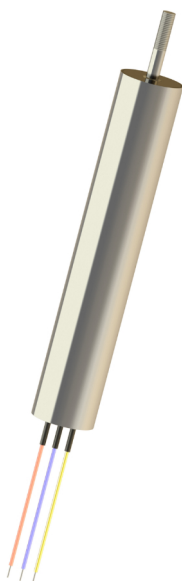


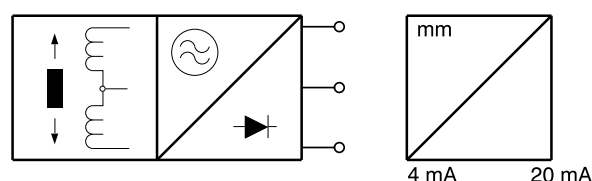
Inductive linear displacement transducers

IW 253 / 55 - 0,5 - A126
Ex II 3G EEx m II A T3


Construction and operating principle

The displacement transducer operates according to the principle of the differential choke, i.e. an inductive half bridge. It consists of two coils which are encapsulated in a stainless steel cylinder. A mu-metal plunger core causes opposing changes of inductance when it is displaced through the centre of the coils. These changes are converted by the integral electronic into a signal proportional to the displacement.

The electronic - designed in SMD technology - contains an oscillator, demodulator, amplifier and the signal output driver. It is short-circuit proof and protected against reverse polarity. The transducers are completely sealed to ensure positive protection against vibration, shock, humidity, oil and through-ignition.

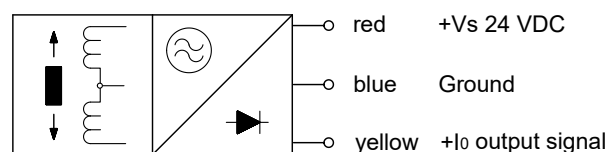


Technical data

■ Operating voltage range V_S :	18 VDC - 30 VDC
■ Calibration voltage:	24 VDC
■ Current consumption I_S :	max. 50 mA
■ Output current I_O :	4...20 mA
■ Measuring stroke:	55 mm
■ Linearity of I_O :	< 0.096 mA
■ Oscillator frequency:	10 kHz
■ Accuracy:	0.5 %
■ Ripple of I_O :	< 0.005 mA _{p-p}
■ Measurement frequency:	up to 100 Hz
■ Operating temperature range:	0 °C to +100 °C
■ Storage temperature range:	-15 °C to +100 °C
■ Calibration temperature:	+20 °C
■ Temperature dependence on I_O :	< 2 μ A / °C
■ Mounting position:	any
■ Protection class:	IP 65
■ Shock resistance (IEC 68-2-27):	30 g 11 ms
■ Vibration resistance (IEC 68-2-6):	55 Hz 11 mm amplit.

■ Self-heating:	20 °C
■ Material of external and internal tube:	1.4301
■ Material of plunger:	1.4304 (threaded part)
■ Material of potting:	Epoxy resin (oil-resistant)
■ Connection cable:	3x0.62 mm ² (AWG 20)
■ Cable insulation:	Kynar (SBF-resistant)
■ Load resistance R_L :	max. 500 Ω
■ Reverse polarity protection:	Yes for V_S (fuse protection on supply side with approx. 100 mA)
■ Short-circuit proof:	Yes for I_O

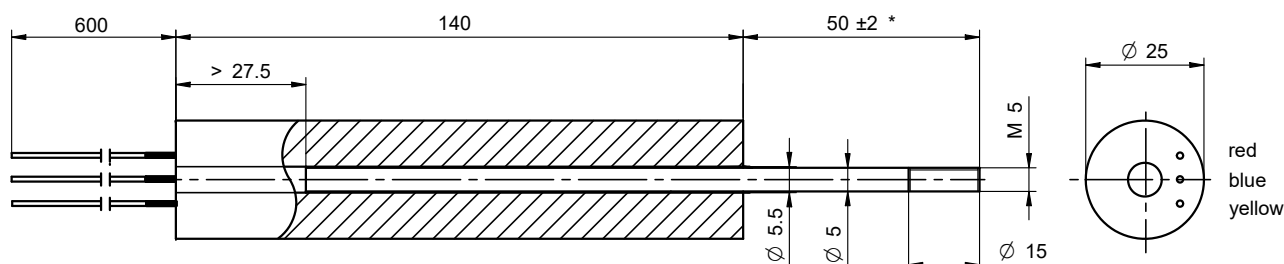
Connection assignment



A fuse on supply side with 100 mA (fast) is required.

The output signal increases positively when the plunger is moved towards the electrical connections.

Dimensions in mm



* The output current is 12 mA with the plunger in the centre position