



1. Concentric runout control of a wheel

The concentricity of a high speed wheel should be controlled. For this purpose a contrast sensor type **SPECTRO-1-FIO** in connection with an optical through beam fiber type **R-S-Q4-(28x0.2)-1200-67°** are used. The distance between transmitter and receiver frontend of the optical fiber is approximately 50mm and the aperture is 28mm. The sensor delivers two analog output signals (ANA 0V ... +10V and ANA 4mA ... 20mA, which are proportional to the position of the wheel inside the aperture), as well as two digital outputs (OUT0 and OUT1). The digital outputs can be used to control, whether the concentricity is inside a certain range. The upper as well as the lower threshold can be adjusted in the Windows® - software **SPECTRO1-Scope V1.1**. The maximum switching frequency in the DC – mode is around 150 kHz.

