



Relay couplers MICROSERIES, PLUGSERIES, RIDERSERIES

Product information

Relay couplers

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Weidmüller's world of relay couplers

**Switching, amplifying and multiplying
Weidmüller's relay couplers give their all!**

Module for module: first class quality!

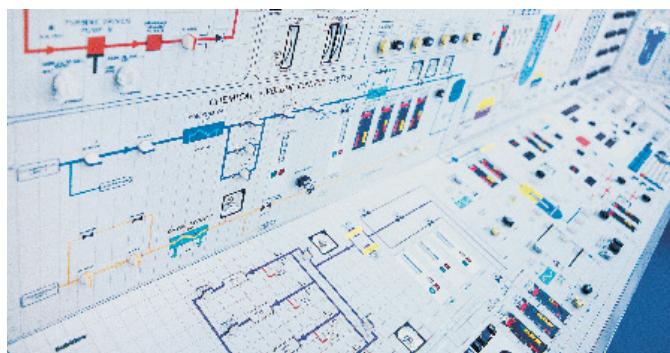
Weidmüller's relay couplers enable interference-free and non-interacting signal transmissions in industrial automation concepts. Quickly mounted, they are compact and can be integrated in the tightest of spaces. Weidmüller's relay couplers guarantee:

- Easy mounting by simply snapping onto the mounting rail
- Protective separation of input and output circuits by adherence to specified insulation voltage
- Simultaneous switching of several loads
- Error-free switching of varying loads
- Reliable coupling of different voltages and currents between the input and output circuits
- Power amplification

For each and every problem: a solution!

This extensive spectrum of performance features means that Weidmüller's relay couplers are particularly suitable for isolating and conditioning of potentials as well as for multiplying signals in automation engineering. The main emphasis is placed on sub-assemblies that couple signals potential-free between the field and the control levels. Based on a wide platform of housings, Weidmüller has the optimum module for every application. Three types of relay coupler modules from Weidmüller have become firmly established in automation engineering:

- Slim measuring and monitoring relays
- Compact power relays
- Proven industrial relays



RSS - Page 16



Slim measuring and monitoring relays: the space savers!

Weidmüller's RSS measuring and monitoring relays take up very little space and their design makes them ideal for conditioning and galvanically isolating signals between the field and the controls. Thanks to the clearance and creepage distance values attained, these 'space savers' can also be utilized for sub-assemblies with protective separation. The contact material and design enable switching of small to medium-sized loads up to 6A @ 24 V DC or 230 V AC.



RCL - Page 24

Compact power relays: the all-rounders!

Weidmüller's RCL power relays are always suitable for universal and optimum utilization when reliable isolation between the input and output is essential. Together with their robust mechanical features, their excellent contact characteristics enable loads up to 16 A @ 24 V DC or 230 V AC to be switched. There are two change-over versions available to duplicate signals. Due to their special design, these 'all-rounders' prevent contact burn due to inductive loads – gold contacts ensure that even small loads such as measurement signals can be reliably switched.



RCM - Page 36

Proven industrial relays: the multi-talented relays!

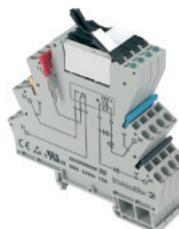
Weidmüller's RCM industrial relays offer an extensive range of options: up to four change-over contacts are available to multiply signals. In addition, the contacts can be mechanically operated by means of a lockable test button to simulate switching statuses during commissioning procedures. To enable monitoring of the contact float, these 'multi-talented' relays are equipped with a mechanical status indicator – optional LED units are available to indicate the switching status

Weidmüller: the connection technology specialist!

Suitable for mounting onto mounting rails, Weidmüller's relay sockets offer the optimum connection technique for both mechanical and systems engineering – optimised to suit the required performance capacity and the expected application.



MICROSERIES - Page 16



The MICROSERIES range integrates the product features of **Weidmüller's RSS measuring and monitoring relays** into the world of terminal blocks. At the same time, the user is able to rely on the specific characteristics of the terminal blocks: he neither has to do without the freedom to choose the connection technique, pluggable cross-connections, universal marking solutions nor does he have to forego the typical space-saving features that relays offer!

PLUGSERIES - Page 18



Proven product characteristics from the world of connection technology in combination with the performance of **Weidmüller's power relays RCL**: all presented in the PLUGSERIES range of products. The pluggable cross-connection ZQV enables rapid and simple bridging of potentials in both inputs and outputs, in addition to offering universal marking solutions. As well as the free choice of connection technique, it is the housing material Wemid that makes the PLUGSERIES such a unique product.

RIDERSERIES RCL - Page 24



The RIDERSERIES range represents the successful integration of **Weidmüller's power relay RCL**: modular in design, the relay, electronics and relay retainer clip are all pluggable. The series formally fulfils the international standard. Compact in design, its proven connection technology, optionally available utilising screw or tension clamp connection techniques, convinces all-comers.

RIDERSERIES RCM - Page 32



This RIDERSERIES range is also available in combination with **Weidmüller's industrial relay RCM** – it then offers characteristics comparable with Weidmüller's power relay RCL: equally modular in design, these couplers are optionally available with screw or tension clamp connections and meet the required standard.

Relay couplers – an overview

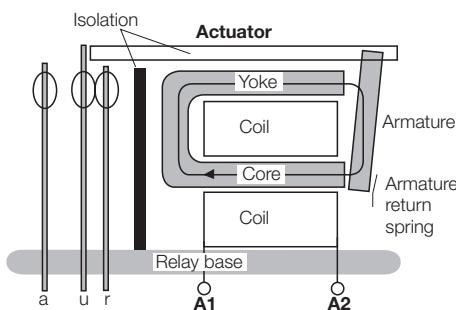
Historical background

The term ‘relay’ was originally used for a station where stagecoaches were able to change their tired horses for fresh ones. The term ‘relay’ was given a totally different meaning by the English physicist Charles Wheatstone (1802–1875). In Wheatstone’s times, departing trains were signalled by a ringing bell at the next railway station up the line.

This was achieved by connecting a battery in the first station to a bell in the second. However, as the railway stations were generally several kilometres apart the power arriving at the second station was often insufficient to ring the bell. Wheatstone invented a switchgear apparatus that was installed at the second railway station. This continued to function even with low power supply levels. The switchgear apparatus switched a second electrical circuit that actuated the bell. That was the birth of the electromagnetic relay.

How a relay functions

A relay is an electromagnetic switch comprising two galvanically isolated circuits. Firstly the control circuit and secondly the open circuit with the normally open contact. As soon as the control circuit is energised, the coil creates a magnetic field in the core/yoke and attracts the armature. The actuator now actuates the switch at the output, the normally open contact (make contact) closes and the normally closed contact (break contact) opens. When the control circuit is turned off, the magnetic field diminishes and the return spring returns the armature to its initial position. The actuator moves the normally open (make contact) back to its normal position, the normally open contact opens, the normally closed contact (break contact) closes.



Consequently, with low power input – battery power for example – a relay provides the option of switching heavy loads as well as being able to serve as a switching amplifier. Thanks to the isolation between the input and output, relays are also suitable for providing separation when the power of the control and the open circuits differ. Equipped with several NO (make) contacts, a relay can also be utilised for multiplying signals.

From relay to relay coupler

There are two alternative methods that make a relay coupler suitable for use in industrial applications: mounting onto a PCB – in combination with the corresponding assembly techniques and circuitry – or plugging onto a specially designed relay base.

Generally, the design and rating data determine if a relay coupler is or is not suitable for a particular application.

For example, relay couplers with plugged on relays are only partly suitable for use in applications subjected to heavy vibrations. In this case, relay couplers with soldered relays should be preferred. Low, compact designs such as those provided by the RIDERSERIES are utilised in small consumer units where the overall available height is limited. Conversely, the compact design of the MICROSERIES helps to save space in electrical cabinets.

Protective separation

It is essential that all electrical equipment required to provide protective separation be designed in such a manner that the insulation cannot be impaired, for example by mechanical errors. If a mechanical error occurs in a relay (bent soldering pin, broken winding wire or broken spring), ‘protective separation’ must be guaranteed. Relays are specified and tested in accordance with EN 61810-1. However, the standard makes no reference to EN 50178 (Electronic equipment for use in power installations); equally no definition is given for the term ‘protective separation’. Things are made worse by the fact that different measurement conditions are given for the test voltages stipulated for relays.

As a consequence, the test voltages cannot be applied to the standards EN 50178 or EN 61140. And because the user is nevertheless increasingly deploying electrical equipment that is supposed to guarantee 'protective separation', a large number of manufacturers of relays point to the EN 61140 and carry out the tests accordingly. And of course the values are then 'protective separation' conform.

Standards

The following individual standards are applied in accordance with the corresponding requirements:

Relay couplers

- DIN EN 50178:
Electronic equipment for use in power installations

Relays

- DIN EN 61810-1:
Electromechanical elementary relays (electromechanical elementary relays without specified time response characteristics)
Part 1: General and safety requirements

Relay base

- DIN EN 61984
Connectors - Safety requirements and tests

EMC – Electromagnetic compatibility

DIN EN 61000-6-1

Part 6-1: Generic standards; Immunity for residential, commercial and light-industrial environments

DIN EN 61000-6-2

Part 6-2: Generic standards - Immunity for industrial environments

DIN EN 61000-6-3

Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments

DIN EN 61000-6-4

Part 6-4: Generic standards - Emission standard for industrial environments

Coil suppression circuit

In DC circuits, the inductance of the relay coil generates a release voltage when de-energised that is capable of damaging or destroying the connected control electronics. A free wheel diode connected in parallel to the coil limits the release voltage, protects the control electronics and prevents induction of the cut-off voltage to other signal lines.

Large circuits or long cable runs are subjected to increased electrical and electromechanical interference and damage. Malfunctions or even total failure of the relay module can result. The radiated interference, and not to forget leakage currents emanating from trigger modules, can also mean that a triggered relay does not drop out. As standards specify that the drop-out voltage is limited to about 15 percent of the rated voltage, the interference voltage generated can be sufficient to prevent the relay from opening. One way of resolving this problem is to connect an RC combination line side to filter out disturbances and provide capacitive suppression of interference voltages.

MICROSERIES products are supplied ex works with these protective circuits already integrated in the electronics; for the PLUGSERIES and RIDERSERIES these are available as modular series electronics.

The same principles apply as with contact protection circuits.

Switching small and large loads

Fundamentally, continuous self-cleaning ensures the highest contact reliability of a relay contact operating medium current loads. With increasing contact load and associated increased contact erosion, switching reliability decreases in line with the growing number of switching operations. The operational service life diminishes. It is true that with very low contact load levels the operational lifetime of the relay is close to that of the mechanical service life due to the lack of contact erosion; however, the lack of self-cleaning contributes towards a reduction in contact reliability.

Achieving reliable contacting with small currents, in particular in conjunction with low voltages, depends on the choice of contact material. Contacts made from silver-nickel, which are standard in most of Weidmüller's relays, are fundamentally suitable from about 10 mA.

Relay couplers – an overview

Such wide-band contacts switch both low and high currents. However, occasional contact failures occur when operating with small currents due to corrosion and the lack of self-cleaning. The higher the currents the more reliable the contacting— thanks to self-cleaning. Silver-nickel is a suitable contact material for small currents/voltages. Conversely, it achieves **only moderate switching reliability**. If this is tenable, then conventional standard relays offer an economic solution.

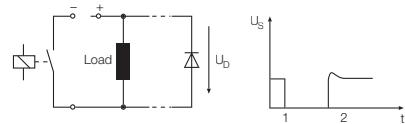
Conventional relays with hard gold plated contacts should be preferred for applications with low currents/voltages requiring increased levels of **contact reliability**, because these do not corrode and function more reliably as a consequence.

If **very high levels of switching reliability** are required, in particular in conjunction with small currents/voltages, then relays are not the first choice by any means. Weidmüller recommends using optocouplers in such cases. Wear and abrasion caused by mechanical movements are not possible with optocouplers.

Protecting the contacts

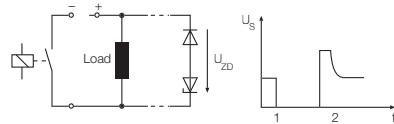
Arcing occurs when switching inductive or capacitive loads; these influence the electrical service life of the relay. The following contact protection circuits provide reduced contact wear:

Diode



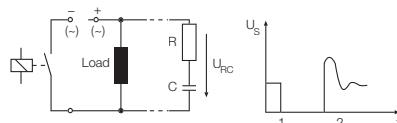
Advantage: can be utilised for all power ratings, low overvoltage, low space requirements, economic
disadvantage: considerable drop-out delay

Diode and Z-diode:



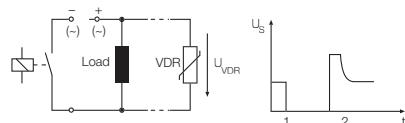
Advantage: low overvoltage (determined through Z-diode), short drop-out delay
Disadvantage: cannot be used for large power ratings

RC combination



Advantage: low overvoltage, short drop-out delay
Disadvantage: greater contacts subjected to greater current loads when switching, increasingly complex and expensive with increasing power ratings

Varistor



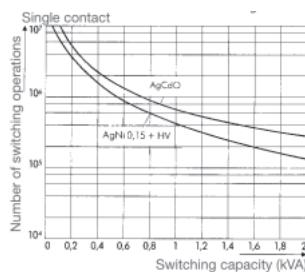
Advantage: short drop-out delay, economic
Disadvantage: cannot be used with all Operating voltages and power ratings

US = Voltage waveform
1 = Close
2 = Open

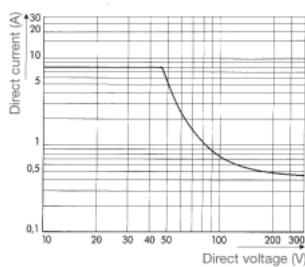
Principal characteristic curves of relay contacts

Although each relay contact displays its own characteristics, the performance curves determined are very similar as far as their waveform, but not, however, as far as the actual values are concerned. Example curves are given below for

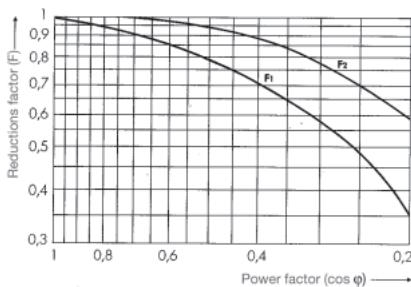
- Contact service life (number of switching operations in relation to switching capacity)
- DC load breaking capacity (direct current in relation to direct voltage)
- Reduction factor under inductive load (reduction factor in relation to $\cos \varphi$)



Service life of contact under resistive load



DC load breaking capacity with resistive load



Reduction factor with inductive load $\cos \varphi < 1$

Number of switching operations eff. = no. of switching operations at ($\cos \varphi = 1$) \times Reduction factor F

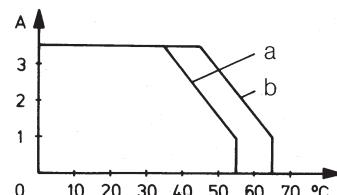
Derating curve

The contact resistance of the contacts contributes significantly to an increase in temperature within the relay modules. A derating curve illustrates this relationship. The curve defines the function of the permissible current relative to the ambient temperature.

The permissible current (curve a) is determined for the following operating conditions:

- Continuous operation
- Nominal input voltage +10 percent
- Several relay modules operating under load, mounted horizontally without spacing on a mounting rail.

A higher current load applies (curve b) when the modules are mounted with a space of 620 mm. Curve b also shows the maximum values for short-time switching operations when mounted horizontally side by side.



Relay couplers – an overview

Contact materials

AgNi Au (silver-nickel hard gold plated)

For dry loads, measuring and switching circuits, control inputs
(1 mV - 10 V, 0.1 mA - 100 mA)

AgNi 0.15 (fine grain silver)

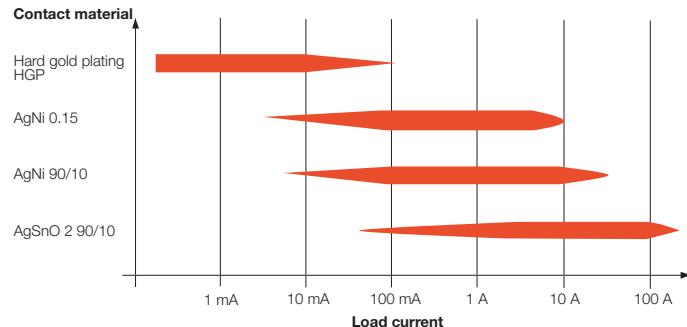
Suitable for low to medium sized loads, AC and DC loads, resistive and inductive (solenoid valve, fans, heaters); not suitable for high inrush currents.

AgNi 90/10 (silver-nickel)

Suitable for all loads, constantly low contact-circuit resistances in the low load range, AC and DC loads, resistive and inductive (solenoid valve, fans, heaters); not suitable for capacitive inrush currents.

AgSnO₂ 90/10 (silver-tin oxide)

Suitable for all loads. Well suited for higher loads. Particularly well suited for high inrush currents with short rise times (lamp loads, capacitive loads, fluorescent tubes, switched-mode power supplies and so forth). Well suited for resistive, inductive and capacitive DC applications due to low occurrence of material transport.



Definition of technical data

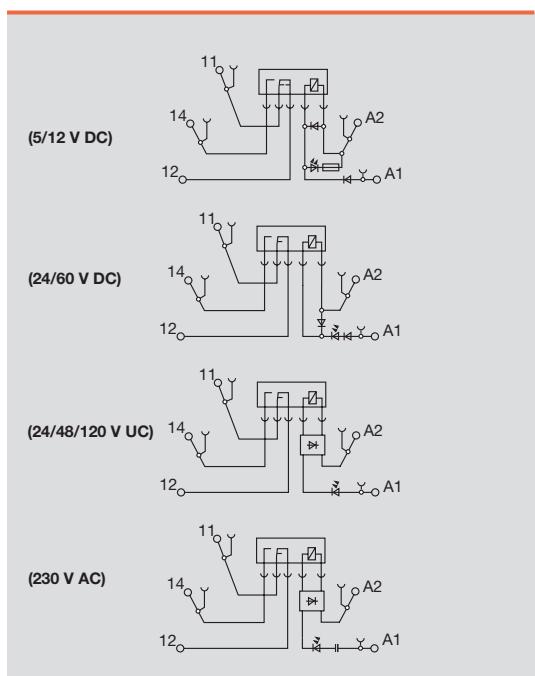
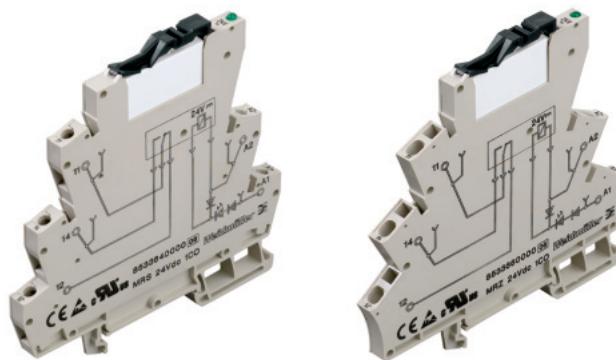
Input Circuit	
Nominal voltage [V]	reference voltage at which the relay coupler operates; typical input voltages => 5 V DC, 12, 24, 48, 60, 115, 230 AC/DC
Nominal current [mA]	Quotient of input voltage and input resistance; input resistance => coil resistance. + resistance of triggering device (R, LED, GL ...)
Nominal power [W/VA]	Input voltage x input current DC/AC with tolerance +/- 10 % or +5/-15 %, typ. range for relay coupler 250 mW ... 1 W or 0.4 VA...1.2 VA
Response voltage [V]	Smallest input voltage required for the relay coupler to respond (Tu = 293 K)
Pull-in current [mA]	Smallest input current at which the relay switches from idle to working position (Tu = 293 K)
Pull-in power [W/VA]	Product of response voltage and pull-in current
Drop-out voltage [V]	Voltage level at which the relay reliably drops out
Drop-out current [mA]	Input current at which the relay reliably drops out
Output Circuit	
Max. switching voltage [V]	Max. voltage that can be applied to the relay contact
Making current [A]	The current allowed to flow for max. 4 seconds after the relay contact closes
Continuous current [A]	Current allowed to flow continuously after the contact closes
Switching power [W/VA]	Product of output voltage and making current under resistive, inductive or capacitive load
Min. switching power [μ W]	Smallest power that can be switched via the contact
Service life	Number of switching operations until the contact fails <ul style="list-style-type: none"> – mechanical => without electrical load – electrical => under resistive or inductive AC/DC load
Response time [ms]	Time until contact closes/opens after switching the excitation voltage
Drop-out time [ms]	Time until contact closes/opens after opening the excitation current circuit
Switching frequency [Hz]	Switching operations/second in pulse duty factor 1 : 2 (ton = toff)
Dielectric strength [kV]	Max. test voltage between input and output circuits that does not result in a discharge
Protective separation	Relay couplers to EN 50178 and VDE 0106 T 101

Relay coupler – MICROSERIES

1 change-over contact

Module can be used as a universal interface between control and actuator for switching small and medium loads

- The plug-in cross-connection in input and output minimizes the wiring work loads.
- Width 6.1 mm
- Relay base also accepts optocouplers



Output

Max. switching voltage AC/Continuous current	250 V/6 A
Min. switching power	12 V/100 mA
Response time / Release time	6.2 ms/3.9 ms
Contact base material LK	AgSnO
Mechanical endurance	20x10 ⁶ switching cycles
Max. switching frequency at rated load	0.1 Hz

Rated data

Status indicator/Free wheel diode	LED green/Yes
Reverse volt. prot	available
Ambient temp., fitted w/o distance	-25 °C...+50 °C
Storage temperature	-40 °C...+60 °C
Climate	40°C/93% RH, no condensation
Approvals	CE; cURus;

Insulation coordinates (EN 50 178)

Standards	EN 50178
Rated voltage	300 V
Impulse withstand voltage	4 kV
Creepage and clearance path input - output	≥ 5.5 mm
Oversupply category	III
Pollution severity	2
Safety separation acc. to VDE 0106 Part 101	Yes

Dimensions

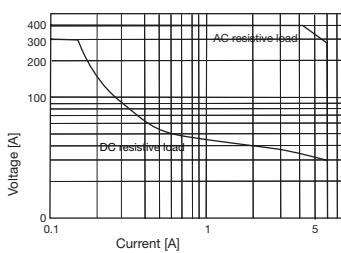
Clamping range (rating- / min. / max.)	mm ²	2.5 / 0.5 / 4	1.5 / 0.5 / 2.5
Length x width x height	mm	93 / 6.1 / 92	94 / 6.1 / 91

Information

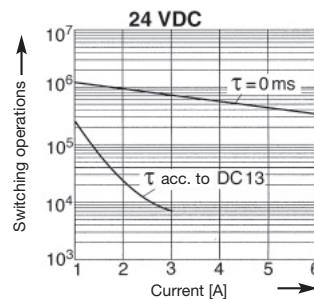
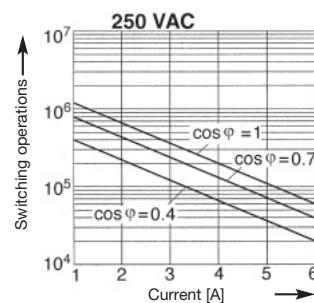
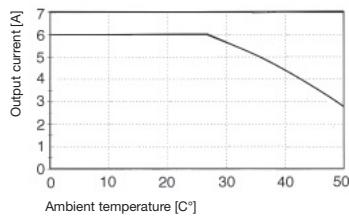
For information on cross-connector and marker please see
Accessories MICROSERIES

Applications

Load breaking capacity



Current temperature rise/derating curve



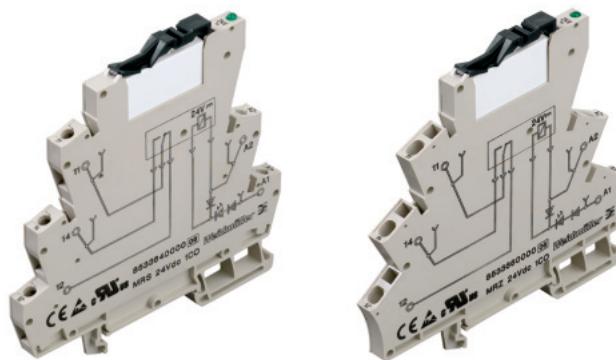
1 change-over contact

Order data		5 V DC 1CO	12 VDC 1CO	24 V DC 1CO	24 V UC 1CO
Input					
Rated voltage		5 V DC ± 20 %	12 V DC ± 20 %	24 V DC ± 20 %	24 V UC ± 10 %
Rated current AC					11 mA
Rated current DC		38.5 mA	17 mA	6.6 mA	6.4 mA
Power rating		193 mW	210 mW	160 mW	154 mW
Oper.-/drop-out volt. AC-coil					15.8 V/7 V
Oper.-/drop-out volt. DC-coil		3.2 V/1.6 V	6.4 V/2.5 V	15.4 V/6.5 V	15.8 V/7 V
Pull-in curr./release curr. AC-coil					3.6 mA/1.3 mA
Pull-in curr./release curr. DC-coil		21.6 mA/8 mA	8.4 mA/2.4 mA	4 mA/1.2 mA	3.6 mA/1.3 mA
Order data					
Complete module					
Screw connection	Type	MRS 5Vdc 1CO	MRS 12Vdc 1CO	MRS 24Vdc 1CO	MRS 24Vuc 1CO
	Order No.	8556080000	8556070000	8533640000	8556050000
Tension clamp connection	Type	MRZ 5Vdc 1CO	MRZ 12Vdc 1CO	MRZ 24VDC 1CO	MRZ 24Vuc 1CO
	Order No.	8556150000	8556140000	8533660000	8556120000
Order data					
Spare relay, pluggable					
	Type	RSS113005 05Vdc-Rel1U	RSS113012 12Vdc-Rel1U	RSS113024 24Vdc-Rel1U	RSS113024 24Vdc-Rel1U
	Order No.	4061580000	4061610000	4060120000	4060120000
Information					
Order data		48 V UC 1CO	60 V DC 1CO	120 V UC 1CO	230 V AC 1CO
Input					
Rated voltage		48 V UC ± 10 %	60 V DC ± 20 %	120 V UC + 10 % / -15 %	230 V AC ±10%
Rated current AC		5 mA		3.5 mA	7.6 mA
Rated current DC		4 mA	3.3 mA	3.5 mA	
Power rating		190 mW	200 mW	0.42 VA	1.75 VA
Oper.-/drop-out volt. AC-coil		29 V/11 V		71 V/22 V	103 V/49 V
Oper.-/drop-out volt. DC-coil		29 V/11 V	35 V/11 V	71 V/22 V	
Pull-in curr./release curr. AC-coil		2.2 mA/1.3 mA		1.8 mA/0.5 mA	5 mA/2.5 mA
Pull-in curr./release curr. DC-coil		2.2 mA/1.3 mA	1.6 mA/0.6 mA	1.8 mA/0.5 mA	
Order data					
Complete module					
Screw connection	Type	MRS 48Vuc 1CO	MRS 60Vdc 1CO	MRS 120Vuc 1CO	MRS 230Vac 1CO
	Order No.	8556040000	8556060000	8556030000	8556020000
Tension clamp connection	Type	MRZ 48Vuc 1CO	MRZ 60Vdc 1CO	MRZ 120Vuc 1CO	MRZ 230Vac 1CO
	Order No.	8556110000	8556130000	8556100000	8556090000
Order data					
Spare relay, pluggable					
	Type	RSS113048 48Vdc-Rel1U	RSS113060 60Vdc-Rel1U	RSS113060 60Vdc-Rel1U	RSS113024 24Vdc-Rel1U
	Order No.	4061620000	4061630000	4061630000	4060120000
Information					

Relay coupler – MICROSERIES

Special versions

- 24 V DC – Actuator version:
Bridgeable, potential-free connection allows actuators to be connected directly to the output
- 120 V AC – RC version:
RC combination in the input guarantees reliable switching thresholds, for example, in the case of leakage currents on the control side



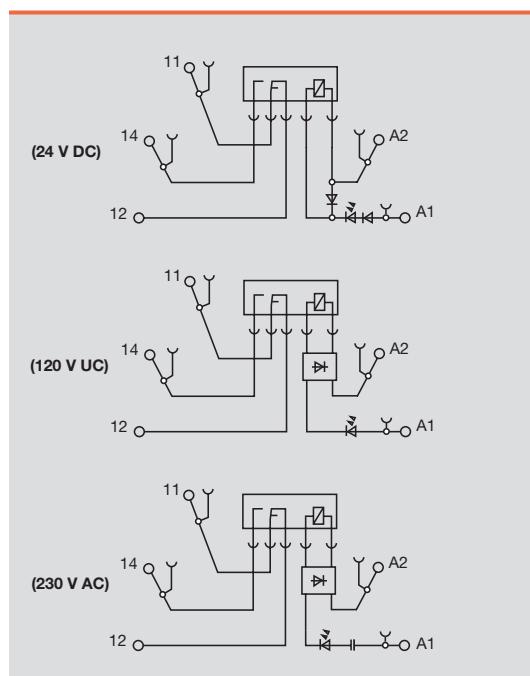
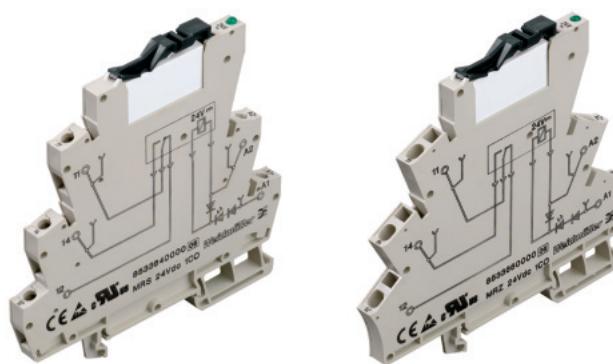
		Output
(24 V DC)		Max. switching voltage AC/Continuous current 250 V/6 A
Min. switching power		12 V/10 mA
Response time / Release time		6.6 ms/5.8 ms
Contact base material LK		AgSnO
Mechanical endurance		20x10 ⁶ switching cycles
Max. switching frequency at rated load		0.1 Hz
Rated data		
Status indicator/Free wheel diode		LED green/Yes
Reverse volt. prot.		available
Ambient temp., fitted w/o distance		-25 °C...+55 °C
Storage temperature		-40 °C...+60 °C
Climate		40°C/93% RH, no condensation
Approvals		CE; cURus;
Insulation coordinates (EN 50 178)		
Standards		EN 50178
Rated voltage		300 V
Impulse withstand voltage		4 kV (1.2/50 µs)
Creepage and clearance path input - output		≥ 5.5 mm
Overvoltage category		III
Pollution severity		2
Safety separation acc. to VDE 0106 Part 101		
Dimensions		Screw connection
Clamping range (rating- / min. / max.)		mm ² 2.5 / 0.5 / 4
Length x width x height		mm 93 / 6.1 / 92
Information		For information on cross-connector and marker please see Accessories MICROSERIES

Order data	24 V DC ACT	120 V AC 1CO RC		
Input				
Rated voltage	24 V DC ±20 %	120 V AC +10 % / -15 %		
Rated current AC		7 mA		
Rated current DC	6.6 mA			
Power rating	160 mW	0.84 VA		
Oper.-/drop-out volt. AC-coil		79 V/65 V		
Oper.-/drop-out volt. DC-coil	15.4 V/6.5 V			
Pull-in curr./release curr. AC-coil		4.5 mA/3.7 mA		
Pull-in curr./release curr. DC-coil	4 mA/1.2 mA			
Order data				
Complete module				
Screw connection	Type	MRS 24Vdc ACT	MRS 120VAC 1CO RC	
	Order No.	8660920000	8825970000	
Tension clamp connection	Type	MRZ 24VDC ACT	MRZ 120VAC 1CO RC	
	Order No.	8660910000	8825960000	
Order data				
Spare relay, pluggable				
Type				
Order No.				
Information				

1 change-over gold-plated contact

Module can be used as an universal interface between control and actuator for switching small and medium loads

- The pluggable cross-connection in input and output minimizes the effort to wiring work load
- Width 6.1 mm
- Relay bases also accept optocouplers



Output

Max. switching voltage AC/Continuous current	250 V/6 A
Min. switching power	12 V/10 mA
Response time / Release time	6.6 ms/5.8 ms
Contact base material LK	AgSnO 5 µm Au
Mechanical endurance	20x10 ⁶ switching cycles
Max. switching frequency at rated load	0.1 Hz

Rated data

Status indicator/Free wheel diode	LED green/Yes
Reverse volt. prot.	available
Ambient temp., fitted w/o distance	-25 °C...+50 °C
Storage temperature	-40 °C...+60 °C
Climate	40°C/93% RH, no condensation
Approvals	CE; cURus;

Insulation coordinates (EN 50 178)

Standards	EN 50178
Rated voltage	300 V
Impulse withstand voltage	4 kV
Creepage and clearance path input - output	≥ 5.5 mm
Oversupply category	III
Pollution severity	2
Safety separation acc. to VDE 0106 Part 101	Yes

Dimensions

Clamping range (rating- / min. / max.)	mm ²	2.5 / 0.5 / 4	1.5 / 0.5 / 2.5
Length x width x height	mm	93 / 6.1 / 92	94 / 6.1 / 91

Information

For information on cross-connector and marker please see
Accessories MICROSERIES

Order data

Input

Rated voltage	24 V DC ±20 %
Rated current AC	
Rated current DC	6.6 mA
Power rating	160 mW
Oper.-/drop-out volt. AC-coil	
Oper.-/drop-out volt. DC-coil	15.4 V/6.5 V
Pull-in curr./release curr. AC-coil	
Pull-in curr./release curr. DC-coil	4 mA/1.2 mA

24 V DC 1CO Au

120 V UC 1CO Au

230 V AC 1CO Au

Order data

Complete module

Screw connection	Type	MRS 24Vdc 1CO 5uAu	MRS 120Vuc 1CO 5uAu	MRS 230Vac 1CO 5uAu
Order No.		8596060000	8652030000	8596050000
Tension clamp connection	Type	MRZ 24Vdc 1CO 5uAu	MRZ 120Vuc 1CO 5uAu	MRZ 230Vac 1CO 5uAu
Order No.		8596080000	8652040000	8596070000

Order data Spare relay, pluggable

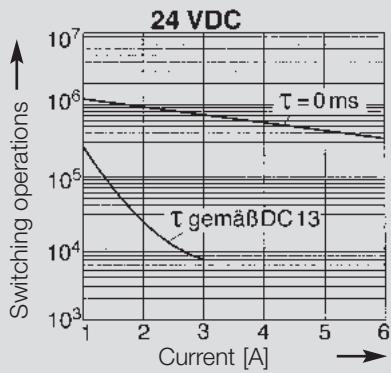
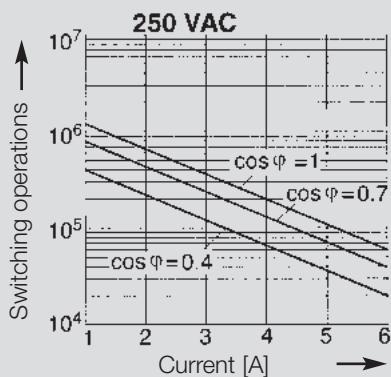
Type	RSS112024 24Vdc-Rel1U	RSS112060 60Vdc-Rel1U	RSS112024 24Vdc-Rel1U
Order No.	4061590000	4061600000	4061590000

Information

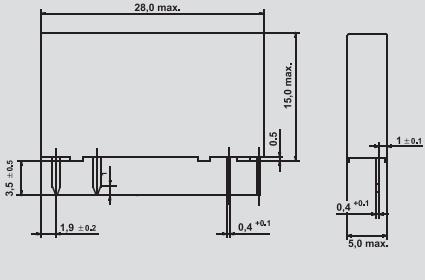
RSS relay
1 change-over contact / DC coil



Contact service life Material AgSnO₂



Mounting dimensions



Technical data

Contact number and type

1 change-over contact

Contact version

Single contact

Switching current

6 A

Switching voltage / max. switching voltage

250 V DC/400 V AC

Breaking capacity

1500 VA

Contact material / recommended min. load

AgSnO₂ 12 V, 100 mA

AgSnO₂ 5µ Au 12 V, 10 mA 1)

Typ. duration of bounce NO contact

1 ms

Typ. duration of bounce break contact element

5 ms

Miscellaneous data

Flammability rating

V-0

Ambient temperature

-40 ... +85 °C

Max. switching operations with rated load / without load

6/1200 operating cycles per minute

Response / Release time

5/2.5 ms

Duration of bounce NO contact / break contact element

1.5/5 ms

Ingress protection of the housing

IP 67

1) recommended load: µW to 0,25 W (depending from the load composition) at 2.5 W the gold plate will last for app. 20.000 switching operations

Order data

Coil voltage 5 V, 1 change-over contact

Type QTY. Order No.

RSS 113005 20 4061580000

Coil voltage 12 V, 1 change-over contact

RSS 113012 20 4061610000

Coil voltage 24 V, 1 change-over contact

RSS 113024 20 4060120000

Coil voltage 48 V, 1 change-over contact

RSS 113048 20 4061620000

Coil voltage 60 V, 1 change-over contact

RSS 113060 20 4061630000

Coil voltage 24 V, 1 change-over contact, 5µ Au¹⁾

RSS 112024 20 4061590000

Coil voltage 60 V, 1 change-over contact, 5µ Au¹⁾)

RSS 112060 20 4061600000

Type code RSS Relais

Type code

RSS

Type Rider Signal Slim



Type of construction

1 Print version, upright, waterproof

Coil

005 5 V DC

012 12 V DC

024 24 V DC

048 48 V DC

060 60 V DC

Type of contact

1 CO contacts

Contact material

2 AgSnO₂ hgp

3 AgSnO₂

Accessories

General information – MICROSERIES



Pluggable cross-connections

Type	no. of poles	QTY.	Order No.
yellow			
ZQV 4N / 2 GE	2	60	1758250000
ZQV 4N / 3 GE	3	60	1762630000
ZQV 4N / 4 GE	4	60	1762620000
ZQV 4N / 10 GE	10	20	1758260000
ZQV 4N / 20 GE	20	20	1909020000
red			
ZQV 4N / 2 RT	2	60	1793950000
ZQV 4N / 3 RT	3	60	1793980000
ZQV 4N / 4 RT	4	60	1794010000
ZQV 4N / 10 RT	10	20	1794040000
ZQV 4N / 20 RT	20	20	1909150000
blue			
ZQV 4N / 2 BL	2	60	1793960000
ZQV 4N / 3 BL	3	60	1793990000
ZQV 4N / 4 BL	4	60	1794020000
ZQV 4N / 10 BL	10	20	1794050000
ZQV 4N / 20 BL	20	20	1909100000
black			
ZQV 4N / 2 SW	2	60	1793970000
ZQV 4N / 3 SW	3	60	1794000000
ZQV 4N / 4 SW	4	60	1794030000
ZQV 4N / 10 SW	10	20	1794060000
ZQV 4N / 20 SW	20	20	1909130000

Technical data

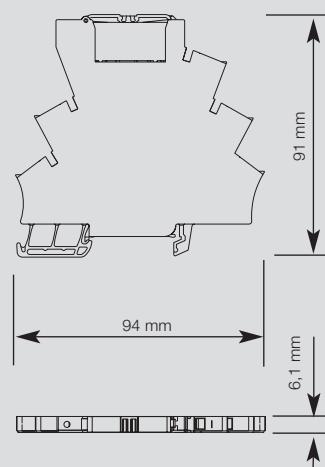
Clampable wire	Tension clamp connection	Screw connection
Solid core H07V-U	mm ²	0.5 ... 2.5
Flexible H07V-K	mm ²	0.5 ... 2.5
"f" with ferrules according to DIN 46 228 / 1	mm ²	0.5 ... 1.5
"f" with ferrules with plastic collars	mm ²	0.5 ... 1.5
Max. terminal range	mm ²	0.13 ... 2.5
Plug gauge to IEC 60 947-1	Size	A 2
		A 3
General technical data		
Nominal torque	-	0.6
Continuous current of cross-connection, 2-pole	A	10
Continuous current of cross-connection, multi-pole	A	10
Insulation stripping length	mm	10
Ingress protection	IP 20	IP 20
Housing material	Wemid	Wemid
Flammability rating UL 94	V-0	V-0
Nominal current	A	6
Nominal voltage	V	250

Other accessories

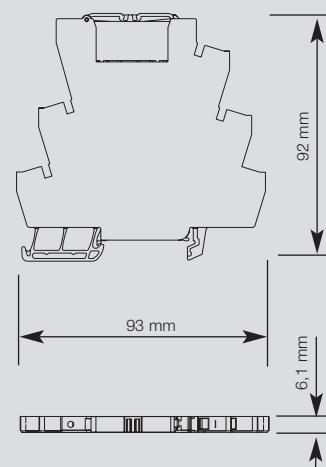
Type	QTY.	Order No.
Base module		
MRZ 24VDC 1CO BASIS	10	8826000000
MRS 24VDC 1CO BASIS	10	8826010000
MRZ 120VUC 1CO BASIS	10	8826020000
MRS 120VUC 1CO BASIS	10	8826030000
MRZ 230VAC 1CO BASIS	10	8826040000
MRS 230VAC 1CO BASIS	10	8826050000
Markers		
WS 12/6	12 x 6 mm	200
		1061160000
Labels, Lasermark		
LM MT 300 15/6 ge	484 Etik. / Bogen	10
		1686360000
Screwdriver		
SD 0,6 x 3,5 x 100	10	9008330000

Dimension drawings

Tension clamp connection



Screw connection



1 change-over contact

Modular system comprising

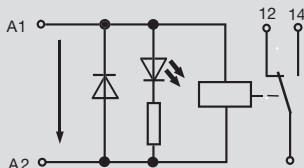
- Relay socket for rail mounting
- LED indicator unit / RC combination
- Retaining clip
- Plug-in relay

Cross-section of coil connections

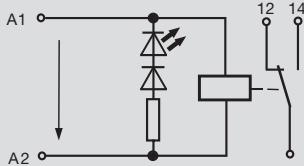
and relay change-over contacts by means of
plug-in cross-connection ZQV 2.5N



DC-Version



AC-Version



Output

Max. switching voltage AC/Continuous current	250 V/10 A
Min. switching power	10 V/100 mA
Response time / Release time	5.8 ms/6.9 ms
Contact base material LK	AgNi 90/10
Mechanical endurance	30x10 ⁶ switching cycles
Max. switching frequency at rated load	0.1 Hz

Rated data

Status indicator/Free wheel diode	LED green/Yes
Reverse volt. prot.	available
Ambient temp., fitted w/o distance	-25 °C...+50 °C
Storage temperature	-40 °C...+50 °C
Climate	40°C/93% RH, no condensation
Approvals	CE;cURus;

Insulation coordinates (EN 50 178)

Standards	EN 50178
Rated voltage	250 V
Impulse withstand voltage	6 kV
Creepage and clearance path input - output	> 8 mm
Oversupply category	III
Pollution severity	2
Safety separation acc. to VDE 0106 Part 101	Yes

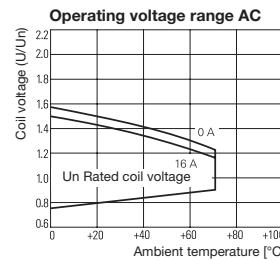
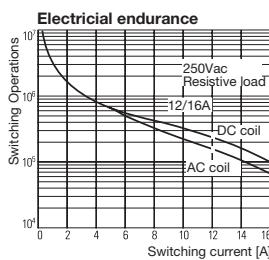
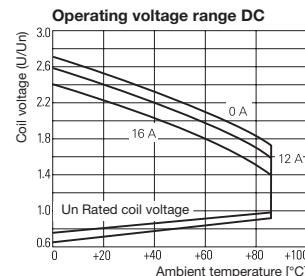
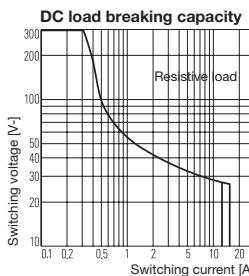
Dimensions

Clamping range (rating- / min. / max.)	mm ²	2.5 / 0.5 / 2.5	2.5 / 0.5 / 2.5
Length x width x height	mm	92 / 15.3 / 95	92 / 15.3 / 87

Information

For information on cross-connector and marker please see
Accessories PLUGSERIES

Applications



1 change-over contact

Order data		12 V DC 1CO	24 V DC 1CO	115 V DC 1CO	24 V AC 1CO
Input					
Rated voltage		12 V DC ±20 %	24 V DC ±10 %	115 V DC ±10 %	24 V AC ±10 %
Rated current AC					32 mA
Rated current DC		33 mA	16 mA	3.5 mA	
Power rating		400 mW	400 mW	400 mW	0.75 VA
Oper.-/drop-out volt. AC-coil					17 V/3.6V
Oper.-/drop-out volt. DC-coil		8.4 V/1.2 V	16.8 V/2.4 V	76 V/11 V	
Pull-in curr./release curr. AC-coil					
Pull-in curr./release curr. DC-coil					
Order data					
Complete module					
Screw connection	Type	PRS 12Vdc LD 1CO	PRS 24Vdc LD 1CO	PRS 115Vdc LD 1CO	PRS 24Vac LD 1CO
	Order No.	8536471001	8530621001	8536510000	8536530000
Tension clamp connection	Type	PRZ 12Vdc LD 1CO	PRZ 24Vdc LD 1CO	PRZ 115Vdc LD 1CO	PRZ 24Vac LD 1CO
	Order No.	8536571001	8530691001	8536610000	8536651001
Order data					
Spare relay, pluggable					
	Type	RT314012 12Vdc-Rel1U	RT314024 24Vdc-Rel1U	RT314110 110Vdc-Rel1U	RT315524 24Vac-Rel1U
	Order No.	4058470000	4058480000	4058500000	4058510000
Information					
Order data		120 V AC 1CO	230 V AC 1CO		
Input					
Rated voltage		120 V AC ±10 %	230 V AC ±10%		
Rated current AC		6.6 mA	3.2 mA		
Rated current DC					
Power rating		0.75 VA	0.75 VA		
Oper.-/drop-out volt. AC-coil		86.3 V/17.3 V	171 V/34 V		
Oper.-/drop-out volt. DC-coil					
Pull-in curr./release curr. AC-coil					
Pull-in curr./release curr. DC-coil					
Order data					
Complete module					
Screw connection	Type	PRS 120Vac LD 1CO	PRS 230Vac LD 1CO		
	Order No.	8530641001	8530671001		
Tension clamp connection	Type	PRZ 120Vac LD 1CO	PRZ 230Vac LD 1CO		
	Order No.	8530710000	8530731001		
Order data					
Spare relay, pluggable					
	Type	RT314615 115Vac-Rel1U	RT314730 230Vac-Rel1U		
	Order No.	4058520000	4058540000		
Information					

Relay coupler – PLUGSERIES

2 change-over contacts

Modular system comprising

- Relay socket for rail mounting
- LED indicator unit / RC combination
- Retaining clip
- Plug-in relay

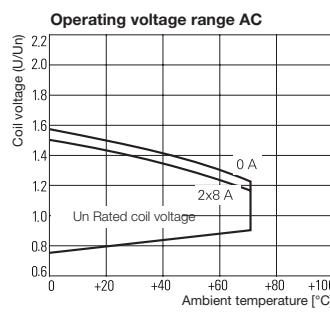
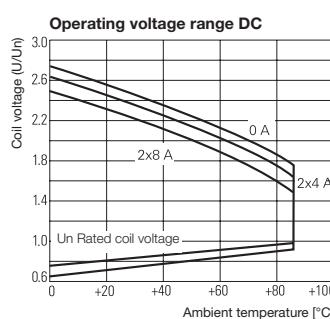
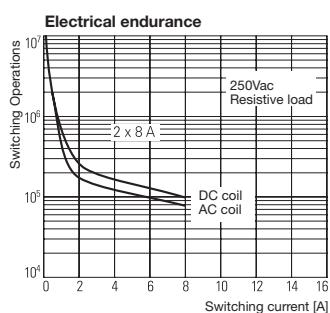
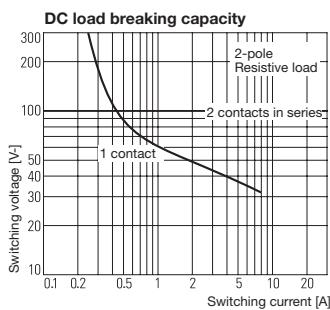
Cross-section of coil connections

and relay change-over contacts by means of
plug-in cross-connection ZQV 2.5N



Output		
Max. switching voltage AC/Continuous current	250 V/10 A	
Min. switching power	10 V/100 mA	
Response time / Release time	9 ms/45 ms	
Contact base material LK	AgNi 90/10	
Mechanical endurance	5x10 ⁵ switching cycles	
Max. switching frequency at rated load	0.1 Hz	
Rated data		
Status indicator/Free wheel diode	LED green/Yes	
Reverse volt. prot.	available	
Ambient temp., fitted w/o distance	-40 °C...+50 °C	
Storage temperature	-40 °C...+50 °C	
Climate	40°C/93% RH, no condensation	
Approvals	CE;cURus;	
Insulation coordinates (EN 50 178)		
Standards	EN 50178	
Rated voltage	250 V	
Impulse withstand voltage	6 kV	
Creepage and clearance path input - output	> 8 mm	
Oversupply category	III	
Pollution severity	2	
Safety separation acc. to VDE 0106 Part 101	Yes	
Dimensions		
Clamping range (rating- / min. / max.) mm ²	2.5 / 0.5 / 2.5	2.5 / 0.5 / 2.5
Length x width x height mm	92 / 15.3 / 95	92 / 15.3 / 87
Information		
For information on cross-connector and marker please see Accessories PLUGSERIES		

Applications



2 change-over contacts

Order data		12 V DC 2CO	24 V DC 2CO	115 V DC 2CO	24 V AC 2CO
Input					
Rated voltage		12 V DC ±20 %	24 V DC ±10 %	115 V DC ±10 %	24 V AC ±10 %
Rated current AC					32 mA
Rated current DC		33 mA	16 mA	3.5 mA	
Power rating		400 mW	400 mW	400 mW	0.75 VA
Oper.-/drop-out volt. AC-coil					17 V/3.6 V
Oper.-/drop-out volt. DC-coil		8.4 V/1.2 V	16.8V /2.4 V	76 V/11 V	
Pull-in curr./release curr. AC-coil					
Pull-in curr./release curr. DC-coil					
Order data					
Complete module					
Screw connection	Type	PRS 12Vdc LD 2CO	PRS 24Vdc LD 2CO	PRS 115Vdc LD 2CO	PRS 24Vac LD 2CO
	Order No.	8536501001	8530631001	8536520000	8536560000
Tension clamp connection	Type	PRZ 12Vdc LD 2CO	PRZ 24Vdc LD 2CO	PRZ 115Vdc LD 2CO	PRZ 24Vac LD 2CO
	Order No.	8536591001	8530701001	8536630000	8536681001
Order data					
Spare relay, pluggable					
	Type	RCL 424012 12Vdc-Rel2U	RCL 424024 24Vdc-Rel2U	RCL 424110 110Vdc-Rel2U	RCL 424524 24Vac-Rel2U
	Order No.	4058560000	4058570000	4058590000	4058600000
Information					
Order data		120 V AC 2CO	230 V AC 2CO		
Input					
Rated voltage		120 V AC ±10 %	230 V AC ±10%		
Rated current AC		6.6 mA	3.2 mA		
Rated current DC					
Power rating		0.75 VA	0.75 VA		
Oper.-/drop-out volt. AC-coil		86.3 V/17.3 V	172.5 V/34.5 V		
Oper.-/drop-out volt. DC-coil					
Pull-in curr./release curr. AC-coil					
Pull-in curr./release curr. DC-coil					
Order data					
Complete module					
Screw connection	Type	PRS 120Vac LD 2CO	PRS 230Vac LD 2CO		
	Order No.	8530661001	8530681001		
Tension clamp connection	Type	PRZ 120Vac LD 2CO	PRZ 230Vac LD 2CO		
	Order No.	8530720000	8530741001		
Order data					
Spare relay, pluggable					
	Type	RCL 424615 115Vac-Rel2U	RCL 424730 230Vac-Rel2U		
	Order No.	4058610000	4058630000		
Information					

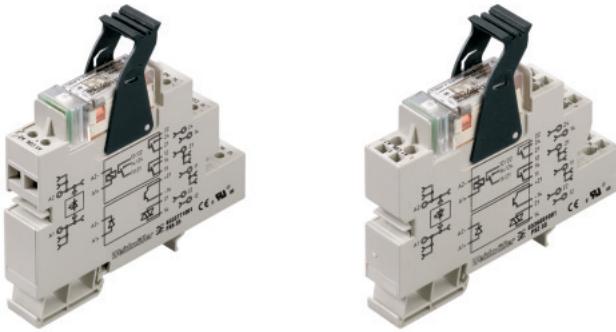
2 change-over gold-plated contacts

Modular system comprising

- Relay socket for rail mounting
- LED indicator unit / RC combination
- Retaining clip
- Plug-in relay

Cross-section of coil connections

and relay change-over contacts by means of
plug-in cross-connection ZQV 2.5N

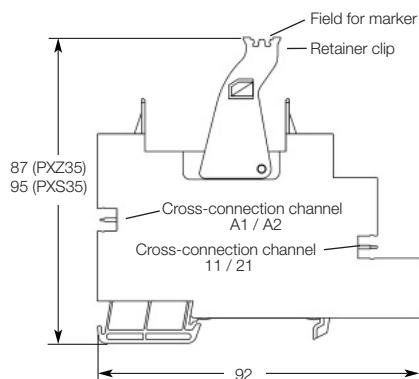


DC-Version		Output	
A1	12	Max. switching voltage AC/Continuous current	250 V/10 A
A2	14	Min. switching power	5 V/10 mA
	22	Response time / Release time	9 ms/45 ms
	24	Contact base material LK	AgNi 90/10
	11	Mechanical endurance	5x10 ⁵ switching cycles
	21	Max. switching frequency at rated load	0.1 Hz
AC-Version		Rated data	
A1	12	Status indicator/Free wheel diode	LED green/No
A2	14	Reverse volt. prot.	
	22	Ambient temp., fitted w/o distance	-40 °C...+50 °C
	24	Storage temperature	-40 °C...+50 °C
	11	Climate	40°C/93% RH, no condensation
	21	Approvals	CE;cURus;
Insulation coordinates (EN 50 178)			
Standards			
EN 50178			
Rated voltage			
250 V			
Impulse withstand voltage			
6 kV			
Creepage and clearance path input - output			
> 8 mm			
Overvoltage category			
III			
Pollution severity			
2			
Safety separation acc. to VDE 0106 Part 101			
Dimensions		Screw connection	Tension clamp connection
Clamping range (rating- / min. / max.)		mm ²	2.5 / 0.5 / 2.5
Length x width x height		mm	92 / 15.3 / 95
Information			
For information on cross-connector and marker please see Accessories PLUGSERIES			

Order data

Input	24 V DC 2CO Au	120 V AC 2CO Au	230 V AC 2CO AU
Rated voltage	24 V DC ±10 %	120 V AC ±10 %	230 V AC ±10%
Rated current AC		6.6 mA	3.2 mA
Rated current DC	16 mA		
Power rating	400 mW	0.75 VA	0.75 VA
Oper.-/drop-out volt. AC-coil		86.3 V/17.3 V	172.5 V/34.5 V
Oper.-/drop-out volt. DC-coil	16.8 V/2.4 V		
Pull-in curr./release curr. AC-coil			
Pull-in curr./release curr. DC-coil			
Order data	Complete module	PRS 24VDC LD 2COAU	PRS 120VAC LD 2CO AU
Screw connection	Type	PRS 24VDC LD 2COAU	PRS 120VAC LD 2CO AU
Order No.	8561760000	8595960000	8595990000
Tension clamp connection	Type	PRZ 24Vdc LD 2CO AU	PRZ 120VAC LD 2COAU
Order No.	8552440000	8575940000	8575950000
Order data	Spare relay, pluggable	RCL 425024 24Vdc-Rel2U	RCL 425615 115Vac-Rel2U
Type	RCL 425024 24Vdc-Rel2U	RCL 425615 115Vac-Rel2U	RCL 425730 230Vac-Rel2U
Order No.	4058580000	4058620000	4058640000
Information			

Accessories



Technical data

Base module

Nominal current	16 A
Nominal voltage	250 V
Voltage proof coil/contacts	> 4 kV
Protection class	IP 20
Nominal cross-section	2.5 mm ²
Insulation stripping length	8 mm
Ambient temperature	10 mm
Flammability class to UL 94	-40 °C ... +60 °C
	V-0

Screw connection
Tension clamp connection

Order data

Base module for installing onto TS 35 mounting rail

Type	QTY.	Order No.
PXS35	10	8533771001
PXZ35	10	8536691001

Retainer clip

PRC	100	8536700000
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LED display with free wheel diode

6 ... 24 V DC	PLED 24 V DC	20	8536710000
LED red, 6 ... 24 V DC	PLED 24 V DC rot	20	8611010000
48 ... 60 V DC	PLED 48 V DC	20	8536720000
115 V DC	PLED 115 V DC	20	8536730000
12 ... 24 V AC	PLED 24 V AC	20	8536750000
115 V AC	PLED 120 V AC	20	8536760000
230 V AC	PLED 230 V AC	20	8536780000
LED red, 230 V AC	PLED 230 V AC rot	20	8611000000
RC combination 120...230 V AC/DC	PLRC 200 nF/200Ω	20	8566530000

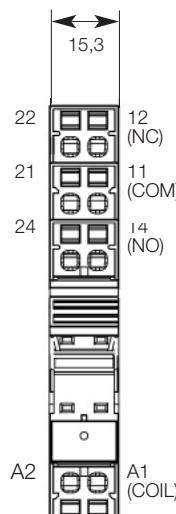
Pluggable cross-connections

2-pole	black	ZQV 2.5N/4-2SW	60	1784270000
	red	ZQV 2.5N/4-2RT	60	1784280000
	blue	ZQV 2.5N/4-2BL	60	1784290000

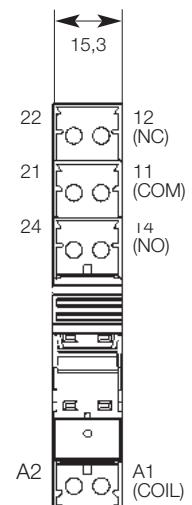
Markings

10 x 5 mm	WS 10/5	200	1060860000
15 x 5 mm	WS 15/5	96	1609880000

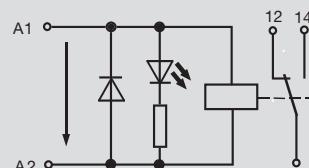
Tension clamp connection



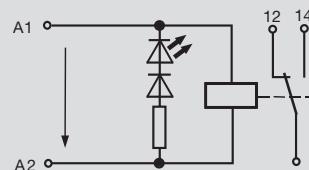
Screw connection



DC version



AC version



RCL KIT

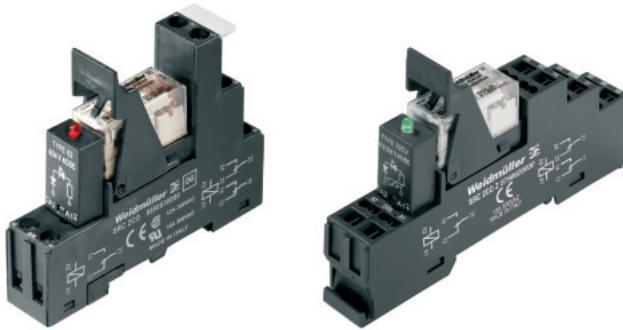
1 change-over contact

Modular system comprising:

- Relay socket for rail mounting
- LED indicator unit / RC combination
- Retaining clip
- Plug-in relay
- Marker

Independent connection technology:

- Screw connection and tension clamp technology



DC version		Output	
A1	12	Max. switching voltage AC	250 V
A2	14	Rated current	16 A
	11	Contact base material	AgNi 90/10
		Mechanical endurance	AC coil 10x10 ⁶ / DC coil 30x10 ⁶ switching cycles
		Response time / Release time	7 ms / 3 ms
AC version		Rated data	
A1	12	Status indicator/Free wheel diode	Green LED = DC coil; red LED = AC coil/Yes
A2	14	Ambient temp., fitted w/o distance	-40 °C...+70 °C
	11	Flammability rating UL 94	V-0
		Approvals	cURus;UR;CSA;CE;
Insulation coordinates (IEC 60664)			
A1	12	Rated voltage	250 V
A2	14	Creepage and clearance path input - output	10 mm
	11	Overvoltage category	III
		Pollution severity	3
Dimensions		Screw connection	
Clamping range (rating- / min. / max.)		mm ²	2.5 / 0.5 / 2.5
Length x width x height		mm	78.5 / 15.5 / 62
Information		Tension clamp connection	
		1.5 / 0.5 / 1.5	
		96.9 / 16 / 63.2	

Order data	24 V DC 1CO LED	24 V AC 1CO LED	115 V AC 1CO LED	230 V AC 1CO LED
Input				
Rated voltage	24 V DC	24 V AC	115 V AC	230 V AC
Rated current AC		31.6 mA	6.6 mA	3.2 mA
Rated current DC	16.7 mA			
Power rating	500 mW	0.75 VA	0.75 VA	0.75 VA
Oper.-/drop-out volt. AC-coil		18.0 V/3.6 V	86.3 V/17.3 V	172.5 V/34.5 V
Oper.-/drop-out volt. DC-coil	16.8 V/2.4 V			

Order data	Complete module	RCLKIT 24VDC 1CO LED GN	RCLKIT 24VAC 1CO LED RT	RCLKIT 115VAC 1CO LD RT	RCLKIT 230VAC 1CO LED RT
Screw connection	Type	RCLKIT 24VDC 1CO LED GN	RCLKIT 24VAC 1CO LED RT	RCLKIT 115VAC 1CO LD RT	RCLKIT 230VAC 1CO LED RT
Order No.	7940006158	7940006161	8810160000	7940006160	
Tension clamp connection	Type	RCLKITZ 24VDC 1CO LED	RCLKITZ 24VAC 1CO LED	RCLKITZ 115VAC 1CO LDRT	RCLKITZ 230VAC 1CO LED
Order No.	8798620000	8798640000	8810110000	8798660000	
Order data	Spare relay, pluggable	RCL314024	RCL314524	RCL314615	RCL314730
Order No.		8693260000	8693500000	8693890000	8693320000
Information					

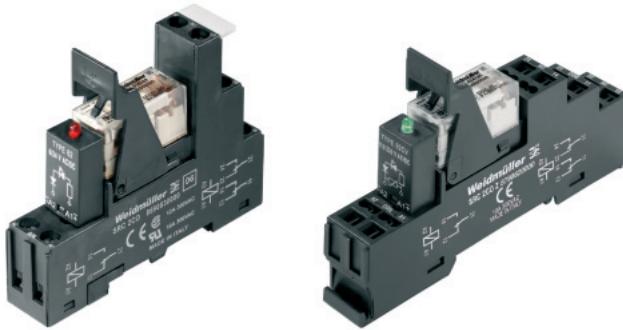
RCL KIT**2 change-over contacts**

Modular system comprising:

- Relay socket for rail mounting
- LED indicator unit / RC combination
- Retaining clip
- Plug-in relay
- Marker

Independent connection technology:

- Screw connection and tension clamp technology



DC version		Output	
A1	12	Max. switching voltage AC	250 V
A2	14	Rated current	8 A/1 Contact
	11	Contact base material	AgNi 90/10 or AgNi 5 µ Au
		Mechanical endurance	AC coil 5x10 ⁶ /DC coil 30x10 ⁶ switching cycles
		Response time / Release time	7 ms/3 ms
AC version		Rated data	
A1	12	Status indicator/Free wheel diode	Green LED = DC coil; red LED = AC coil/Yes
A2	14	Ambient temp., fitted w/o distance	-40 °C...+70 °C
	11	Flammability rating UL 94	V-0
		Approvals	cURus;UR;CSA;CE;
Insulation coordinates (IEC 60664)			
A1	12	Rated voltage	250 V
A2	14	Creepage and clearance path input - output	10 mm
	11	Ovoltage category	III
		Pollution severity	3
Dimensions		Screw connection	Tension clamp connection
Clamping range (rating- / min. / max.)		mm ²	1.5 / 0.5 / 1.5
Length x width x height		mm	96.9 / 16 / 63.2
Information			

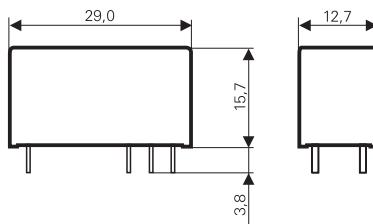
Order data	24 V DC 2CO LED	24 V AC 2CO LED	115 V AC 2CO LED	230 V AC 2CO LED
Input				
Rated voltage	24 V DC	24 V AC	115 V AC	230 V AC
Rated current AC		31.6 mA	6.6 mA	3.2 mA
Rated current DC	16.7 mA			
Power rating	500 mW	0.75 VA	0.75 VA	0.75 VA
Oper.-/drop-out volt. AC-coil		18.0 V/3.6 V	86.3 V/17.3 V	172.5 V/34.5 V
Oper.-/drop-out volt. DC-coil	16.8 V/2.4 V			

Order data	Complete module	RCLKIT 24VDC 2CO LED GN	RCLKIT 24VAC 2CO LED RT	RCLKIT 115VAC 2CO LD RT	RCLKIT 230VAC 2CO LED RT
Screw connection	Type	RCLKIT 24VDC 2CO LED GN	RCLKIT 24VAC 2CO LED RT	RCLKIT 115VAC 2CO LD RT	RCLKIT 230VAC 2CO LED RT
Order No.	7940006157	7940006162	8810100000	7940006159	
Tension clamp connection	Type	RCLKIT 24VDC 2CO LED	RCLKIT 24VAC 2CO LED	RCLKIT 115VAC 2CO LDRT	RCLKIT 230VAC 2CO LED
Order No.	8798630000	8798650000	8810120000	8798670000	
Order data	Spare relay, pluggable	RCL 424024 24Vdc-Rel2U	RCL 424524 24Vac-Rel2U	RCL 424615 115Vac-Rel2U	RCL 424730 230Vac-Rel2U
	Type	4058570000	4058600000	4058610000	4058630000
Order No.					
Information					

RCL relay

1 change-over contact AC / DC coil

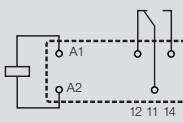
- 3000 resp. 4000 VA breaking capacity
- Minimum height 15.7 mm
- Hard gold-plated contacts available
- For boiler controls, timers, garage door controls, interface modules



PCB layout / terminal assignment

View of pin layout, dimensions in mm

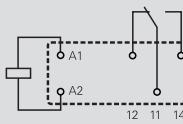
1 C/O contact



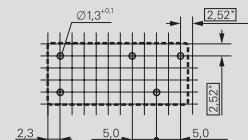
12 A, Pitch 3,5 mm



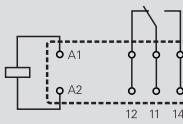
1 C/O contact



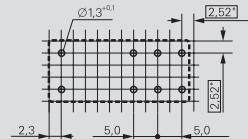
12 A, Pitch 5 mm



1 C/O contact



12 A, Pitch 5 mm



Output

Max. switching voltage AC	250 V
Rated current	12 A at 3.5 mm/16 A at 5 mm Pitch
Contact base material	AgNi 90/10 or AgNi 5 μ Au
Mechanical endurance	AC coil 10x10 ⁶ /DC coil 30x10 ⁶ switching cycles
Response time / Release time	7 ms/3 ms

Rated data

Ambient temp., fitted w/o distance	-40 °C...+70 °C
Flammability rating UL 94	V-0
Approvals	cURus; VDE;

Insulation coordinates (IEC 60664)

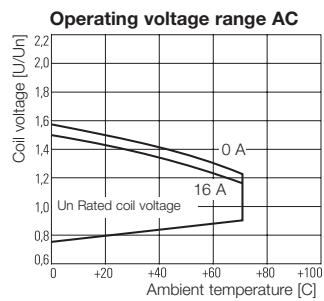
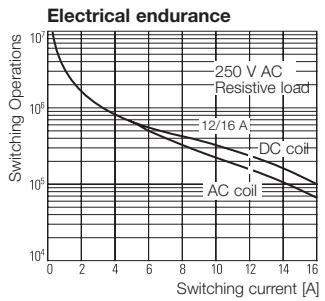
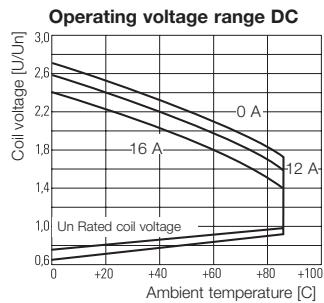
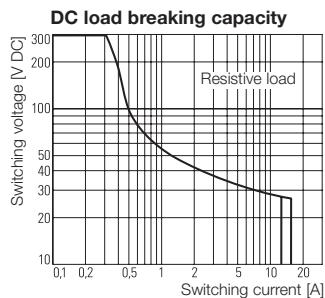
Rated voltage	250 V
Creepage and clearance path input - output	10 mm
Oversupply category	III
Pollution severity	3

Dimensions

Length x width x height mm 29 / 12,7 / 15,7

Information

Applications



RCL relay
1 change-over contact AC / DC coil

Type code	RCL			
Type	RIDER Control Low			
Type of construction	1 12 A, Pitch 3.5 mm, flux proof 2 12 A, Pitch 5 mm, flux proof 3 16 A, Pitch 5 mm, flux proof			
Type of contact	1 1 CO contacts 3 1 NO contacts			
Contact material	4 AgNi 90/10 5 AgNi 90/10 hgp			
DC coil	006 6 V DC 012 12 V DC 024 24 V DC 048 48 V DC 060 60 V DC 110 110 V DC			
AC coil	512 12 V AC 524 24 V AC 548 48 V AC 615 115 V AC 730 230 V AC			

Order data	6 V DC 1CO	12 V DC 1CO	24 V DC 1CO	48 V DC 1CO
Input				
Rated voltage	6 V DC	12 V DC	24 V DC	48 V DC
Oper.-/drop-out volt. DC-coil	4.2 V/0.6 V	8.4 V/1.2 V	16.8 V/2.4 V	33.6 V/4.8 V
Power rating	500 mW	500 mW	500 mW	500 mW
Rated current DC	66.7 mA	33.3 mA	16.7 mA	8.7 mA
Coil resistance	90 Ω ±10%	360 Ω ±10%	1440 Ω ±10%	5520 Ω ±10%

Order data	Complete module	6 V DC 1CO	12 V DC 1CO	24 V DC 1CO	48 V DC 1CO
12 A / 3.5 mm	Type	RCL114006	RCL114012	RCL114024	RCL114048
AgNi 90/10	Order No.	8693400000	8693190000	8693180000	8693480000
16 A / 5 mm	Type	RCL314006	RCL314012	RCL314024	RCL314048
AgNi 90/10	Order No.	8693800000	8693240000	8693260000	8693380000
16 A / 5 mm	Type		RCL315012	RCL315024	RCL315048
AgNi 5 μ Au	Order No.		on request	8824830000	on request

Information				
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Order data	24 V AC 1CO	48 V AC 1CO	115 V AC 1CO	230 V AC 1CO
Input				
Rated voltage	24 V AC	48 V AC	115 V AC	230 V AC
Oper.-/drop-out volt. AC-coil	18.0 V/3.6 V	64 V/7.2 V	86.3 V/17.3 V	172.5 V/34.5 V
Power rating	0.75 VA	0.75 VA	0.75 VA	0.75 VA
Rated current AC	31.6 mA	15.6 mA	6.6 mA	3.2 mA
Coil resistance	350 Ω ±10%	1420 Ω ±10%	8100 Ω ±15%	32500 Ω ±15%

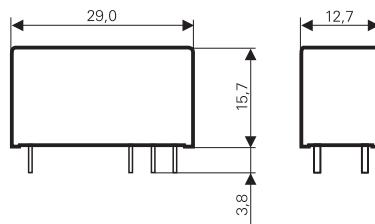
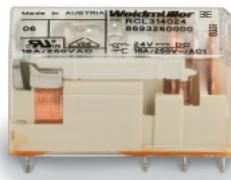
Order data	Complete module	24 V AC 1CO	48 V AC 1CO	115 V AC 1CO	230 V AC 1CO
12 A / 3.5 mm	Type	RCL114524	RCL114548	RCL114615	RCL114730
AgNi 90/10	Order No.	8693220000	8693510000	8693390000	8693230000
16 A / 5 mm	Type	RCL314524	RCL314548	RCL314615	RCL314730
AgNi 90/10	Order No.	8693500000	8693880000	8693890000	8693320000
16 A / 5 mm	Type	RCL315524	RCL315548	RCL315615	RCL315730
AgNi 5 μ Au	Order No.	8824870000	on request	on request	on request

Information				
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RCL relay

2 change-over contacts AC / DC coil

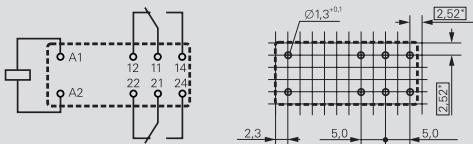
- 2000 VA breaking capacity
- Minimum height 15.7 mm
- Hard gold-plated contacts available
- For household appliances, heating controls, emergency lights, modems



PCB layout / terminal assignment

View of pin layout,
dimensions in mm

2 C/O contact



Output

Max. switching voltage AC	250 V
Rated current	8 A/1 Contact
Contact base material	AgNi 90/10 or AgNi 5 µ Au
Mechanical endurance	AC coil 5x10 ⁶ /DC coil 30x10 ⁶ switching cycles
Response time / Release time	7 ms/2 ms

Rated data

Ambient temp., fitted w/o distance	-40 °C...+70 °C
Flammability rating UL 94	V-0
Approvals	cURus; VDE;
Insulation coordinates (IEC 60664)	

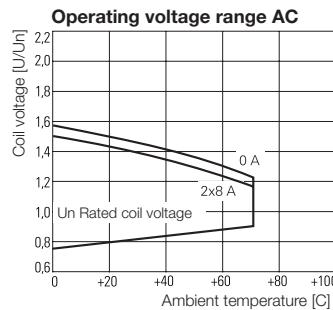
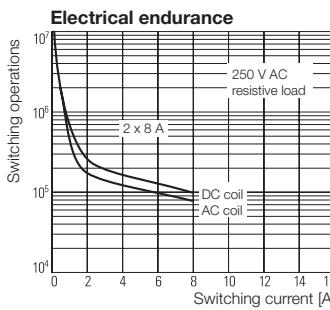
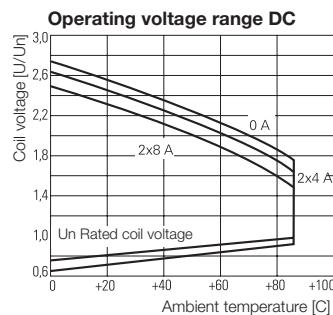
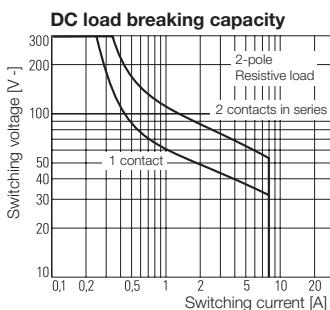
Rated voltage	250 V
Creepage and clearance path input - output	10 mm
Oversupply category	III
Pollution severity	3

Dimensions

Length x width x height mm 29 / 12,7 / 15,7

Information

Applications



RCL relay
2 change-over contacts AC / DC coil

Type code	RCL			
Type	RIDER Control Low			
Type of construction	4 8 A, pitch 5 mm, flux proof			
Type of contact	2 2 CO contacts 4 2 NO contacts			
Contact material	4 AgNi 90/10 5 AgNi 90/10 hgp			
DC coil	006 6 V DC 012 12 V DC 024 24 V DC 048 48 V DC 060 60 V DC 110 110 V DC			
AC coil	512 12 V AC 524 24 V AC 548 48 V AC 615 115 V AC 730 230 V AC			

Order data	12 V DC 2CO	24 V DC 2CO	48 V DC 2CO	110 V DC 2CO
Input				
Rated voltage	12 V DC	24 V DC	48 V DC	110 V DC
Oper.-/drop-out volt. DC-coil	8.4 V/1.2 V	16.8 V/2.4 V	33.6 V/4.8 V	77 V/11 V
Power rating	500 mW	500 mW	500 mW	500 mW
Rated current DC	33.3 mA	16.7 mA	8.7 mA	4.1 mA
Coil resistance	360 Ω ±10%	1440 Ω ±10%	5520 Ω ±10%	26600 Ω ±12%

Order data	12 V DC 2CO	24 V DC 2CO	48 V DC 2CO	110 V DC 2CO	
Complete module					
8 A / 5 mm	Type	RCL 424012 12Vdc-Rel2U	RCL 424024 24Vdc-Rel2U	RCL 424048	RCL 424110 110Vdc-Rel2U
AgNi 90/10	Order No.	4058560000	4058570000	4058750000	4058590000
	Type				
	Order No.				
8 A / 5 mm	Type	RCL425012	RCL 425024 24Vdc-Rel2U	RCL425048	RCL425110
AgNi 5 μ Au	Order No.	on request	4058580000	on request	on request

Information				

Order data	24 V AC 2CO	48 V AC 2CO	115 V AC 2CO	230 V AC 2CO
Input				
Rated voltage	24 V AC	48 V AC	115 V AC	230 V AC
Oper.-/drop-out volt. AC-coil	18 V/3.6 V	64 V/7.2 V	86.3 V/17.3 V	172.5 V/34.5 V
Power rating	0.75 VA	0.75 VA	0.75 VA	0.75 VA
Rated current AC	31.6 mA	15.6 mA	6.6 mA	3.2 mA
Coil resistance	350 Ω ±10%	1420 Ω ±10%	8100 Ω ±15%	32500 Ω ±15%

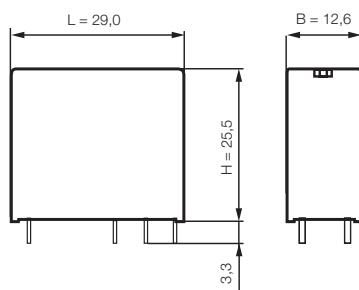
Order data	24 V AC 2CO	48 V AC 2CO	115 V AC 2CO	230 V AC 2CO	
Complete module					
8 A / 5 mm	Type	RCL 424524 24Vac-Rel2U	RCL424548	RCL 424615 115Vac-Rel2U	RCL 424730 230Vac-Rel2U
AgNi 90/10	Order No.	4058600000	8693340000	4058610000	4058630000
	Type				
	Order No.				
8 A / 5 mm	Type	RCL425524	RCL425548	RCL 425615 115Vac-Rel2U	RCL 425730 230Vac-Rel2U
AgNi 5 μ Au	Order No.	on request	on request	4058620000	4058640000

Information				

Relay coupler – RIDERSERIES

RCH Safety relay

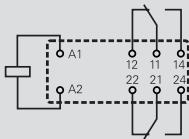
- Relay with forcibly guided contacts to EN 50205
- 2 change-over contacts or 1 NO contact and 1 NC contact
- 1500 VA breaking capacity
- 6 kV impulse voltage



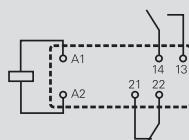
Circuit diagram

View of pin layout

2 CO



1 NO and 1 NC



Output

Max. switching voltage AC	250 V
Rated current	6 A
Contact base material	AgNi
Mechanical endurance	10x10 ⁶ switching cycles
Response time / Release time	10 m/4 ms

Rated data

Ambient temp., fitted w/o distance	-25 °C...+70 °C
Flammability rating UL 94	

Approvals cURus;

Insulation coordinates (IEC 60664)

Rated voltage	250 V
Creepage and clearance path input - output	8 mm
Overvoltage category	III
Pollution severity	2

Dimensions

Length x width x height mm 29 / 12.6 / 25.5

Information

Order data

Input

	12 V DC 1CO	24 V DC 1CO	12 V DC 1NC / 1NO	24 V DC 1NC / 1NO
Rated voltage	12 V	24 V	12 V	24 V
Rated current AC				
Rated current DC	58.3 mA	29.2 mA	58.3 mA	29.2 mA
Power rating	700 mW	700 mW	700 mW	700 mW
Oper.-/drop-out volt. AC-coil				
Oper.-/drop-out volt. DC-coil	9.0 V/1.2 V	18.0 V/2.4 V	9.0 V/1.2 V	18.0 V/2.4 V

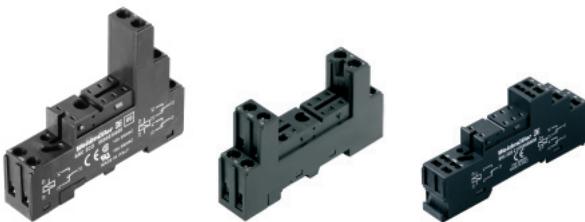
Order data

Break contact element/ Type			RCH S51012	RCH S51024
No contact Order No.			8768670000	8768700000
CO contact Type	RCH S21012	RCH S21024		
Order No.	8768660000	8768680000		

Order data

Type				
Order No.				

Information

Accessories for RCL relays**Plug-in module with screw and tension clamp connection****Order data**

Description	Type	QTY.	Order No.
Plug-in module with screw connections, pitch 3.5 mm, snaps onto DIN mounting rail	SRC 1CO	10	8690840000
Plug-in module with screw connections, pitch 5 mm, snaps onto DIN mounting rail	SRC 2CO	10	8690830000
Plug-in module with screw connections, pitch 5 mm, snaps onto DIN mounting rail	SRC 2CO N	10	8693930000
Plug-in module with tension clamp connections pitch 5 mm, snaps onto DIN mounting rail	SRC 2CO Z	10	8783930000

Technical data

Nominal current	1-pole 2-pole	12 A 2 x 12 A*)
Nominal voltage		250 V~
Dielectric strength, screw/tension clamp connection		>3000 Veff / 4000 Veff
Insulation group (VDE 0110b)		C/250 V~
Ambient temperature		-25...+80° C
Ingress protection		IP 20
Connection cross-section (screw connection) / with ferrules		2 x 2.5 mm ² /2 x 1.5 mm ²
Connection cross-section (tension clamp connection)		2 x 1.5 mm ²
Terminal torque / max.		0.5 Nm/0.7 Nm

*) With 1-pole relays (16 A), the following terminal connections are required: 11 with 21, 12 with 22, 14 with 24.

With 1-pole relays (12 A), the relay connections 11, 12 and 14 are to be wired to the module terminals 21, 12 and 24.

Accessories

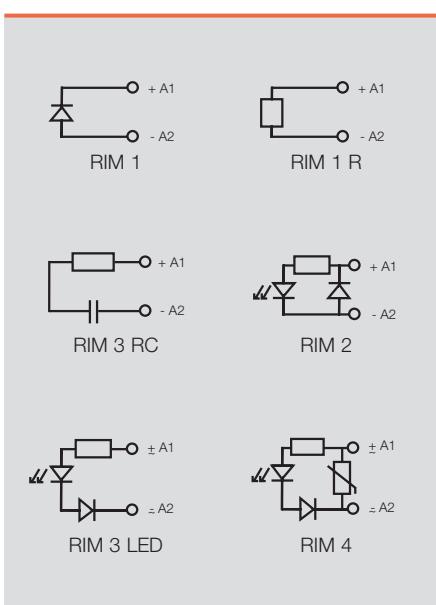
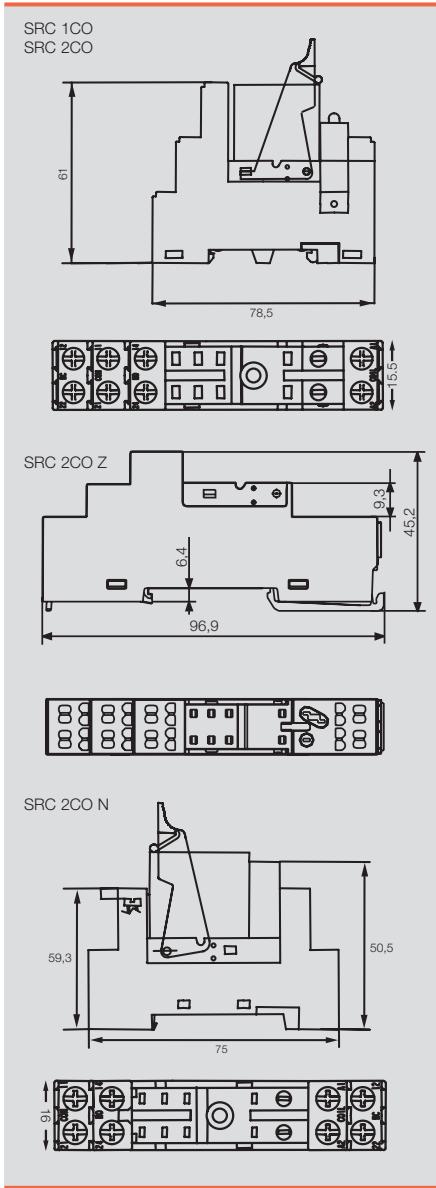
Description	Type	QTY.	Order No.
Plastic retaining clip RCL	SRC CLIP LP	10	8691090000
Plastic retaining clip RCH	SRC CLIP HP	10	8691070000
Markers, individual	SRC MARK	10	8693270000
Markers, MultiCard	ESG 6/15 MC RIDERSERIES	200	1881280000
Markers, MultiCard, custom print	ESG 6/15 RIDERS custom print	40	1881290000

LED and protection modules for SRC 1 CO, SRC 2 CO

Plug simply into the base module; reverse-connect protection
Connect parallel to coil

**Order data**

Description	Type	QTY.	Order No.	Order No.
Free Wheel diode 1N4007	RIM 1 6/320V	10	8690940000	
Resistor 62 kOhm 1 Watt	RIM 1 R 110/230VAC	10	8816590000	
RC element 6...24 Vac	RIM 3 6/24VAC	10	8690980000	
RC element 24...60 Vac	RIM 3 24/60VAC	10	8690990000	
RC element 110...230 Vac	RIM 3 110/230VAC	10	8691000000	
LED			red	green
LED 6...24 Vdc with free wheel diode	RIM 2 6/24VDC	10	8690950000	8713720000
LED 24...60 Vdc with free wheel diode	RIM 2 24/60VDC	10	8690960000	8713730000
LED 110...230 Vdc with free wheel diode	RIM 2 110/230VDC	10	8690970000	8713740000
LED 6...24 Vdc / Vac	RIM 3 6/24VUC	10	8691010000	8713750000
LED 24...60 Vdc / Vac	RIM 3 24/60VUC	10	8691020000	8713760000
LED 110...230 Vdc / Vac	RIM 3 110/230VUC	10	8691030000	8713770000
LED 6...24 Vdc / Vac with varistor protection	RIM 4 6/24VUC	10	8691040000	8713780000
LED 24...60 Vdc / Vac with varistor protection	RIM 4 24/60VUC	10	8691050000	8713790000
LED 110...230 Vdc / Vac with varistor protection	RIM 4 110/230VUC	10	8691060000	8713800000

Dimensions in mm

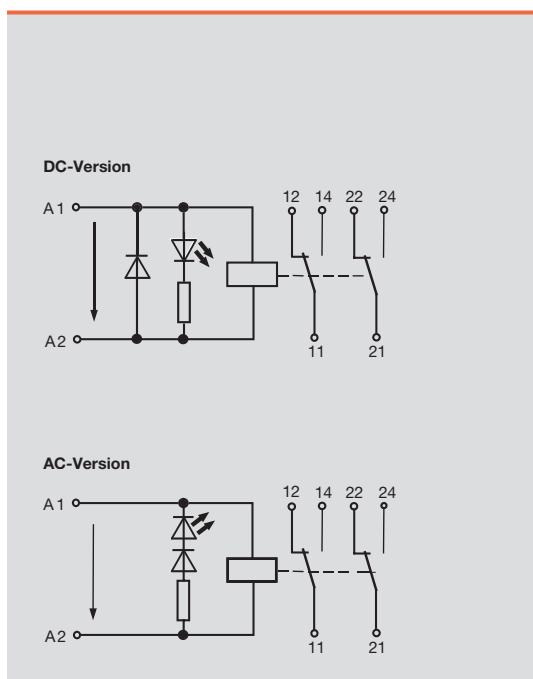
Relay coupler – RIDERSERIES

RCM KIT

2 change-over contacts

Modular system comprising:

- Relay socket for rail mounting
- LED indicator unit / RC combination
- Retaining clip
- Plug-in relay
- Marker



Output

Max. switching voltage AC	250 V
Rated current	12 A
Contact base material	AgNi 90/10
Mechanical endurance	AC coil 20x10 ⁶ /DC coil 30x10 ⁶ switching cycles
Response time / Release time	15 ms/10 ms

Rated data

Status indicator/Free wheel diode	Green LED = DC coil; red LED = AC coil/Yes
Ambient temp., fitted w/o distance	-40 °C...+70 °C
Flammability rating UL 94	V-0
Approvals	cURus;UR;CSA;CE;

Insulation coordinates (IEC 60664)

Rated voltage	240 V
Creepage and clearance path input - output	≤ 4 mm
Oversupply category	III
Pollution severity	3

Dimensions

Clamping range (rating- / min. / max.)	mm ²	Screw connection	Tension clamp connection
Length x width x height	75 / 27 / 82		

Information

Order data

Input	24 V DC 2CO LED	24 V AC 2CO LED	115 V AC 2CO	230 V AC 2CO LED
Rated voltage	24 V DC	24 V AC	115 V AC	230 V AC
Rated current AC		41.6 mA	8.8 mA	4.3 mA
Rated current DC	31.3 mA			
Power rating	750 mW	1.0 VA	1.0 VA	1.0 VA
Oper.-/drop-out volt. AC-coil		19.2 V/7.2 V	92 V/34.5 V	184.0 V/69.0 V
Oper.-/drop-out volt. DC-coil	18.0 V/2.4 V			

Order data

Complete module	RCMKIT 24VDC 2CO LED GN	RCMKIT 24VAC 2CO LED RT	RCMKIT 115VAC 2CO LEDRT	RCMKIT 230VAC 2CO LED RT
Screw connection				
Type	7940007061	7940007113	8810130000	7940007116
Order No.				

Order data Spare relay, pluggable

Type	RCM270024	RCM270524	RCM270615	RCM270730
Order No.	8689860000	8689760000	8689800000	8689820000

Information

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RCM KIT

3 change-over contacts

Modular system comprising:

- Relay socket for rail mounting
- LED indicator unit / RC combination
- Retaining clip
- Plug-in relay
- Marker



DC-Version		Output Max. switching voltage AC 250 V Rated current 10 A Contact base material AgNi 90/10 Mechanical endurance AC coil 20x10 ⁶ /DC coil 30x10 ⁶ switching cycles Response time / Release time 15 ms/10 ms
AC-Version		Rated data Status indicator/Free wheel diode Green LED = DC coil; red LED = AC coil/Yes Ambient temp., fitted w/o distance -40 °C...+70 °C Flammability rating UL 94 V-0 Approvals cURus;UR;CSA;CE;
		Insulation coordinates (IEC 60664) Rated voltage 240 V Creepage and clearance path input - output ≤ 4 mm Overvoltage category III Pollution severity 3
		Dimensions Clamping range (rating- / min. / max.) mm ² 2.5 / 0.5 / 2.5 Length x width x height mm 75 / 27 / 82
		Information

Order data	24 V DC 3CO LED	24 V AC 3CO LED	115 V AC 3CO LED	230 V AC 3CO LED
Input				
Rated voltage	24 V DC	24 V AC	115 V AC	230 V AC
Rated current AC		41.6 mA	8.8 mA	4.3 mA
Rated current DC	31.3 mA			
Power rating	750 mW	1.0 VA	1.0 VA	1.0 VA
Oper.-/drop-out volt. AC-coil	18.0 Vz7zzzz/2.4 V	19.2 V/7.2 V	92 V/34.5 V	184.0 V/69.0 V
Oper.-/drop-out volt. DC-coil				

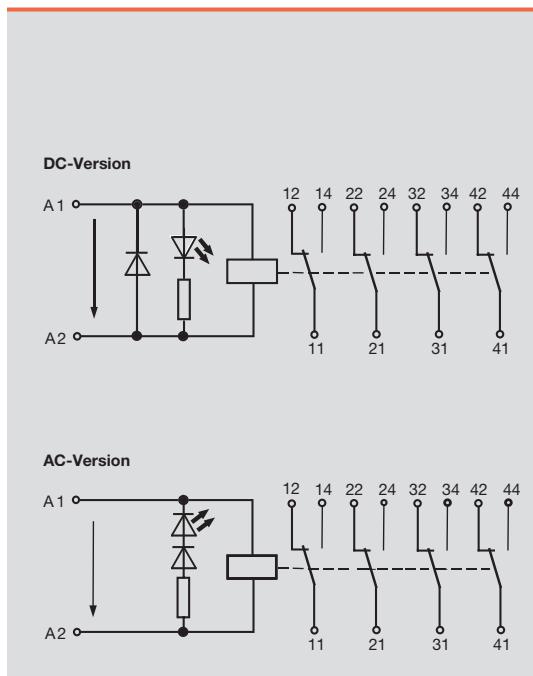
Order data	Complete module	RCMKIT 24VDC 3CO LED GN	RCMKIT 24VAC 3CO LED RT	RCMKIT 115VAC 3CO LEDRT	RCMKIT 230VAC 3CO LED RT
Screw connection	Type	RCMKIT 24VDC 3CO LED GN	RCMKIT 24VAC 3CO LED RT	RCMKIT 115VAC 3CO LEDRT	RCMKIT 230VAC 3CO LED RT
Order No.	7940007062	7940007114	8810140000	7940007117	
Tension clamp connection	Type				
Order No.					
Order data	Spare relay, pluggable	RCM370024	RCM370524	RCM370615	RCM370730
	Type	RCM370024	RCM370524	RCM370615	RCM370730
	Order No.	8690040000	8690030000	8689980000	8690000000
Information					

RCM KIT

4 change-over contacts

Modular system comprising:

- Relay socket for rail mounting
- LED indicator unit / RC combination
- Retaining clip
- Plug-in relay
- Marker



Output

Max. switching voltage AC	250 V
Rated current	6 A
Contact base material	AgNi 90/10
Mechanical endurance	AC coil 20x10 ⁶ /DC coil 30x10 ⁶ switching cycles
Response time / Release time	15 ms/10 ms

Rated data

Status indicator/Free wheel diode	Green LED = DC coil; red LED = AC coil/Yes
Ambient temp., fitted w/o distance	-40 °C...+70 °C
Flammability rating UL 94	V-0
Approvals	cURus;UR;CSA;CE;

Insulation coordinates (IEC 60664)

Rated voltage	240 V
Creepage and clearance path input - output	≤ 3 mm
Oversupply category	III
Pollution severity	2

Dimensions

Clamping range (rating- / min. / max.)	mm ²	Screw connection	Tension clamp connection
Length x width x height	mm	2.5 / 0.5 / 2.5 75 / 27 / 82	1.5 / 0.5 / 1.5 96 / 31 / 60

Information

Order data

Input

Rated voltage	24 V DC
Rated current AC	
Rated current DC	31.3 mA
Power rating	750 mW
Oper.-/drop-out volt. AC-coil	
Oper.-/drop-out volt. DC-coil	18.0 V/2.4 V

24 V DC 4CO LED

24 V AC 4CO LED

115 V AC 4CO LED

230 V AC 4CO LED

24 V AC

41.6 mA

115 V AC

8.8 mA

230 V AC

4.3 mA

1.0 VA

19.2 V/7.2 V

1.0 VA

92 V/34.5 V

1.0 VA

184.0 V/69.0 V

Order data

Complete module

Screw connection	Type	RCMKIT 24VDC 4CO LED GN	RCMKIT 24VAC 4CO LED RT	RCMKIT 115VAC 4CO LEDRT	RCMKIT 230VAC 4CO LED RT
Order No.		7940007063	7940007115	8810150000	7940007118
Tension clamp connection	Type	RCMKITZ 24VDC 4CO LED	RCMKITZ 24VAC 4CO LED	RCMKITZ 115VAC 4CO LDRT	RCMKITZ 230VAC 4CO LED
Order No.		8798740000	8798750000	8810080000	8798760000

Order data

Spare relay, pluggable

Type	RCM570024	RCM570524	RCM570615	RCM570730
Order No.	8690200000	8690110000	1180800000	1181100000

Information

Accessories for miniature relays RCM

Plug-in module with screw or tension clamp connection



Order data

Description	Type	QTY.	Order No.
Plug-in module with screw connections, snap-on installation, 2-pole	SCM 2CO	10	8690880000
Plug-in module with screw connections, snap-on installation, 3-pole	SCM 3CO	10	8690890000
Plug-in module with screw connections, snap-on installation, 4-pole	SCM 4CO	10	8690900000
Plug-in module with screw connections, snap-onto DIN mounting rails, 4-pole	SCM 4CO N	10	8690910000
Plug-in module with tension clamp connections, snap-onto DIN mounting rails, 4-pole	SCM 4CO Z	10	8783920000

Technical data

Nominal current	4-pole 6 A, 3-pole 10 A, 2-pole 12 A
Nominal voltage	300 V AC
Dielectric strength, coil/contacts	>4000 Veff
Insulation group (VDE 0110b)	C/250 V AC
Ambient temperature	-45...+70° C (1)
Ingress Protection (IEC 61810)	IP 20
Touch protection meets	VBG 4
Connection cross-section (tension clamp connection)	2 x 1.5 mm ²
Connection cross-section (ferrules)	2 x 2.5 mm ²
Terminal torque (screw connection)	0.5 Nm
Max.	0.8 Nm

1) At nominal currents up to +40°C, up to +70°C at 70 %

Accessories

Description	Type	QTY.	Order No.
Plastic retaining clip RCM	SCM CLIP P	10	8691110000
Metal retaining clip RCM	SRC CLIP H	10	8691100000
Markers for SCM 2CO, SCM 3CO, SCM 4CO, SCM 4CO N	SCM MARK	10	8694370000
Markers, individual	SRC MARK	10	8693270000
Markers for SCM 4CO Z	ESG 6/15 MC RIDERSERIES	200	1881280000
Markers, individual	ESG 6/15 RIDERS custom print	40	1881290000

LED and protection modules for SRC 1 CO, SRC 2 CO

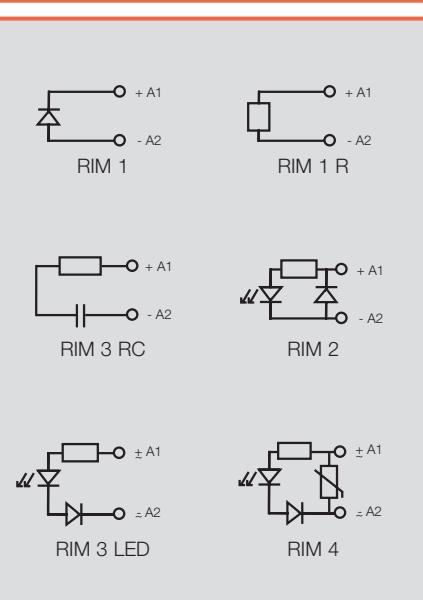
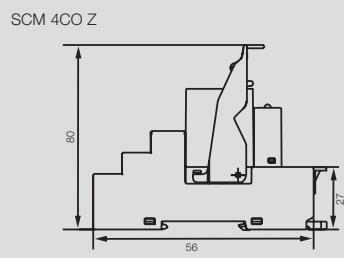
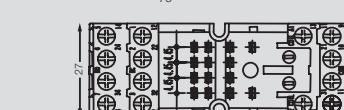
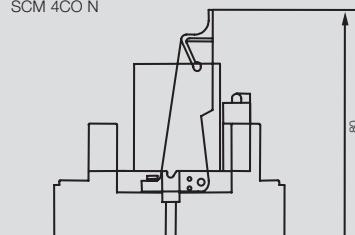
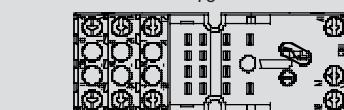
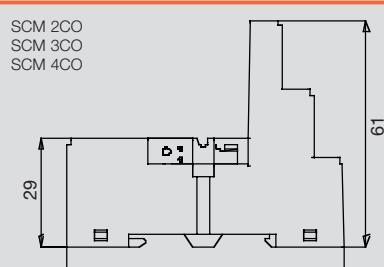
Plug simply into the base module; polarised protection
Connect parallel to coil



Order data

Description	Type	QTY.	Order No.	Order No.
Free Wheel diode 1N4007	RIM 1 6/320V	10	8690940000	
Resistor 62 kOhm 1 Watt	RIM 1 R 110/230VAC	10	8816590000	
RC element 6...24 Vac	RIM 3 6/24VAC	10	8690980000	
RC element 24...60 Vac	RIM 3 24/60VAC	10	8690990000	
RC element 110...230 Vac	RIM 3 110/230VAC	10	8691000000	
LED			red	green
LED 6...24 Vdc with free wheel diode	RIM 2 6/24VDC	10	8690950000	8713720000
LED 24...60 Vdc free wheel diode	RIM 2 24/60VDC	10	8690960000	8713730000
LED 110...230 Vdc free wheel diode	RIM 2 110/230VDC	10	8690970000	8713740000
LED 6...24 Vdc / Vac	RIM 3 6/24VUC	10	8691010000	8713750000
LED 24...60 Vdc / Vac	RIM 3 24/60VUC	10	8691020000	8713760000
LED 110...230 Vdc / Vac	RIM 3 110/230VUC	10	8691030000	8713770000
LED 6...24 Vdc / Vac with varistor protection	RIM 4 6/24VUC	10	8691040000	8713780000
LED 24...60 Vdc / Vac with varistor protection	RIM 4 24/60VUC	10	8691050000	8713790000
LED 110...230 Vdc / Vac with varistor protection	RIM 4 110/230VUC	10	8691060000	8713800000

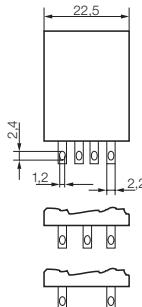
Dimensions in mm



RCM relay

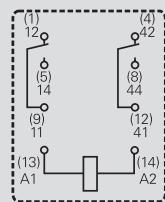
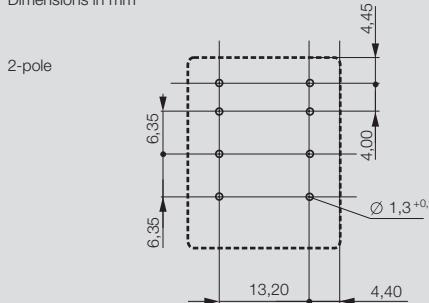
2 change-over contacts AC / DC coil

- 3000 VA breaking capacity
- Push-on connection
- Finger-protected tester, locking selectable
- Ample marking facilities



Circuit diagram

View of pin layout
Dimensions in mm



Output

Max. switching voltage AC	250 V
Rated current	12 A
Contact base material	AgNi 90/10
Mechanical endurance	AC coil 20x10 ⁵ /DC coil 30x10 ⁶ switching cycles
Response time / Release time	15 ms/10 ms

Rated data

Ambient temp., fitted w/o distance	-40 °C...+70 °C
Flammability rating UL 94	V-0

Approvals cURus; CE; VDE;

Insulation coordinates (IEC 60664)

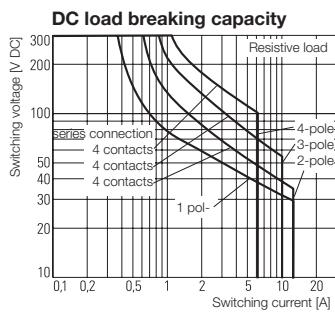
Rated voltage	240 V
Creepage and clearance path input - output	≤ 4 mm
Oversupply category	III
Pollution severity	3

Dimensions

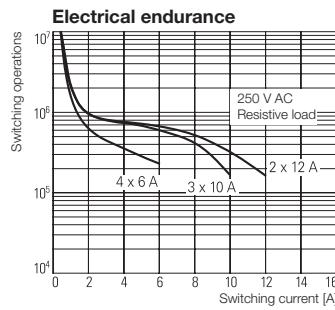
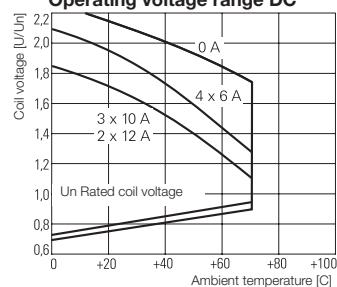
Length x width x height mm 28 / 22.5 / 29

Information

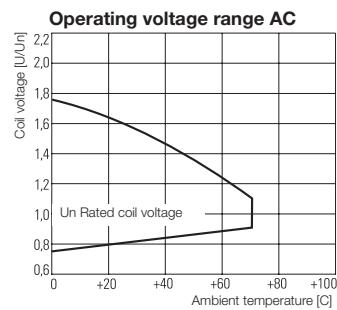
Applications



Operating voltage range DC



Operating voltage range AC



RCM relay
2 change-over contacts AC / DC coil

Type code	RCM			
Type	RIDER Control Multiple			
Contacts				
2	2 CO contacts			
3	3 CO contacts			
5	4 CO contacts			
Contact material				
7	AgNi 90/10, with test button			
8	AgNi 90/10 hgp, with test button			
Type of construction				
0	Standard, 2,8 mm Faston			
1	Print connections			
DC coil				
006	6 V DC			
012	12 V DC			
024	24 V DC			
048	48 V DC			
060	60 V DC			
110	110 V DC			
220	220 V DC			
AC coil				
506	6 V AC			
512	12 V AC			
524	24 V AC			
548	48 V AC			
615	115 V AC			
730	230 V AC			

Order data	12 V DC 2CO	24 V DC 2CO	48 V DC 2CO	110 V DC 2CO
Input				
Rated voltage	12 V DC	24 V DC	48 V DC	110 V DC
Oper.-/drop-out volt. DC-coil	9.0 V/1.2 V	18.0 V/2.4 V	36.0 V/4.8 V	82.5 V/11.0 V
Power rating	750 mW	750 mW	750 mW	750 mW
Rated current DC	62.5 mA	31.3 mA	15.6 mA	6.8 mA
Coil resistance	192 Ω ±10%	777 Ω ±10%	3072 Ω ±10%	16133 Ω ±15%

Order data	Complete module			
without LED	Type	RCM270012	RCM270024	RCM270048
AgNi 90/10	Order No.	8689840000	8689860000	8689880000
with LED	Type	RCM270L12	RCM270L24	RCM270L48
AgNi 90/10	Order No.	8689850000	8689870000	8689890000
	Type			
	Order No.			

Information				

Order data	24 V AC 2CO	48 V AC 2CO	115 V AC 2CO	230 V AC 2CO
Input				
Rated voltage	24 V AC	48 V AC	115 V AC	230 V AC
Oper.-/drop-out volt. AC-coil	38.4 V/14.4 V	48.0 V/18.0 V	92.0 V/34.5 V	184.0 V/69.0 V
Power rating	1.0 VA	1.0 VA	1.0 VA	1.0 VA
Rated current AC	41.6 mA	21.3 mA	8.8 mA	4.3 mA
Coil resistance	192 Ω ±10%	777 Ω ±10%	4845 Ω ±12%	19465 Ω ±15%

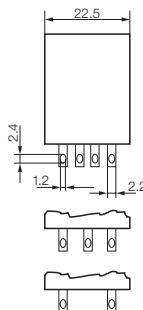
Order data	Complete module			
without LED	Type	RCM270524	RCM270548	RCM270615
AgNi 90/10	Order No.	8689760000	8689780000	8689800000
with LED	Type	RCM270R24	RCM270R48	RCM270S15
AgNi 90/10	Order No.	8689770000	8689790000	8689810000
	Type			
	Order No.			

Information				

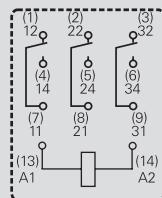
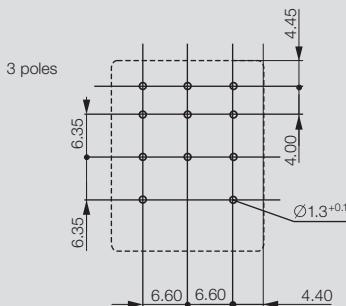
RCM relay

3 change-over contacts AC / DC coil

- 2500 VA breaking capacity
- Push-on connection
- Finger-protected tester, locking selectable
- Ample marking facilities



Circuit diagramm View of pin layout Dimensions in mm



Output

Max. switching voltage AC	250 V
Rated current	10 A
Contact base material	AgNi 90/10
Mechanical endurance	AC coil 20x10 ⁶ /DC coil 30x10 ⁶ switching cycles
Response time / Release time	15 ms/10 ms

Rated data

Ambient temp., fitted w/o distance	-40 °C...+70 °C
Flammability rating UL 94	V-0
Approvals	cURus; CE; VDE;

Insulation coordinates (IEC 60664)

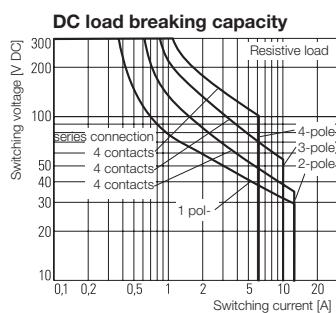
Rated voltage	240 V
Creepage and clearance path input - output	≤ 4 mm
Oversupply category	III
Pollution severity	3

Dimensions

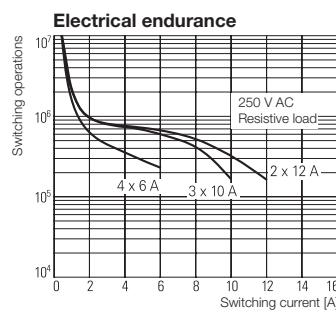
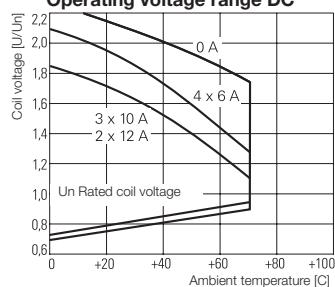
Length x width x height mm 28 / 22.5 / 29

Information

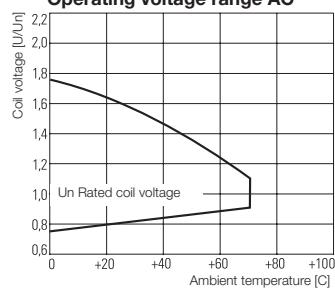
Applications



Operating voltage range DC



Operating voltage range AC



RCM relay
3 change-over contacts AC / DC coil

Type code	RCM			
Type	RIDER Control Multiple			
Contacts	2 2 CO contacts 3 3 CO contacts 5 4 CO contacts			
Contact material	7 AgNi 90/10, with test button 8 AgNi 90/10 hgp, with test button			
Type of construction	0 Standard, 2,8 mm Faston 1 Print connections			
DC coil	006 6 V DC 012 12 V DC 024 24 V DC 048 48 V DC 060 60 V DC 110 110 V DC 220 220 V DC			
AC coil	506 6 V AC 512 12 V AC 524 24 V AC 548 48 V AC 615 115 V AC 730 230 V AC			

Order data	12 V DC 3CO	24 V DC 3CO	48 V DC 3CO	110 V DC 3CO
Input				
Rated voltage	12 V DC	24 V DC	48 V DC	110 V DC
Oper.-/drop-out volt. DC-coil	9.0 V/1.2 V	18.0 V/2.4 V	36.0 V/4.8 V	82.5 V/11.0 V
Power rating	750 mW	750 mW	750 mW	750 mW
Rated current DC	62.5 mA	31.3 mA	15.6 mA	6.8 mA
Coil resistance	192 Ω ±10%	777 Ω ±10%	3072 Ω ±10%	16133 Ω ±15%

Order data	Complete module			
without LED	Type	RCM370012	RCM370024	RCM370048
AgNi 90/10	Order No.	8690020000	8690040000	8690060000
with LED	Type	RCM370L12	RCM370L24	RCM370L48
AgNi 90/10	Order No.	8694310000	8690050000	8689940000
	Type			
	Order No.			

Information				

Order data	24 V AC 3CO	48 V AC 3CO	115 V AC 3CO	230 V AC 3CO
Input				
Rated voltage	24 V AC	48 V AC	115 V AC	230 V AC
Oper.-/drop-out volt. AC-coil	19.2 V/7.2 V	38.4 V/14.4 V	92.0 V/34.5 V	184.0 V/69.0 V
Power rating	1.0 VA	1.0 VA	1.0 VA	1.0 VA
Rated current AC	41.6 mA	21.3 mA	8.8 mA	4.3 mA
Coil resistance	192 Ω ±10%	777 Ω ±10%	4845 Ω ±12%	19465 Ω ±15%

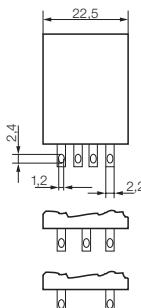
Order data	Complete module			
without LED	Type	RCM370524	RCM370548	RCM370615
AgNi 90/10	Order No.	8690030000	8689960000	8689980000
with LED	Type	RCM370R24	RCM370R48	RCM370S15
AgNi 90/10	Order No.	8689950000	8689970000	8689990000
	Type			
	Order No.			

Information				

RCM relay

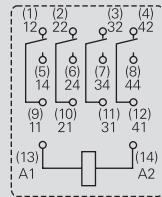
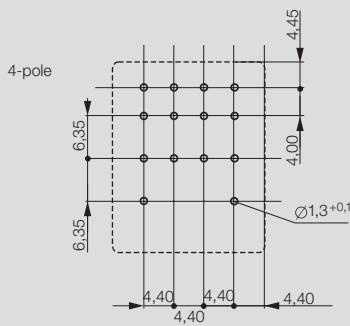
4 change-over contacts AC / DC coil

- 1500 VA breaking capacity
- Push-on connection
- AC-/DC-version as well as with gold-plated contacts
- Finger-protected tester, locking selectable
- Ample marking facilities



Circuit diagram

View of pin layout
Dimensions in mm



Output

Max. switching voltage AC	250 V
Rated current	6 A
Contact base material	AgNi 90/10 or AgNi 5 µ Au
Mechanical endurance	AC coil 20x10 ⁶ /DC coil 30x10 ⁶ switching cycles
Response time / Release time	15 ms/10 ms

Rated data

Ambient temp., fitted w/o distance	-40 °C...+70 °C
Flammability rating UL 94	V-0

Approvals cURus; CE; VDE;

Insulation coordinates (IEC 60664)

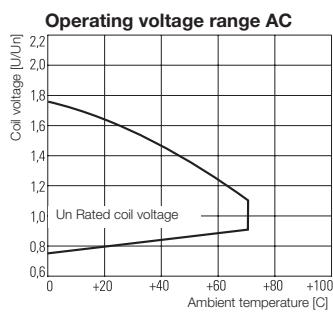
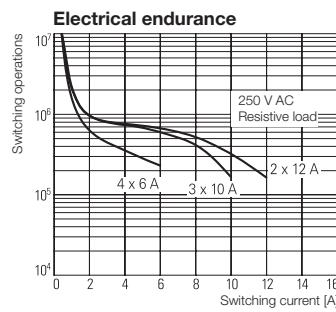
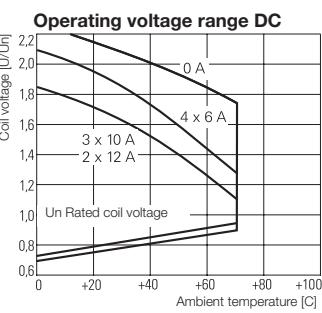
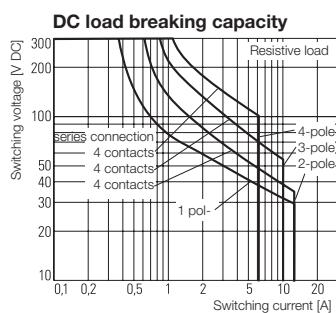
Rated voltage	240 V
Creepage and clearance path input - output	≤ 3 mm
Oversupply category	III
Pollution severity	2

Dimensions

Length x width x height mm 28 / 22.5 / 29

Information

Applications



RCM relay
4 change-over contacts AC / DC coil

Type code	RCM			
Type	RIDER Control Multiple			
Contacts	2 2 CO contacts 3 3 CO contacts 5 4 CO contacts			
Contact material	7 AgNi 90/10, with test button 8 AgNi 90/10 hgp, with test button			
Type of construction	0 Standard, 2,8 mm Faston 1 Print connections			
DC coil	006 6 V DC 012 12 V DC 024 24 V DC 048 48 V DC 060 60 V DC 110 110 V DC 220 220 V DC			
AC coil	506 6 V AC 512 12 V AC 524 24 V AC 548 48 V AC 615 115 V AC 730 230 V AC			

Order data	12 V DC 4CO	24 V DC 4CO	48 V DC 4CO	110 V DC 4CO
Input				
Rated voltage	12 V DC	24 V DC	48 V DC	110 V DC
Oper.-/drop-out volt. DC-coil	9.0 V/1.2 V	18 V/2.4 V	36 V/4.8 V	82.5 V/11 V
Power rating	750 mW	750 mW	750 mW	750 mW
Rated current DC	62.5 mA	31.3 mA	15.6 mA	6.8 mA
Coil resistance	192 Ω ±10%	777 Ω ±10%	3072 Ω ±10%	16133 Ω ±15%

Order data	Complete module			
without LED	Type	RCM570012	RCM570024	RCM570048
AgNi 90/10	Order No.	8054360000	8690200000	8074670000
with LED	Type	RCM570L12	RCM570L24	RCM570L48
AgNi 90/10	Order No.	8690180000	8690220000	8690230000
without LED	Type	RCM580012	RCM580024	RCM580048
AgNi 5 μ Au	Order No.	on request	8694460000	on request

Information				

Order data	24 V AC 4CO	48 V AC 4CO	115 V AC 4CO	230 V AC 4CO
Input				
Rated voltage	24 V AC	48 V AC	115 V AC	230 V AC
Oper.-/drop-out volt. AC-coil	19.2 V/7.2 V	38.4 V/14.4 V	92 V/34.5 V	184 V/69 V
Power rating	1.0 VA	1.0 VA	1.0 VA	1.0 VA
Rated current AC	41.6 mA	21.3 mA	8.8 mA	4.3 mA
Coil resistance	192 Ω ±10%	777 Ω ±10%	4845 Ω ±12%	19465 Ω ±15%

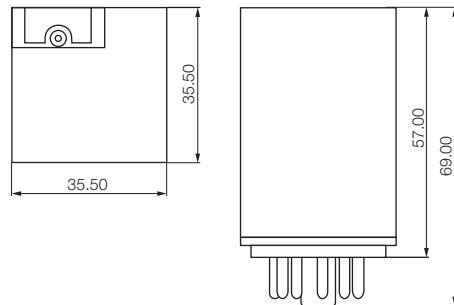
Order data	Complete module			
without LED	Type	RCM570524	RCM570548	RCM570615
AgNi 90/10	Order No.	8690110000	1180900000	1180800000
with LED	Type	RCM570R24	RCM570R48	RCM570S15
AgNi 90/10	Order No.	8690120000	8690130000	8690150000
without LED	Type	RCM580524		RCM580615
AgNi 5 μ Au	Order No.	7940008171		8824860000

Information				

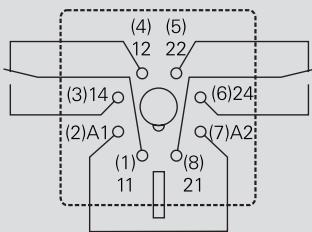
RRD relay

2 change-over contacts AC / DC coil

- 2 change-over contacts
- 250 VA breaking capacity
- Mechanical status display
- Finger-protected tester, locking selectable



Circuit diagramm View of pin layout



Output

Max. switching voltage AC	250 V
Rated current	10 A
Contact base material	AgNi 90/10
Mechanical endurance	20x10 ⁶ switching cycles
Response time / Release time	12 ms/5 ms

Rated data

Ambient temp., fitted w/o distance	-45 °C...+50 °C
Flammability rating UL 94	V-0
Approvals	cURus; CE; VDE;

Insulation coordinates (IEC 60664)

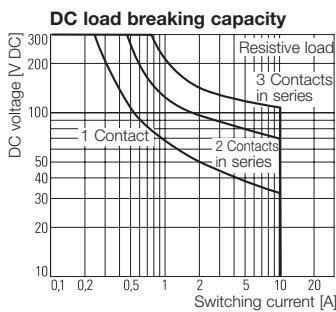
Rated voltage	250 V
Creepage and clearance path input - output	≤ 4 mm
Oversupply category	III
Pollution severity	3

Dimensions

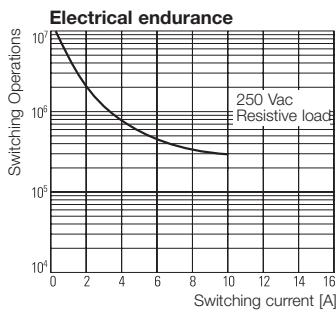
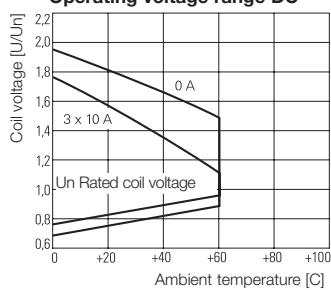
Length x width x height mm 35.5 / 35.5 / 57

Information

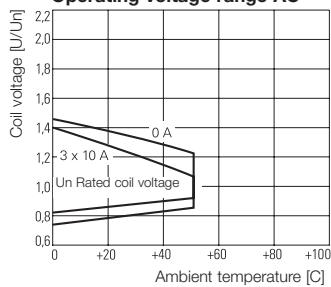
Applications



Operating voltage range DC



Operating voltage range AC



RRD relay
2 change-over contacts AC / DC coil

Type code	RRD					Free wheel diode
Type	RIDER RounD					
Contacts	2 2 change-over contacts, 8-pole 3 3 change-over contacts, 11-pole					
Contact material	2 AgNi 90/10					
Type of construction	1 DC coil with test button 3 DC coil with test button and bi-polar LED 6 AC coil with test button 8 AC coil with test button and bi-polar LED					
DC coil	006 6 V DC 012 12 V DC 024 24 V DC 048 48 V DC 060 60 V DC 110 110 V DC 220 220 V DC	0C4 0E8 0G0 1B0 2C0				
AC coil	506 6 V AC 512 12 V AC 524 24 V AC 548 48 V AC 615 115 V AC 730 230 V AC					

Order data	24 V DC 2CO	48 V DC 2CO	110 V DC 2CO	220 V DC 2CO
Input				
Rated voltage	24 V DC	48 V DC	110 V DC	220 V DC
Oper.-/drop-out volt. DC-coil	18.0 V/2.4 V	36.0 V/4.8 V	82.5 V/11.5 V	165 V/22 V
Power rating	1.2 W	1.2 W	1.2 W	1.2 W
Rated current DC	50.5 mA	24.0 mA	11.0 mA	5.5 mA
Coil resistance	475 Ω ±10%	2000 Ω ±10%	10000 Ω ±12%	40000 Ω ±15%

Order data	Complete module			
with tester	Type	RRD221024	RRD221048	RRD221110
AgNi 90/10	Order No.	8690370000	8690390000	8690410000
with tester/LED	Type	RRD223024	RRD223048	RRD223110
AgNi 90/10	Order No.	8690380000	8690400000	8690420000
	Type			RRD223220
	Order No.			8798600000

Information				

Order data	24 V AC 2CO	48 V AC 2CO	115 V AC 2CO	230 V AC 2CO
Input				
Rated voltage	24 V AC	48 V AC	115 V AC	230 V AC
Oper.-/drop-out volt. AC-coil	19.2 V/9.6 V	38.4 V/19.2 V	92.0 V/46.0 V	184.0 V/92.0 V
Power rating	2.3 VA	2.3 VA	2.3 VA	2.3 VA
Rated current AC	94.2 mA	47.5 mA	20.6 mA	10.1 mA
Coil resistance	86 Ω ±10%	345 Ω ±10%	2000 Ω ±10%	8300 Ω ±12%

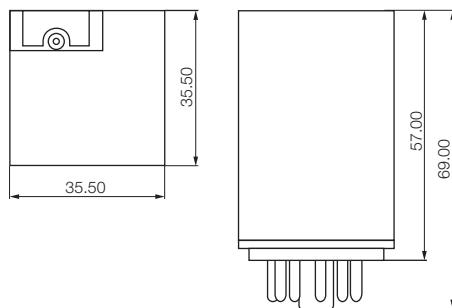
Order data	Complete module			
with tester	Type	RRD226024	RRD226048	RRD226115
AgNi 90/10	Order No.	8690270000	8690290000	8690310000
with tester/LED	Type	RRD228024	RRD228048	RRD228115
AgNi 90/10	Order No.	8690280000	8690300000	8690320000
	Type			RRD228230
	Order No.			8690340000

Information				

RRD relay

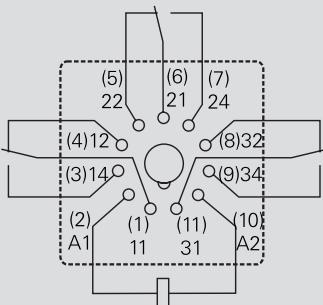
3 change-over contacts AC / DC coil

- 3 change-over contacts
- 500 VA breaking capacity
- Mechanical status display
- Finger-protected tester, locking selectable



Circuit diagramm

View of pin layout



Output

Max. switching voltage AC	250 V
Rated current	4 A
Contact base material	AgNi 90/10
Mechanical endurance	20x10 ⁶ switching cycles
Response time / Release time	12 ms/5 ms

Rated data

Ambient temp., fitted w/o distance	AC coil -45...+50 °C / DC coil -45...+60 °C
Flammability rating UL 94	V-0
Approvals	cURus; CE; VDE;

Insulation coordinates (IEC 60664)

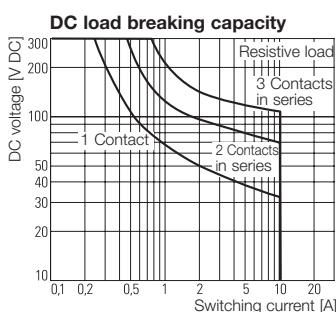
Rated voltage	250 V
Creepage and clearance path input - output	≤ 4 mm
Oversupply category	III
Pollution severity	3

Dimensions

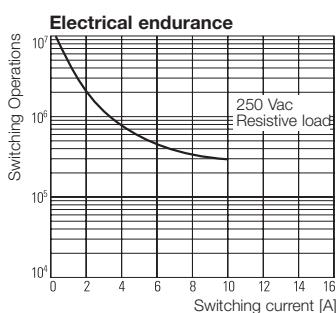
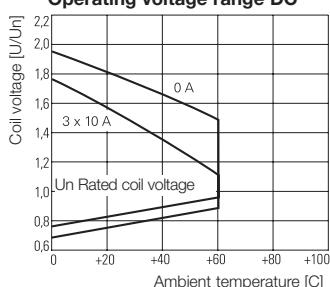
Length x width x height mm 35.5 / 35.5 / 57

Information

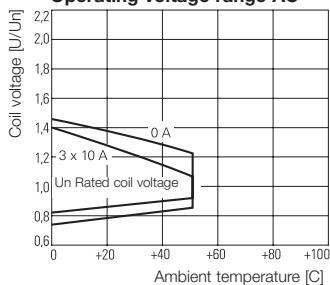
Applications



Operating voltage range DC



Operating voltage range AC



RRD relay
3 change-over contacts AC / DC coil

Type code	RRD				Free wheel diode
Type	RIDER RounD				
Contacts	2 2 change-over contacts, 8-pole 3 3 change-over contacts, 11-pole				
Contact material	2 AgNi 90/10				
Type of construction	1 DC coil with test button 3 DC coil with test button and bi-polar LED 6 AC coil with test button 8 AC coil with test button and bi-polar LED				

Order data	12 V DC 3CO	24 V DC 3CO	110 V DC 3CO	220 V DC 3CO
Input				
Rated voltage	12 V DC	24 V DC	110 V DC	220 V DC
Oper.-/drop-out volt. DC-coil	9 V/1.2 V	18 V/2.4 V	82.5 V/11.5 V	165 V/22 V
Power rating	1.2 W	1.2 W	1.2 W	1.2 W
Rated current DC	109.1 mA	50.5 mA	11 mA	5.5 mA
Coil resistance	110 Ω ±10%	475 Ω ±10%	10000 Ω ±12%	40000 Ω ±15%

Order data	12 V DC 3CO	24 V DC 3CO	110 V DC 3CO	220 V DC 3CO
Complete module				
with tester	Type	RRD321012	RRD321024	RRD321110
AgNi 90/10	Order No.	8799030000	8690610000	8690650000
with tester/LED	Type		RRD323024	RRD323110
AgNi 90/10	Order No.		8690620000	8690660000
	Type			
	Order No.			

Information				

Order data	24 V AC 3CO	48 V AC 3CO	115 V AC 3CO	230 V AC 3CO
Input				
Rated voltage	24 V AC	48 V AC	115 V AC	230 V AC
Oper.-/drop-out volt. AC-coil	19.2 V/9.6 V	38.4 V/19.2 V	92 V/46 V	184 V/92 V
Power rating	2.3 VA	2.3 VA	2.3 VA	2.3 VA
Rated current AC	94.2 mA	47.5 mA	20.6 mA	10.1 mA
Coil resistance	86 Ω ±10%	345 Ω ±10%	2000 Ω ±10%	8300 Ω ±12%

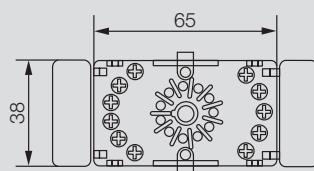
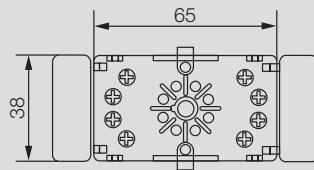
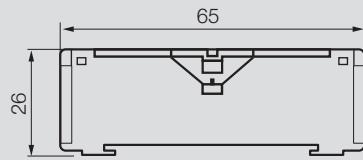
Order data	24 V AC 3CO	48 V AC 3CO	115 V AC 3CO	230 V AC 3CO
Complete module				
with tester	Type	RRD326024	RRD326048	RRD326115
AgNi 90/10	Order No.	8690450000	8690470000	8690550000
with tester/LED	Type	RRD328024	RRD328048	RRD328115
AgNi 90/10	Order No.	8690460000	8690480000	8690560000
	Type			
	Order No.			

Information				

Accessories for RRD relays
Plug-in module with screw connection



Dimensions in mm



Ordering data

Description

Plug-in module with screw connections, 8-pole

Plug-in module with screw connections, 11-pole

Contact data

Nominal current

Type QTY. Order No.

SRD 2CO 10 8690930000

Nominal voltage

SRD 3CO 10 8690920000

Dielectric strength, coil/contacts

10 A

Ambient temperature

400 V AC

>3000 V_{eff}

-40 °C...+ 85 °C

Ingress protection class (IEC 61810)

IP 20

Touch protection meets

VBG 4

Mounting/mounting rail

TS35

Connection cross-section

2 x 2.5 mm²

Terminal torque

0.8 Nm

Retainer clip (metal)

Description

Accessories for

Type Order No.

Metal retainer clip, RRD

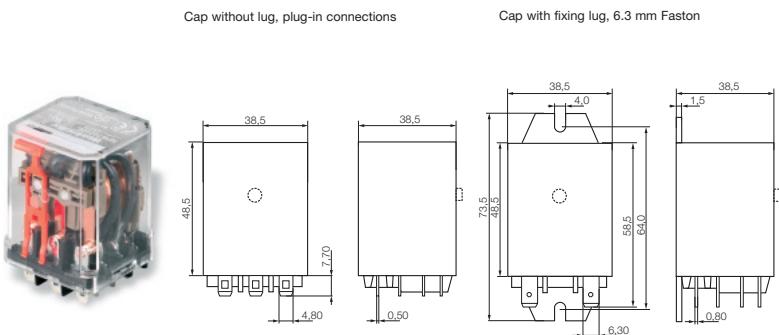
SRD CLIP M 8691120000

Relay coupler – RIDERSERIES

RPW relay

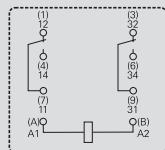
2 change-over contacts AC / DC coil 3 change-over contacts AC / DC coil

- 6000 VA breaking capacity
- Mechanical status display
- With or without tester / fixed with lug

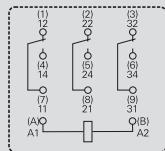


Circuit diagramm View of pin layout Dimensions in mm

2 C/O contacts



3 C/O contacts



Output

Max. switching voltage AC	400 V
Rated current	16 A
Contact base material	AgCdO
Mechanical endurance	20x10 ⁶ switching cycles
Response time / Release time	15 ms/10 ms

Rated data

Ambient temp., fitted w/o distance	-45 °C...+70 °C
Flammability rating UL 94	V-0

Approvals cURus; CE; VDE;

Insulation coordinates (IEC 60664)

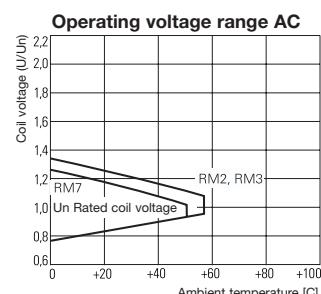
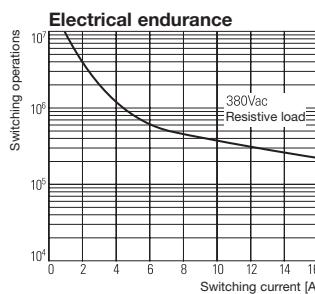
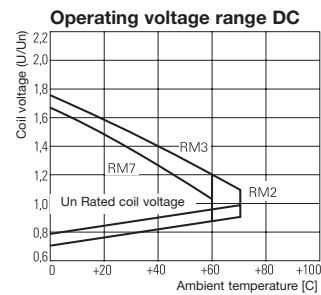
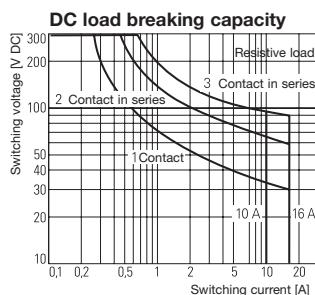
Rated voltage	400 V
Creepage and clearance path input - output	≤ 6 mm
Oversupply category	III
Pollution severity	3

Dimensions

Length x width x height mm 38.5 / 38.5 / 48.5

Information

Applications



RPW relay

2 change-over contacts AC / DC coil
3 change-over contacts AC / DC coil

Type code	RPW			
Typ	RIDER PoWer			
Contacts	2 2 change-over contacts 7 3 change-over contacts			
Type of construction	0 Without test button 3 With test button			
Housing	2 Cap without lug, 4.8 mm Faston 5 Cap with lug, 6.3 mm Faston			
DC coil	006 6 V DC 012 12 V DC 024 24 V DC 048 48 V DC 060 60 V DC 110 110 V DC			
AC coil	506 6 V AC 512 12 V AC 524 24 V AC 548 48 V AC 615 115 V AC 730 230 V AC			

Order data

	24 V DC 2CO	24 V AC 2CO	115 V AC 2CO	230 V AC 2CO
Input				
Rated voltage	24 V DC	24 V AC	115 V AC	230 V AC
Oper.-/drop-out volt. DC-coil	18 V/2.4 V	19.2 V/9.6 V	92 V/46 V	184 V/92 V
Power rating	1.2 W	2.3 VA	2.3 VA	2.3 VA
Rated current DC	50.5 mA	94.2 mA	20.6 mA	10.1 mA
Coil resistance	475 Ω ±10%	86 Ω ±10%	2000 Ω ±10%	8300 Ω ±12%

Order data

Complete module		24 V DC 2CO	24 V AC 2CO	115 V AC 2CO	230 V AC 2CO
without lug without tester	Type	RPW202024	RPW202524	RPW202615	RPW202730
AgCdO	Order No.	8690730000	8690710000	on request	8690720000
without lug with tester	Type	RPW232024	RPW232524	RPW232615	RPW232730
AgCdO	Order No.	on request	on request	on request	on request
with lug without tester	Type	RPW205024	RPW205524	RPW205615	RPW205730
AgCdO	Order No.	8690790000	8690770000	8692900000	8690780000

Information

Information				
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Order data

	24 V DC 3CO	24 V AC 3CO	115 V AC 3CO	230 V AC 3CO
Input				
Rated voltage	24 V DC	24 V AC	115 V AC	230 V AC
Oper.-/drop-out volt. DC-coil	18 V/2.4 V	19.2 V/9.6 V	92 V/46 V	184 V/92 V
Power rating	1.6 W	2.8 VA	2.8 VA	2.8 VA
Rated current DC	69.6 mA	109.2 mA	23 mA	11.7 mA
Coil resistance	345 Ω ±10%	80 Ω ±10%	1850 Ω ±10%	7500 Ω ±10%

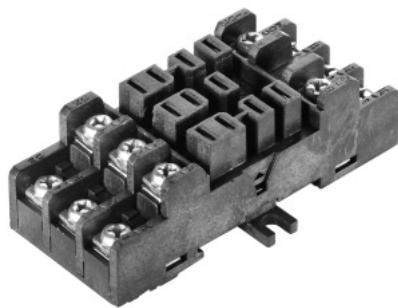
Order data

Complete module		24 V DC 3CO	24 V AC 3CO	115 V AC 3CO	230 V AC 3CO
without lug without tester	Type	RPW702024	RPW702524	RPW702615	RPW702730
AgCdO	Order No.	8690760000	8690740000	8693110000	8690750000
without lug with tester	Type	RPW732024	RPW732524	RPW732615	RPW732730
AgCdO	Order No.	on request	8692990000	on request	on request
with lug without tester	Type	RPW705024	RPW705524	RPW705615	RPW705730
AgCdO	Order No.	8690820000	8690800000	on request	8690810000

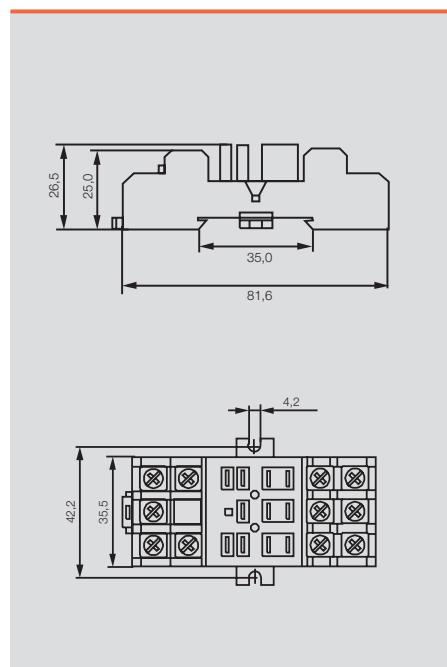
Information

Information				
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Accessories for RPW
Plug-in module with screw connection



Dimensions in mm



Order data

Description	Type	QTY.	Order No.
Plug-in module with screw connections	SPW 3CO	25	8697680000
Contact data			
Nominal current	16 A		
Nominal voltage	250 VAC		
Dielectric strength, coil/contacts	>2500 Vrms		
Ambient temperature	-40° C...+ 40° C		
Terminal torque	0.8 Nm		
Max.	1.2 Nm		

Worldwide activities

- A Austria**
Weidmüller Ges.m.b.H.
Industriezentrum Nö Süd
Straße 2, Objekt M2
2355 Wiener Neudorf
Phone +43 2236 6708-0
Fax +43 2236 6708-199
office.at@weidmueller.com
- ADN Yemen**
Please contact
Weidmüller Middle East
United Arab Emirates
- AUS Australia**
Weidmüller Pty. Ltd.
43 Huntingwood Drive
Huntingwood,
NSW, 2148
P.O. Box 6944
Blacktown
NSW, 2148
Phone +61 2 9671-9999
Fax +61 2 9671-9911
info@weidmueller.com.au
www.weidmueller.com.au
- B Belgium**
Weidmüller Benelux B.V.
Ambachtelaan 11 A
3001 Heverlee
Phone +32 16 395990
Fax +32 16 401051
info@weidmueller.be
- BA Bosnia-Herzegovina**
BH ES Elektrosistem d.o.o.
ul. J. Veselinovica 18
78000 Banja Luka
Bosna
Phone +387 51 317500
Fax +387 51 317500
elsist@inecc.net
www.elektrosistem.co.yu
- BG Bulgaria**
Weid-Bul eOOd
ul. Nezabavka 33 A,
bl. 315/3/10
1113 Sofia
Phone +359 2 9632560
Fax +359 2 9631098
weidbul@nat.bg
- BR Brazil**
Conexel Conexões Elétricas Ltda.
Rua García Lorca, 176- V. Paulicéia,
09695-900, São Bernardo do
Campo - SP, Brasil
Phone +55 11 43669600
Fax +55 11 43621677
vendas@conexel.com.br
www.conexel.com.br
- BRN Bahrain**
Khayber Trading Company
P.O. Box 1976 Manama,
Bahrain
Phone +973 720 747
Fax +973 720 331
khayber@batelco.com.bn
- BY Belarus**
TECHNIKON Ltd.
Oktyabrskaya Str. 16/5
Apt. 704
220030 Minsk
Belarus
Phone +375 17 2104626
Fax +375 17 2275830
technikon@belsonet.net
- CDN Canada**
W Interconnections Canada Inc.
10 Spy Court, Markham,
Ontario L3 R5 H6
Phone +1 905 475-1507
Fax +1 905 475-5855
info1@weidmueller.ca
www.weidmueller.ca
- CH Switzerland**
Weidmüller Schweiz AG
Rundbuckstrasse 2
8212 Neuhausen am Rheinfall
Phone +41 52 6740707
Fax +41 52 6740708
mail:info@weidmueller.ch
www.weidmueller.ch
- CN China**
Weidmüller Interface International
Trading (Shanghai) Co., Ltd.
Unit 503-504 Central Plaza,
No. 227 Huangpi N. Rd.,
200003 Shanghai
P.R. China
Phone +86 21 63758766
Fax +86 21 63759077
www.cnweidmuller.com
- CO Colombia**
Automatizacion Avanzada S. A.
Carrera 97 No. 42 A-23 B3,
Santafe de Bogotá Colombia.
Phone +57 1 4132048
Fax +57 1 4159788
mgallegos@
automatizacionavanzada.com
- CR Costa Rica**
ELVATRON S.A.
400 Norte
Banco Costa Rica, la Uruca,
San José, Costa Rica
Phone +506 2 961060
Fax +506 2 960328
dirk.haase@elvatron.com
- CZ Czech Republic**
Weidmüller s. r. o.
Videnska ul. 340
25242 Vestec u Prahy
Phone +420 2 44001400
Fax +420 2 44001499
office@weidmueller.cz
- D Germany**
Weidmüller GmbH & Co. KG
Ohmstraße 9
32758 Detmold
Phone +49 5231 1428-0
Fax +49 5231 1428-116
weidmueller@weidmueller.de
www.weidmueller.de
- DK Denmark**
Knud Wexøe A/S
Skaettekæret 11
P.O. Box 152
2840 Holte
Phone +45 45465800
Fax +45 45465801
wexoe@wexoe.dk
- E Spain**
Weidmüller S. A.
Narcís Monturiol 11-13
Pol. Ind. Sudeste
08960 Sant Just Desvern
Barcelona
Phone +34 93 4803386
Fax +34 93 3718055
weidmueller@weidmueller.es
www.weidmueller.es
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Please contact
ELVATRON S. A., Costa Rica
- EST Estonia**
Alter Electric OÜ
Türi 6, 11313 Tallinn, Estonia
Phone +372 65 19 666
Fax +372 65 19667
alter@alter.ee
- ET Egypt**
Standard Electric
5, Heliopolis Hospital Street,
Cairo, Egypt
Phone +20 2 6444182
Fax +20 2 6444191
stdelec@click.com.eg
- F France**
Weidmüller EURL
12, Chaussée Jules César
B.P. 263 Osny
95523 CERGY PONTOISE Cedex
Phone +33 1 34245500
Fax +33 1 34245501
mail@weidmuller.fr
www.weidmueller.com
- FIN Finland**
JUHA-ELEKTRO OY
Kylänpolku 6
P. O. Box 57
00681 Helsinki
Phone +358 9 4784111
Fax +358 9 47841311
- GB United Kingdom**
Weidmüller Ltd.
1 Abbey Wood Road
Kings Hill
West Malling
Kent ME19 4YT
Phone +44 1732 877000
Fax +44 1732 873873
info@weidmueller.co.uk
www.weidmueller.com
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Please contact
ELVATRON S. A., Costa Rica
- GR Greece**
Electrorama S.A.
1 An. Martali Str.
41335 Larissa
Phone +30 2410 552533
Fax +30 2410 283463
valvizos@electrorama.com.gr
- H Hungary**
Weidmüller Kereskedelmi Kft
Dombóvári út 13
1117 Budapest
P. O. Box 22
1507 Budapest
Phone +36 1 464-7888
Fax +36 1 3827701
info@weidmueller.hu
- HK Hong Kong**
United Equity Limited
Suite B, 11/F International Industrial
Centre
2-8 Kwei Tei Street, Fotan
Shatin, N. T.
Phone +852 26876739
Fax +852 26876735
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United Arab Emirates
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Please contact
ELVATRON S. A., Costa Rica
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Elektro Partner d.o.o.
Radnicka cesta 22
10000 Zagreb
Phone +385 1 6184793
Fax +385 1 6184795
elektropartner@zg.hnt.net.hr
- I Italy**
Weidmüller S.r.l.
Via Albert Einstein 4
20092 Cinisello Balsamo
Milano
Phone +39 02 660681
Fax +39 02 6124945
weidmueller@weidmueller.it
www.weidmueller.it
- IL Israel**
A.U. Shay Ltd.
Embar Street 23/25
P.O.Box 10049
Petach-Tikva 49222
Phone +972 3 9233601
Fax +972 3 9234601
shay@uriel-shay.com
- IND India**
Weidmüller Representative office
Vijay Dattani
119, Prashanth Extention
Whitefield
Bangalore - 560 066
Phone +91 80 8453999
Fax +91 80 8453999
- IR Iran**
TAF Co.
72, Iranshahr Av.
Unit 5,
15816 Teheran
Phone +98 21 8831-7851
Fax +98 21 8882-0268
tafco@safineh.net
- IRL Ireland**
A.P. Haslam Ltd.
14 Sunshine Ind. Estate
Crumlin Road
Dublin 12
Phone +353 1 453-2522
Fax +353 1 453-2949
paul.haslam@aphaslam.ie
- IS Iceland**
Samey Automation Center
Lyngas 13, 210 Garðabær,
Island
Phone +354 510 5200
Fax +354 510 5201
samey@samey.is
- J Japan**
Nihon Weidmüller Co. Ltd.
Asahi Seimeji Bldg, 11F
1-14-1 Fuchicho Fuchi-shi
Tokyo 183-0055 Japan
Phone +81 42 330-7891
Fax +81 42 330-7895
www.weidmuller.co.jp
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P.O.Box 2829,
Safat 13029 Kuwait
Phone +965 4333355
Fax +965 4344085
contact@nie-kwt.com
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- LT Lithuania**
ELEKTROS IRANGA
Tinklu g.29a, 5319 Panevezys,
Lithuania
Phone +370 45582828
Fax +370 45582727
info@eliranga.lt
- LV Latvia**
Elektrosistemas
Kuldīgas St. 51,
1046 Riga, Latvia
Phone +371 7070140
Fax +371 7070141
edgars.vilkins@elektrosistemas.lv
- MA Morocco**
Energy-Technics Transfer, S.A.
23 Boulevard Lieutenant
Mohamed El Bakai Tamri
Casablanca 20250
Phone +212 2 343700
Fax +212 2 343699
- MAL Malaysia**
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9, Jalan PJ5 11/24,
Bandar Sunway,
46150 Petaling Jaya,
Selangor Darul Ehsan,
Malaysia
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Fax +60 3 5633 6562
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MEX	Mexico W Interconnections, S.A. de C.V Av. Ingenieros Civiles No. 204-B, Conjunto Industrial Chachapa 72990 Chachapa, Puebla Mexiko Phone +52 222 2866247/48/49 Fax +52 222 2866242 clientes@weidmuller.com.mx
MK	Macedonia ES MK Elektrosistem d.o.o. Ul. Bulevar III makedonske brigade bb 91000 Skopje Macedonia Phone +389 91 460295 Fax +389 91 460298 elektrosistem-mk@mt.net.mk
N	Norway Siv. Ing. J. F. Knudtzen A/S Billingstadsletta 97 1396 Billingstad P.O. Box 160 1378 Nesbru Phone +47 66 983350 Fax +47 66 980955 patorgersbraaten@jfknudtzen.no
NIC	Nicaragua Please contact ELVATRON S. A., Costa Rica
NL	Netherlands Weidmüller Benelux B.V. Franciscusweg 221 1216 SE Hilversum Postbus 1505 1200 BM Hilversum Phone +31 35 6261261 Fax +31 35 6234569 info@weidmuller.nl www.weidmuller.nl
NZ	New Zealand Cuthbert S. Steward Limited 27 Te Puni Street POB 38496 Petone Petone, Wellington Phone +64 4 5686156 Fax +64 4 5686056
OM	Oman Please contact Weidmüller Middle East United Arab Emirates
P	Portugal Weidmüller - Sistemas de Interface, S. A. Estrada Outeiro Polima, Lote B, Nº B2, Escritório 2 - Abóboda 2785-518 São Domingos de Rana Lisboa Phone +351 21 4459190 Fax +351 21 4455871 weidmuller@weidmuller.pt www.weidmuller.pt
PA	Panama Please contact ELVATRON S. A., Costa Rica
PE	Peru TECNOLÓGIA ELÉCTRICA Y SOLUCIONES S.A.C. Calle Huandoy 501, Lima 32 – Perú Phone +51 1 5620004 Fax +51 1 5620004 info@tecsol-peru.com
PK	Pakistan Access Technology Networks [Pvt] Ltd. Flat 1, 2nd Floor, Panther Plaza 16B, F8, MARKAZ Islamabad Pakistan Phone +92 51 2254371-72 Fax +92 51 2261086 atn@ib.comsats.net.pk
PL	Poland Weidmüller Sp. z o.o. ul. Goździnowska 10 03-302 Warszawa Poland Phone +48 22 5100940 Fax +48 22 5100941 biuro@weidmuller.com.pl www.weidmuller.pl
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Q	Qatar Please contact Weidmüller Middle East United Arab Emirates
RA	Argentina CPI SA Baunesse 2660 1431 Buenos Aires Phone +54 11 45238008 Fax +54 11 45220546 compras@cpi.com.ar
RC	Taiwan Fittatek Co., Ltd. 12 F. No. 185 Fu-Kuo Road, Tso Ying Dist, Kaohsiung, Taiwan Phone +886 7556-0858 Fax +886 7556-3279
	Eucan Enterprise Ltd No. 145 He Ping 2nd Rd Kaohsiung, Taiwan Phone +886 7 715 6610 Fax +886 7 715 8748 www.eucan.com.tw
RCH	Chile Felipe Bahamondes S.A./ATS AGRO Servicios Agroindustriales María Luisa Santander 0475 Providencia Casilla 3425 Santiago Phone +56 2 341-1271 Fax +56 2 341-1275 felipe@mailblocks.com
RI	Indonesia P. T. Nego Electrindo Komplek Sentra Kramat, Blok A18 Jl. Kramat Raya No. 7-9 Jakarta 10450 Indonesia Phone +62 21 3156218 Fax +62 21 3156219
RL	Lebanon Progress Engineering & Trading Enterprises P.O. Box 11-1111 Pharaon Bldg., Opp Electr. du Liban Chafaca Str., Al Naher Beirut - Lebanon Phone +961 144 4664 Fax +961 144 4664 progress@inco.com.lb
RO	Romania Weidmüller Interface Romania S. R. L. Jud. Maramures Nr. 944 437345 Tauti Magheraus Phone +40 1 3220230 Fax +40 1 3228857 romint@dnt.ro
ROK	South Korea Weidmüller Co., Ltd. 2 floor Wooam B/D 46-27 Samsung2-Dong, Kangnam-Ku Seoul Korea, Zip: 135-868 Phone +82 2 5160003 Fax +82 2 5160090 info@weidmuller.co.kr
RP	Philippines El Criscent Corporation B-41 L-10, Villa Palao, Banilac, Calamba City Laguna 4027, Philippines Phone +63 49 3456329 Fax +63 49 3456329
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RUS	Russia Weidmüller Representative office Shabolovka street 2 119049 Russia, Moskau Phone +7 095 771-6940 Fax +7 095 771-6941 info@weidmueller.ru www.weidmueller.ru
S	Sweden Weidmüller AB Stockholm, Arenavägen 39, 12177 Johanneshov P.O. Box 10120 12128 Stockholm-Globen Phone +46 771 43 00 44 Fax +46 8 7272480 mail.stockholm@weidmuller.se
SA	Saudi Arabia Al Abdulkarim Trading P.O. Box 5777, Dammam 31432 Saudi Arabia Phone +966 3 833-7110 Fax +966 3 833-8242 info@akte.com.sa
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SGP	Singapore Weidmüller Pte. Ltd. 629 Aljunied Road, #05-05 Ocitech Industrial Building Singapore 389838 Phone +65 6841 5311 Fax +65 6841 5377 info@weidmuller.com.sg www.weidmuller.com.sg
SK	Slovakia Elektris s.r.o. Racińska 188 SK 83153 Bratislava, Slovakia Phone +421 2 49200113 Fax +421 2 44680328 weidmueller@compute.sk
SLO	Slovenia ELEKTROSPONI d.o.o. Stegne 25 1000 Ljubljana Phone +38 6 15113810 Fax +38 6 15111604 elektrospoj@siol.net
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