

Correvit® R-350 Sensors

Type CR350A

Non-contact Optical Sensors

Correvit R-350 sensors are designed for application under extreme testing conditions, e.g. measuring longitudinal dynamics with rail vehicles.

- Correvit R-350 has working range of 350 ±50 mm, applicable from 0,3 ... 400 km/h
- Excellent distance measurement accuracy: ±0,2 %
- Adjustable filter time (unfiltered, moving average 8 ... 512 ms, FIR-Filter 2 ... 100 Hz)
- Direct connection to PC or various evaluation systems
- Signal outputs: analog, digital, CAN Bus, USB or RS-232C
- Negligible service and maintenance requirements

Description

Correvit R-350 sensors produce outstanding accuracy on the railhead – dry or wet. Designed for applications with rail vehicles, the R-350 sensors mark a major step in the evolution of the proven Correvit optical measurement principle.

State-of-the-art optical elements combined with optoelectronic components and digital signal processing make the R-350 sensors even more insusceptible to errors.

Speed and distance information is updated at 250 Hz to track every highly dynamic maneuver.

Application

High-precision, slip-free measurement of distance, longitudinal speed and acceleration for rail vehicle testing.

Technical Data

Performance Specifications

Speed range	km/h	0,3 ... 400
Distance resolution	mm	2,47
Measurement accuracy ¹⁾	% FSO	<±0,2
Measurement frequency	Hz	250
Working distance and range	mm	350 ±50

Signal Output

Digital output 1 - V _L	pulses/m	1 ... 1 000/TTL
Analog output 1 - V _L	V	0 ... 10

¹⁾ determined on test surface with distance >200 m



Signal Input

Trigger input calibration		yes
Analog input 1+2	V	-10 ... 10
Counter input	kHz	0 ... 10

Interfaces

CAN (Motorola/Intel)		2.0B
USB (Full Speed)		2.0
RS-232C		yes

System Specifications

Power supply	V	10 ... 28
Power consumption at 12 V	W	33
Temperature range		
Operation	°C	-25 ... 50
Storage	°C	-40 ... 85
Relative humidity (non condensing)	%	5 ... 80
Degree of protection		
Sensor head (cable mounted)		IP67
Electronics (cable mounted)		IP30
Dimensions (LxBxH)		
Sensor head	mm	125x70x45
Electronics	mm	180x125x95
Weight		
Sensor head	grams	500
Electronics	grams	1 100
Shock		
g		50 half sine
ms		6
Vibration		
g		10
Hz		10 ... 150
Illumination		LED-IR
Weave length	mm	850
Laser class		1M

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This information corresponds to the current state of knowledge. Kistler reserves the right to make technical changes. Liability for consequential damage resulting from the use of Kistler products is excluded.

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Dimensions

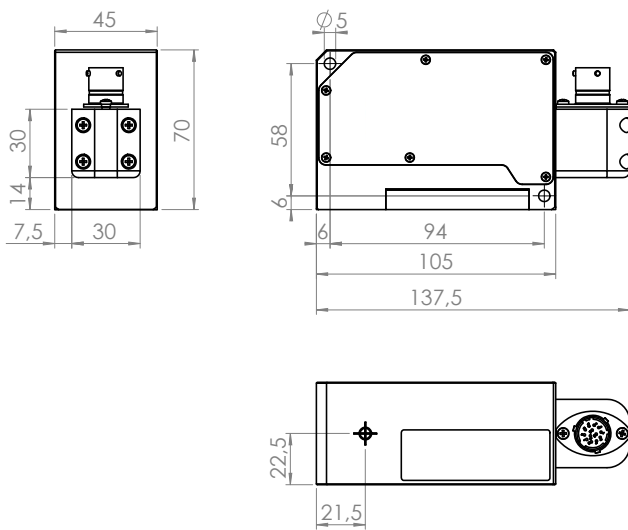


Fig 1: Dimensions of the R-350 sensor

Mounting

Using mounting plate 55065449, you may mount the sensor in a suitable area such as the bogie. The mounting distance between the lower side of the mounting plate and the rail head must be 125 mm.



Fig 3: R-350 sensor on mounting plate

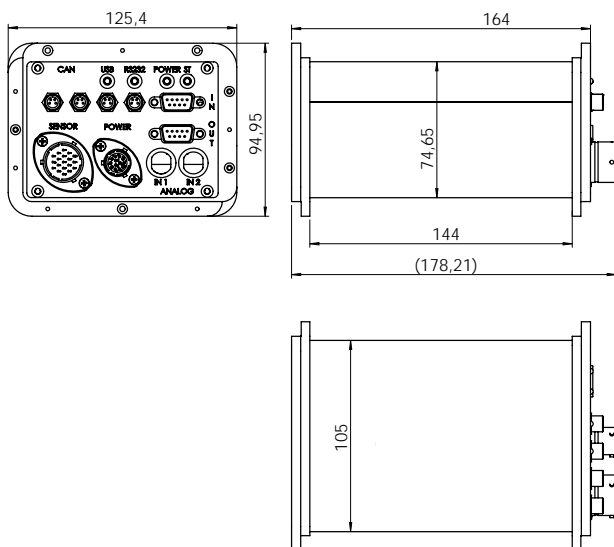


Fig 2: Dimensions of the R-350 electronics

Included Accessories

- Sensor electronics
- Sensor cable, l = 10 m
- Power cable, MIL, 6 pin Banana, l = 2 m
- Connection cable CAN, l = 2 m
- Connection cable RS-232C, l = 2 m
- Connection cable USB, l = 2 m
- Distribution cable, D-Sub, 2 x BNC, l = 1 m
- Mini folding rule
- Multimedia CD incl. software & manuals
- Sensor calibration (DIN EN ISO 9001)
- Cranked wrench key
- Hexagon wrench key, 6 kt 4 mm
- Set screw for R-350
- Transport case, complete

Ordering No.

- 55065841
- 18019047
- 18012634
- 18012482
- 18012469
- 18012483
- 18012382
- 55064207
- 55082182
- 44000609
- 55065040
- 55063983
- 55082183
- 55066876

Optional Accessories

- Light barrier
- Brake switch
- Holder for R-350 sensor

Ordering No.

- 18012640
- 55065914
- 55065449

Ordering Code

- Correxit R-350 Sensor

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