

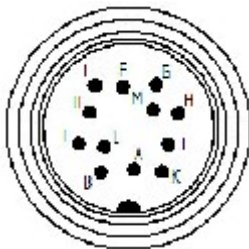
Models T31, T32, T33, & T34 Spindle Torque Transducer

- Capacities From 1 Nm – 500 Nm
- $\pm 5V$ Output (10V Option)
- Speeds Up to 2000 rpm
- Integrated Speed/Angle Measurement
- Very Short Axial Length
- High Torsional Stiffness
- Reliable and Durable
- Simplifies Installation

Wiring Diagram

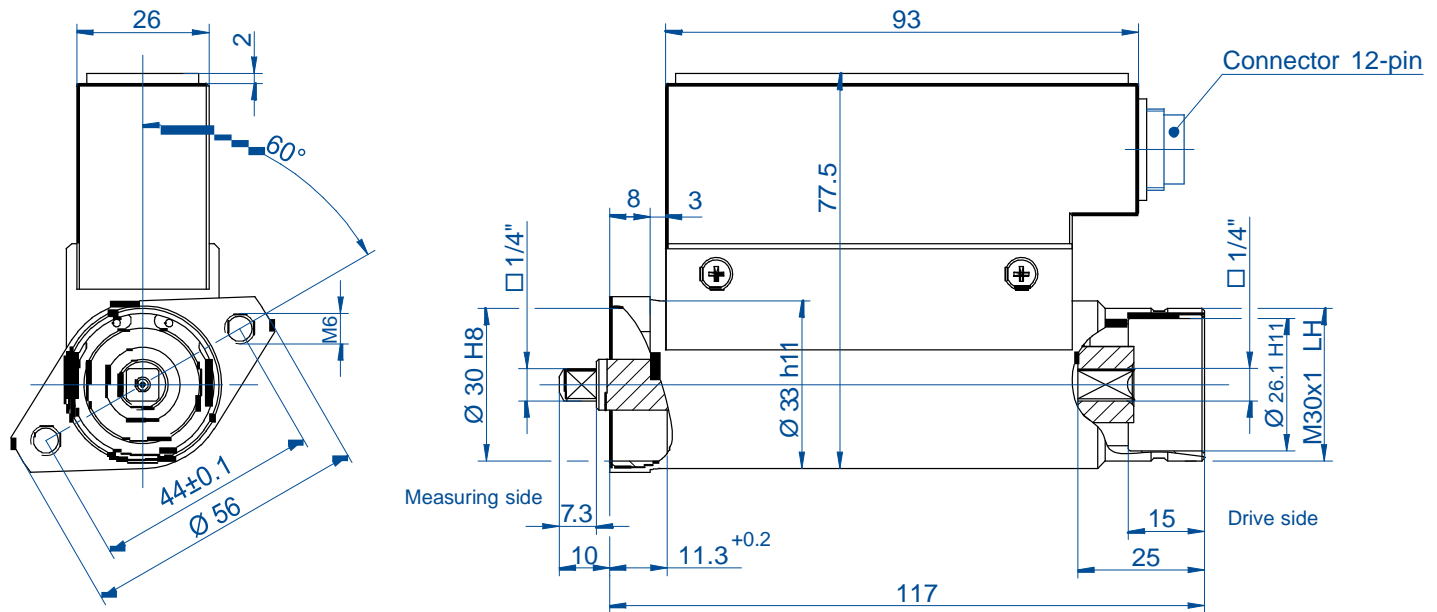
Specifications

12-Pin Wiring		
Pin A	NC	
Pin B	Signal Angle B	5V TTL
Pin C	Signal (+)	$\pm 5V$ ($\pm 10V$)
Pin D	Signal (GND)	0V
Pin E	Supply (GND)	0V
Pin F	Supply (+)	12 - 28VDC
Pin G	Signal Angle A	5V TTL
Pin H	NC	
Pin J	NC	
Pin K	Control Signal	L < 2.0V; H > 3.5V
Pin L	NC	
Pin M	Shield	



Accuracy -(Max Error)	
Combined Error - %FS	± 0.3
Nonrepeatability -%RO	± 0.05
Temperature	
Effect on Zero - % RO/ $^{\circ}C$	± 0.05
Effect on Output - %/ $^{\circ}C$	+/- 0.02
Compensated Range - $^{\circ}C$	5 to +45
Operating Range - $^{\circ}C$	0 to +60
Electrical	
Supply Voltage - VDC	12 to 28
Supply Current - mA	90
Output - VDC	± 5
Sample Rate - Hz	10,000
Bandwidth - Hz	1 kHz-3dB
Resolution	12-bit
Calibration Signal - %FS	100
Electrical Connection	12-pin Binder
Encoder	360 pulse/rev, 2-track, +5V TTL, 90 $^{\circ}$ offset, quadrature
Mechanical	
Safe Overload - % RO	150
Cyclic Load Rating - % RO	70 Peak-Peak (DIN 50100)
Maximum RPM	2000
Protection Class	IP50

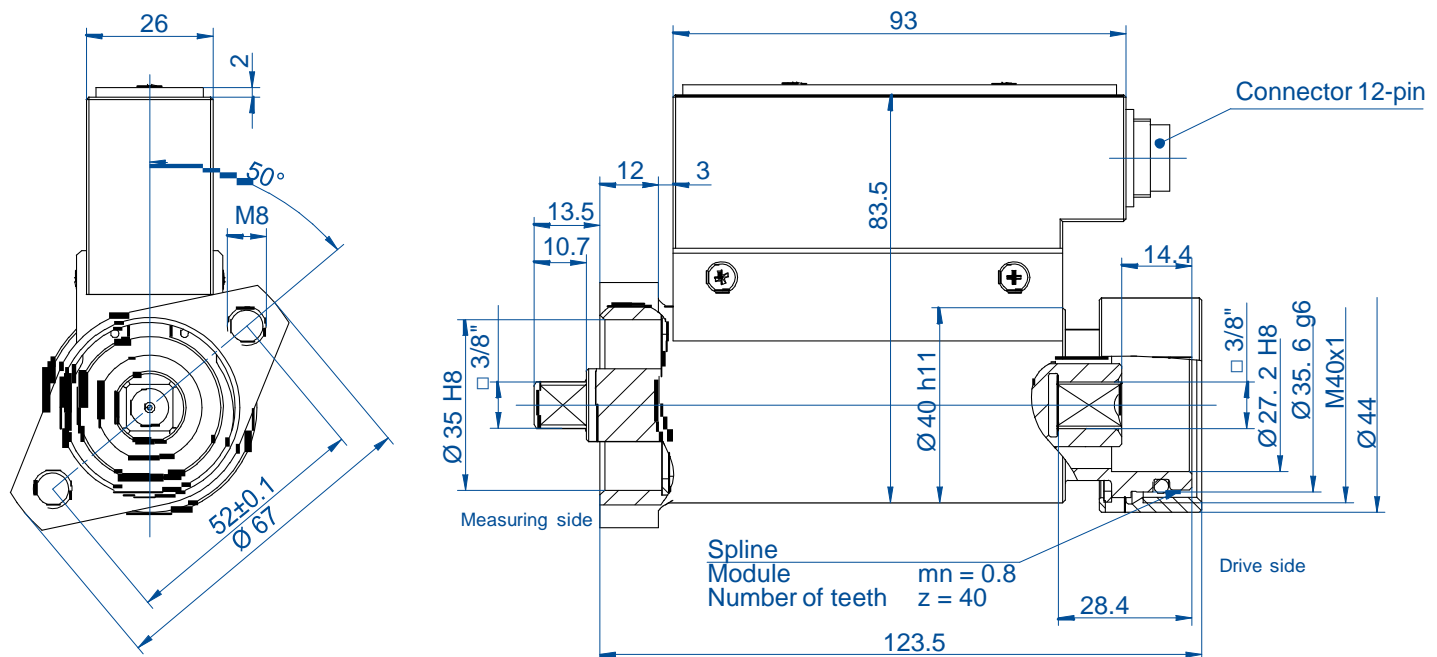
T31



Nominal Torque Nm 1 / 3 / 6 / 12

All dimensions in mm

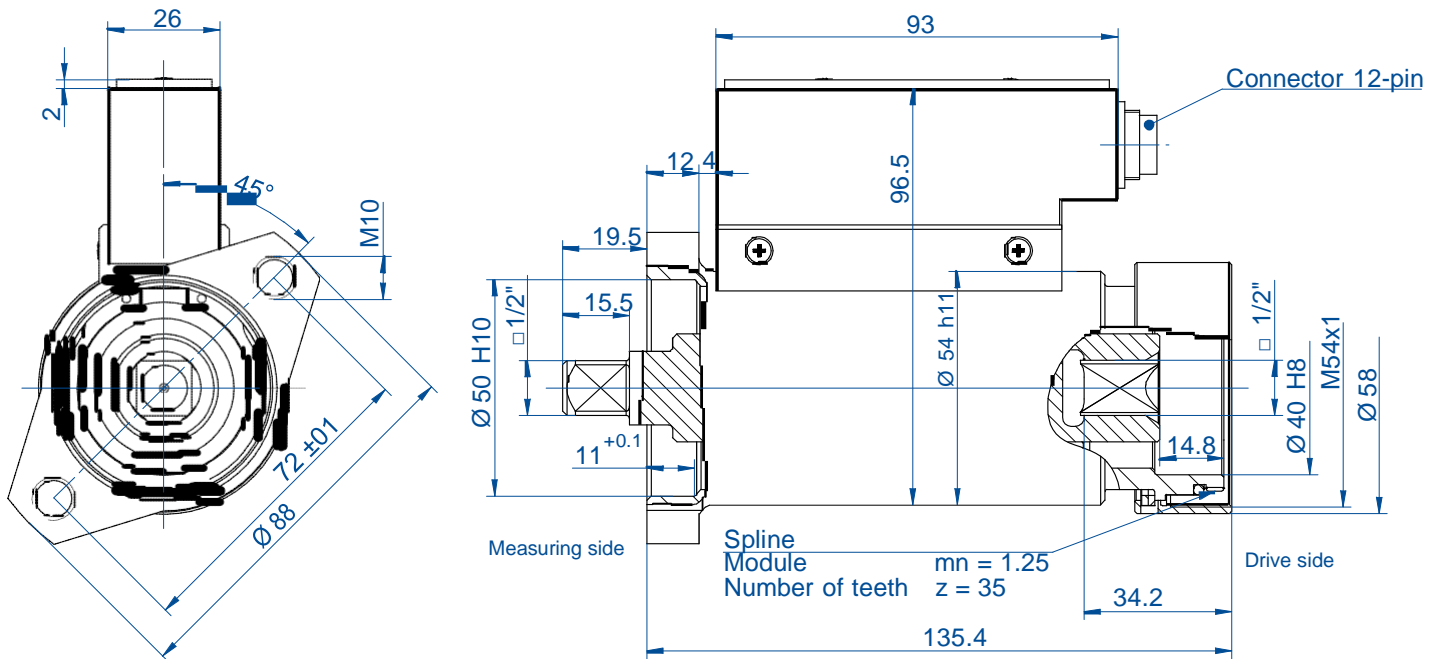
T32



Nominal Torque Nm 4 / 6 / 12 / 35 / 60 / 80

All dimensions in mm

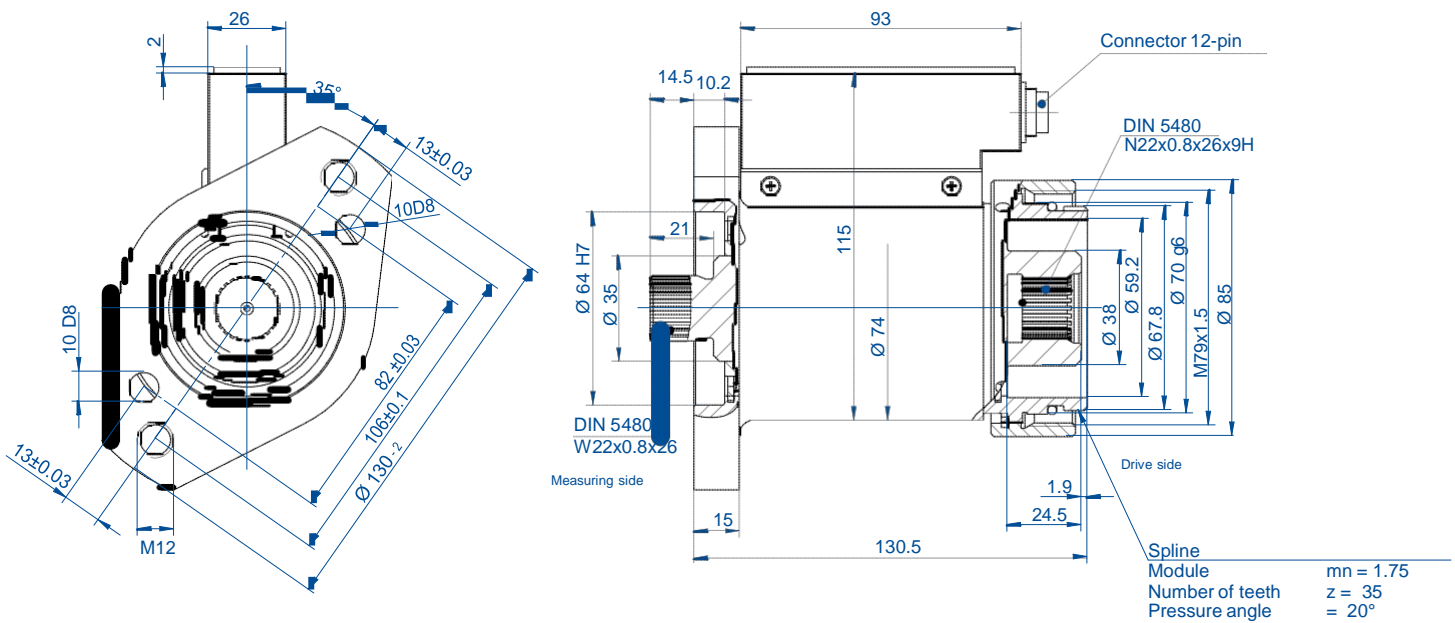
T33



Nominal Torque Nm 60 / 90 / 95 / 160 / 200 / 240

All dimensions in mm

T34



All dimensions in mm

Nominal Torque Nm 150 / 250 / 500