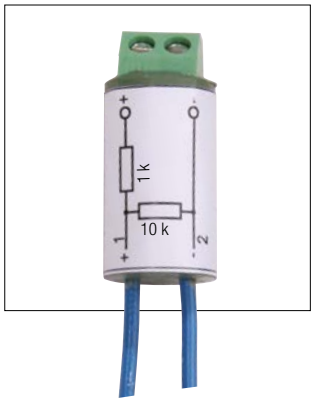
Resistive coupling element 1 k/10 k



The resistive coupling element is used to monitor open and short circuits in isolator amplifier circuits controlled by mechanical contacts. The coupling element is installed directly to the control contact or inside its terminal box.

Function

Numerous isolator amplifiers can monitor the connected sensor line for open or short circuit conditions thanks to the employment of electronic proximity switches to which current can be applied in both damped and undamped status (EN/IEC 60947-5-6). Current values outside the specified range are identified as open or short circuits. If simple mechanical contacts are used, it is not possible to identify a short circuit.

Neither can be distinguished between open circuit and open contact. This problem can be solved by installing a resistor combination at the end of the sensor line immediately before the switch. This combination provides a closed-circuit current even when the contacts is open. At closed contact it restricts the current to a value which lies clearly below the response threhold for short circuit.

Four states can be detected: open circuit (broken cable), open switch, closed switch, short circuit.

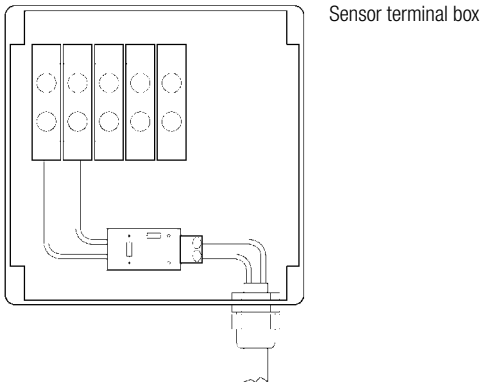
The resistive coupling element can be used with all isolator amplifiers featuring open and short circuit monitoring, e. g. BARTEC, CEAG, Hartmann & Braun, Pepperl + Fuchs

Technical data

Resistance	1 k/0.6 W 10 k/0.6 W
Terminals	1.5 mm²
Connection cable	0.75 mm²
Supply voltage	max. DC 20 V
Ambient temperature	-55 °C to +70 °C

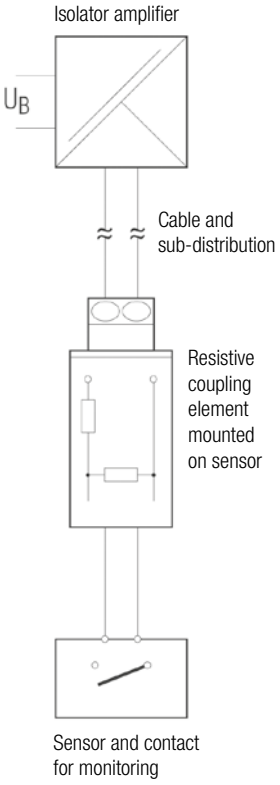
Installation

for example, in the sensor terminal box

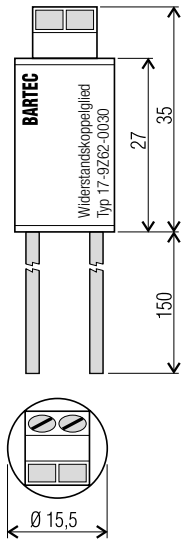


Application

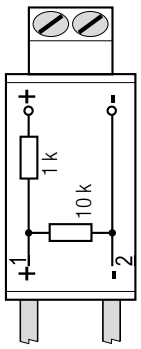
Open/short circuit monitoring for isolator amplifiers with contact control.



Dimensions



Wiring diagram



Ordering information

Resistive coupling element 1 k/10 k	**17-9Z62-0030**

Other variants on request. Technical data subject to change without notice.