

SERIES F

Low Profile PCB Relays

All-or-Nothing relays ideally suited for modern electronic applications demanding low-profile design and minimum power consumption. Design offering sealed IP67 construction, suitable for any automatic soldering process. The cover incorporates a special device that, easily pierced after

PCB washing, avoids internal ozone formation. Contact rating is 8 A and a complete range of DC coil supply voltages is available. Terminations are for printed circuit board mounting, either directly (all main international pin configurations available), or by exclusive sockets.



DIELECTRIC STRENGTH

Coil springset to contacts : **4000 V RMS**
 Between open contacts : **1000 V RMS**
 Ground / live parts : ground insulated from outside

OPERATING TIMES (At Rated Voltage)

Operate (excluding bounces) : **max 9** milliseconds
 Release (excluding bounces) : **max 3** milliseconds
 Bounces : **max 3** milliseconds

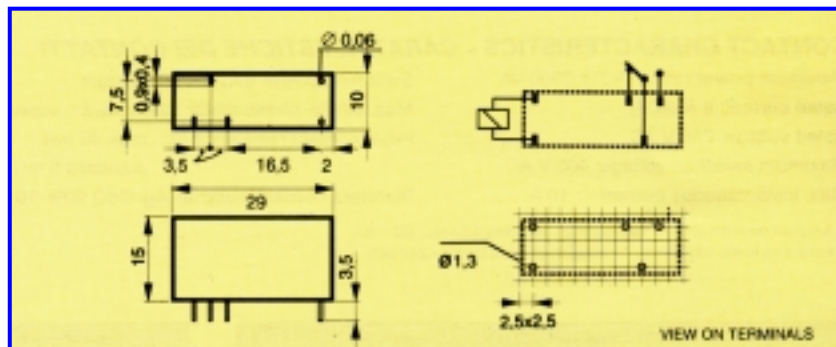
SPECIFICATION

Min. insulation resistance	2x10 ⁷ MΩ @ 500 VDC (all circuits)
Insulation group (VDE 110)	1° Gr. C 250 VAC
Enclosure classification	IP67 sealed (IEC 144)
Type of duty	continuous
Mechanical life expectancy	30x10 ⁶ operations
Max ops./hour @ no load	20000
Max ops./hour @ rated load	360
Temperature range	-40 to +70° C
Storage temperature	-40 to +80° C
Vibration	10 g 45-100 Hz
Impulse voltage class	0
Operating class (CEI 41-1)	C
Weight	10 grams
Min. creepage dist./ air gap	8 mm between coil / contacts (VDE 0730)

AVAILABLE TYPES

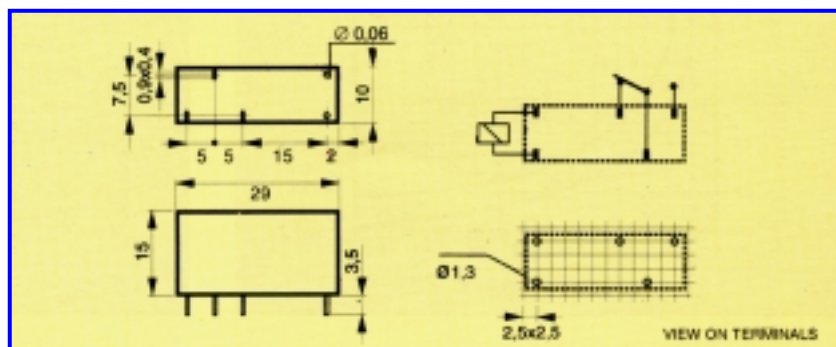
F15A - 3.5 mm pin-spacing **8A-250V AC**
 1 pole changeover.
 Printed circuit terminations.

Standard contact material Ag-CdO 10%.
 Normally open, alternative material and gold plated contact versions available on request for agreed quantities.



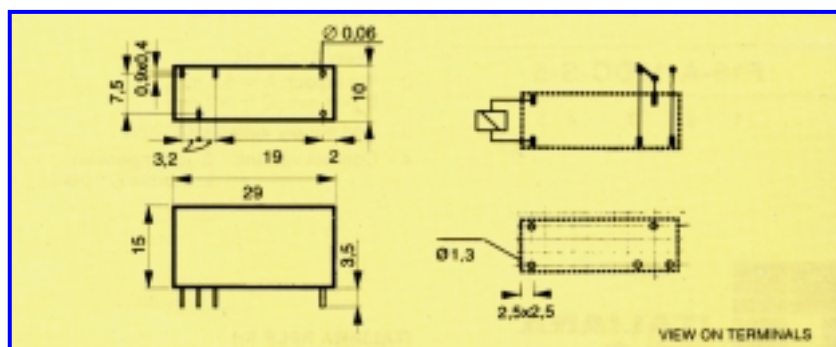
F15B - 5 mm pin-spacing **8A-250V AC**
 1 pole changeover.
 Printed circuit terminations.

Standard contact material Ag-CdO 10%.
 Normally open, alternative material and gold plated contact versions available on request for agreed quantities.



F15C - 3.2 mm pin-spacing **8A-250V AC**
 1 pole changeover.
 Printed circuit terminations.

Standard contact material Ag-CdO 10%.
 Normally open, alternative material and gold plated contact versions available on request for agreed quantities.



APPROVALS

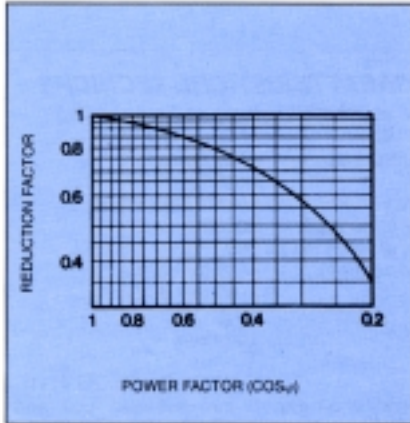


COIL CHARACTERISTICS

Rated Voltage V	DC		OPERATING VOLTAGE	
	Rated Current mA	Resistance R Ω	V Min.	V Max.
5	43.5	115	3.4	9
6	37.5	160	4	10.5
12	18.7	640	8	21
24	9.4	2550	16	42
48	4.7	10250	32	84
110	3.5	31000	73	147

Resistance values at 20°C ambient temp.

Tolerance on R: $\pm 10\%$



Reduction factor for inductive AC load

Power supply voltages: 5-6-12-24-48-110 VDC
 Rated power: 225 mW
 Operating range: -33% to +75% of nominal
 Minimum hold voltage: 66% of nominal
 Must release voltage: 5% of nominal
 Thermic insulation class of winding (IEC 317): F (155°C)

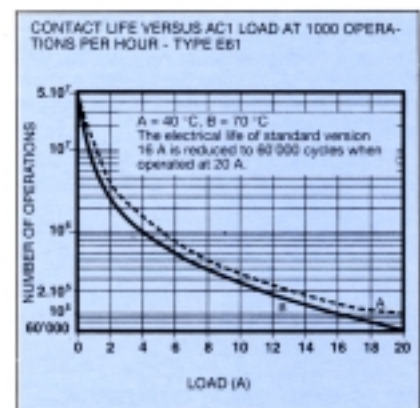
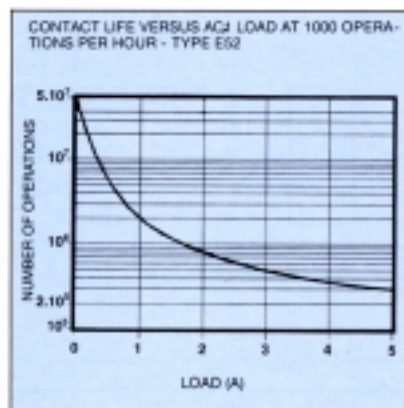
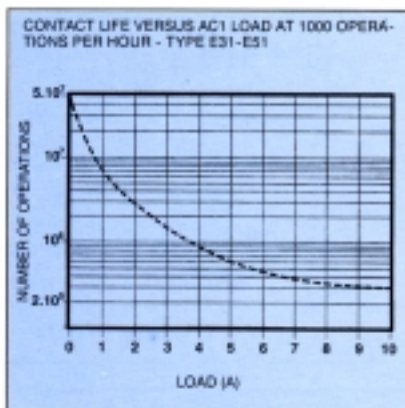
CONTACT CHARACTERISTICS

Maximum power rating (AC1) : 2000 VA
 Rated current : 8 A (AC1)
 Rated voltage : 250 VAC
 Maximum switched voltage : 400 VAC
 Maximum instantaneous current⁽¹⁾ : 10 A
 Switching power (DC1) : see diagram

Maximum single-phase motor load (cos ϕ 0.7 – 250VAC max.) : ¼ HP
 Initial contact resistance⁽²⁾ : max. 30 m Ω standard 8 m Ω
 Standard material: Ag-CdO 90%-10%

⁽¹⁾ Make & maintaining only - max. 0.5 sec.

⁽²⁾ Category of application (EN 60255) : 3



ORDERING INFORMATION

F15 - A - 12 DC - S - 5

1 2 3 4 5

- 1 – Relay type: F15
- 2 – Pin layout: A = 3.5 mm
B = 5 mm; C = 3.2 mm
- 3 – Coil supply voltage: DC only
- 4 – Contact configuration:
S = changeover (standard)
L = normally open (on request)

- 5 – Alternative contact materials:
None = standard material
1 = Silver / Nickel (Ag-Ni 10%)
4 = Silver / Tin Oxide (Ag-SnO₂ 12%)
5 = Gold plated silver (Ag-Ni + 3 μ Au)

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