

DATA SHEET

Formerly
**DEUTSCH LTD
RELAY**

**F/BS9151 F0008
2PDT CRYSTAL CAN RELAY**

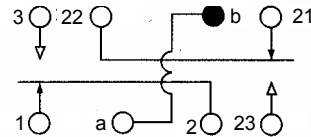


TYPE F

Key Features

- Hermetically Sealed
- BS9000 Approval
- Low Level to 3A Switching

Wiring Schematic



Specification

General

Contact Arrangement
Weight
Mating Bases

2 Pole changeover (2PDT) break before make.
15 gram (mounting style 01)
Solder Contacts – Order Part No. 4223-1
Crimp Contacts – Order Part No. 420204

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 (Typical, 5 Vdc, 10mA)

Mean Mechanical Life
Operate Time

5×10^7 Operations
3.5 ms max. nominal
5 ms max. (excluding bounce)

Release Time

1 ms nominal
5 ms max. (excluding bounce)

Bounce Time

3 ms max.

All measurements at 25°C and nominal voltage

Environmental

Temperature Range
Shock
Vibration

-65°C to +125°C
490 m/s² (50g) for 11 ms
60 to 2000 Hz at 196 m/s² (20g)
10 to 60 Hz at 1.5mm amplitude

Linear Acceleration
Bump
Climatic
Salt Mist

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

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Ordering Information

See sheet 4

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 mΩ max measured at open circuit voltage of 5 V and current of 10 mA

Code 02 contacts 50 mΩ max measured at open circuit voltage of 10 mV and current of 10 mA

Insulation Resistance

500 MΩ min – between any two isolated terminals

500 MΩ min – between terminals and case

Measured at 500 VDC and +25°C

Dielectric Strength

1000 Vrms, 50 Hz, at sea level, between contacts and case and between the two sets of contacts

750 Vrms, 50 Hz, at sea level, between open contacts of a set and coil to case.

350 Vrms, 50 Hz, at 20 mbar (87000ft) air pressure, between all terminals and case.

Capacitance

Closed contacts to case 3.7 pF

Open contacts to case 2.0 pF

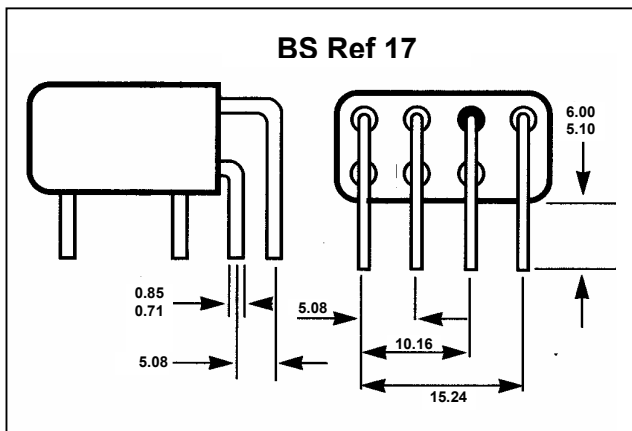
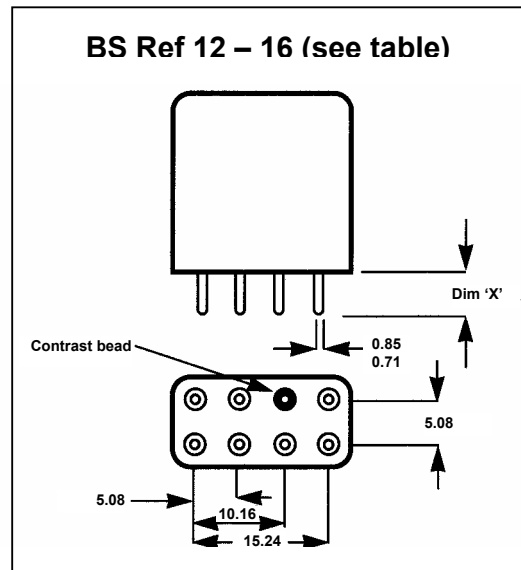
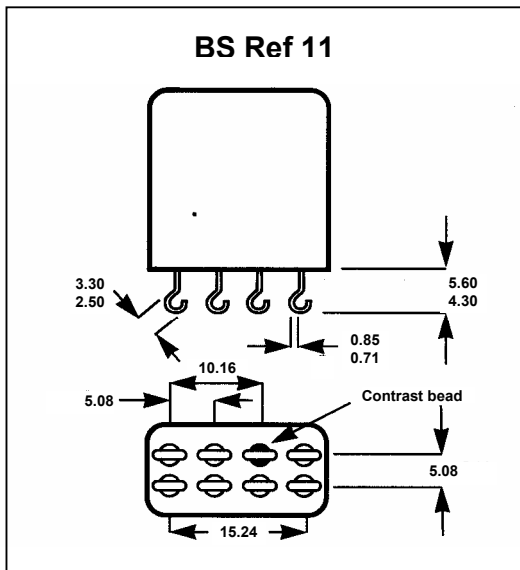
Between contacts of a set 2.0 pF

Between the two contact sets 3.5 pF

Coil Dissipation

The maximum operate power that can be applied to the coil is 1.5 W at +25°C de-rated linearly to 1.0 W at +125°C

TERMINATION VARIANTS



REF	Dim.X
12	4.55 - 5.60
13	2.90 - 3.40
14	7.50 - 8.30
15	24.00 - 26.00
16	74.00 - 78.00

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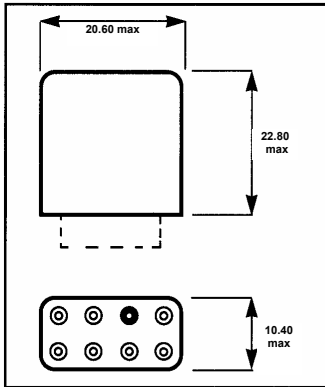
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MOUNTING VARIANTS

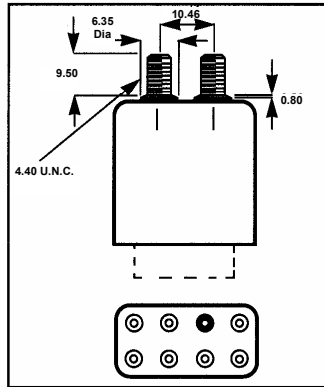
RELAY

TYPE F

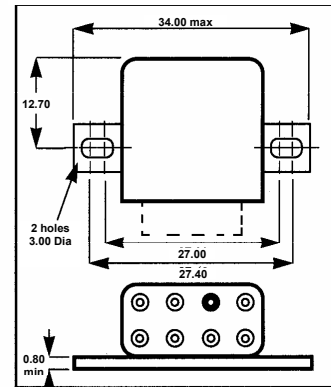
BS Ref 01



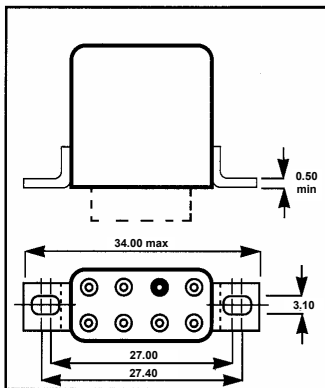
BS Ref 02



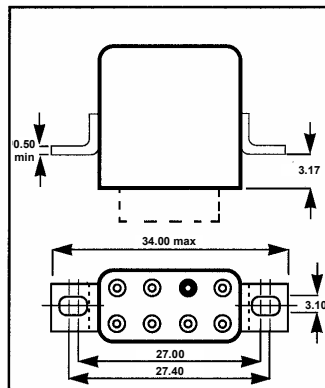
BS Ref 03



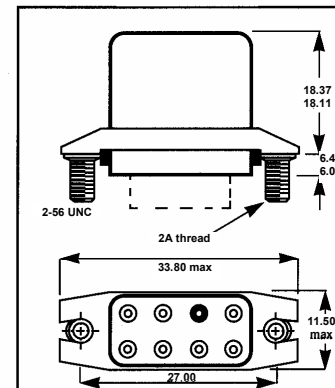
BS Ref 04



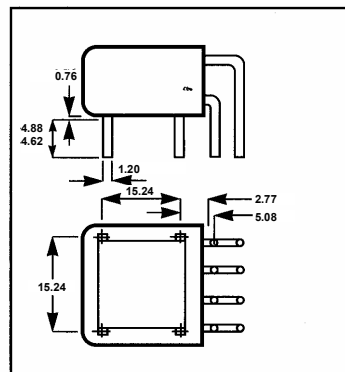
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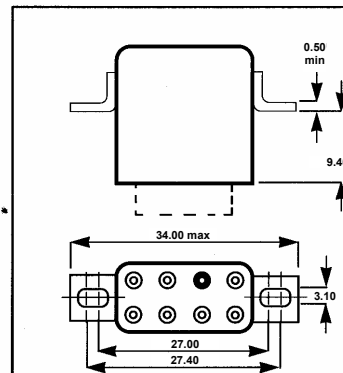
BS Ref 06



BS Ref 07



BS Ref 08



F RELAY AND F008 MOUNTING VARIANTS

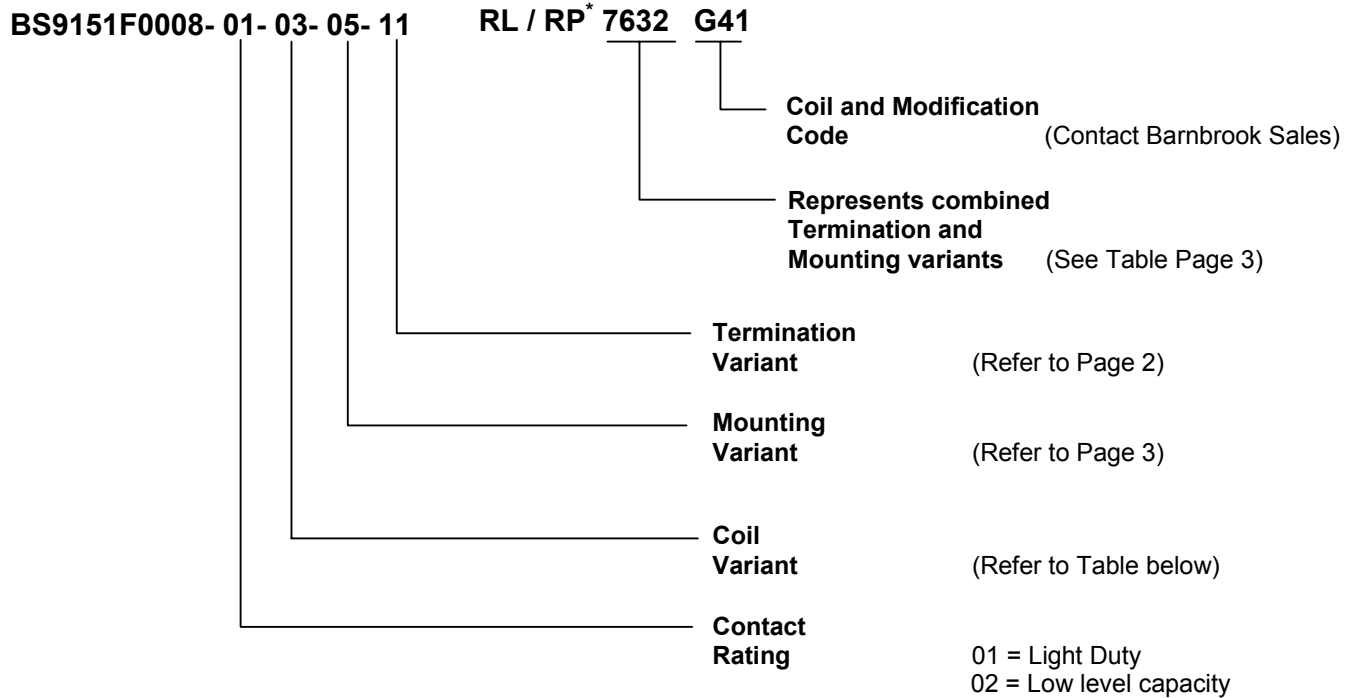
Mounting variant BS	01	02	03	04	05	06	07	08
Vibration level m/s ²	196	147	196	196	196	196	196	196
Equivalent non-BS mounting variants	Hooks	RL7630	RL7633	RL7631	RL11566	RL7632	-	-
	Pins	RL7641	RL9000	RL9004	RL7643	RL9003	RL43	RL14142
Vibration level m/s ²	296*	147	196	196	196	245	196	196

* Body of relay must be rigidly mounted by epoxy cement etc.

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ORDERING INFORMATION



* The RP series of relays belong to this product group and are identical to RL relays. Contact Barnbrook Systems for additional information and ordering.

COIL VARIANTS AND OPERATING CHARACTERISTICS

BS Reference	Resistance ohms \pm 10%	Must Operate Volts dc	Must Release Volts dc	Maximum Volts dc	Nominal Volts DC	Approximate inductance (Henrys)
01	35	3.6	0.3	7.2	6	0.03
02	200	7.2	0.6	14.4	12	0.20
03	675	14.4	1.2	32.0	24	0.70
04	2450	28.3	2.4	57.6	48	2.50
05	975	19.2	1.6	38.4	32	0.95

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