SERIES KM
RELAY - NONLATCH
1 PST-DM, 50 AMP

APPLICATION NOTES:

All welded construction
Contact arrangement 1 PST NO-DM Configuration in one inch cube
Designed to the performance standards of MIL-PRF-6106

PRINCIPLE TECHNICAL CHARACTERISTICS

Contacts rated at 28 Vdc
Weight 0.188lb max
Dimensions 1.025in x 1.025in x 1.66in
Hermetically sealed, corrosion resistant metal can.
Detail specifications and ordering data appear on the following pages.

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>Resistive [2]</td>
<td>Resistive</td>
</tr>
<tr>
<td>Lamp [3]</td>
<td>Lamp</td>
</tr>
<tr>
<td>Overload [3]</td>
<td>Overload</td>
</tr>
<tr>
<td>Rupture</td>
<td>Rupture</td>
</tr>
</tbody>
</table>

Contact Electrical Characteristics

Resistive [2]
Inductive [3]
Motor [3]
Lamp [3]
Overload [3]
Rupture

Date of issue: 01/07

Data sheets are for initial product selection and comparison. Contact Esterline Power Systems prior to choosing a component.
## Coil Characteristics (Vdc)

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Nominal operating voltage</td>
<td>28</td>
<td>12</td>
<td>6</td>
<td>48</td>
<td>28</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>Maximum operating voltage</td>
<td>29</td>
<td>14.5</td>
<td>7.3</td>
<td>50</td>
<td>29</td>
<td>14.5</td>
<td>7.3</td>
</tr>
</tbody>
</table>

Maximum pickup voltage

- Cold coil at +125°C
  | 18 | 9 | 4.5 | 36 | 18 | 9 | 4.5 |
- During high temp test at +125°C
  | 19.8 | 9.9 | 5 | 38 | 19.8 | 9.9 | 5 |
- During continuous current test at +125°C
  | 22.5 | 11.25 | 5.7 | 42 | 22.5 | 11.25 | 5.7 |
- Drop-out voltage (Maximum)
  | 7 | 4.5 | 2.5 | 14 | 7 | 4.5 | 2.5 |

Coil resistance $\Omega \pm 10\% +25^\circ C$ except type "C" & "V" +20\%, -10\%

| | 290 | 70 | 18 | 890 | 290 | 70 | 18 |

## General Characteristics

### Temperature range
-70°C to +125°C

### Minimum operating cycles (life) at rated load
50,000 [3]

### Minimum operating cycles (life) at 25% rated load
200,000

### Dielectric strength at sea level
- All circuits to ground and circuit to circuit 1250 Vrms
- Coil to ground 1000 Vrms

### Dielectric strength at altitude 80,000 ft
500 Vrms [4]

### Insulation resistance
- Initial (500 Vdc) 100 M $\Omega$ min
- After environmental tests (500 Vdc) 50 M $\Omega$ min

### Sinusoidal vibration
- 0.12” DA / 10 to 57 Hz
- 20G / 57 to 2000 Hz

### Random vibration
- Applicable specification MIL-STD-202
- Method 214
- Test condition 1E (0.2G²/Hz, 50 to 2000 Hz)
- Duration 15 minutes each plane

### Shock
- 50G / 11 ms ± 1ms

### Maximum contact opening time under vibration and shock
10 $\mu$s

### Operate time at nominal voltage@25°C
20 ms max

### Release time at nominal voltage@25°C
15 ms max

### Contact make bounce at nominal voltage@25°C
1 ms max

### Contact release break bounce at nominal voltage@25°C
0.5 ms max [7]

### Weight maximum
0.188lb

Unless otherwise noted, the specified temperature range applies to all relay characteristics.
NOTES

[2] For full rated load max. temp. and altitude use No. 8 wire or larger.
   Relays to be mounted to limit mounting bracket temp. to 160 °C.
5. Special models available: i.e. high reliability testing, etc.
[6] "N R & V" coils have back EMF suppression to - 42 volts maximum.
[7] Applies to "N, R & V" coils only.
8. Relay will not operate, but will not be damaged by application of reverse polarity to coil.

NUMBERING SYSTEM

Basic series designation__________________________| KM - A 5 A |
1-Mounting Style (D,J,U)__________________________|   |
2-Terminal Types (5)______________________________|   |
3-Coil Voltage see coil characteristics (A,B,C,M,N,R or V)_______|

MOUNTING STYLES

MOUNTING STYLE D

MOUNTING STYLE J

MOUNTING STYLE U
TERMINAL TYPES

TERMINAL TYPE 5

MOUNTING DATA & SCHEMATIC DIAGRAM

TERMINAL LAYOUT

SCHEMATIC DIAGRAM

"N" COIL (SUPPRESSED, SEE NOTE 5)

MOUNTING DIMENSIONS

STANDARD TOLERANCE: .xx ± .03; .xxx ± .010