

# VLM60

## Sensor for Speed and Length

The non-contact optical VLM60 is a modern speed and length measuring device in a robust aluminum IP65 housing. An automatically controlled white light LED illuminates the surface of the measuring object. The reflected light is projected onto the *optical track* image sensor by the integrated precision optics. The movement of the measurement object is measured in this way by means of a correlation method. The speed is detected bidirectionally in both the x and y directions. The VLM60 can be used as a direct replacement for measuring wheels or other rotary encoder applications. The built-in TTL incremental output holds two pulse phases for each of the two directions of movement. There is an optionally Ethernet based fieldbus interface available. Thanks to the flexible installation position, the small dimensions and the short working distance of 100 mm, the VLM60 can be integrated easily into a wide variety of installations.



### Key features

- Acquisition of longitudinal and cross movement
- Detection of moving direction change
- No minimum speed, measurement down to 0 m/s
- No object touch, no slip, non-wearing
- No harmful LASER-light
- Made in Germany

### Applications

- Suitable for various cases of applications like cutting, positioning, regulation, inspection, quality control
- Applicable for a wide range of products like strips, webs, plates, tubes, profiles, etc.
- Integrable into winders, slitting lines, coating and inspection lines etc.

### Technical Data

Working distance and tolerance	100 ± 10 mm
Measurement range	0,0 ... 300 m/min (0,0 ... 5 m/s)
Measurement uncertainty <sup>1)</sup>	< 1 %
Reproducibility <sup>1)</sup>	< 1 %
Working principle	Correlation
Illumination	White light LED (life span > 5 years, exchangeable)
Supply voltage (V <sub>sup</sub> )	12 ... 30 V DC
Power consumption	< 7 W
Temperature range	0 °C ... 50 °C
Protection level	IP 65
EMC	Conformity according IEC 61326-1:2020
Weight, dimensions	ca. 1,45 kg, 132 mm x 140 mm x 60 mm (without connectors)
Programming interface	USB, for parameter adjustment and software updates
I/O signals	Status output (V <sub>sup</sub> - 1 V, 100 mA max., short circuit proof) Trigger input (10 ... 30 V, 3 mA max., opto- isolated)
Incremental output (Encoder)	per direction of movement two phases (A/B, 90°) 5V TTL, output frequency max. 1 MHz, max. 100 mA per phase
Fieldbus interface (optional)	Ethernet (FBFE), Profinet IO (FBPN), Ethernet/IP (FBEI)
Scope of delivery	VLM60, data cable, positioning aid, USB memory with documentation and software, printed manual

<sup>1)</sup> DIN 1319 / ISO 3534, of measured length, test conditions: measuring length 10 m, constant conditions in: temperature (20 °C), distance, velocity, illumination.