

## ATF315

### Low Range Disc Type Static Torque Transducer

- Measurement ranges 0 ... 10 mNm to 0 ... 5 Nm
- Non-linearity 0.05 % RT
- Output signal 0.2 ... 1 mV/V
- Supply voltage 10 VDC



This static torque transducer is used extensively in instrumentation and small electric motor test and calibration applications.

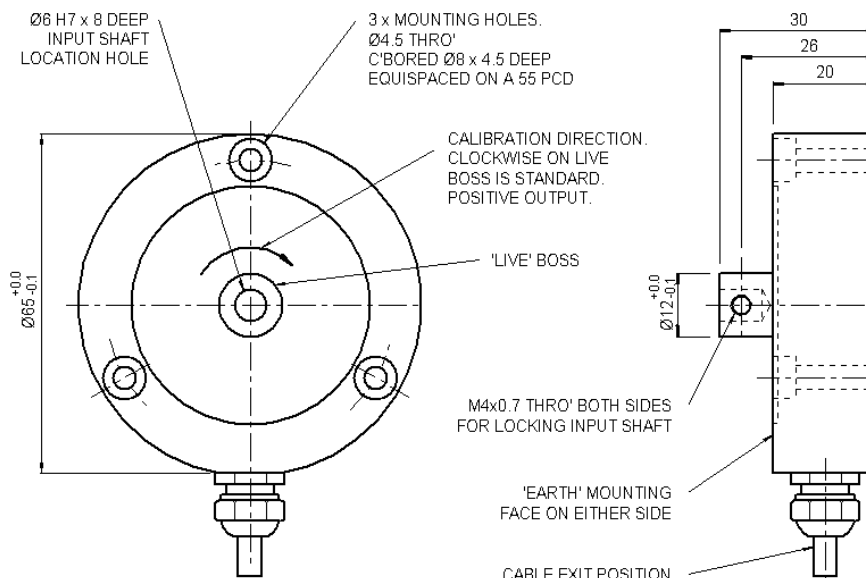
Torque transmission must be arranged to input only torque as extraneous forces, such as tare loads or axial loads will cause measurement errors. Note we are able to calibrate with extraneous load cases replicated. The highly symmetrical signal outputs are usually between 0.2 and 1mV/V for full range.

We are happy to design variants of this transducer to meet your specific requirements. Please consult our engineering department. If you require a higher torque range than 5 Nm the ALF311 is available with ranges up to 1000 Nm.

#### Geometry:

Slender disc, with outer ring earth fixing and live inner boss usually shaft driven.

#### ■ Dimensions



Dimensions in „mm“, approx. values

These drawings are for information only and not intended for construction purpose. Please contact us for detailed drawings.

## ■ Specification

Rated torque:	10 mNm to 5 N m
Non-linearity, terminal:	±0.05 % RT
Hysteresis:	±0.1 % RT
Creep, 20 min:	±0.3 % v.M.
Repeatability:	±0.05 % RT
Rated output, nominal:	0.2 to 1 mV/V (range dependant)
Zero load output:	±4 % RT
Temperature effect on rated output:	±0.005 % AT/K
Temperature effect on zero load output (1 mV/V):	±0.01 % RT/K
Compensated temperature range:	-10 ... +50 °C
Operating temperature range:	-10 ... +80 °C
Supply voltage, recommended:	10 V
Supply voltage, max.:	15 V
Bridge resistance:	700 Ohm
Insulation resistance, minimum at 50 VDC:	500 MOhm
Overload, safe:	125 % RT
Overload, ultimate:	150 % RT
Weight (excl. cable):	approx. 110 to 130 g
Material:	Aluminium

### Notes:

1. RT = rated torque
2. AT = applied torque
3. Temperature coefficients apply over the compensated range.
4. Avoid applying axial or side loads to the central boss.

## ■ Electrical Connections

The transducer is fitted with 2 m of PVC insulated 4 core screened cable type 7-2-4C. The screen is not connected to the transducer body.

### Wiring:

+ supply voltage	red
- supply voltage	blue
+ output signal	yellow
- output signal	green
screen	orange

The signal connections are for a positive signal for a clockwise torque on the centre boss.

Our policy is to improve specification of our products continuously, so technical and production details can be changed without any notice.