



# CORREVIT® S-HR

Non-Contact Optical

High-Resolution Sensor

for

**slip-free measurement of longitudinal and transversal dynamics**

- Accuracy of the unfiltered angle within the range of  $\pm 15^\circ = 0.1^\circ$
- High-resolution slip angle measurement by enhanced measuring principle
- Working range of  $250 \pm 50$  mm from test surface
- Applicable from 0.5 kph ... 250 kph\*
- Adjustable filter time for speed signal and angle up from  $\pm 15^\circ$  (unfiltered, moving average 8 ... 512 ms)  
FIR Filter with constant filter time (adjustable)

Considerably improved performance enabled by the application of the latest technologies:

- ⇒ Latest halogen lamp with aluminum reflector
  - ⇒ Improved distance linearity
  - ⇒ Easier mounting
  - ⇒ Improved signal processing by ideal combination of analog and digital signal conditioning (DSP-FPGA technology)
  - ⇒ Reduced noise in output signal
  - ⇒ Improved measurement features on various surfaces
  - ⇒ Improved standstill indication
  - ⇒ Quick filter start-up
  - Extremely high measuring accuracy\*\* better than  $\pm 0.1\%$  as a result of precise optics and digital signal processing
  - Programmable standard analog and digital signal outputs
  - All measured values available in all output formats
  - Direct connection to PC and virtually all data acquisition systems
- Signal outputs:
- Analog  $\pm 10V$  / 16 Bit
  - Digital pulses
  - CAN-Bus
  - RS232
  - USB
- No extensive initialization required
  - Negligible service and maintenance requirements as a result of durable technology
  - Tested and used under extreme environmental conditions



\* high-resolution angle output up from 10 kph / \*\* with calibration on the test surface

## Typical Technical Data

### Performance specifications

Angle measurement range:	±40°
High-Resolution:	±15°
Speed range*:	0.5 ... 250 kph
Distance resolution:	2.66 mm
Distance measurement deviation**:	<±0.1%
High-resolution angle output range:	10 ... 250 km/h
Angle resolution:	0.01°
Angle accuracy:	±0.1°
Angle resolution (-40°...-15°; +15°...+40°):	0.1°
Measurement frequency:	250 Hz
Working distance and range:	250 ±50 mm

### Signal outputs

Digital output 1 - IVI or $V_L$ ***:	1 ... 1000 pulses/m
Digital output 2 - $V_q$ or angle***:	$f_{center} = 5 \text{ kHz}$
Analog output 1 - IVI or $V_L$ ***:	0 ... 10 V
Analog output 2 - $V_q$ :	-10 ... +10 V
Analog output 3 - angle:	-10 ... +10 V

### Signal inputs

Trigger input:	for calibration with LB / Brake switch
Analog input 1+2:	-10 ... +10 V
Counter input:	0 ... 100 KHz

### Interfaces:

analog ±10V / 16 Bit  
digital pulses  
CAN 2.0B  
RS232  
USB 2.0 Full Speed

### System specifications

Power supply:	10 ... 28 V, 60W
Temperature range: Operation:	- 25 ... +60 °C
Storage:	- 10 ... +85 °C
Rel. humidity:	5 ... 80% non condensing
Protection standard sensor head (cable mounted):	IP 67
Protection standard electronics:	IP 50
Dimensions of the sensor head (l x w x h):	165 x 50 x 130 mm
Weight of the sensor head:	1250 g ****
Dimensions of the electronics (l x w x h):	164 x 125 x 95 mm
Weight of the electronics:	1250 g
Illumination:	2 x 20 W Halogen (Aluline Pro)
Splash guard:	yes
Sensor cable:	5 m

\* optional: calibrated up to 400 km/h    \*\*\* switching-over between the respective measured variables  
\*\* with calibration on test surface        via CeCalWin Pro possible  
\*\*\*\* optional: sensor head made of magnesium = approx. 900 g

