

# Technical data sheet

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## Relay Module



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### Identification

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Type RE 7-2078 / FK DC 24V  
Part No. [762078](#)

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### Product version

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Datasheet version 02

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### Use/Application/Properties

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Description This universal-relay-coupler component is designed for the output-coupler level. The activation occurs via DC 24 V. There is a 250 V / 6 A common available on the load side for the switching of small to medium loads.

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### Input

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Rated voltage  $U_N$  DC 24 V  
Voltage range DC 16.8 V – 30 V  
Rated current (at  $U_N$ ) 20 mA  
Status indication LED Yellow LED  
Protection device Input Reverse diode  
Rated insulation voltage 50 V  
Degree of pollution 2  
Over voltage category I  
Activation voltage >16.8 V  
Interrupting voltage <2.4 V

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### Output

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Switching voltage AC/DC 1 V – 250 V  
Switching current AC/DC 0.001 A – 6 A  
Switching capacity AC/DC max. 1500 VA / see Load limit curve  
Protection device output none  
Inrush peak current 4 s 10 A 10 % duty factor  
Switch-on delay approx. 5 ms

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Shutdown delay	approx. 5 ms
Contact material	AgSnO <sub>2</sub> hard-gold-plated
Capacity of hard-gold-plating	24 V / 10 mA
Rated insulation voltage	250 V
Degree of pollution	2
Over voltage category	I
Switching capacity according to EN 60947-5-1	<b>AC 15:</b> 3 A @ 24 V / 3 A @ 115 V / 3 A @ 230 V <b>DC 13:</b> 1 A @ 24 V / 0.2 A @ 115 V / 0.1 A @ 230 V
Bounce time	approx. 5 ms

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Connection type	Spring terminal: 0.50 – 1.5 mm <sup>2</sup> Stripping length: 10 mm Screwdriver: 3.5 × 0.6 mm
Clearance/creepage dist. (control/load side)	>5.5 mm
Safe isolation	yes
Rated insulation voltage	300 V
Standing surge voltage	6 kV
Contact type	1 change over contact
Critical frequency	(at 50 % duty factor) <360 / h
Mechanical service life	> 20 × 10 <sup>6</sup> operations
Storage temperature range	-25 °C ... +80 °C

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### General

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Dimensions (w × h × d)	6.2 mm × 90.0 mm × 92.5 mm
Weight/unit	0.031 kg
Housing material	PPE
Form	Microcompact

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### Electrical isolation

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Potential groups	A: Coil (+A1, -A2) B: Changeover (11, 12, 14)
Isolating voltage	AC 1500 V between all potential groups

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### Environmental service conditions

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<b>Altitude</b>	2000 m
Operating temperature class	OT4: -40 °C ... +70 °C
Switch-on extended Operating temperature class	ST1: OTx + 15 °C
Temperature variation class	H1:no requirements
Shock/Vibration	Category 1, class B
Class of supply voltage interruption	S1
Supply change-over class	C1: 100 ms
Useful life class	L4: 20 years
Degree of pollution	PD2

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Over voltage category	OV2
Socket and edge connector	K2: Sockets for ICs and/or edge connectors are not used
Protective coating class	PC1: no protective coatings
Degree of protection	IP20

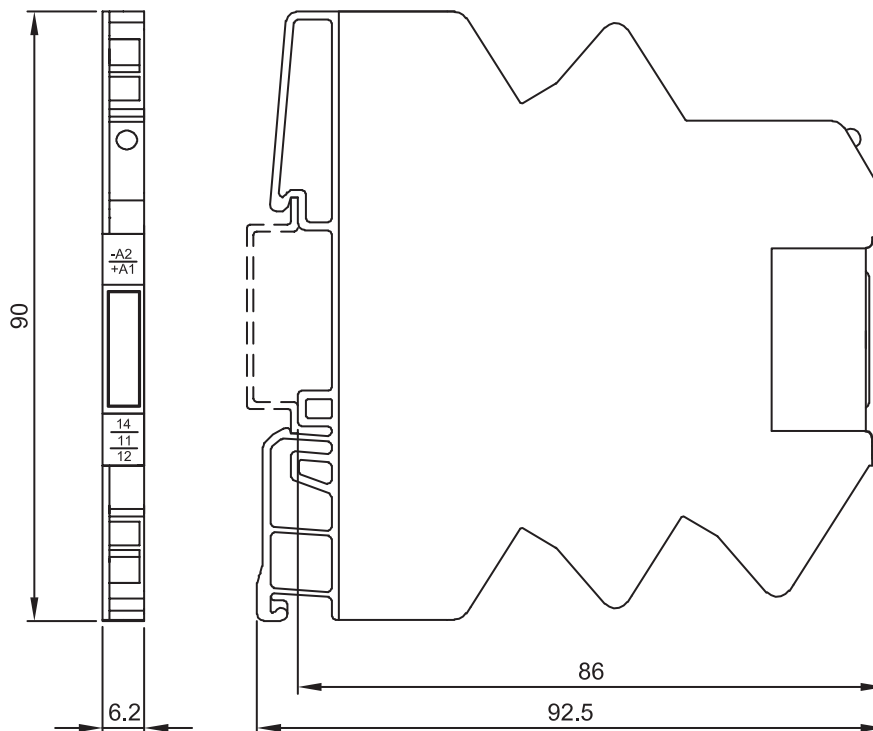
## Standards/Certifications

Standards	<p><b>EN 50155:2007:</b> Railway applications – Rolling stock – Electronic equipment</p> <p><b>EN 50155:2017:</b> Railway applications – Rolling stock – Electronic equipment</p> <p><b>EN 50121-3-2:2016:</b> Railway applications – Electromagnetic compatibility – Part 3-2: Rolling stock – Apparatus</p> <p><b>EN 50124-1:2017:</b> Railway applications – Insulation coordination – Part 1: Basic requirements – Clearances and creepage distances for all electrical and electronic equipment</p> <p><b>EN 61373:2010:</b> Railway applications – Rolling stock equipment – Shock and vibration tests</p> <p><b>EN 61373:1999:</b> Railway applications – Rolling stock equipment – Shock and vibration tests</p> <p><b>EN 45545-2:2013+A1:2015:</b> Railway applications – Fire protection on railway vehicles – Part 2: Requirements for fire behaviour of materials and components</p>
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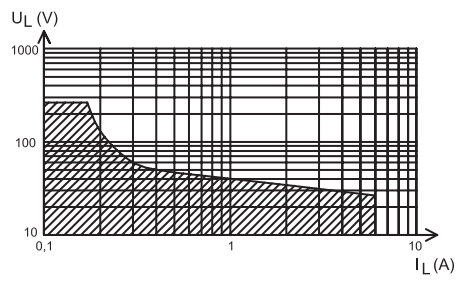
## Notes and Comments

Comments	<p>Inductive loads must be wired with a suitable suppressor element!</p> <p>When the module has been used once over the power limit of the hard gold plating it can no longer be used in the switching range below the power limit.</p>
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## Dimensions



## Diagrams



## Circuit diagram

