Balanced-Force Design
Hermetically sealed
Designed to the performance standards of MIL-PRF-6106

**PRINCIPLE TECHNICAL CHARACTERISTICS**

Contacts rated at 28 Vdc and 115 Vac, 400 Hz, 1Ø and 115/200 Vac, 400Hz, 3Ø

Weight 14.0 Oz.

Special units available upon request, including models with auxiliary contacts. Optional Ground Fault Protection (GFP) feature available. Contact factory for information on MIL-qualified part numbers.

**CONTACT ELECTRICAL CHARACTERISTICS**

<table>
<thead>
<tr>
<th>Contact rating per pole and load type [1]</th>
<th>Load current in Amps</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>28 Vdc</td>
</tr>
<tr>
<td></td>
<td>115 Vac 400 Hz</td>
</tr>
<tr>
<td></td>
<td>115/200 Vac 400 Hz 3Ø</td>
</tr>
<tr>
<td></td>
<td>115 Vac 60 Hz DELTA</td>
</tr>
<tr>
<td>Motor</td>
<td>20 - - -</td>
</tr>
<tr>
<td>Intermediate current</td>
<td>10 - - 12.5/60 12.5/60</td>
</tr>
<tr>
<td>Load transfer [3]</td>
<td>- - 12.5/60 12.5/60</td>
</tr>
</tbody>
</table>

*Contact factory for information on MIL-qualified part numbers.*

Data sheets are for initial product selection and comparison. Contact Esterline Power Systems prior to choosing a component.
**COIL CHARACTERISTICS (Vdc)**

<table>
<thead>
<tr>
<th>CODE</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>F Vac 400Hz</th>
<th>N [6] Vdc</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal operating voltage</td>
<td>28</td>
<td>12</td>
<td>6</td>
<td>115</td>
<td>28</td>
</tr>
<tr>
<td>Maximum operating voltage</td>
<td>29</td>
<td>14.5</td>
<td>7.3</td>
<td>124</td>
<td>29</td>
</tr>
</tbody>
</table>

**Pick-up voltage, maximum**

- Nominal: 18 Vdc, 9 Vdc, 4.5 Vdc, 90 Vdc, 18 Vdc
- High temp test: 20 Vdc, 10 Vdc, 5 Vdc, 95 Vdc, 20 Vdc
- Continuous current test: 22.5 Vdc, 11 Vdc, 5.7 Vdc, 100 Vdc, 22.5 Vdc

**Drop-out voltage, maximum**

- 7 Vdc, 4.5 Vdc, 2.5 Vdc, 30 Vdc, 7 Vdc

**Coil resistance in Ohms ±10% at +25°C**

- 200 Ohms, 50 Ohms, 12 Ohms, - Ohms, 90 Ohms

**Coil current max. mA at +25°C**

- - mA, - mA, - mA, 90 mA, - mA

**GENERAL CHARACTERISTICS**

- Temperature range: -55°C to +71°C
- Minimum operating cycles (life) at rated resistive load: 50,000 cycles
- Minimum operating cycles (life) at 25% rated resistive load: 200,000 cycles
- Dielectric strength at sea level:
  - All circuits to ground and circuit to circuit: 1500 Vrms
  - Coil to ground and aux. contacts: 1000 Vrms
- Dielectric strength at altitude: 50,000 feet:
  - Main contacts: 700 Vrms
  - Coil and aux. contacts: 500 Vrms
- Insulation resistance:
  - Initial: 100 MΩ min
  - After environmental tests: 50 MΩ min
- Sinusoidal vibration: 10 G / 70 to 2000 Hz
- Shock (6 ms duration): 50 G
- Maximum contact opening time under vibration and shock: 10 µs
- Operate time at nominal voltage (Including bounce):
  - DC: 25 ms max
  - AC: 80 ms max
- Release time at nominal voltage (Including bounce):
  - DC: 25 ms max
  - AC: 80 ms max
- Weight:
  - 14.0 Oz. max.
  - 11.5 Oz. max. [5]
- Power requirements:
  - at pick-up +25°C: 0.980 watt
  - at nominal D.C. voltage: 4.35 watt max.
  - Overload @ 115/200 Vac, 400Hz. @ 28 Vdc: 400 Amp, 125 Amp
  - Rupture @ 115/200 Vac, 400Hz. @ 28 Vdc: 500 Amp, 150 Amp
### NUMBERING SYSTEM

<table>
<thead>
<tr>
<th>Relay family</th>
<th>1-Mounting Style (A, B, etc.)</th>
<th>2-Terminal &amp; Circuit (1, 2, 3, etc.)</th>
<th>3-Coil Voltage (A, B, C, F &amp; N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>H - X 0 X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[7] HD - X 0 X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[8] HP - X 0 X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[4] HT - X 0 X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[7] HTD - X 0 X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[8] HTP - X 0 X</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### NOTES

1. Auxiliary contact rating - see page 5, note [2].
2. Inductive load life, 20,000 cycles.
3. Applicable military specification: MS27751, MIL-R6106/26, MIL-R6106/43.
4. Suitable for transfer between unsynchronized A.C. power sources at the ratings indicated: 12.5 amperes for series "H, HD, HP"; (MS27751-1,-7,-8,-9,-10 & -15). 60 Amperes for series "HT, HTD, HTP"; (MS27751-11,-12,-17,-18,-19 & -20).
5. Terminal type 6, 8, & 10.
6. Suppressed "N" coil has back EMF suppression to 42 volts max. Consult factory.
8. Non-hermetic, non-metallic cover gasket sealed version. (Not available with mounting style C).
CONFIGURATION STYLES

SERIES H, HD, HP, HT, HTD, HPT

MOUNTING STYLE A

MOUNTING STYLE B

MOUNTING STYLE C

STANDARD TOLERANCE: XX ± .03, XXX ± .010

Date of issue: 06/10
NOTE: Although all configuration and/or terminal type options are available, some combinations may require a setup charge and be subject to minimum order size.