



CORREVIT® ID-LS

Non-Contact
1-Axis
Optical Sensor

for

Slip-Free Measurement of the Length and Speed of Moving Strip Material with Directional Detection

- Widest speed range 0.2 to 1600 m/min; a high pulse resolution of up to 4000 pulses/m; direction detection
- Exceptionally high measuring accuracy* – better than 0.1% as a result of precision optical gratings and direct signal processing.
- Compact, robust sensor construction with integrated filter electronics and serial interface.
- Switch-off double lamp: switches automatically to lamp 2 if lamp 1 is defective
- Different standardized digital interfaces for indication of length. Analog interfaces for speed.
- Quick and easy calibration of pulse outputs using the latest processor technology.
- Simple operation and quick installation in production lines, suitable for industrial applications (IP 66, opt. IP 67) with direct connection to any process controls.
- Tested and used under extreme ambient conditions.
- Negligible service and maintenance requirements as a result of durable technology.



* with calibration on the test surface

Application: Industrial measurement of strip material

Applications for the ID-LS Sensor include the measurement of textiles, carpets, paper, foils, steel, wood, cables, ropes, wires, tubes, etc. (from approx. 1 mm in diameter - smaller diameters possible depending on the surface structure). Use the ID-LS Sensor in any industrial application where slippage, shrinkage, elongation, extreme environmental conditions or the production process make traditional contact measurement techniques inexact. CORREVIT® ID-LS Sensors perform a precise measurement adapted to the surface structure. CORREVIT® ID-LS Sensors use the proven grating correlation process, with 4-flank optical gratings, which ensures direct signal processing. Difficult measurement requirements during the production process, such as the degree of elongation and shrinkage, can be achieved precisely using a combination of two sensors for highest precision.

CORREVIT® ID-LS Sensor technology decisively contributes to precise industrial measurement evaluation and process control.

Typical Technical Specifications

Working range:	115 ±15 mm
Speed range:	0,2 to 1600 m/min
Acceleration:	max. 3 to 5 m/s ²
Minimum measurement width:	1 mm (dependent on micro)
Resolution:	4000 Pulse/m optical, i.e. 0,25 mm
Repeatability:	< ±0,1 %
Linearity:	< ±0,1 %
Inputs and Outputs:	
Length:	Length pulses and direction Differential (RS 485; 5 V) or open-collector (5-24V; 10 mA max)
or:	2 length signals with ±90° phase-shifted pulses pulse duty factor 1:1 Differential (RS 485; 5 V) or Open-Collector (5-24V; 10 mA max)
Speed:	Voltage analog (optional); 0 to 12V, 12 bit
or:	power analog (optional); 4 to 20mA, analog, 12 Bit
Signal quality:	Test signal OK (optional); Differential (RS 485; 5V)
Lamp function:	Lamp 1 defect; open-collector (5-24V; 10 mA max) switch-off lamp; single (5-24V; GND)
Interface:	RS 232
Supply:	
Voltage:	24 V (20-36V) DC
Power consumption:	38 Watt (20 W lamp) or 50 Watt (35 W lamp)
Surroundings condigions:	
Temp. storage:	-40 to 85° C
Temp. operation:	0 to 60° C
Relative humidity:	5 to 80 %, not condensing
Shock:	50 g half-sine, 6 ms
Vibration:	10 g, 10 to 150 Hz
Dimensions (l x w x h):	280 x 255 x 101 mm (incl. lamp)
Net weight:	4,8 kg (without cable)
System protection:	IP 66, opt. IP 67

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C3D-D024-51-01-01E



In a continuous effort to improve our products, CORRSYS 3D Sensors AG reserves the right to change specifications without prior notice.