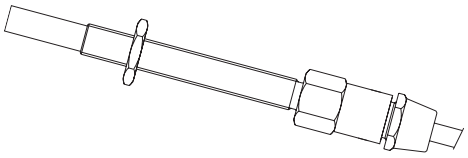
DSE 1210 A, S

M12
x1.25

Standard
pole wheel:
Module 2

Module
range:
1...>4

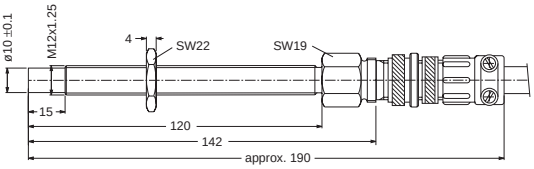


Features

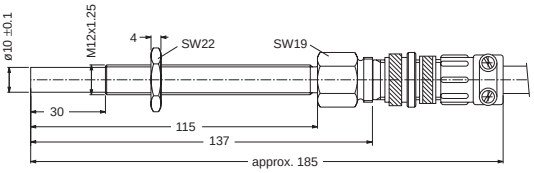
- Without line amplifier
- Turbocharger application
- High temperature version

Dimensions

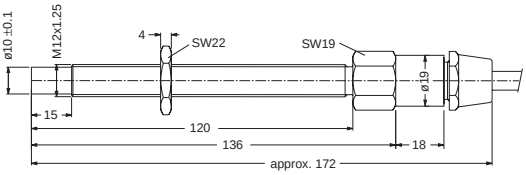
Version A
.01



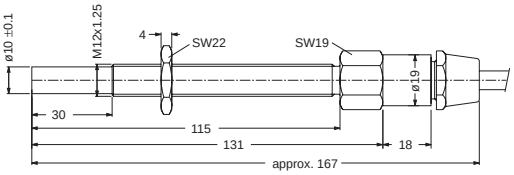
.02



Version S
.01



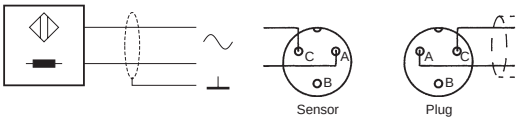
.02



Model overview

Type	Part Nr.	Connection	Housing thread	Weight [g]	Operating temperature [°C]	Notes
DSE 1210.01 ATZ	304Z-03106	Connector	M12x1.25	150	-20…+85	previously FTG 232 A
DSE 1210.01 STZ	304Z-03107	Cable 5 m	M12x1.25	520	-20…+85	previously FTG 232 S
DSE 1210.02 AHZ	304Z-03109	Connector	M12x1.25	150	-20…+150	previously FTG 233 A
DSE 1210.02 SHZ	304Z-03110	Cable 5 m	M12x1.25	520	-20…+150	previously FTG 233 S

Technical Data

Supply	
Power supply	Active sensor without power supply. Reverse polarity protection. No current consumption. Coil inductance acc. to Technical Data (see table 1).
Input	
Frequency range	~10 Hz…50 kHz
Noise immunity	Cable shield connected to the supply negative pole. Noise generator between housing and electronics. 1.5 kV/1.5 ms/max. 5 Hz (source resistance 500 Ω), 2.0 kV/HF-bursts (level 4 in accordance with IEC 801-4), 2.5 kV/1 MHz damped resonance (class III in accordance with IEC 255-4).
Pole wheel	Ferromagnetic toothed wheel i.e. Ust37-2, involute gear form preferred. Module ≥ 1, min. tooth width 6 mm, side offset with min. tooth width: < 0.2 mm, eccentricity < 0.2 mm or acc. to specifications for turbocharger. Pole wheel-sensor gap ≥ 0.1 mm. Gap depending on rotational speed (circumferential) and module acc. to diagrams A1, B1 and Technical Data (see table 1).
Output	
Signal output	A.C. voltage, approx. sinusoidal. Amplitude dependent on rotational speed, pole wheel-sensor gap, pole dimensions and structural shape (involute gear form preferred). Characteristics in diagram A show the dependence on gap d. Diagram B shows lowest measuring speed N100 for different modules and gaps d. Output voltage Un at rotational speed of 5 m/sec is the reference value. (I.e. at pole wheel-Ø 64 mm, n = 1500 min^{-1}) acc. to Technical Data (see table 1). Short circuit proof and protected against reverse polarity.
Connection	 Shield to be connected with 0 V of power supply.
Mechanical	
Protection class	IP68 (head version H), IP64 (head version T), IP67 (cable connection), IP50 (jack connection).
Vibration immunity	20 g_n in the range 5…2000 Hz.
Shock immunity	50 g_n during 20 ms, half sine wave.
Operating temperature	Acc. to model overview.
Insulation	Housing and electronics galvanically isolated (500 V/50 Hz/1 min).
Housing	Stainless steel 1.4305, front side hermetically sealed (H-version), electronic components potted in a chemical- and age-proof synthetic resin. Dimensions acc. to model overview and dimensional drawings.
Weight	Acc. to model overview.
Operating instructions	304E-63922
Versions	
Version ST	PVC cable: Part nr. 824L-30894, 2wire, 2 x 0.75 mm^2, stranded wire (metal net insulated from the housing), grey. Outer Ø max. 6,7 mm, bending radius min. 60 mm, weight 70 g/m.
Version SH	Teflon cable: Part nr. 824L-31841, 2wire, 2 x 0.75 mm^2, stranded wire (metal net insulated from the housing), black. Outer Ø max. 5.0 mm, bending radius min. 80 mm, weight 45 g/m. Standard length for version SH: 2 m, 5 m.
Version AH	Connection type: 820E-31142. Connection plug: 820E-31141.