



Speed indicator units for trains and other rail-guided vehicles have to be designed and built to the highest standards to ensure flawless performance even in extreme ambient conditions.

The indication must be sufficiently accurate to enable the driver to keep to his timetable and maintain optimum control over the vehicle in critical situations.

The indicator unit must be extremely reliable and must warn the driver of the possibility of false readings in the event of a fault condition.

Combining several readings (e.g. V_{actual} , V_{nominal}) in one indicator makes it easy to compare them and saves space on the driver's instrument panel.

The indicator is controlled by a step-motor and an electronic control system which converts the input signal (nominal) into the pulses which drive the step-motor.

The correct position of the pointer is checked internally by a feedback-encoder system. The entry signal is compared to the feedback signal.

If the tolerance is within a given range, the pointer position is gauged as correct. If not an alarm is generated and shown by the alarm light.

The feedback signal of the pointer is also available on an output. This enables to compare the signal source outside the speed indicator with the pointer position. Thus allows surveying the complete signal conditioning process chain from the signal source to the pointer.

For further information on the Hasler[®] SPEEDO, please do not hesitate to ask our friendly staff who is happy to help.

Hasler® SPEEDO



Main technical data

Analogue inputs

V_{actual}	0 ... 20 mA; 4 ... 20 mA 0 ... 10 V
V_{nominal}	0 ... 20 mA; 4 ... 20 mA 0 ... 10 V

Digital inputs

Lamp _A	$U_{\text{ON}} > 12 \text{ V}; U_{\text{OFF}} < 5 \text{ V}$
Lamp _B	external contact
Lamp _C	external contact
Lamp _D	external contact
Flag	external contact

Analogue outputs

Pointer position	0 ... 20 mA; 4 ... 20 mA
feedback	0 ... 10 V

Digital outputs

V_{max} alarm	relay contact
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Interfaces

Service	Ethernet / USB
RS485	on request
CAN	on request

Standards	EN 50155:2007; EN 50121-3-2:2006; EN 61373:1999	
Environment	Service:	EN 50155:2007, Table T1, T3
	Storage:	EN 60068-2-1
	Humidity:	EN 50155:2007, Section 4.1.4
Shock & Vibration	EN 61373:1999; Category 1, Class B; body mounted	
Degree of protection	Front: IP54	Back: IP20
Dimensions	W x H x D 144 x 144 x 110 mm	
Weight	1.2 kg	
Accuracy	V_{actual}	±0.5% of maximum value (pointer)
	V_{nominal}	±1% of maximum value (LED ring)
Illumination	LED, brightness dimmable automatic or manual	
Power supply	Nominal battery	24 ... 110 V _{DC}
	Consumption	10 W _{max}

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