

**Drehmomentsensor, reaktiv**

**D-2223**

**Torque Sensor, reactive**

- Nenn Drehmoment von 2 N·m ... 5000 N·m
  - Genauigkeitsklasse optional 0,1% v. Endwert
  - Mit Flansch und Innen- Normvierkant
  - Sehr kurze axiale Baulänge
  - Hohe Drehsteifigkeit
  - Zuverlässig und robust
  - Einfache Handhabung und Montage
  - Sonderausführungen auf Anfrage
- *Nominal torque from 2 N·m ... 5000 N·m*
  - *Accuracy class optional 0.1% f. scale*
  - *With flange and standard inside square end*
  - *Very short axial length*
  - *High torsional stiffness*
  - *Reliable and durable*
  - *Simple handling and assembly*
  - *Special versions on request*

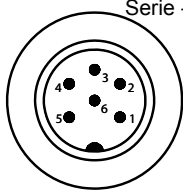


**Technische Daten - Specifications**

| Artikel-Nr.<br>Article-No. | Nenn Drehmoment<br>Nominal Torque<br>[N·m] | Federkonstante<br>Springrate<br>[N·m/rad] | Massen-<br>trägheits-<br>moment<br>Mass<br>Moment<br>of Inertia<br>[kg·m <sup>2</sup> ] |                       | Grenzlängskraft<br>Limit Thrust Load<br>[N] | Grenzquerkraft<br>Limit Shear Force<br>[N] |
|----------------------------|--|---|---|-----------------------|---|--|
|                            |  |   | Antriebseite<br>Drive Side  | Messeite<br>Test Side |   |  |
| 102954                     | 2  | 2,2E+02                                   | 2,1E-04   | 3,0E-06               | 400   | 9  |
| 102955                     | 5  | 7,5E+02                                   | 2,1E-04   | 3,0E-06               | 730   | 22   |
| 102983                     | 12   | 2,2E+03                                   | 2,1E-04   | 3,1E-06               | 1300  | 51   |
| 102573                     | 25   | 5,3E+03                                   | 2,1E-04   | 1,6E-06               | 2100  | 120  |
| 102984                     | 63   | 1,4E+04                                   | 2,2E-04   | 2,0E-06               | 4000  | 270  |
| 102574                     | 100  | 1,9E+04                                   | 4,2E-04   | 1,4E-05               | 5000  | 300  |
| 102428                     | 160  | 3,6E+04                                   | 4,2E-04   | 1,5E-05               | 7100  | 500  |
| 102958                     | 200  | 4,9E+04                                   | 4,2E-04   | 1,6E-05               | 8600  | 680  |
| 102959                     | 500  | 1,2E+05                                   | 1,3E-03   | 9,1E-05               | 12000                                       | 1600                                       |
| 102767                     | 1000                                       | 5,4E+05                                   | 2,8E-03   | 2,4E-04               | 21000                                       | 2900                                       |
| 102429                     | 2000                                       | 1,1E+06                                   | 8,0E-03   | 1,3E-03               | 35000                                       | 3900                                       |
| 108514                     | 5000                                       | 4,1E+06                                   | 3,6E-02   | 4,0E-03               | 63000                                       | 8500                                       |

| D-2223  |                     |   |
|---|---------------------|---|
| Genauigkeitsklasse - Accuracy class                       | % v. E - f. s.      | 0,2   |
| Reproduzierbarkeit - Repeatability (DIN 1319)             | %                   | ±0,02   |
| Speisespannung - Excitation voltage                       | VDC                 | 2 ... 12  |
| Brückenwiderstand - Bridge resistance                     | Ω                   | 350   |
| Nennkennwert - Nominal sensitivity                        | mV/V                | 1 ±0,2%   |
| Referenztemperatur - Reference temperature                | °C                  | 23  |
| Nenntemperaturbereich - Nominal temperature range         | °C                  | -5 ... 45   |
| Gebrauchstemperaturbereich - Service temperature range    | °C                  | -15 ... 55  |
| Temp. koef. des Nullsignals - Temp. coeff. of zero signal | % v. E./K - f. s./K | ±0,02   |
| Temp. koef. des Kennwerts - Temp. coeff. of sensitivity   | % v. E./K - f. s./K | ±0,01   |
| Gebrauchsdrehmoment (statisch) - Service torque (static)  | % v. E - f. s.      | 150   |
| Grenzdrehmoment (statisch) - Limit torque (static)        | % v. E - f. s.      | 200   |
| Bruchdrehmoment (statisch) - Ultimate torque (static)     | % v. E - f. s.      | >300  |
| Schwingbreite - Bandwidth (DIN 50100)                     | % v. E - f. s.      | 70 (Spitze - Spitze) - (peak - peak)              |
| Schutzart - Level of protection (DIN EN 60529)            |                     | IP50  |
| Elektrischer Anschluss - Electrical connection            |                     | 6-polig Serie 723 - 6-pin series 723 <sup>1</sup> |

**Anschlussbelegung - Pin Connection**

| 6-polig - 6-pin | D-2223  |   |
|-----------------|---|---|
| Pin 1           | Speisung (-) - Excitation (-)                     | <div style="text-align: right;">Serie - Series 723</div>  <div style="text-align: center;">Draufsicht - Top view</div> |
| Pin 2           | Speisung (+) - Excitation (+)                     |   |
| Pin 3           | Schirm - Shield                                   |   |
| Pin 4           | Signal (+) - Signal (+)                           |   |
| Pin 5           | Signal (-) - Signal (-)                           |   |
| Pin 6           | Kontrollsignal (Option) - Control signal (option) |   |

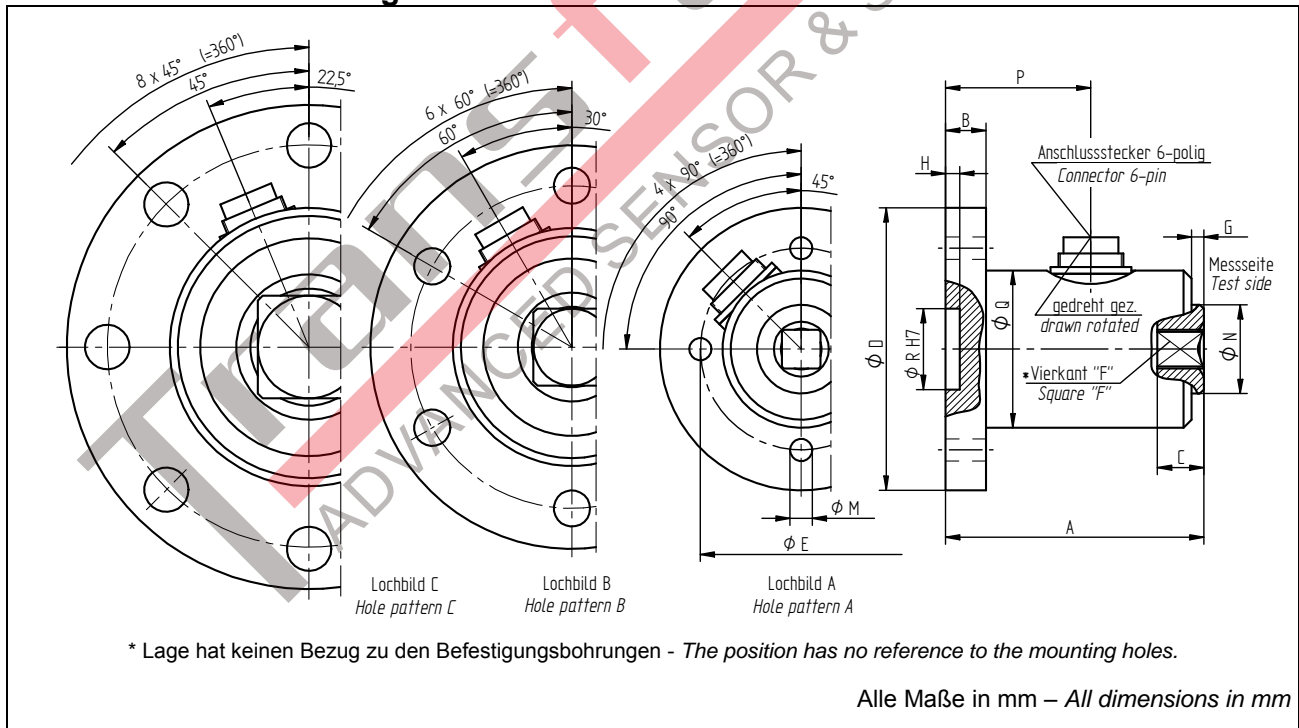
**Optionen/ Zubehör - Options/ Accessories**

| Artikel-Nr. - Article-No. | Bezeichnung - Description  |                 |                 |
|---------------------------|--|-----------------|-----------------|
| 100933                    | Genauigkeitsklasse - Accuracy class  | % v. E. - f. s. | 0,1             |
| 100218                    | Kontrollsignal - Control signal  | % v. E. - f. s. | 100             |
| 42828                     | Erweiterter Temperaturbereich - Extended temperature range   |                 | -30 °C...100 °C |
| 42829                     | Erweiterter Temperaturbereich - Extended temperature range   |                 | -30 °C...120 °C |
| 10301                     | Kabeldose 6-polig Serie 581 - Female cable connector 6-pin series 581  |                 |                 |
| 10315                     | Winkeldose 6-polig Serie 682 - Female angled connector 6-pin series 682  |                 |                 |
| 10266                     | Anschlusskabel, 3 m, 6-polig Serie 581, freien Lötenden - Connection cable, 3 m, 6-pin series 581, free soldered ends                |                 |                 |
| 10387                     | Anschlusskabel winklig, 3 m, 6-polig Serie 682, freien Lötenden - Connection cable angled, 3 m, 6-pin series 682, free soldered ends |                 |                 |

**Option Kalibrierungen - Option Calibrations**

| Artikel-Nr. - Article-No. | Bezeichnung - Description                   | Stufen - Steps | Norm - Norm                  |
|---------------------------|---|----------------|------------------------------|
| 400676                    | Linearitätsdiagramm - Linearity diagram     | 25%            | Werksnorm - Factory standard |
| 400664                    | Linearitätsdiagramm - Linearity diagram     | 10%            |                              |
| 400961                    | Werkskalibrierung - Proprietary calibration | 3              | VDI/VDE 2646                 |
| 400700                    | Werkskalibrierung - Proprietary calibration | 5              |                              |
| 400688                    | Werkskalibrierung - Proprietary calibration | 8              |                              |
|                           | DAkKS-Kalibrierung - DAkKS-Calibration      |                | auf Anfrage - on request     |

**Mechanische Abmessungen – Dimensions**



| Nennmoment<br>Nominal Torque<br>[N·m] | Abmessungen - Dimensions<br>[mm] |    |      |     |     |        |    |   |     |      |    |     |     | Lochbild<br>Hole<br>Pattern |
|---------------------------------------|----------------------------------|----|------|-----|-----|--------|----|---|-----|------|----|-----|-----|-----------------------------|
|                                       | A                                | B  | C    | ØD  | ØE  | F      | G  | H | ØM  | ØN   | P  | ØQ  | ØR  |                             |
| 2 / 5 / 12                            | 64                               | 10 | 8    | 70  | 50  | 1/4"   | 3  | 3 | 5,5 | 22   | 36 | 39  | 20  | A                           |
| 25 / 63                               | 64                               | 10 | 11,5 | 70  | 50  | 3/8"   | 3  | 3 | 5,5 | 22   | 36 | 39  | 20  | A                           |
| 100 / 160 / 200                       | 75                               | 12 | 16   | 80  | 60  | 1/2"   | 15 | 3 | 6,6 | 29,8 | 41 | 45  | 20  | A                           |
| 500                                   | 88                               | 15 | 24   | 100 | 80  | 3/4"   | 3  | 3 | 9   | 44   | 45 | 59  | 20  | B                           |
| 1000                                  | 94                               | 15 | 28,6 | 120 | 100 | 1"     | 5  | 3 | 11  | 54   | 45 | 69  | 20  | C                           |
| 2000                                  | 124,5                            | 20 | 41,5 | 145 | 120 | 1 1/2" | 5  | 3 | 13  | 76   | 55 | 90  | 20  | C                           |
| 5000                                  | 129,5                            | 25 | 41,5 | 200 | 170 | 1 1/2" | 5  | 4 | 17  | 95   | 57 | 125 | 105 | C                           |