

**D-31, DH-31, and DHL-31 Series, Rated up to 120 Amps,  
115/200 VAC, 400 Hz**

**Product Facts**

- 3PDT, Center off
- Gasket sealed or Hermetically sealed
- Auxiliary contacts available
- Meets many requirements of MIL-PRF-6106



**Performance Data**

**Electrical Characteristics**

- Contact Arrangement** — 3PDT, Center Off
- Rated Operating Voltage** — 115/200 VAC, 400 Hz, 3 phase
- Resistive Rating** — 120 Amps
- Inductive Rating** — 120 Amps
- Motor Rating** — 80 Amps
- Rupture Rating** — 1,000 Amps

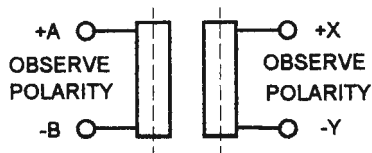
**General Characteristics**

- Temperature Range** — -55°C to +71°C
- Operating Cycles (Life) at Rated Resistive Load, Min.** — 50,000 cycles
- Operating Cycles (Life) Mechanical, Min.** — 100,000 cycles
- Dielectric Strength** — All Circuits to Ground — 1,500 Vrms  
Circuit to Circuit — 1,500 Vrms  
Coil to Ground and Aux. Contacts — 1,000 Vrms
- Altitude** — D-31 — 50,000 ft  
DH-31, DHL-31 — 70,000 ft
- Weight** — 2.60 lbs

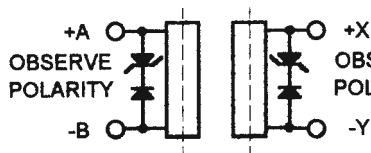
**Coil Characteristics**

- Duty Cycle** — Continuous (Type A, See diagram below)  
Continuous with suppression (Type B or Type C, See diagram below)
- Operating Voltage, Nom.** — 28 Vdc
- Pickup Voltage @ 25°C, Max.** — Coil Type A and C — 18 Vdc  
Coil Type B — 15 Vdc
- Dropout Voltage @ 25°C, Max.** — Coil Type A and C — 1.5 to 7 Vdc  
Coil Type B — 2 to 7 Vdc
- Coil Resistance ±20% @ 25°C** — Coil Type A — N/A  
Coil Type B — 100 Ohms  
Coil Type C — 132 Ohms
- Coil Current @ 25°C, Max.** — .350 Amp

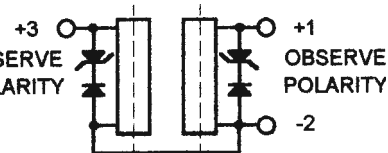
**Coil Type**



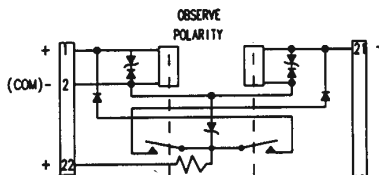
A — Continuous



B — Continuous with Suppression



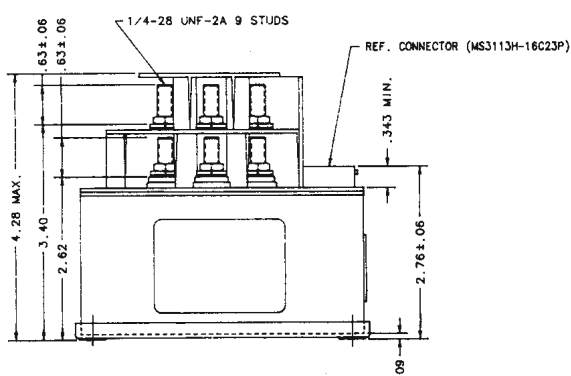
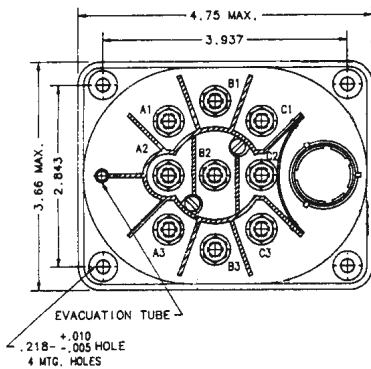
C — Continuous with Suppression



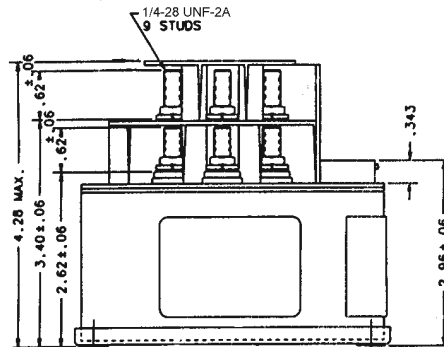
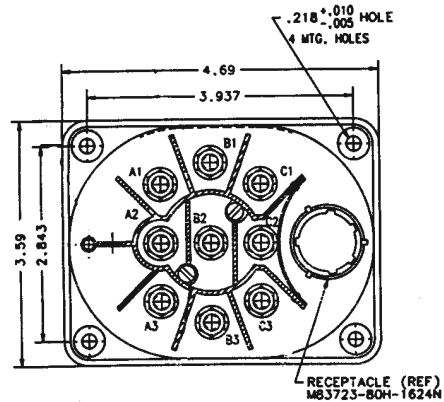
D — Latching

For factory-direct application assistance, phone 419-521-9500 or fax 419-526-2749.

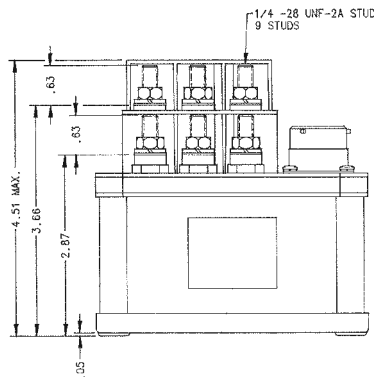
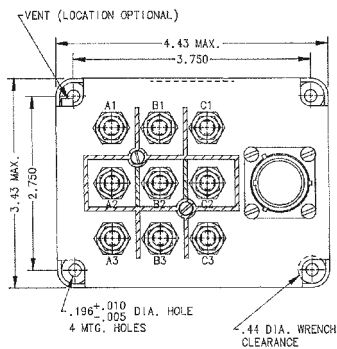
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Mounting Style A



Mounting Style B

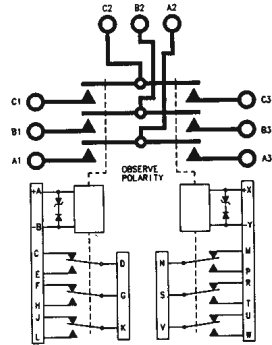


Mounting Style C

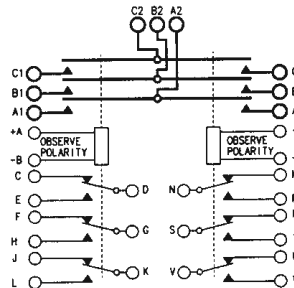
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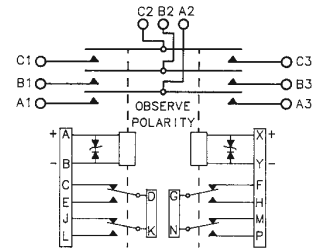
**Circuit Configurations** (Consult factory for other available circuit configurations)



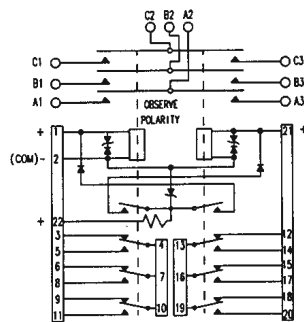
Circuit Configuration 1



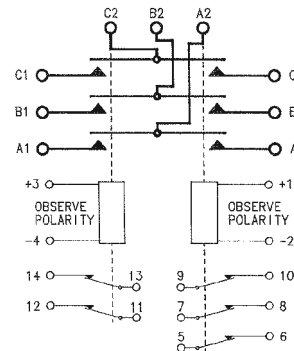
Circuit Configuration 2



Circuit Configuration 3



Circuit Configuration 4



Circuit Configuration 4

| HARTMAN Part Number | Construction Type   | Mounting Style | Coil Type | Circuit Config. | TE Part Number |
|---------------------|---------------------|----------------|-----------|-----------------|----------------|
| D-31DB              | Gasket/Vented       | A              | B         | 1               | 1616049-2      |
| D-31TH              | Gasket/Vented       | C              | A         | 5               | 1616524-5      |
| DH-31A              | Hermetically Sealed | A              | A         | 2               | 1616050-4      |
| DH-31DA             | Hermetically Sealed | A              | B         | 3               | 1616050-5      |
| DH-31DAA            | Hermetically Sealed | A              | A         | 3               | 1616050-6      |
| DHL-31B             | Hermetically Sealed | B              | D         | 4               | 1616050-8      |

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