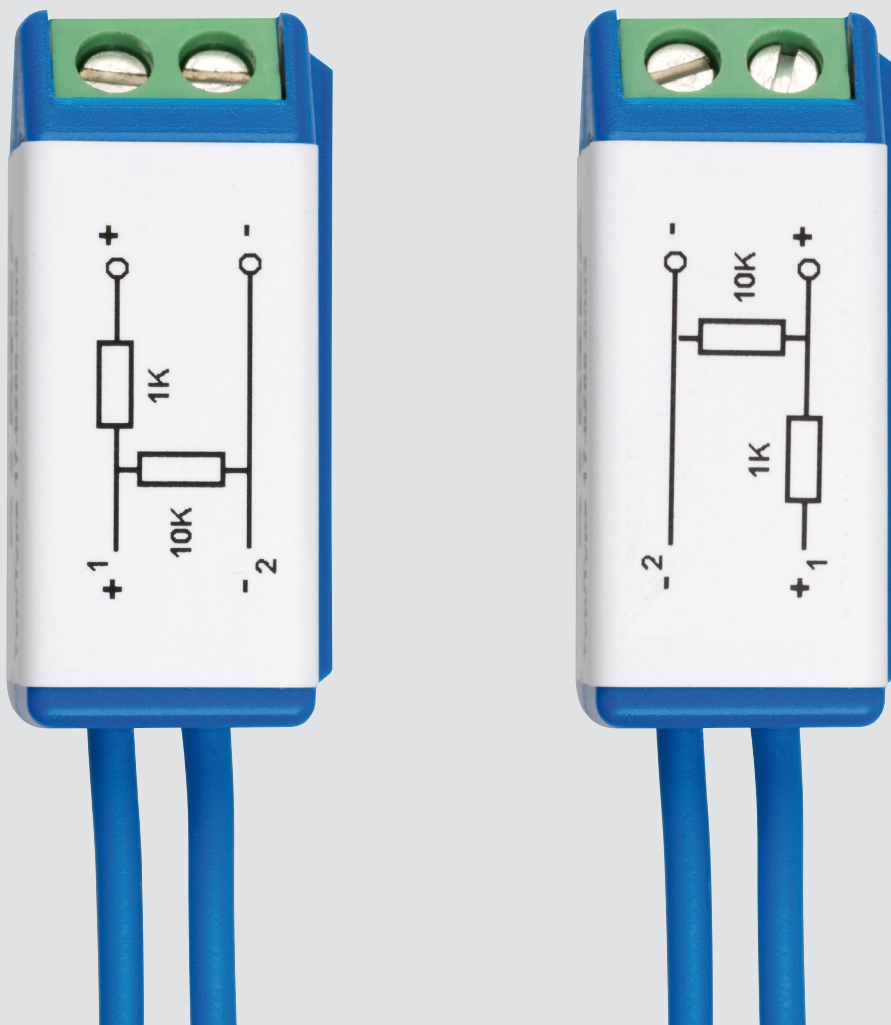


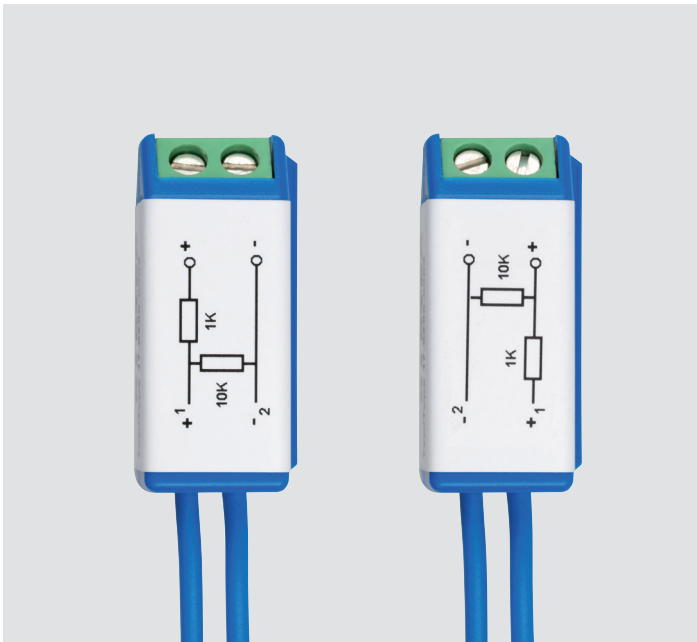
Widerstandskoppelglied Resistive Coupler Element

Type 17-9Z66/....



Resistive Coupler Element

Type 17-9Z66/....



1. Definition

Numerous isolation amplifiers are able to monitor the connected sensor cable for an open circuit and/or short circuit. This is possible because electronic proximity sensors in both an energized and a non-energized state can consume current as defined in EN 60947-5-6. Falling short of or exceeding this value can therefore be clearly assign to an open circuit or short circuit.

If simple mechanical contacts are used in place of electronic proximity sensors, however, it is not possible to distinguish if a short circuit is present. The same applies to a line break and an open contact. This can be remedied by a combination of resistors at the end of the sensor cable directly before the switch. This ensures quiescent current in the cable also in the event of an open contact or to a limited extent with a closed contact, keeping the current at a value significantly below the response threshold for a short circuit.

Four different status can be detected: open circuit, switch open, switch closed, short circuit.

The Resistive Coupling Element may be used with all isolation amplifiers with open circuit and short circuit monitoring, such as from BARTEC, CEAG, Hartmann & Braun, Pepperl + Fuchs.

Intended Use

The Resistive Coupling Element is used as simple apparatus in hazardous areas for the monitoring open circuits/short circuits, (example on isolation amplifiers) in an intrinsic safety circuit.

The Resistive Coupling Element is installed on site directly on the contact to be monitored or in the connection area of it.

2. Explosion Protection

Resistive Coupler Element Typ 17-9Z66-....

ATEX/ IECEx	Simple Apparatus with EPL Ga acc. to Section 5.7 of EN 60079-11:2011 / IEC 60079-11 Ed. 6 Group II subdivision IIC temperature class T6/T5
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Standards	EN IEC 60079-0:2018 / IEC 60079-0 Ed. 7 EN IEC 60079-11:2011 / IEC 60079-11 Ed. 6 EN 60079-14:2014 / IEC 60079-14 Ed. 5
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Co-applicable documents

- EU Declaration of Conformity

The retention of these documents is mandatory!

3. Safety Instructions

The Resistive Coupler Element may only be used within the specified ambient temperature range (service). Use in areas other than those specified or modification of the product by anyone other than the manufacturer is not permitted and releases BARTEC from liability for defects and any further liability. An incorrect installation can lead to malfunctions and loss of explosion protection. The Resistive Coupling Element may be connected and assembled/disassembled only by qualified personnel who are authorised and trained to assemble electrical components in hazardous areas.

The generally applicable legal regulations and other binding guidelines on occupational safety, accident prevention and environmental protection must be observed. When setting up or operating explosion-protected electrical systems, EN/IEC 60079-14 and all relevant installation and operating regulations must be observed. The resistor coupler may only be used if it is clean and undamaged. It is not permitted to modify the module in any way.

Warning and Information Symbols

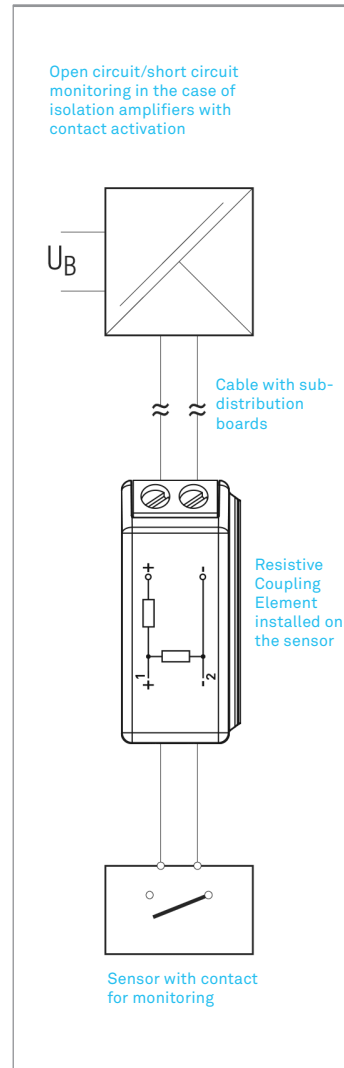
Safety and warning notices are specially highlighted in this user manual and are indicated by symbols.

	DANGER designates a direct threat of danger. If it is not avoided, death or the most serious injuries will result.
	WARNING designates a potentially hazardous situation which can lead to death or serious injuries if it is not avoided.
	CAUTION designates a potentially hazardous situation which can lead to minor or slight injuries if it is not avoided.
	ATTENTION designates a potentially damaging situation which can lead to damage to the installation or to something close to it if it is not avoided.
	NOTE Important advice and information on effective, efficient & environmentally-friendly use.

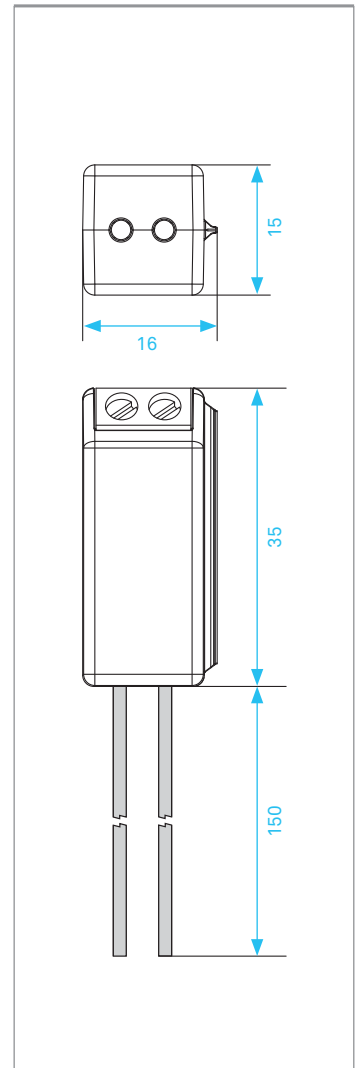
4. Technical Data

Details	
Degree of protection	IP20
Resistance values	See order details
Max. Power (U_i)	30 V
Max. output (P_i)	0.5 W to T5 0.2 W for T6 (to $T_u = +50\text{ °C}$) 0.1 W for T6 (to $T_u = +60\text{ °C}$)
Internal inductance (L_i)	negligibly low
Internal capacity (C_i)	negligibly low
Ambient temperature	-40 °C to +60 °C
Service temperature range	-10 °C to +60 °C T5/T6
Storage temperature and transport temperature	-40 °C to +60 °C
Terminals	0.5 - 1.5 mm ² (solid or stranded wire)
Connection cable	0.5 mm ²
Rated torque	0.5. up to 0.6 Nm
Relative air humidity	5 % to 95 % (non-condensing)

Application



Dimensions



5. Transport and Storage

	<p>ATTENTION</p> <p>Damage due to inappropriate transport or incorrect storage!</p> <ul style="list-style-type: none"> • Observe the admissible storage and transport temperatures. • Condensation can form on the device in a cold environment. • Use the original packaging for transport/storage.
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6. Assembly and Scope

WARNING

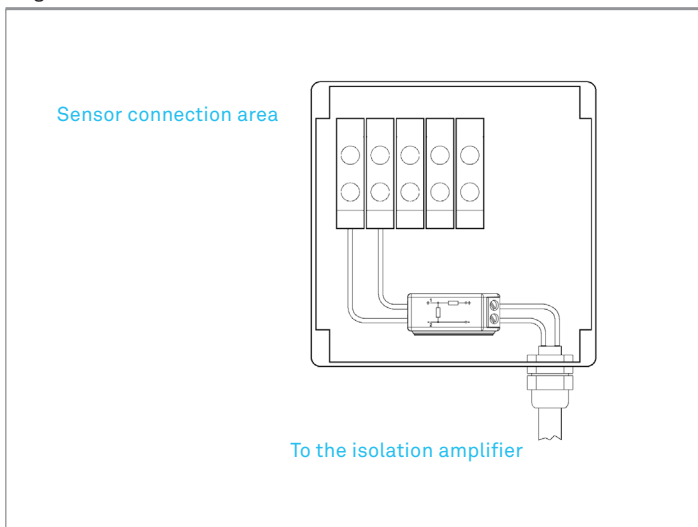
Damage resulting from incorrect use!

- Assembly, disassembly, installation and commissioning work may be done only by qualified personnel who are authorized and trained to assemble electric components in hazardous areas.
- The relevant installation and operating regulations, such as e.g. Directive 1999/92/EC, Directive 94/9/EC, BetrSichV (the German industrial health and safety ordinance), EN 60079-14, the DIN VDE 0100 series and other applicable national standards or ordinances, must be observed when setting up or operating explosion-proof electric systems.

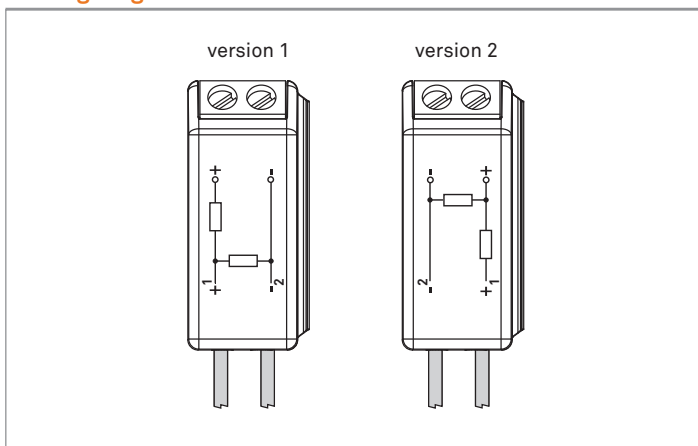


Installation

e.g. in the sensor connection area



Wiring diagram



DANGER

Improper use, incorrect assembly and operation endanger explosion protection and can lead to serious personal injury or property damage.



1. Do not install and commission components that have been stored in a cold environment. Take condensation into consideration!!
2. Before installation, check whether the components are in perfect condition
3. No conversions or changes to the module may be made.

7. Commissionings

Check before commissioning:

1. Module installed correctly?
2. Enclosure undamaged?
3. Wiring is correct?

8. Operation

Once the final check has been conducted, the device can be put into operation.

9. Fault elimination

1. Check wiring and connections
2. Damaged housing irreparable

10. Maintenance, Inspection, Repair

Only authorised and qualified personnel may do any work on the control and regulating component.

Maintenance

If operated correctly in accordance with the installation instructions and ambient conditions, it does not require maintenance.

Inspection

Acc. to EN/IEC 60079-17 and EN/IEC 60079-19 the owner/ managing operator of electric installations in hazardous areas is obliged to have these installations checked by a qualified electrician to ensure that they are in a proper condition.

Repair

Repairs to explosion-protected equipment may only be carried out by the manufacturer or by persons authorized and trained for this purpose. If you have any questions, please contact BARTEC GmbH.

11. Disposal

The regulating and control components contains metallic and plastic parts and electronic parts.



NOTE

Our devices involve electrical equipment which is only intended for commercial use (so-called B2B equipment in accordance with the WEEE Directive).

The regulating and control components must be disposed of in accordance with national regulations.

Our customers may return any products procured from us to our company for disposal. The sender must bear the costs for shipping/packing.

12. Order Number

Version	Designation				Order Number
2	1 k/10 k	With terminals and cables	10 k	Parallel to the terminal	17-9Z66-0001
1	1 k/10 k	With terminals and cables	10 k	Parallel to the cable	17-9Z66-0002
1	2.1 k/22 k	With terminals and cables	22 k	Parallel to the cable	17-9Z66-0013
1	1 k/2 k	With terminals and cables	2 k	Parallel to the cable	17-9Z66-0016
1	1 k/10 k	With terminals and cables	10 k	Parallel to the cable + wire end ferrules	17-9Z66-0021
1	1.5 k/10 k	With terminals and cables	10 k	Parallel to the cable + wire end ferrules	17-9Z66-0022
1	2.7 k/10 k	With terminals and cables	10 k	Parallel to the cable	17-9Z66-0023
1	2 k 7/22 k	With terminals and cables	22 k	Parallel to the cable	17-9Z66-0030

13. Amendments to the Document

BARTEC GmbH reserves the right to change the contents of this document without notification. We assume no guarantee for the correctness of the information. In cases of doubt the German safety instructions apply because it is not possible to rule out errors during printing and translation. The „General Terms and Conditions of Business“ of the BARTEC Group moreover apply in the event of legal disputes.

14. Service Address

BARTEC GmbH
 Max-Eyth-Str. 16
 97980 Bad Mergentheim
 Germany

Tel.: +49 7931 597-0
 E-Mail: info@bartec.com

www.bartec.com

15. EU-Konformitätserklärung / EU Declaration of Conformity

EU Konformitätserklärung
EU Declaration of Conformity
Déclaration UE de conformité

BARTEC

Nº 11-9Z62-7C0002

Wir	We	Nous
BARTEC GmbH Max-Eyth-Straße 16 97980 Bad Mergentheim Germany		
erklären in alleiniger Verantwortung, dass das Produkt Widerstandskoppelglied	declare under our sole responsibility that the product Resistive coupling element	attestons sous notre seule responsabilité que le produit Réseau de résistance
Typ 17-9Z62-00**/**** Typ 17-9Z63-00**/**** Typ 17-9Z66-00**/****		
auf das sich diese Erklärung bezieht den Anforderungen der folgen- den Richtlinien (RL) entspricht RoHS-Richtlinie 2011/65/EU und mit folgenden Normen oder nor- mativen Dokumenten übereinstimmt	to which this declaration relates is in accordance with the provision of the following directives (D) RoHS-Directive 2011/65/EU and is in conformity with the following standards or other normative documents	se référant à cette attestation correspond aux dispositions des direc- tives (D) suivantes Directive RoHS 2011/65/UE et est conforme aux normes ou docu- ments normatifs ci-dessous
EN 60079-11:2012		EN 60079-14:2014
als einfaches elektrisches Betriebsmittel	as a simple apparatus	en tant que matériel simple
Verfahren der internen Fertigungskontrolle	Procedure of internal control of production	Procédure de contrôle interne de fabrication

11-9Z62-7C0002



Bad Mergentheim, 09.09.2021


i.V. Reiner Englert
Product Manager Automation


Kevin Rogers
Head of Global R&D ESS

BARTEC

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