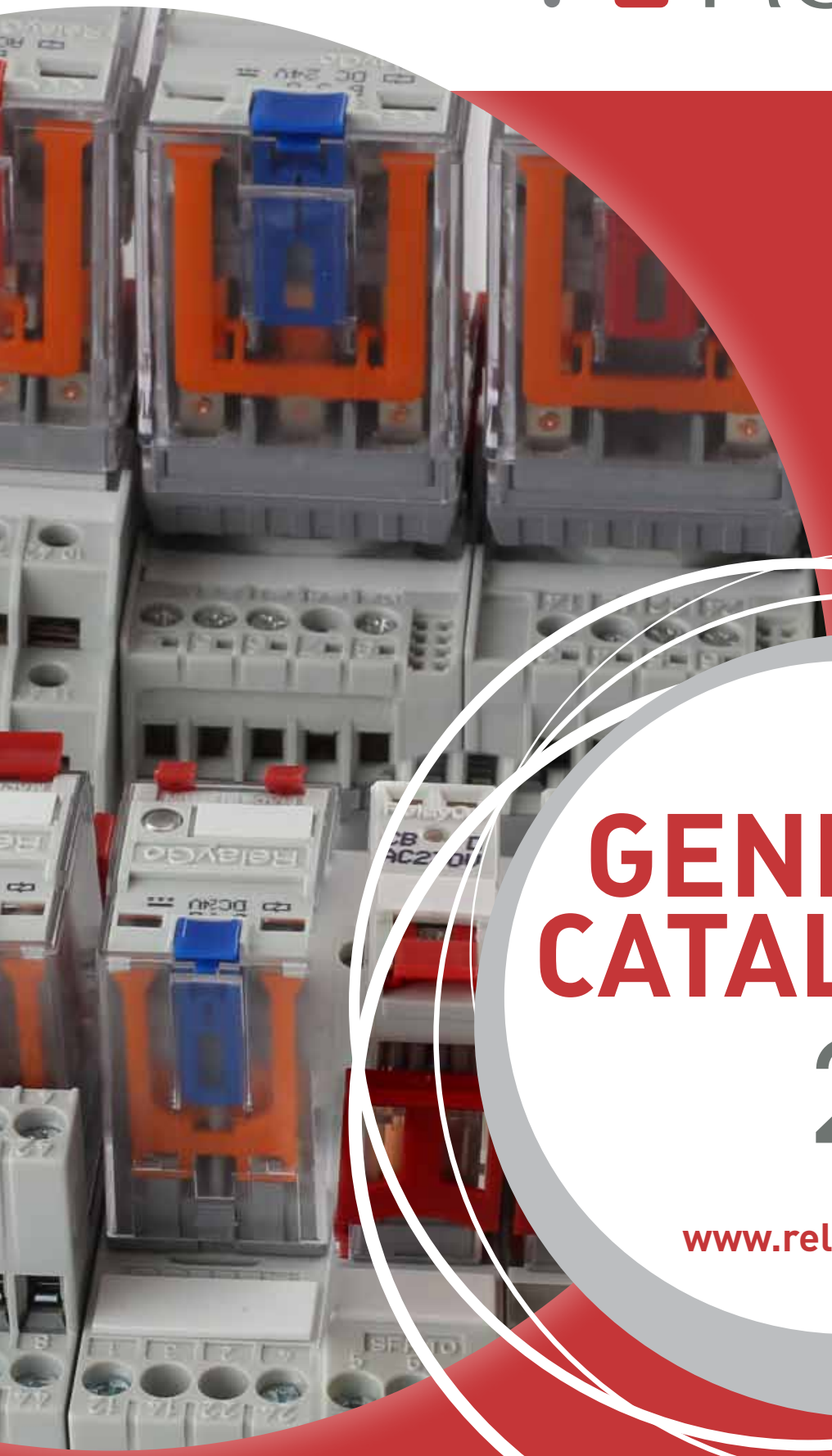
RelayGo



# GENERAL CATALOGUE 2014

www.relaygo.com


RelayGo

## INDEX OF CONTENT



### RM



### RP



### RQ



### RF



### RR

# GENERAL INFORMATION

**RelayGo** is a Spanish company specialized in relays, sockets and industrial automation equipment manufacturing. Our factory, with 50 years' experience in manufacturing, is supplying more than **60 countries** with exceptional quality and range recognition worldwide.
Our factory is an integrated one, all productive processes, from R&D to customer service, delivering a perfectly made product, fully warranted, making **RelayGo** relays the most recognized in the market.
More than 100 wide experienced professionals in relay manufacturing operate **RelayGo**, with exclusive processes and know-how, a factory with more than 4,000 square meters in Alcorcón – Madrid – Spain, more than 5 million relay capacity per year.
We meet our customer needs, seeking for solutions and creating new products to support our customers in their industrial automation and application needs, whereas our product and technology is required.

## CONTACTS

The contacts are made of Silver and Nickel alloys (AgNi) and silver tin oxide ($AgSnO_2$). Other alloys on request.
Depending on the model, a 0,2 µm or 10 µm gold-plating is added to ensure high conductivity and allow switching low level loads in corrosive ambient.
The distance between contacts (GAP) and the speed of contacts opening will determinate arch length and duration. In VAC a 0,5 mm gap is enough to eliminate the arch. In VDC is critical to manage contact distance (GAP) depending on the current and voltage. See the tables for each relay "Maximum VDC current", as well as special DC applications.
**We manufacture different contacts:**
**Contacts in series:** Two or three contacts in series are equivalent to multiply the GAP increasing VDC cut.
**Contacts in parallels:** Cannot switch higher loads but increases current stability and reliability.
**Twin contacts:** The blade is divided into two parts, each with its own contact, both contacts press down each on their own independent fixed contacts. T his system is particularly good for reliably switching at very low levels (increasing MTBF).
**Double break contacts:** The double break contact arrangement is equivalent to two contacts connected in series. The maximum intensity supported corresponds to only one contact. This system allows for higher DC operating voltages.
This system prolongs contact life by inhibiting or reducing the arch. In parallel RC suppressors or varistors can be connected. In VDC applications with inductive loads, a diode must be placed inverse, in parallel (Free-Wheeling).
Typical contact RM and RQ series resistance is 50mΩ. This resistance depends on materials used, pressure among them and contamination.
Maximum voltages are referred to contacts poles and between contacts and coil, complying with EN 60947/4/5 and VDE 0110 established maximum values, considering pollution, insulation material quality, shape, position and dimensions.
Maximum current is referred to each model, considering stable conduction ($I_{th}$) in VAC
Maximum power indicated is the maximum switching value contacts can support. This value can be limited and not always meet the maximum power obtained by multiplying maximum voltage with maximum current.

## COILS

The coils are molded in polybutylene with fiberglass (130° C). Enamelled wires of Class F specification are used (155° C).
They are always verified, 100%, considering quality tolerances.
They are wound on automatic precision winding machines, with the number of turns and wire tension accurately regulated and monitored.
Coil resistance is measured at 20° C and is regulated within ± 10% of specified value. They can be reviewed in each model specification table.
We can produce every specific voltage coil our customers require meeting their specifications.

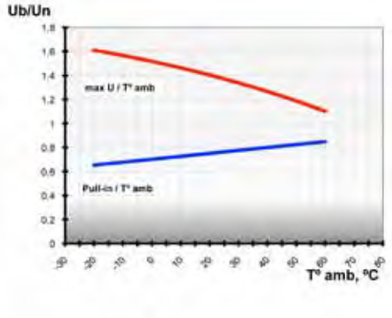
**Minimum working voltage (pull in)** this is the minimum voltage that must be supplied to the coil to ensure contacts change over and the relay is energized, below you will find pull in voltages:

| Working: | 50 Hz | 60 Hz |
|---|---|---|
| VAC 50 Hz relays | 0,8xUn | 0,85xUn |
| VAC 60 Hz relays | 0,75xUn | 0,8xUn |
| VDC relays | 0,8xUn | |

**Maximum release voltage (drop out)** this is the maximum voltage at which the contacts change over and NO contacts close without any vibration. The values of voltage specified are those at or below which the relay must drop out.

VDC relays: ≥ 10% de Un
VAC relays: ≥ 15% de Un

The ambient temperature has an influence on the coil resistance and on its thermal dissipation capacity.
Blue curve represents the variations of the pull in voltage (% Un) in relation with the ambient temperature (T). Red curve indicates the maximum values of the voltage applied (Ub) to the coil in relation with the nominal voltage (Un) at the ambient temperature (T).




# QUALITY CERTIFICATE

## ISO 9000 RELAYGO


Design, production and sales of industrial relays, sockets and accessories. Sales of regulation and control devices for electrical installations.

ISO 14000 in process.

All of our products are compliant with the 2002/95/EC RoHS directive, restrictions on such hazardous materials.

RoHS

## APPROVAL TABLE

| | | |
|---|---|---|
| **Canada** | In process | **Organism:** CSA<br>**Norm:** C 22,2; UL 508 |
| **China** | In process | **Organism:** CQC<br>**Norm:** GB14048.5-2001 |
| **Russia** | In process | **Organism:** CU United Register of Certification bodies |
| **United Kingdom** | Lloyd´s In process | **Organism:** LLoyd´s Register of Shipping |
| **U.S.A** | | **Organism:** UL<br>**Norm:** C 22,2; UL 508<br>UL 60947-1<br>UL 60947-4-1A |

# CODING KEYS

**R** — **RELAY MODELS**
RM2 - Universal of 8 round pins
RM3 - Universal of 11 round pins
RM4 - 4 contacts 10 A
RP3 - 3 contacts 16 A
RQ2 - Miniature 2 contacts 10 A
RQ4 - Miniature 4 contacts 5 A
RF1 - Interface 1 contact 10 A
RF2 - Interface 2 contact 5 A
RS - Solid State

**FAMILY** — **P**
Industrial relays -M
Miniature relays -Q
Interface relays - F
Solid State relays - S
Power relays - P
Railway relays - R

**3** — **NUMBER OF CONTACTS**
1, 2, 3 o 4

**0** — **TYPE OF CONTACT**
0 (STD AgNi)
1 (std + 0,2 µ Au)
2 (std + 3 µ Au)
3 (std + 10 u Au)
4 ($AgSnO_2$)
5 ($AgCdO_2$)
6 (transistor, com N)
7 (transistor, com P)
8 (triak C)
9 (triak Z)

**TYPE OF RELAY** — **10**
(Standard, CO)-10
(sensitive 250 mW, 1 CO, 11p)-11
(sensitive 500 mW, 2 CO, 11p)-12
(sensitive 800 mW, 3 CO, 11p)-13
(open contacts, NO)-14
(1 NO double make)-15
(1 NO double make + magnet)-16
(twin CO)-17
(Wolfram, NO)-18
(Remanence)-19
(std CO + twin CO)-21
(twin contacts CO)-22
(contacts CO 11 pin)-23
(close contacts, NC)-24
(1 NC double break)-25
(1 NC double break + magnet)-26

**L** — **CIRCUIT 1**
N - (no LED)
L - (LED)

**D** — **CIRCUIT 2**
N - (no circuit)
D - (diode FW)
E - (polarity)
U - (ac/dc)
X - (diode HT)
Y - (polarity HT)
R - (RC)

**0** — **SPECIAL EXECUTION**
0 (without S.E)
1 (print circuit pin)
2 (without mechanic ind.)
3 (orange test button)
4 (black blockage button)
5 (housing without front-panel, close)
6 (housing without front-panel + push)
7 (housing withoug front-panel + flanges)
8 (versions 1 + 4)(U)
9 (versions 1 + 5)

# COIL CIRCUIT ACCESORIES

As a relay is managed by transistors, triacs, etc..., It is required to adopt protection measures,... peaks might appear in the line, motor switching, electro-valves, transformers, capacitors, etc.., on the other hand, as the coil disconnects, inverse voltage peaks appear, and they can create high pulses that are transmitted to other devices connected to the Coil line.
Normally a relay is unaffected by these pulses, but if a diode is connected in association with the coil, it must be capable of withstanding an inverse voltage higher than those of the incoming peaks.
RelayGo relays can be manufactured with protection circuits, decreasing or blocking coil generated pulses, as well as block line peaks.

## RM - RQ RELAYS

**L** — **Led indicator with rectifier**
VAC and VDC Relay up to 250 V
1000 V up to 24 V
2000 V from 25 to 60 V
4000 V from 61 to 250 V
Note: LED connected in series with the coil @ 220 VDC in RQ types.

**D** — **Free Wheeling diode**
Reduce peaks caused by the relay coil on de-energization.
2000 V up to 60 VDC
4000 V from 61 to 250 VDC
2000 V on RQ types

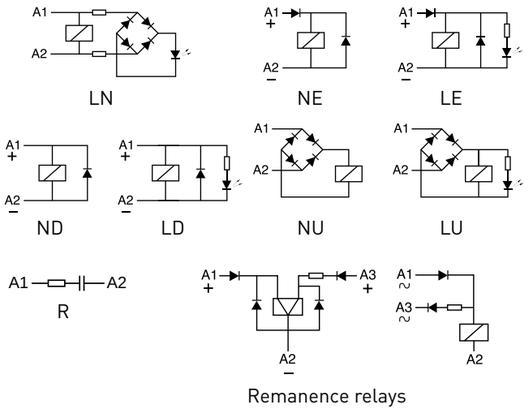
**E** — **Polarity and free wheeling diodes**
A diode in series with the coil protects the relay from reverse connection.
1000 V up to 60 VDC
4000 V from 61 to 250 VDC
2000 V on RQ types

**U** — **Bridge rectifier incorporated VDC / VAC**
Available only in voltages up to 60 V .
Protection 1000 V
Previous circuits, E, D, U, can be combined with L, LED incorporated: LE, LD, LU.

**Note:** RelayGo Components S.L. retains the right to make changes to this document without notice and does not accept any liability for errors.

**R** — **Resistor and Capacitor**
No Led available.
Available only in RM.
Only AC coils.

Circuit Scheme



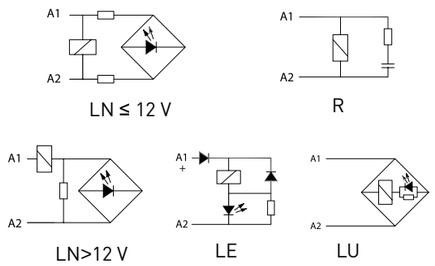

## RF RELAYS

**L** — **Led no polarity**
Bridge rectifier parallel coil ←= 12 VDC / VAC
Bridge rectifier serial coil →= 12 VDC / VAC

**LE** — **Led A+ polarity (optional)**
All VDC voltages, polarity and freewheel diodes.

**LU** — **Led no polarity only in 24 and 48 VDC (optional)**
Bridge rectifier for VAC/VDC relays.

**R** — **Resistor and Capacitor**
No Led available.
Available for VAC coils VAC pulse RC protection.



# ÍNDEX

## APPLICATIONS INDEX

Relay applications are countless and diverse in every aspect of our daily lives and we use them consistently, directly or indirectly in any human activity.
Therefore, we will highlight certain non-exclusive applications.
Specific applications are arranged in general application groups.

### POWER INDUSTRIAL

Single phase AC motor (≤ 1 CV) ..... **RM2010, RM3010, RQ2010**
Three phase AC motor (≤ 2 CV) ..... **RP3010**
DC motor ..... **RM2014, RM3014, RM1015, RM1016, RM2015,RP3014, RP1015, RP1016, RP2016**

### INDUSTRIAL AUTOMATION

Industrial Panels ..... **RM2010, RM3010, RM4010, RQ2010, RQ4110,RF1010, RF2110**
Production Process ..... **RM3010, RP3010**
Welding Process ..... **RQ1010, RQ1018, RQ2014**
Electro-valves ..... **RQ2010, RF1010, RS...**

### PROCESS CONTROL

Low current and voltage switching ... **RM2117, RQ2117, RQ2021, RQ2112,RQ4110, RF1217**
PLC Drivers ..... **RQ4110, RF1010, RF1217, RF2110**
Small DC motors ..... **RM2014, RM3014, RF1014, RS16, RS17**
Inductive, capacitive or photocells sensors **RF1217, RF2110**

### CLIMATE CONTROL

AC resistive load ..... **RM2010, RM3010, RP3010, RQ2010, RQ1018.**
Cryogenic equipment control ..... **RM3010, RP3010, RQ2010**
Compressor switching ..... **RP3010**

### INTELLIGENT BUILDINGS

Elevators/Lifts ..... **RM2010, RM3010, RP3010, RQ2010**
Escalator ..... **RP3010**
Mechanical walkways ..... **RP3010**
Automatic doors ..... **RM2010, RQ2010**
Alarm systems ..... **RQ2112, RQ2119, RF1010, RF2110, RM2019**

### SMART LIGHTING

Fluorescent lighting ..... **RQ1018, RS18**
Filament lamps ..... **RQ1018, RS19**
LED lights ..... **RQ2010, RF1010, RS16, RS18, RS19**

### RAILWAYS EN 60077; EN 61373 APPROVALS

Two contacts ..... **RR2010, RR2117**
Three contacts ..... **RR3010**
Four contacts ..... **RR4010**

### POWER PLANTS

Wind power generators ..... **RM4010, RQ2117, RQ4110**
Thermal stations ..... **RM3010, RP3010**
Nuclear plants ..... **Ask for it**

### HOME AUTOMATION

Access control ..... **RM2117, RQ2117, RQ2021, RQ2112,RQ4110, RF1217**
Alarms ..... **RQ2112, RQ2119, RF1010, RF2110, RM2019**
Climate control ..... **RM3010, RP3010, RQ2010**
Smart lighting ..... **RQ2010, RF1010, RS16, RS17, RS18, RS19**

Some relays models have multiple applications, please contact us to find the most suitable relay for your application, considering housing characteristics and space.

# SPECIAL RELAYS

### 10 - GENERAL PUROPOSE RELAYS

Used in applications like as automation, pneumatic, heating appliances, signaling, as an input or output interface. Change-over contacts. NO/NC Isolation: 1000 Vrms. Gap: 0,5 mm.
Max Nominal Load
16 A @ 230 V AC1 16 A @ 30 V DC1
0,5 A @ 110 V DC1 0,2 A @ 220 V DC1

### 15 - DOUBLE MAKE RELAYS

These relays are designed to support high VDC loads,
Voltages between 110 and 220 V DC.
3.3 mm open contact gap.
Isolation between contacts: 2000 Vrms.
Maximum DC load is shown in specification tables.
Available in RM, RQ and RP series.

### 11 - SENSITIVE RELAYS, 250 mW

Sensitive coil. One Change-Over contact.

### 12 - SENSITIVE RELAYS, 500 mW

Sensitive coil. Two Change-Over contacts.

### 13 - SENSITIVE RELAYS, 800 mW

Sensitive coil. Three change-over contacts, DC coil.
Available in RM and RQ series.
Gold contacts 0,2 or 10 µ Au.
Operation range:
Relays 250 mW: 0,8 ... 2,5 Un
Relays 500 mW: 0,8 ... 1,7 Un
Relays 800 mW: 0,8 ... 1,4 Un

### 21 - POWER CONTACT AND TWIN CONTACT SIGNAL RELAY

In one single relay we combine the power of a standard unit (10) and the twin contact reliability (17).
Specifically designed for feedback applications requirements.

### RS - SOLID STATE RELAY

Switching electronic relay, quick and long life relay (non-mechanical parts).
Different models for different applications, AC current (VAC) and DC current (VDC).

### 17 - TWIN CONTACT RELAYS

Low currents switching applications. High operational reliability.
Change-over contacts. Contact Isolation NO/NC: 1000 Vrms
Gap: 0,5 mm
Gold contacts flash 0,2 µ Au or 10 µ Au (optional)
Max load: 6 A @ 230 V AC-1
Min load: 1 mA@ 5 V DC long life

### 19 - REMANENCE RELAYS

High remanence magnetic circuit, allows the relay to latch when the current applied flows through the coil in a direction and unlatches if the current flows in the opposite direction.
Electronic circuitry is added inside the relay, with diodes and precise resistances to control and protect against transitory pulses.
One winding VAC coil and two winding VDC coil.
All coils withstand permanent connection for operation on release the coils needs 50 ms minimum pulse.

### 18 - HIGH INRUSH RELAYS

Two open contacts, one silver and the other tungsten acting in parallel, separated each other, tungsten contact connect and disconnect, while silver keeps switched.
This relay is used to switch fluorescent and incandescent lamps as well as VDC inductive loads only available in RQ
Max Load:
6 A @ 230 V AC5a/b (Lamps)
10 A @ 230 V AC15 1,5 A@ 110 V DC1

### RR - RAILWAYS RELAY

Designed to satisfy the most demanding Railway needs, extensive voltage range, vibration and crash requirements.

### 14 - OPEN CONTACTS RELAYS

Separating contacts, increases contact gap and improves VDC cut.
Gap: 1,5 mm (RQ Series); 1,7 mm (RM and RP series).
Contact Isolation NO: 2000 Vrms
Max load: 16 A @ 230 V AC1
1,2 A@ 110 V DC1; 0,4 A@ 220 V DC1

### 16 - MAGNETIC BLOW OUT RELAY

These versions are similar to 15 types, however they have the addition of a powerful magnet which "blows out" the arc generated when the contacts are opened, therefore quench-ing the arcing quickly and increasing the contact life.
Avoiding priming and contact welding.
Max Load: 10 A@ 220 V DC1
2 A@ 220 V DC13

### SPECIFICATIONS

Model specifications for each model refers to typical values of "new" Relays at 20 ºC complying with EN 60947

### TABLES

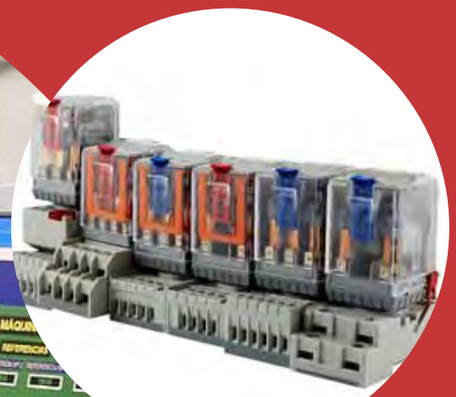
Electrical life tables and maximum VDC current show the typical result of exhaustive tests performed at ambient temperature (20ºC) and 1200 op/hour frequency and under permanent connection.
Measured values can slightly differ from working conditions.

### OVERVOLTAGE RANGE

A maximum over-voltage of 110% Un is permissible at the coil, with rated current through the contacts at an ambient temperature of 60° C.

### SPECIAL APPLICATIONS RELAYS

RelayGo offers collaboration to effectively and efficiently support specific requirements and applications, as well as develop new specifications and non-standard models.



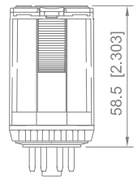
# RM

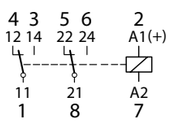
RelayGo

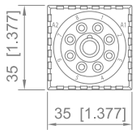
## RM2010 — 2 CHANGE-OVER CONTACTS, 8 PINS, DPDT

**General application** 10 A 250 V AC-1 0,5 A 110 V DC-1
10 A 30 V DC-1 0,2 A 220 V DC-1

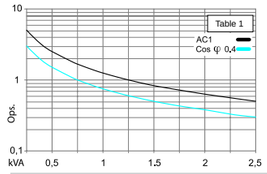
**Dimensions** mm [in]



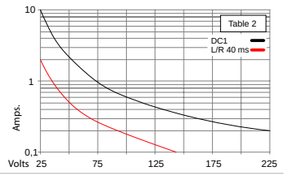




**Electric life, ops x 10⁴**




**Maxim load in VDC**




**Standard types**

AC 50 Hz, (60 Hz): 24, 48, 115, (120), 230, (240), 400
RM2010NN, RM2010LN, RM2010NR
DC: 24, 48, 110, 220
RM2010NN, RM2010LN, RM2010LD, RM2010LE
AC/DC: RM2010LU
**Sockets:** SMB20D, SMT20D, SMW20F, SMP20F

### Contacts

**Max.switching current** 10 A
**Max.peak inrush current, 20ms** 30 A
**Max. Switching voltage** 250 V
**Max. VAC load (table 1)** 2,5 kVA
**Max. VDC load** see (table 2)
**Contact material** AgNi (std), std + 0,2 µ Au, std+10 µ Au

### Insulation

**Contact**
Open contact 1000 V
Contact/contact 2,5 kV
Contact/coil 2,5 kV

**Insulation resistance at 500 V** >3G Ω
**Insulation, EN 61810-1** 2,5 kV/3

CE cULus In process Lloyd's In process In process In process RoHS IEC 61810 EN 60947

### Specifications

**Pick-up time/bounce time** 16 ms + ≤ 3 ms
**Release time/bounce time** 8 ms + ≤ 1 ms
**Ambient temperature,operation/storage** -40ºC (no ice)60ºC/80ºC
**Mechanical life ops.** VAC:10 Mill./VDC:20 Mill
**VDC voltage endurance at rated load** >100.000 ops.
**Switching frequency at rated load** 1200/h.
**Protection class** IP40 / RT1
**Weight** 90 g.

### Coils

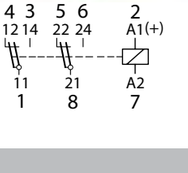
**Pick-up voltage** < 0,8 x Un
**Release voltage** >0,1 x Un
**Nominal power** 2,2 VA (VAC)/ 1,3 W (VDC)

| VAC | Ω | mA |
|---|---|---|
| 24 | 67 | 92 |
| 48 | 296 | 46 |
| 115 | 1K7 | 19 |
| 230 | 7K1 | 9,5 |

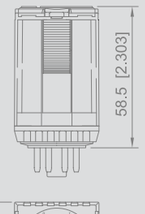
| VDC | Ω | mA |
|---|---|---|
| 24 | 443 | 54 |
| 48 | 1K8 | 27 |
| 110 | 9K2 | 12 |
| 220 | 36K1 | 6 |

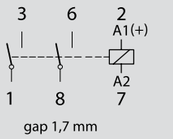
## RM2014 — 2 OPEN CONTACTS (NO), 8 PINS, DPST

**Application for VDC** 10 A 250 V AC-1 1,2 A 110 V DC-1
10 A 30 V DC-1 0,4 A 220 V DC-1

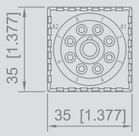


**Dimensions** mm [in]

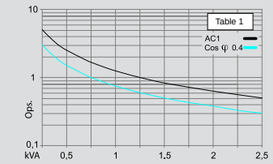


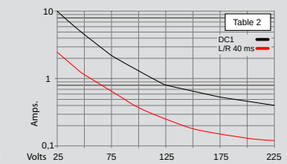

gap 1,7 mm




**Electric life, ops x 10⁴**




**Maxim load in VDC**




**Standard types**

AC 50 Hz, (60 Hz): 24, 48, 115, (120), 230, (240)
RM2014NN, RM2014LN, RM2014NR
DC: 24, 48, 110, 220
RM2014NN, RM2014LN, RM2014LD, RM2014LE
AC/DC: RM2014LU
**Sockets:** SMB20D, SMT20D, SMW20F, SMP20F

### Contacts

**Max.switching current** 10 A
**Max.peak inrush current, 20ms** 30 A
**Max. Switching voltage** 250 V
**Max. VAC load (table 1)** 2,5 kVA
**Max. VDC load** see (table 2)
**Contact material** AgNi (std)

### Insulation

**Contact**
Open contact 2000 V
Contact/contact 2 5 kV
Contact/coil 2,5 kV

**Insulation resistance at 500 V** >3G Ω
**Insulation, EN 61810-1** 2,5 kV/3

CE cULus In process In process RoHS EC 61810 EN 60947

### Specifications

**Pick-up time/bounce time** 20 ms + ≤ 3 ms
**Release time/bounce time** 10 ms + 1 ms
**Ambient temperature,operation/storage** -40ºC (no ice)60ºC/80ºC
**Mechanical life ops.** VAC:10 Mill./VDC:20 Mill
**VDC voltage endurance at rated load** >100.000 ops.
**Switching frequency at rated load** 1200/h.
**Protection class** IP40/ RT1
**Weight** 90 g.

### Coils

**Pick-up voltage** < 0,8 x Un
**Release voltage** >0,1 x Un
**Nominal power** 2,4 VA (VAC)/ 1,6 W (VDC)

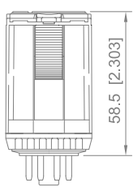
| VAC | Ω | mA |
|---|---|---|
| 24 | 65 | 100 |
| 48 | 286 | 50 |
| 115 | 1K7 | 21 |
| 230 | 6K8 | 10 |

| VDC | Ω | mA |
|---|---|---|
| 24 | 360 | 66 |
| 48 | 1K4 | 34 |
| 110 | 7K6 | 15 |
| 220 | 30K3 | 7,5 |

## RM2117 — 2 TWIN CHANGE-OVER CONTACTS, 8 PINS, DPDT

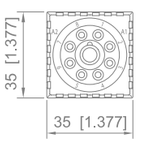
**Low signal application** 6 A 250 V AC-1 6 A 30 V DC-1
5 mA/5V 1 mA/5 V DC-1

**Dimensions** mm [in]

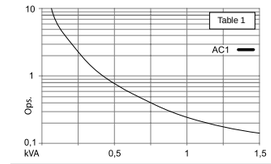




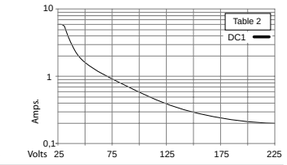





**Electric life, ops x 10⁴**




**Maxim load in VDC**




**Standard types**

AC 50 Hz, (60 Hz): 24, 48, 115, (120), 230, (240)
RM2117NN, RM2117LN, RM2117NR
DC: 24, 48, 110, 220
RM2117NN, RM2117LN, RM2117LD, RM2117LE
AC/DC: RM2117LU
**Sockets:** SMB20D, SMT20D, SMW20F, SMP20F

### Contacts

**Max.switching current** 6 A
**Max.peak inrush current, 20ms** 15 A
**Max. Switching voltage** 250 V
**Max. VAC load (table 1)** 1,2 KVA
**Max. VDC load** see (table 2)
**Contact material** AgNi + 0,2µ Au (std), std + 10 µ Au

### Insulation

**Contact**
Open contact 1000 V
Contact/contact 2,5 KV
Contact/coil 2,5 KV

**Insulation resistance at 500 V** >3G Ω
**Insulation, EN 61810-1** 2,5 KV / 3

CE In process In process RoHS IEC 61810 EN 60947

### Specifications

**Pick-up time/bounce time** 16 ms + ≤ 3 ms
**Release time/bounce time** 8 ms + ≤ 1 ms
**Ambient temperature,operation/storage** -40ºC (no ice)60ºC/80ºC
**Mechanical life ops.** VAC:10 Mill./VDC:20 Mill
**VDC voltage endurance at rated load** >100.000 ops.
**Switching frequency at rated load** 1200/h.
**Protection class** IP40/ RT1
**Weight** 90 g.

### Coils

**Pick-up voltage** < 0,8 x Un
**Release voltage** >0,1 x Un
**Nominal power** 2,2 VA (VAC)/ 1,3 W (VDC)

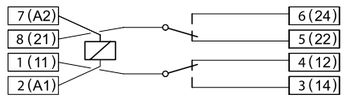
| VAC | Ω | mA |
|---|---|---|
| 24 | 67 | 92 |
| 48 | 296 | 46 |
| 115 | 1K7 | 19 |
| 230 | 7K1 | 9,5 |

| VDC | Ω | mA |
|---|---|---|
| 24 | 443 | 54 |
| 48 | 1K8 | 27 |
| 110 | 9K2 | 12 |
| 220 | 36K1 | 6 |

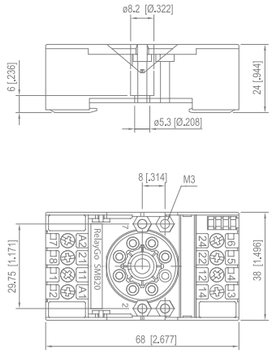
## SMB20 — 2 POLES, RAIL DIN

**Socket for octal relays, with clip and marking label**
**10 A / 300 V**

### Connection diagram




### Dimensions mm [in]




### Specifications

**Rated load** ..... 10 A / 300 V

**Insulation**

Test voltage, (Vrms/ 1 min.)

Contacts/coils ..... 2,5 kV
All terminals/DIN rail ..... 2,5 kV
Terminal/terminal ..... 25 kV

**Cross-section of connecting wire**

Single-wire ..... 4 mm² or 2 x 2,25 mm²
Multi-wire ..... 22 - 14 AWG
Cable with tip ..... 4 mm²
Max. screw torque ..... 1,2 Nm
Screw dimensions ..... M3, Pozi
Retaining clip plastic integrated

In process In process In process IEC 61810 EN 60947

### Socket for RM relays

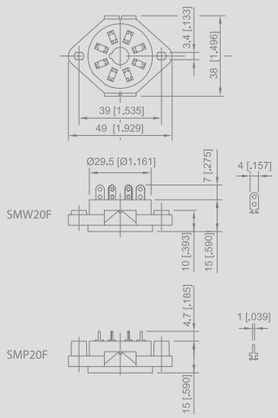
**8 pin plug-in relays RM2010, RM2014, RM2117**

Mounting in rail DIN and panel
Coding label.
Numeration EN/DIN

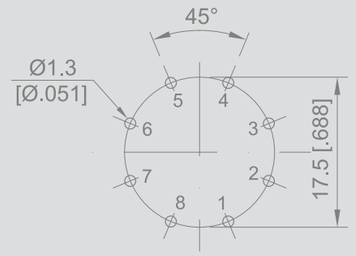
According to the norm EN 60947-1 and IEC 61810-1

## SMW20F — 2 POLES, PANEL MOUNTING, SOLDERING WITH CABLES

### Dimensions mm [in]




### PCB mounting




### Socket for RM relays

**Socket for RM 8 pin plug-in relays RM2010, RM2014, RM2117**

### Specifications

**Rated load** ..... 10 A / 300 V
**Isolation (terminal/terminal)** ..... 2,5 kV

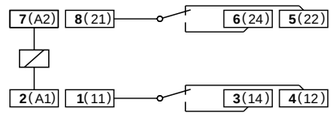
In process

## SMP20F — 2 POLES, PRINTED CIRCUIT, MOUNTABLE WITH SCREW M3

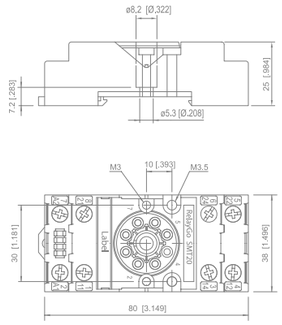
## SMT20 — 2 POLES, RAIL DIN

**Socket for octal relays, with clip and marking label**
**10 A / 300 V**

### Connection diagram




### Dimensions mm [in]




### Specifications

**Rated load** ..... 10 A / 300 V

**Insulation**

Test voltage , (Vrms/ 1 min.)

Contacts/coils ..... 2,5 kV
All terminals/DIN rail ..... 2,5 kV
Terminal/terminal ..... 25 kV

**Cross-section of connecting wire**

Single-wire ..... 4 mm² or 2 x 2,25 mm²
Multi-wire ..... 22 - 14 AWG
Cable with tip ..... 4 mm²
Max. screw torque ..... 1,2 Nm
Screw dimensions ..... M3, Pozi
Retaining clip plastic integrated

In process In process IEC 61810 EN 60947

### Socket for RM relays

**8 pin plug-in relays RM2010, RM2014, RM2117**

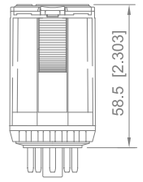
Mounting in rail DIN and panel
Coding label
Numeration EN/DIN

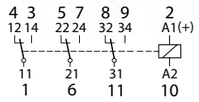
According to the norm EN 60947-1 and IEC 61810-1

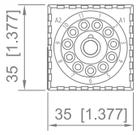
## RM3010 — 3 CHANGE-OVER CONTACTS, 11 PINS, TPDT

**General application** 10 A 250 V AC-1 0,5 A 110 V DC-1 / 10 A 30 V DC-1 0,5 A 220 V DC-1

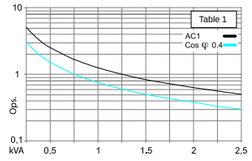
**Dimensions** mm [in]



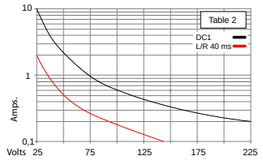




**Electric life, ops x 10⁴**




**Maxim load in VDC**




**Standard types**

AC 50 Hz, (60 Hz): 24, 48, 115, (120), 230, (240)

RM3010NN, RM3010LN, RM3010NR
DC: 24, 48, 110, 220
RM3010NN, RM3010LN, RM3010LD, RM3010LE
AC/DC: RM3010LU

**Sockets:** SMB30D, SMP30D, SMB30P, SMB30S, SMW30F, SMP30F

### Contacts

| | |
|---|---|
| Max.switching current | 10 A |
| Max.peak inrush current, 20ms | 30 A |
| Max. Switching voltage | 250 V |
| Max. VAC load (table 1) | 2,5 kVA |
| Max. VDC load | see (table 2) |
| Contact material | AgNi (std), std + 0,2 µ Au, std + 10 µ Au |

### Insulation

Contact

| | |
|---|---|
| Open contact | 1000 V |
| Contact/contact | 2,5 kV |
| Contact/coil | 2,5 kV |
| Insulation resistance at 500 V | >3G Ω |
| Insulation, EN 61810-1 | 2,5 kV/3 |

In process In process In process In process IEC 61810 EN 60947

### Specifications

| | |
|---|---|
| Pick-up time/bounce time | 16 ms + ≤ 3 ms |
| Release time/bounce time | 8 ms + ≤ 1 ms |
| Ambient temperature,operation/storage | -40ºC (no ice)60ºC/80ºC |
| Mechanical life ops. | VAC:10 Mill./VDC:20 Mill |
| VDC voltage endurance at rated load | >100.000 ops. |
| Switching frequency at rated load | 1200/h. |
| Protection class | IP40 / RT1 |
| Weight | 95 g. |

### Coils

| | |
|---|---|
| Pick-up voltage | < 0,8 x Un |
| Release voltage | >0,1 x Un |
| Nominal power | 2,2 VA (VAC) / 1,3 W (VDC) |

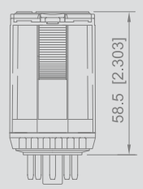
| VAC | Ω | mA |
|---|---|---|
| 24 | 67 | 92 |
| 48 | 296 | 46 |
| 115 | 1K7 | 19 |
| 230 | 7K1 | 9,5 |

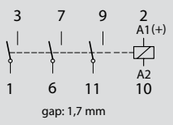
| VDC | Ω | mA |
|---|---|---|
| 24 | 443 | 54 |
| 48 | 1K8 | 27 |
| 110 | 9K2 | 12 |
| 220 | 36K1 | 6 |

## RM3014 — 3 OPEN CONTACTS, (NO) 11 PINS, TPST

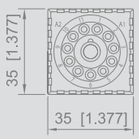
**Application for VDC** 10 A 250 V AC-1 1,2 A 110 V DC-1 / 10 A 30 V DC-1 0,4 A 220 V DC-1

**Dimensions** mm [in]

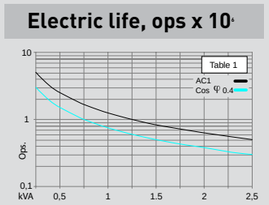


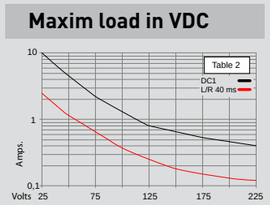

gap: 1,7 mm




**Electric life, ops x 10⁴**




**Maxim load in VDC**




**Standard types**

AC 50 Hz, (60 Hz): 24, 48, 115, (120), 230, (240)

RM3014NN, RM3014LN, RM3014NR,
DC: 24, 48, 110, 220
RM3014NN, RM3014LN, RM3014LD, RM3014LE
AC/DC: RM3014LU

**Sockets:** SMB30D, SMP30D, SMB30P, SMB30S, SMW30F, SMP30F

### Contacts

| | |
|---|---|
| Max.switching current | 10 A |
| Max.peak inrush current, 20ms | 30 A |
| Max. Switching voltage | 250 V |
| Max. VAC load (table 1) | 2,5 kV A |
| Max. VDC load | see (table 2) |
| Contact material | AgNi (std) |

### Insulation

Contact

| | |
|---|---|
| Open contact | 2000 V |
| Contact/contact | 2,5 kV |
| Contact/coil | 2,5 kV |
| Insulation resistance at 500 V | >3G Ω |
| Insulation, EN 61810-1 | 2,5 kV/3 |

In process In process IEC 61810 EN 60947

### Specifications

| | |
|---|---|
| Pick-up time/bounce time | 20 ms + ≤ 3 ms |
| Release time/bounce time | 10 ms + ≤ 1 ms |
| Ambient temperature,operation/storage | -40ºC (no ice)60ºC/80ºC |
| Mechanical life ops. | VAC:10 Mill./VDC:20 Mill |
| VDC voltage endurance at rated load | >100.000 ops. |
| Switching frequency at rated load | 1200/h. |
| Protection class | IP40/ RT1 |
| Weight | 95 g. |

### Coils

| | |
|---|---|
| Pick-up voltage | < 0,8 x Un |
| Release voltage | >0,1 x Un |
| Nominal power | 2,4 VA (VAC)/ 1,6 W (VDC) |

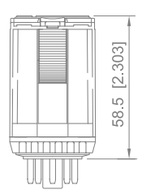
| VAC | Ω | mA |
|---|---|---|
| 24 | 65 | 100 |
| 48 | 286 | 50 |
| 115 | 1K7 | 21 |
| 230 | 6K8 | 10 |

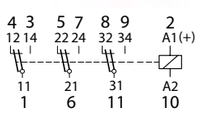
| VDC | Ω | mA |
|---|---|---|
| 24 | 360 | 66 |
| 48 | 1K4 | 34 |
| 110 | 7K6 | 15 |
| 220 | 30K3 | 7,5 |

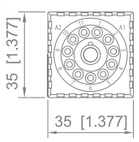
## RM3117 — 3 TWIN CONTACTS, 11 PINS, TPDT

**Low signal, three change-over** 6 A 250 V AC-1 6 A 30 V DC-1 / 5 mA/5 V 1 mA/5 V DC-1

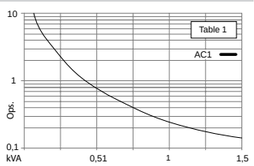
**Dimensions** mm [in]



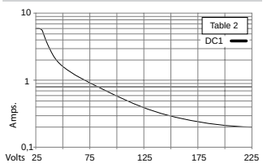




**Electric life, ops x 10⁴**




**Maxim load in VDC**




**Standard types**

AC 50 Hz, (60 Hz): 24, 48, 115, (120), 230, (240)

RM3117NN, RM3117LN, RM3117NR
DC: 24, 48, 110, 220
RM3117NN, RM3117LN, RM3117LD, RM3117LE
AC/DC: RM3117LU

**Sockets:** SMB30D, SMP30D, SMB30P, SMB30S,SMW30F, SMP30F

### Contacts

| | |
|---|---|
| Max.switching current | 6 A |
| Max.peak inrush current, 20ms | 15 A |
| Max. Switching voltage | 250 V |
| Max. VAC load (table 1) | 1,2 kVA |
| Max. VDC load | see (table 2) |
| Contact material | AgNi + 0,2 µ Au (std), std + 10 µ Au |

### Insulation

Contact

| | |
|---|---|
| Open contact | 1000 V |
| Contact/contact | 2,5 kV |
| Contact/coil | 2,5 kV |
| Insulation resistance at 500 V | >3G Ω |
| Insulation, EN 61810-1 | 2,5 kV / 3 |

In process In process IEC 61810 EN 60947

### Specifications

| | |
|---|---|
| Pick-up time/bounce time | 16 ms + ≤ 3 ms |
| Release time/bounce time | 8 ms + ≤ 1 ms |
| Ambient temperature,operation/storage | -40ºC (no ice)60ºC/80ºC |
| Mechanical life ops. | VAC:10 Mill./VDC:20 Mill |
| VDC voltage endurance at rated load | >100.000 ops. |
| Switching frequency at rated load | 1200/h. |
| Protection class | IP40 / RT1 |
| Weight | 95 g. |

### Coils

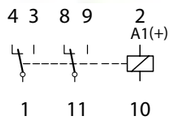
| | |
|---|---|
| Pick-up voltage | < 0,8 x Un |
| Release voltage | >0,1 x Un |
| Nominal power | 2,2 VA (VAC)/ 1,3 W (VDC) |

| VAC | Ω | mA |
|---|---|---|
| 24 | 67 | 92 |
| 48 | 296 | 46 |
| 115 | 1K7 | 19 |
| 230 | 7K1 | 9,5 |

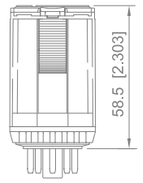
| VDC | Ω | mA |
|---|---|---|
| 24 | 443 | 54 |
| 48 | 1K8 | 27 |
| 110 | 9K2 | 12 |
| 220 | 36K1 | 6 |

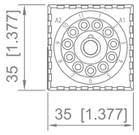
## RM2112 — 2 CHANGE-OVER SENSITIVE RELAY, 11 PINS, DPDT

**Sensitive relay 500 mW** **6 A 250 V AC-1 6A 3 0 V DC-1**

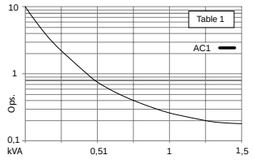



**Dimensions** mm [in]

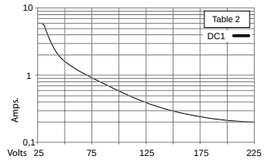



**Electric life, ops x 10⁴**




**Maxim load in VDC**




**Standard types**

DC: 12, 24, 48, 60, 110
RM2112NN, RM2112D, RM2112E
**Sockets:** SMB30D, SMP30D, SMB30P, SMB30S, SMW30F, SMP30F

### Contacts

| | |
|---|---|
| **Max.switching current** | 6 A |
| **Max.peak inrush current, 20ms** | 15 A |
| **Max. Switching voltage** | 250 V |
| **Max. VAC load (table 1)** | 2,5 kVA |
| **Max. VDC load** | see (table 2) |
| **Contact material** | AgNi + 0,2 µ Au (std), 10 µ Au |

### Insulation

**Contact**

| | |
|---|---|
| Open contact | 1000 V |
| Contact/contact | 2,5 kV |
| Contact/coil | 2,5 kV |
| **Insulation resistance at 500 V** | >3G Ω |
| **Insulation, EN 61810-1** | 2,5 kV/3 |

IEC 61810 EN 60947

### Specifications

| | |
|---|---|
| **Pick-up time/bounce time** | 18 ms/ ≤ 3 ms |
| **Release time/bounce time** | 10 ms/ ≤ 1 ms |
| **Ambient temperature,operation/storage** | -40ºC (no ice)60ºC/80ºC |
| **Mechanical life ops.** | VAC:10 Mill./VDC:20 Mill |
| **VDC voltage endurance at rated load** | >100.000 ops. |
| **Switching frequency at rated load** | 1200/h. |
| **Protection class** | IP40 / RT1 |
| **Weight** | 90 g. |

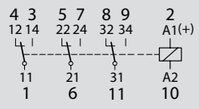
### Coils

| | |
|---|---|
| **Pick-up voltage** | < 0,8 x Un |
| **Release voltage** | >0,1 x Un |
| **Nominal power** | 500 mW) |

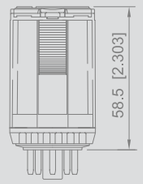
| VDC | Ω | mA |
|---|---|---|
| 24 | 1K1 | 21 |
| 48 | 4K6 | 10 |
| 60 | 7K2 | 8,3 |
| 110 | 24K2 | 4,5 |

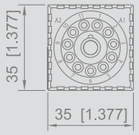
## RM3113 — 3 CHANGE-OVER SENSITIVE RELAY, 11 PINS, TPDT

**Sensitive relay 800 mW** **6 A 250 V AC-1 6 A 30 V DC-1**

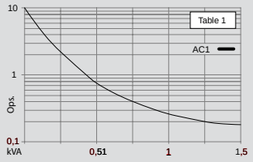



**Dimensions** mm [in]

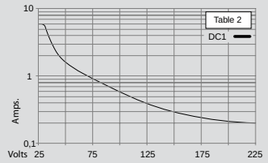



**Electric life, ops x 10⁴**




**Maxim load in VDC**




**Standard types**

DC: 24, 48, 60, 110
RM3113NN, RM3113D, RM3113E
**Sockets:** SMB30D, SMP30D, SMB30P, SMB30S, SMW30F, SMP30F

### Contacts

| | |
|---|---|
| **Max.switching current** | 6 A |
| **Max.peak inrush current, 20ms** | 15 A |
| **Max. Switching voltage** | 250 V |
| **Max. VAC load (table 1)** | 2,5 kVA |
| **Max. VDC load** | see (table 2) |
| **Contact material** | AgNi + 0,2 µ Au (std), 10 µ Au |

### Insulation

**Contact**

| | |
|---|---|
| Open contact | 1000 V |
| Contact/contact | 2,5 kV |
| Contact/coil | 2,5 kV |
| **Insulation resistance at 500 V** | >3G Ω |
| **Insulation, EN 61810-1** | 2,5 kV / 3 |

IEC 61810 EN 60947

### Specifications

| | |
|---|---|
| **Pick-up time/bounce time** | 18 ms/ ≤ 3 ms |
| **Release time/bounce time** | 10 ms/ ≤ 1 ms |
| **Ambient temperature,operation/storage** | -40ºC (no ice)60ºC/80ºC |
| **Mechanical life ops.** | VAC:10 Mill./VDC:20 Mill |
| **VDC voltage endurance at rated load** | >100.000 ops. |
| **Switching frequency at rated load** | 1200/h. |
| **Protection class** | IP40 / RT1 |
| **Weight** | 90 g. |

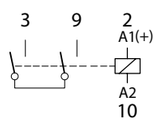
### Coils

| | |
|---|---|
| **Pick-up voltage** | < 0,8 x Un |
| **Release voltage** | >0,1 x Un |
| **Nominal power** | 800 mW |

| VDC | Ω | mA |
|---|---|---|
| 24 | 720 | 33 |
| 48 | 2K8 | 17 |
| 60 | 4K5 | 13 |
| 110 | 15K | 7 |

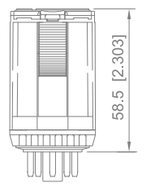
## RM1015 — 1 DOUBLE MAKE OPEN CONTACT, 11 PINS, SPST

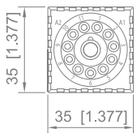
**Power relay, VDC** **10 A 250 V AC-1 7 A 110 V DC-1**
**10 A 30 V DC-1 1,2 A 220 V DC-1**



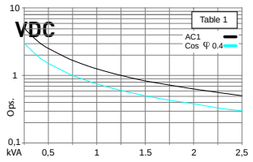

gap > 3 mm (1,7 + 1,7)

**Dimensions** mm [in]

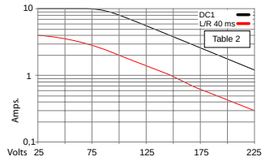



**DC-1 Electric life, ops x 10⁴**




**Maxim load in**




**Standard types**

AC 50 Hz, (60 Hz): 24, 48, 115, (120), 230, (240)
RM1015NN, RM1015LN, RM1015NR
DC: 24, 48, 110, 220
RM1015NN, RM1015LN, RM1015LD, RM1015LE
AC/DC: RM1015LU
**Sockets:** SMB30D, SMP30D, SMB30P, SMB30S, SMW30F, SMP30F

### Contacts

| | |
|---|---|
| **Max.switching current** | 10 A |
| **Max.peak inrush current, 20ms** | 30 A |
| **Max. Switching voltage** | 250 V |
| **Max. VAC load (table 1)** | 2,5 kVA |
| **Max. VDC load** | see (table 2) |
| **Contact material** | AgNi (std) |

### Insulation

**Contact**

| | |
|---|---|
| Open contact | 2,5 kV |
| Contact/coil | 2,5 kV |
| **Insulation resistance at 500 V** | >3G Ω |
| **Insulation, EN 61810-1** | 2,5 kV/3 |

IEC 61810 EN 60947

### Specifications

| | |
|---|---|
| **Pick-up time/bounce time** | 20 ms + ≤ 3 ms |
| **Release time/bounce time** | 10 ms + ≤ 1 ms |
| **Ambient temperature,operation/storage** | -40ºC (no ice)60ºC/80ºC |
| **Mechanical life ops.** | VAC:10 Mill./VDC:20 Mill |
| **VDC voltage endurance at rated load** | >100.000 ops. |
| **Switching frequency at rated load** | 1200/h. |
| **Protection class** | IP40 / RT1 |
| **Weight** | 90 g. |

### Coils

| | |
|---|---|
| **Pick-up voltage** | < 0,8 x Un |
| **Release voltage** | >0,1 x Un |
| **Nominal power** | 2,4 VA (VAC) / 1,3 W (VDC) |

| VAC | Ω | mA |
|---|---|---|
| 24 | 65 | 100 |
| 48 | 286 | 50 |
| 115 | 1K7 | 21 |
| 230 | 6K8 | 10 |

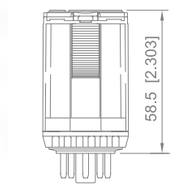
| VDC | Ω | mA |
|---|---|---|
| 24 | 443 | 54 |
| 48 | 1K7 | 27 |
| 110 | 9K2 | 12 |
| 220 | 36K1 | 6 |

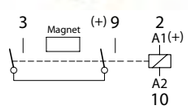
## RM1016 — 1 OPEN CONTACT, MAGNETIC BLOW OUT, 11 PINS, SPST

**Power double make relay VDC**

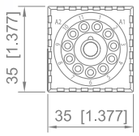
**10 A 250 V AC-1** **10A 220V DC-1**
**3,6 A 110 V L/R40ms** **2A 220V L/R40ms**

### Dimensions mm [in]

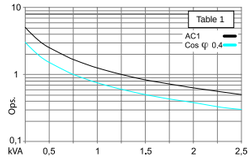


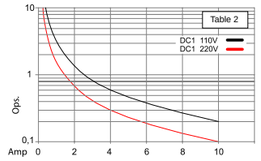

gap > 3 mm ( 1,7 + 1,7)




### Electric life, ops x 10⁴




### Maxim load in VDC




### Standard types

AC 50 Hz, (60 Hz): 24, 48, 115, (120), 230, (240)
RM1016NN, RM1016LN, RM1016NR
DC: 24, 48, 110, 220
RM1016NN, RM1016LN, RM1016LD, RM1016LE
AC/DC: RM1016LU
**Sockets:** SMB30D, SMP30D, SMB30P, SMB30S, SMW30F, SMP30F

### Contacts

| | |
|---|---|
| Max.switching current | 10 A |
| Max.peak inrush current, 20ms | 30 A |
| Max. Switching voltage | 250 V |
| Max. VAC load (table 1) | 2,5 kVA |
| Max. VDC load | see (table 2) |
| Contact material | AgNi (std) |

### Insulation

Contact

| | |
|---|---|
| Open contact | 2,5 kV |
| Contact/coil | 2,5 kV |
| Insulation resistance at 500 V | >3G Ω |
| Insulation, EN 61810-1 | 2,5 kV / 3 |

CE cULus In process RoHS IEC 61810 EN 60947

### Specifications

| | |
|---|---|
| Pick-up time/bounce time | 20 ms + ≤ 3 ms |
| Release time/bounce time | 10 ms + ≤ 1 ms |
| Ambient temperature,operation/storage | -40ºC (no ice)60ºC/80ºC |
| Mechanical life ops. | VAC:10 Mill./VDC:20 Mill |
| VDC voltage endurance at rated load | >100.000 ops. |
| Switching frequency at rated load | 1200/h. |
| Protection class | IP40 / RT1 |
| Weight | 90 g. |

### Coils

| | |
|---|---|
| Pick-up voltage | < 0,8 x Un |
| Release voltage | >0,1 x Un |
| Nominal power | 2,4 VA (VAC)/ 1,3W (VDC) |

| VAC | Ω | mA |
|---|---|---|
| 24 | 65 | 100 |
| 48 | 286 | 50 |
| 115 | 1K7 | 21 |
| 230 | 6K8 | 10 |

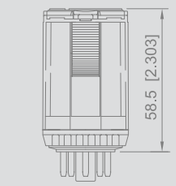
| VDC | Ω | mA |
|---|---|---|
| 24 | 443 | 54 |
| 48 | 1K7 | 27 |
| 110 | 9K2 | 12 |
| 220 | 36K1 | 6 |

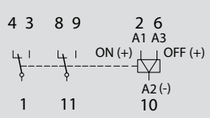
## RM2019 — 2 CHANGE-OVER CONTACTS, REMANENCE, 11 PINS, DPDT

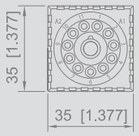
**Magnetic remanence**

**10 A 250 V AC-1** **0,5 A 110 V DC-1**
**10 A 30 V DC-1** **0,2 A 220 V DC-1**

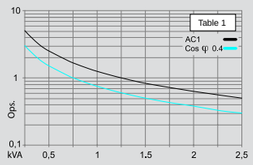
### Dimensions mm [in]



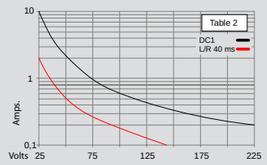




### Electric life, ops x 10⁴




### Maxim load in VDC




### Standard types

AC 50 Hz, (60 Hz): 24, 48, 115, (120), 230, (240)
RM2019NN
DC: 12, 24, 48, 110
RM2019NN
**Sockets:** SMB30D, SMP30D, SMB30P, SMB30S, SMW30F, SMP30F

### Contacts

| | |
|---|---|
| Max.switching current | 10 A |
| Max.peak inrush current, 20ms | 30 A |
| Max. Switching voltage | 250 V |
| Max. VAC load (table 1) | 2,5 kVA |
| Max. VDC load | see (table 2) |
| Contact material | AgNi (std), std + 0,2 µ Au, std +10 µ Au |

### Insulation

Contact

| | |
|---|---|
| Open contact | 1000 V |
| Contact/contact | 2,5 kV |
| Contact/coil | 2,5 kV |
| Insulation resistance at 500 V | >3G Ω |
| Insulation, EN 61810-1 | 2,5 kV/3 |

CE cULus In process EAC In process RoHS IEC 61810 EN 60947

### Specifications

| | |
|---|---|
| Pick-up time/bounce time | 50 ms. |
| Ambient temperature,operation/storage | -40ºC (no ice)60ºC/80ºC |
| Mechanical life ops. | VAC:10 Mill./VDC:20 Mill |
| VDC voltage endurance at rated load | >100.000 ops. |
| Switching frequency at rated load | 1200/h. |
| Protection class | IP40/ RT1 |
| Weight | 95 g. |

### Coils

| | |
|---|---|
| Pick-up voltage | 1,5 VA/W |
| Release voltage | 0,5 VA/W |

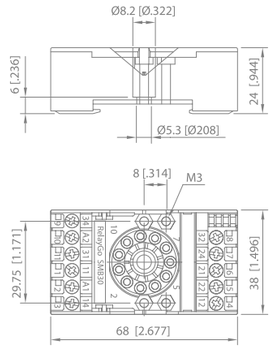
| VAC | ONmA | OFFmA |
|---|---|---|
| 24 | 75 | 12 |
| 48 | 38 | 6 |
| 115 | 16 | 2,5 |
| 230 | 8 | 1,3 |

| VDC | ONmA | OFFmA |
|---|---|---|
| 12 | 125 | 41 |
| 24 | 63 | 21 |
| 48 | 31 | 10 |
| 110 | 14 | 4,5 |

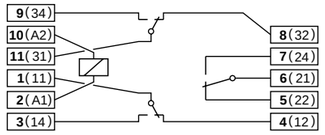
## SMB30 — 3 POLES, RAIL DIN

**Socket for undecal relays, with clip and marking label** — **10 A / 250 V**

### Dimensions mm [in]




### Connection diagram




### Specifications

**Rated load** ..... 10 A / 250 V

**Insulation**

Test voltage, (Vrms/ 1 min.)

Contacts/coils ..... 2,5 kV
All terminals/DIN rail ..... 2,5 kV
Terminal/terminal ..... 25 kV

**Cross-section of connecting wire**

Single-wire ..... 4 mm² or 2 x 2,25 mm²
Multi-wire ..... 22 - 14 AWG
Cable with tip ..... 4 mm²
Max. screw torque ..... 1,2 Nm
Screw dimensions ..... M3, Pozi
Retaining clip plastic integrated
Weight ..... 55 gr

CE cULus cULus (In process) Lloyd's (In process) EAC (In process) RoHS IEC 61810 EN 60947

### Socket for RM relays

**Socket for RM 11 pin plug-in relays RM3010, RM3014, RM3117, RM2112, RM3113, RM1015, RM1016, RM2019**

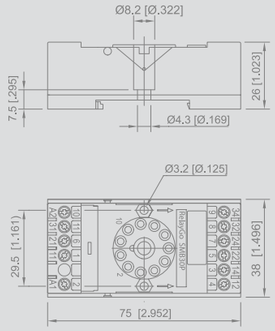
Mounting in rail DIN and panel
Coding label.
Numeration EN/DIN

According to the norm EN 60947-1 and IEC 61810-1

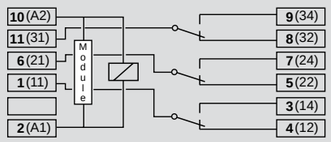
## SMB30P 0 — 3 POLES, RAIL DIN, PLUG-IN MODULES MM1, PARALLEL

**Accesories of the coil for plug-in module to the socket** — **10 A / 250 V**

### Dimensions mm [in]




### Connection diagram




### Specifications

**Rated load** ..... 10 A / 250 V

**Insulation**

Test voltage, (Vrms/ 1 min.)

Contacts/coils ..... 2,5 kV
All terminals/DIN rail ..... 2,5 kV
Terminal/terminal ..... 25 kV

**Cross-section of connecting wire**

Single-wire ..... 4 mm² or 2 x 2,25 mm²
Multi-wire ..... 22 - 14 AWG
Cable with tip ..... 4 mm²
Max. screw torque ..... 1,2 Nm
Screw dimensions ..... M3, Pozi
Retaining clip plastic integrated
Weight ..... 55 gr

CE cULus cULus (In process) Lloyd's (In process) EAC (In process) RoHS IEC 61810 EN 60947

### Socket for RM relays

**Socket for RM 11 pin plug-in relays RM3010, RM3014, RM3117, RM2112, RM3113, RM1015, RM1016, RM2019**

Mounting in rail DIN and panel
Coding label.
Numeration EN/DIN

According to the norm EN 60947-1 and IEC 61810-1

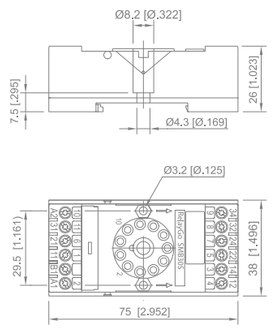
### MM1

Paralel module for the socket SMB30P

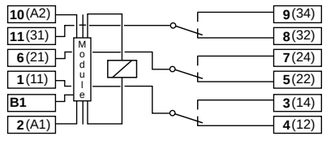
## SMB30S 0 — 3 POLES, RAIL DIN PLUG-IN MODULES MM2, SERIES

**Accesories of the coil for plug-in module to the socket** — **10 A / 300 V**

### Dimensions mm [in]




### Connection diagram




### Specifications

**Rated load** ..... 10 A / 250 V

**Insulation**

Test voltage, (Vrms/ 1 min.)

Contacts/coils ..... 2,5 kV
All terminals/DIN rail ..... 2,5 kV
Terminal/terminal ..... 25 kV

**Cross-section of connecting wire**

Single-wire ..... 4 mm² or 2 x 2,25 mm²
Multi-wire ..... 22 - 14 AWG
Cable with tip ..... 4 mm²
Max. screw torque ..... 1,2 Nm
Screw dimensions ..... M3, Pozi
Retaining clip plastic integrated
Weight ..... 55 gr

CE cULus cULus (In process) Lloyd's (In process) EAC (In process) RoHS IEC 61810 EN 60947

### Socket for RM relays

**Socket for RM 11 pin plug-in relays RM3010, RM3014, RM3117, RM2112, RM3113, RM1015, RM1016, RM2019**

Mounting in rail DIN and panel
Coding label.
Numeration EN/DIN

According to the norm EN 60947-1 and IEC 61810-1

### MM2

Serie module for the socket SMB20S.

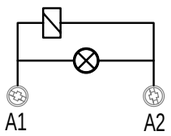
# MM modules for sockets



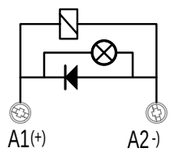
## MM1 MODULES FOR SOCKET SMB30P

**In parallel with the coil**

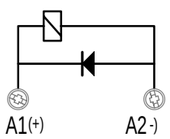

**Pilot LED**
MM1L / 24 VAC/VDC
MM1L / 48 VAC/VDC
MM1L / 110 ... 125 VAC/VDC
MM1L / 200 ... 230 VAC/VDC



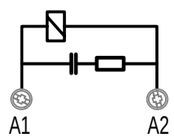

**Freewheeling diode and LED**
MM1LD / 24 VDC
MM1LD / 48 VDC
MM1LD / 110 ... 125 VDC
MM1LD / 200 ... 230 VDC




**Freewheeling diode**
MM1ND / 12 ... 60 VDC
MM1ND / 12 ... 250 VDC



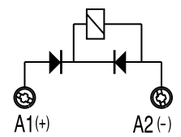

**RC suppressor (LED not available)**
MM1NR / 20 ... 50 VAC
MM1NR / 110 ... 120 VAC
MM1NR / 220 ... 240 VAC



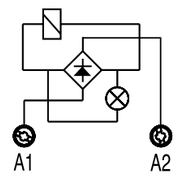

## MM2 MODULES FOR SOCKET SMB30S

**In serie with the coil**

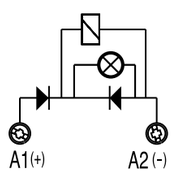

**Freewheeling and polarity diode**
MM2NE / 12 ... 60 VDC
MM2NE /12 ... 250 VDC

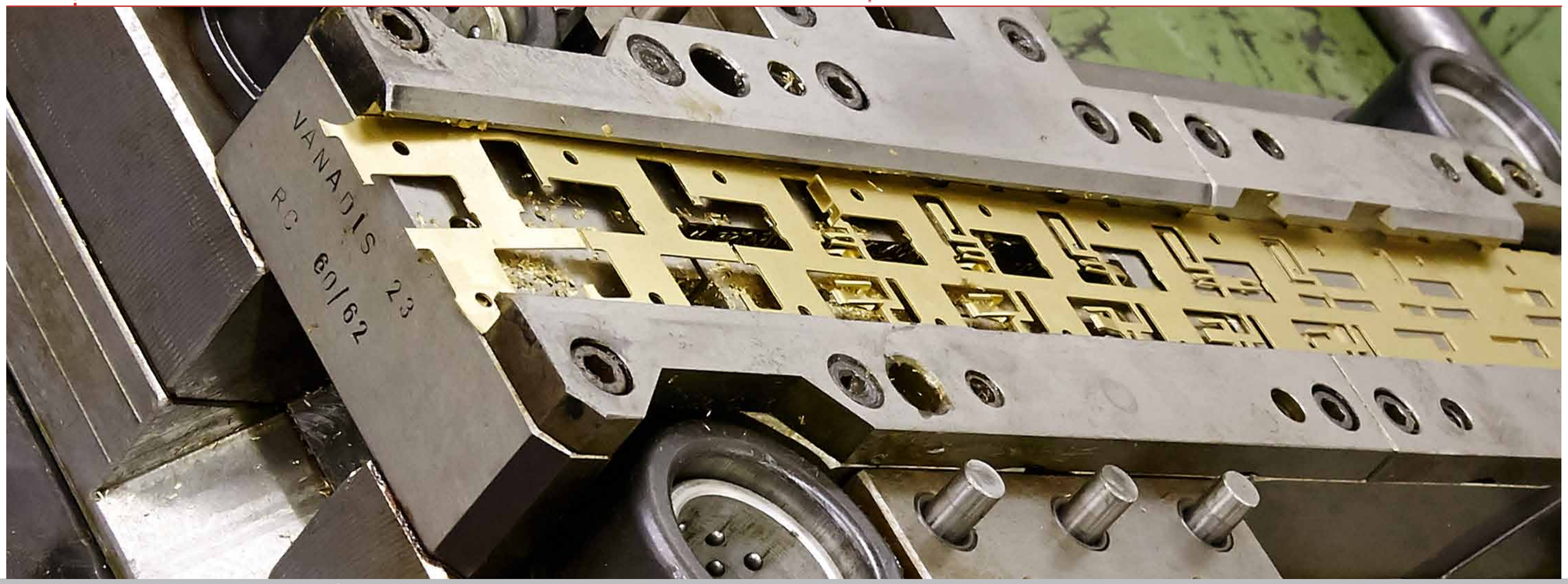



**Rectifier bridge and LED**
MM2NU / 12 ... 48 VAC/VDC
MM2LU / 12 VAC/VDC
MM2LU / 24 VAC/VDC
MM2LU / 48 VAC/VDC




**Freewheeling, polarity and LED diode**
MM2LE / 24 VDC
MM2LE / 48 VDC
MM2LE / 110 ... 125 VDC
MM2LE / 200 ... 230 VDC







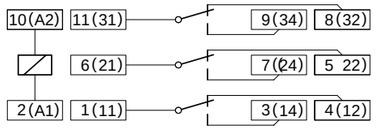

www.relaygo.com / Laguna 30. 28923, Alcorcón (Madrid) - Spain / Tlf: +34 916 416 012 Fax.: +34 916 412 193

## SMT30 — 3 POLES, RAIL DIN

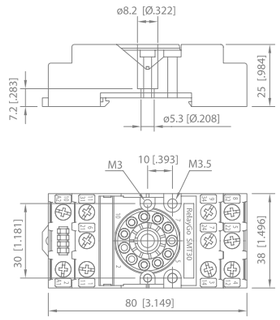
**Socket for undecal relays, with clip and marking label**

**10 A / 250 V**

### Connection diagram




### Dimensions mm [in]




### Specifications

**Rated load** ..... 10 A / 250 V

**Insulation**

Test voltage, (Vrms/ 1 min.)

Contacts/coils ..... 2,5 kV
All terminals/DIN rail ..... 2,5 kV
Terminal/terminal ..... 2,5 kV

**Cross-section of connecting wire**

Single-wire ..... 4 mm² or 2 x 2,25 mm²
Multi-wire ..... 22 - 14 AWG
Cable with tip ..... 4 mm²
Max. screw torque ..... 1,2 Nm
Screw dimensions ..... M3, Pozi
Retaining clip plastic integrated
Weight ..... 55 gr

In process In process In process

IEC 61810 EN 60947

### Socket for RM relays

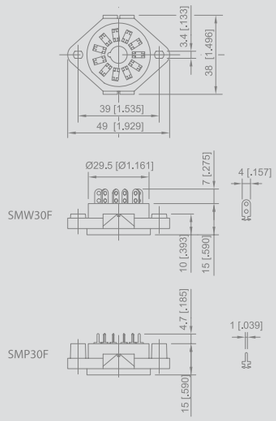
**Socket for RM 11 pin plug-in relays RM3010, RM3014, RM3117, RM2112, RM3113, RM1015, RM1016, RM2019**

Mounting in rail DIN and panel
Coding label.
Numeration EN/DIN

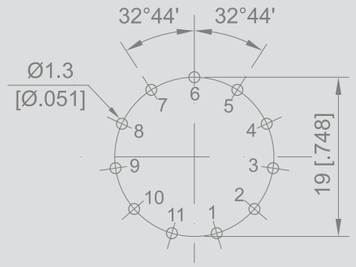
According to the norm EN 60947-1 and IEC 61810-1

## SMW30F — 3 POLES, PANEL MOUNTING, SOLDERING WITH CABLES

### Dimensions mm [in]




### PCB mounting




### Socket for RM relays

**Socket for RM 11 pin plug-in relays RM3010, RM3014, RM3117, RM2112, RM3113, RM1015, RM1016, RM2019**

### Specifications

**Rated load** ..... 10 A / 250 V
**Insulation (terminal/terminal)** ..... 2,5 kV

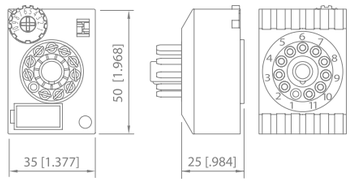
In process

## SMP30F — 3 POLES, PRINTED CIRCUIT, MOUNTABLE WITH SCREW M3

## TM

TM timers plug into the sockets timing 8 and 11 pin relays.
RM2 & RM3. These relays plug into the timer.

**Dimensions** mm [in]



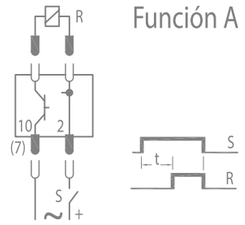

**Specifications**

| | |
|---|---|
| Repetition accuracy | +0,5 % /20 ms. |
| Voltage variations | 1ms/volt |
| Ambient temperature | -0,25% /K |
| Reset time | <150 ms. |
| Reset time | <200 ms. |
| Operation time | VAC/VDC 80/50 ms. |
| Ambient temperature | -10ºC...+60ºC |
| Protection | IEC 255.4 |
| **Material** | **PC Lexan or similar** |
| Protection degree | IP40 |
| Weight | 35 g |

## TMA — ON DELAY

**The count is initiated when S is closed. The relay is activated when the time (t) is achieved**

**Connection diagram**



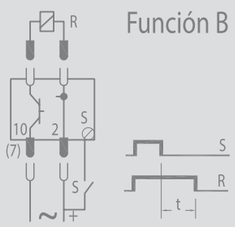

**Tipes TMA2 and TMA3 with time scale 0,2 sec - 30 min.**

| | |
|---|---|
| **TMA2L** | 12 ... 60 V |
| **TMA2H** | 61... 240 V |
| **TMA3L** | 12 ... 60 V |
| **TMA3H** | 61... 240 V |

## TMB — INTERVAL IN OFF-IMPULSE

**The count is initiated when S is opened. The relay is desactivated when time t is desactivated.**

**Connection diagram**



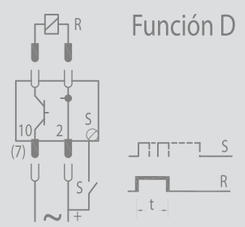

**Tipes TMB2 and TMB3 with time scale 0,2 sec - 30 min.**

| | |
|---|---|
| **TMB2L** | 12 ... 60 V |
| **TMB2H** | 61... 240 V |
| **TMB3L** | 12 ... 60 V |
| **TMB3H** | 61... 240 V |

## TMD — IMPUSE-ON INTERVAL

**The relay is activated with a closing pulse in S and desactivated when the the time (t) is achieved**

**Connection diagram**



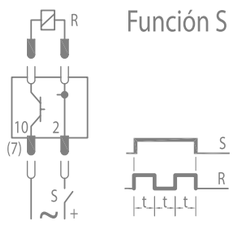

**Tipes TMD2 and TMD3 with time scale 0,2 sec - 30 min.**

| | |
|---|---|
| **TMD2L** | 12 ... 60 V |
| **TMD2H** | 61... 240 V |
| **TMD3L** | 12 ... 60 V |
| **TMD3H** | 61... 240 V |

## TMS — CYCLIC

**The relay is activated intermittent in time cycles (t) when S is closed. First cycle ON**

**Connection diagram**



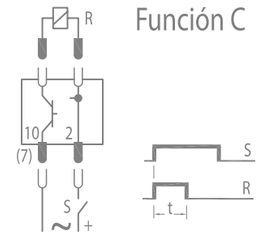

**Tipes TMS2 and TMS3 with time scale 0,2 sec - 30 min.**

| | |
|---|---|
| **TMS2L** | 12 ... 60 V |
| **TMS2H** | 61... 240 V |
| **TMS3L** | 12 ... 60 V |
| **TMS3H** | 61... 240 V |

## TMC — ONE SHOT DELAY

**The relay is activated when S is closed and desactivated when the time (t) is achieved.**

**Connection diagram**



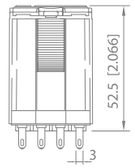

**Tipes TMC2 and TMC3 with time scale 0,2 sec - 30 min.**

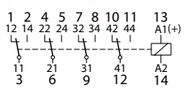
| | |
|---|---|
| **TMC2L** | 12 ... 60 V |
| **TMC2H** | 61... 240 V |
| **TMC3L** | 12 ... 60 V |
| **TMC3H** | 61... 240 V |

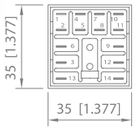
## RM4010 — 4 CHANGE-OVER CONTACTS, 14 FASTON, FPDT

**General application** 10 A 250 V AC-1 0,5 A 110 V DC-1 / 10 A 30 V DC-1 0,2 A 220 V DC-1

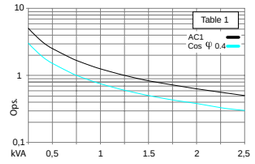
### Dimensions mm [in]



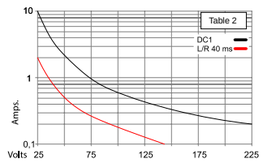




### Electric life, ops x 10⁴




### Maxim load in VDC




### Standard types

AC 50 Hz, (60 Hz): 24, 48, 115, (120), 230, (240)
RM4010NN, RM4010LN, RM4010NR
DC: 24, 48, 110, 220

RM4010NN, RM4010LN, RM4010LD, RM4010LE
AC/DC: RM4010LU

**Sockets:** SMT40D, SMW40F, SMP40X, SMP40F

### Contacts

| | |
|---|---|
| Max.switching current | 10 A |
| Max.peak inrush current, 20ms | 30 A |
| Max. Switching voltage | 250 V |
| Max. VAC load (table 1) | 2,5 kVA |
| Max. VDC load | see (table 2) |
| Contact material | AgNi (std) + Agni + 0,2 µ Au, std +10 µ Au |

### Insulation

| | |
|---|---|
| Contact | |
| Open contact | 1000 V |
| Contact/contact | 2,5 kV |
| Contact/coil | 2,5 KV |
| Insulation resistance at 500 V | >3G Ω |
| Insulation, EN 61810-1 | 2,5 kV/3 |

CE Lloyd's (In process) (In process) EAC (In process) RoHS IEC 61810 EN 60947

### Specifications

| | |
|---|---|
| Pick-up time/bounce time | 20 ms + ≤ 3 ms |
| Release time/bounce time | 10 ms + ≤ 1 ms |
| Ambient temperature,operation/storage | -40ºC (no ice)60ºC/80ºC |
| Mechanical life ops. | VAC:10 Mill./VDC:20 Mill |
| VDC voltage endurance at rated load | >100.000 ops. |
| Switching frequency at rated load | 1200/h. |
| Protection class | IP40 / RT1 |
| Weight | 90 g. |

### Coils

| | |
|---|---|
| Pick-up voltage | < 0,8 x Un |
| Release voltage | >0,1 x Un |
| Nominal power | 2,4 VA (VAC)/ 1,4 W (VDC) |

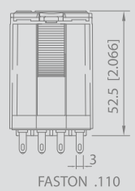
| VAC | Ω | mA |
|---|---|---|
| 24 | 65 | 100 |
| 48 | 286 | 50 |
| 115 | 1K7 | 21 |
| 230 | 6K8 | 10 |

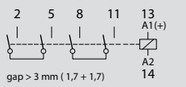
| VDC | Ω | mA |
|---|---|---|
| 24 | 414 | 58 |
| 48 | 1K6 | 30 |
| 110 | 8K1 | 13 |
| 220 | 35K7 | 6,2 |

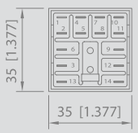
## RM2015 — 2 DOUBLE MAKE OPEN CONTACT, 6 FASTON, DPST

**Power relay, VDC** 10 A 250 V AC-1 7 A 110 V DC-1 / 10 A 30 V DC-1 1,2 A 220 V DC-1

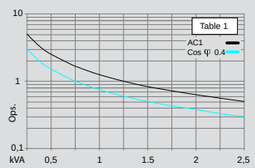
### Dimensions mm [in]



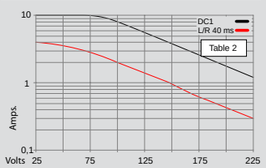




### Electric life, ops x 10⁴




### Maxim load in VDC




### Standard types

AC 50 Hz, (60 Hz): 24, 48, 115, (120), 230, (240)
RM2015NN, RM2015LN, RM2015NR
DC: 24, 48, 110, 220

RM2015NN, RM2015LN, RM2015LD, RM2015LE
AC/DC: RM2015LU

**Sockets:** SMT40D, SMW40F, SMP40X, SMP40F

### Contacts

| | |
|---|---|
| Max.switching current | 10 A |
| Max.peak inrush current, 20ms | 30 A |
| Max. Switching voltage | 250 V |
| Max. VAC load (table 1) | 2,5 kVA |
| Max. VDC load | see (table 2) |
| Contact material | AgNi (std) |

### Insulation

| | |
|---|---|
| Contact | |
| Open contact | 2,5 kV |
| Contact/contact | 2,5 kV |
| Contact/coil | 2,5 kV |
| Insulation resistance at 500 V | >3G Ω |
| Insulation, EN 61810-1 | 2,5 kV/3 |

CE (In process) (In process) EAC RoHS EC 61810 EN 60947

### Specifications

| | |
|---|---|
| Pick-up time/bounce time | 20 ms + ≤ 3 ms |
| Release time/bounce time | 10 ms + ≤ 1 ms |
| Ambient temperature,operation/storage | -40ºC (no ice)60ºC/80ºC |
| Mechanical life ops. | VAC:10 Mill./VDC:20 Mill |
| VDC voltage endurance at rated load | >100.000 ops. |
| Switching frequency at rated load | 1200/h. |
| Protection class | IP40 / RT1 |
| Weight | 90 g. |

### Coils

| | |
|---|---|
| Pick-up voltage | < 0,8 x Un |
| Release voltage | >0,1 x Un |
| Nominal power | 2,4 VA (VAC) / 1,3 W (VDC) |

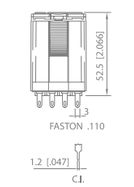
| VAC | Ω | mA |
|---|---|---|
| 24 | 65 | 100 |
| 48 | 286 | 50 |
| 115 | 1K7 | 21 |

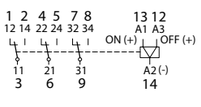
| VDC | Ω | mA |
|---|---|---|
| 24 | 443 | 54 |
| 48 | 1K8 | 27 |
| 110 | 9K2 | 12 |
| 220 | 36K1 | 6 |

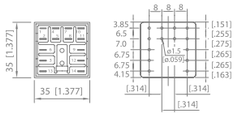
## RM3019 — 3 CHANGE-OVER CONTACTS, REMANENCE, 12 FASTON TPDT

**Magnetic remanence** 10 A 250 V AC-1 0,5 A 110 V DC-1 / 10 A 30 V DC-1 0,2 A 220 V DC-1

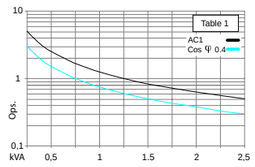
### Dimensions mm [in]



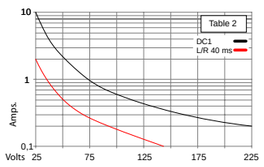




### Electric life, ops x 10⁴




### Maxim load in VDC




### Standard types

AC 50 Hz, (60 Hz): 24, 48, 115, (120), 230, (240)
RM3019NN
DC: 12, 24, 48, 110
RM3019NN

**Sockets:** SMT40D, SMW40F, SMP40X, SMP40F

### Contacts

| | |
|---|---|
| Max.switching current | 10 A |
| Max.peak inrush current, 20ms | 30 A |
| Max. Switching voltage | 250 V |
| Max. VAC load (table 1) | 2,5 kVA |
| Max. VDC load | see (table 2) |
| Contact material | Agni + 0,2 µ Au (std), 10 µ Au |

### Insulation

| | |
|---|---|
| Contact | |
| Open contact | 2,5 kV |
| Contact/contact | 2,5 kV |
| Contact/coil | 2,5 kV |
| Insulation resistance at 500 V | >3G Ω |
| Insulation, EN 61810-1 | 2,5 kV / 3 |

CE (In process) (In process) EAC RoHS EC 61810 EN 60947

### Specifications

| | |
|---|---|
| Pick-up time/bounce time | 50 ms. |
| Ambient temperature,operation/storage | -40ºC (no ice)60ºC/80ºC |
| Mechanical life ops. | VAC:10 Mill./VDC:20 Mill |
| VDC voltage endurance at rated load | >100.000 ops. |
| Switching frequency at rated load | 1200/h. |
| Protection class | IP40 / RT1 |
| Weight | 90 g. |

### Coils

| | |
|---|---|
| Pick-up voltage | 1,5 VA/W |
| Release voltage | 0,5 VA/W |

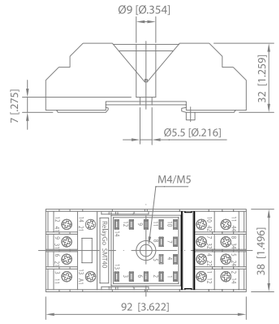
| VAC | ONmA | OFFmA |
|---|---|---|
| 24 | 75 | 12 |
| 48 | 38 | 6 |
| 115 | 16 | 2,5 |
| 230 | 8 | 1,3 |

| VDC | ONmA | OFFmA |
|---|---|---|
| 12 | 125 | 41 |
| 24 | 63 | 21 |
| 48 | 31 | 10 |
| 110 | 14 | 4,5 |

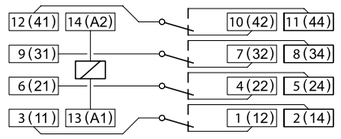
## SMT40 — 4 POLES, RAIL DIN

**Socket for RM4 relay, with clip and marking label**
**10 A / 250 V**

### Dimensions mm [in]




### Connection diagram




### Specifications

**Rated load** ..... 10 A / 250 V

**Insulation**

Test voltage, (Vrms/ 1 min.)

Contacts/coils ..... 2,5 kV
All terminals/DIN rail ..... 2,5 kV
Terminal/terminal ..... 2,5 kV

**Cross-section of connecting wire**

Single-wire ..... 4 mm² or 2 x 2,25 mm²
Multi-wire ..... 22 - 14 AWG
Cable with tip ..... 4 mm²
Max. screw torque ..... 1,2 Nm
Screw dimensions ..... M3, Pozi
Retaining clip plastic integrated

CE Lloyd's In process EAC In process RoHS IEC 61810 EN 60947

### Socket for RM relays

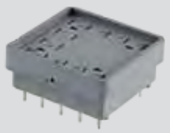
**Socket for RM, 14 born plug-in relays RM3010, RM3014, RM3117, RM2112, RM3113, RM1015, RM1016, RM2019**

Mounting in rail DIN and panel
Coding label.
Numeration EN/DIN

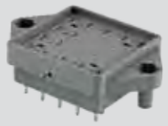
According to the norm EN 60947-1 and IEC 61810-1

## SMW40F — 4 POLES, PANEL MOUNTING, SOLDERING WITH CABLES

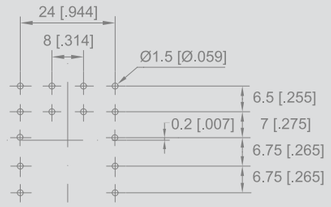
## SMP40X — 4 POLES, PRINTED CIRCUIT



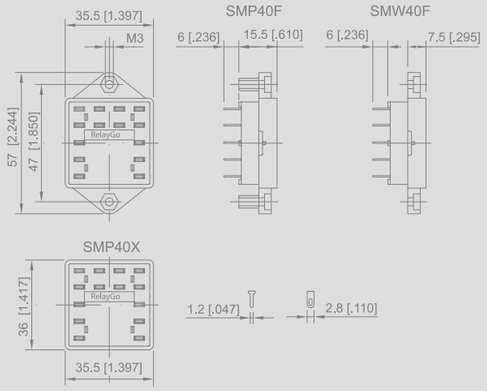
## SMP40F — 4 POLES, PRINTED CIRCUIT, MOUNTABLE WITH SCREW M3



### PCB mounting




### Dimensions mm [in]




### Socket for RM relays

**Socket for RM, 14 born plug-in relays RM4010, RM2015, RM3019**

### Specifications

**Rated load** ..... 10 A / 250 V
**Insulation (terminal/terminal)** ..... 2,5 kV

CE EAC In process RoHS

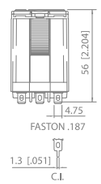
RP

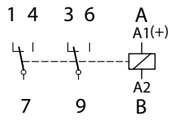
RelayGo

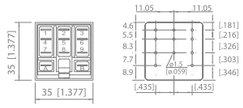
## RP2010 — 2 CHANGE-OVER CONTACTS, 8 FASTON, DPDT

**General application** 16 A 400 V AC-1 0,5 A 110 V DC-1 / 16 A 30 V DC-1 0,2 A 220 V DC-1

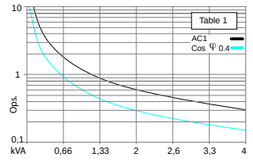
### Dimensions mm [in]



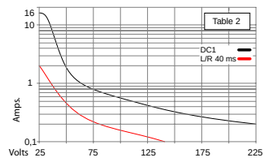




### Electric life, ops x 10⁴




### Maxim load in VDC




### Standard types

AC 50 Hz, (60 Hz): 24, 48, 115, (120), 230, (240), 400

RP2010NN, RP2010LN, RP2010NR
DC: 24, 48, 110, 220
RP2010NN, RP2010LN, RP2010LD, RP2010LE,
AC/DC: RP2010LU
**Sockets:** SPT30D, SPW30F, SPP30X, SPP30F

### Contacts

| | |
|---|---|
| Max.switching current | 16 A |
| Max.peak inrush current, 20ms | 40 A |
| Max. Switching voltage | 400 V |
| Max. VAC load (table 1) | 4 kVA |
| Max. VDC load | see (table 2) |
| Contact material | AgNi (std) |

### Insulation

| | |
|---|---|
| Contact | |
| Open contact | 1000 V |
| Contact/contact | 4 kV |
| Contact/coil | 4 kV |
| Insulation resistance at 500 V | >3G Ω |
| Insulation, EN 61810-1 | 4 kV / 3 |

IEC 61810 EN 60947

### Specifications

| | |
|---|---|
| Pick-up time/bounce time | 20 ms / ≤ 3 ms |
| Release time/bounce time | 10 ms / ≤ 1 ms |
| Ambient temperature,operation/storage | -40ºC (no ice)60ºC/80ºC |
| Mechanical life ops. | VAC:10 Mill./VDC:20 Mill |
| VDC voltage endurance at rated load | >100.000 ops. |
| Switching frequency at rated load | 1200/h. |
| Protection class | IP40 / RT1 |
| Weight | 90 g. |

### Coils

| | |
|---|---|
| Pick-up voltage | < 0,8 x Un |
| Release voltage | >0,1 x Un |
| Nominal power | 2,4 VA (VAC) / 1,4 W (VDC) |

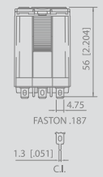
| VAC | Ω | mA |
|---|---|---|
| 24 | 65 | 100 |
| 48 | 286 | 50 |
| 115 | 1K7 | 21 |
| 230 | 6K8 | 10 |
| 400 | 18K8 | 6 |

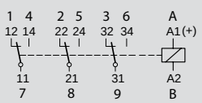
| VDC | Ω | mA |
|---|---|---|
| 24 | 414 | 58 |
| 48 | 1K6 | 30 |
| 110 | 8K1 | 13 |
| 220 | 35K6 | 6 |

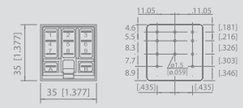
## RP3010 — 3 CHANGE-OVER CONTACTS, 11 FASTON, TPDT

**General application** 16 A 400 V AC-1 0,5 A 110 V DC-1 / 16 A 30 V DC-1 0,2 A 220 V DC-1

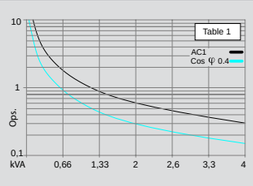
### Dimensions mm [in]



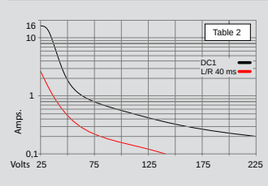




### Electric life, ops x 10⁴




### Maxim load in VDC




### Standard types

AC 50 Hz, (60 Hz): 24, 48, 115, (120), 230, (240), 400

RP3010NN, RP3010L, RP3010NR
DC: 24, 48, 110, 220
RP3010NN, RP3010L, RP3010LD, RP3010LE
AC/DC: RP3010LU
**Sockets:** SPT30D, SPW30F, SPP30X, SPP30F

### Contacts

| | |
|---|---|
| Max.switching current | 16 A |
| Max.peak inrush current, 20ms | 40 A |
| Max. Switching voltage | 400 V |
| Max. VAC load (table 1) | 4 kVA |
| Max. VDC load | see (table 2) |
| Contact material | AgNi (std) |

### Insulation

| | |
|---|---|
| Contact | |
| Open contact | 1000 V |
| Contact/contact | 4 kV |
| Contact/coil | 4 kV |
| Insulation resistance at 500 V | >3G Ω |
| Insulation, EN 61810-1 | 4 kV / 3 |

EN 60947I EC 61810

### Specifications

| | |
|---|---|
| Pick-up time/bounce time | 20 ms / ≤ 3 ms |
| Release time/bounce time | 10 ms / ≤ 1 ms |
| Ambient temperature,operation/storage | -40ºC (no ice)60ºC/80ºC |
| Mechanical life ops. | VAC:10 Mill./VDC:20 Mill |
| VDC voltage endurance at rated load | >100.000 ops. |
| Switching frequency at rated load | 1200/h. |
| Protection class | IP40 / RT1 |
| Weight | 95 g. |

### Coils

| | |
|---|---|
| Pick-up voltage | < 0,8 x Un |
| Release voltage | >0,1 x Un |
| Nominal power | 2,4 VA (VAC) / 1,4 W (VDC) |

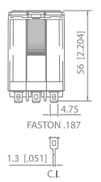
| VAC | Ω | mA |
|---|---|---|
| 24 | 65 | 100 |
| 48 | 286 | 50 |
| 115 | 1K7 | 21 |
| 230 | 6K8 | 10 |
| 400 | 18K8 | 6 |

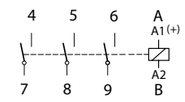
| VDC | Ω | mA |
|---|---|---|
| 24 | 414 | 58 |
| 48 | 1K6 | 30 |
| 110 | 8K1 | 13 |
| 220 | 35K6 | 6,5 |

## RP3014 — 3 OPEN CONTACTS, 8 FASTON, TPST

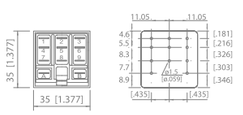
**Application for VDC** 16 A 400 V AC-1 1,2 A 110 V DC-1 / 16 A 30 V DC-1 0,4 A 220 V DC-1

### Dimensions mm [in]

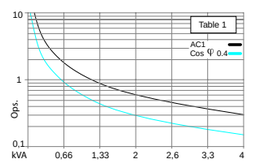


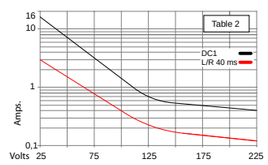

gap: 1,7 mm




### Electric life, ops x 10⁴




### Maxim load in VDC




### Standard types

AC 50 Hz, (60 Hz): 24, 48, 115, (120), 230, (240)
RP3014NN, RP3014LN, RP3014NR
DC: 24, 48, 110, 220
RP3014NN, RP3014LN, RP3014LD, RP3014LE
AC/DC: RP3014LU
**Sockets:** SPT30D, SPW30F, SPP30X, SPP30F

### Contacts

| | |
|---|---|
| Max.switching current | 16 A |
| Max.peak inrush current, 20ms | 40 A |
| Max. Switching voltage | 400 V |
| Max. VAC load (table 1) | 4 kVA |
| Max. VDC load | see (table 2) |
| Contact material | AgNi (std) |

### Insulation

| | |
|---|---|
| Contact | |
| Open contact | 2000 V |
| Contact/contact | 4 kV |
| Contact/coil | 4 kV |
| Insulation resistance at 500 V | >3G Ω |
| Insulation, EN 61810-1 | 4 kV / 3 |

EN 60947 IEC 61810

### Specifications

| | |
|---|---|
| Pick-up time/bounce time | 20 ms / ≤ 3 ms |
| Release time/bounce time | 10 ms / ≤ 1 ms |
| Ambient temperature,operation/storage | -40ºC (no ice)60ºC/80ºC |
| Mechanical life ops. | VAC:10 Mill./VDC:20 Mill |
| VDC voltage endurance at rated load | >100.000 ops. |
| Switching frequency at rated load | 1200/h. |
| Protection class | IP40 / RT1 |
| Weight | 95 g. |

### Coils

| | |
|---|---|
| Pick-up voltage | < 0,8 x Un |
| Release voltage | >0,1 x Un |
| Nominal power | 2,4 VA (VAC) / 1,6 W (VDC) |

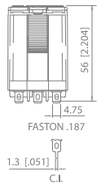
| VAC | Ω | mA |
|---|---|---|
| 24 | 65 | 100 |
| 48 | 286 | 50 |
| 115 | 1K7 | 21 |
| 230 | 6K8 | 10 |
| 400 | 18K8 | 6 |

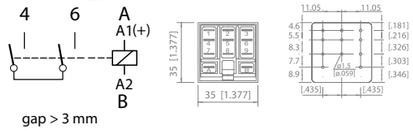
| VDC | Ω | mA |
|---|---|---|
| 12 | 90 | 133 |
| 24 | 360 | 66 |
| 48 | 1K4 | 34 |
| 110 | 7K6 | 15 |
| 220 | 30K3 | 7,5 |

## RP1015 — 1 DOUBLE MAKE OPEN CONTACT, 4 FASTON, SPST

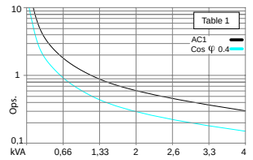
**Power relay VDC** 16 A 400 V AC-1 6 A 110 V DC-1
**One contact NO** 16 A 30 V DC-1 1,2 A 220 V DC-1

### Dimensions mm [in]

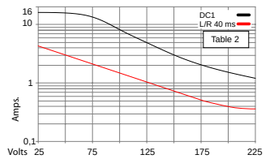



### Electric life, ops x 10⁴




### Maxim load in VDC




### Standard types

AC 50 Hz, (60 Hz): 24, 48, 115, (120), 230, (240)
RP1015NN, RP1015LN, RP1015NR
DC: 24, 48, 110, 220
RP1015NN, RP1015LN, RP1015LD, RP1015LE
AC/DC: RP1015LU
**Sockets:** SPT30D, SPW30F, SPP30X, SPP30F

### Contacts

| | |
|---|---|
| Max.switching current | 16 A |
| Max.peak inrush current, 20ms | 40 A |
| Max. Switching voltage | 400 V |
| Max. VAC load (table 1) | 4 kVA |
| Max. VDC load | see (table 2) |
| Contact material | AgNi (std) |

### Insulation

Contact

| | |
|---|---|
| Contact/contact | 4 kV |
| Contact/coil | 4 kV |
| Insulation resistance at 500 V | >3G Ω |
| Insulation, EN 61810-1 | 4 kV / 3 |

In process In process — EC 61810 EN 60947

### Specifications

| | |
|---|---|
| Pick-up time/bounce time | 20 ms / ≤ 3 ms |
| Release time/bounce time | 10 ms / ≤ 1 ms |
| Ambient temperature,operation/storage | -40ºC (no ice)60ºC/80ºC |
| Mechanical life ops. | VAC:10 Mill./VDC:20 Mill |
| VDC voltage endurance at rated load | >100.000 ops. |
| Switching frequency at rated load | 1200/h. |
| Protection class | IP40 / RT1 |
| Weight | 90 g. |

### Coils

| | |
|---|---|
| Pick-up voltage | < 0,8 x Un |
| Release voltage | >0,1 x Un |
| Nominal power | 2,4 VA (VAC) / 1,3 W (VDC) |

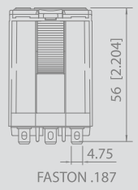
| VAC | Ω | mA |
|---|---|---|
| 24 | 65 | 100 |
| 48 | 286 | 50 |
| 115 | 1K7 | 21 |
| 230 | 6K8 | 10 |
| 400 | 18K8 | 6 |

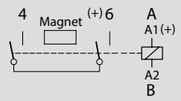
| VDC | Ω | mA |
|---|---|---|
| 24 | 443 | 54 |
| 48 | 1K7 | 27 |
| 110 | 9K2 | 12 |
| 220 | 34K5 | 6,5 |

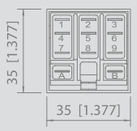
## RP1016 — 1 OPEN CONTACT, MAGNETIC BLOW-OUT, 4 FASTON, SPST

**Power relay VDC** 16 A 400 V AC-1 10 A 220 V DC-1
**One contact NO** 3,6 A 30 V DC Ind 2 A 220 V DC-1

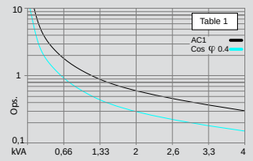
### Dimensions mm [in]



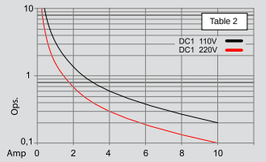




### Electric life, ops x 10⁴




### Maxim load in VDC




### Standard types

AC 50 Hz, (60 Hz): 24, 48, 115, (120), 230, (240)
RP1016NN, RP1016LN, RP1016NR
DC: 12, 24, 48, 110, 120/125, 220
RP1016NN, RP1016LN, RP1016LD, RP1016LE
AC/DC: RP1016LU
**Sockets:** SPT30D, SPW30F, SPP30X, SPP30F

### Contacts

| | |
|---|---|
| Max.switching current | 16 A |
| Max.peak inrush current, 20ms | 40 A |
| Max. Switching voltage | 400 V |
| Max. VAC load (table 1) | 4 kVA |
| Max. VDC load | see (table 2) |
| Contact material | AgNi (std) |

### Insulation

Contact

| | |
|---|---|
| Open contact | 4000 V |
| Contact/contact | 4 kV |
| Contact/coil | 4 kV |
| Insulation resistance at 500 V | >3G Ω |
| Insulation, EN 61810-1 | 4 kV / 3 |

In process In process — IEC 61810 EN 60947

### Specifications

| | |
|---|---|
| Pick-up time/bounce time | 20 ms / ≤ 3 ms |
| Release time/bounce time | 10 ms / ≤ 1 ms |
| Ambient temperature,operation/storage | -40ºC (no ice)60ºC/80ºC |
| Mechanical life ops. | VAC:10 Mill./VDC:20 Mill |
| VDC voltage endurance at rated load | >100.000 ops. |
| Switching frequency at rated load | 1200/h. |
| Protection class | IP40 / RT1 |
| Weight | 90 g. |

### Coils

| | |
|---|---|
| Pick-up voltage | < 0,8 x Un |
| Release voltage | >0,1 x Un |
| Nominal power | 2,4 VA (VAC) / 1,3 W (VDC) |

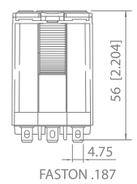
| VAC | Ω | mA |
|---|---|---|
| 24 | 65 | 100 |
| 48 | 286 | 50 |
| 115 | 1K7 | 21 |
| 230 | 6K8 | 10 |
| 400 | 18K8 | 6 |

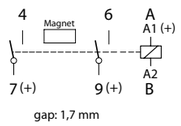
| VDC | Ω | mA |
|---|---|---|
| 12 | 110 | 108 |
| 24 | 443 | 54 |
| 48 | 1K7 | 27 |
| 110 | 9K | 12 |
| 220 | 34K5 | 6,5 |

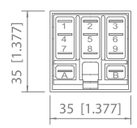
## RP2016 — 2 OPEN CONTACTS, MAGNETIC BLOW-OUT, 6 FASTON, DPST

**Power Relay VDC** 16 A 250 V AC-1 7A 110 V DC-1
3 A 220 V DC-1

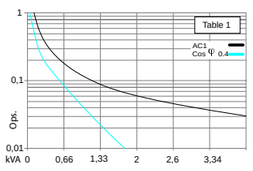
### Dimensions mm [in]



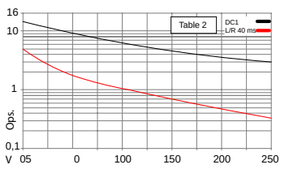




### Electric life, ops x 10⁴




### Maxim load in VDC




### Standard types

AC 50 Hz, (60 Hz): 24, 48, 115, (120), 230, (240)
RP2016NN, RP2016LN, RP2016NR,
DC: 12, 24, 48, 110, 120/125, 220
RP2016NN, RP2016LN, RP2016LD, RP2016LE
AC/DC: RP2016LU
**Sockets:** SPT30D, SPW30F, SPP30X, SPP30F

### Contacts

| | |
|---|---|
| Max.switching current | 16 A |
| Max.peak inrush current, 20ms | 40 A |
| Max. Switching voltage | 250 V |
| Max. VAC load (table 1) | 4 kVA |
| Max. VDC load | see (table 2) |
| Contact material | AgNi (std) |

### Insulation

Contact

| | |
|---|---|
| Open contact | 4000 V |
| Contact/contact | 4 kV |
| Contact/coil | 4 kV |
| Insulation resistance at 500 V | >3G Ω |
| Insulation, EN 61810-1 | 4 kV / 3 |

In process In process — IEC 61810 EN 60947

### Specifications

| | |
|---|---|
| Pick-up time/bounce time | 20 ms / ≤ 3 ms |
| Release time/bounce time | 10 ms / ≤ 1 ms |
| Ambient temperature,operation/storage | -40ºC (no ice)60ºC/80ºC |
| Mechanical life ops. | VAC:10 Mill./VDC:20 Mill |
| VDC voltage endurance at rated load | >100.000 ops. |
| Switching frequency at rated load | 1200/h. |
| Protection class | IP40 / RT1 |
| Weight | 90 g. |

### Coils

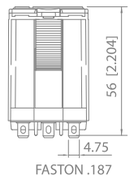
| | |
|---|---|
| Pick-up voltage | < 0,8 x Un |
| Release voltage | >0,1 x Un |
| Nominal power | 2,4 VA (VAC) / 1,6 W (VDC) |

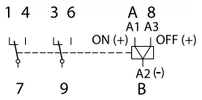
| VAC | Ω | mA |
|---|---|---|
| 24 | 65 | 100 |
| 48 | 286 | 50 |
| 115 | 1K7 | 21 |
| 230 | 6K8 | 10,4 |

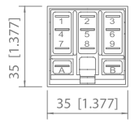
| VDC | Ω | mA |
|---|---|---|
| 12 | 90 | 133 |
| 24 | 373 | 66 |
| 48 | 1K4 | 33 |
| 110 | 7K6 | 15 |

## RP2019 — 2 CHANGE-OVER CONTACTS, REMANENCE, 9 FASTON, DPDT

**Dimensions** mm [in]

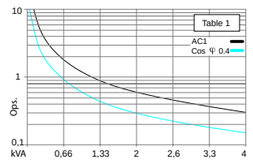


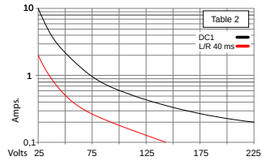




**Magnetic remanence** — 10 A 400 V AC1 / 0,2 A 250 V Ind — 10 A 30 V DC1 / 0,5 A 110 V DC1

**Electric life, ops x 10⁴**




**Maxim load in VDC**




**Standard types**

AC 50 Hz, (60 Hz): 24, 48, 115, (120), 230, (240)
RP2019NN
DC: 12, 24, 48, 110, 125
RP2019NN
**Sockets:** SPT30D, SPW30F, SPP30X, SPP30F

### Contacts

| | |
|---|---|
| Max.switching current | 10 A |
| Max.peak inrush current, 20ms | 30 A |
| Max. Switching voltage | 400 V |
| Max. VAC load (table 1) | 4 kVA |
| Max. VDC load | see (table 2) |
| Contact material | AgNi (std) |

### Insulation

| | |
|---|---|
| Contact | |
| Open contact | 2000 V |
| Contact/contact | 4 kV |
| Contact/coil | 4 kV |
| Insulation resistance at 500 V | >3G Ω |
| Insulation, EN 61810-1 | 4 kV / 3 |

CE cULus (In process) EAC (In process) RoHS — IEC 61810 EN 60947

### Specifications

| | |
|---|---|
| Pick-up time/bounce time | 50 ms. |
| Ambient temperature,operation/storage | -40ºC (no ice)60ºC/80ºC |
| Mechanical life ops. | VAC:10 Mill./VDC:20 Mill |
| VDC voltage endurance at rated load | >100.000 ops. |
| Switching frequency at rated load | 1200/h. |
| Protection class | IP40 / RT1 |
| Weight | 90 g. |

### Coils

| | |
|---|---|
| Pick-up voltage | 1,5 VA/W |
| Release voltage | 0,5 VA/W |

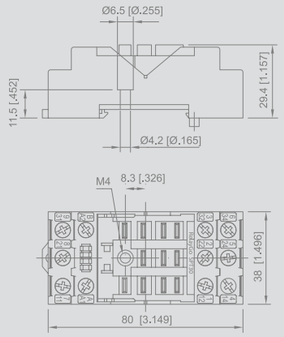
| VAC | ON mA | OFF mA |
|---|---|---|
| 24 | 75 | 12 |
| 48 | 38 | 6 |
| 115 | 16 | 2,5 |
| 230 | 8 | 1,3 |

| VDC | ON mA | OFF mA |
|---|---|---|
| 12 | 125 | 41 |
| 24 | 63 | 21 |
| 48 | 31 | 10 |
| 110 | 14 | 4,5 |

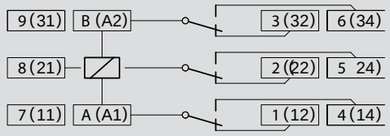
## SPT30 — 3 POLES, RAIL DIN

**Socket for 11 faston relays, with clip and marking label**
**16 A / 400 V**

**Dimensions** mm [in]




**Connection diagram**




### Specifications

| | |
|---|---|
| Rated load | 10 A / 400 V |
| **Insulation** | |
| Test voltage, (Vrms/ 1 min.) | |
| Contacts/coils | 4 kV |
| All terminals/DIN rail | 4 kV |
| Terminal/terminal | 4 kV |
| **Cross-section of connecting wire** | |
| Single-wire | 4 mm² or 2 x 2,25 mm² |
| Multi-wire | 22 - 14 AWG |
| Cable with tip | 4 mm² |
| Max. screw torque | 1,2 Nm |
| Screw dimensions | M3, Pozi |
| Retaining clip plastic integrated | |

CE cULus (In process) EAC (In process) RoHS — IEC 61810 EN 60947

### Socket for RP relays

**Socket for RP, 11 pin plug-in relays RP2010, RP3010, RP3014, RP1015, RP1016, RP2016, RP2019**

Mounting in rail DIN and panel
Coding label.
Numeration EN/DIN

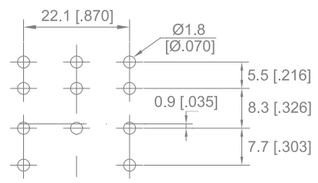
According to the norm EN 60947-1 and IEC 61810-1

## SPW30F — 3 POLES, PANEL MOUNTING, SOLDERING WITH CABLES

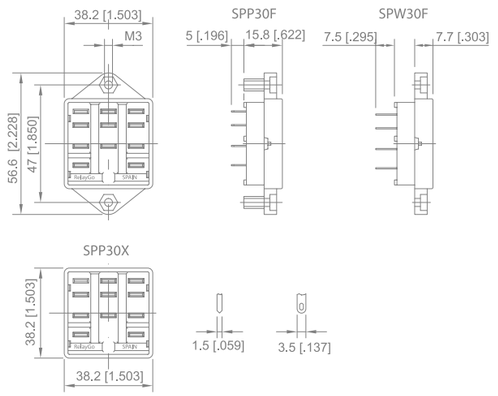
## SPP30X — 3 POLES, PRINTED CIRCUIT

## SPP30F — 3 POLES, PRINTED CIRCUIT, MOUNTABLE WITH SCREW M3

**PCB mounting**




**Dimensions** mm [in]




### Socket for RP relays

**Socket for RP, 11 pin plug-in relays RP2010, RP3010, RP3014, RP1015, RP1016, RP2016, RP2019**

### Specifications

| | |
|---|---|
| Rated load | 16 A / 400 V |
| Insulation (terminal/terminal) | 4 kV |

CE EAC (In process) RoHS

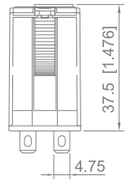

RQ

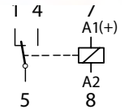
RelayGo

## RQ1010 — 1 CHANGE-OVER CONTACT, 5 FASTON, SPDT

**General application** 16 A 250 V AC-1 0,5 A 110 V DC-1
**Power** 16 A 30 V DC-1 0,2 A 220 V DC-1

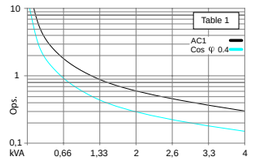
### Dimensions mm [in]



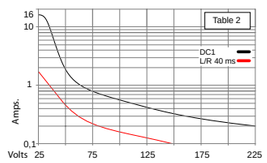





### Electric life, ops x 10⁴




### Maxim load in VDC




### Standard types

AC 50 Hz, (60 Hz): 24, 48, 115, (120), 230, (240)
RQ1010NN, RQ1010LN, RQ1010
DC: 12, 24, 48, 110
RQ1010NN, RQ1010LN, RQ1010LD, RQ1010LE
AC/DC: RQ1010LU
**Sockets:** SQR20D

### Contacts

**Max.switching current** ..... 16 A
**Max.peak inrush current, 20ms** ..... 40 A
**Max. Switching voltage** ..... 250 V
**Max. VAC load (table 1)** ..... 4 kVA
**Max. VDC load** ..... see (table 2)
**Contact material** ..... AgNi (std)

### Insulation

**Contact**
Open contact ..... 1000 V
Contact/coil ..... 2,5 kV
**Insulation resistance at 500 V** ..... >3G Ω
**Insulation, EN 61810-1** ..... 2,5 kV / 3

IEC 61810 EN 60947

### Specifications

**Pick-up time/bounce time** ..... 16 ms + ≤ 3 ms
**Release time/bounce time** ..... 8 ms + ≤ 1 ms
**Ambient temperature,operation/storage** ..... -40ºC (no ice)60ºC/80ºC
**Mechanical life ops.** ..... VAC:10 Mill./VDC:20 Mill
**VDC voltage endurance at rated load** ..... >100.000 ops.
**Switching frequency at rated load** ..... 1200/h.
**Protection class** ..... IP40 / RT1
**Weight** ..... 43 g.

### Coils

**Pick-up voltage** ..... < 0,8 x Un
**Release voltage** ..... >0,1 x Un
**Nominal power** ..... 1,2 VA (VAC) / 1,3 W (VDC)

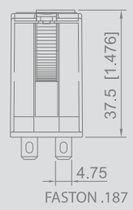
| VAC | Ω | mA |
|---|---|---|
| 24 | 174 | 50 |
| 48 | 686 | 25 |
| 115 | 4K3 | 10,4 |
| 230 | 18K6 | 5,2 |

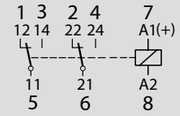
| VDC | Ω | mA |
|---|---|---|
| 12 | 111 | 108 |
| 24 | 432 | 55 |
| 48 | 1K7 | 28 |
| 110 | 9K2 | 12 |

## RQ2010 — 2 CHANGE-OVER CONTACTS, 8 FASTON, DPDT

**General application** 10 A 250 V AC-1 0,5 A 110 V DC-1
10 A 30 V DC-1 0,2 A 220 V DC-1

### Dimensions mm [in]





### Electric life, ops x 10⁴




### Maxim load in VDC




### Standard types

AC 50 Hz, (60 Hz): 24, 48, 115, (120), 230, (240)
RQ2010NN, RQ2010LN, RQ2010
DC: 12, 24, 48, 110
RQ2010NN, RQ2010LN, RQ2010LD, RQ2010LE
AC/DC: RQ2010LU
**Sockets:** SQB20D, SQW20X, SQP20X, SQP20F, SQB20I

### Contacts

**Max.switching current** ..... 10 A
**Max.peak inrush current, 20ms** ..... 30 A
**Max. Switching voltage** ..... 250 V
**Max. VAC load (table 1)** ..... 2,5 kVA
**Max. VDC load** ..... see (table 2)
**Contact material** ..... AgNi (std), std + 0,2µ Au, std + 10µ Au

### Insulation

**Contacto**
Open contact ..... 1000 V
Contact/contact ..... 2,5 kV
Contact/coil ..... 2,5 kV
**Insulation resistance at 500 V** ..... >3G Ω
**Insulation, EN 61810-1** ..... 2,5 kV / 3

In process In process In process In process IEC 61810 EN 60947

### Specifications

**Pick-up time/bounce time** ..... 16 ms / ≤ 3 ms
**Release time/bounce time** ..... 8 ms + ≤ 1 ms
**Ambient temperature,operation/storage** ..... -40ºC (no ice)60ºC/80ºC
**Mechanical life ops.** ..... VAC:10 Mill./VDC:20 Mill
**VDC voltage endurance at rated load** ..... >100.000 ops.
**Switching frequency at rated load** ..... 1200/h.
**Protection class** ..... IP40 / RT1
**Weight** ..... 43 g.

### Coils

**Pick-up voltage** ..... < 0,8 x Un
**Release voltage** ..... >0,1 x Un
**Nominal power** ..... 1,2 VA (VAC) / 1 W (VDC)

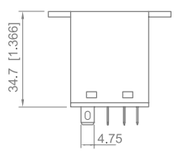
| VAC | Ω | mA |
|---|---|---|
| 24 | 174 | 50 |
| 48 | 686 | 25 |
| 115 | 4K3 | 10,4 |
| 230 | 18K6 | 5,2 |

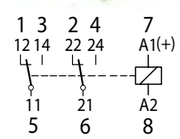
| VDC | Ω | mA |
|---|---|---|
| 12 | 148 | 85 |
| 24 | 594 | 43 |
| 48 | 2K3 | 21 |
| 110 | 11K4 | 10 |

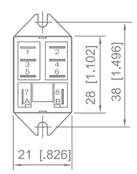
## RQ2010N N7 — 2 CHANGE-OVER CONTACTS , PANEL MOUNTING, 8 FASTON, DPDT

**Panel mountable** 10 A 250 V AC-1 0,5 A 110 V DC-1
10 A 30 V DC-1 0,2 A 220 V DC-1

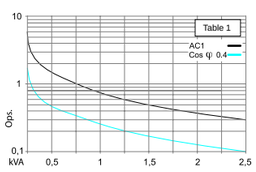
### Dimensions mm [in]



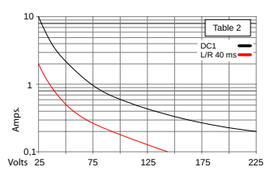




### Electric life, ops x 10⁴




### Maxim load in VDC




### Standard types

AC 50 Hz, (60 Hz): 24, 48, 115, (120), 230, (240)
RQ2010NN7
DC: 12, 24, 48, 110
RQ2010NN7

### Contacts

**Max.switching current** ..... 10 A
**Max.peak inrush current, 20ms** ..... 30 A
**Max. Switching voltage** ..... 250 V
**Max. VAC load (table 1)** ..... 2,5 kVA
**Max. VDC load** ..... see (table 2)
**Contact material** ..... AgNi (std)

### Insulation

**Contact**
Open contact ..... 1000 V
Contact/contact ..... 2,5 kV
Contact/coil ..... 2,5 kV
**Insulation resistance at 500 V** ..... >3G Ω
**Insulation, EN 61810-1** ..... 2,5 kV / 3

In process In process In process In process IEC 61810 EN 60947

### Specifications

**Pick-up time/bounce time** ..... 16 ms / ≤ 3 ms
**Release time/bounce time** ..... 8 ms + ≤ 1 ms
**Ambient temperature,operation/storage** ..... -40ºC (no ice)60ºC/80ºC
**Mechanical life ops.** ..... VAC:10 Mill./VDC:20 Mill
**VDC voltage endurance at rated load** ..... >100.000 ops.
**Switching frequency at rated load** ..... 1200/h.
**Protection class** ..... IP40 / RT1
**Weight** ..... 43 g.

### Coils

**Pick-up voltage** ..... < 0,8 x Un
**Release voltage** ..... >0,1 x Un
**Nominal power** ..... 1,2 VA (VAC) / 1 W (VDC)

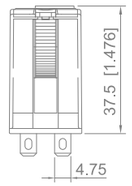
| VAC | Ω | mA |
|---|---|---|
| 24 | 174 | 50 |
| 48 | 686 | 25 |
| 115 | 4K3 | 10,4 |
| 230 | 18K6 | 5,2 |

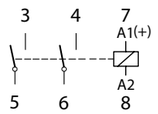
| VDC | Ω | mA |
|---|---|---|
| 12 | 148 | 85 |
| 24 | 594 | 43 |
| 48 | 2K3 | 21 |
| 110 | 11K4 | 10 |

## RQ2014 — 2 OPEN CONTACTS, 6 FASTON, DPST

**Power relay VDC** — 10 A 250 V AC-1 / 0,8 A 110 V DC-1 / 10 A 30 V DC-1 / 0,4 A 220 V DC-1

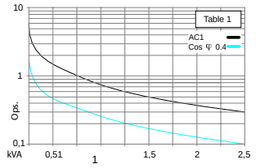
**Dimensions** mm [in]



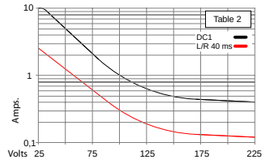





**Electric life, ops x 10⁴**




**Maxim load in VDC**




**Standard types**

AC 50 Hz, (60 Hz): 24, 48, 115, (120), 230, (240)
RQ2014NN, RQ2014LN, RQ2014
DC: 12, 24, 48, 110
RQ2014NN, RQ2014LN, RQ2014LD, RQ2014LE
AC/DC: RQ2014LU
**Sockets:** SQB20D, SQW20X, SQP20X, SQP20F, SQB20I

### Contacts

| | |
|---|---|
| Max.switching current | 10 A |
| Max.peak inrush current, 20ms | 30 A |
| Max. Switching voltage | 250 V |
| Max. VAC load (table 1) | 2,5 kVA |
| Max. VDC load | see (table 2) |
| Contact material | AgNi (std) |

### Insulation

Contact

| | |
|---|---|
| Open contact | 2000 V |
| Contact/contact | 2,5 kV |
| Contact/coil | 2,5 kV |
| Insulation resistance at 500 V | >3G Ω |
| Insulation, EN 61810-1 | 2,5 kV / 3 |

CE Lloyd's In process (CCC) In process EAC In process RoHS — IEC 61810 EN 60947

### Specifications

| | |
|---|---|
| Pick-up time/bounce time | 20 ms / ≤ 3 ms |
| Release time/bounce time | 10 ms / ≤ 1 ms |
| Ambient temperature,operation/storage | -40ºC (no ice)60ºC/80ºC |
| Mechanical life ops. | VAC:10 Mill./VDC:20 Mill |
| VDC voltage endurance at rated load | >100.000 ops. |
| Switching frequency at rated load | 1200/h. |
| Protection class | IP40 / RT1 |
| Weight | 43 g. |

### Coils

| | |
|---|---|
| Pick-up voltage | < 0,8 x Un |
| Release voltage | >0,1 x Un |
| Nominal power | 1,5 VA (VAC) / 1,5 W (VDC) |

| VAC | Ω | mA |
|---|---|---|
| 24 | 153 | 62 |
| 48 | 611 | 31 |
| 115 | 3K6 | 13 |
| 230 | 14K6 | 6,5 |

| VDC | Ω | mA |
|---|---|---|
| 12 | 99 | 121 |
| 24 | 388 | 61 |
| 48 | 1K5 | 32 |
| 110 | 8K | 14 |

## RQ2021 — 2 CONTACTS, 1 POWER, 1 SIGNAL, 8 FASTON, DPDT



**General application + low signal** — 10 A 250 V AC-1 / 10 A 30 V DC-1 / 6 A 250 V AC-1 / 6 A 30 V DC-1

**Dimensions** mm [in]










**Electric life, ops x 10⁴**




**Maxim load in VDC**




**Standard types**

AC 50 Hz, (60 Hz): 24, 115, 230, (240)
RQ2021NN, RQ2021LN, RQ2021
DC: 24, 48, 110
RQ2021NN, RQ2021LN, RQ2021LD, RQ2021LE
AC/DC: RQ2021LU
**Sockets:** SQB20D, SQW20X, SQP20X, SQP20F, SQB20I

### Contacts

| | |
|---|---|
| Max.switching current | 10 A/6 A |
| Max.peak inrush current, 20ms | 30 A/15 A |
| Max. Switching voltage | 250 V |
| Max. VAC load (table 1) | 2,5 kVA |
| Contact material | AgNi / AgNi + 0,2µ Au |

### Insulation

Contact

| | |
|---|---|
| Open contact | 1000 V/ 1000 V |
| Contact/contact | 2,5 kV |
| Contact/coil | 2,5 kV |
| Insulation resistance at 500 V | >3G Ω |
| Insulation, EN 61810-1 | 2,5 kV / 3 |

CE (CCC) In process RoHS — IEC 61810 EN 60947

### Specifications

| | |
|---|---|
| Pick-up time/bounce time | 20 ms / ≤ 3 ms |
| Release time/bounce time | 10 ms / ≤ 1 ms |
| Ambient temperature,operation/storage | -40ºC (no ice)60ºC/80ºC |
| Mechanical life ops. | VAC:10 Mill./VDC:20 Mill |
| VDC voltage endurance at rated load | >100.000 ops. |
| Switching frequency at rated load | 1200/h. |
| Protection class | IP40 / RT1 |
| Weight | 43 g. |

### Coils

| | |
|---|---|
| Pick-up voltage | < 0,8 x Un |
| Release voltage | >0,1 x Un |
| Nominal power | 1,2VA (VAC) / 1W (VDC) |

| VAC | Ω±10% | mA |
|---|---|---|
| 24 | 174 | 50 |
| 115 | 4K3 | 10,4 |
| 230 | 18K6 | 5,2 |

| VDC | Ω±10% | mA |
|---|---|---|
| 24 | 594 | 40 |
| 48 | 2K3 | 20,8 |
| 110 | 11K4 | 9,6 |

## RQ2117 — 2 TWIN CONTACTS, 8 FASTON, DPDT



**Low signal** — 6 A 250 V AC-1 / 6 A 30 V DC-1 / 5mA / 5 V / 1mA / 5 V DC-1

**Dimensions** mm [in]










**Electric life, ops x 10⁴**




**Maxim load in VDC**




**Standard types**

AC 50 Hz, (60 Hz): 24, 48, 115, (120), 230, (240)
RQ2117NN, RQ2117LN, RQ2117
DC: 12, 24, 48, 110
RQ2117NN, RQ2117LN, RQ2117LD, RQ2117LE
AC/DC: RQ2117LU
**Sockets:** SQB20D, SQW20X, SQP20X, SQP20F, SQB20I

### Contacts

| | |
|---|---|
| Max.switching current | 6 A |
| Max.peak inrush current, 20ms | 15 A |
| Max. Switching voltage | 250 V |
| Max. VAC load (table 1) | 1,2 kVA |
| Max. VDC load | see (table 2) |
| Contact material | AgNi + 0,2µ Au, (std), std + 10µ Au |

### Insulation

Contact

| | |
|---|---|
| Open contact | 1000 V |
| Contact/contact | 2,5 kV |
| Contact/coil | 2,5 kV |
| Insulation resistance at 500 V | >3G Ω |
| Insulation, EN 61810-1 | 2,5 kV / 3 |

CE cULus Lloyd's In process (CCC) In process EAC In process RoHS — IEC 61810 EN 60947

### Specifications

| | |
|---|---|
| Pick-up time/bounce time | 16 ms / ≤ 3 ms |
| Release time/bounce time | 8 ms / ≤ 1 ms |
| Ambient temperature,operation/storage | -40ºC (no ice)60ºC/80ºC |
| Mechanical life ops. | VAC:10 Mill./VDC:20 Mill |
| VDC voltage endurance at rated load | >100.000 ops. |
| Switching frequency at rated load | 1200/h. |
| Protection class | IP40 / RT1 |
| Weight | 43 g. |

### Coils

| | |
|---|---|
| Pick-up voltage | < 0,8 x Un |
| Release voltage | >0,1 x Un |
| Nominal power | 1,2 VA (VAC) / 1 W (VDC) |

| VAC | Ω | mA |
|---|---|---|
| 24 | 174 | 50 |
| 48 | 686 | 25 |
| 115 | 4K3 | 10,4 |
| 230 | 18K6 | 5,2 |

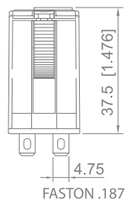
| VDC | Ω | mA |
|---|---|---|
| 12 | 148 | 85 |
| 24 | 594 | 43 |
| 48 | 2K3 | 21 |
| 110 | 11K4 | 11 |

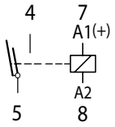
# RQ miniature relays

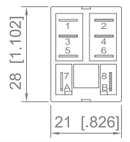
RQ1018 RQ1015

## RQ1018 — 1 OPEN CONTACT, TUNGSTEN, 4 FASTON, SPST

**Dimensions** mm [in]

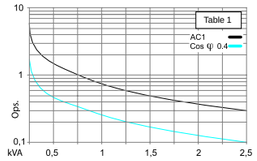


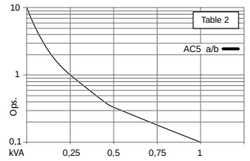




**Relay for switching on lamps**
**One contact NO** — **10 A 250 V AC-1** **6 A 250 V AC-5a/b**

**Electric life, ops x 10⁴**




**Maxim load in VDC**




**Standard types**

AC 50 Hz, (60 Hz): 24, 48, 115, (120), 230, (240)
RQ1018NN, RQ1018LN, RQ1018
DC: 12, 24, 48, 110
RQ1018NN, RQ1018LN, RQ1018LD, RQ1018LE
AC/DC: RQ1018LU
**Sockets:** SQB20D, SQW20X, SQP20X, SQP20F, SQB20I

### Contacts

| | |
|---|---|
| Max.switching current | 10 A |
| Max.peak inrush current, 20ms | 500 A |
| Max. Switching voltage | 250 V |
| Max. VAC load (table 1) | 2,5 kVA |
| Max. VDC load | see (table 2) |
| Contact material | AgNi + W (std) |

### Insulation

| | |
|---|---|
| Contacto | |
| Open contact | 1000V |
| Contact/coil | 2,5 kV |
| Insulation resistance at 500 V | >3G Ω |
| Insulation, EN 61810-1 | 2,5 kV / 3 |

CE Lloyd's (In process) (In process) (In process) RoHS — IEC 61810 EN 60947

### Specifications

| | |
|---|---|
| Pick-up time/bounce time | 20 ms / ≤ 3 ms |
| Release time/bounce time | 10 ms / ≤ 1 ms |
| Ambient temperature,operation/storage | -40ºC (no ice)60ºC/80ºC |
| Mechanical life ops. | VAC:10 Mill./VDC:20 Mill |
| VDC voltage endurance at rated load | >100.000 ops. |
| Switching frequency at rated load | 1200/h. |
| Protection class | IP40 / RT1 |
| Weight | 43 g. |

### Coils

| | |
|---|---|
| Pick-up voltage | < 0,8 x Un |
| Release voltage | >0,1 x Un |
| Nominal power | 1,5 VA (VAC) / 1,5 W (VDC) |

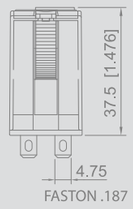
| VAC | Ω | mA |
|---|---|---|
| 24 | 153 | 62 |
| 48 | 611 | 31 |
| 115 | 3K6 | 13 |
| 230 | 14K6 | 6,5 |

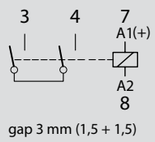
| VDC | Ω | mA |
|---|---|---|
| 12 | 99 | 121 |
| 24 | 388 | 61 |
| 48 | 1K5 | 32 |
| 110 | 8K | 14 |

## RQ1015 — 1 DOUBLE MAKE OPEN CONTACT, 4 FASTON, SPST



**Dimensions** mm [in]

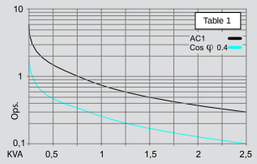


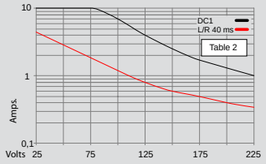

gap 3 mm (1,5 + 1,5)


**Power Relay VDC** — **10 A 250 V AC-1** **16 A 110 V DC-1**
**One contact NO** — **10 A 30 V DC-1** **1 A 220 V DC-1**

**Electric life, ops x 10⁴**




**Maxim load in VDC**




**Standard types**

AC 50 Hz, (60 Hz): 24, 48, 115, (120), 230, (240)
RQ1015NN, RQ1015LN, RQ1015
DC: 12, 24, 48, 110
RQ1015NN, RQ1015LN, RQ1015LD, RQ1015LE
AC/DC: RQ1015LU
**Sockets:** SQB20D, SQW20X, SQP20X, SQP20F, SQB20I

### Contacts

| | |
|---|---|
| Max.switching current | 10 A |
| Max.peak inrush current, 20ms | 30 A |
| Max. Switching voltage | 250 V |
| Max. VAC load (table 1) | 2,5 kVA |
| Max. VDC load | ver (Table 2) |
| Contact material | AgNi (std) |

### Insulation

| | |
|---|---|
| Contact | |
| Open contact | 2,5 k V |
| Contact/contact | 2,5 kV |
| Contact/coil | 2,5 kV |
| Insulation resistance at 500 V | >3G Ω |
| Insulation, EN 61810-1 | 2,5 kV / 3 |

CE Lloyd's (In process) (In process) (In process) RoHS — IEC 61810 EN 60947

### Specifications

| | |
|---|---|
| Pick-up time/bounce time | 20 ms / ≤ 3 ms |
| Release time/bounce time | 10 ms / ≤ 1 ms |
| Ambient temperature,operation/storage | -40ºC (no ice)60ºC/80ºC |
| Mechanical life ops. | VAC:10 Mill./VDC:20 Mill |
| VDC voltage endurance at rated load | >100.000 ops. |
| Switching frequency at rated load | 1200/h. |
| Protection class | IP40 / RT1 |
| Weight | 43 g. |

### Coils

| | |
|---|---|
| Pick-up voltage | < 0,8 x Un |
| Release voltage | >0,1 x Un |
| Nominal power | 1,5 VA (VAC) / 1,3 W (VDC) |

| VAC | Ω | mA |
|---|---|---|
| 24 | 153 | 62 |
| 48 | 611 | 31 |
| 115 | 3K6 | 13 |
| 230 | 14K6 | 6,5 |

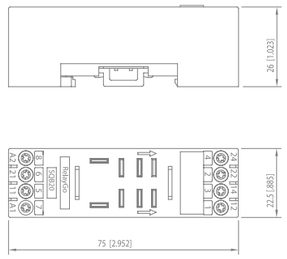
| VDC | Ω | mA |
|---|---|---|
| 12 | 111 | 108 |
| 24 | 432 | 55 |
| 48 | 1K7 | 27 |
| 110 | 9K2 | 12 |

# SQ miniature relays sockets

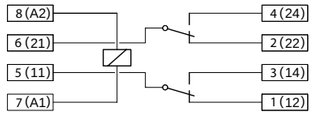
## SQB20 — 2 POLE, RAIL DIN

**Socket for RQ relays, with clip and marking label**
**10 A / 250 V**

### Dimensions mm [in]




### Connection diagram




### Specifications

**Rated load** ..... 16 A / 250 V

**Insulation**

Test voltage, (Vrms/ 1 min.)
Contacts/coils ..... 2,5 kV
All terminals/DIN rail ..... 2,5 kV
Terminal/terminal ..... 2,5 kV

**Cross-section of connecting wire**

Single-wire ..... 4 mm² ó 2 x 2,25 mm²
Multi-wire ..... 22 - 14 AWG
Cable with tip ..... 4 mm²
Max. screw torque ..... 1,2 Nm
Screw dimensions ..... M3, Pozi
Retaining clip plastic integrated

CE cULus cSAus (In process) Lloyd's (In process) EAC (In process) RoHS — IEC 61810 EN 60947

### Socket for RQ relays

**Socket for RQ,2 poles plug-in relays RQ2010, RQ2010NN7, RQ2014, RQ2021, RQ2117, RQ1018, RQ1015**

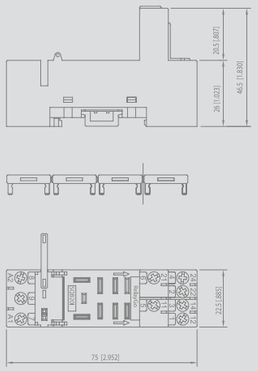
Mounting in rail DIN and panel
**Coding** label.
Numeration EN/DIN

According to the norm EN 60947-1 and IEC 61810-1

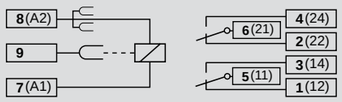
## SQB20I 10 — 2 POLES, RAIL DIN, LOGICAL DISPOSITION IN- OUT

**Socket for RQ relays, with clip and marking label**
**10 A / 250 V**

### Dimensions mm [in]




### Connection diagram




### Specifications

**Rated load** ..... 10 A / 250 V

**Insulation**

Test voltage, (Vrms/ 1 min.)
Contacts/coils ..... 2,5 kV
All terminals/DIN rail ..... 2,5 kV
Terminal/terminal ..... 2,5 kV

**Cross-section of connecting wire**

Single-wire ..... 4 mm² or 2 x 2,25 mm²
Multi-wire ..... 22 - 14 AWG
Cable with tip ..... 4 mm²
Max. screw torque ..... 1,2 Nm
Screw dimensions ..... M3, Pozi
Retaining clip plastic integrated

CE Lloyd's (In process) EAC (In process) RoHS — IEC 61810 EN 60947

### Socket for RQ relays

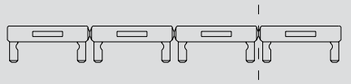
**Socket for RQ,2 poles plug-in relays RQ2010, RQ2010NN7, RQ2014, RQ2021, RQ2117, RQ1018, RQ1015**

Mounting in rail DIN and panel
Coding label.
Numeration EN/DIN

According to the norm EN 60947-1 and IEC 61810-1

### Accessories

Coil bridge BQ14 for socket SQB20I

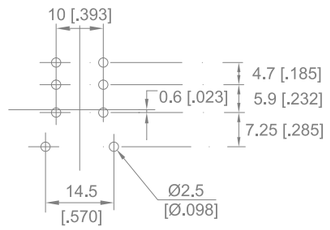


## SQW20F — 2 POLES, PANEL MOUNTING, SOLDERING WITH CABLES

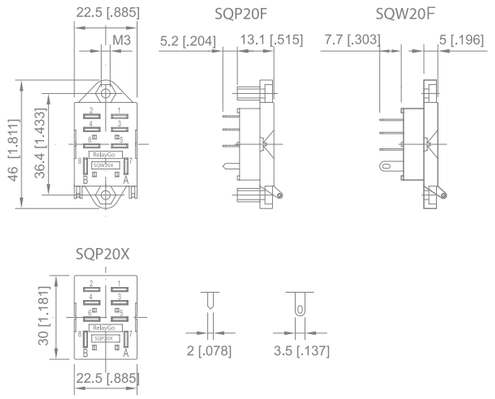
## SQP20X — 2 POLES, PRINTED CIRCUIT

## SQP20F — 2 POLES, PRINTED CIRCUIT, MOUNTABLE WITH SCREW M3

### PCB mounting




### Dimensions mm [in]




### Socket for RQ relays

**Socket for RQ, 2 poles plug-in relays RQ2010, RQ2010NN7, RQ2014, RQ2021, RQ2117, RQ1018, RQ1015**

### Specifications

**Rated load** ..... 10 A / 250 V
**Insulation (terminal/terminal)** ..... 2,5 kV

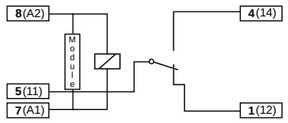
CE EAC (In process) RoHS

# SQ miniature relays sockets

## SQR10 — 1 POLE, RAIL DIN

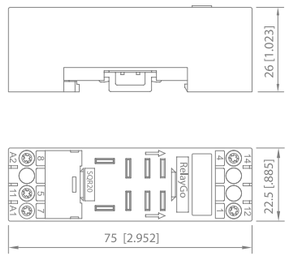
**Socket for RQ1010 relays, with clip and marking label**
**16 A / 250 V**

### Connection diagram




### Dimensions mm [in]

SQR10 para RQ1010 (16A) relés




### Specifications

**Rated load** ..... 16 A / 250 V

**Insulation**

Test voltage, (Vrms/ 1 min.)

Contacts/coils ..... 2,5 kV
All terminals/DIN rail ..... 2,5 kV
Terminal/terminal ..... 2,5 kV

**Cross-section of connecting wire**

Single-wire ..... 4 mm² or 2 x 2,25 mm²
Multi-wire ..... 22 - 14 AWG
Cable with tip ..... 4 mm²
Max. screw torque ..... 1,2 Nm
Screw dimensions ..... M3, Pozi
Retaining clip plastic integrated

CE Lloyd's In process EAC In process RoHS IEC 61810 EN 60947

### Socket for RQ1010 relays

**Socket for RQ, 1 pole plug-in relays RQ1010**

Mounting in rail DIN and panel
Coding label.
Numeration EN/DIN

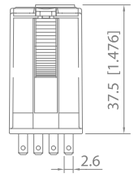
According to the norm EN 60947-1 and IEC 61810-1

# RQ miniature relays

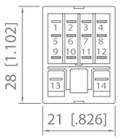
## RQ4110 — 4 CHANGE-OVER CONTACTS, 14 FASTON, FPDT

**General application** 5 A 250 V AC-1
5 A 30 V DC-1 0,2 A 110 V DC-1

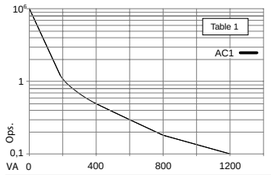
**Dimensions** mm [in]



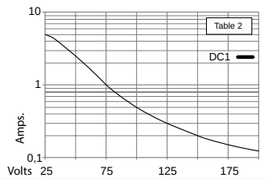





**Electric life, ops x 10⁴**




**Maxim load in VDC**




**Standard types**

AC 50 Hz, (60 Hz): 24, 48, 115, (120), 230, (240)
RQ4110NN, RQ4110LN, RQ4110
DC: 12, 24, 48, 110
RQ4110NN, RQ4110LN, RQ4110LD, RQ4110LE
AC/DC: RQ4110LU
**Sockets:** SQB40D, SQW40F, SQP40X, SQP40F

### Contacts

**Max.switching current** ..... 5 A
**Max.peak inrush current, 20ms** ..... 15 A
**Max. Switching voltage** (same polarity) ..... 250 V
**Max. VAC load (table 1)** ..... 1250 kVA
**Max. VDC load** ..... see (table 2)
**Contact material** ..... AgNi+0,2µ Au, (std), std +10µ Au

### Insulation

**Contact**
Open contact ..... 1000 V
Contact/contact ..... 2 kV
Contact/coil ..... 2,5 kV
**Insulation resistance at 500 V** ..... >3G Ω
**Insulation, EN 61810-1** ..... 2,5 kV / 3

CE cULus cSAus (In process) CCC (In process) EAC (In process) RoHS IEC 61810 EN 60947

### Specifications

**Pick-up time/bounce time** ..... 10 ms / ≤ 3 ms
**Release time/bounce time** ..... 6 ms / ≤ 1 ms
**Ambient temperature,operation/storage** ..... -40ºC (no ice)60ºC/80ºC
**Mechanical life ops.** ..... VAC:10 Mill./VDC:20 Mill
**VDC voltage endurance at rated load** ..... >100.000 ops.
**Switching frequency at rated load** ..... 1200/h.
**Protection class** ..... IP40 / RT1
**Weight** ..... 43 g.

### Coils

**Pick-up voltage** ..... < 0,8 x Un
**Release voltage** ..... >0,1 x Un
**Nominal power** ..... 1,2 VA (VAC) / 1 W (VDC)

| VAC | Ω | mA |
|---|---|---|
| 24 | 174 | 50 |
| 48 | 686 | 25 |
| 115 | 4K3 | 10,4 |
| 230 | 18K6 | 5,2 |

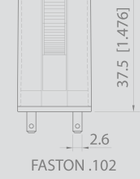
| VDC | Ω | mA |
|---|---|---|
| 12 | 148 | 81 |
| 24 | 594 | 40 |
| 48 | 2K3 | 21 |
| 110 | 11K4 | 11 |

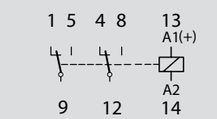
## RQ2112 — 2 CHANGE-OVER CONTACTS SENSITIVE, 8 FASTON, DPDT



**Sensitive 500 mW DC, 800 mVA AC.**
**Margin of operation** 0,8...1,7 x Un
5 A 250 V AC-1 5 A 30 V DC-1

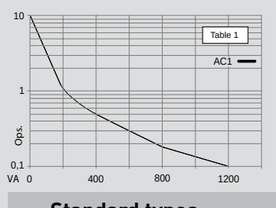
**Dimensions** mm [in]



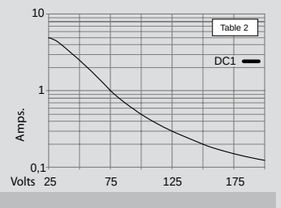





**Electric life, ops x 10⁴**




**Maxim load in VDC**




**Standard types**

AC 50 Hz, (60 Hz): 24, 48, 115, (120), 230, (240)
RQ2112NN, RQ2112LN
DC: 12, 24, 48, 110
RQ2112NN, RQ2112LN, RQ2112LD, RQ2112LE
AC/DC: RQ2112LU
**Sockets:** SQB40D, SQW40F, SQP40X, SQP40F

### Contacts

**Max.switching current** ..... 5 A
**Max.peak inrush current, 20ms** ..... 15 A
**Max. Switching voltage** ..... 250 V
**Max. VAC load (table 1)** ..... 1200 kVA
**Max. VDC load** ..... see (table 2)
**Contact material** ..... AgNi+0,2µ Au (std), std +10µ Au

### Insulation

**Contact**
Open contact ..... 1000 V
Contact/contact ..... 2,5 kV
Contact/coil ..... 2,5 kV
**Insulation resistance at 500 V** ..... >3G Ω
**Insulation, EN 61810-1** ..... 2,5 kV / 3

CE cULus cSAus (In process) Lloyd's CCC (In process) EAC (In process) RoHS IEC 61810 EN 60947

### Specifications

**Pick-up time/bounce time** ..... 10 ms / ≤ 3 ms
**Release time/bounce time** ..... 6 ms / ≤ 1 ms
**Ambient temperature,operation/storage** ..... -40ºC (no ice)60ºC/80ºC
**Mechanical life ops.** ..... VAC:10 Mill./VDC:20 Mill
**VDC voltage endurance at rated load** ..... >100.000 ops.
**Switching frequency at rated load** ..... 1200/h.
**Protection class** ..... IP40 / RT1
**Weight** ..... 40 g.

### Coils

**Pick-up voltage** ..... < 0,8 x Un
**Release voltage** ..... >0,1 x Un
**Nominal power** ..... 0,8 VA (VAC) / 0,5 W (VDC)

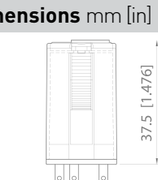
| VAC | Ω | mA |
|---|---|---|
| 24 | 238 | 33 |
| 48 | 1K | 17 |
| 115 | 5K9 | 7 |
| 230 | 23K9 | 3,5 |

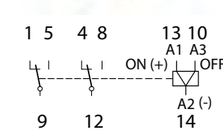
| VDC | Ω | mA |
|---|---|---|
| 12 | 288 | 42 |
| 24 | 1K1 | 21 |
| 48 | 4K6 | 10 |
| 110 | 24K2 | 4,5 |

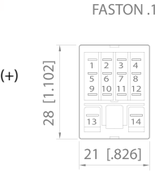
## RQ2119 — 2 CHANGE-OVER CONTACTS, REMANENECE, 9 FASTON DPDT

**Magnetic remanence** 5 A 1200 V AC-1
5 A 30 V DC-1 0,2 A 110 V DC-1

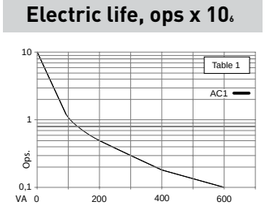
**Dimensions** mm [in]



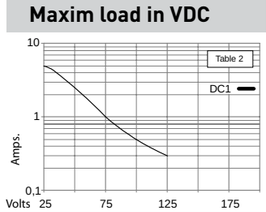




**Electric life, ops x 10⁴**




**Maxim load in VDC**




**Standard types**

AC 50 Hz, (60 Hz): 24, 48, 115, (120), 230, (240)
RQ2119NN
DC: 12, 24, 48, 60
RQ2119NN
**Sockets:** SQB40D, SQW40F, SQP40X, SQP40F

### Contacts

**Max.switching current** ..... 5 A
**Max.peak inrush current, 20ms** ..... 15 A
**Max. Switching voltage** ..... 120 V
**Max. VAC load (table 1)** ..... 1200 kVA
**Max. VDC load** ..... see (table 2)
**Contact material** ..... AgNi+0,2µ Au

### Insulation

**Contact**
Open contact ..... 1000 V
Contact/contact ..... 2 kV
Contact/coil ..... 2 kV
**Insulation resistance at 500 V** ..... >3G Ω
**Insulation, EN 61810-1** ..... 2,5 kV / 3

CE cULus cSAus (In process) Lloyd's CCC (In process) EAC (In process) RoHS IEC 61810 EN 60947

### Specifications

**Pick-up time/bounce time** ..... 50 ms.
**Ambient temperature,operation/storage** ..... -40ºC (no ice)60ºC/80ºC
**Mechanical life ops.** ..... VAC:10 Mill./VDC:20 Mill
**VDC voltage endurance at rated load** ..... >100.000 ops.
**Switching frequency at rated load** ..... 1200/h.
**Protection class** ..... IP40 / RT1
**Weight** ..... 43 g.

### Coils

**Pick-up voltage** ..... 1,2 VA / W
**Release voltage** ..... 0,3 VA / W

| VAC | ON mA | OFF mA |
|---|---|---|
| 24 | 50 | 8 |
| 48 | 25 | 4 |
| 115 | 10 | 2 |
| 230 | 5 | 1 |

| VDC | ON mA | OFF mA |
|---|---|---|
| 12 | 100 | 25 |
| 24 | 50 | 12 |
| 48 | 25 | 6 |
| 60 | 20 | 5 |

# SQ miniature relays sockets

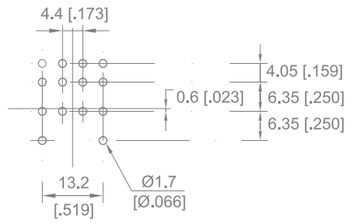


**SQW40F** — 4 POLES, PANEL MOUNTING , SOLDERING WITH CABLES

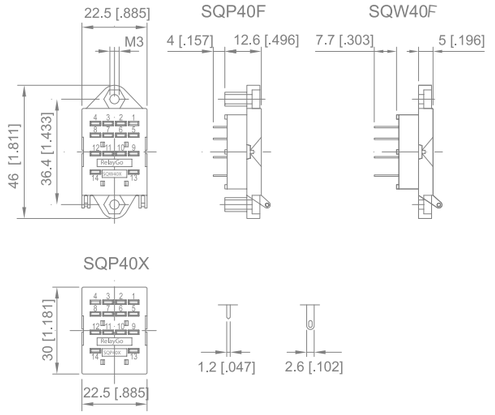
**SQP40X** — 4 POLES, PRINTED CIRCUIT

**SQP40F** — 4 POLES, PRINTED CIRCUIT, MOUNTABLE WITH SCREW M3

## PCB mounting




## Dimensions mm [in]




## Socket for RQ relays

Socket for RQ, four / two poles plug-in relays RQ4110, RQ2112, RQ2119

## Specifications

Rated load ..... 6 A / 250 V
Insulation (terminal/terminal) ..... 2,5 kV

CE Lloyd's (In process) EAC (In process) RoHS

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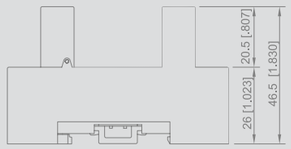
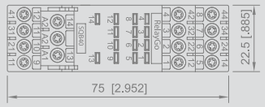
**SQB40** — 4 POLES, RAIL DIN

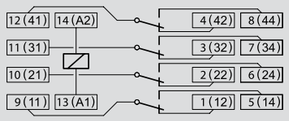
**Socket for RQ4 relays, with clip and marking label**
**10 A / 250 V**

## Dimensions mm [in]




## Connection diagram




## Specifications

Rated load ..... 6 A / 250 V

Insulation
Test voltage, (Vrms/ 1 min.)
Contacts/coils ..... 2,5 kV
All terminals/DIN rail ..... 2,5 kV
Terminal/terminal ..... 2,5 kV

Cross-section of connecting wire
Single-wire ..... 4 mm² or 2 x 2,25 mm²
Multi-wire ..... 22 - 14 AWG
Cable with tip ..... 4 mm²
Screw dimensions ..... M3, Pozi
Max. screw torque ..... 1,2 Nm
Retaining clip plastic integrated

## Socket for RQ relays

Socket for RQ, four / two poles plug-in relays RQ4110, RQ2112, RQ2119

According to the norm EN 60947-1 and IEC 61810-1

CE cULus cULus Lloyd's CCC EAC RoHS (In process) IEC 61810 EN 60947



# RF

RelayGo

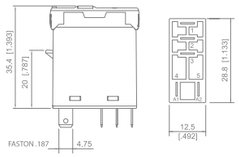
# RF interface relays

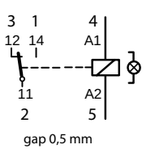
RF1010 | RF1010N N7 | RF1014

## RF1010 — 1 CHANGE-OVER CONTACT, 5 FASTON, SPDT

**General application** 10 A 250 V AC-1 0,5 A 110 V DC-1 / 10 A 30 V DC-1 0,2 A 220 V DC-1 / 13 A 250 V AC-1 (UL)

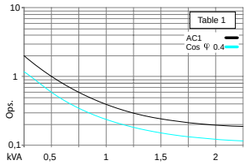

### Dimensions mm [in]



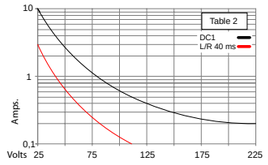




gap 0,5 mm

### Electric life, ops x 10⁴




### Maxim load in VDC




### Standard types

AC 50 Hz, (60 Hz): 24, 48, 115, (120), 230, (240)
RF1010NN, RF1010LN,RF1010NR
DC: 12, 24, 48, 110
RF1010NN, RF1010LN, RF1010LE
AC/DC: RQ1010LU
**Sockets:** SFB10D, SFR10D, SFP10X

### Contacts

**Max.switching current** ..... 10 A
**Max.peak inrush current, 20ms** ..... 30 A (120A $AgSnO_2$)
**Max. Switching voltage** ..... 250 V
**Max. VAC load (table 1)** ..... 2,5 kVA
**Max. VDC load** ..... see (table 2)
**Contact material** ..... AgNi (std), std + 10 µ Au, $AgSnO_2$

### Insulation

**Contact**
Open contact ..... 1000 V
Contact/coil ..... 5 kV
**Insulation resistance at 500 V** ..... >3G Ω
**Insulation, EN 61810-1** ..... 4 kV / 3

IEC 61810 EN 60947

### Specifications

**Pick-up time/bounce time** ..... 10 ms / ≤ 1 ms
**Release time/bounce time** ..... 5 ms / ≤ 3 ms
**Ambient temperature,operation/storage** ..... -40ºC (no ice)70ºC/80ºC
**Mechanical life ops.** ..... VAC:10 Mill./VDC:20 Mill
**VDC voltage endurance at rated load** ..... >100.000 ops.
**Switching frequency at rated load** ..... 1200/h.
**Protection class** ..... IP40 / RT1
**Weight** ..... 21 g.

### Coils

**Pick-up voltage** ..... < 0,8 x Un
**Release voltage** ..... >0,1 x Un
**Nominal power** ..... 1,1 VA (VAC) / 0,7 W (VDC)

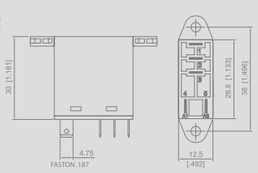
| VAC | Ω | mA |
|---|---|---|
| 24 | 290 | 45 |
| 48 | 1.200 | 23 |
| 115 | 7.300 | 9,5 |
| 230 | 28.800 | 4,7 |

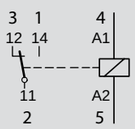
| VDC | Ω | mA |
|---|---|---|
| 12 | 224 | 53 |
| 24 | 742 | 32 |
| 48 | 3.500 | 13,7 |
| 110 | 19.900 | 5,5 |

## RF1010N N7 — 1 CHANGE-OVER CONTACT, PANEL MOUNTING, 5 FASTON, SPDT

**General application** 10 A 250 V AC-1 0,5 A 110 V DC-1 / 10 A 30 V DC-1 0,2 A 220 V DC-1

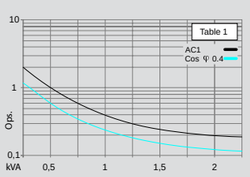

### Dimensions mm [in]



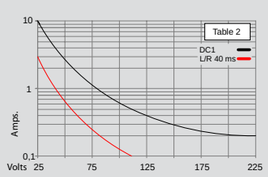




gap 0,5 mm

### Electric life, ops x 10⁴




### Maxim load in VDC




### Standard types

AC 50 Hz, (60 Hz): 24, 48, 115, (120), 230, (240)
RF1010NN7
DC: RF1010NN7

### Contacts

**Max.switching current** ..... 10 A
**Max.peak inrush current, 20ms** ..... 30 A
**Max. Switching voltage** ..... 250 V
**Max. VAC load (table 1)** ..... 2,5 kVA
**Max. VDC load** ..... see (table 2)

### Insulation

**Contact**
Open contact ..... 1000 V
Contact/coil ..... 5 kV
**Insulation resistance at 500 V** ..... >3G Ω
**Insulation, EN 61810-1** ..... 4 kV / 3

IEC 61810 EN 60947

### Specifications

**Pick-up time/bounce time** ..... 10 ms. / ≤ 1 ms
**Release time/bounce time** ..... 5 ms. / ≤ 3 ms
**Ambient temperature,operation/storage** ..... -40ºC (no ice)
**Mechanical life ops.** ..... VAC:10 Mill./VDC:20 Mill
**VDC voltage endurance at rated load** ..... >100.000 ops.
**Switching frequency at rated load** ..... 1200/h.
**Protection class** ..... IP40 / RT1
**Weight** ..... 21 g.

### Coils

**Pick-up voltage** ..... < 0,8 x Un
**Release voltage** ..... >0,1 x Un
**Nominal power** ..... 1,1 VA (VAC) / 0,7 W (VDC)

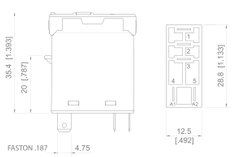
| VAC | Ω | mA |
|---|---|---|
| 24 | 290 | 45 |
| 48 | 1.200 | 23 |
| 115 | 7.300 | 9,5 |
| 230 | 28.800 | 4,7 |

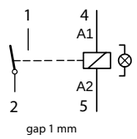
| VDC | Ω | mA |
|---|---|---|
| 12 | 224 | 53 |
| 24 | 742 | 32 |
| 48 | 3.500 | 13,7 |
| 110 | 19.900 | 5,5 |

## RF1014 — 1 OPEN CONTACT, (NO) 4 FASTON, SPST

**Application for VDC** 10 A 250 V AC-1 0,8 A 110 V DC-1 / 10 A 30 V DC-1 0,4 A 220 V DC-1

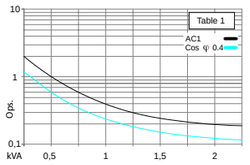

### Dimensions mm [in]



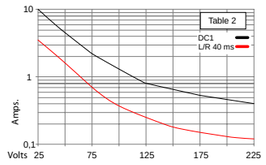




gap 1 mm

### Electric life, ops x 10⁴




### Maxim load in VDC




### Standard types

AC 50 Hz, (60 Hz): 24, 48, 115, (120), 230, (240)
RF1014NN, RF1014LN, RF1014NR
DC: 12, 24, 48, 110
RF1014NN, RF1014LN, RF1014LE
AC/DC: RF1014LU
**Sockets:** SFB10D, SFR10D, SFP10X

### Contacts

**Max.switching current** ..... 10 A
**Max.peak inrush current, 20ms** ..... 30 A (120A $AgSnO_2$)
**Max. Switching voltage** ..... 250 V
**Max. VAC load (table 1)** ..... 2,5 kVA
**Max. VDC load** ..... see (table 2)
**Contact material** ..... AgNi (std), std + 10 µ Au, $AgSnO_2$

### Insulation

**Contact**
Open contact ..... 2000 V
Contact/coil ..... 5 kV
**Insulation resistance at 500 V** ..... >3G Ω
**Insulation, EN 61810-1** ..... 4 kV / 3

IEC 61810 EN 60947

### Specifications

**Pick-up time/bounce time** ..... 10 ms / ≤ 1 ms
**Release time/bounce time** ..... 8 ms / ≤ 3 ms
**Ambient temperature,operation/storage** ..... -40ºC (no ice)70ºC/80ºC
**Mechanical life ops.** ..... VAC:10 Mill./VDC:20 Mill
**VDC voltage endurance at rated load** ..... >100.000 ops.
**Switching frequency at rated load** ..... 1200/h.
**Protection class** ..... IP40 / RT1
**Weight** ..... 21 g.

### Coils

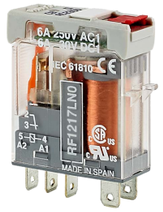
**Pick-up voltage** ..... < 0,8 x Un
**Release voltage** ..... >0,1 x Un
**Nominal power** ..... 1,1 W / 0,7 W (VDC)

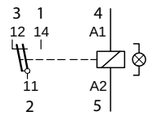
| VAC | Ω | mA |
|---|---|---|
| 24 | 290 | 45 |
| 48 | 1.200 | 23 |
| 115 | 7.300 | 9,5 |
| 230 | 28.800 | 4,7 |

| VDC | Ω | mA |
|---|---|---|
| 12 | 224 | 53 |
| 24 | 742 | 32 |
| 48 | 3.500 | 13,7 |
| 110 | 19.900 | 5,5 |

# RF/RS interface relays and solid state relays

## RF1217 — 1 TWIN CHANGE-OVER CONTACT, 5 FASTON, SPDT

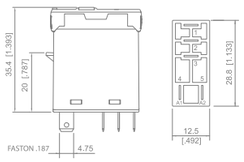


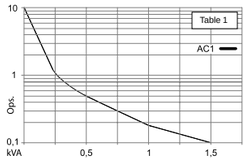
gap 0,5 mm

**Low signal** 6 A 250 V AC-1 0,5 A 110 V DC-1 / 6 A 30 V DC-1 0,2 A 220 V DC-1

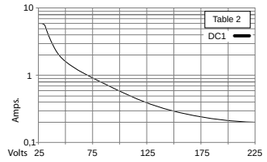
### Dimensions mm [in]




### Electric life, ops x 10⁴




### Maxim load in VDC




### Standard types

AC 50 Hz, (60 Hz): 24, 48, 115, (120), 230, (240)
RF1217NN, RF1217LN, RF1217NR
DC: 12, 24, 48, 110
RF1217NN, RF1217LN, RF1217LE
AC/DC:RF1217LU
**Sockets:** SFB10D, SFR10D, SFP10X

### Contacts

**Max.switching current** ..... 6 A
**Max.peak inrush current, 20ms** ..... 15 A
**Max. Switching voltage** ..... 250 V
**Max. VAC load (table 1)** ..... 1,5 kVA
**Max. VDC load** ..... see (table 2)
**Contact material** ..... AgNi + 3 µ Au (std), AgNi + 10 µ Au

### Insulation

**Contact**
Open contact ..... 1000 V
Contact/coil ..... 5 kV
**Insulation resistance at 500 V** ..... >3G Ω
**Insulation, EN 61810-1** ..... 4 kV / 3

In process In process In process IEC 61810 EN 60947

### Specifications

**Pick-up time/bounce time** ..... 10 ms / 1 ms
**Release time/bounce time** ..... 5 ms / ≤ 3 ms
**Ambient temperature,operation/storage** ..... -40ºC (no ice)70ºC/80ºC
**Mechanical life ops.** ..... VAC:10 Mill./VDC:20 Mill
**VDC voltage endurance at rated load** ..... >100.000 ops.
**Switching frequency at rated load** ..... 1200/h.
**Protection class** ..... IP40 / RT1
**Weight** ..... 21 g.

### Coils

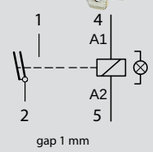
**Pick-up voltage** ..... < 0,8 x Un
**Release voltage** ..... >0,1 x Un
**Nominal power** ..... 1,1 VA (VAC) / 0,7 W (VDC)

| VAC | Ω | mA |
|---|---|---|
| 24 | 290 | 45 |
| 48 | 1.200 | 23 |
| 115 | 7.300 | 9,5 |
| 230 | 28.800 | 4,7 |

| VDC | Ω | mA |
|---|---|---|
| 12 | 224 | 53 |
| 24 | 742 | 32 |
| 48 | 3.500 | 13,7 |
| 110 | 19.900 | 5,5 |

## RF1222 — 1 TWIN CHANGE-OVER CONTACT, NO, 4 FASTON, SPST

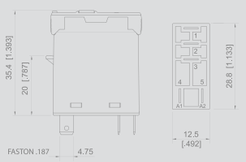


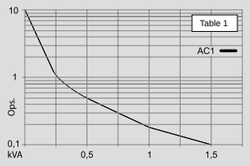
gap 1 mm

**Application for VDC** 6 A 250 V AC-1 0,8 A 110 V DC-1 / 6 A 30 V DC-1 0,4 A 220 V DC-1

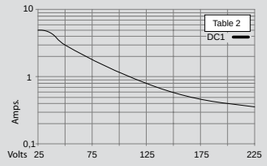
### Dimensions mm [in]




### Electric life, ops x 10⁴




### Maxim load in VDC




### Standard types

AC 50 Hz, (60 Hz): 24, 48, 115, (120), 230, (240)
RF1222NN, RF1222LN, RF1222NR
DC: 12, 24, 48, 110
RF1222NN, RF1222LN, RF1222LE
AC/DC:RF1222LU
**Sockets:** SFB10D, SFR10D, SFP10X

### Contacts

**Max.switching current** ..... 6 A
**Max.peak inrush current, 20ms** ..... 15 A
**Max. Switching voltage** ..... 250 V
**Max. VAC load (table 1)** ..... 1,5 kVA
**Max. VDC load** ..... see (table 2)
**Contact material** ..... AgNi + 3 µ Au (std), AgNi + 10 µ Au

### Insulation

**Contact**
Open contact ..... 2000 V
Contact/coil ..... 5 kV
**Insulation resistance at 500 V** ..... >3G Ω
**Insulation, EN 61810-1** ..... 4 kV / 3

In process In process IEC 61810 EN 60947

### Specifications

**Pick-up time/bounce time** ..... 10 ms / 1 ms
**Release time/bounce time** ..... 5 ms / ≤ 3 ms
**Ambient temperature,operation/storage** ..... -40ºC (no ice)70ºC/80ºC
**Mechanical life ops.** ..... VAC:10 Mill./VDC:20 Mill
**VDC voltage endurance at rated load** ..... >100.000 ops.
**Switching frequency at rated load** ..... 1200/h.
**Protection class** ..... IP40 / RT1
**Weight** ..... 21 g.

### Coils

**Pick-up voltage** ..... < 0,8 x Un
**Release voltage** ..... >0,1 x Un
**Nominal power** ..... 1,1 W / 0,7 W (VDC)

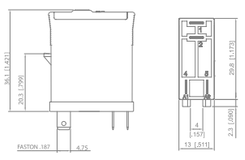
| VAC | Ω | mA |
|---|---|---|
| 24 | 290 | 45 |
| 48 | 1.200 | 23 |
| 115 | 7.300 | 9,5 |
| 230 | 28.800 | 4,7 |

| VDC | Ω | mA |
|---|---|---|
| 12 | 224 | 53 |
| 24 | 742 | 32 |
| 48 | 3.500 | 13,7 |
| 110 | 19.900 | 5,5 |

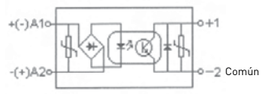
## RS1614 — SOLID STATE RELAY, VDC


**Connection of inductive and resistive loads in VDC, negative common** 2 A 5 ... 50 VDC

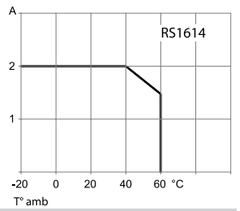
### Dimensions mm [in]




### Output




### Maxim load




### Standard types

**Sockets:** SFB10D, SFR10D, SFP10X

### Entrance without polarity

**Turn-on voltage** ..... 5...32 Vdc
**Release voltage** ..... < 2,5 Vdc
**Input current** ..... 3+-1 mA
**Stabilised current regulator** ..... Yes
**Input voltage protection** ..... IEC-1000-4-5 level 1

### Specifications

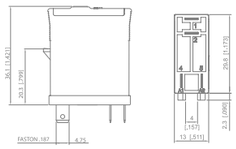
**Test voltage between input/output** ..... 4 KV / 1 min
**Turn-on delay** ..... 1 ms
**Release delay** ..... max. 2 ms
**Ambient temperature operation** ..... 60ºC
**Ambient temperature storage** ..... 100ºC
**Weight** ..... 28 g.

In process IEC 61810 EN 60947

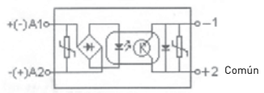
## RS1714 — SOLID STATE RELAY, VDC

**Connection of inductive and resistive loads in VDC, positive common**
**2 A 5 ... 50 VDC**

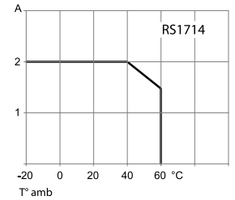

**Dimensions** mm [in]



**Output**




**Maxim load**




**Standard types**

**Sockets:** SFB10D, SFR10D, SFP10X

**Entrance without polarity**

| | |
|---|---|
| **Input voltage** | 5...32 Vdc |
| **Release voltage** | < 2,5 Vdc |
| **Input current** | 3+-1 mA |
| **Stabilised current regulator** | Yes |
| **Input voltage protection** | IEC-1000-4-5 level 1 |

**Specifications**

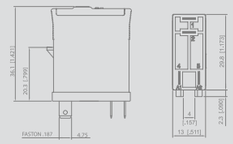
| | |
|---|---|
| **Test voltage between input/output** | 4 KV / 1 min |
| **Turn-on delay** | 1 ms |
| **Release delay** | max. 2 ms |
| **Ambient temperature operation** | 60ºC |
| **Ambient temperature storage** | 100ºC |
| **Weight** | 28 g. |

IEC 61810 EN 60947

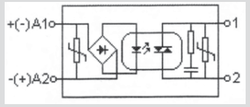
## RS1814 — SOLID STATE RELAY, VAC

**Connection of inductive loads in VAC, one open contact**
**3 A 24 ... 250 V AC, 50/60**

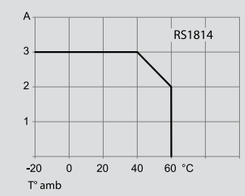

**Dimensions** mm [in]



**Hz Output**




**Maxim load**




**Standard types**

**Sockets:** SFB10D, SFR10D, SFP10X

**Entrance without polarity**

| | |
|---|---|
| **Input voltage** | 5...32 Vdc |
| **Release voltage** | < 2,5 Vdc |
| **Input current** | 5...15 mA |
| **Stabilised current regulator** | Yes |
| **Input voltage protection** | IEC-1000-4-5 level 1 |

**Specifications**

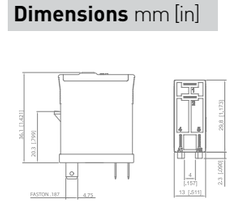
| | |
|---|---|
| **Test voltage between input/output** | 4 KV / 1 min |
| **Turn-on delay** | 1/2 cycle |
| **Release delay** | 2 ms+1/2 cycle |
| **Ambient temperature operation** | 60ºC |
| **Ambient temperature storage** | 100ºC |
| **Weight** | 28 g. |

IEC 61810 EN 60947

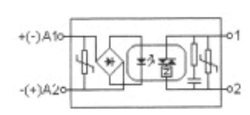
## RS1914 — SOLID STATE RELAY, VAC

**Connection of resistive and lamp loads in VAC, zero crossing, one open contact**
**3 A 24 ... 250 V AC, 50/60 Hz**

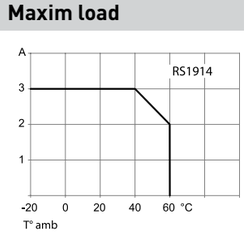

**Dimensions** mm [in]



**Output**




**Maxim load**




**Tipos estándar**

**Sockets:** SFB10D, SFR10D, SFP10X

**Entrance without polarity**

| | |
|---|---|
| **Input voltage** | 5...32 Vdc |
| **Release voltage** | < 2,5 Vdc |
| **Input current** | 5...15 mA |
| **Stabilised current regulator** | Yes |
| **Input voltage protection** | IEC-1000-4-5 level 1 |

**Specifications**

| | |
|---|---|
| **Test voltage between input/output** | 4 KV / 1 min |
| **Turn-on delay** | 1/2 cycle |
| **Release delay** | 2 ms+1/2 cycle |
| **Ambient temperature operation** | 60ºC |
| **Ambient temperature storage** | 100ºC |
| **Weight** | 28 g. |

IEC 61810 EN 60947

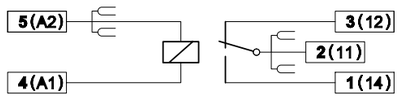
# SF interface relays sockets



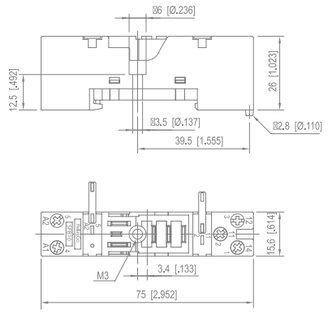
## SFB10 — 1 POLE, RAIL DIN

**Sockets for RF relays of a change-over pole.**
**Rail Din or panel mounting**

### Connection diagram




### Dimensions mm [in]




### Specifications

**Rated load** ..... 10 A / 250 V

**Insulation**

Test voltage, (Vrms/ 1 min.)
Contacts/coils ..... 5 kV
All terminals/DIN rail ..... 5 kV
Maxim strength of pressing in bornes ..... 1,2 Nm
Cable multi-thread capacity ..... 22 - 14 AWG
Capacity of the solid or pointers thread ..... 4 mm² or 2 x 2,25 mm²
Approximate weight ..... 28 g
Fastening clip integrated
Identification label

### Other aspects

Tinned hard brass terminals
Zinc screws
Integrated clip. It allows to remove the label

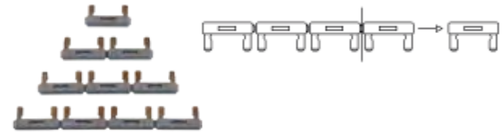
CE cULus cSPus (In process) EAC (In process) RoHS — IEC 61810 EN 60947

### Socket for RF relays

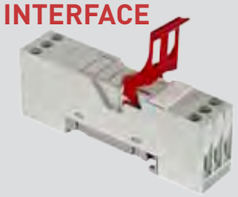
**In/out socket of borns "in line" for relays RF1010, RF1010NN7, RF1014, RF1410, RF1514, RF1217, RF1222, RS1614, RS1714, RS1814, RS1914**

### Accessories

Coil bridge BF14
Integrated clip
Mounting in rail din
Maxim current through the bridge ..... 10 A

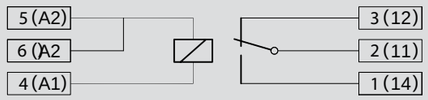


## SFR10 — 1 POLE, RAIL DIN, REINFORCED, IN/OUT FOR INTERFACE

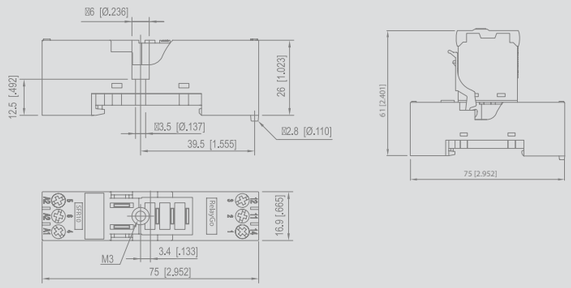


**Socket in/out for RF relays of a change-over pole**

### Connection diagram




### Dimensions mm [in]




### Specifications

**Rated load** ..... 16 A / 250 V

**Insulation**

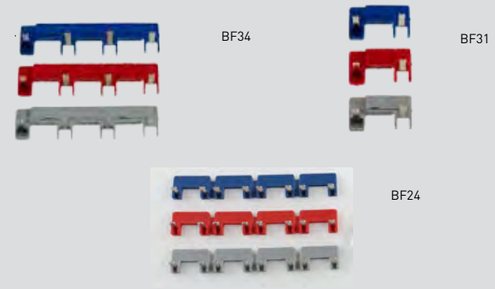
Test voltage, (Vrms/ 1 min.)
Contacts/coils ..... 5 kV
All terminals/DIN rail ..... 5 kV
Máxima fuerza de apriete en bornas ..... 1,2 Nm
Screw dimensions ..... M3, Pozi
Cable multi-thread capacity ..... 22 - 14 AWG
Capacity of the solid or pointers thread ..... 4 mm² or 2 x 2,25 mm²
Terminals of extrahard brass, processed ..... 4 mm²
Fastening clip integrated
Identification label

CE cULus EAC (In process) RoHS — IEC 61810 EN 60947

### Socket for RF relays

**In/out socket of borns "in line" for relays RF1010, RF1010NN7, RF1014, RF1410, RF1514, RF1217, RF1222, RS1614, RS1714, RS1814, RS1914**

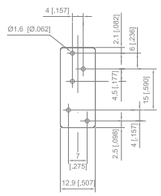
BF bridges are suitable to use in sockets SF1. These bridges allow to join in a secure and quick way the contacts saving cabling and reducing the time of the mounting.



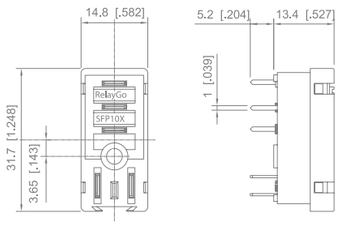

## SFP10X — 1 POLE, PRINTED CIRCUIT

**Sockets for RF relays in printed circuit**

### Connection diagram




### Dimensions mm [in]




### Specifications

**Rated load** ..... 10 A / 250 V

**Insulation**

Test voltage, (Vrms/ 1 min.)
Contacts/coils ..... 5 kV
Hard brass tin-plated terminals ..... 0,5 x 1 mm
Retaining clip plastic integrated

CE cULus EAC (In process) RoHS — EC 61810 EN 60947

### Socket for RF relays

**In/out interface socket with terminals for RF1010, RF1010NN7, RF1014, RF1410, RF1514, RF1217, RF1222, RS1614, RS1714, RS1814, RS1914**







www.relaygo.com / Laguna 30. 28923, Alcorcón (Madrid) - Spain / Tlf: +34 916 416 012 Fax.: +34 916 412 193

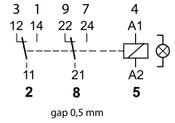


SF

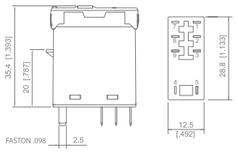
# RF interface relays

## RF2110 — 2 CHANGE-OVER CONTACTS, 8 FASTON, DPDT

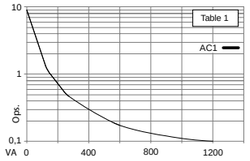
**General application** 5 A 250 V AC-1 0,5 A 110 V DC-1 / 5 A 30 V DC-1 0,2 A 220 V DC-1

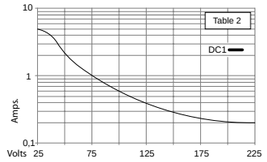

### Dimensions mm [in]




### Electric life, ops x 10⁴




### Maxim load in VDC




### Standard types

AC 50 Hz, (60 Hz): 24, 48, 115, (120), 230, (240)
RF2110NN, RF2110LN, RF2110NR
DC: 12, 24, 48, 110
RF2110NN, RF2110LN, RF2110LE
AC/DC: RF2110LU
**Sockets:** SFB20D, SFP20X

### Contacts

| | |
|---|---|
| Max.switching current | 5 A |
| Max.peak inrush current, 20ms | 15 A |
| Max. Switching voltage | 250 V |
| Max. VAC load (table 1) | 1,2 kVA |
| Max. VDC load | see (table 2) |
| Contact material | AgNi + 0,2 µ Au (std), 10 µ Au |

### Insulation

| | |
|---|---|
| Contact | |
| Open contact | 1000 V |
| Contact/contact | 3 kV |
| Contact/coil | 5 kV |
| Insulation resistance at 500 V | >3G Ω |
| Insulation, EN 61810-1 | 4 KV / 3 |

CE cULus In process In process In process RoHS IEC 61810 EN 60947

### Specifications

| | |
|---|---|
| Pick-up time/bounce time | 10 ms / 1 ms |
| Release time/bounce time | 5 ms / ≤ 3 ms |
| Ambient temperature,operation/storage | -40ºC (no ice)70ºC/80ºC |
| Mechanical life ops. | VAC:10 Mill./VDC:20 Mill |
| VDC voltage endurance at rated load | >100.000 ops. |
| Switching frequency at rated load | 1200/h. |
| Protection class | IP40 / RT1 |
| Weight | 21 g. |

### Coils

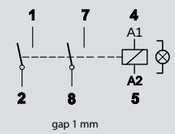
| | |
|---|---|
| Pick-up voltage | < 0,8 x Un |
| Release voltage | >0,1 x Un |
| Nominal power | 1,1 VA (VAC) / 0,7 W (VDC) |

| VAC | Ω | mA |
|---|---|---|
| 24 | 290 | 45 |
| 48 | 1.200 | 23 |
| 115 | 7.300 | 9,5 |
| 230 | 28.800 | 4,7 |

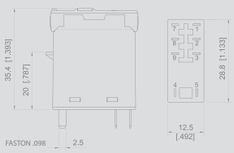
| VDC | Ω | mA |
|---|---|---|
| 12 | 224 | 53 |
| 24 | 742 | 32 |
| 48 | 3.500 | 13,7 |
| 110 | 19.900 | 5,5 |

## RF2114 — 2 OPEN CONTACTS, 6 FASTON, DPST

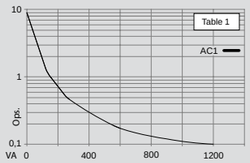
**Application for VDC** 5 A 250 V A C-1 0,5 A 110 V DC-1 / 5 A 30 V DC-1 0,2 A 220 V DC-1

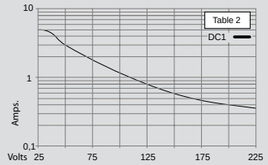

### Dimensions mm [in]




### Electric life, ops x 10⁴




### Maxim load in VDC




### Standard types

AC 50 Hz, (60 Hz): 24, 48, 115, (120), 230, (240)
RF2114NN, RF2114LN, RF2114NR
DC: 12, 24, 48, 110
RF2114NN, RF2114LN, RF2114LE
AC/DC: RF2114LU
**Sockets:** SFB20D, SFP20X

### Contacts

| | |
|---|---|
| Max.switching current | 5 A |
| Max.peak inrush current, 20ms | 15 A |
| Max. Switching voltage | 250 V |
| Max. VAC load (table 1) | 1,2 kVA |
| Max. VDC load | see (table 2) |
| Contact material | AgNi + 0,2 µ Au (std), 10 µ Au |

### Insulation

| | |
|---|---|
| Contact | |
| Open contact | 2000 V |
| Contact/contact | 3 kV |
| Contact/coil | 5 kV |
| Insulation resistance at 500 V | >3G Ω |
| Insulation, EN 61810-1 | 4 kV / 3 |

CE cULus cULus In process In process In process RoHS IEC 61810 EN 60947

### Specifications

| | |
|---|---|
| Pick-up time/bounce time | 10 ms / ≤ 1 ms |
| Release time/bounce time | 8 ms / ≤ 3 ms |
| Ambient temperature,operation/storage | -40ºC (no ice)70ºC/80ºC |
| Mechanical life ops. | VAC:10 Mill./VDC:20 Mill |
| VDC voltage endurance at rated load | >100.000 ops. |
| Switching frequency at rated load | 1200/h. |
| Protection class | IP40 / RT1 |
| Weight | 21 g. |

### Coils

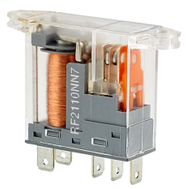
| | |
|---|---|
| Pick-up voltage | < 0,8 x Un |
| Release voltage | >0,1 x Un |
| Nominal power | 1,1 W / 0,7 W (VDC) |

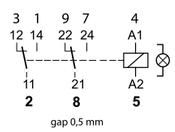
| VAC | Ω | mA |
|---|---|---|
| 24 | 290 | 45 |
| 48 | 1.200 | 23 |
| 115 | 7.300 | 9,5 |
| 230 | 28.800 | 4,7 |

| VDC | Ω | mA |
|---|---|---|
| 12 | 224 | 53 |
| 24 | 742 | 32 |
| 48 | 3.500 | 13,7 |
| 110 | 19.900 | 5,5 |

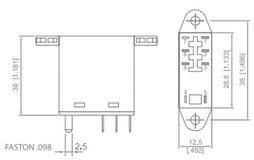
## RF2110N N7 — 2 CHANGE-OVER CONTACTS, PANEL MOUNTING, 8 FASTON, DPDT

**General application** 5 A 250 V AC-1 0,5 A 110 V DC-1 / 5 A 30 V DC-1 0,2 A 220 V DC-1

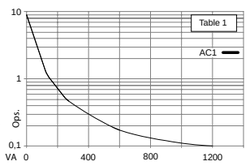


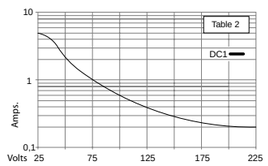

### Dimensiones mm [in]




### Electric life, ops x 10⁴




### Maxim load in VDC




### Standard types

AC 50 Hz, (60 Hz): 24, 48, 115, (120), 230, (240)
RF2110NN, RF2110LN, RF2110NR
DC: 12, 24, 48, 110
RF2110NN, RF2110LN, RF2110LE
AC/DC: RF2110LU
**Sockets:** SFB20D, SFP20X

### Contacts

| | |
|---|---|
| Max.switching current | 5 A |
| Max.peak inrush current, 20ms | 15 A |
| Max. Switching voltage | 250 V |
| Max. VAC load (table 1) | 1,2 kVA |
| Max. VDC load | see (table 2) |
| Contact material | AgNi + 0,2 µ Au (std), 10 µ Au |

### Insulation

| | |
|---|---|
| Contact | |
| Open contact | 1000 V |
| Contact/contact | 3 kV |
| Contact/coil | 5 kV |
| Insulation resistance at 500 V | >3G Ω |
| Insulation, EN 61810-1 | 4 kV / 3 |

CE cULus In process In process RoHS IEC 61810 EN 60947

### Specifications

| | |
|---|---|
| Pick-up time/bounce time | 10 ms. / ≤ 1 ms |
| Release time/bounce time | 5 ms / ≤ 3 ms |
| Ambient temperature,operation/storage | -40ºC (no ice) |
| Mechanical life ops. | VAC:10 Mill./VDC:20 Mill |
| VDC voltage endurance at rated load | >100.000 ops. |
| Switching frequency at rated load | 1200/h. |
| Protection class | IP40 / RT1 |
| Weight | 21 g. |

### Coils

| | |
|---|---|
| Pick-up voltage | < 0,8 x Un |
| Release voltage | >0,1 x Un |
| Nominal power | 1,1 VA (VAC) / 0,7 W (VDC) |

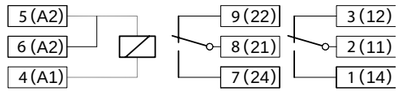
| VAC | Ω | mA |
|---|---|---|
| 24 | 290 | 45 |
| 48 | 1.200 | 23 |
| 115 | 7.300 | 9,5 |
| 230 | 28.800 | 4,7 |

| VDC | Ω | mA |
|---|---|---|
| 12 | 224 | 53 |
| 24 | 742 | 32 |
| 48 | 3.500 | 13,7 |
| 110 | 19.900 | 5,5 |

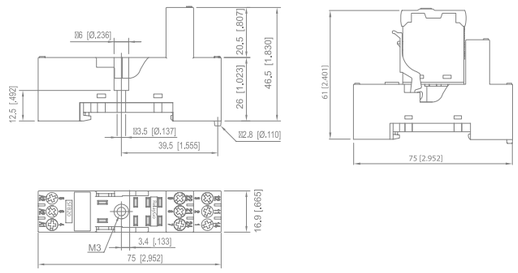
## SFB20 — 2 POLES IN/OUT FOR INTERFACE

**Socket in/out RF relays of two change-over poles**

### Connection diagram




### Dimensions mm [in]




### Specifications

**Rated load** ..... 5 A / 250 V

**Insulation**

Test voltage, (Vrms/ 1 min.)
Contacts/coils ..... 5 kV
All terminals/DIN rail ..... 5 kV
Terminal/terminal ..... 3 kV
Max screw torque ..... 1,2 Nm
Max cross section multi-wire ..... 22 - 14 AWG
Max cross section single-wire (or tip) ..... 4 mm²
Terminal box iron zinc plated
Retaining clip and marking label integrated

CE cULus EAC In process RoHS — IEC 61810 EN 60947

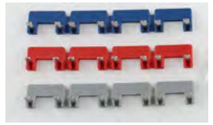
### Socket for RF relays

**Socket interface with terminals in line for relays RF2100, RF2114, RF2110NN7**

The bridges BF allow to connect securely and quickly the terminals of sockets SFB, saving material and time.

BF34

BF31

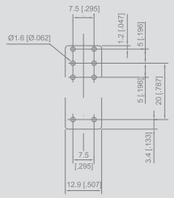


BF24

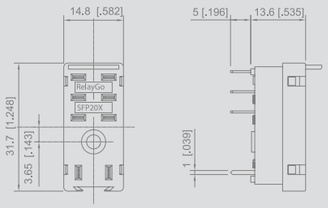
## SFP20X — 2 POLES, PRINTED CIRCUIT

**Socket of printed circuit for RF relays in two poles**

### Connection diagram




### Dimensions mm [in]




### Specifications

**Rated load** ..... 5 A / 250 V

**Insulation**

Test voltage, (Vrms/ 1 min.)
Contacts/coils ..... 5 kV
Hard brass tin-plated terminals ..... 0,5 x 1 mm
Retaining clip plastic integrated

CE cULus EAC In process RoHS — EC 61810 EN 60947

### Socket for RF relays

**Socket interface with terminals in line for relays RF2110, RF2114, RF2110NN7**

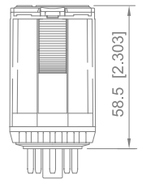
RR

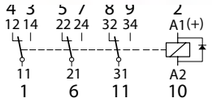
RelayGo

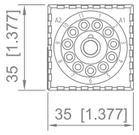
## RR3010 — 3 CHANGE-OVER CONTACTS, 11 PINS, TPDT

**Application for railway** 6 A 250 V AC-1 6 A 110 V DC-1

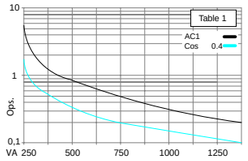
### Dimensions mm [in]



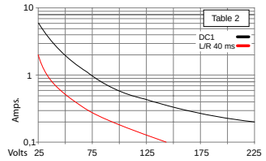




### Electric life, ops x 10⁴




### Maxim load in VDC




### Standard types

DC: 12, 24, 48, 110
RR3010NN, RR3010LN, RR30F00
**Sockets:** SMB30D, SMP30D, SMB30P, SMB30S, SMW30F, SMP30F

### Contacts

| | |
|---|---|
| Max.switching current | 6 A |
| Max.peak inrush current, 20ms | 15 A |
| Max. Switching voltage | 250 V |
| Max. VAC load (table 1) | curve/ see Fig 1 |
| Max. VDC load | see (table 2) |
| Contact material | AgNi (std), std + 0,2µ Au, std + 10µ Au |

### Insulation

| | |
|---|---|
| Pollution grade | PD3 |
| With pulse | (1.2/50µs) |
| Contacts (pulses /Vrms, 1 min) | |
| Contact/contact | 4 kV /2200 V |
| Contact/coil | 4 kV / 2200 V |
| Between contacts same pole | 1550 / 850 V |

CE In process In process RoHS — EN 60077 EN 61373 IEC 61810 EN 60947

### Specifications

| | |
|---|---|
| Ambient temperature | 40ºC |
| Mechanical life ops. | > 10 millions |
| Thermic class | B (130º) |
| Vibration:category-class | 1/B Body Mounted |
| Protection class | IP40 |
| Vibration | 5-150Hz ( 3 axes) |
| Shock | 5 g ( 3 axes) |
| Operation (UN) / release time | 18 ms / 35 ms |
| Weight | 95 g. |

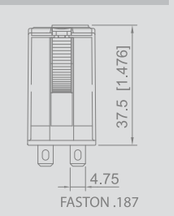
### Coils

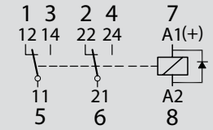
| | |
|---|---|
| Operation range | 0,7 UN @ 1,25 Un |
| Nominal power | 1,07 W |
| Release voltage | >0,1 x Un |

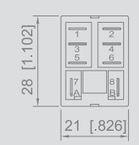
## RR2010 — 2 CHANGE-OVER CONTACTS, 8 FASTON, DPDT

**Application for railway** 10 A 250 V AC-1 1 0 A 30 V DC-1

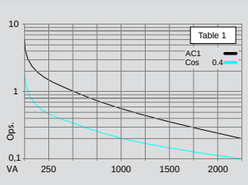
### Dimensions mm [in]



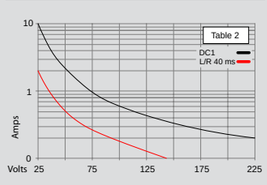




### Electric life, ops x 10⁴




### Maxim load in VDC




### Standard types

DC: 12, 24, 48, 110
RR2010NN, RR2010LN, RR2010D, RR2010LD
**Sockets:** SQB20D, SQW20X, SQP20X, SQP20F, SQB20I

### Contacts

| | |
|---|---|
| Max.switching current | 10 A |
| Max.peak inrush current, 20ms | 30 A |
| Max. Switching voltage | 250 V |
| Max. VAC load (table 1) | 2,5 kVA |
| Max. VDC load | see (table 2) |
| Contact material | AgNi (std), std + 0,2µ Au, std + 10µ Au |

### Insulation

| | |
|---|---|
| Pollution grade | PD3 |
| With pulse | (1.2/50µs) |
| Contacts (pulses /Vrms, 1 min) | |
| Contact/contact | 4 kV /2200 V |
| Contact/coil | 4 kV / 2200 V |
| Between contacts same pole | 1550 / 850 V |

CE cULus In process In process In process RoHS — EN 60077 EN 61373 IEC 61810 EN 60947

### Specifications

| | |
|---|---|
| Ambient temperature | 40ºC |
| Mechanical life ops. | 20 millions |
| Thermic class | B (130º) |
| Vibration:category-class | 1/B Body Mounted |
| Protection class | IP40 |
| Vibration | 5-150Hz ( 3 axes) |
| Shock | 5 g ( 3 axes) |
| Operation (UN) / release time | 10 ms / 15 ms |
| Weight | 35 g. |

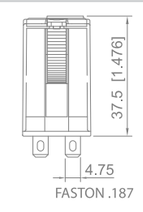
### Coils

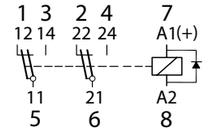
| | |
|---|---|
| Operation range | 0,7 UN @ 1,25 Un |
| Nominal power | 1,07 W |
| Release voltage | >0,1 x Un |

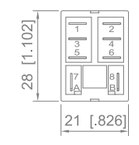
## RR2117 — 2 CHANGE-OVER BIFURCATED CONTACTS, 8 FASTON, DPDT

**Application for railway** 6 A 250 V AC-1 6 A 30 V DC-1

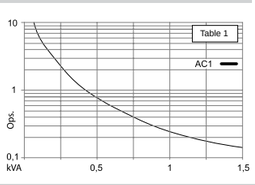
### Dimensions mm [in]



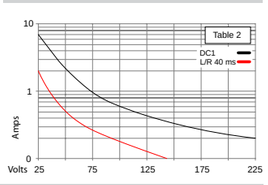




### Electric life, ops x 10⁴




### Maxim load in VDC




### Standard types

DC: 12, 24, 48, 110
RR2117NN, RR2117LN, RR2117D, RR2117LD
**Sockets:** SQB20D, SQW20X, SQP20X, SQP20F, SQB20I

### Contacts

| | |
|---|---|
| Max.switching current | 6 A |
| Max.peak inrush current, 20ms | 15 A |
| Max. Switching voltage | 250 V |
| Max. VAC load (table 1) | Table 1 / ver Fig 1 |
| Max. VDC load | see (table 2) |
| Contact material | AgNi (std), std + 0,2µ Au, std + 10µ Au |

### Insulation

| | |
|---|---|
| Pollution grade | PD3 |
| With pulse | (1.2/50µs) |
| Contacts (pulses /Vrms, 1 min) | |
| Contact/contact | 4 kV / 2200 V |
| Contact/coil | 4 kV / 2200 V |
| Between contacts same pole | 1550 / 850 V |

CE In process In process RoHS — EN 60077 EN 61373 IEC 61810 EN 60947

### Specifications

| | |
|---|---|
| Ambient temperature | 40ºC |
| Mechanical life ops. | 20 millions |
| Thermic class | B (130º) |
| Vibration:category-class | 1/B Body Mounted |
| Protection class | IP40 |
| Vibration | 5-150Hz ( 3 axes) |
| Shock | 5 g ( 3 axes) |
| Operation (UN) / release time | 10 ms / 15 ms |
| Weight | 35 g. |

### Coils

| | |
|---|---|
| Operation range | 0,7 UN @ 1,25 Un |
| Nominal power | 1,07 W |
| Release voltage | >0,1 x Un |

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# RelayGo

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