

## Type CT3 Precision Series Force Transducer



### Product Description

Flintec Force Transducers are designed to meet the most stringent accuracy requirements. The CT3 *Precision* shear web metric series force transducers offer the following items.

### Key Features

- Capacities: 1.5 kN to 450 kN
- High accuracy (0.02-0.04 %)
- Low height
- First choice for structural and materials testing
- Guaranteed maximum off-centre load and moment error
- Low creep
- Low susceptibility to magnetic fields
- Barometric pressure compensated
- Temperature compensated
- Output up to 4 mV/V
- Bayonet connector
- Protection IP 67

### Options

- Additional bridges
- Output adjustment to standard
- Compression overload protection
- Integral cable
- Custom connectors
- Imperial versions available

### Available Accessories

- Mating connector
- Loading fixtures
- Interconnection cable
- Shunt calibration connector
- Instrumentation

| Specifications                     |                     |                    |                         |          |           |          |
|------------------------------------|---------------------|--------------------|-------------------------|----------|-----------|----------|
| MODEL                              |                     |                    | CT3-10M-                | CT3-10M- | CT3-20M-  | CT3-30M- |
| Maximum capacity                   | (E <sub>max</sub> ) | kN                 | 1.5 / 2.5 / 5 / 10      | 25 / 50  | 100 / 250 | 450      |
| <b>ACCURACY</b>                    |                     |                    |                         |          |           |          |
| Static error band                  |                     | %*RO               | ≤ ± 0.02                | ≤ ± 0.03 | ≤ ± 0.04  | ≤ ± 0.05 |
| Non-linearity                      |                     | %*RO               | ≤ ± 0.03                | ≤ ± 0.04 |           | ≤ ± 0.05 |
| Hysteresis                         |                     | %*RO               | ≤ ± 0.02                | ≤ ± 0.04 |           | ≤ ± 0.05 |
| Non-repeatability                  |                     | %*RO               | ≤ ± 0.01                |          |           |          |
| Creep error (20 minutes)           |                     | %*RO               | ≤ ± 0.03                |          |           |          |
| Off-centre load sensitivity        |                     | %*RO/cm            | ≤ ± 0.04                | ≤ ± 0.25 |           |          |
| Side load sensitivity              |                     | %*RO               | ≤ ± 0.1                 | ≤ ± 0.25 |           |          |
| Zero balance                       |                     | %*RO               | ≤ ± 1.0                 |          |           |          |
| <b>TEMPERATURE</b>                 |                     |                    |                         |          |           |          |
| Compensated temperature range      |                     | °C                 | -10...+45               |          |           |          |
| Operating temperature range        |                     | °C                 | -55...+90               |          |           |          |
| Temperature effect on sensitivity  | (TC <sub>LC</sub> ) | %*of reading/°C    | ≤ ± 0.0015              | ≤ ± 1.0  |           |          |
| Temperature effect on zero         | (TC <sub>0</sub> )  | %*RO/°C            | ≤ ± 0.0027              |          |           |          |
| <b>ELECTRICAL</b>                  |                     |                    |                         |          |           |          |
| Rated Output                       | (RO)                | mV/V               | 2 ± 10%                 | 4 ± 10%  |           |          |
| Excitation voltage                 |                     | V                  | recommended 10, max. 20 |          |           |          |
| Input resistance                   | (R <sub>LC</sub> )  | Ω                  | 350 +40/-3.5            |          |           |          |
| Output resistance                  | (R <sub>out</sub> ) | Ω                  | 350 ± 3.5               |          |           |          |
| Insulation resistance (50 V DC)    |                     | MΩ                 | ≥ 5000                  |          |           |          |
| <b>MECHANICAL</b>                  |                     |                    |                         |          |           |          |
| Safe load limit                    | (E <sub>lim</sub> ) | %*E <sub>max</sub> | 150                     |          |           |          |
| Weight                             |                     | kg                 | 1.2                     | 3        | 10        | 24       |
| Flexure material                   |                     |                    | aluminium               | steel    |           |          |
| Protection according to DIN 40.050 |                     |                    | IP 67                   |          |           |          |

| Dimensions (in mm)      |     |      |      |     |      |       |                            |      |             |             |
|-------------------------|-----|------|------|-----|------|-------|----------------------------|------|-------------|-------------|
|                         |     |      |      |     |      |       |                            |      |             |             |
| Type                    | H1  | H2   | H3   | H4  | H5   | D1    | D2                         | D3   | cell thread | base thread |
| CT3-10M-1.5/2.5/5/10 kN | 3.1 | 31.8 | 28.7 | 0.8 | 5.1  | 104.8 | 32.8                       | 31.8 | M12x1.25    | M12x1.25    |
| CT3-10M-25/50 kN        | 3.1 | 31.8 | 28.7 | 0.8 | 5.1  | 104.8 | 32.8                       | 31.8 | M16x2       | M16x2       |
| CT3-20M-100/250 kN      | 3.1 | 41.4 | 44.5 | 0.8 | 7.6  | 154.0 | 100 kN-59.4<br>250 kN-65.5 | 57.2 | M33x2       | M33x2       |
| CT3-30M-450 kN          | 6.3 | 57.2 | 50.8 | 0.8 | 10.2 | 203.2 | 95.5                       | 76.2 | M42x2       | M42x2       |

**Wiring**

- The force transducer is provided with a bayonet connector.