

LF
2PDT BISTABLE LATCHING
CRYSTAL CAN RELAY



TYPE LF

Key Features

- Hermetically Sealed
- Low level to 3A switching

Specifications

General

Contact Arrangement
Weight

The maximum operate power that can be applied is 0.75 watt per coil at +25°C, de-rated linearly to 0.5 watt at +125°C. LF relays are suitable for short-pulse operation and the pulse power may be increased in inverse ratio to the duty cycle when used in this mode, with a limit ratio of 16:1. The minimum pulse lengths are 3 ms. Pulse power is the continuous power divided by the duty cycle, where the duty cycle equals the pulse lengths divided by the time for one cycle.

2 Pole changeover (2PDT) break before make.
15.3 gm (mounting variant 01)

Performance

Contact Rating/Life

3A resistive, 10^5 operations at 28 VDC
1A resistive, 10^5 operations at 115 VRMS 400 Hz
Low level, 10^6 operations

Mean Mechanical Life
Operate Time
Release Time
Bounce Time

5×10^7
6 ms nominal
8 ms max. (including bounce)
1 ms max.

All measurements at 25°C and nominal voltage

Environmental

Temperature Range
Shock
Vibration

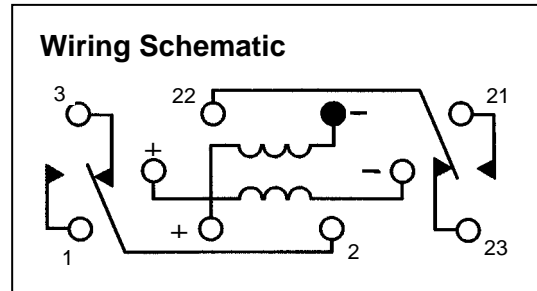
-65°C to +125°C
981 m/s² (100g) for 11 ms
60 to 2000 Hz at 196 m/s² (20g) acceleration
10 to 60 Hz at 1.5mm amplitude
(Applies to mounting variant 01)

Linear Acceleration
Bump
Climatic
Salt Mist

981 m/s² (100g)
4000 bumps at 390 m/s² (40g), 6ms duration
BS 2011 test Z/ABDM procedure 1
BS 2011 part 2.1 Kb severity 2

Ordering Information

See sheet 4



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Design authority and manufacture by Barnbrook Systems Limited
Barnbrook Systems reserves the right to alter specifications and design without notice

Electrical

Contact Resistance

Code 01 contacts, 50 milliohms max measured at open circuit voltage of 5V and current of 10 mA

Insulation Resistance

1000 Megohms min – between any two isolated terminals
500 Megohms min – between terminals and case

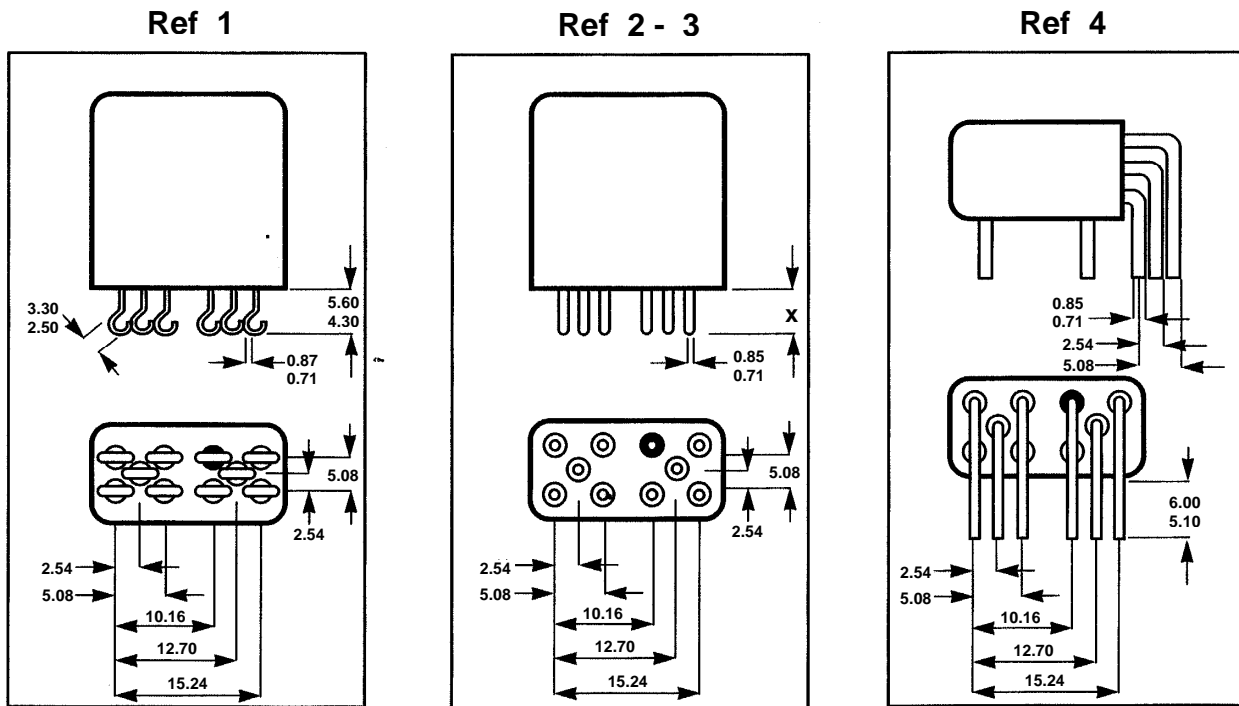
Dielectric Strength

Measured at 500 VDC and +25°C
1000 VRMS, 50 Hz at sea level, between contacts and case and between the two sets of contacts
750 VRMS at 50 Hz, at sea level, between open contacts of a set and coil to case.

Capacitance

350 VRMS 50 Hz, at 20 mbar air pressure (87,000ft), between all terminals and case.
Closed contact to case 3.7 pF
Open contacts to case 2.0 pF
Between two contacts of a set 2.0 pF
Between the contact sets 3.5 pF

TERMINATION VARIANTS



All dimensions are millimetres.
Tolerances ± 0.25 unless otherwise stated

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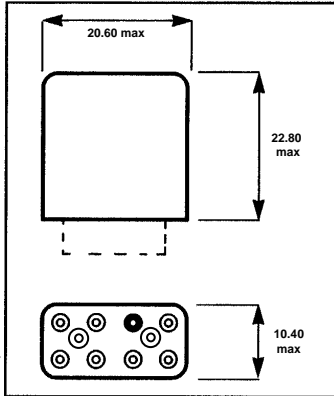
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Note ● Denotes Contrast Bead

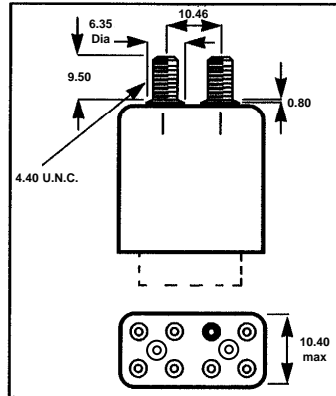
REF	Dim. X
2	4.55 – 5.60
3	74.00 – 78.00

MOUNTING VARIANTS

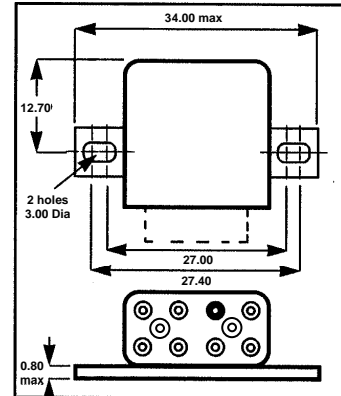
Ref 01



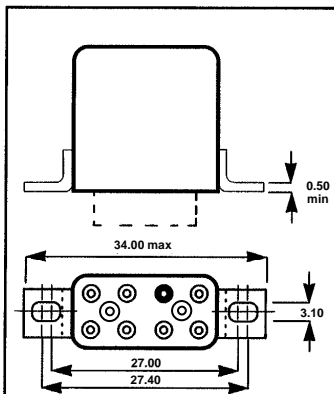
Ref 02



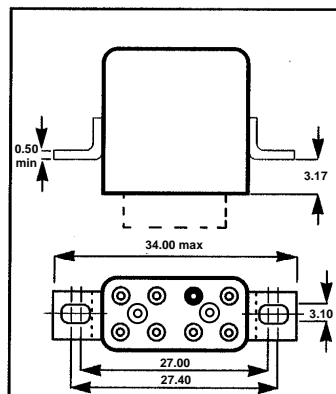
Ref 11



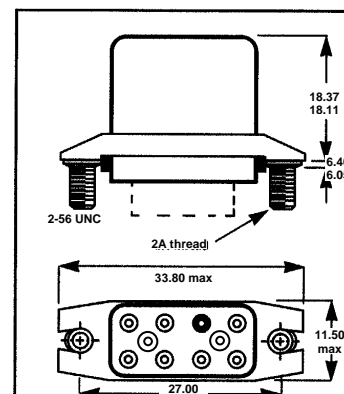
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Ref 05

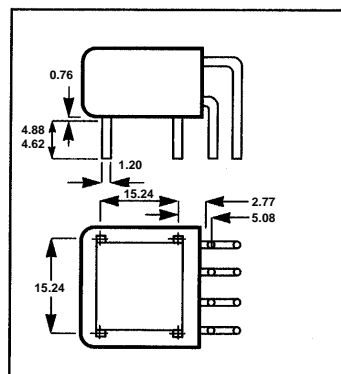


Ref 08



Note ● Denotes Contrast Bead

Ref 33

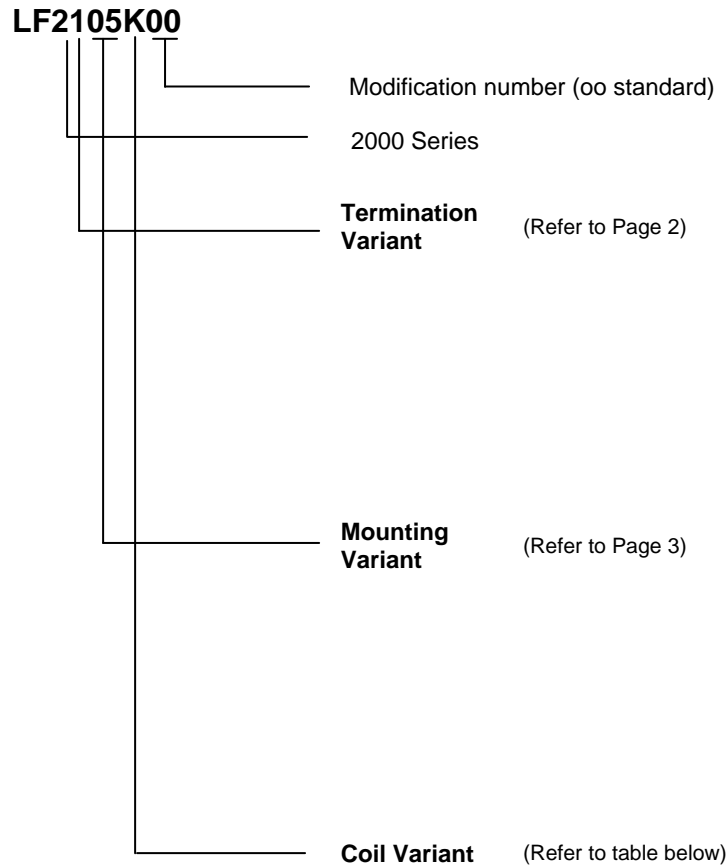


Mounting style 02 has a vibration level of 147 m/s^2 (15g)
 All other styles have a vibration level of 196 m/s^2 (20g)
 All dimensions are in millimetres.
 Tolerances ± 0.25 unless otherwise stated

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ORDERING INFORMATION



COIL VARIANTS AND OPERATING CHARACTERISTICS

LF Coil Ref	Resistance Ohms $\pm 10\%$ (twice)	Must Operate volts DC	Maximum volts DC	Nominal Volts DC	Approximate inductance each Coil (Henrys)
D	85	3.6	7.2	6	0.06
E	130	4.6	7.2	6	
F	200	5.6	12.0	10.4	
G	300	7.2	14.4	12	0.16
J	760	12.0	24.0	20	0.38
K	1150	14.4	32.0	24	0.60
L	2000	19.2	38.4	32	0.90
N	4400	28.8	57.6	48	1.90
E02	130	4.8	10.5	9	

All values measured at 25°C

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