

Signal Transducer SA502-3G

- **Converting of potentiometer signals into adjustable analogue norm signals**
- **Wire break monitoring on all potentiometer lines with LED indication and relay output**
- **Galvanic isolated analogue outputs: 1x 0..10V, 1x 0..20mA**
- **Flexible linearization of the potentiometer signal by 3 adjustable base points**
- **Galvanic isolated power supply with status LED**
- **Designed for DIN Rail mounting with up to 4g vibration resistance**



The amplifier SA502-3G is designed to convert potentiometer signals into a standard current signal 0..20mA and voltage signal 0..10V. The potentiometer is completely wire break monitored.

The connected Potentiometer is powered through an internal voltage feed of 15V. Internal Resistors limit the current through the potentiometer. The voltage value of the wiper is used to determine the position of the potentiometer and for wire break detection. The output signal range and offset can be linear calibrated with three base positions by using integrated potentiometers.

The device is designed for galvanic isolated signal transmission via 0..10V and 0..20mA standard signals in parallel.

A detected wire break at the potentiometer is indicated by a LED and displayed for external monitoring via a relay as a dry contact as well as an output signal of 0mA respectively 0V. In case of power supply failure or the monitor relay contact is open.

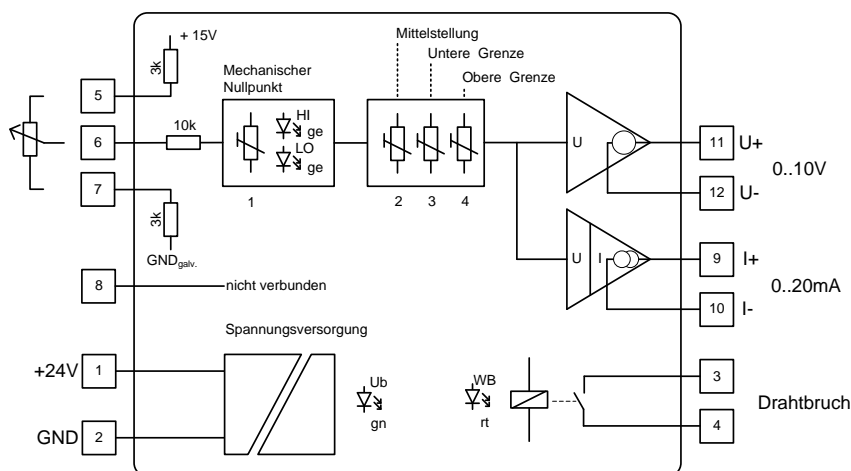


Fig 1: Block diagram SA502-3G

Technical Data

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|---|--|
| Supply voltage | $U_{Nom} = 24V\ DC, 18 \dots 32V\ DC, \text{ galvanic isolated}$ |
| Power consumption | $< 75mA$ |
| Overvoltage | 2,5-times U_e for 2ms |
| Reverse supply | integrated |
| Operating temperature | According to IEC60068-2-2 and IEC60068-2-1 $-25^\circ \dots +70^\circ C$ |
| Storage temperature | According to IEC60068-2, $-40^\circ \dots +85^\circ C$ |
| Relative Humidity | According to IEC60068-2-30 Db, $\leq 96\% @ 55^\circ C$ |
| Vibration resistance for DIN rail mounting | According to IEC60068-2-6 Fc, $\pm 1,6mm @ 2\dots 25Hz,$ $\pm 4g @ 25\dots 100Hz$ |
| Shock resistance | According to IEC60068, 15 g/11 ms |
| Protection class | According to DIN EN60529, IP20 |
| Interference emission | According to IEC61000-6-4, class A CISPR16-1 CISPR16-2 |
| Interference immunity | According to IEC61000-6-2; IEC61000-4-2, -4-3, -4-4, - 4-5, -4-6 |
| Mounting position | Preferably horizontal |
| Enclosure material | PVC |
| Mounting | 35mm mounting rail |
| Dimensions (WxHxD) | 22,6x65,8x102mm |
| Plug connection | Plug with screw-type terminals, cable 2,5 mm ² |
| Input | Potentiometer ($R = 2..10k\Omega; \text{ max. } \pm 10\%$) |
| Digital Outputs | 1x Relay (wire break indication) |
| Analogue Outputs | 1x 0..10VDC, 1x 0..20mA; galvanix isolated from power supply |
| General standards and regulations | According to regulations of the classes CE, ABS, BV, DnV, GL, LR, classNK |

Dimension Drawings

