

Type DR-2153

**Miniatur-Drehmomentsensor,
Analogausgang - torque sensor, analog
output**

- Aktiver Ausgang $\pm 5V$ - active output signal $\pm 5V$
- Messrate 10 kSample - sample rate 10 kSample

Type DR-2453

**Miniatur-Drehmomentsensor, RS485-
Schnittstelle - torque sensor, RS485-
interface**

- RS485-Schnittstelle - RS485 interface
- Auto-Identifikation u.a. von: Messbereich, Serien-Nr, Kalibrierdatum - auto identification of: measuring range, serial number, date of calibration
- Messrate 4 kSample - sample rate 4 kSample



Beide Typen haben eine berührungslose und digitale Signalübertragung von Rotor zu Stator, also ohne Signalverfälschung und wartungsfrei.

Both types have a contactless and digital signal transmission from shaft to case, that means no failure of transmission and maintenance free.



| Artikel-Nr. (DR-2153) | Artikel-Nr. (DR-2453) | Messbereich nominal torque [Nm] | Sechskant hexagon | max. Drehzahl max. speed [min ⁻¹] | Federkonstante springrate [Nm/rad] | Massen- trägheits- moment of inertia J in [kg cm ²] | | zul. Axiallast max. thrust load [N] |
|--------------------------|--------------------------|---------------------------------------|----------------------|--|--|--|----------------------------|---|
| | | | | | | Messeite test side | Antriebseite drive side | |
| 103816 | 104167 | 0,1 | 1/4" | 3000 | 75 | 0,01763 | 0,00184 | 15 |
| 103815 | 104168 | 0,2 | | 3000 | 75 | 0,01763 | 0,00184 | 20 |
| 103157 | 104169 | 0,5 | | 3000 | 240 | 0,01763 | 0,00184 | 30 |
| 103817 | 104170 | 1 | | 4000 | 440 | 0,01763 | 0,00184 | 40 |
| 103678 | 104171 | 2 | | 4000 | 650 | 0,01764 | 0,00185 | 50 |
| 102386 | 104172 | 5 | | 4000 | 650 | 0,01769 | 0,00189 | 50 |
| 101845 | 104173 | 10 | | 4000 | 1630 | 0,01777 | 0,00189 | 50 |
| 103814 | 104174 | 15 | | 4000 | 2996 | 0,01790 | 0,00210 | 100 |
| 102067 | 104175 | 20 | | 4000 | 2996 | 0,00190 | 0,00210 | 100 |

TECHNISCHE DATEN - specifications

Analogausgang RS485-Interface

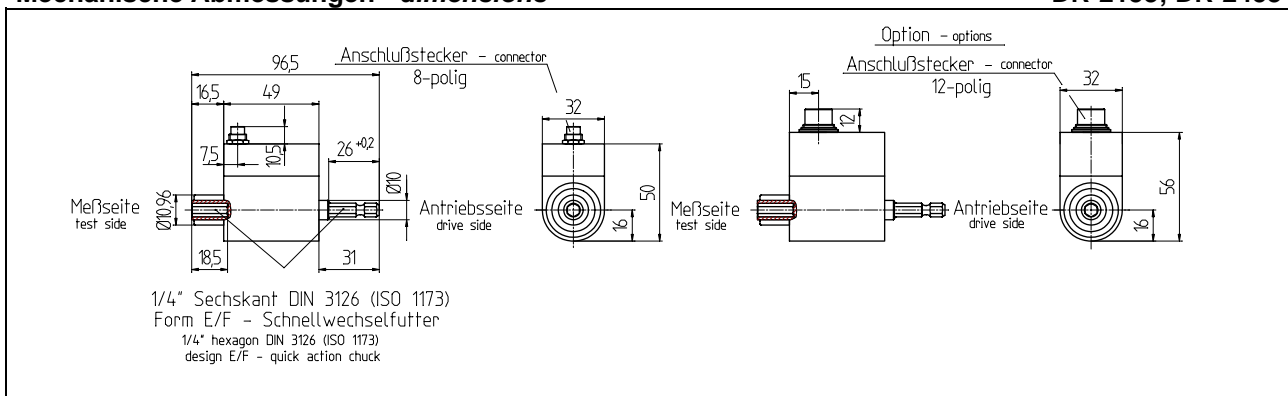
| TYP - type | | DR-2153 | DR-2453 |
|--|----------|---|---------|
| Genauigkeitsklasse - accuracy class | % v.E | 0,1 | |
| Reproduzierbarkeit n. DIN 1319 - nonrepeatability | % | ±0,02 | |
| Versorgung - supply voltage | VDC | 12 ... 28 | |
| Stromaufnahme - supply current | mA | <60 | |
| Ausgangssignal - output signal | V | ±0 ... 5 | |
| Belastbarkeit - output current max. | mA | 5 kurzschlussfest short circuit resist. L <2,0; H>3,5 | |
| Eingang Kontr.aufschaltung - calibration control | V | L <2,0; H>3,5 | |
| Messrate - sample rate | kSample | 10 | |
| Messrate Mode 1 - sample rate mode 1 (115KBd) | kSample | | 4 |
| Messrate Mode 2 - sample rate mode 2 (115KBd) | kSample | | 2 |
| Messrate Mode 3 - sample rate mode 3 (115KBd) | kSample | | 1 |
| Messrate Mode 4 - sample rate mode 4 (115KBd) | kSample | | 0,5 |
| Nenntemp.bereich - nominal temp. range | °C | +5 ... +45 | |
| Gebrauchstemp.bereich - service temp. range | °C | 0 ... +60 | |
| Temp. koef. des Kennwertes - temp. coeff. of sensitivity | % v.E./K | +0,01 | |
| Temp. koef. des Nullsignals - temp. coeff. of zero | % v.E./K | ±0,02 | |
| Gebrauchsmoment (statisch) - service torque | % v.E. | 150 | |
| Grenzmoment (statisch) - limit torque | % v.E. | 200 | |
| Bruchmoment (statisch) - ultimate torque | % v.E. | >300 | |
| Schwingbreite - bandwidth (DIN 50100) | % | 70 (Spitze - Spitze) - (top - top) | |
| Schutzart - level of protection (DIN 40 050) | | IP 50 | |
| Anschlussstecker - connector | | 8-polig - 8-pin | |

Artikel Nr. Option - options

| | | | | |
|--------|--|---|----------------------------|--|
| 101560 | Winkelmessung, 360 Impulse 2xTTL 90° versetzt - anglecontrol 360 imp.,2 tracks, 90°-shifted | | Rechtsdrehung CW - turn | CH A  CH B  |
| 103562 | Ausgangssignal - output signal | V | ± 0 ... 10 | |

Mechanische Abmessungen - dimensions

DR-2153; DR-2453



Anschlussbelegung - connection

| 8-polig 8-pin | 12-polig 12-pin | DR-2153 (8-polig / 12-polig) - (8-pin / 12 pin) | | DR-2453 (nur 12-polig) - (for 12-pin only) | |
|------------------|--------------------|---|--------------------|--|-------------|
| - | Pin A | NC | - | NC | - |
| Pin 7 | Pin B | Option Winkel B - angle B | TTL | Option Winkel B - angle B | TTL |
| Pin 3 | Pin C | Sign. (+) - signal (+) | ±5 V | NC | - |
| Pin 4 | Pin D | Sign. (GND) - signal (GND) | 0 V | NC | - |
| Pin 2 | Pin E | Vers (GND) - excitation (GND) | 0 V | Vers.(GND) - excitation | 0 V |
| Pin 1 | Pin F | Vers (+) - excitation (+) | 12 ... 28 V | Vers (+) - excitation (+) | 12 ... 28 V |
| Pin 6 | Pin G | Option Winkel A - angle A | TTL | Option Winkel A - angle A | TTL |
| - | Pin H | NC | - | NC | - |
| - | Pin J | NC | - | RS 485 | RS 485 (-) |
| Pin 5 | Pin K | Kontrolle - cal. control | L < 2,0V; H > 3,5V | NC | - |
| Pin 8 | Pin L | NC | - | RS 485 | RS 485 (+) |
| - | Pin M | Gehäuse - housing | | Gehäuse - housing | |