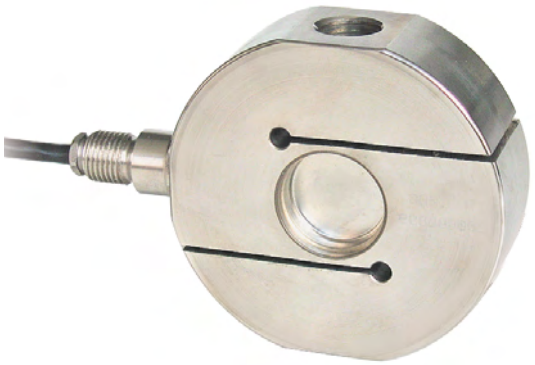
# CTL

## TENSION (COMPRESSION) LOAD CELLS

LAUMAS®

OMETRYS measurement technologies

### Capacity from 100 kg to 12500 kg



- 17-4 PH STAINLESS STEEL
- COMBINED ERROR ≤ ±0.02%
- PROTECTION CLASS IP68

| CAPACITY kg | ACCURACY CLASS C3 | | | NET WEIGHT (kg) | CODE |
|---|---|---|---|---|---|
| 100 | – | – | – | 0.7 | CTL100 |
| 200 | – | – | – | 0.7 | CTL200 |
| 300 | – | – | – | 0.7 | CTL300 |
| 500 | • | • | • | 1.4 | CTL500 |
| 1000 | • | • | • | 1.4 | CTL1000 |
| 2500 | • | • | • | 1.4 | CTL2500 |
| 5000 | • | • | • | 2.6 | CTL5000 |
| 7500 | • | • | • | 2.7 | CTLA7500 |
| 10000 | • | • | • | 3.7 | CTLA10000 |
| 12500 | • | • | • | 4.8 | CTL12500 |

⌊⌋ ON REQUEST

## CERTIFICATIONS

OIML R60 C3

Complies with the Eurasian Customs Union standards

Equivalent of the CE marking for the United Kingdom

Complies with United Kingdom regulations for legal for trade use

CERTIFICATIONS ON REQUEST

IP69K — Declaration of conformity + IP69K marking protection rating
*Water protection in case of high-pressure or steam jet cleaning (test: pressurized water is sprayed from a distance of max 150 mm)*
*Water pressure: 100 bar; temperature: 80 °C; test duration: 250 seconds (reference standard: DIN 40050-9)*

Accredia traceable calibration report

ATEX II 1GD *(zone 0-1-2-20-21-22)* ( CE - UKCA )

IECEx *(zone 0-1-2-20-21-22)*

Complies with the Eurasian Customs Union standards for use in potentially explosive atmospheres

Complies with the regulations of the Russian Federation for legal for trade use

## OPTIONS ON REQUEST

| | DESCRIPTION |
|---|---|
| | Two redundant strain gauges Wheatstone bridges (350 Ω) with two output cables; for dual safety systems. |

Rev. 0.0

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## TENSION (COMPRESSION) LOAD CELLS

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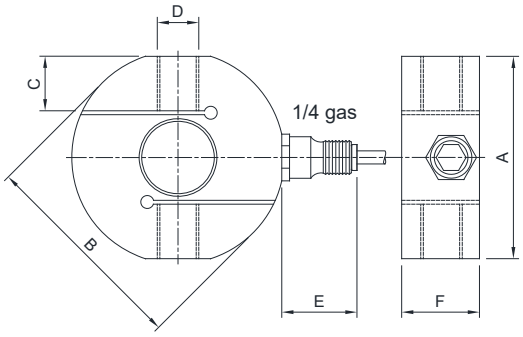
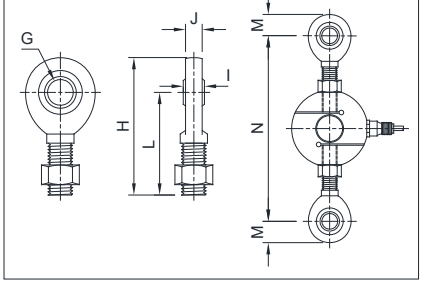
### COMPLEMENTARY ACCESSORIES

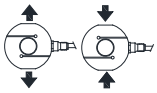
| DESCRIPTION | DIMENSIONS | LOAD CELL CAPACITY | CODE |
|---|---|---|---|
| Ball-and-socket joint with nut: | | | |
| stainless steel | M12x1.75 | 100-300 kg | EM12DADOINOX |
| | M16x2 | 500-1000 kg | EM16DADOINOX |
| | M20x1.5 | 2500 kg | EM20DADOINOX |
| | M24x2 | 5000-7500 kg | EM24DADOINOX |
| galvanized C45 steel | M12x1.75 | 100-300 kg | EM12DADO |
| | M16x2 | 500-1000 kg | EM16DADO |
| | M20x1.5 | 2500 kg | EM20DADO |
| | M24x2 | 5000-7500 kg | EM25DADO |
| | M30x2 | 10000 kg | EM30DADO |
| | M36x3 | 12500 kg | EM35DADO |

### DIMENSIONS (mm)




**Overall dimensions with ball-and-socket joints**



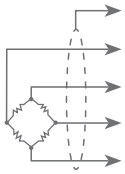
| | 100 kg 200 kg 300 kg | 500 kg 1000 kg | 2500 kg | 5000 kg 7500 kg | 10000 kg | 12500 kg |
|---|---|---|---|---|---|---|
| A | 60 | 78 | 78 | 90 | 103 | 120 |
| B | 63 | 82 | 82 | 102 | 114 | 129 |
| C | 14.5 | 21 | 21 | 24 | 30.5 | 37 |
| D | M12x1.75 | M16x2 | M20x1.5 | M24x2 | M30x2 | M36x3 |
| E | 29 | 29 | 29 | 29 | 29 | 29 |
| F | 22 | 30 | 30 | 45 | 50 | 55 |
| G | Ø12 | Ø17 | Ø20 | Ø25 | Ø30 | Ø35 |
| H | 71 | 92 | 104.5 | 126 | 146.5 | 181 |
| I | 10 | 14 | 16 | 20 | 22 | 25 |
| J | 8.5 | 11.5 | 13.5 | 17.5 | 19.5 | 21.5 |
| L | 54.5 | 69.5 | 77.5 | 94.5 | 110 | 140 |
| M | 16.5 | 22.5 | 27 | 31.5 | 36.5 | 41 |
| N (≈) | 143 | 175 | 190 | 235 | 260 | 324 |

### TECHNICAL FEATURES

| | | | |
|---|---|---|---|
| Material | | 17-4 PH stainless steel | |
| OIML R60 Accuracy class • Verification intervals | | - | C3 • 3000 |
| Nominal load (E max) | | 100 - 200 - 300 kg | 500 - 1000 - 2500 - 5000 kg 7500 - 10000 - 12500 kg |
| Minimum verification interval (V min) | | E max / 10000 | |
| Combined error | | ≤ ±0.02% | |
| Protection class | | IP68 | |
| Rated output | 2 mV/V ±0.1% | Input resistance | 350 Ω ±5 |
| Temperature effect on zero | 0.005% °C | Output resistance | 350 Ω ±2 |
| Temperature effect on span | 0.003% °C | Zero balance | ±1% |
| Temperature range OIML R60 | -10 °C / +40 °C | Insulation resistance | ≥5000 MΩ |
| Compensated temperature range | -20 °C / +70 °C | Safe overload (% of full scale) | 150% |
| Operating temperature range | -30 °C / +90 °C | Ultimate overload (% of full scale) | 300% |
| Creep at nominal load in 30 minutes | 0.05% | Deflection at nominal load | 0.3 mm |
| Max supply voltage without damage | 15 V | | |

### ELECTRICAL CONNECTIONS

| | |
|---|---|
| Cable lenght | 10 m |
| Cable diameter | 5 mm |
| Cores | 6 x 0.14 mm² |



| | |
|---|---|
| SHIELD | |
| + SIGNAL | GREEN |
| + EXCITATION<br>+ REF./SENSE | RED<br>BLUE |
| - SIGNAL | WHITE |
| - EXCITATION<br>- REF./SENSE | BLACK<br>YELLOW |

*The Company reserves the right to make changes to the technical data, drawings and images without notice.*

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