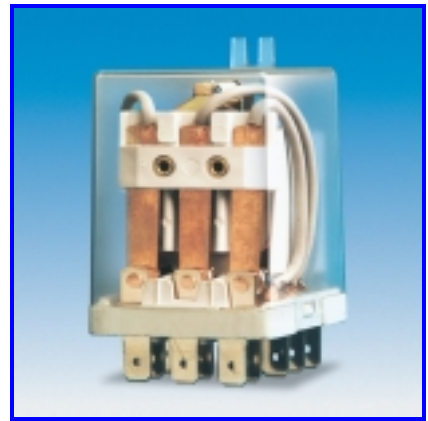


SERIES B

Power Industrial Relays

All-or-Nothing relays designed to meet high power switching applications, having up to three changeover contacts, rated 4000 or 7500VA AC1. They are ideally suited for arduous duties where safety and reliability are at premium, being even capable to replace small contactors when switching

resistive loads. The 3mm contact gap version is very popular, meeting the strictest safety standards. Meeting IEC-CEI-VDE standards, this design includes a dust cover, 0.25 Faston terminals (6.3x0.8 mm) and flame resistant terminal block material.



DIELECTRIC STRENGTH	type B1-B3	type B2-B4
Coil spring set to contacts :	2500 V RMS	2500 V RMS
Between adjacent contacts :	2500 V RMS	2500 V RMS
Between open contacts :	2500 V RMS	2000 V RMS
Ground / live parts :	2000 V RMS	2000 V RMS

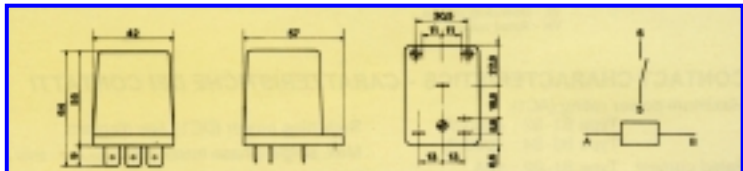
OPERATING TIMES (At Rated Voltage)		
Operate (excluding bounces) :	max 15	milliseconds
Release (excluding bounces) :	max 12	milliseconds
Bounces :	max 10	milliseconds

SPECIFICATION

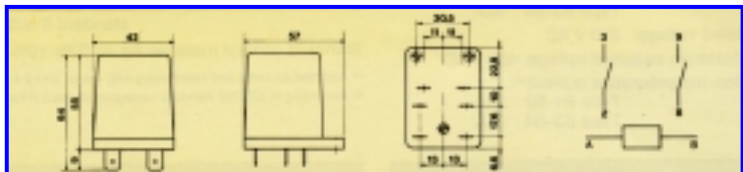
Min. insulation resistance	2x10 ⁴ MΩ @ 500 VDC (all circuits)
Insulation group (VDE 110)	1° Gr. C 250 VAC
Enclosure classification	IP 40 (IEC 144)
Type of duty	continuous
Mechanical life expectancy	10 ⁶ operations
Max ops./hour @ no load	10000 (AC / DC)
Max ops./hour @ rated load	1200 (AC / DC)
Temperature range	-10 to +55° C
Type B4-3 with AC coils	-10 to +45° C
Storage temperature	-25 to +80° C
Vibration	4 g (N / O contacts) 1 g (N / C contacts)
Impulse voltage class	0
Operating class (CEI 41-1)	C

AVAILABLE TYPES

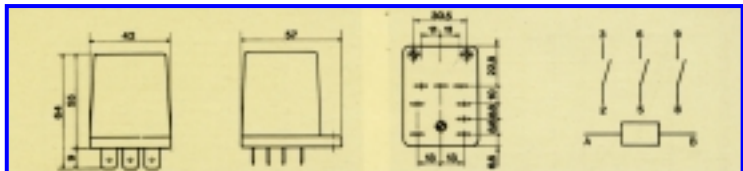
B1-1 1 pole normally open - **16A-250V AC**
B3-1 1 pole normally open - **30A-250V AC**
 Distance between open contacts: 3 mm
 Weight: 135 grams



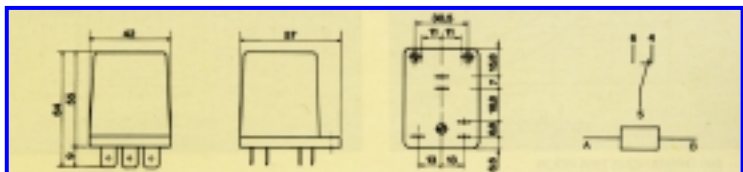
B1-2 2 pole normally open - **16A-250V AC**
B3-2 2 pole normally open - **30A-250V AC**
 Distance between open contacts: 3 mm
 Weight: 145 grams



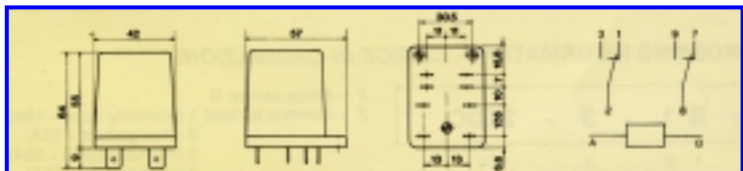
B1-3 3 pole normally open - **16A-250V AC**
B3-3 3 pole normally open - **30A-250V AC**
 Distance between open contacts: 3 mm
 Weight: 155 grams



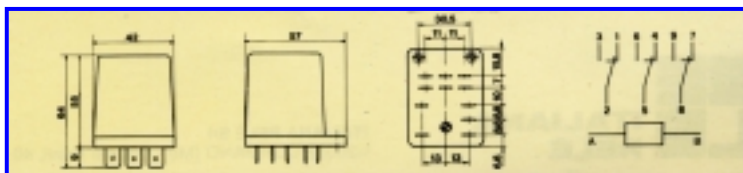
B2-1 1 pole changeover - **16A-250V AC**
B4-1 1 pole changeover - **30A-250V AC**
 Distance between open contacts: 1 mm
 Weight: 135 grams



B2-2 2 pole changeover - **16A-250V AC**
B4-2 2 pole changeover - **30A-250V AC**
 Distance between open contacts: 1 mm
 Weight: 145 grams



B2-3 3 pole changeover - **16A-250V AC**
B4-3 3 pole changeover - **30A-250V AC**
 Distance between open contacts: 1 mm
 Weight: 155 grams



APPROVALS (16A Types only)



All dimensions in mm

COIL CHARACTERISTICS

Rated Voltage V	DC		AC		
	Rated Current mA	Resistance R Ω	Rated Current mA	Resistance R Ω	Impedance Z Ω
6	270	22	650	2	9
12	135	88	320	8	37
24	68	350	160	32	150
48	34	1400	80	130	600
110	15	7500	35	670	3100
230	-	-	17	2900	13500

Resistance values at 20°C ambient temp.

Tolerance on R and Z: $\pm 10\%$

Power supply voltages:
6-12-24-48-110-230-400 VAC
6-12-24-48-60-110 VDC

Rated power:
2W (DC) ; 3.9 VA (AC)

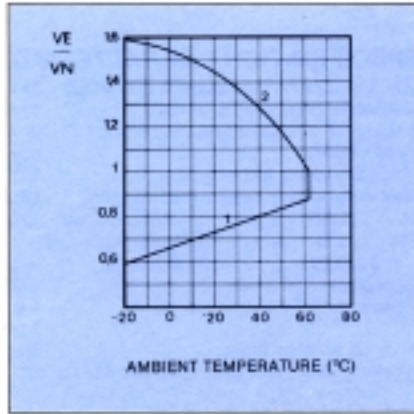
Operating range:
- 20% to + 10% of nominal

Minimum hold voltage:
80% of nominal (AC)
50% of nominal (DC)

Must release voltage:
15% of nominal (AC)
5% of nominal (DC)

Thermic insulation class of winding

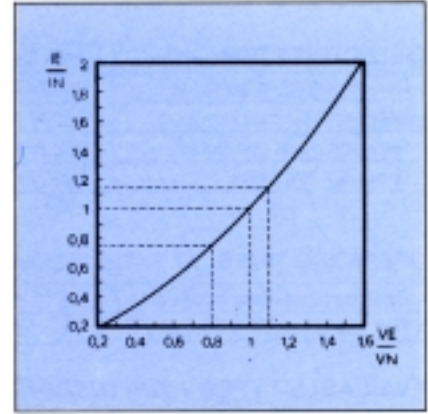
MAX ADMITTED OPERATING RANGE (DC) VERSUS AMBIENT TEMPERATURE



Curve 1: Min. coil operation voltage at stabilized temperature
Curve 2: Max. coil operation voltage at rated load.

VE - Operating voltage
VN - Rated voltage

VARIATION OF POWER CONSUMPTION VERSUS OPERATING RANGE (AC - 50 Hz)



I - Operating current
VN - Rated voltage

(IEC 317): F (155°C)

CONTACT CHARACTERISTICS

Power rating (AC1) : 4000VA (Type B1-B2)

7500VA (Type B3-B4)

Rated current : 16A (Type B1-B2)

30A (Type B3-B4)

Rated voltage: 250V AC

Max. instantaneous current⁽¹⁾ :

30A (Type B1-B2)

35A (Type B3-B4)

Max switched voltage : 400 VAC

Max. single-phase motor load :

½ HP (B1-B2) – 1 HP (B3-B4)

Switching power (DC1) : see diagram

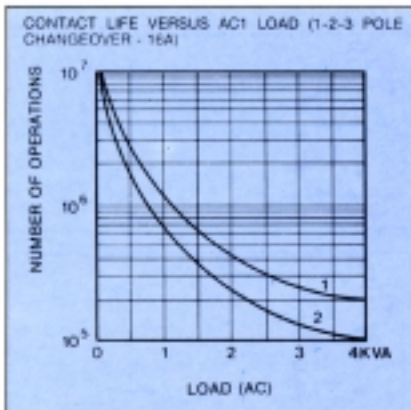
Initial contact resistance⁽²⁾: max. 30 m Ω

standard 5 m Ω

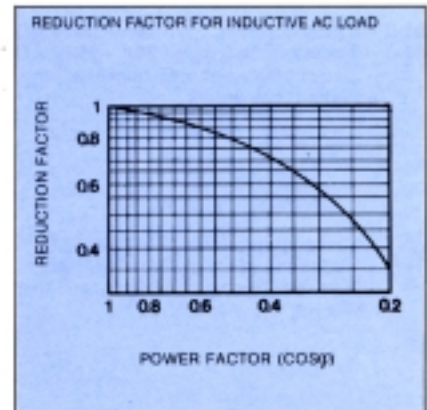
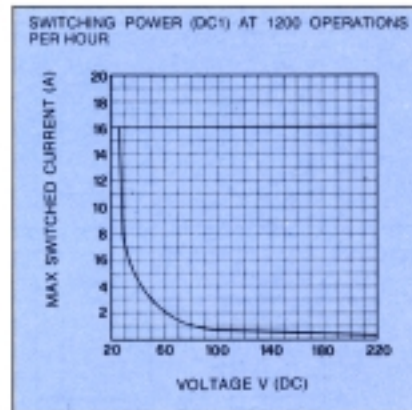
Contact material: Ag90% - Ni10%

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

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



1 - 600 OPERATIONS PER HOUR
2 - 1200 OPERATIONS PER HOUR



ORDERING INFORMATION

B2 - 3 - 230 AC - FS

1 2 3 4 5

1 - Relay Series: B

2 - Contact type:

1 = Normally Open 16A

2 = Changeover 16A

3 = Normally Open 30A

4 = Changeover 30A

3 - Number of poles: 1 - 2 - 3

4 - Coil supply voltage: AC or DC

5 - Fixing options:

FS = Fixing tabs on cover (standard)

FA = screw mounting on base (M4x8)

AD = DIN-rail flange on cover

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