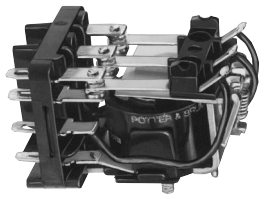
# KUP Series Panel Plug-in Relay

- **AC coils: 5-240VAC, 50/60 Hz.; DC coils 6-110VDC**
- **Contact arrangements of 1 form X, 1-3 form A and 1-4 form C**
- **Wide selection of termination and mounting styles**
- **PC terminals available**
- **Push-to-test button and indicator lamp options**
- **Sockets available for panel, DIN rail or PCB mounting**
- **Class B coil insulation**



Typical applications
Vending, commercial sewing, tool/die equipment, robotics, timers, welding, HVAC, medical, power generators

## Approvals

UL E22575; CSA LR15734
Technical data of approved types on request

## Contact Data

| | | | |
|---|---|---|---|
| Contact arrangement | 1 Form X (NO-DM); 1-3 Form A (NO); 1-4 Form C (CO) | | |
| Rated voltage | 240VAC | | |
| Rated current | 10A | | |
| Contact material | Ag | AgCdO | AgSnOInO |
| Min. recommended contact load | 100mA, 12VDC | 300mA, 12VDC | 300mA, 12VDC |
| Frequency of operation | 360 ops./hr | 360 ops./hr | 360 ops./hr |
| Operate/releases time max. | 15/10ms | | |
| Bounce time max. | 17ms | | |

**Contact ratings**

| Type | Load | Cycles |
|---|---|---|
| **UL 508** | | |
| Ag, 1, 2 and 3 pole | | |
| | 5A, 240VAC | |
| | 5A, 28VDC | |
| | 1/6HP, 120VAC | |
| | 2.5A, 120VAC, tungsten | |
| | 1/3HP, 240VAC | |
| | 0.5A, 120VDC | |
| | 5FLA, 15LRA, 250VAC | |
| Ag, 4 pole | | |
| | 5A, 240VAC | |
| | 2.5A, 120VAC, tungsten | |
| | 0.5A, 120VDC | |
| | 1/6HP, 120VAC | |
| | 1/3HP, 240VAC | |
| AgCdO, 1, 2 and 3 pole | | |
| | 10A, 240VAC | |
| | 10A, 32VDC | |
| | 5FLA, 15LRA, 250VAC | |
| | 1/3HP, 120VAC | |
| | 5A, 120VAC, tungsten | |
| | 1/2HP, 250VAC | |
| | 0.5A, 125VDC | |
| | 10FLA, 40LRA, 125VAC | |
| | 3A, 600VAC | |
| | 1/2HP, 480VAC | |
| | 1/2HP, 600VAC | |
| | 1HP, 480 VAC, 3 phase | |
| AgCdO, 4 pole | | |
| | 10A, 240VAC | |
| | 5A, 120VAC, tungsten | |
| | 0.5A, 120VDC | |
| | 10A, 28VDC, resistive | |
| | 10FLA, 30LRA, 125VAC | |
| | 5FLA, 15LRA, 250 VAC | $30x10^3$ |
| | 125VA, 250 VAC | |
| AgCdO, 4 pole (continued) | | |
| | 1/3HP, 120VAC | |
| | 1/2HP, 250VAC | |
| Total load not to exceed 30 A, 28 VDC, 120 VAC and 20 A, 250 VAC | | |
| AgSnOInO | | |
| | 10A, 277VAC, pf = 0.8 | $100x10^3$ |
| Mechanical endurance | $10x10^6$ ops. | |

## Coil Data

| | |
|---|---|
| Coil voltage range | 5 to 110VDC<br>6 to 240VAC |
| Coil insulation system according UL | Class B |

**Coil versions, DC coil**

| Coil code | Rated voltage VDC | Operate voltage VDC | Coil resistance Ω±10% | Rated coil power W |
|---|---|---|---|---|
| 1, 2 and 3 pole | | | | |
| 5 | 5 | 3.75 | 21 | 1.2 |
| 6 | 6 | 4.5 | 32.1 | 1.125 |
| 12 | 12 | 9.0 | 120 | 1.2 |
| 24 | 24 | 18.0 | 472 | 1.25 |
| 48 | 48 | 36.0 | 1800 | 1.3 |
| 110 | 110 | 82.5 | 10000 | 1.25 |
| 4 pole | | | | |
| 5 | 5 | 3.75 | 14 | 1.8 |
| 6 | 6 | 4.5 | 20 | 1.8 |
| 12 | 12 | 9.0 | 80 | 1.8 |
| 24 | 24 | 18.0 | 320 | 1.8 |
| 48 | 48 | 36.0 | 1250 | 1.85 |
| 110 | 110 | 82.5 | 6720 | 1.8 |

All figures are given for coil without preenergization, at ambient temperature +23°C.

**Coil versions, AC coil**

| Coil code | Rated voltage VAC | Operate voltage VAC | Coil resistance Ω±15% | Rated coil power VA |
|---|---|---|---|---|
| 1 and 2 pole | | | | |
| 6 | 6 | 5.1 | 6 | 2.0 |
| 12 | 12 | 10.2 | 24 | 2.0 |
| 24 | 24 | 20.4 | 85 | 2.0 |
| 120 | 120 | 102.0 | 2250 | 2.1 |
| 240 | 240 | 204.0 | 9110 | 2.1 |
| 3 and 4 pole | | | | |
| 6 | 6 | 5.1 | 4.2 | 2.8 |
| 12 | 12 | 10.2 | 18 | 2.8 |
| 24 | 24 | 20.4 | 72 | 2.8 |
| 120 | 120 | 102.0 | 1700 | 2.9 |
| 240 | 240 | 204.0 | 7200 | 2.9 |

All figures are given for coil without preenergization, at ambient temperature +23°C.



08-2011, Rev. 0811
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Datasheets, product data, 'Definitions' section, application notes and all specifications are subject to change.

## KUP Series Panel Plug-in Relay (Continued)

### Insulation Data

| | |
|---|---|
| Initial dielectric strength | |
| between open contacts | 1200V$_{rms}$ |
| between contact and coil | 2200V$_{rms}$ |
| between adjacent contacts | 2200V$_{rms}$ |
| Initial insulation resistance | |
| between insulated elements | 100MΩ, 500VDC |

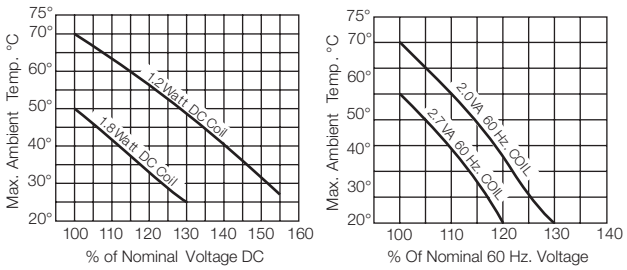
### Other Data

Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at www.te.com/customersupport/rohssupportcenter

Ambient temperature

| | |
|---|---|
| DC coil | Enclosed relays, 4 pole: -45ºC to 50ºC |
| | Enclosed relays, 1-3 pole: -45ºC to 70ºC |
| | Open relays: 15ºC higher maximum |
| AC coil | Enclosed relays, 3 and 4 pole: -45°C to +45°C |
| | Enclosed relays, 1 and 2 pole: -45ºC to +55ºC |
| | Open relays: 15°C higher maximum |

Maximum allowable ambient temperature vs voltage (KUP enlcosed)




### Other Data (continued)

| | |
|---|---|
| Category of environmental protection | |
| IEC 61810 | RT0 - open relay; RTI - dust protected |
| Terminal type | Quick connects (QC), .187, .205 or .250; PCB-THT |
| Terminal retention, push force | |
| QC .205 | 17 lbs for 3s |
| QC .187, QC .250, PCB | 25 lbs for 3s |
| Weight | 85g |
| Packaging/unit | tray/25 pcs., box/150pcs. |

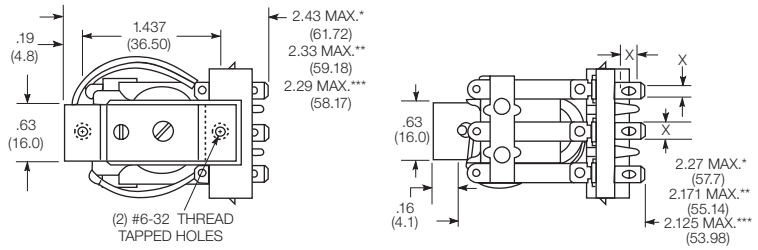
### Accessories

For details see datasheet — Sockets and Accessories, KUP Relays

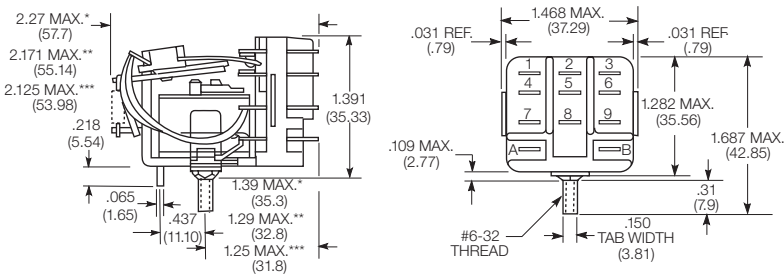
| Product Code | Description |
|---|---|
| 27E893 | DIN socket (use 20C318 clip) |
| 27E121 | Track mount socket (use 20C314 clips) |
| 27E043 | Chassis mount/solder eyelet socket (use 20C254 clip) |
| 27E046 | Chassis mount/PCB socket (use 20C254 clip) |
| 27E067 | Chassis mount/quick connect socket (use 20C254 clip) |
| 27E396 | Snap-in/quick connect socket (use 20C254 clip) |

### Dimensions

KU bracket type




KU stud type




**Seated Heights For KU (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.

1.282" (32.56mm) for #6-32 tapped core with .125" (3.18mm) or .218" (5.54mm) locating tab.

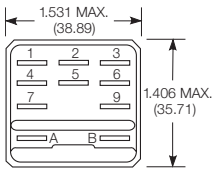
2.046" (51.97mm) for relay with printed circuit terminals.

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.

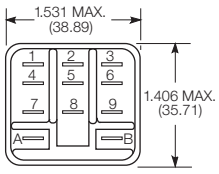
*Dimensions with .250" (6.35mm) terminals.
** Dimensions with .110" (2.79mm) or .205" (5.21mm) terminals.
*** Dimensions with .187" (4.75mm) terminals.

**Relay front diagrams**

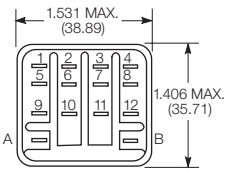
Models with 6.35mm (.250) QC terminals




1-3 pole models with all other terminals




4 pole models



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