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Sender Unit

2159-20 (stat.)

The Sender Unit, integrated in the gearbox, transfers the number of revolutions of a gearwheel into electrical pulses.

The revolutions are captured by means of a Hall IC. The pulses supplied by the Hall IC are used by tachographs and on-board computers for capturing the distance covered and the road speed.

When using the integrated sender unit the speedometer shaft connection is no longer necessary.

2159-20 is designed for heavy-duty purposes!

Features

- Touch-sensitive measuring procedure (Hall IC)
- Integrated in the gearbox
- Static measuring (zero-speed recognition)
- Double pulse (inverted)
- Can be sealed
- Can be directly connected to the vehicle electric system
- Recognition of sense of rotation (2 sensors)
- 7 different lengths to comply with the different types of gearboxes

Applications

- For tachographs/EC tachographs KTCO 1318, FTCO 1319 and MTCO 1390 NEC
- Generally for devices requiring an electrical pulse (double pulse, inverted) for road speed and/or distance measuring.

Sender Unit

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Technical Information

Output	Double pulse (inverted)
Operating voltage	6,5 ... 30 V
Power consumption (-U)	max. 16 mA
Operating temperature	A -30°C ... +135°C
	B -30°C ... +145°C
Storage temperature	A -40°C ... +140°C
	B -40°C ... +150°C
Connection	unearthed
Output resistor (pull up)	open collector
Protective resistance	1,5 kΩ
Signal shape	rectangular
Frequency (max.)	≤ 4 kHz
Output signal A1	$U_L \leq 1,9 \text{ V}$ (1mA)
Output signal A2	inversion of A1
Interference protection	DIN 40839 T1
Radiated susceptibility	DIN 40839 T4 (100V/m)
Outputs, short-circuit proof	30 V, 1 min.
Protection	IEC 529, IP 67
Resistance to vibrations	30 g
Shock resistance	100 g, 11 ms, 50 cycles
Tightness	0,5 bar oil, 120°C, 100h
Scanning speed	V_{\min} circumference $\geq 0 \text{ m/s}$
of pulse wheel (typ.)	
Pulse wheel material (typ.)	St 4 LG RP
Thickness of pulse material	2 mm
Segment/gap (typ.)	1 : 1,5 to 1 : 2
Length of segment (typ.)	16 mm
Air gap, Sender Unit/pulse wheel (typ.)	1,4 mm
Not to be used in cases of	
extraneous magnetic fields	> 2 mT
Connection of sender unit	via bayonet joint
to sender unit cable	
Connection of sender unit	via thread M 18 x 1,5
to vehicle gearbox	
Torquet (wrench size)	max. 50 Nm (SW 27)
Weight	approx. 80 to 160 g
Dimensions	approx. 16 x 19,8/25/35
(Ø x L in mm)	63,2/90

