

BENDING BEAM LOAD CELL

TENSION &  
COMPRESSION



- COMBINED ERROR  $\leq \pm 0.02\%$
- IP68 PROTECTION RATING
- AISI 420 STAINLESS STEEL



NOMINAL LOAD (FS)

| kg  | N     | Net weight (kg) | ACCURACY CLASS |    |  |  | ISO 17025  |
|-----|-------|-----------------|----------------|----|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|------------|
|     |       |                 | C3             | C4 |                                                                                      |                                                                                       |            |
| 20  | 200   | 0.4             | •              | •  | –                                                                                    | •                                                                                     | (optional) |
| 50  | 500   | 0.4             | •              | •  | •                                                                                    | •                                                                                     | (optional) |
| 100 | 1 000 | 0.4             | •              | •  | •                                                                                    | •                                                                                     | (optional) |
| 200 | 2 000 | 0.4             | •              | •  | •                                                                                    | •                                                                                     | (optional) |
| 350 | 3 500 | 0.4             | •              | •  | •                                                                                    | •                                                                                     | (optional) |
| 500 | 5 000 | 0.4             | •              | •  | •                                                                                    | •                                                                                     | (optional) |

ON REQUEST



## TECHNICAL DATA

### PRECISION

|                                        |                                    |
|----------------------------------------|------------------------------------|
| Rated Output ( $C_n$ )                 | 2 mV/V $\pm 1$ % at FS             |
| Zero Balance                           | $< \pm 1$ %                        |
| Combined error                         | $\leq \pm 0.02$ %FS (C3)           |
|                                        | $\leq \pm 0.017$ %FS (C4)          |
| Non-linearity                          | $\leq \pm 0.014$ %FS (C3)          |
|                                        | $\leq \pm 0.012$ %FS (C4)          |
| Hysteresis                             | $\leq \pm 0.014$ %FS (C3)          |
|                                        | $\leq \pm 0.012$ %FS (C4)          |
| Repeatability                          | -                                  |
| Creep                                  | $\leq \pm 0.02$ %FS (at 30 min FS) |
| Temperature coefficient of zero        | 0.002 %FS/°C                       |
| Temperature coefficient of sensitivity | 0.014 %FS/°C                       |
| Compensated temperature range          | -10...+40 °C                       |
| Operating temperature range            | -30...+65 °C                       |
| Reference Temperature                  | 23 °C                              |

### MECHANICAL PROPERTIES

|                  |                          |
|------------------|--------------------------|
| Material         | AISI 420 stainless steel |
| Deflection at FN | ~ 0.4 mm                 |

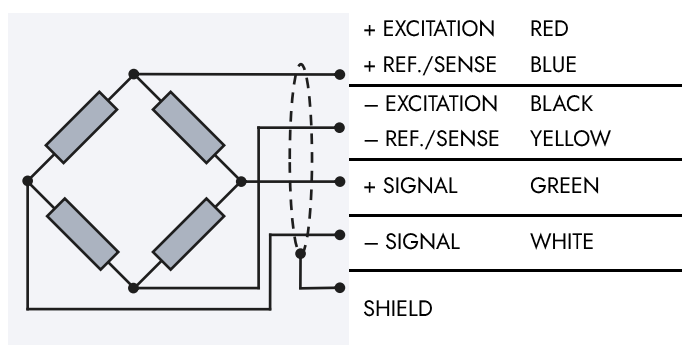
### MECHANICAL LIMITS

|                               |             |                                                                                                                                                                           |
|-------------------------------|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Service load                  | 120 %FS     | Load without any permanent deformation or change in calibration.                                                                                                          |
| Safe overload                 | 150 %FS     | The highest static load that may be applied once or briefly without mechanical damage.                                                                                    |
| Breaking load                 | $> 300$ %FS | Load at which permanent deformation or mechanical failure (fracture) occurs.                                                                                              |
| Max. transverse load (side)   | 50 %FS      | Maximum lateral or shear load that can be applied (e.g. due to misalignment or friction).                                                                                 |
| Max. permissible dynamic load | 70 %FS      | For cyclic or oscillating loads, the amplitude should not exceed this load to prevent fatigue failure. The dynamic load must be applied to the transducer central thread. |

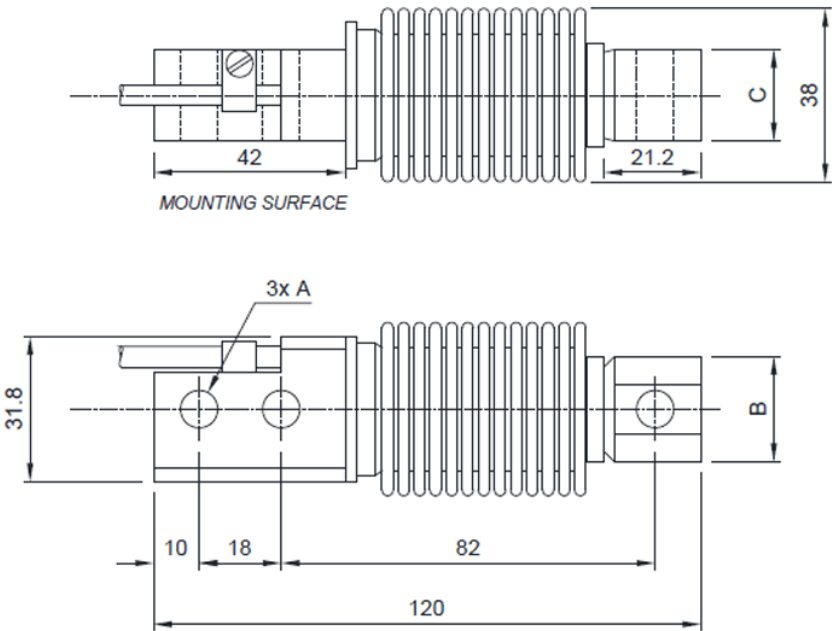
### ELECTRICAL PROPERTIES

|                                |                                  |
|--------------------------------|----------------------------------|
| Bridge configuration           | Full Wheatstone bridge, 6-wire   |
| Input resistance               | 460 $\pm$ 50 $\Omega$            |
| Output resistance              | 350 $\pm$ 3.5 $\Omega$           |
| Insulation resistance          | $\geq 5,000$ M $\Omega$ at 100 V |
| Recommended excitation voltage | $\leq 18$ V                      |
| Cable diameter                 | 5 mm                             |
| Cable length                   | 3 000 mm                         |

### ELECTRICAL CONNECTION

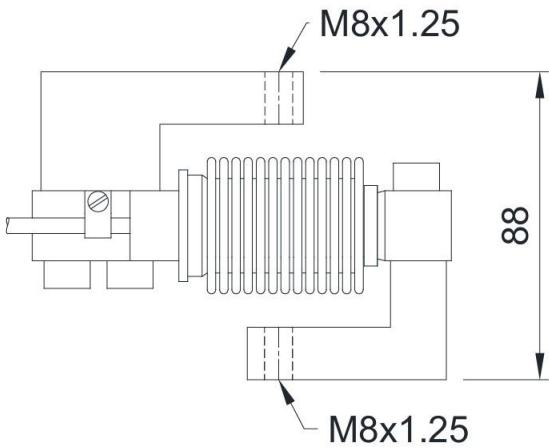


DIMENSIONS (mm)



|              | A      | B  | C  |
|--------------|--------|----|----|
| 20 – 200 kg  | Ø 8.2  | 23 | 20 |
| 350 – 500 kg | Ø 10.3 | 24 | 19 |

TENSION STAINLESS STEEL  
BRACKETS (max load 100 kg)



| Screw             | M8    |       | M10   |       |
|-------------------|-------|-------|-------|-------|
| Screw class       | 6.8   | 8.8   | 6.8   | 8.8   |
| Tightening torque | 19 Nm | 25 Nm | 37 Nm | 50 Nm |



## COMPLIANCE AND CERTIFICATION

|                                |                                                                                                                                                                                                                                                                                                     |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Protection Rating              | IP68 according to IEC 60529                                                                                                                                                                                                                                                                         |
| Compliance                     | CE, RoHS, REACH                                                                                                                                                                                                                                                                                     |
| Calibration                    | Factory-calibrated, ISO 17025 calibration available on request                                                                                                                                                                                                                                      |
| HS-CODE                        | 9031.80.80                                                                                                                                                                                                                                                                                          |
| Certifications                 |  OIML R60 C3                                                                                                                                                                                                       |
|                                |  Complies with the Eurasian Customs Union regulations                                                                                                                                                              |
|                                |  Equivalent of the CE marking for the United Kingdom                                                                                                                                                               |
|                                |  Complies with United Kingdom regulations for legal for trade use                                                                                                                                                  |
| Certifications<br>(on request) | Calibration report                                                                                                                                                                                                                                                                                  |
|                                |  LAT Accredia calibration certificate ISO 376 or ASTM E74 <u>for capacities from 1000 kg to 10000 kg</u>                                                                                                         |
|                                |  OIML R60 C4                                                                                                                                                                                                     |
|                                |  ATEX II 1G 2D (zone 0-1-2-21-22) (  -  ) |
|                                |  IECEx (zone 0-1-2-20-21-22)                                                                                                                                                                                     |
|                                |  Complies with the Eurasian Customs Union regulations for use in potentially explosive atmospheres                                                                                                               |
|                                |  FM HazLoc - Complies with the United States and Canada regulations for use in potentially explosive atmospheres                                                                                                 |
|                                |  Complies with Chinese market regulations for use in potentially explosive atmospheres                                                                                                                           |
|                                |  NTEP - Complies with United States regulations for legal for trade use                                                                                                                                          |
|                                |                                                                                                                                                                                                                                                                                                     |



## MOUNTING KITS AND ACCESSORIES

### TFCPV

- Adjustable upper plate in AISI 304 stainless steel (PPV) or galvanized steel (PPVZ).
- Lower plate and block in AISI 304 stainless steel.
- Constraint against lateral forces and anti-tilt by AISI 304 stainless steel (TFCPV, TFCPVZ, TFCPV10) or galvanized steel (TFCPVZ10) self-centering joint foot.
- Compensation for any misalignments of the support plates of the structure.
- Partial height adjustment.
- Locking screw to avoid damage during transport and installation.



50...500 kg  
0.5...5 kN

### TFCGP

- Upper plate with a compression joint in AISI 304 stainless steel and rubber.
- Lower plate and block in AISI 304 stainless steel.
- Compensation for any misalignments of the support plates of the structure.
- Locking screw to avoid damage during transport and installation.
- It can be used for systems with at least 3 supports.



50...500 kg  
0.5...5 kN

### TFCFSB

- Compression joint in AISI 304 stainless steel and rubber.
- Lower plate and block in AISI 304 stainless steel.
- Compensation for any misalignments of the support plates of the structure.
- Locking screw to avoid damage during transport and installation.
- It can be used for systems with at least 3 supports.



50...500 kg  
0.5...5 kN

