacity load cell (up to 500 t)
- o Made completely of stainless steel
- o Protection class: IP67
- o Pendular technology - Self-restoring
- o Available in C1.5 (1500 d) OIML / R 60 (EN 45501)
- o Matched impedance and sensitivity (for parallel connection)
- o Whole range of mounting accessories is available
- o Cable length: 12 m (500 t: 20 m) (other lengths available on request)

Most popular options



Ex i



IP68

Application(s)

SENSY's load cells 3100P are perfectly designed for the following applications:

- Weighbridges, high-capacity reactor weighing,
- Silos, tanks or hoppers weighing.

Capacities

3100P: (5) - (7.5) - 10 - (15) - 20 - 30 - 50 - (75) - 100 - (150) - 200 - 300 - 500** t

| Specifications | 0.25 % | 0.1 % | C 1.5 | 0.03 % | |
|---|--------------|--------------|--------------|--------------|-------------|
| Accuracy class | 0.25 % F.S.* | 0.1% F.S.* | 1500 d OIML | 0.03% F.S.* | - |
| Combined error (non-linearity + hysteresis) | <± 0.25 | < ± 0.1 | <± 0.035 | <± 0.03 | % F.S.* |
| Repeatability error | <± 0.1 | <± 0.03 | <± 0.015 | <± 0.015 | % F.S.* |
| Creep error over 30 min. | <± 0.1 | <± 0.06 | <± 0.035 | <± 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 | <± 0.017 | <± 0.015 | % F.S./10°C |
| Temperature coefficient of zero signal | <± 0.035 | <± 0.035 | <± 0.025 | <± 0.023 | % F.S./10°C |
| Nominal sensitivity | 1.5 | 1.5 | 1.5 | 1.5 | mV/V |
| Sensitivity tolerance | <± 0.3 | <± 0.3 | <± 0.2 | <± 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.

** : 2 mV/V

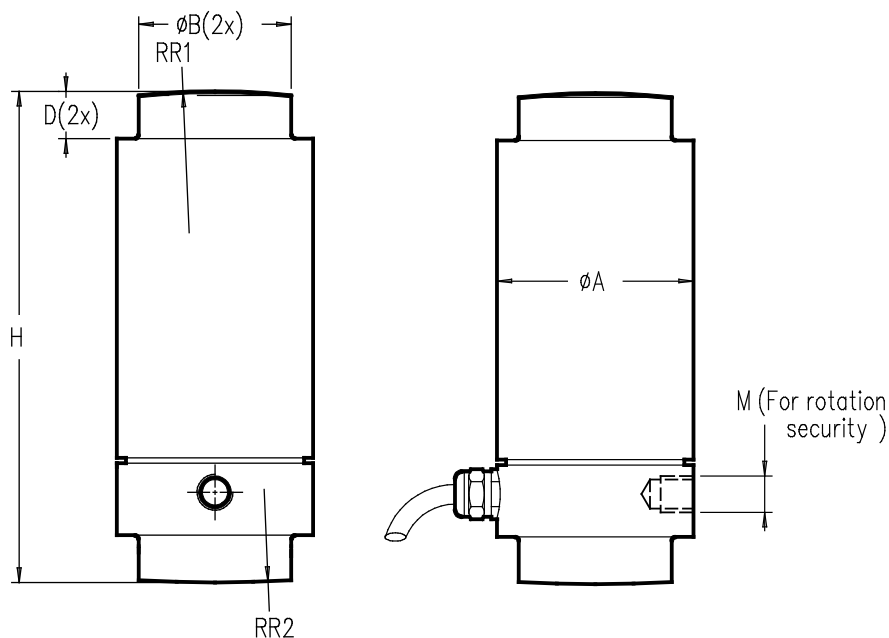
Note: C 1.5 only available for capacities between 5 and 100 t.

Specifications subject to change without notice.



ISO 9001 certified

3100P > STANDARD DIMENSIONS



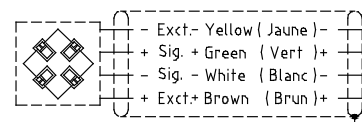
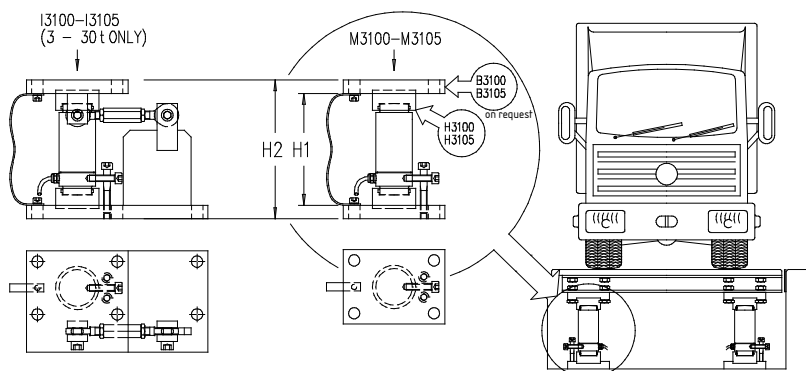
| Ref. Item | Capacities | $\varnothing A$ | $\varnothing B$ | D | H | M | RR1 | RR2 | H1 | H2 | Max. Deflexion (mm) | Weight (kg) |
|-----------|-------------|-----------------|-----------------|----|-----|-----|-----|-----|-----|-----|---------------------|-------------|
| 3100P-A | 5 - 30 t | 54 | 42 | 13 | 135 | M10 | 200 | 250 | 165 | 205 | 0.03 - 0.1 | 2.2 |
| 3100P-B | 50 - 100 t | ± 89 | 64 | 30 | 190 | M12 | 300 | 300 | 234 | 294 | 0.26 - 0.34 | 5 |
| 3100P-C | 150 - 200 t | 115 | 90 | 20 | 210 | M16 | 400 | 400 | 290 | 370 | 0.33 | 15 |
| 3100P-D | 300 t | 136 | 110 | 20 | 240 | M16 | 400 | 400 | 338 | 418 | 0.4 | 23 |
| 3100P-E | 500 t | 180 | 130 | 25 | 350 | M12 | 600 | 600 | 610 | 594 | 0.57 | 46 |

→ Other capacities and dimensions available on request

Dimensions in mm

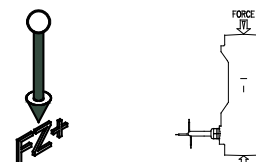
Accessories

Wiring code

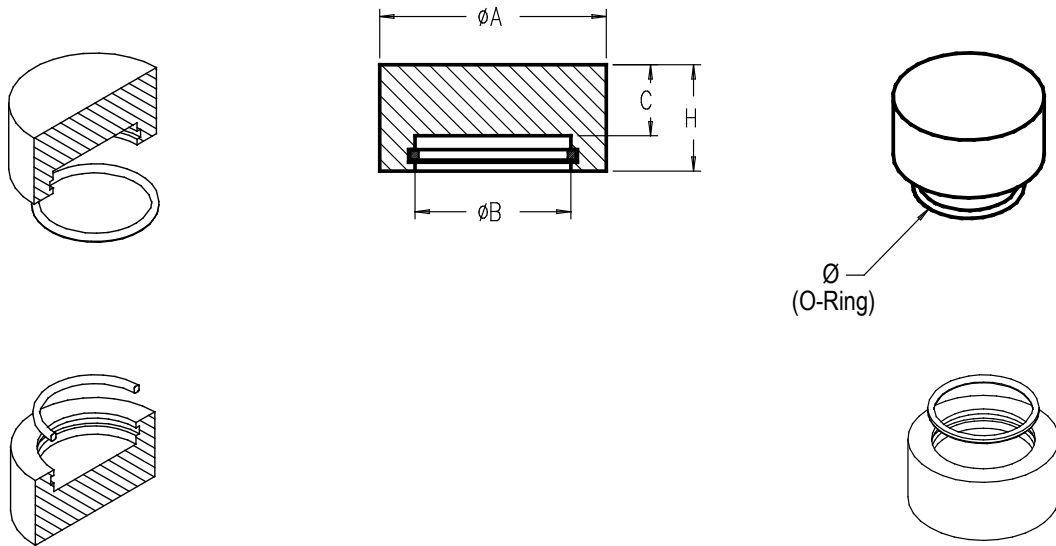


Standard : Cable screen not connected to transducer
 Faradisation non connectée au capteur

Load direction



H3100P > STANDARD DIMENSIONS



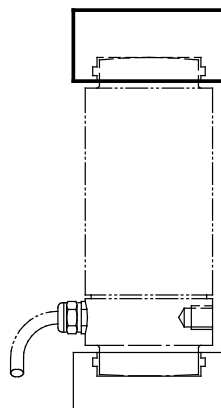
| Ref. Item* | Capacities | ø A | ø B | C | H | ø (O-Ring) | Weight (kg) |
|------------|-------------|-----|-----|----|-----|------------|-------------|
| H3100P-A | 5 - 30 t | 64 | 44 | 20 | 30 | 42 x 3 | ±0.65 |
| H3100P-B | 50 - 100 t | 99 | 66 | 32 | 43 | 64 x 4 | ±2.3 |
| H3100P-C | 150 - 200 t | 128 | 92 | 50 | 65 | 90 x 5 | ±6 |
| H3100P-D | 300 t | 148 | 112 | 59 | 75 | 110 x 5 | ±9 |
| H3100P-E | 500 t | 178 | 132 | 90 | 105 | 130 x 5 | ±19.3 |

*Material: stainless steel

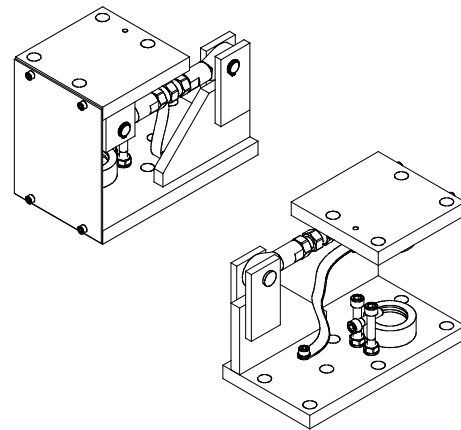
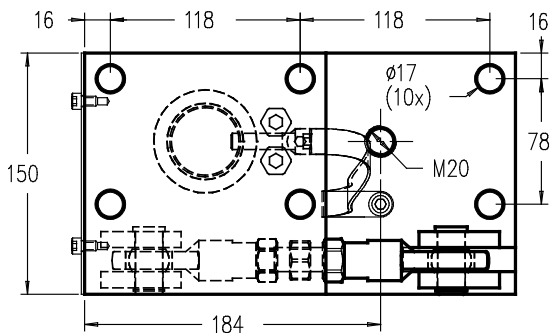
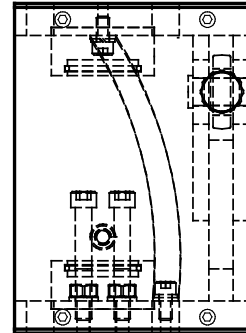
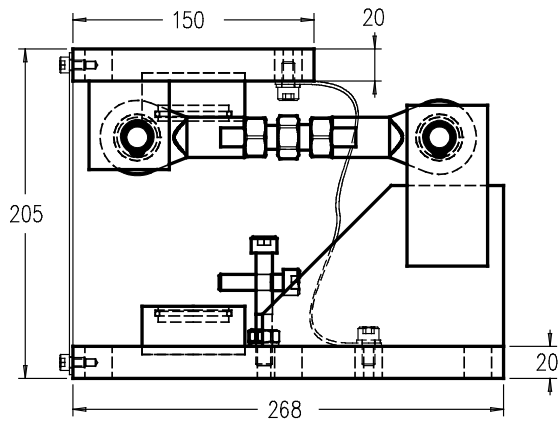
→ Other capacities and dimensions available on request

Dimensions in mm

Other view



I3100P-I3105P > STANDARD DIMENSIONS

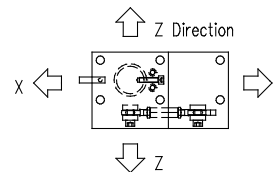
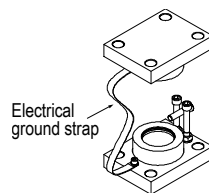
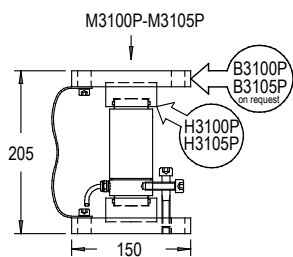


| Ref. Item* | Capacities |
|--|------------|
| I310xP-A | 5 - 30 t |
| * x=Material: I3100P - stainless steel; I3105P - alloy steel | |

→ Other capacities and dimensions available on request

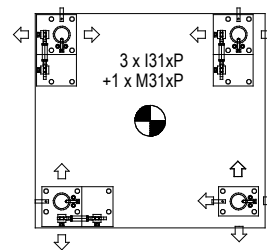
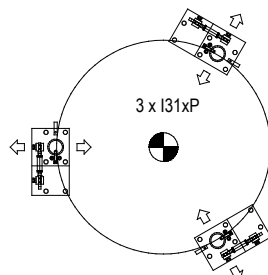
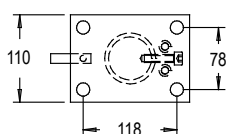
Dimensions in mm

Other views

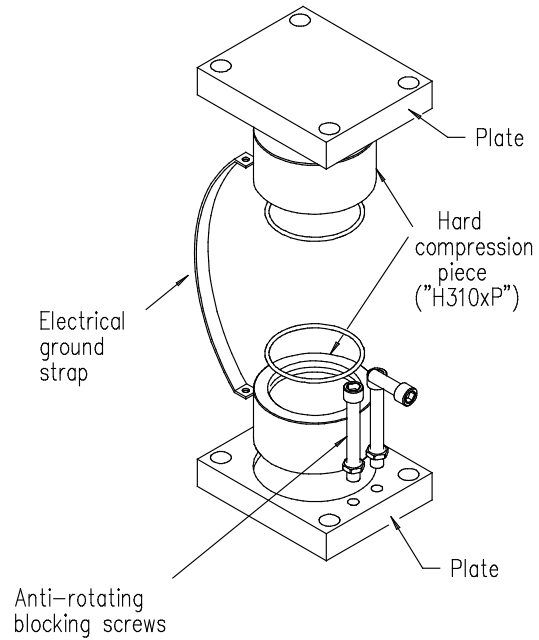
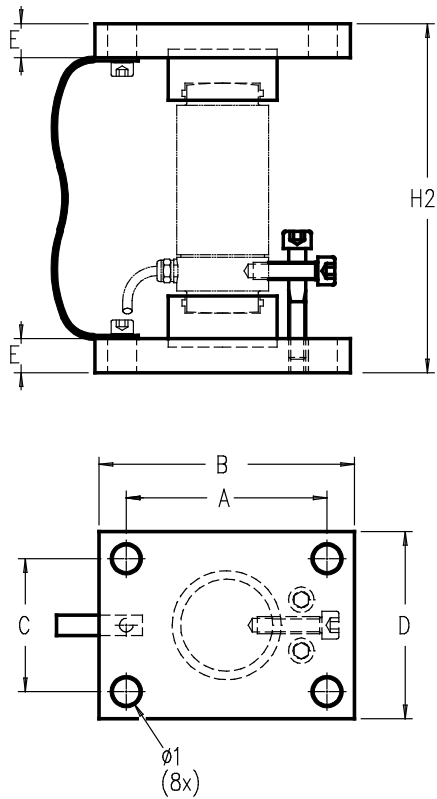


X Direction
(MAX. 5200 kg STAT.
2240 kg DYN.)

Stainless steel
(MAX. 2100 kg STAT.
800 kg DYN.)



M3100P-M3105P > STANDARD DIMENSIONS



| Ref. Items | Capacities | A | B | C | D | E | Ø1 | H2 | Weight (kg) |
|------------|-------------|-----|-----|-----|-----|----|----|-----|-------------|
| M310xP-A | 5 - 30 t | 118 | 150 | 78 | 110 | 20 | 17 | 205 | ±5.7 |
| M310xP-B | 50 - 100 t | 130 | 170 | 90 | 130 | 30 | 21 | 294 | ±13 |
| M310xP-C | 150 - 200 t | 185 | 235 | 135 | 185 | 40 | 25 | 370 | ±35.5 |
| M310xP-D | 300 t | 185 | 235 | 135 | 185 | 40 | 25 | 418 | ±41 |
| M310xP-E | 500 t | 200 | 260 | 200 | 260 | 40 | 27 | 594 | ±78 |

*x=Material: M3100P - stainless steel; M3105P - alloy steel

→ Other capacities and dimensions available on request

Dimensions in mm

Other view

