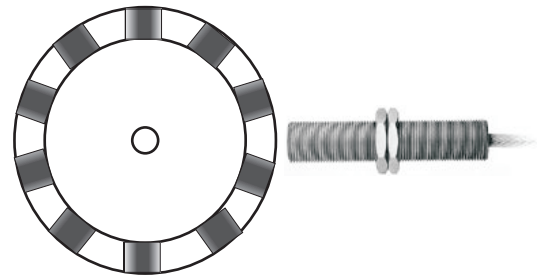


The pulse sensor is designed to sense the contrast between light and dark marks on a rotating wheel. When fixing the marks, it is important to note that a shiny black mark may be more reflective than a matt white mark, and that the largest possible reflection contrast is to be implemented. The optimum sensor to object distance depends on the contrast, the width of the markings, the distance between them and on the brightness of the surroundings. It can vary between 2 and 20 mm.

The wider the marks, the larger the distance can be. Minimum width should be 5 mm, length approximately 10 mm.

For the electrical connection of the sensor to De. E. Horn units, the pulse amplifier Ev103 is necessary.



### Technical Data

Signal frequency :	min. 1 Hz, max. 10 kHz
Working temperature :	-10 ... 60°C
Storage temperature :	
Enclosure :	IP 67 DIN 40050
Weight with cable :	110 g
Max. Length of cable :	approx. 300 m
Connecting cable :	2m LiYCY 3x0,25mm <sup>2</sup> shielded (other length upon request)
Housing :	Brass, Nickel plated
Dimensions :	Marking, signal shield

### Mounting

When mounting the sensor it is important that the imaginary line connecting the marks at the cable end of the sensor must be parallel to the axis of the rotating object.

### EV 10304./47

The amplifier EV 103 is required where the rotational speed is to be measured with the optical sensor type FGL 5/. It has to be connected between the sensor and the converter. By means of 2 potentiometers, one for the input sensitivity and one for the light/dark sensing ratio, it is possible to optimize matching of the pulse amplifier to the sensing conditions.

### Technical Data

Input :	adapted to the optical sensor FGL 5/ .
Output:	square wave signals $L < +0.3 \text{ V}$ ( $R_i = 100 \text{ Ohm}$ ); $H = \text{approx. } +15 \text{ V}$ ( $R_i = 3.2 \text{ Ohm}$ )
Frequency range:	2 Hz ... 10 kHz
Working temperature :	0 ... 50 °C
Auxiliary voltage :	220V or 110V +/- 15 % / 50 .. 60 Hz / about 3 VA or DC-current 24V +/- 20% (potential isolated)
Housing :	Makrolon housing for fixing on standard rail DIN 46277 and DIN EN 50022 or by 2 bore holes according to DIN 46121 and DIN 43660
Connection terminals :	according to DIN 46199 for 2x2.5 mm <sup>2</sup>
Enclosure :	terminals Ip20, housing Ip40 (DIN 40050)
Weight :	approx. 0.4 kg

Connection Plan  
auxiliary voltage pulse amplifier  
remove lid for re-calibration  
pulse output  
sensor FGL 5/3 or 5/4

Dimensions  
mounting with profile rail DIN 46277