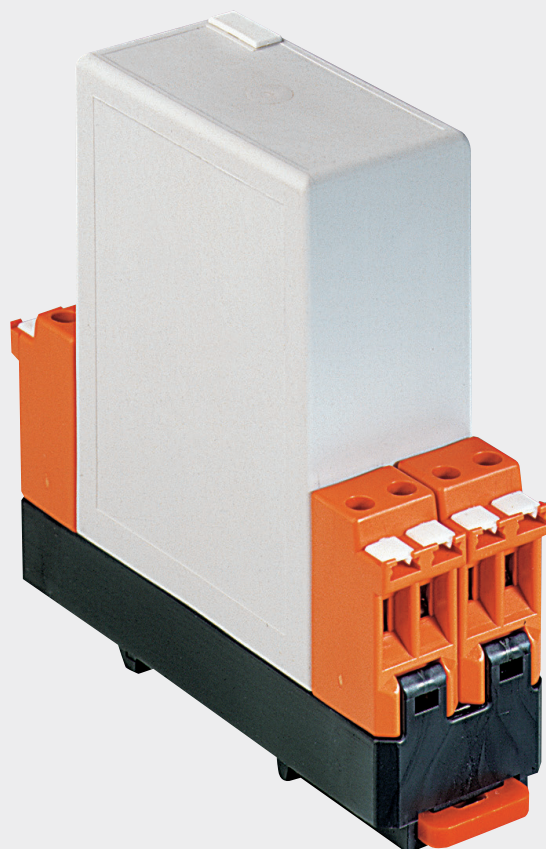


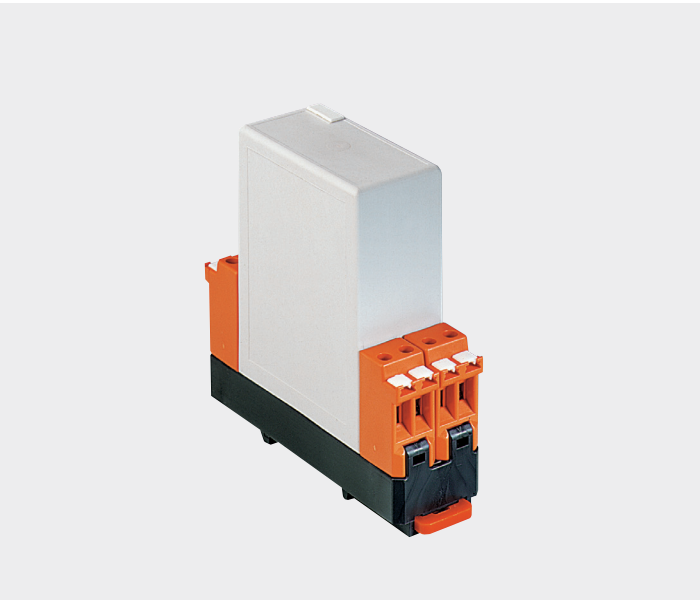
Isolator relay

galvanic isolation in acc. with EN/IEC 60079-0 and EN/IEC 60079-11



Isolator relay contact separation

galvanic isolation in acc. with EN/IEC 60079-0 and EN/IEC 60079-11



Definition

This relay is used as an isolator between non-intrinsically safe and intrinsically safe circuits. Various coil and contact configurations are available. Several intrinsically safe circuits can be connected to the contact circuits, provided that intrinsic safety is maintained. Safe galvanic isolation in conformance to EN/IEC 60079-11 up to 375 V is provided between the coil and contacts.

With applicable documents

- Declaration of EU conformity
- Test certificates

These documents must be retained!

Industrial Requirements of Zone 1

The modules are approved as “Ex d flameproof enclosures” with connecting terminals in “Ex e increased safety ex e”. Since the open connecting terminals are Ex e, the modules are given a partial certificate with the “U” marking.

Special note concerning the “U” marking

The modules must be installed in an enclosure that meets the requirements of a recognised type of protection in accordance EN/IEC 60079-0, min. protection type IP54. When installing in an enclosure with “increased safety ‘e’”, the clearance and creep age distances in Tables 1+2 in IEC/EN 60079-7 must be complied with.

Intrinsically safe installed components

If installed components with intrinsically safe circuits are produced as associated apparatus, they undergo their own type examination by a notified body. These are marked with an “X” after the test number.

The “X” indicates that special conditions apply to this device in the test certificate. These conditions can be read in the test certification.

Use in local control stations

Local control stations may generally be opened for testing and adjustment work.

Work may be carried out on intrinsically safe circuits if all non-intrinsically safe circuits have an internal cover which, when the enclosure is open, corresponds to at least the following protection class IP 20 when the enclosure is open.

Explosion protection

Marking ATEX	II 2(1)G Ex de [ia Ga] IIC Ga
Certification	PTB 97 ATEX 1068 U PTB 03 ATEX 2169 X
Marking IECEx	Ex db e IIC or Ex d e [ia Ga] IIC Ga Ex db e l or Ex d e [ia Ma] I Mb
Certification	IECEx PTB 13.0016X
Marking CSA	Class I, Zone 1, IIC A/Ex d e [ia] IIC Ga
Certification	CSA 2011-2484303U
Ambient temperature range	-20 °C to +60 °C

Other approvals and certificates, see www.bartec.com

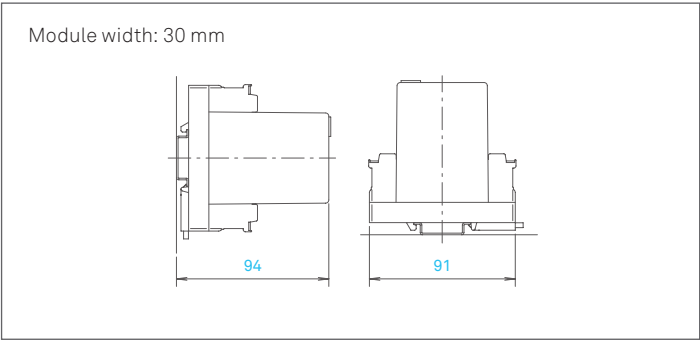
Technical data

Enclosure material	High-quality thermoplastic
Protection class (EN/IEC 60529)	Module IP 66 Terminals IP 20
Terminals	2.5 mm², fine stranded
Mounting rail	TH 35 x 7.5 (15) EN/IEC 60715
Terminal designation	written marking label
Ambient temperature	-25 °C to +55 °C (DC 12 V/24 V) at T6 and 15 mm distance
Storage temperature	-40 °C to +70 °C
Weight	0.250 kg

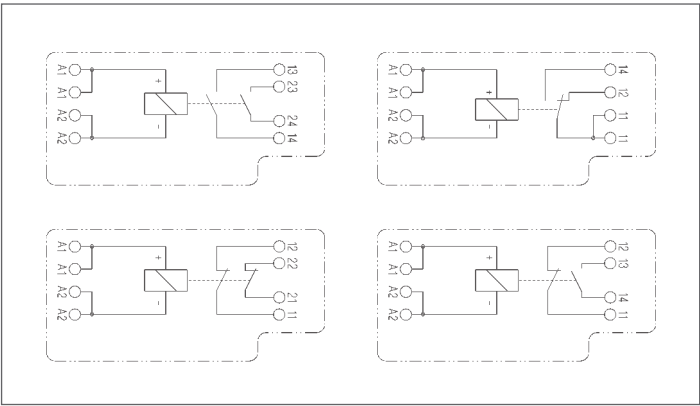
Electrical data

Coil data	
Nominal voltage (VDC)	24 V
Pick-up voltage (VDC)	≤ 17,5 V
Drop-out voltage (VDC)	≥ 2,4 V
Nominal current (mA)	29 mA
Resistance (Ohm)	822 ±10%
Contact data (non-intrinsically safe)	
Single-pole contact	Contact material AgCuNi
Max. switching voltage	AC 250 V
Max. switching current	4 A
Max. switching capacity (AC)	100 VA/cos φ = 1
Max. switching capacity (at switching voltage up to DC 24 V)	96 W/ohmic load
Contact data (intrinsically safe)	
Double contact	Contact material AgCuNi, hard gold plated
Max. switching voltage	AC 46 V, DC 65 V
Max. switching current	2 A
Max. switching capacity (AC)	92 VA/cos φ = 1
Max. switching capacity	48 W/ohmic load
Test voltages	Coil-contact 5000 V _{rms}
	Contact assembly-contact assembly 2500 V _{rms}
	Contact open 1000 V _{rms}
Mechanical life	> 50 x 10 ⁶ switching cycles
Electrical life	3 x 10 ⁶ switching cycles (single-pole contact, AC 250 V; 4 A; cos φ = 1; 360 switching cycles/h)

Dimensions/mounting positions (mm)



Wiring diagram/terminal assignment



Marking

Particularly important points in these instructions are marked with a symbol:



DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.



WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.



NOTICE is used to address practices not related to personal injury.



NOTE Important instructions and information on effective, economical and environmentally compatible handling.

Transport and storage



NOTICE

Damages due to improper storage!

- Observe storage and transport temperatures.
- Condensation can arise on components in a cold environment.
- Use the original packaging for transport/storage.

Installation



NOTICE

Damage due to improper handling!

- Assembly, disassembly, installation and commissioning may only be performed by qualified personnel who are authorized and trained to assemble electrical components in hazardous areas.

Plugs:

- The plugs are difficult to pull off! Due to the high fitting accuracy of plug and socket, a vacuum is created during removal, which requires higher removal forces. For this reason, the plugs must be pulled off carefully to avoid damaging the plugs and connectors.



DANGER

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

The following special conditions must be heeded!

1. Do not install and commission components that have been stored in a cold environment. Take condensation into consideration!
2. The enclosure has been sealed in the factory. The enclosure must not be opened!
3. Before installation, check whether the components are in perfect condition.
4. No conversions or changes to the module may be made.
5. Only work on the module when it is voltage-free.
6. All screws and terminals must be tightened using a torque wrench, taking account of the recommended connection torque for screws and terminals of 0.4 Nm to 0.7 Nm. Suitable measures must be taken to ensure this.
7. Units must be mounted at a distance of 8 mm from the to the nearest unit.
8. Ensure the unit is dead (be aware of consumers with stored energy)
9. Cover any live neighbouring components.
10. The PA connection part must be connected with low impedance to the equipotential bonding conductor of the hazardous area. Since the intrinsically safe circuits are galvanically connected to ground potential, equipotential bonding of the intrinsically safe circuits must be maintained throughout the service life of the system.
11. Decommission the device in the event of a fault.

Installation

Installation and commissioning may only be carried out by qualified personnel who are authorized and trained to install electrical components in potentially explosive atmospheres.



DANGER

Exposed live parts. Danger to life due to electric shock!!

- Only work on the module when it is de-energised state.



CAUTION

Infrared light! Danger to eyesight!

- Do not look into the laser beam of the transmitter
- In the event of a malfunction, put the device out of operation!

Commissioning

Check before commissioning:

- 1. Has the module been installed correctly?
- 2. Is the enclosure undamaged?
- 3. Has the connection been carried out correctly?
- 4. Have you checked that the wiring is correct?
- 5. Does the module function correctly?
- 6. PA properly connected to equipotential bonding conductor.

Operation

After the final inspection has been carried out, the device can be put into operation.



DANGER

There is a danger to life if the device is not used as intended!

- Observe the special conditions for explosion protection.
- Operate only within the permitted temperature range.
- Connect PA properly to equipotential bonding conductor.
- In the event of bus failure (communication error), the outputs go into fail-safe mode (go to 0 and are switched off!).

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

Under EN/IEC 60079-0 and EN/IEC 60079-11 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

The component cannot be repaired. Please contact BARTEC GmbH if you have any questions.

Disposal

The regulating and control components contain 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.

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.

The current version of data sheets, operating instructions, certificates and EC declarations of conformity can be downloaded from bartec.com or directly requested from BARTEC GmbH.

Ordering information (Version 1)

0	7	-	7	3	1	1	-	9	3	7	A	/	B	B	0	0
A		Contacts (non-intrinsically safe) 1 – 1 changeover 4 – 2 NO 6 – 2 NC 7 – 1 NO / 1 NC														
BB		Coil voltage (intrinsically safe) W5 – DC 24 V														
Please insert code number.																

Ordering information (Version 2)

0	7	-	7	3	1	1	-	9	3	7	A	/	B	B	0	0
A		Contacts (intrinsically safe) E – 1 changeover F – 1 NO / 1 NC G – 2 NO H – 2 NC														
BB		Coil voltage (non-intrinsically safe) Q6 – DC 24 V														
Please insert code number.																

Service Address

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

Phone: +49 7931 597 0
info@bartec.com
bartec.com

Konformitätsbescheinigung
Attestation of Conformity
Attestation de conformité

BARTEC

Nº 01-7311-7C0030-D

Wir	We	Nous
BARTEC GmbH Max-Eyth-Straße 16 97980 Bad Mergentheim Germany		
erklären in alleiniger Verantwortung, dass das Produkt Steuer- und Regel-Komponente	declare under our sole responsibility that the product Control Component	attestons sous notre seule responsabilité que le produit Composants de commande et de regulation

07-7311-**/******

auf das sich diese Erklärung bezieht den Anforderungen der folgenden Richtlinien (RL) entspricht ATEX-Richtlinie 2014/34/EU EMV-Richtlinie 2014/30/EU RoHS-Richtlinie 2011/65/EU und mit folgenden Normen oder normativen Dokumenten übereinstimmt	to which this declaration relates is in accordance with the provision of the following directives (D) ATEX-Directive 2014/34/EU EMC-Directive 2014/30/EU 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 directives (D) suivantes Directive ATEX 2014/34/UE Directive CEM 2014/30/UE Directive RoHS 2011/65/UE et est conforme aux normes ou documents normatifs ci-dessous
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EN 60079-0:2018

EN 60079-1:2014

EN 60079-7:2015/A1 :2018

EN 60079-11:2012

EN 61000-6-2:2005

EN 61000-6-4:2007 + A1:2011

EN 60529:1991/A2:2013/

AC:2019

Verfahren der EU-Baumusterprüfung / Benannte Stelle	Procedure of EU-Type Examination / Notified Body	Procédure d'examen UE de type / Organisme Notifié
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PTB 97 ATEX 1068 U (*)

0102, PTB, Bundesallee 100, 38116 Braunschweig, DE

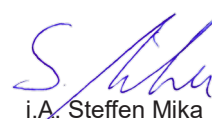
(*) Die Ex-Komponente ist Teil eines elektrischen Betriebsmittels oder eines Moduls, gekennzeichnet mit dem Symbol „U“, das nicht für sich allein verwendet werden darf und über dessen Einbau in elektrische Betriebsmittel oder Systeme zur Verwendung in explosionsgefährdeten Bereichen gesondert entschieden werden muss. Merkmale dieser Komponente sowie die Bedingungen für ihren Einbau in Geräte und Schutzsysteme siehe Betriebsanleitung der Komponente.	(*) The Ex-component is a part of an electrical apparatus or a module, marked with the symbol "U", which is not intended to be used alone and requires additional consideration when incorporated into electrical apparatus or systems for use in explosive atmospheres. Characteristics and how the component must be incorporated into equipment or protective systems see operation manual of the component.	(*) Le composant Ex est partie de matériel électrique ou de module, marquée du symbol « U », ne devant pas être utilisée seule et nécessitant une certification complémentaire lorsqu'elle est incorporée à un matériel électrique ou à un système pour atmosphères explosives. Les caractéristiques du composant ainsi que les conditions d'incorporation dans des appareils ou des systèmes de protection regarde voir l'instruction d'emploi du composant.
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0044

Bad Mergentheim, 25.10.2022


i.V. Reiner Englert

Product Manager Automation


i.A. Steffen Mika

Certification Manager R&D ESS

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