

## Technical Note

### Ausgang R1K (R5K, R10K)

#### Correct Wiring of Cable Actuated Sensors with R1K, R5K and R10K Potentiometer Outputs

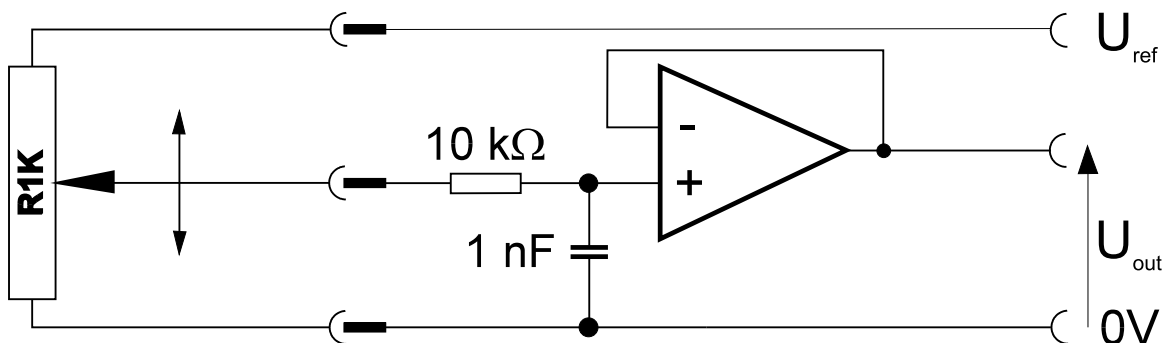
ASM Sensors uses only high quality hybrid potentiometers. This rotary potentiometer offers a very high linearity and resolution through the use of a conductive coating.



**In order to ensure the high resolution and linearity over the life of the unit, the amount of current flowing through the wiper or sliding contact inside the potentiometer must be as little as possible!**

- *Even currents as small as  $1\mu\text{A}$  cause measurable linearity errors and raise the amount of wiper noise.*
- *Input currents  $> 0.1\text{nA}$  lead to reduction in potentiometer life expectancy and are therefore not recommended.*

Recommended output circuit:



For applications with higher input currents, we recommend our integrated signal processing options 10V, 420A, 420T, PMUx with 0-10V or 4-20mA outputs. Alternatively, ASM offers external signal processing modules, WS-UMR-10V and WS-UMR-420A, that were especially designed for ASM sensors with hybrid potentiometers and are guaranteed to provide the best linearity and longest life expectancy.