KU series

KUP Enclosed Relay
KUIP 8mm Coil to Contacts
KUGP 3mm Contact Gap, 8mm Coil to Contacts
KUEP 10 Amp 150VDC Load Switching
KUMP 15 Amp 277VAC

Users should thoroughly review the technical data before selecting a product part number. It is recommended that users also seek out the pertinent approvals files of the agencies/laboratories and review them to ensure the product meets the requirements for a given application.

Features
- AC coils: 6-240VAC, 50/60 Hz. DC: 6-110VDC.
- Contact arrangement up to 4PDT.
- Wide selection of termination and mounting styles.
- PC terminals available.
- Push to test button and indicator lamps.
- KUPEP incorporates a blow out magnet for high voltage DC switching.
- KUIP offers 8mm contact-to-coil spacing for a higher degree of isolation.
- KUGP provides 3mm contact gap and 8mm contact-to-coil spacing.
- Complete line of sockets and DIN rail.
- Class B coil insulation.

Contact Data @ 25°C

Arrangements: See respective ordering information table.


Expected Mechanical Life:

Contact Data @ 25°C

Arrangements: See respective ordering information table.


Expected Mechanical Life:

Contact Ratings

<table>
<thead>
<tr>
<th>Material</th>
<th>Arrangement</th>
<th>UL/CSA Ratings</th>
<th>Expected Life</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fine Silver</td>
<td>All</td>
<td>5 amps @ 28VDC or 240VAC 80% PF, 2.5 amp tungsten @ 120VAC, 1/2 amp @ 120VDC.</td>
<td>100,000</td>
</tr>
<tr>
<td></td>
<td>KUP</td>
<td>10 amps @ 28VDC or 240VAC, 80% PF, 5 amp tungsten @ 120VAC, 3A 600VAC, 1/2 amp @ 120VDC.</td>
<td>100,000</td>
</tr>
<tr>
<td></td>
<td>KUIP</td>
<td>1/3 HP @ 240VAC, 5 FLA, 15 LRA @ 250VAC (FLA covered by 30,000 operations).</td>
<td>100,000</td>
</tr>
<tr>
<td></td>
<td>KUGP</td>
<td>15 amp @ 277VAC, 80% PF KUM KUMP</td>
<td>100,000</td>
</tr>
<tr>
<td></td>
<td>KUMP</td>
<td>10 amp @ 28VDC or 120VAC, 80% PF 6 2/3 amp @ 240VAC, 80% PF</td>
<td>100,000</td>
</tr>
<tr>
<td></td>
<td>KUEP</td>
<td>10 amp @ 240VAC or 120VAC, 80% PF</td>
<td>100,000</td>
</tr>
<tr>
<td></td>
<td>KUIP</td>
<td>10 amp @ 28VDC or 120VAC, 80% PF 6 2/3 amp @ 240VAC, 80% PF</td>
<td>100,000</td>
</tr>
<tr>
<td></td>
<td>KUMP</td>
<td>10 amp @ 28VDC or 120VAC, 80% PF</td>
<td>100,000</td>
</tr>
<tr>
<td></td>
<td>KUEP</td>
<td>10 amp @ 150VDC</td>
<td>100,000</td>
</tr>
<tr>
<td></td>
<td>KUIP</td>
<td>5 amp @ 150VDC</td>
<td>100,000</td>
</tr>
<tr>
<td></td>
<td>KUMP</td>
<td>3 amp @ 150VDC</td>
<td>100,000</td>
</tr>
</tbody>
</table>

Initial Dielectric Strength

Between Open Contacts: 1,200V rms; KUGP, 3,500V rms.
Between Adjacent Contacts: 2,200V rms.
Between Contacts and Coil: 2,200V rms; KUGP, KUIP, 3,750V rms.

Specifications and availability subject to change.

www.tycoelectronics.com
Technical support: Refer to inside back cover.

Dimensions are in inches over (millimeters) unless otherwise specified.

Dimensions are shown for reference purposes only.

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Environmental Data (Continued)

Maximum Allowable Ambient Temperature vs. Voltage (KUP enclosed)

Mechanical Data

Termination: Quick connect, solder and PC board.
Enclosure: Clear polycarbonate dust cover.
Weight: 3.0 oz. (85g) approximately.

Ordering Information

Typical Part No. ▶

<table>
<thead>
<tr>
<th>Code</th>
<th>Type</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>KU</td>
<td>-14</td>
<td>A 1 5 F</td>
</tr>
</tbody>
</table>

1. Basic Series & Type:
   - KU = Basic open relay.
   - KUP = Basic enclosed relay.

2. Contact Arrangement:
   - 1 = 1A (SPST-NC)
   - 3 = 3C (3PDT)
   - 5 = 1C (SPDT)
   - 14 = 3C (3PDT)
   - 17 = 4C (4PDT)
   - 11 = 2C (DPDT)

3. Coil Input:
   - A = AC 50/60 Hz.
   - D = DC

4. Mountings:

<table>
<thead>
<tr>
<th>Type</th>
<th>KU</th>
<th>KUP (through 3 poles)</th>
<th>KUP (4 pole models)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Codes Available</td>
<td>1,3,4</td>
<td>1,2,3,4,5, A,E,T</td>
<td>1,3,5,A,E</td>
</tr>
</tbody>
</table>

   - OPEN STYLE
     1. #6-32 stud, .218" (5.54mm) locating tab.
     3. #6-32 tapped core, .125" (3.18mm) locating tab.
     4. #6-32 tapped core, .218" (5.54mm) locating tab.

5. Terminal & Contact Material:

<table>
<thead>
<tr>
<th>Type</th>
<th>1 &amp; 2 Pole Models</th>
<th>3 Pole Models</th>
<th>4 Pole Models</th>
</tr>
</thead>
<tbody>
<tr>
<td>Codes Available</td>
<td>1, 5, 7, K</td>
<td>1, 5, 7</td>
<td>1**, 5**, 7, 9</td>
</tr>
</tbody>
</table>

   - 1 = .187" (4.75mm) quick-connect/solder; silver, 5 amps.
   - 5 = .187" (4.75mm) quick connect/solder; silver-cadmium oxide, 10 amps.
   - 7 = .047" (1.19mm) printed circuit; silver-cadmium oxide, 10 amps.
   - 9 = 4 pole KU, KUP; .110" (2.79mm) quick connect/solder; silver-cadmium oxide, 10 amps.

   - K = .250" (6.35mm) quick connect; silver-cadmium oxide, 10 amps.

5A. Gold Flashed Contact Option:
   - F = Optional gold flashing for silver and silver-cadmium oxide contacts.

6. Coil Voltage:
   - To 240VAC, 50/60 Hz. or 110VDC.

Our authorized distributors are more likely to stock:

- KUP-5A15-24
- KUP-5A15-120
- KUP-5A55-120
- KUP-5D15-12
- KUP-5D55-12
- KUP-11A11-120
- KUP-11A15-12
- KUP-11A15-24
- KUP-11A15-120
- KUP-11A35-120
- KUP-11D11-24
- KUP-11D15-24
- KUP-11D55-24
- KUP-11D55-120
- KUP-11D55-240
- KUP-14A15-12
- KUP-14A15-24
- KUP-14A55-240
- KUP-14A55-120
- KUP-14A55-240
- KUP-14D15-24
- KUP-14D55-24
- KUP-17A19-120
- KUP-17A19-120
- KUP-17A19-120
- KUP-17D19-24
- KUP-17D19-24
Ordering Information

High Isolation Design

<table>
<thead>
<tr>
<th>Typical Part No.</th>
<th>KUIP</th>
<th>-5</th>
<th>A</th>
<th>5</th>
<th>5</th>
<th>-120</th>
</tr>
</thead>
<tbody>
<tr>
<td>KUGP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. **Basic Series & Type:**
   - KUIP = Enclosed relay with 8mm contact to coil spacing.
   - KUGP = Enclosed relay with 3mm open contact spacing and 8mm contact to coil spacing. (Form A and Form X arrangements only)

2. **Contact Arrangement:**
   - 5 = 1 Form C (SPDT)*
   - 7 = 2 Form A (DPST-NO)
   - 11 = 2 Form C (DPDT)*
   - *Not offered on KUGP model.

3. **Coil Input:**
   - A = AC, 50/60 Hz.
   - D = DC

4. **Mountings:**
   - 1 = PLAIN CASE, SOCKET MOUNT
   - 5 = BRACKET MOUNT CASE
   - T = TOP FLANGE CASE

5. **Terminal & Contact Material:**
   - 3 = .047" (1.19mm) printed circuit board; silver
   - 5 = .187" (4.75mm) quick connect/solder; silver-cadmium oxide

6. **Coil Voltage:**
   - To 240VAC, 50/60 Hz. or 110VDC. (For 277VAC, consult factory.)
   - See coil data tables.

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Ordering Information

High Voltage DC Switching

<table>
<thead>
<tr>
<th>Typical Part No.</th>
<th>KUEP</th>
<th>-3</th>
<th>A</th>
<th>5</th>
<th>-120</th>
</tr>
</thead>
<tbody>
<tr>
<td>KUEP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. **Basic Series & Type:**
   - KUEP = Enclosed relay with magnetic blow-outs.

2. **Contact Arrangement:**
   - 3 = 1X (SPST-NO-DM)
   - 7 = 2A (DPST-NO)
   - 11 = 2C (DPDT)

3. **Coil Input:**
   - A = AC 50/60 Hz.
   - D = DC

4. **Mountings:**
   - 1 = PLAIN CASE;
   - 3 = with indicator lamp.*
   - 5 = BRACKET MOUNT CASE
   - T = TOP FLANGE CASE
   - *Indicator lamps are available on models with the following coils: 6-24VAC and DC, 110VDC and 120-240VAC. Only models with 120-240VAC coils are UL recognized.

5. **Terminal & Contact Material:**
   - 5 = .187" (4.75mm) quick connect/solder; silver-cadmium oxide
   - 7 = .047" (1.19mm) printed circuit; silver-cadmium oxide

6. **Coil Voltage:**
   - To 240VAC, 50/60 Hz. or 110VDC. (For 277VAC, consult factory.)

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Our authorized distributors are more likely to stock the following items for immediate delivery.

- KUGP-7D55-24 KUIP-14A15-120
- KUIP-5A55-120 KUIP-14D15-12
- KUIP-11D55-24 KUIP-14D15-24
- KUIP-11D55-12 KUIP-14A15-120

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Our authorized distributors are more likely to stock the following items for immediate delivery.

- KUEP-3A15-120 KUEP-3D15-110 KUEP-11D15-12
- KUEP-3D15-12 KUEP-7D15-24 KUEP-11D15-24
- KUEP-3D15-24 KUEP-11A15-120
Ordering Information

15 Amp Switching

<table>
<thead>
<tr>
<th>Typical Part No.</th>
<th>KUM</th>
<th>-14</th>
<th>A</th>
<th>1</th>
<th>8</th>
<th>-120</th>
</tr>
</thead>
<tbody>
<tr>
<td>KUM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Basic Series & Type:
- KUM = 15 amp open relay
- KUMP = 15 amp enclosed relay

2. Contact Arrangement:
- 1 = 1A (SPST-NO)
- 2 = 1B (SPST-NC)
- 3 = 1X (SPSTNO-DM)
- 4 = 1Y (SPSTNC-DB)
- 5 = 1C (SPDT)
- 6 = 1Z (SPSTNC-NO [DB-DM])
- 7 = 2A (DPST-NO)
- 8 = 2B (DPST-NC)
- 12 = 3A (3PST-NO)
- 13 = 3B (3PST-NC)
- 14 = 3C (3PDT)

3. Coil Input:
- A = AC, 50/60 Hz.
- D = DC

4. Mountings:

<table>
<thead>
<tr>
<th>Type</th>
<th>KUM</th>
<th>KUMP</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPEN STYLE</td>
<td>1 = #6-32 stud, 218° (5.54mm)</td>
<td>1 = PLAIN CASE;</td>
</tr>
<tr>
<td></td>
<td>(5.54mm) locating tab.</td>
<td>A = PLAIN CASE, #6-32 STUD LOCATING TAB;</td>
</tr>
<tr>
<td>2 = 2-hole bracket, #6-32 tapped.</td>
<td>2 = with test button.</td>
<td>B = with test button.</td>
</tr>
<tr>
<td>3 = #6-32 tapped core, .125° (3.18mm) locating tab.</td>
<td>3 = with indicator lamp.*</td>
<td>C = with indicator lamp.*</td>
</tr>
<tr>
<td>4 = #6-32 tapped core, .218° (5.54mm) locating tab.</td>
<td>4 = with test button &amp; indicator lamp.*</td>
<td>D = with test button &amp; indicator lamp.*</td>
</tr>
<tr>
<td>5 = #6-32 tapped core, no locating tab.</td>
<td>5 = BRACKET MOUNT CASE;</td>
<td>E = PLAIN CASE, TAPPED CORE, LOCATING TAB;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6 = with test button.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7 = with indicator lamp.*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8 = with test button &amp; indicator lamp.*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>9 = STUD ON END OF PLAIN CASE.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>*Indicator lamps are available on models with the following coils: 6-24VAC and DC, 110VDC and 120-240VAC. Only models with 120-240VAC coils are UL recognized.</td>
</tr>
</tbody>
</table>

5. Terminal & Contact Material:

<table>
<thead>
<tr>
<th>Type</th>
<th>1 &amp; 2 Pole Models</th>
<th>3 Pole Models</th>
</tr>
</thead>
<tbody>
<tr>
<td>Codes Available</td>
<td>6,8,9,G</td>
<td>6,8,9</td>
</tr>
</tbody>
</table>

- 6 = .205" (5.21mm) quick connect/solder; silver-cadmium-oxide.
- 8 = .187" (4.75mm) quick connect/solder; silver-cadmium-oxide.
- 9 = .047" (1.19mm) printed circuit; silver-cadmium-oxide.
- G = .250" (6.35mm) quick connect; silver-cadmium-oxide. (Not available on 3 pole models.)

6. Coil Voltage:
- To 240VAC, 50/60 Hz, or 110VDC (For 277VAC, consult factory.)

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Our authorized distributors are more likely to stock the following items for immediate delivery.

- KUMP-11A18-24
- KUMP-11A18-120
- KUMP-11A18-240
- KUMP-11D18-12
- KUMP-11D18-24
- KUMP-14A18-24
- KUMP-14A18-120
- KUMP-14D18-24
- KUMP-14D18-110
- KUMP-14D18-12
Outline Dimensions

Open Relays

Bracket Type

Stud Type

Enclosed Relays

Plain Case

Top Flange Case

Bracket Mount Case

Core and Stud Mount Cases

Seated Heights For Open Relays

- 1.391" (35.33mm) for #6-32 stud with .218" (5.54mm) locating tab.
- 1.52" (38.6mm) for bracket with 2 #6-32 tapped holes.
- 1.262" (32.56mm) for #6-32 tapped core with .125" (3.18mm) or .218" (5.54mm) locating tab.
- 2.046" (51.97mm) for relay with printed circuit terminals.

STUD TYPE also available with .125" (3.18mm) tab, as well as without stud and locating tab. Models without stud have core tapped #6-32 THREAD, .25" (6.4mm) minimum depth.

*Dimensions with .250" (6.35mm) terminals.
**Dimensions with .110" (2.79mm) or .205" (5.21mm) terminals.
***Dimensions with .187" (4.75mm) terminals.

Dimensions are shown for reference purposes only. Dimensions are in inches (millimeters) unless otherwise specified. Specifications and availability subject to change.


Technical support: www.tycoelectronics.com

P&B 727

Catalog 1308242
Issued 3-03 (PDF Rev. 1-06)

Catalog 1308242
Issued 3-03 (PDF Rev. 1-06)
Outline Dimensions (Continued)

Relay Front Diagrams

<table>
<thead>
<tr>
<th>1-3 Pole Relays</th>
<th>Relays With .250&quot; (6.35mm) Terminals</th>
<th>4 Pole Relays</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Diagram" /></td>
<td><img src="image2.png" alt="Diagram" /></td>
<td><img src="image3.png" alt="Diagram" /></td>
</tr>
</tbody>
</table>

Terminal Dimensions

<table>
<thead>
<tr>
<th>.110&quot; (2.79mm) Quick Connect</th>
<th>.205&quot; (5.21mm) Quick Connect</th>
<th>.250&quot; (6.35mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image4.png" alt="Diagram" /></td>
<td><img src="image5.png" alt="Diagram" /></td>
<td><img src="image6.png" alt="Diagram" /></td>
</tr>
</tbody>
</table>

Wiring Diagrams

<table>
<thead>
<tr>
<th>*1 Form X</th>
<th>1 Form C</th>
<th>*2 Form A</th>
<th>*2 Form C</th>
<th>3 Form C</th>
<th>4 Form C</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image7.png" alt="Diagram" /></td>
<td><img src="image8.png" alt="Diagram" /></td>
<td><img src="image9.png" alt="Diagram" /></td>
<td><img src="image10.png" alt="Diagram" /></td>
<td><img src="image11.png" alt="Diagram" /></td>
<td><img src="image12.png" alt="Diagram" /></td>
</tr>
</tbody>
</table>

*Recommended Load Polarity for Optimum Arc Suppression.

PC Board Layouts (Bottom Views)

<table>
<thead>
<tr>
<th>1 Form X</th>
<th>3 Pole Models</th>
<th>4 Pole Models</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image13.png" alt="Diagram" /></td>
<td><img src="image14.png" alt="Diagram" /></td>
<td><img src="image15.png" alt="Diagram" /></td>
</tr>
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