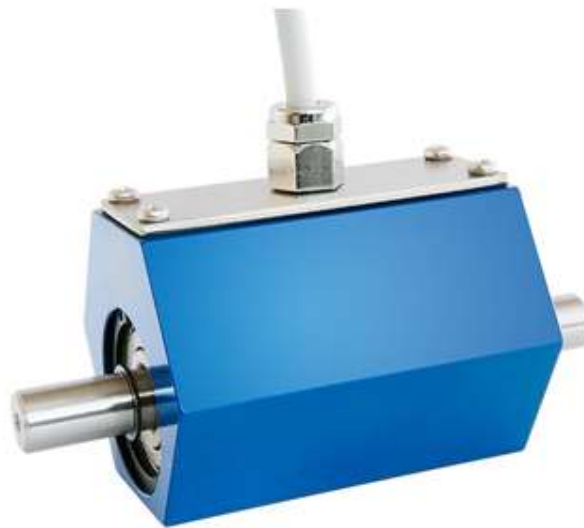


## Torque Sensor, rotating Series 86-2477

This sensor has a contactless and digital signal transmission from rotor to stator, which means no signal falsification and maintenance-free



### **86-2477-xxxx**

Nominal torque from 0.2 Nm ... 200 Nm

Active output  $\pm 5$  V (optional  $\pm 10$  V)

Speed up to  $10000 \text{ min}^{-1}$

For stiff and floating sensor assembly

Very short axial length

High torsional stiffness

Reliable and durable

Simple handling and assembly

Excellent price performance ratio

Special version on request

**86-2477**

## Technical Data Model 86-2477

Order code	Article No. 86-2477	Nominal Torque [Nm]	Limit Speed [min <sup>-1</sup> ]	Springrate [N·m/rad]	Mass moment of inertia [kg·m <sup>2</sup> ] <sup>1</sup>		Limit Thrust Load [N] <sup>[1]</sup>	Limit Shear Force [N] <sup>[2]</sup>
					Drive side	Test side		
86-2477-4200	108187	0,2	10000	1,80E+01	1,60E-06	1,00E-06	58	1,5
86-2477-4500	108188	0,5	10000	1,10E+02	1,60E-06	1,00E-06	185	2,1
86-2477-5001	106433	1	10000	2,20E+02	1,60E-06	1,10E-06	340	5,1
86-2477-5002	106475	2	10000	2,10E+02	1,60E-06	1,10E-06	340	5,1
86-2477-5005	106434	5	10000	8,90E+02	1,70E-06	1,10E-06	1050	29
86-2477-5010	106476	10	10000	8,90E+02	1,70E-06	1,10E-06	1050	29
86-2477-5020	106541	20	8000	8,40E+03	4,20E-05	2,10E-05	2600	98
86-2477-5050	106542	50	8000	8,40E+03	4,20E-05	2,10E-05	2600	98
86-2477-5100	106543	100	8000	2,00E+04	4,70E-05	2,70E-05	6400	250
86-2477-5200	106544	200	8000	2,00E+04	4,70E-05	2,70E-05	6400	250

## Technical Data

### 86-2477

Accuracy class	0,25	% f. s.
Repeatability (DIN 1319)	±0,05	%
Excitation voltage	12 ... 28	VDC
Current consumption	≤50	mA
Output signal	±5	V
Reference temperature	23	°C
Nominal temperature range	5 ... 45	°C
Service temperature range	0 ... 60	°C
Storage temperature range	-10 ... 70	°C
Temp. coeff. of sensitivity	±0,02	% f. s.
Temp. coeff. of zero signal	±0,04	% f. s.
Service torque (static)	150	% f. s.
Limit torque (static)	200	% f. s.
Ultimate torque (static)	>300	% f. s.
Bandwidth (DIN 50100)	70 (peak-peak)	%
Level of protection (DIN EN 60529)	IP50	
Electrical connection	1 m free soldered ends	

## Option

Article-no.	Description
103562	Output signal ±10V
	Keys according DIN 6885 on request

## Option Calibrations

Article-no	Description	Steps	Norm
400676	Linearity diagram	25%	Factory standard
400664	Linearity diagram	10%	
400961	Proprietary calibration	3	
400700	Proprietary calibration	5	VDI/VDE 2646
400688	Proprietary calibration	8	
	DAkkS-Calibration		on request

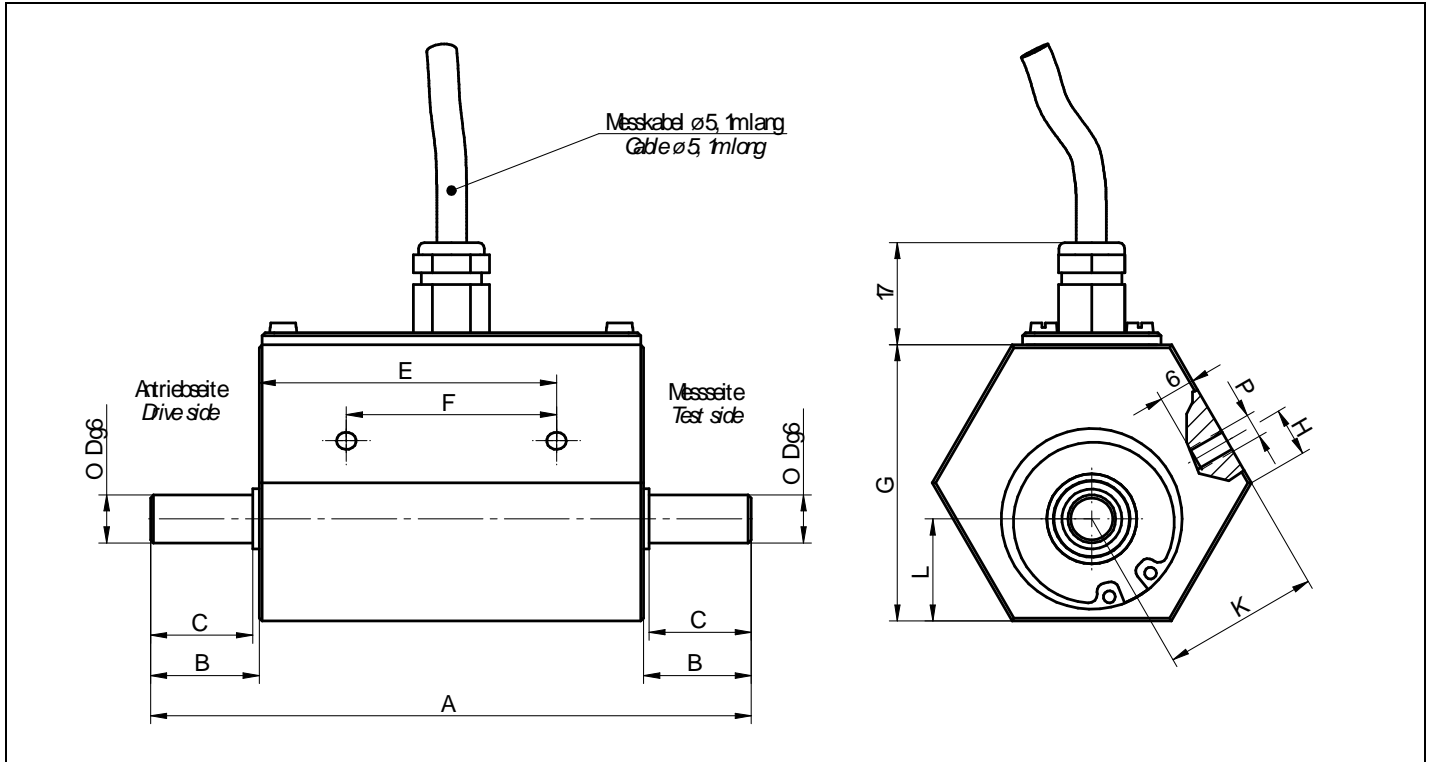
## Pin Connection

Brown	Supply (+)	12 ... 28 VDC
Green	Supply (GND)	0 V
Yellow	Signal (+)	±5 V (±10V)
White	Signal (GND)	0 V
Shield	Shield	

[1] Unsupported shaft

[2] Unsupported shaft

## Mechanical Dimensions



Measuring range [N·m]	Dimensions - [mm]										
	A	B	C	Ø D	E	F	⬡ G	H	K	L	P
0,2	100	18	17	8 g6	49,5	35	46	8	26	17	M4
0,5	100	18	17	8 g6	49,5	35	46	8	26	17	M4
1	100	18	17	8 g6	49,5	35	46	8	26	17	M4
2	100	18	17	8 g6	49,5	35	46	8	26	17	M4
5	100	18	17	10 g6	49,5	35	46	8	26	17	M4
10	100	18	17	10 g6	49,5	35	46	8	26	17	M4
20	140	30	29	18 g6	60	40	65	15	34,8	28	M5
50	140	30	29	18 g6	60	40	65	15	34,8	28	M5
100	160	40	39	22 g6	60	40	65	15	34,8	28	M5
200	160	40	39	22 g6	60	40	65	15	34,8	28	M5

86-2477