

# Single relay - REL-MR-230AC/21-21AU/MS - 2987998

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Plug-in miniature relay, with multi-layer contact with hard gold coating, 2 changeover contacts, test button, mechanical switching position indicator, status LED, coil voltage 230 V AC

## Your advantages

- With detectable manual operation
- Integrated status LED
- Switching current of up to 16 A
- DC types with integrated freewheeling diode
- Mechanical switch position indicator



## Key Commercial Data

Packing unit	10 pc
Minimum order quantity	10 pc
GTIN	
GTIN	4046356481007

## Technical data

### Dimensions

Width	12.7 mm
Height	29 mm
Depth	25 mm

### Ambient conditions

Ambient temperature (operation)	-40 °C ... 70 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C

### Coil side

Nominal input voltage $U_N$	230 V AC
Mains frequency	50/60 Hz

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## Technical data

### Coil side

Typical input current at $U_N$	3.5 mA
Typical response time	3 ms ... 12 ms (depending on phase relation)
Typical release time range	2 ms ... 8 ms (depending on phase relation)
Power dissipation for nominal condition	0.42 W

### Contact side

Contact type	2 changeover contacts
Type of switch contact	Single contact
Contact material	AgNi, hard gold-plated
Maximum switching voltage	30 V AC 36 V DC
Minimum switching voltage	12 V (At 1 mA)
Min. switching current	1 mA (at 12 V)
Maximum inrush current	50 mA
Limiting continuous current	50 mA
Switching capacity	1.5 A (at 240 V, AC15)

### Contact side (with destroyed gold layer)

Contact material	AgNi
Note	the following values are applicable if a gold layer is destroyed
Maximum switching voltage	250 V AC/DC
Minimum switching voltage	12 V (at 10 mA)
Limiting continuous current	8 A
Maximum inrush current	16 A (20 ms)
Min. switching current	10 mA (at 12 V)
Interrupting rating (ohmic load) max.	2000 VA (for 250 V AC)
Switching capacity	1 A (at 24 V, DC13) 1.5 A (at 24 V, AC15) 1.5 A (at 120 V, AC15) 1.5 A (at 240 V, AC15)

### General

Test voltage	5 kV AC (50 Hz, 1 min., winding/contact) 2.5 kV AC (50 Hz, 1 min., contact/contact)
Mechanical service life	5x 10 <sup>6</sup> cycles
Service life, electrical	see diagram

### Connection data

Connection method	Solder connection
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### Standards and Regulations

Connection in acc. with standard	CUL
Standards/regulations	EN 61810-1

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## Technical data

### Standards and Regulations

	VDE 0435-201
	EN 50178

### Conformance/approvals

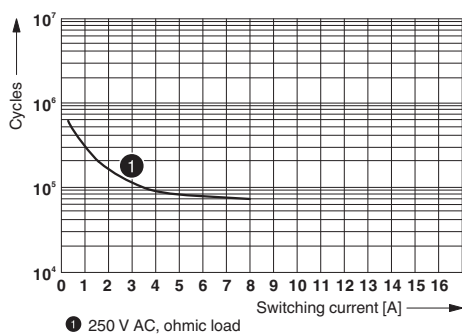
Designation	Corrosive gas test
Identification	ISA-S71.04. G3 Harsh Group
	EN 60068-2-60

### Environmental Product Compliance

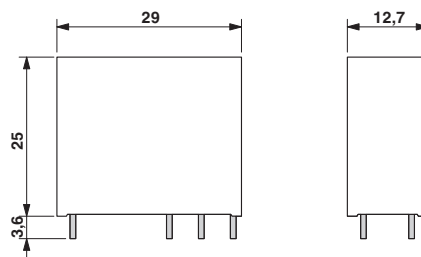
China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

## Drawings

Diagram

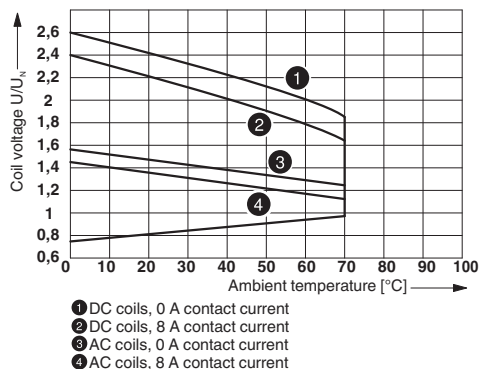


Dimensional drawing

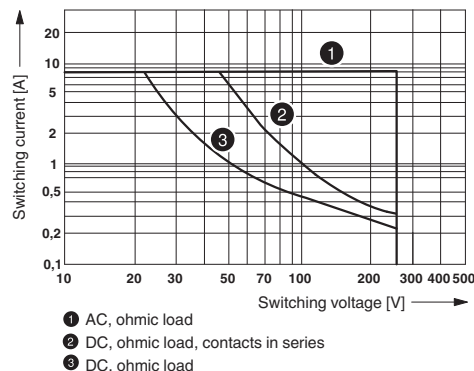


### Electrical service life

Diagram



Diagram

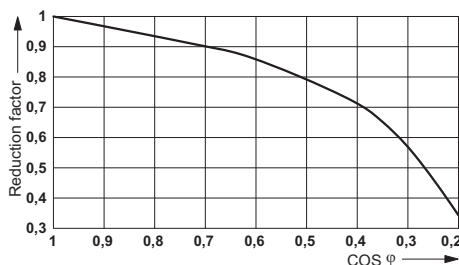


### Operating voltage range

### Interrupting rating

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Diagram



Service life reduction factor with various cos phi

## Classifications

### eCl@ss

eCl@ss 10.0.1	27371601
eCl@ss 11.0	27371601
eCl@ss 4.0	27371100
eCl@ss 4.1	27371100
eCl@ss 5.0	27371600
eCl@ss 5.1	27371600
eCl@ss 6.0	27371600
eCl@ss 7.0	27371601
eCl@ss 9.0	27371601

### ETIM

ETIM 2.0	EC001437
ETIM 3.0	EC001437
ETIM 4.0	EC001437
ETIM 5.0	EC001437
ETIM 6.0	EC001437
ETIM 7.0	EC001437

### UNSPSC

UNSPSC 6.01	30211916
UNSPSC 7.0901	39121515
UNSPSC 11	39121515
UNSPSC 12.01	39121515
UNSPSC 13.2	39122334
UNSPSC 18.0	39122334
UNSPSC 19.0	39122334
UNSPSC 20.0	39122334

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## Classifications

### UNSPSC

UNSPSC 21.0	39122334
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## Approvals

### Approvals

### Approvals

UL Recognized / cUL Recognized / EAC / EAC / VDE Zeichengenehmigung / cULus Recognized

### Ex Approvals

## Approval details

UL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 195083
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cUL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 195083
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EAC			TR_TS_D_00573_c
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EAC			RU*C- DE.*08.B.00010
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VDE Zeichengenehmigung		<a href="http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx">http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx</a>	40027210
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cULus Recognized			
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## Accessories

### Additional products

## Single relay - REL-MR-230AC/21-21AU/MS - 2987998

### Accessories

Relay base - RIF-1-BPT/2X21 - 2900931



Relay base RIF-1..., for miniature power relay with 1 or 2 changeover contacts or solid-state relays of the same design, Push-in connection, plug-in option for input/interference suppression modules, for mounting on NS 35/7,5

Relay base - RIF-1-BSC/2X21 - 2900930



RIF-1... relay base, for miniature power relay with 1 or 2 changeover contacts or identical solid-state relays, screw connection, plug-in option for input/interference suppression modules, for mounting on NS 35/7,5

Relay base - PR1-BSC3/2X21 - 2833521



Relay base PR1..., for miniature power relay or miniature switching relay with 1 or 2 PDT or solid-state relay of same construction, 1/3 level design, screw connections, connection facility for input/interference suppression modules

Relay base - PR1-BSP3/2X21 - 2833534



Relay base PR1..., for miniature power relay or miniature switching relay with 1 or 2 PDT or solid-state relay of same construction, 1/3 level design, spring-cage connections, connection facility for input/interference suppression modules

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