

VELOMAT

MESSELEKTRONIK GmbH



Torque Sensor, reactive



Torque Sensor, reactive

Series: TAF

Features

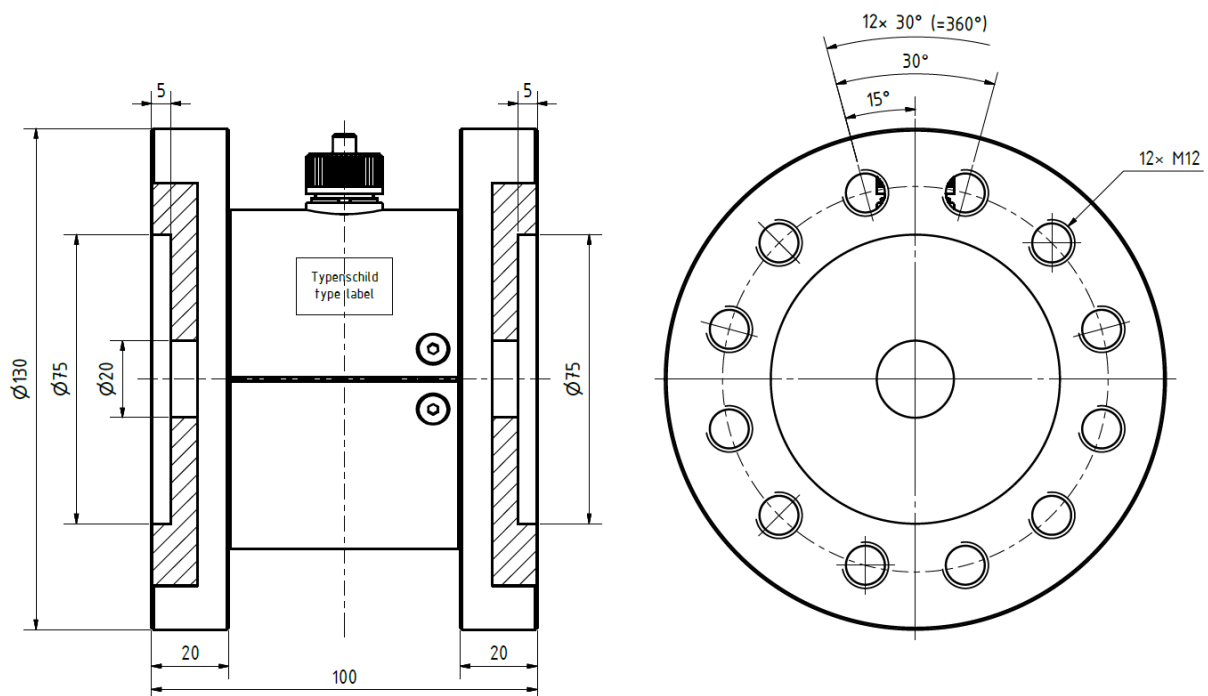
- Nominal torque of 10 ... 5000 Nm
- For e.g. reaction torque detection or torsion measurement
- Flange-flange solution
- Very compact axial length
- High torsional rigidity
- Easy handling and assembly
- Special designs on request

Application

- Measurement, control and regulation technology
- Fully automated production centers
- Measurement and control equipment
- Toolmaking
- Special machine construction

Nominal Torque [N x m]	Screws		Weight [kg]
	Draw Torque [N x m]	Strength Class	
2000	120	10.9	4.8
5000	144	12.9	4.8

Drawing / Dimensions

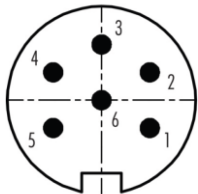


Technical Data

Reactive torque measuring flange with through hole		
Nominal torque M_{nom}	N·m	10 ... 5000
Accuracy class	% v. Ew.	0,5
Nominal value C_{nom}	mV/V	1 ±0,5 %
Bridge resistance R_{Br}	Ω	350
Nominal range of the supply voltage	VDC	2 ... 12
Electrical connection		6-pin series 723 ¹
Reference temperature T_{ref}	°C	23
Nominal temperature range	°C	-15 ... 70
Operating temperature range	°C	-25 ... 80
Temperature influence on the zero signal TK_0	% v. Ew./K	±0,2
Temperature influence on the nominal value TK_c	% v. Ew./K	±0,04
Maximum operating torque M_G (static)	% v. Ew.	150
Limit torque M_{max} (static)	% v. Ew.	200
Breaking torque M_B (static)	% v. Ew.	>300
Permissible vibration stress when subjected to torque M_{df}	% v. Ew.	70 (peak – peak)
protection class		IP50

Nominal Torque [N x M]	Spring Constant [N x M/rad]	Moment of inertia [kg·x m ²]		Limit longitudinal force [N]	Limit shear force [N]
		Drive side	Measuring side		
2000	7,8E+05	4,4E-03	4,0E-03	35000	3000
5000	1,1E+06	4,4E-03	4,1E-03	50000	5500

PIN assignment

6-pin	DF-30	Series 723
Pin 1 – white	Supply (-)	
Pin 2 – brown	Supply (+)	
Pin 3 – green	Not occupied	
Pin 4 – yellow	Measuring signal (+)	
Pin 5 – grey	Measuring signal (-)	
Pin 6 – pink	Not occupied	

Options

Description	
Accuracy class	0,2 % M_{nom}
Control signal	100 % M_{nom}
Extended temperature range	-30 °C ... 100 °C

Calibrations

Description	Steps	Norm
Linearity diagram	25 %	Factory standard
Linearity diagram	10 %	
Factory calibration	3	VDI / VDE 2656
Factory calibration	5	
Factory calibration	8	
DKD-calibration		Upon request

Accessories

Electrical connection

Cable socket 6-pin series 581
Angled socket 6-pin series 682
Connection cable, 3 m, with 6-pin cable socket series 581 and free wires
Angled connection cable, 3 m, with 6-pin angled socket series 682 and free wires