

Electrical Torque Transducers – Model 415



- Capacities: 1Nm to 500Nm
- For static reaction torque measurement
- Flange connection
- Suitable for permanent installation
- In testing machines and production facilities
- High stiffness
- Good accuracy
- TEDS module integrated inside sensor ¹⁾

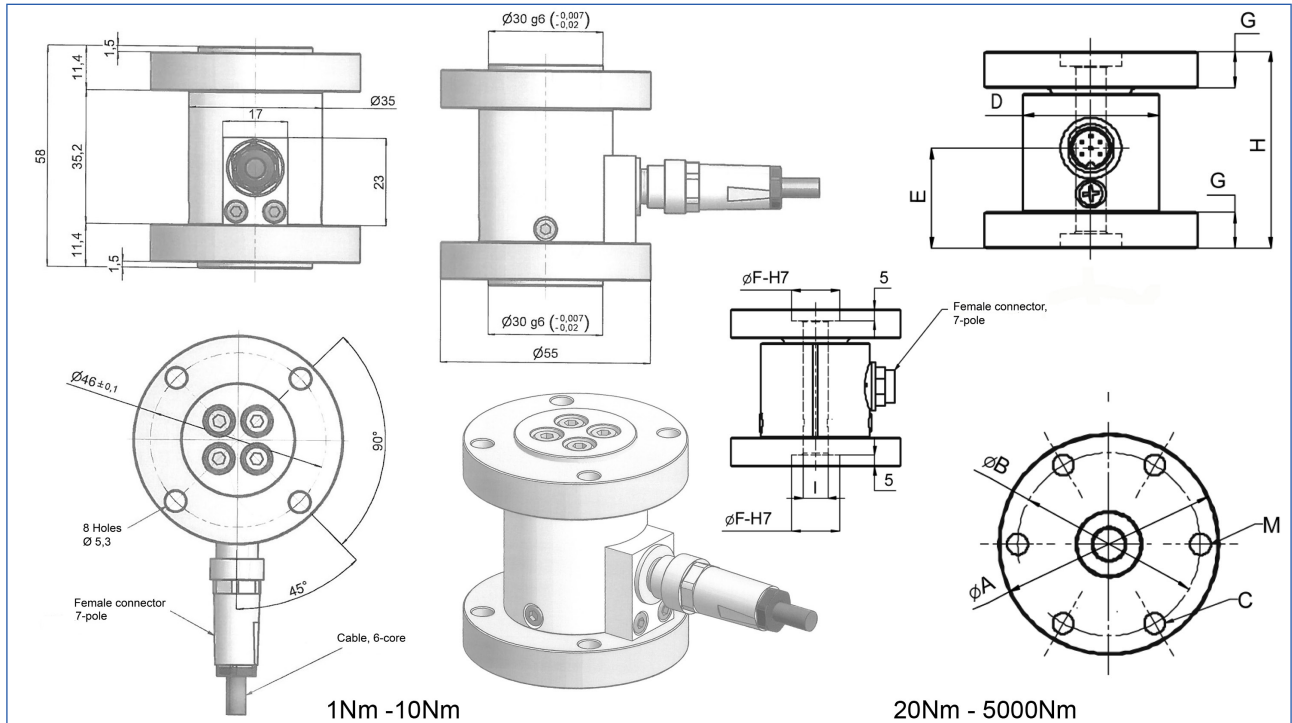
The electrical torque transducers of the model series 415 with flange connection are excellently suitable for static reaction torque measurements. The sensors that are made of stainless steel are characterised by their high stiffness and good accuracy. They are suitable for permanent installation in testing machines and production facilities. A TEDS module is already integrated inside the device.

Model 415			
>> Technical data close to VDI / VDE directive 2638			
	Symbol	Unit	Standard
Zero signal when removed	S_0	mV/V	0,01
Rated characteristic value	C_{nom}	mV/V	1
Relative error of characteristic value	d_c	%	$\leq \pm 0,5$
Relative linearity error	d_{lin}	%	$\leq \pm 0,2$
Relative repeatability error in unchanged mounting position	b_{rg}	%	$\leq \pm 0,02$
Combined error	F_{comb}	%	$\leq \pm 0,2$
Reference temperature	T_{ref}	°C	21
Rated temperature range	$B_{T, nom}$	°C	-10...+40
Operating temperature range	$B_{T, G}$	°C	-15...+70
Storage temperature range	$B_{T, S}$	°C	-30...+80
Relative creep after 30 min	$K_{0,5}$	%	$\leq \pm 0,05$
Relative creep after 8 h	K_8	%	$\leq \pm 0,07$
Temperature effect on characteristic value per 10K	TK_C	%	$\leq \pm 0,002$
Temperature effect on zero signal per 10K	TK_0	%	$\leq \pm 0,002$
Input resistance	R_e	Ω	400 ± 25
Output resistance	R_a	Ω	350 ± 2
Insulation resistance	R_{is}	$G\Omega$	> 5
Max. excitation voltage	U	V	15
Rated range of excitation voltage	$B_{U, nom}$	V	5...10
Limit torque	T_L	%	≤ 150
Breaking torque	T_B	%	≥ 300
Max. permissible dynamic load ²⁾	L_{dy}	%	≤ 70
Degree of protection acc. to DIN 60529			IP64

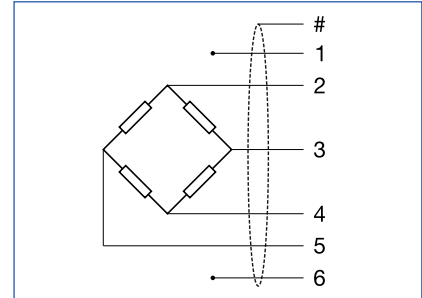
¹⁾ TEDS = Transducer Electronic Data Sheet acc. to IEEE 1451.4

²⁾ Oscillation amplitude acc. to DIN 50100

Electrical Torque Transducers – Model 415



Dimensions in mm				
Model 415				
	1Nm	20Nm	500Nm	2000Nm
	2Nm	50Nm	1000Nm	5000Nm
	5Nm	100Nm		
	10Nm	200Nm		
A		70	100	130
B ± 0,2		58	82	100
C		6x60°	8x45°	12x30°
D		45	60	86
E	Dimensions:	33	40	45
F	see	20	20	75
G	drawing	12	15	20
H		65	80	100
I		10	18	20
M		8	10	12
Sensitivity mV/V		0,5	1	1



Connection Drawing		
1	white	TEDS Data
2	red	Excitation +
3	yellow	Output +
4	blue	Excitation -
5	green	Output-
6	black	TEDS GND
#		Shield