

MACX-MR-3V-690-R-PT - Monitoring relay



1487448

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3-phase voltage monitoring relay with RS-485 interface (160...690V AC) , with overvoltage, undervoltage, window monitoring as well as phase sequence, phase loss failure, asymmetry (adjustable asymmetry) monitoring functions. 24...240VAC/DC wide range power supply, with adjustable threshold values and response delay. Supports failure record storage. Supports NFC communication and Modbus/RTU communication, with two configuration possibilities. 1 PDT dry contact output, plug-in connection.

Commercial data

Item number	1487448
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	C443
Product key	DK6611
GTIN	4063151930950
Weight per piece (including packing)	196.3 g
Weight per piece (excluding packing)	196.3 g
Customs tariff number	85371098
Country of origin	CN

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Technical data

Product properties

Product type	Voltage monitoring relay
Operating mode	Closed circuit or wire break
Mechanical service life	Approx. 1×10^7 cycles

Insulation characteristics: Railway standard

Overvoltage category	III
Pollution degree	3

Electrical properties

Rated impulse withstand voltage	6 kV
Service life electrical	approx. 1×10^5 cycles, resistive load 2000 V A
Maximum power dissipation for nominal condition	15 W
Mains type	3-phase

Railway standard

Rated insulation voltage	600 V
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Electrical isolation

Electrical isolation	300 V
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Supply

Supply voltage range	24 V AC ... 240 V AC -15 % ... +10 %
	24 V DC ... 240 V DC -25 % ... +30 %
	24 V ... 240 V AC -10 % ... +10 % (Railway application)
	48 V ... 110 V DC (Railway application)
Nominal power consumption	15 VA (1.5 W)
Frequency range	48 Hz ... 400 Hz

Input data

Input name	Measuring input
Measured value	AC sine (48 Hz ... 63 Hz)
Input resistance of voltage input	0.75 MΩ
Maximum temperature coefficient	0.05 %/K
Setting range for response delay	0 s ... 99.9 s
Min setting range of the voltage threshold value	160 V ... 690 V
Max. setting range of the voltage threshold value	690 V
Function	Undervoltage
	Overvoltage
	Window
	Asymmetry
	Phase sequence
	Phase failure

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Basic accuracy	1 %
Repeat accuracy	0.5 %
Asymmetry	2 % ... 30 % / OFF
Recovery time	200 ms

Output data

Switching

Contact switching type	1 floating changeover contact
Contact material	AgSnO
Maximum switching voltage	250 V AC
Interrupting rating (ohmic load) max.	2000 VA (8 A/250 V AC)
Output fuse	10 A (fast-blow)

Connection data

Connection method	Push-in connection
Stripping length	10 mm
Conductor cross-section rigid	0.2 mm ² ... 2.5 mm ²
Conductor cross-section flexible	0.2 mm ² ... 2.5 mm ²
Conductor cross-section AWG	24 ... 14

Interfaces

Data: Network interface

Communication protocol	Modbus/RTU
Communication standard	RS-485
Connection method	Plug-in connection
Transmission speed range	2.4 kbps ... 115.2 kbps

Signaling

Status display	LED
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Dimensions

Width	22.5 mm
Height	109 mm
Depth	114 mm

Material specifications

Flammability rating according to UL 94	V0
Housing insulation material	PBT

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
	IP20

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Ambient temperature (operation)	-40 °C ... 70 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Altitude	2000 m
Permissible humidity (operation)	10 % ... 95 %

Approvals

CE/UKCA

Identification	EN 62311, EN 300 330, EN 301 489-1, EN 301 489-3, EN/IEC 63000
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UL, USA/Canada

Identification	UL/C-UL Listed UL 508
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CCC

Identification	GB/T 14048.5
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TÜV

Identification	EN 60947-5-1
	EN 60255-27

Electronic devices in rail vehicles

Operating temperature class	OT4
Class of extended operating temperature upon activation	ST2
Temperature change class	H1
Interruption of the power supply/supply changeover	S2
	S3/C1
	C2
Hazard levels	HL1
	HL2
	HL3
Protective coating	PC2
Shock (operation)	Category 1
Vibration (operation)	Class B

EMC data

Electromagnetic compatibility	Conformance with EMC directive
Low Voltage Directive	Conformance with Low Voltage Directive
Noise immunity	EN 61000-6-2

Noise emission

Standards/regulations	EN 61000-6-4
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Standards and regulations

Railway standard

Standard designation	EN 50155, GB/T 25119
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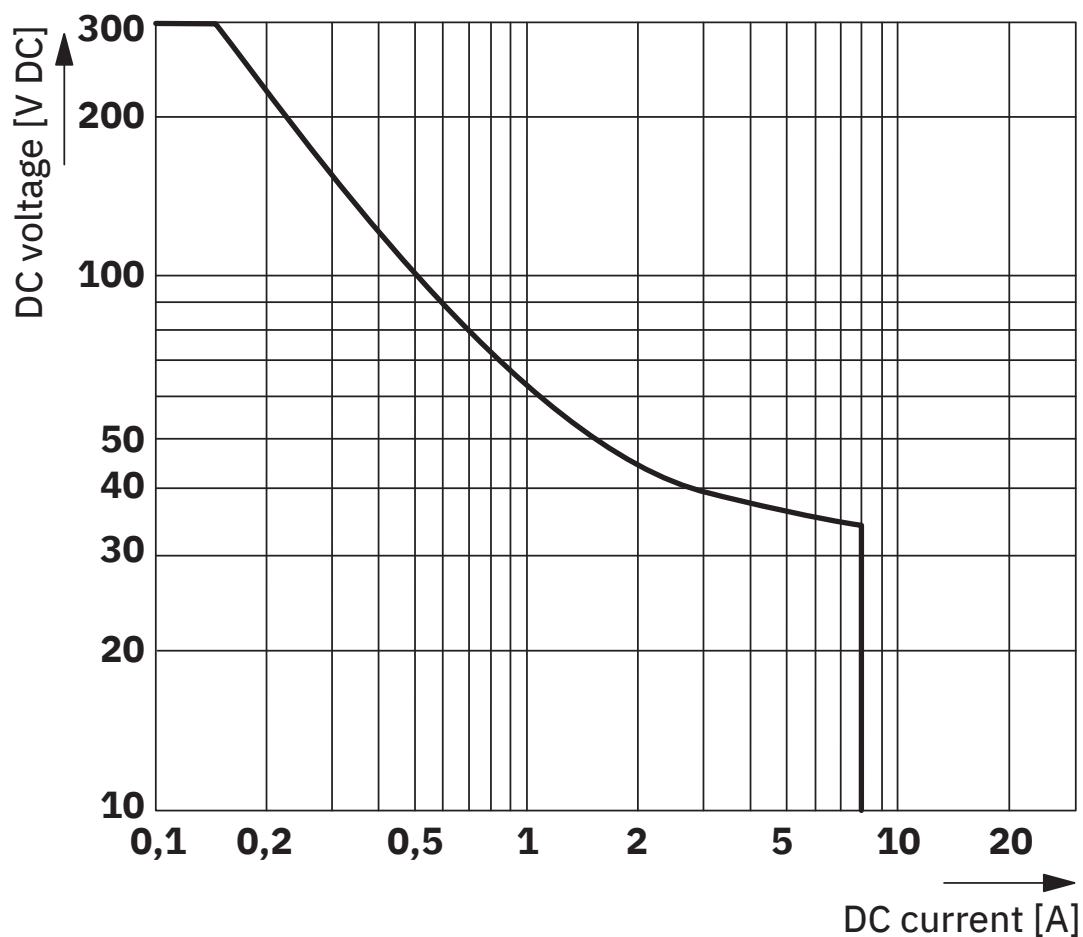
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Mounting

Mounting type	DIN rail mounting
Assembly note	on standard DIN rail NS 35 in accordance with EN 60715
Mounting position	any

Drawings

Diagram



Interrupting rating

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Approvals

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CCC

Approval ID: 2024010303656845

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Classifications

ECLASS

ECLASS-13.0	27371801
ECLASS-15.0	27371801

ETIM

ETIM 10.0	EC001438
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UNSPSC

UNSPSC 21.0	41113600
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Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(a), 7(c)-I

China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
SCIP	ccd01887-fcf1-44ff-aa35-1cb8afde4f10

EF3.1 Climate Change

CO2e kg	8.512 kg CO2e
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