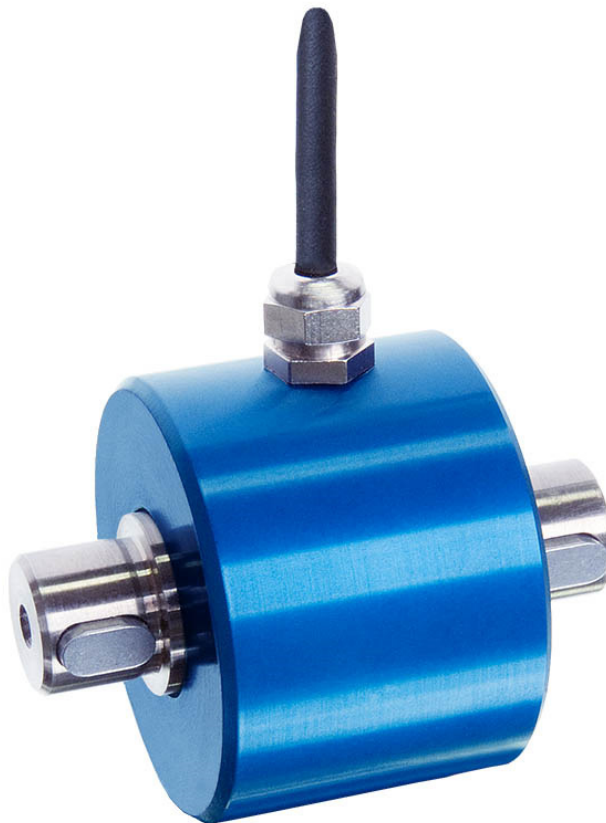


## Drehmomentsensor, reaktiv

**DK-15**

### *Torque Sensor, reactive*

- Nenndrehmoment von 1 N·m ... 100 N·m
  - Beide Wellenenden mit Passfedern
  - Sehr kurze axiale Baulänge
  - Hohe Drehsteifigkeit
  - Zuverlässig und robust
  - Einfache Handhabung und Montage
  - Sonderausführungen auf Anfrage
- *Nominal torque from 1 N·m ... 100 N·m*
  - *Both shaft ends with keys*
  - *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 | Nennmoment<br>Nominal Torque<br>[N·m] | Federkonstante<br>Springrate<br>[N·m/rad] | Massen-<br>trägheits-<br>moment<br>Mass<br>Moment of<br>Inertia<br>[kg·m²] |                        | Grenzlängskraft<br>Limit Thrust Load<br>[N] | Grenzquerkraft<br>Limit Shear Force<br>[N] |
|----------------------------|---------------------------------------|-------------------------------------------|----------------------------------------------------------------------------|------------------------|---------------------------------------------|--------------------------------------------|
|                            |                                       |                                           | Antriebsseite<br>Drive Side                                                | Messseite<br>Test Side |                                             |                                            |
| 100384                     | 1                                     | 2,78E+02                                  | 1,10E-05                                                                   | 3,78E-07               | 400                                         | 11                                         |
| 100383                     | 2                                     | 2,78E+02                                  | 1,10E-05                                                                   | 3,78E-07               | 400                                         | 11                                         |
| 100382                     | 5                                     | 8,03E+02                                  | 1,10E-05                                                                   | 3,86E-07               | 700                                         | 25                                         |
| 100381                     | 10                                    | 3,22E+03                                  | 1,10E-05                                                                   | 4,07E-07               | 1150                                        | 51                                         |
| 100378                     | 20                                    | 3,50E+03                                  | 1,11E-05                                                                   | 4,47E-07               | 1700                                        | 95                                         |
| 100377                     | 50                                    | 1,17E+04                                  | 3,24E-05                                                                   | 2,44E-06               | 3700                                        | 190                                        |
| 100376                     | 100                                   | 1,55E+04                                  | 3,26E-05                                                                   | 2,63E-06               | 4350                                        | 270                                        |

| DK-15                                                      |                                                |                                      |
|------------------------------------------------------------|------------------------------------------------|--------------------------------------|
| 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. koeff. des Nullsignals - Temp. coeff. of zero signal | % v. E./K - f. s./K                            | ±0,02                                |
| Temp. koeff. 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             | 3 m, freien Lötenden - 3 m, free soldered ends |                                      |

## Anschlussbelegung - Pin Connection

|                 |                                                   |
|-----------------|---------------------------------------------------|
| Grün - Green    | Speisung (-) - Excitation (-)                     |
| Braun - Brown   | Speisung (+) - Excitation (+)                     |
| Gelb - Yellow   | Signal (+) - Signal (+)                           |
| Weiß - White    | Signal (-) - Signal (-)                           |
| Grau - Grey     | Kontrollsignal (Option) - Control signal (option) |
| Schirm - Shield | Schirm - Shield                                   |

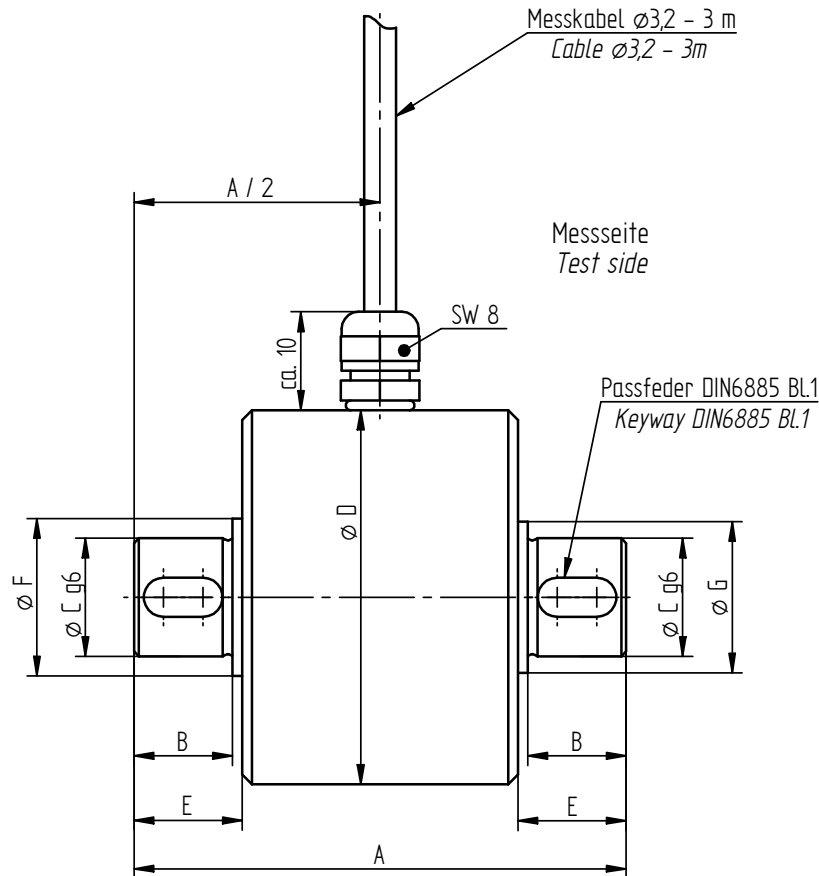
## Optionen - Options

| Artikel- Nr. -<br>Article-No. | Bezeichnung - Description                                  |                   |     |
|-------------------------------|------------------------------------------------------------|-------------------|-----|
| 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 |     |

### Option Kalibrierungen - Option Calibrations

| Artikel-Nr. -<br>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



Alle Maße in mm – All dimensions in mm

| Nennmoment<br>Nominal Torque<br>[N·m] | Abmessungen - Dimensions<br>[mm] |    |    |    |      |    |      |
|---------------------------------------|----------------------------------|----|----|----|------|----|------|
|                                       | A                                | B  | ØC | ØD | E    | ØF | ØG   |
| 1 / 2 / 5 / 10 / 20                   | 50                               | 10 | 12 | 38 | 11   | 16 | 15,4 |
| 50 / 100                              | 70                               | 20 | 18 | 49 | 21,5 | 21 | 20,5 |