



CORREVIT[®] S-350 Aqua

Non-Contact Optical Sensor

for

slip-free measurement of longitudinal and transversal dynamics

- CORREVIT[®] S-350 Aqua with working range of 350 ± 100 mm
- Applicable from 0.5 kph ... 250 kph*
- Due to its considerably extended working range, the S-350 Aqua Sensor is ideally suited for application with trucks, busses and off-road vehicles.
- Sensor Electronics provide option for connection of a Gyro to attain yaw rate for measurement of sideslip angle relative to the vehicle's center of gravity
- Adjustable filter time (unfiltered, 8 ... 512 ms)
FIR Filter with constant filter time (adjustable)

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

- ⇒ Latest halogen lamp with aluminum reflector
 - ⇒ Smallest dimensions
 - ⇒ Improved distance linearity,
 - ⇒ Easier mounting
 - ⇒ Improved signal processing by ideal combination of the analog and digital signal conditioning (DSP-FPGA technology).
 - ⇒ Reduced noise of the output signal
 - ⇒ Improved measurement features on various surfaces
 - ⇒ Improved standstill
 - ⇒ 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
 - Direct connection to PC and virtually all data acquisition systems
- Signal outputs: Analog
 Digital
 CAN Bus V 2.0B
 USB or RS232
- Negligible service and maintenance requirements as a result of durable technology



* optional: calibrated up to 400 km/h
** with calibration on the test surface

Art. No.:
S-350 Aqua long. 15377
S-350 Aqua trans. 15378

Typical Technical Data

Performance specifications

Speed range:	0.5 ... 250 kph *
Distance resolution:	2.47 mm
Distance measurement deviation:	<±0.2% **
Angle range:	±40°
Angle resolution:	<±0.1°
Working distance and range:	350 ±100 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:

CAN 2.0B (Motorola or Intel)
 USB 2.0 Full Speed
 RS232

System specifications

Power supply****:	10 ... 28 V; 40 W (12 V DC)
Temperature range: Operation:	- 25 ... 50° C
Storage:	- 40 ... 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):	105 x 70 x 45 mm
Weight of the sensor head:	500 g
Dimensions of the electronics (l x w x h):	180 x 125 x 95 mm
Weight of the electronics:	1100 g
Shock:	50 g half-sine, 6 ms
Vibration:	10 g, 10 ... 150 Hz
Illumination:	Halogen

Technical Data for CORRSYS-DATRON Gyro: refer to separate data sheet
 Angular Rate Gyro Modules
 D113-51-02-01E_YawRateModules

http://www.corrsys-datron.com/Support/Data_Sheets/Datasheets-Sensors/cds-d_YAW-RATE_e.pdf

- * optional: calibrated up to 400 km/h
- ** with calibration on test surface
- *** switching-over between the respective measured variables via CeCalWin Pro possible
- **** from serial number 640-084100

CORREVIT® is a registered trademark of CORRSYS-DATRON Sensorysysteme GmbH
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CORREVIT® S-350 Aqua Sensor with Gyro
 for automatic calculation of sideslip angle relative to the vehicle's center of gravity

In a continuous effort to improve our products, CORRSYS-DATRON reserves the right to change specifications without prior notice.