CORRSYS DATRON Sensorsystems

CORREVIT® SL

Non-Contact 2-Axis Optical Sensor

for

Slip-Free Measurement of Longitudinal and Transversal (Transverse Angle) Dynamics

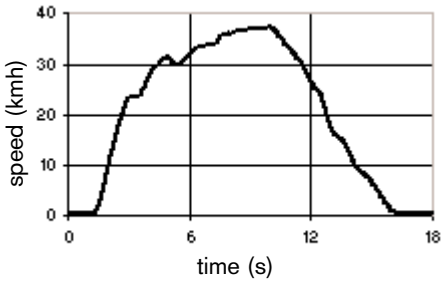
- Smaller and lighter version of the proven CORREVIT® S-CE Sensor.
- Same performance characteristics as the CORREVIT® S-CE Sensor.
- Lightweight carbon fiber housing.
- Developed for measurement of tire slip angle at speeds up to 400 kmh.
- Exceptionally high measuring accuracy (better than 0.1%*), enabled by precision optical gratings and direct signal processing.
- Programmable standardized analog and digital signal outputs using the latest processor techniques, fast and easy calibration.
- All measured values available.
- Easy operation, mounting angle correction and direct connection to PC or other evaluation systems.
- Proven performance in extreme conditions.
- Robust, reliable optical technology requires only negligible service and maintenance.

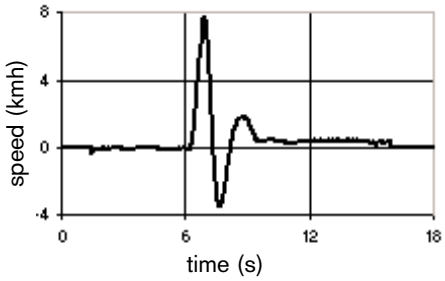
* with calibration on the test surface

Article no. 11313

Concept

The lightweight CORREVIT® SL Sensor is specially developed for the measurement of tire slip angle. The low weight and compact design of the sensor have negligible effect on tire slip angle, providing more accurate results. The SL Sensor uses proven optical correlation technology to ensure the most accurate possible signal representation. This technology incorporates a high-intensity light source that illuminates the test surface, which is optically detected by the sensor via a two-phase optical grating system. Fast (approximately 5 minutes), easy mounting and universal applicability distinguish this proven non-contact, optical sensor.





Typical Technical Specifications

Performance Specifications

Speed range:	0.5 to 400 kph
Distance resolution:	2.5 mm
Measurement deviation*:	±0.1%
Angle range:	±40°
Angle resolution:	<±0.1°
Optimal mounting height:	300 mm
Working range:	±50 mm

Electronic Connector Output

Digital output 1 - distance IVI or V_L:	1 to 1000 pulses/m
Digital output 2 - switchable:	Output as frequency
- Frequency modulated angle or transversal speed:	f_{center} = 5 kHz
Analog output 1 - magnitude speed IVI or longitudinal speed V_L:	0 to 10 V
Analog output 2 - transversal speed V_q:	-10 to +10 V
Analog output 3 - angle b: -10 ... +10 V	
CAN Bus (optional):	CAN v2.0B

System Specifications

Power requirement:		10 to 14.5 V; 45 W (12 V DC)
Temperature range	Operation:	- 25 to 50° C
	Storage:	- 40 to 85° C
Relative Humidity: condensing		5 to 80% not
System protection of the sensor:		IP 67
Dimensions of the sensor (l x w x h):		180 x 52 x 160 mm
	Weight:	640 g (including spray guard)
Dimensions of the electronics (l x w x h):		212 x 144 x 53 mm
	Weight:	940 g
Shock:		50 g half-sine, 6 ms
Vibration:		10 g, 10 to 150 Hz

Serial interface for connection to the PC, automatic sensor identification, function control.

*with calibration on the test surface

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