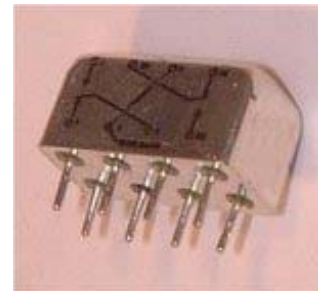


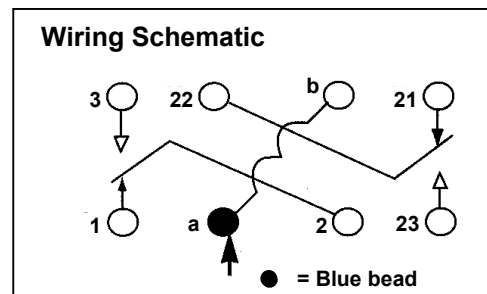
HDS5/BS9151 F0026
2PDT HALF CRYSTAL CAN RELAY



TYPE HDS5

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 gm (mounting variant 01)
Solder Contacts – Order Part No. 4223-1
Crimp Contacts – Order Part No. 42024

Performance

Contact Rating/Life

2A resistive, 10^5 operations at 28 VDC
1A resistive, 10^5 operations at 115 VAC, 400 Hz
Low level, 10^6 operations (typical 5 VDC, 10 mA)
 5×10^7 operations
3.5 ms nominal, 5 ms max (excluding bounce)
1 ms nominal, 5 ms max. (excluding bounce) 01
3 ms max.

Mean Mechanical Life
Operate Time
Release Time
Bounce Time

All measurements at 25°C and nominal voltage

Environmental

Temperature Range
Shock*
Vibration*

-65°C to +125°C
490 m/s² for 11 +/- 1ms
60 to 2000 Hz at 196 m/s² acceleration
10 to 60 Hz at 1.5 mm amplitude

* Applies to mounting style 01

Linear acceleration
Bump
Climatic
Salt Mist

980 m/s²
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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SHEET 1 OF 4

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 with an open circuit voltage of 5V max and current of 10 mA.

Code 02 contacts - 50 mΩ max measured with an open circuit voltage of 10mV max and current of 10 mA.

Insulation Resistance

500 MΩ minimum - between any two isolated terminals
500 MΩ minimum - between terminals and case.

Measured at 500 VDC and 25°C

Voltage Proof

500 VRMS 50 Hz, at sea level between terminals and case, between any two sets of contacts and between open contacts.

350 VRMS 50 Hz, at 20 millibar air pressure, between all terminals and case.

Capacitance

Closed contacts to case 4 pF

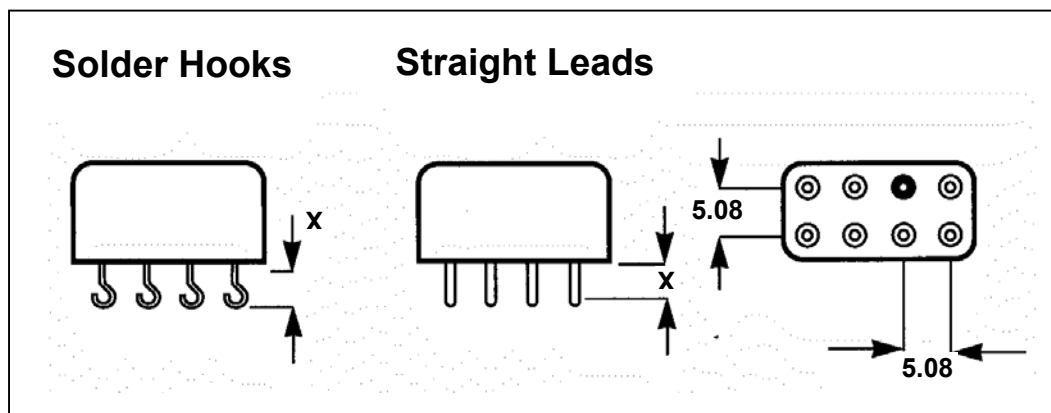
Open contacts to case 2 pF

Between contacts of a set 2 pF

Between the two contact sets 4 pF

TERMINATION VARIANTS

HD	BS	Type	Dim.X in mm.
A	-	Straight	7.92
B	-	Straight	12.70
C	-	Straight	25.40
H	11	Hooks	5.08
L	-	Straight	76.20
S	12	Straight	5.08



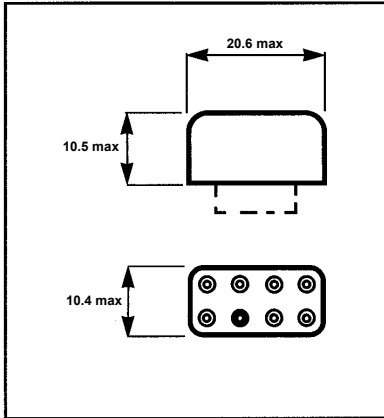
Data Sheet No
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SHEET 2 OF 4

MOUNTING VARIANTS

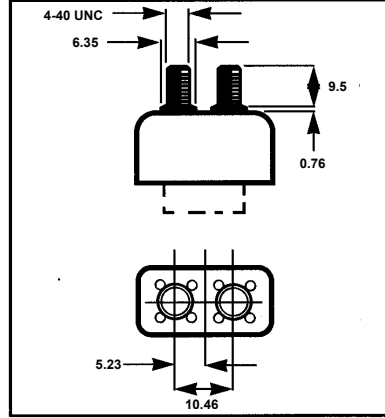
BS Ref 01

HD Ref 21



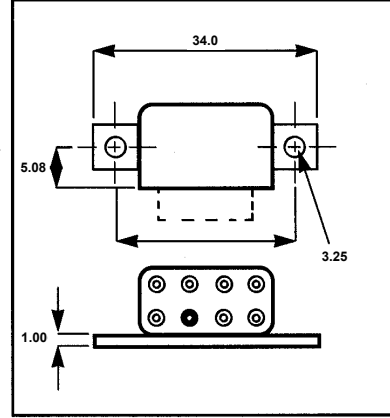
BS Ref 02

HD Ref 26



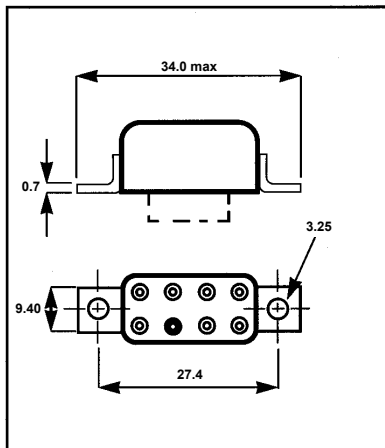
BS Ref 03

HD Ref 34



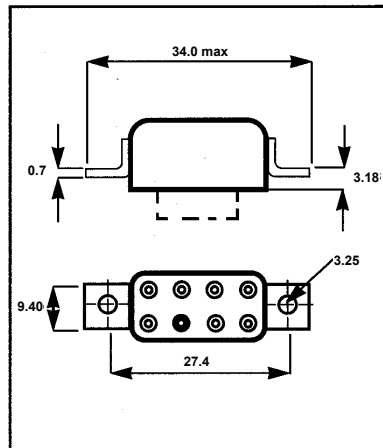
BS Ref 04

HD Ref 25



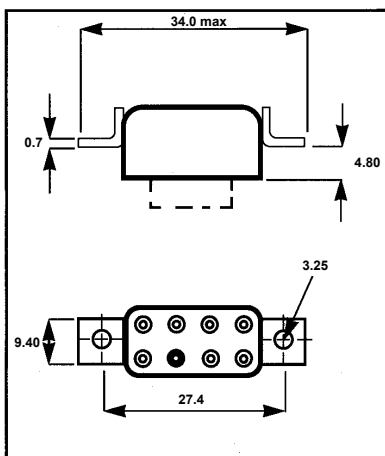
BS Ref 05

HD Ref 22



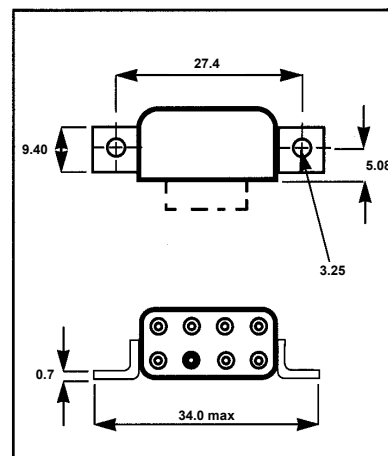
BS Ref 07

HD Ref 23



BS Ref 08

HD Ref 24



Tolerances +/- 0.25 unless otherwise stated.
All dimensions are in mm unless otherwise stated.

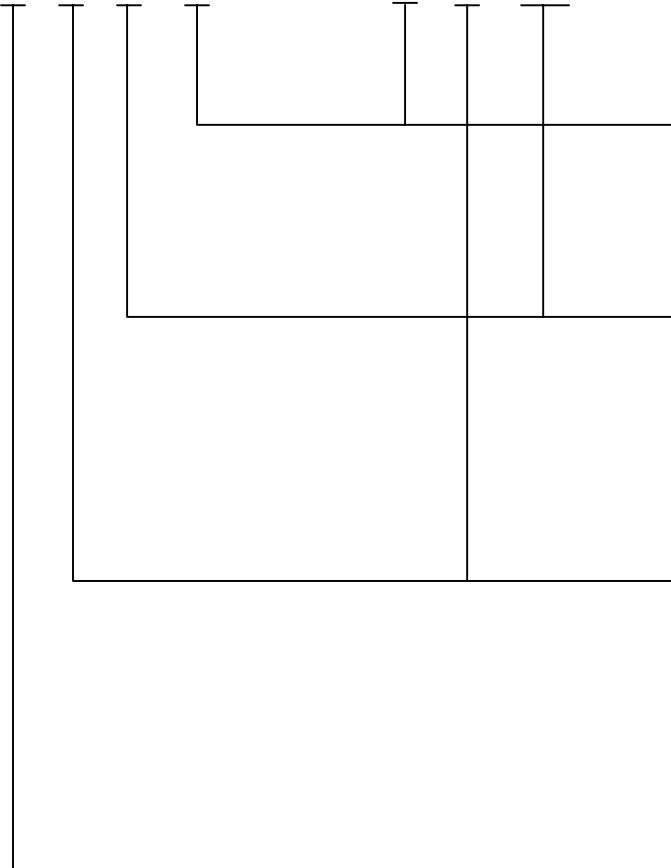
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ORDERING INFORMATION

BS9151-F0026- 01- 08 - 05- 12

HDS5S - F2 – K22



Termination Variant (Refer to Page 2)	
BS	HD
11	H
12	S

Mounting Variant (Refer to Page 3)	
BS	HD
01	21
02	26
03	34
04	25
05	22
07	23
08	24

Coil Variant (Refer to table below)	
BS	HD
02	C2
05	E2
08	F2
09	F3
11	G2
-	H2
-	M2
-	J2
15	K2

Contact Rating (Refer to page 2)	
01	Light Duty Rating
02	Low Level

COIL VARIANTS AND OPERATING CHARACTERISTICS

HD Coil	Nominal Operating Voltage	Coil Resistance Ohms +/- 10%	Must Operate Voltage VDC	Must Drop Out Voltage VDC	BS Coil
H2	4.5	25	2.5	0.2	-
C2	6.0	42	3.2	0.3	02
E2	12.0	210	6.8	0.6	05
M2	18.0	430	9.5	0.9	-
K2	20.0	700	10.6	0.9	15
F3	24.0	1250	14.4	1.2	09
F2	26.5	830	13.5	1.2	08
J2	32.0	1300	16.8	1.4	-
G2	48.0	2800	25.5	2.5	11

All Values are measured at 25°C

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