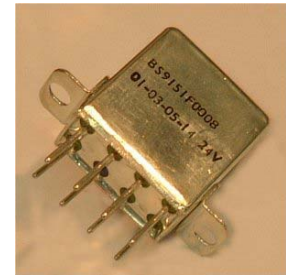


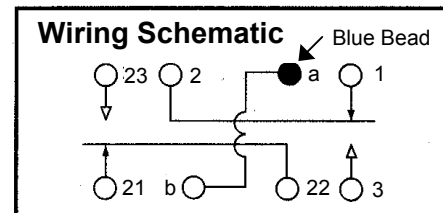
**HDD1**  
**2PDT CRYSTAL CAN RELAY**



**TYPE HDD1**

**Key Features**

- Hermetically Sealed
- Low level switch
- Double compartment sealing



**Specification**

**General**

Contact Arrangement  
Weight  
Mating Bases

2 Pole changeover (2PDT) break before make  
18 gm (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 VAC 400 Hz  
1A inductive,  $10^5$  operations at 28 VDC  
Low level  $10^6$  operations

Operate Time  
Release Time  
Bounce Time

5 ms max. at 20°C with nominal voltage (excluding bounce)  
3 ms max. at 20°C with nominal voltage (excluding bounce)  
3 ms max. at 20°C with nominal voltage

**Environmental**

Temperature Range  
Bump  
Shock  
Vibration

-65°C to +125°C  
4000 bumps at 390 m/s<sup>2</sup> (40g), 6ms duration  
490 m/s<sup>2</sup> (50g) for 11 ms  
60 to 2000 Hz at 147 m/s<sup>2</sup> (15g) acceleration  
10 to 60 Hz at 1mm amplitude  
BS 2011 test Z/ABDM procedure 1  
BS 2011 part 2.1 Kb severity 2

Climatic  
Salt Mist

**Ordering Information**

See sheet 4

Data Sheet No  
**DSHDD1- 0305**

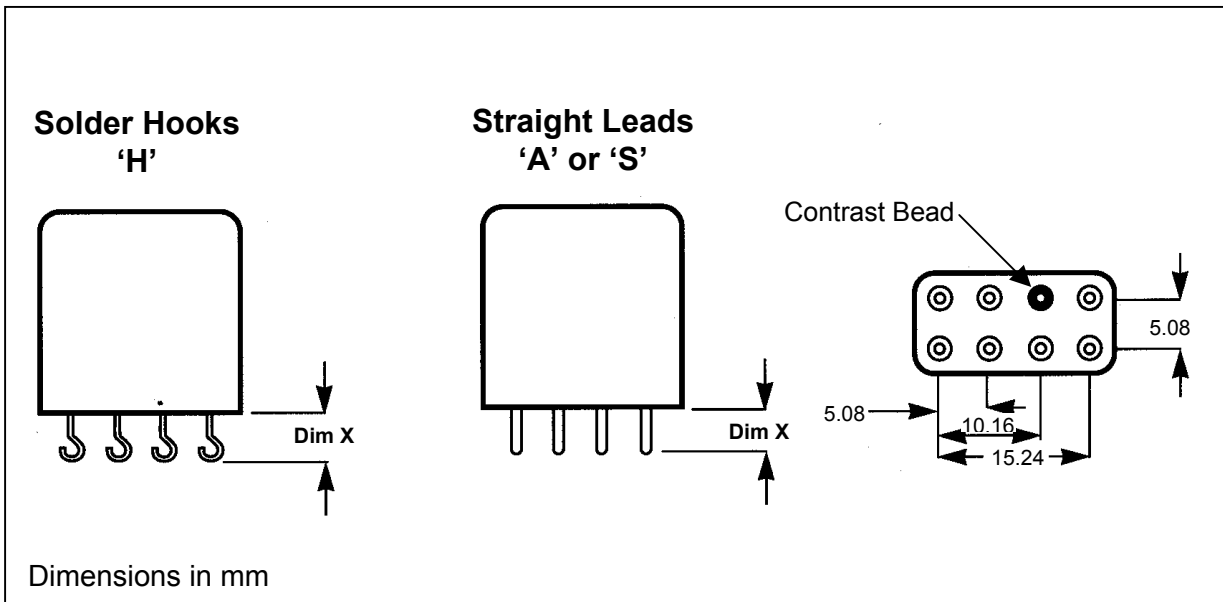
SHEET 1 OF 4

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

### Electrical

|                       |                              |
|-----------------------|------------------------------|
| Contact Resistance    | 50 mΩ max at 10 mV           |
| Insulation Resistance | 500 MΩ minimum at 500 Vdc    |
| Dielectric Strength   | 750 Vrms, 50 Hz at sea level |
|                       | 350 Vrms at 70,000 ft        |
| Coil Sensitivity      | Min operate power 100 mW     |
| Capacitance           | Contact to case 1.4 pF       |
|                       | Between open contacts 0.3 pF |
|                       | Between contact sets 0.2 pF  |
|                       | Coil to case 24 pF           |

### TERMINATION VARIANTS



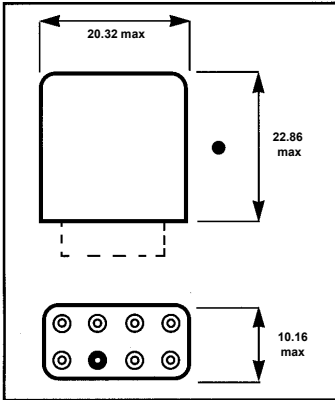
| HD | Type          | Dim.X mm. |
|----|---------------|-----------|
| H  | Solder Hook   | 4.69      |
| S  | Straight Lead | 5.08      |
| A  | Straight Lead | 7.92      |

Data Sheet No  
**DSHDD1- 0305**

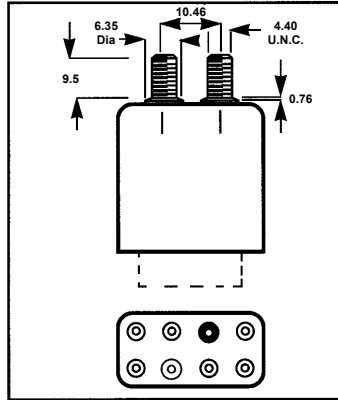
SHEET 2 OF 4

## MOUNTING VARIANTS

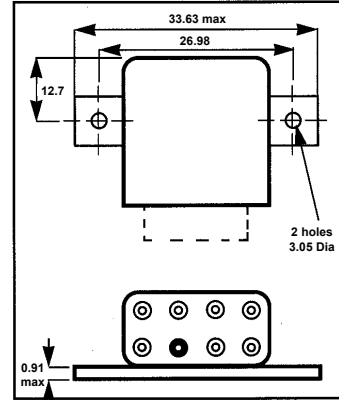
**HD Style 01**



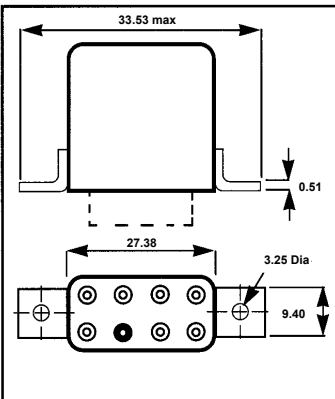
**HD Style 15**



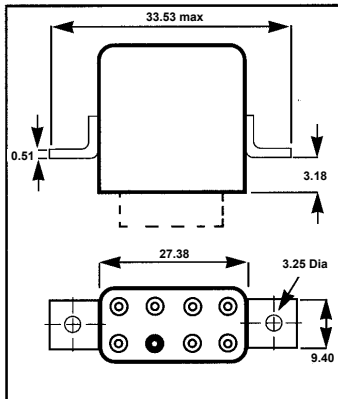
**HD Style 09**



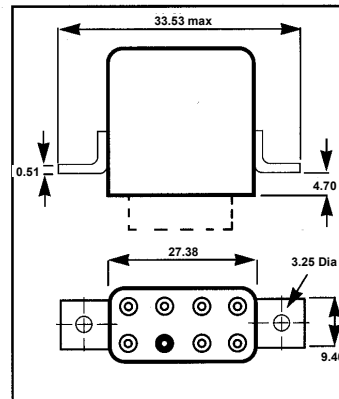
**HD Style 02**



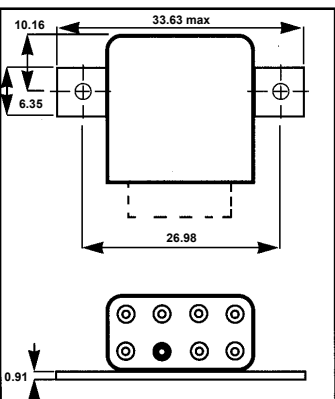
**HD Style 03**



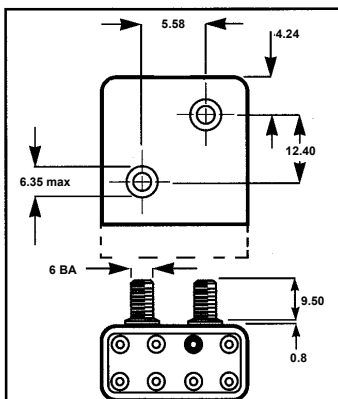
**HD Style 06**



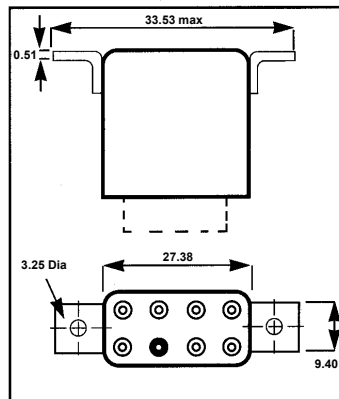
**HD Style 07**



**HD Style 13**



**HD Style 19**



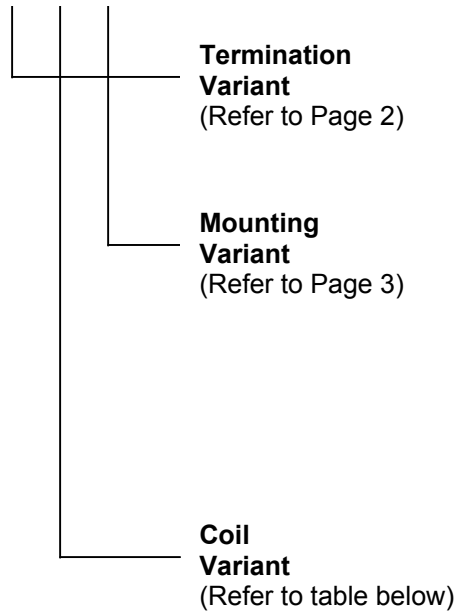
All dimensions are in millimeters

● Blue bead

Data Sheet No  
**DSHDD1- 0305**  
SHEET 3 OF 4

## ORDERING INFORMATION

### HDD1S-C2-E01



## COIL VARIANTS AND OPERATING CHARACTERISTICS

| HD Coil Reference | Nominal Operate Voltage VDC | Coil Resistance Ohms $\pm 10\%$ at 20°C | Must Operate Current mA | Must Drop Out Current mA |
|-------------------|-----------------------------|---|-------------------------|--------------------------|
| B2                | 3                           | 31.25                                   | 56.8                    | 5.6                      |
| C2                | 6                           | 125                                     | 28.4                    | 2.8                      |
| D2                | 9                           | 280                                     | 18.9                    | 1.9                      |
| E2                | 12                          | 500                                     | 14.2                    | 1.4                      |
| M2                | 17                          | 1000                                    | 10.0                    | 1.0                      |
| F2                | 24                          | 2000                                    | 7.1                     | 0.7                      |
| J2                | 32                          | 3555                                    | 5.3                     | 0.5                      |
| G2                | 48                          | 8000                                    | 3.6                     | 0.3                      |

All values are measured at 25°C

Data Sheet No  
**DSHDD1- 0305**

SHEET 4 OF 4