

**Drehmomentmessflansch, reaktiv**  
***Torque Measuring Flange, reactive***

**D-2209**

- Nenndrehmoment von 1 N·m ... 5 N·m
  - Flansch-Flansch-Lösung
  - Zentrierabsatz beidseitig
  - Sehr kurze axiale Baulänge
  - Hohe Drehsteifigkeit
  - Zuverlässig und robust
  - Einfache Handhabung und Montage
  - Sonderausführungen auf Anfrage
- *Nominal torque from 1 N·m ... 5 N·m*
  - *Flange-flange-solution*
  - *Fixing shoulder on both sides*
  - *Very short axial length*
  - *High torsional stiffness*
  - *Reliable and durable*
  - *Simple handling and assembly*
  - *Special versions on request*

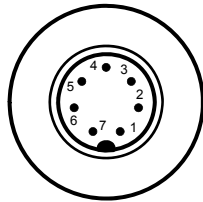


## Technische Daten - Specifications

| Artikel-Nr.<br>Article-No. | Nennrehmoment<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·m²] |                        | Grenzlängskraft<br>Limit Thrust Load<br>[N] | Grenzquerkraft<br>Limit Shear Force<br>[N] |
|----------------------------|------------------------------------------|-------------------------------------------|----------------------------------------------------------------------------|------------------------|---------------------------------------------|--------------------------------------------|
|                            |                                          |                                           | Antriebsseite<br>Drive Side                                                | Messseite<br>Test Side |                                             |                                            |
| 106379                     | 1                                        | 247                                       | 3,1E-05                                                                    | 2,6E-05                | 250                                         | 14                                         |
| 106380                     | 2                                        | 587                                       | 3,1E-05                                                                    | 2,6E-05                | 510                                         | 30                                         |
| 102292                     | 5                                        | 1799                                      | 3,1E-05                                                                    | 2,9E-05                | 1200                                        | 75                                         |

| D-2209                                                     |                     |                                                   |
|------------------------------------------------------------|---------------------|---------------------------------------------------|
| 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                                              |
| Max. dynam. Belastung - Max. dynamic load (DIN 50100)      | % v. E - f. s.      | 70 (Spitze - Spitze) - (peak - peak)              |
| Schutzart - Level of protection (DIN EN 60529)             |                     | IP50                                              |
| Elektrischer Anschluss - Electrical connection             |                     | 7-polig Serie 712 - 7-pin series 712 <sup>1</sup> |

## Anschlussbelegung - Pin Connection

| 7-polig -<br>7-pin | D-2209                                            |                                                                                                                                                                                                             |
|--------------------|---------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pin 1              | Speisung (-) - Excitation (-)                     | <div style="text-align: right;">Serie - Series 712</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) |                                                                                                                                                                                                             |
| Pin 7              | NC                                                |                                                                                                                                                                                                             |

## Optionen/ Zubehör - Options/ Accessories

| 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 |
| 10294                        | Kabeldose 7-polig Serie 712 - Female cable connector 7-pin series 712                                                                |                |                 |
| 10367                        | Winkeldose 7-polig Serie 712 - Female angled connector 7-pin series 712                                                              |                |                 |
| 10316                        | Anschlusskabel, 3 m, 7-polig Serie 712, freien Lötenden - Connection cable, 3 m, 7-pin series 712, free soldered ends                |                |                 |
| 103348                       | Anschlusskabel winklig, 3 m, 7-polig Serie 712, freien Lötenden - Connection cable angled, 3 m, 7-pin series 712, free soldered ends |                |                 |

### 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

