

DATA SHEET

Formerly
DEUTSCH LTD
RELAY

HF/BS9151 F0007
2PDT HALF CRYSTAL CAN RELAY



TYPE HF

Key Features

- Hermetically Sealed
- BS9000 Approval
- 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

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Ordering Information

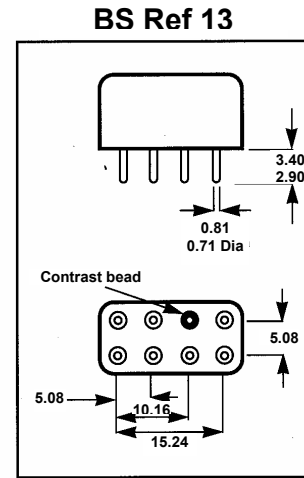
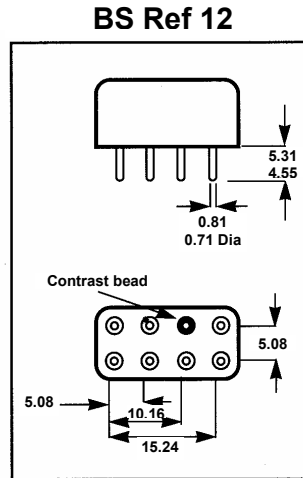
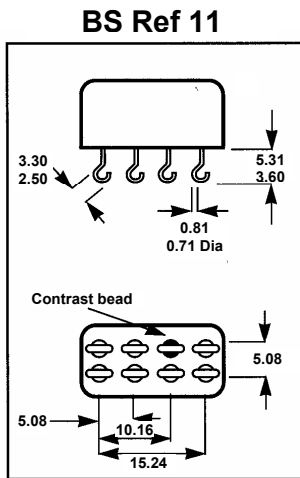
See sheet 4

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 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



All dimensions are in millimetres. Tolerances ± 0.25 unless otherwise stated

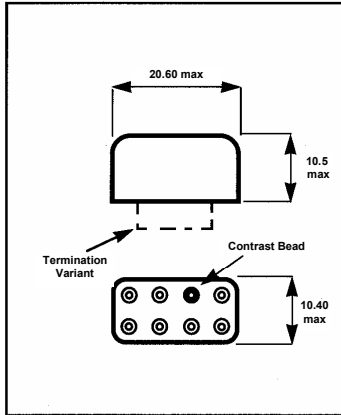
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MOUNTING VARIANTS

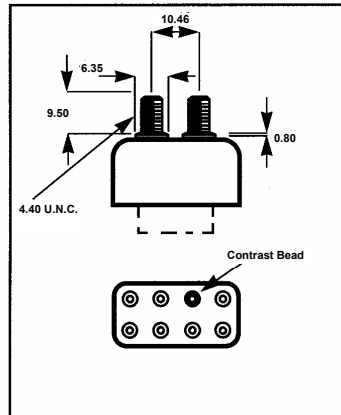
BS Ref 01/11*

HF Ref 01



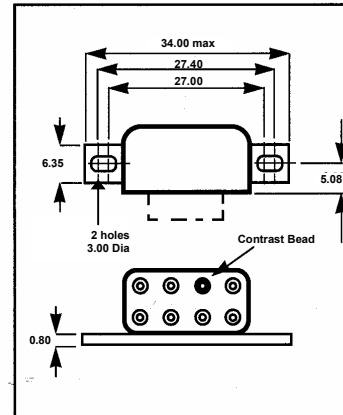
BS Ref 02

HF Ref 02



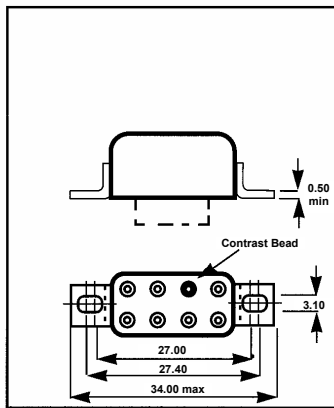
BS Ref 03

HF Ref 03



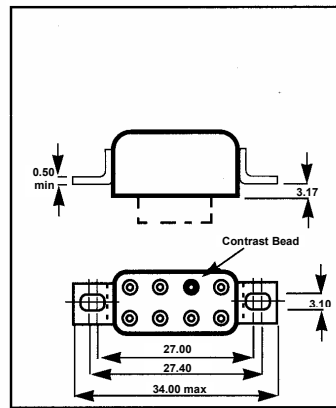
BS Ref 04

HF Ref 25



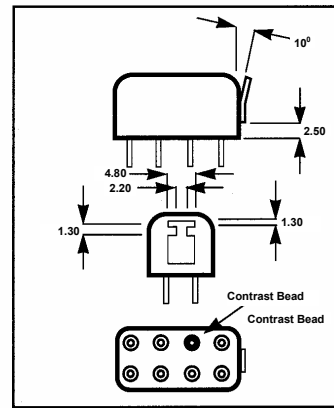
BS Ref 05/09*/10

HF Ref 05



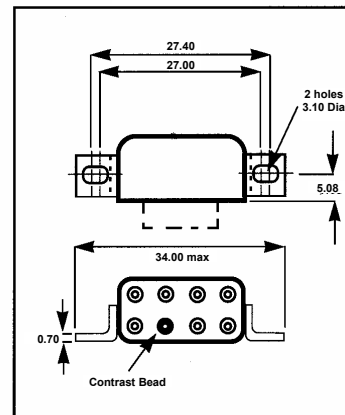
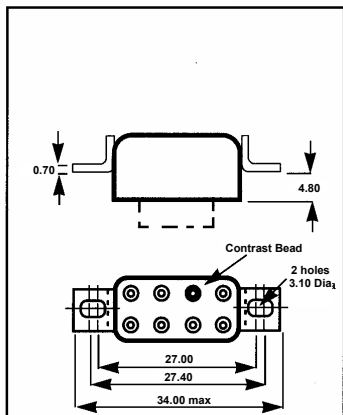
BS Ref 06

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

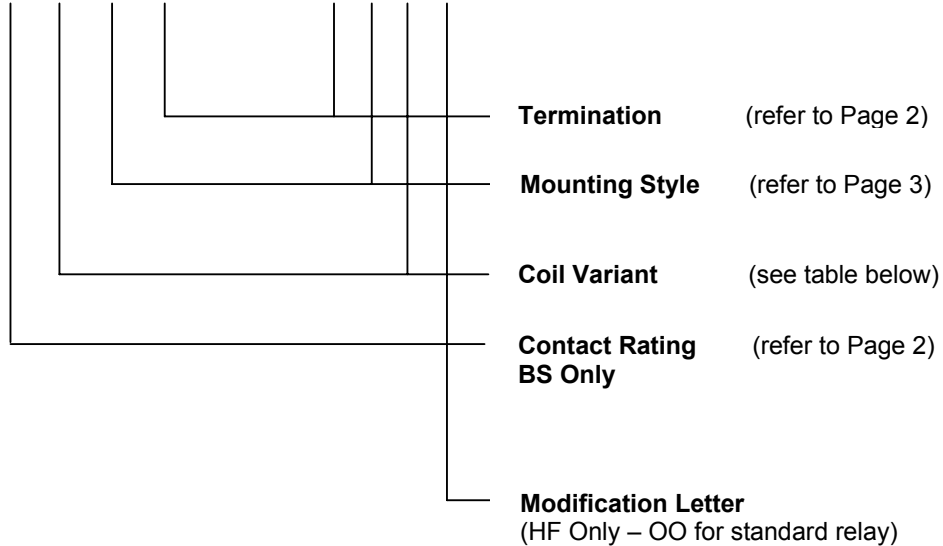
All dimensions are in millimetres. Tolerances ± 0.25 unless otherwise stated.
Can dimensions shown in Ref 01 apply to all variations. All termination variants allowable.

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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
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