Lorenz® messtechnik gmbh

Rotating Torque Sensor DR-2481 (contactless) with Nominal Torque of 260 N·m

Data sheet

This sensor has a contactless and digital signal transmission from rotor to stator without signal falsification of the measurement data. It is therefore highly accurate and maintenance-free.

Performance Features

- Torque sensor with spline drive for e.g. test bench applications
- Active output ±10V
- Speed up to 15000 min^{-1}
- Very short axial length
- High torsional stiffness
- Simple handling and assembly
- Special versions on request

Application

- Assembly technology
- Process measuring and control technology
- Automotive industry
- Measuring and control devices
- Tool engineering
- Special mechanical engineering

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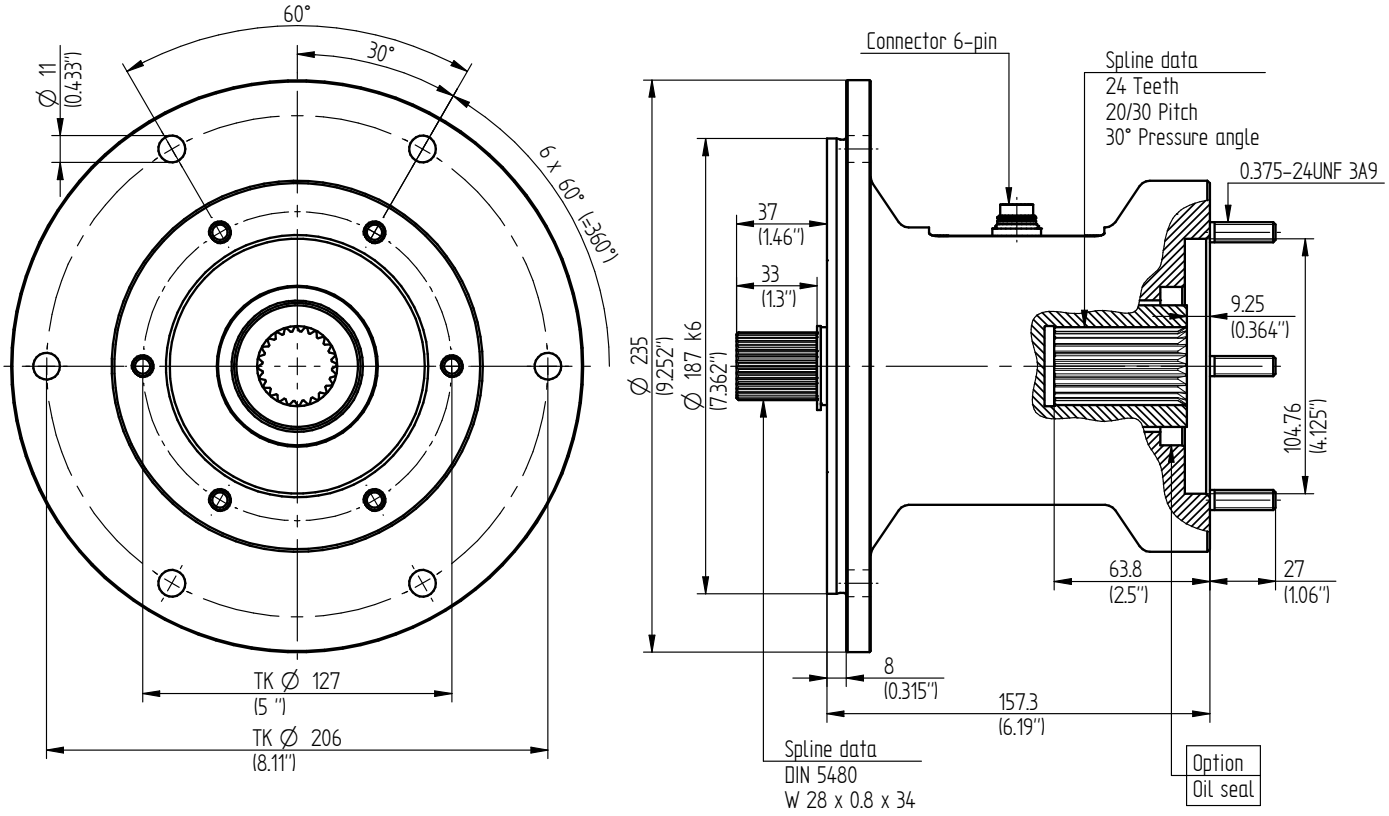
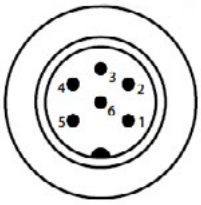
Dimensions of DR-2481 in mm (inch)



Article-No.	Nominal Torque [N·m]	Weight [kg]
106462	260	8.2

Connection Assignment

6-pin	DR-2481		Series 723
Pin 1	Supply (GND)	0V	
Pin 2	Supply (+)	12 ... 28VDC	
Pin 3	Shield		
Pin 4	Signal (+)	±10V	
Pin 5	Signal (GND)	0V	
Pin 6	NC	-	

Technical Data acc. to VDI/VDE/DKD 2639

Torque Sensor D-2481		
Nominal torque **M_{nom}**	N·m	260
Accuracy class	% M_{nom}	0.5
Relative repeatability error in unchanged mounting position **b'**	% M_{nom}	±0.2
Rated range of supply voltage	VDC	12 ... 28
Current consumption	mA	≤90
Output signal	V	±10
Electrical connection		6-pin series 723[1]
Reference temperature **T_{ref}**	°C	23
Rated temperature range	°C	5 ... 45
Operating temperature range	°C	0 ... 60
Storage temperature range	°C	-10 ... 70
Temperature effect on zero signal **TK_0**	% M_{nom}/10 K	±0.4
Temperature effect on characteristic value **TK_C**	% M_{nom}/10 K	±0.2
Maximum operating torque **M_G** (static)	% M_{nom}	150
Torque limit **M_{max}** (static)	% M_{nom}	180
Breaking torque **M_B** (static)	% M_{nom}	>250
Maximum speed	min^{-1}	15000
Permissible oscillation stress when subjected to torque **M_{df}**	% M_{nom}	70 (peak-to-peak)
Level of protection		IP50

Calibrations

Article-No.	Description	
400676	Linearity diagram in accordance to factory standard	25 % steps
400664	Linearity diagram in accordance to factory standard	10% steps
400961	Proprietary calibration acc. to VDI/VDE 2646	3 steps
400700	Proprietary calibration acc. to VDI/VDE 2646	5 steps
400688	Proprietary calibration acc. to VDI/VDE 2646	8 steps
	DAkkS-Calibration / Standard on request	

Accessories

Electrical Connection

Article-No.	Description
10301	Female cable connector 6-pin series 723
10315	Female angled connector 6-pin series 723
10266	Connection cable, 3 m, with 6-pin female cable connector series 723 and free strands
10387	Connection cable angled, 3 m, with 6-pin female angled connector series 723 and free strands

Amplifiers

Examples of suitable amplifiers for the torque sensor D-2481:

LCV-USB3	SI-ETH	SI-USB3	GM 80	GM 80-PA
				

Further suitable amplifiers you can find on our homepage under https://www.lorenz-messtechnik.de/english/products/.

[1] Female cable connector in scope of delivery at first delivery