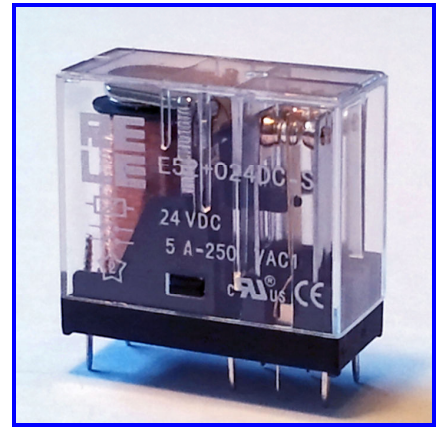


SERIES E

Miniature Relays for Printed Circuit Boards

All-or-Nothing relays ideally suited for all electronic appliances demanding compact design and reduced power consumption. Design includes a protective dust cover and, on request, a sealed version. Single and double pole contact configurations available.

Different types with up to 16A ratings and a complete range of DC coil supply voltages are available. Terminals are for printed circuit board mounting, either directly, or via appropriate sockets, for any application requiring full "plug-in" serviceability or maintenance.



DIELECTRIC STRENGTH

Coil spring set to contacts :	5000 V RMS
Between adjacent contacts :	4000 V RMS
Between open contacts :	1000 V RMS
Ground / live parts :	(insulated ground)

OPERATING TIMES (At Rated Voltage)

Operate (excluding bounces) :	max 20	milliseconds
Release (excluding bounces) :	max 10	milliseconds
Bounces :	max 5	milliseconds

SPECIFICATION

Min. insulation resistance	100 MΩ @ 500 VDC (all circuits)
Pollution degree / ins.voltage	3 / 250 VAC (EN 81610-1)
Enclosure classification	IP 40 (sealed type IP67) (EN 60529)
Type of duty	Continuous
Mechanical life expectancy	10x10 ⁶ operations
Max ops./hour @ no load	18000
Max ops./hour @ rated load	3600
Temperature range	-40 to +70° C
Storage temperature	-55 to +80° C
Vibration	10 g - 10-55 Hz
Shock resistance	10 g - 11 ms
Overvoltage class	III
Weight	17 grams
Min. creepage dist. / air gap	8 mm between coil / contacts (VDE 0730)

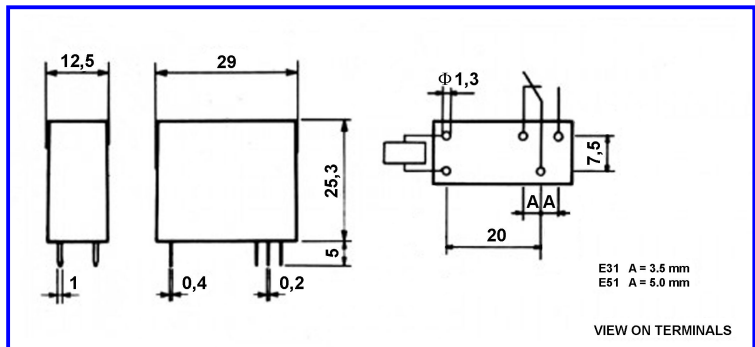
AVAILABLE TYPES

E31 - 3.5 mm pin-spacing **10A-240V AC**

E51 - 5 mm pin-spacing **10A-240V AC**

1 pole changeover or normally open.
Printed circuit terminations.

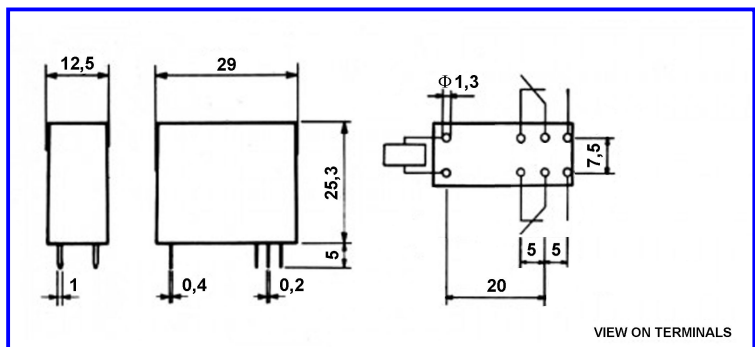
Contact material Ag-CdO 10%.



E52 - 5 mm pin-spacing **5A-240V AC**

2 pole changeover or normally open.
Printed circuit terminations.

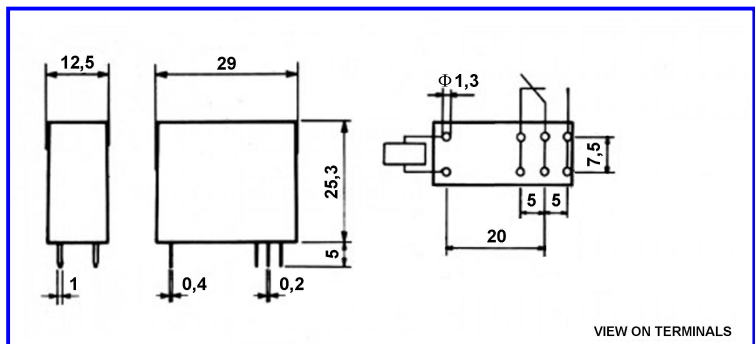
Contact material Ag-CdO 10%.



E61 - 5 mm pin-spacing **16A-240V AC**

1 pole changeover or normally open.
Printed circuit terminations.

Contact material Ag-CdO 10%.



APPROVALS



COIL CHARACTERISTICS

Rated Voltage V	DC		AC		
	Rated Current mA	Resistance R Ω	Rated Current mA (50 Hz)	Rated Current mA (60 Hz)	Resistance R Ω
6	88	68	-	-	-
12	44	270	100	86	60
24	22	1080	50	43	250
48	11	4340	25	21	980
110	5	22830	11	9	5500
5.8	-	-	5.8	5	22000

Resistance values at 23°C ambient temp.

Tolerance on R: ± 10%

Power supply voltages:

6-12-24-48-110 VDC

12-24-110-220 VAC

Rated power: 0.53W (DC)

1.2VA (AC)

Operating range:

-25% to +10% of nominal (DC)

-20% to +10% of nominal (AC)

Minimum hold voltage:

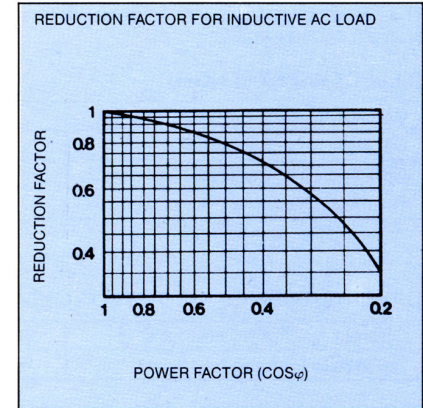
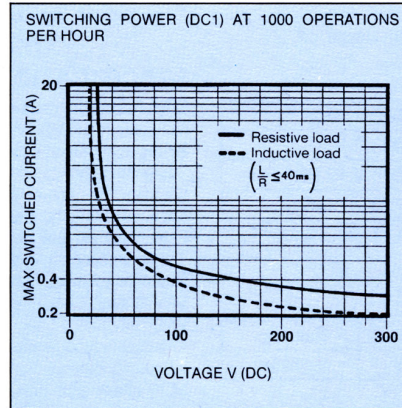
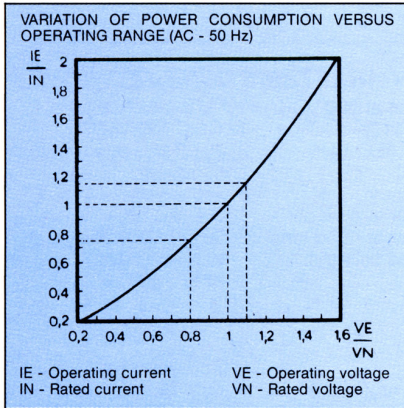
70% of nominal (DC)

80% of nominal (AC)

Must release voltage:

10% of nominal (AC & DC)

Thermic insulation class of winding (IEC 317): F (155°C)

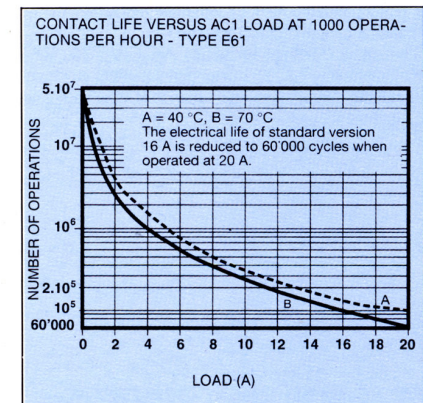
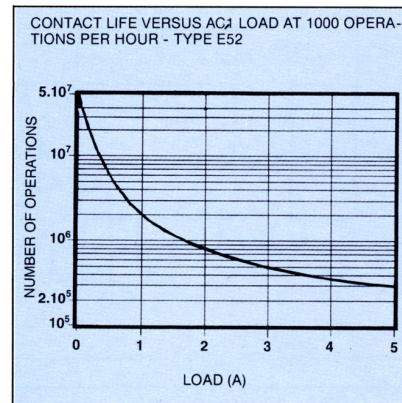
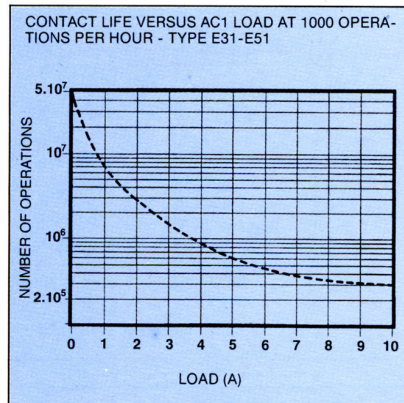


CONTACT CHARACTERISTICS

	E31-51	E52	E61	
Maximum power rating (AC1) :	2400	1200	3840	VA
Rated current :	10	5	16	A
Rated voltage :	240	240	240	VAC
Maximum switched voltage :	240	240	240	VAC
Maximum instantaneous current ⁽¹⁾ :	15	7	25	A
Switching power (DC1) :	see diagram			
Maximum single-phase motor load (cosφ 0.7 - 250VAC max.) :	1/3	1/6	1/2	HP
Initial contact resistance ⁽²⁾ : maximum	100	100	100	mΩ
Standard	30	50	20	mΩ
Standard material	Ag-CdO	Ag-CdO	Ag-CdO	90-10%

⁽¹⁾ Maximum admitted time 0.5 sec. ED=0.1

⁽²⁾ Contact category (EN 61810-7) : CC2



ORDERING INFORMATION

E51 + 24DC - S - ER - 5

1 2 3 4 5

1 - Relay type: E31+ E51+ E52+ E61+

2 - Coil supply voltage: AC or DC

3 - Contact configuration:

S = changeover (standard)

L = normally open (on request)

4 - Version : Void = (in cover, flux tight)

ER = (in cover, sealed)

5 - Alternative contact material:

Void = standard (Ag-CdO)

4 = Silver-Tin Oxide (Ag-SnO₂)

5 = Gold plated silver (Ag+3μ Au)

Groups 4 & 5 of code are normally omitted, concerning special types available only on request for agreed quantities.