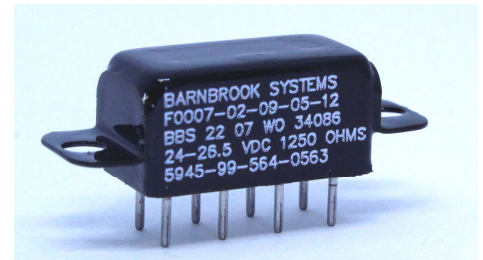


DATA SHEET

DSDDS

Formerly
DEUTSCH LTD
RELAY

HF/BS9151 F0007
2PDT HALF CRYSTAL CAN RELAY



TYPE HF

Key Features

- Hermetically Sealed
- Low Level capability
- Small size for high density packaging

Specification

General

Contact Arrangement
Weight
Mating Bases

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

Performance

Contact Rating/Life

2A 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 (If applicable)
3.5 ms nominal

Release Time

5 ms max (excluding bounce)

Bounce Time

1 ms nominal

5 ms max. (excluding bounce)

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) acceleration
10 to 60 Hz at 1.5mm amplitude
(Applies to mounting variant 01)

Linear Acceleration
Bump

980 m/s² (100g)
4000 bumps at 390 m/s² (40g), 6ms duration. (If applicable)

Climatic
Salt Mist

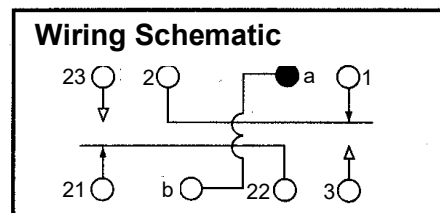
BS 2011 Test Z/ABDM procedure 1
BS 2011 Part 2.1 Kb severity 2

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



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SHEET 1 OF 4

Electrical

Contact Resistance

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

Insulation Resistance

Code 02 contacts 50 mΩ max measured at open circuit voltage of 10 mV and current of 10 mA
500 Megohms min – between any two isolated terminals
500 Megohms min – between terminals and case
Measured at 500 VDC and +25°C

Dielectric Strength

500 VRMS, 50 Hz, at sea level, between terminals and case, between two sets of contacts and between open contacts of a set
350 VRMS, 50 Hz, at 20 mbar air pressure (87,000ft) between all terminals and case

Capacitance

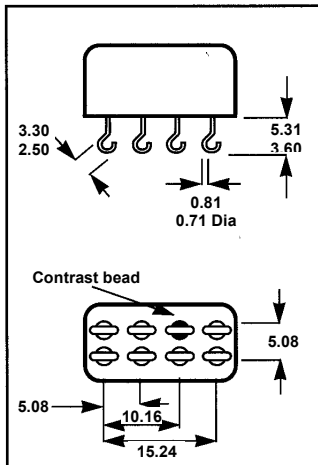
Closed contacts to case 4 pF
Open contacts to case 2 pF
Between contacts of a set 2 pF
Between the two contact sets 4 pF

Coil Dissipation

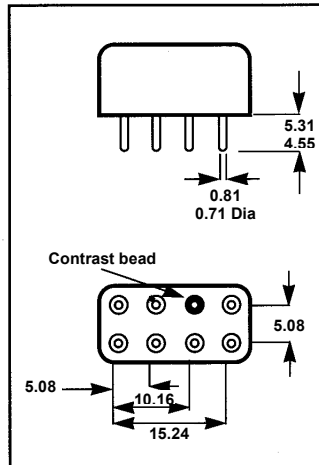
The maximum operate power that can be applied to the coil is 1.0 W at +25°C de-rated linearly to 0.8 W at +125°C

TERMINATION VARIANTS

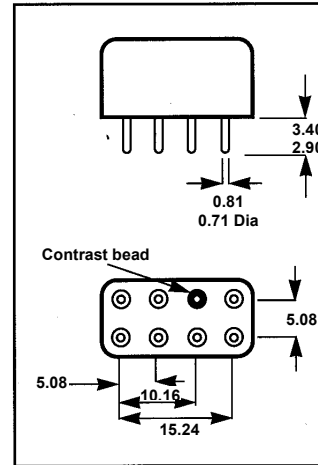
BS Ref 11



BS Ref 12



BS Ref 13



Data Sheet No
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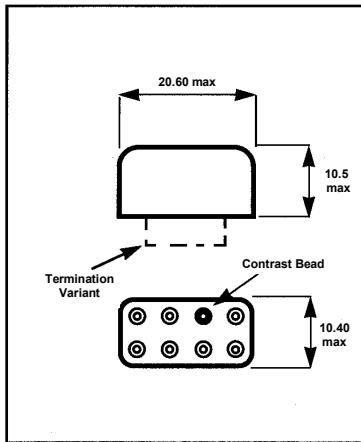
All dimensions are in millimetres. Tolerances ± 0.25 unless otherwise stated

SHEET 2 OF 4

MOUNTING VARIANTS

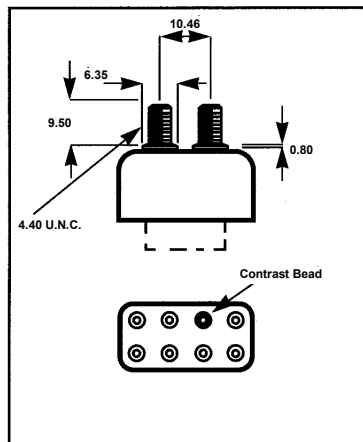
BS Ref 01/11*

HF Ref 01



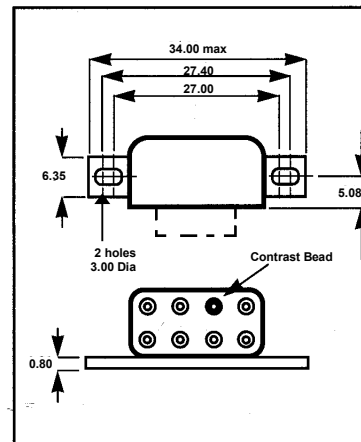
BS Ref 02

HF Ref 02



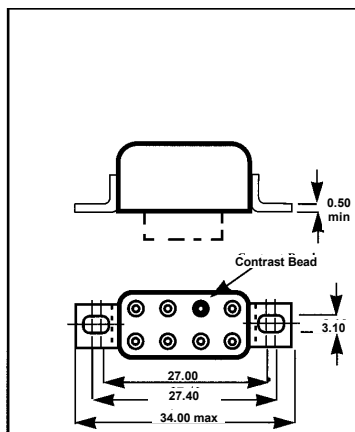
BS Ref 03

HF Ref 03



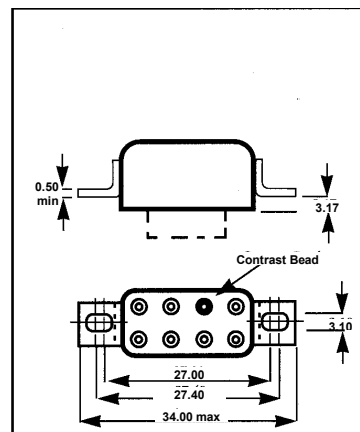
BS Ref 04

HF Ref 25



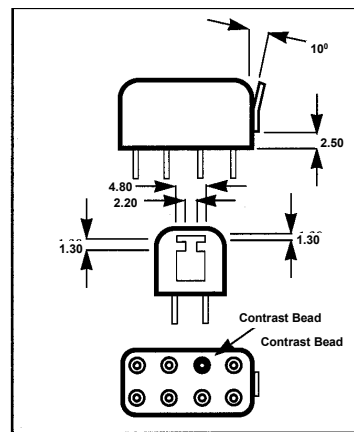
BS Ref 05/09*/10

HF Ref 05



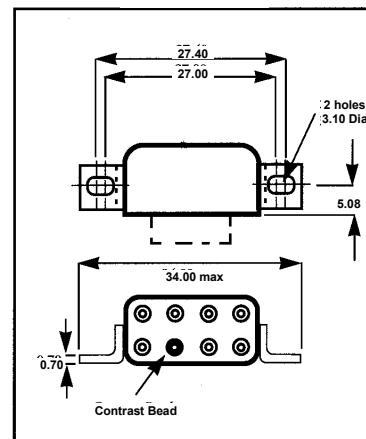
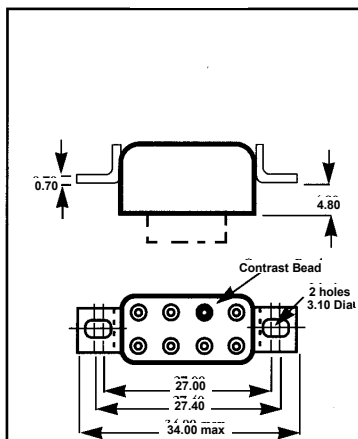
BS Ref 06

HF Ref 95



BS Ref 07

BS Ref 08



BS Mounting Variant	Equivalent HF Mounting Variant	Vibration Level M/s ²
01	01	196*
02	02	98
03	03	196
04	25	196
05	05	196
06	95	196
07	-	196
08	-	196
09	-	196
10	-	196
11	-	196*

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

- * BS Ref 09 – Underside of bracket to be free of paint
- * BS Ref 10 – Both sides of bracket to be free of paint
- * BS Ref 11 – Free of paint

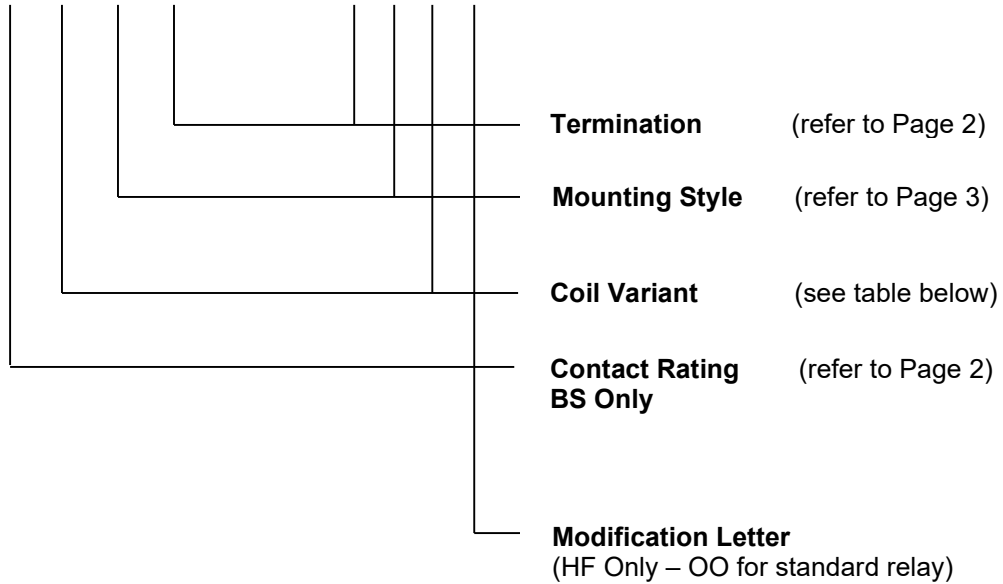
All dimensions are in millimetres. Tolerances ± 0.25 unless otherwise stated.
Can dimensions shown in Ref 01 apply to all variations. All termination variants allowable.

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ORDERING INFORMATION

BS9151F0007- 01- 03- 05- 12 HF 12 05 A OO



COIL VARIANTS AND OPERATING CHARACTERISTICS

BS Reference		Resistance ohms +/- 10%	Must Operate volts DC	Must Release volts DC	Maximum volts DC	Nominal Volts DC
BS	HF					
01	-	40	3.6	0.30	7.2	6
02	S6	42	3.6	0.30	7.2	6
03	A	60	3.6	0.30	7.2	6
04	G	150	7.2	0.60	14.4	12
05	S7	210	7.2	0.60	14.4	12
06	B	320	7.2	0.60	14.4	12
	J	520	9.5	0.90	20.0	18
07	-	675	14.4	1.20	32.0	24 – 26.5
08	S2	830	14.4	1.20	32.0	24 – 26.5
	M	1000	14.4	1.20	32.0	24
09	D	1250	14.4	1.20	32.0	24 – 26.5
10	-	2500	28.8	2.40	57.6	48
11	S4	2800	28.8	2.40	57.6	48
12	E	3500	28.8	2.40	57.6	48
13	F	40	3.0	0.25	6.0	5
14	K	700	14.4	1.20	32.0	24 – 26.5
15	C	700	10.6	0.88	24.0	20

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All values measured at +25°C