

**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             |
|------------------------|------------------------|--------------------|
| <b>UL 508</b>          |                        |                    |
| 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 <sup>3</sup> |
|                        | 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 <sup>3</sup> |
| Mechanical endurance   | 10x10 <sup>6</sup> 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 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 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.

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

**Insulation Data**

|                               |                      |
|-------------------------------|----------------------|
| Initial dielectric strength   |                      |
| between open contacts         | 1200V <sub>rms</sub> |
| between contact and coil      | 2200V <sub>rms</sub> |
| between adjacent contacts     | 2200V <sub>rms</sub> |
| 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](http://www.te.com/customersupport/rohssupportcenter).

**Ambient temperature**

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

**Maximum allowable ambient temperature vs voltage (KUP enclosed)**

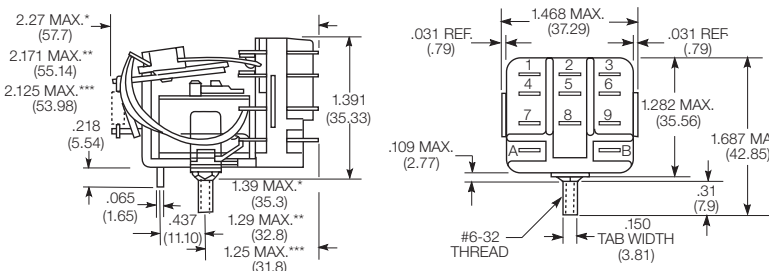


**Dimensions**

**KU bracket type**



**KU stud type**



**Seated Heights For KU (open) Relays**

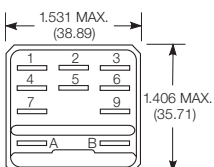
- 1.391" (35.33mm) for #6-32 stud with .218" (5.54mm) locating tab.
- 1.52" (38.6mm) for bracket with 2-#6 32 tapped holes.
- 1.282" (32.56mm) for #6-32 tapped core with .125" (3.18mm) or .218" (5.54mm) locating tab.
- 2.046" (51.97mm) for relay with printed circuit terminals.

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.

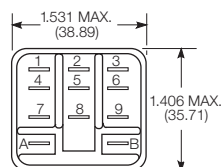
\*Dimensions with .250" (6.35mm) terminals.  
\*\* Dimensions with .110" (2.79mm) or .205" (5.21mm) terminals.  
\*\*\* Dimensions with .187" (4.75mm) terminals.

**Relay front diagrams**

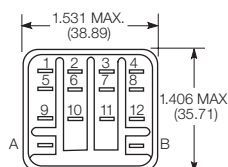
Models with 6.35mm (.250) QC terminals



1-3 pole models with all other terminals



4 pole models



**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)       |

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

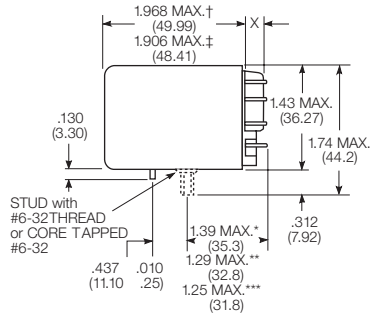
**Dimensions (continued)**

KUP plain case



X Is For Terminal Dimensions.  
See Terminal Drawings.

KUP core / stud mount case



KUP top flange case



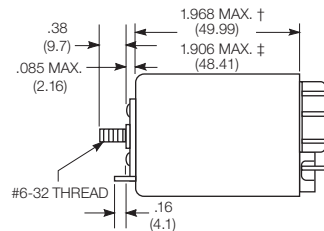
† Dimensions with .250" (6.35mm) terminals.  
‡ Dimensions with .187" (4.75mm and .205" 5.21mm) terminals.

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

KUP bracket mount case



KUP stud on end case



**Terminal dimensions**

4.75mm (.187) quick connect



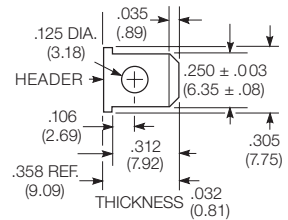
5.21mm (.205) quick connect



1.19mm (.047) printed circuit



6.35mm (.250) quick connect



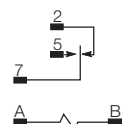
**Terminal assignment**

1 Form X



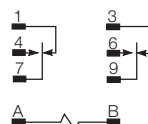
1 Form C

1 Form A (delete 2)



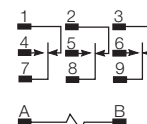
2 Form C

2 Form A (delete 1 & 3)

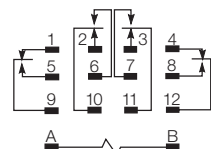


3 Form C

3 Form A (delete 1, 2 & 3)



4 Form C

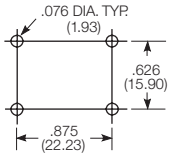


**KUP Series Panel Plug-in Relay** (Continued)

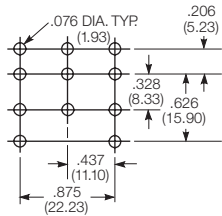
**PCB layout**

Bottom view on solder pins

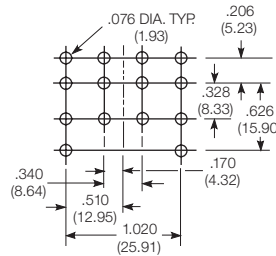
1 form X version



3 pole version  
(Omit unnecessary holes for form A and 2 pole types)



4 pole version



**Product code structure**

Typical product code **KUP -14 A 1 5 -120**

| Type                | <b>KU</b> Open style relay  | <b>KUP</b> Enclosed relay  |
|---------------------|---|--|
| Contact arrangement | <b>1</b> 1 form A (1 NO)<br><b>7</b> 2 form A (2 NO)<br><b>14</b> 3 form C (3 CO) | <b>3</b> 1 form X (1 NO-DM)<br><b>11</b> 2 form C (2 CO)<br><b>17</b> 4 form C (4 CO)<br><b>5</b> 1 form C (1 CO)<br><b>12</b> 3 form A (3 NO) |
| Coil Input          | <b>A</b> AC, 50/60Hz  | <b>D</b> DC  |

**Mounting and options**

- KU**
- 1** #6-32 mounting stud, 5.54mm (.218in) locating tab
  - 3** #6-32 tapped core, 3.18mm (.125in) locating tab
  - 4** #6-32 tapped core, 5.54mm (.218in) locating tab
  - 5** #6-32 tapped core, no locating tab
- KUP**
- 1** Socket mount (plain) case
  - 2** Socket mount (plain) case with push-to-test button 1)
  - 3** Socket mount (plain) case with indicator lamp 2)
  - 4** Socket mount (plain) case with indicator lamp and push-to-test button 1) 2)
  - 5** Bracket mount case
  - A** Plain case with #6-32 stud and locating tab
  - E** Plain case with #6-32 tapped core and locating tab
  - T** Top flange case 1)
- 1) Not available with four pole models (Contact arrangement 17).  
2) Indicator lamps are available on models with the following coils: 6-24VAC and VDC, 110VDC and 120-240VAC. Only models with 120-240VAC coils are UL recognized.

**Terminal and contact material**

- 1 and 2 pole models**
- 1** 4.75mm (.187in) quick connect/solder; Ag, 5A
  - J** 4.75mm (.187in) quick connect/solder; AgCdO, 10A
  - 5** 6.35mm (.250in) quick connect/solder; Ag, 5A
  - P** 4.75mm (.187in) quick connect/solder; AgSnOInO, 10A
  - W** 6.35mm (.250in) quick connect/solder; AgSnOInO, 10A
- 3 pole models**
- 1** 4.75mm (.187in) quick connect/solder; Ag, 5A
  - 5** 4.75mm (.187in) quick connect/solder; AgCdO, 10A
  - P** 4.75mm (.187in) quick connect/solder; AgSnOInO, 10A
- 4 pole models**
- 1** 4.75mm (.187in) quick connect/solder; Ag, 5A 3)
  - 4** 2.79mm (.110in) quick connect/solder; Ag, 5A
  - 7** 1.19mm (.047in) PCB; AgCdO, 10A
  - P** 4.75mm (.187in) quick connect/solder; AgSnOInO, 10A 3)
  - U** 2.79mm (.110in) quick connect/solder; AgSnOInO, 10A 2)
  - 3) 4 pole KUP with 4.75mm (.187in) terminals will not plug into sockets. Must use 2.79mm (.110) terminals for socket mounting.
- 3** 1.19mm (.047in) PCB; Ag, 5A
  - 7** 1.19mm (.047in) PCB; AgCdO, 10A
  - S** 1.19mm (.047in) PCB; AgSnOInO, 10A
  - 3** 1.19mm (.047in) PCB; Ag, 5A
  - 5** 4.75mm (.187in) quick connect/solder; AgCdO, 10A 3)
  - 9** 2.79mm (.110in) quick connect/solder; AgCdO, 10A
  - S** 1.19mm (.047in) PCB; AgSnOInO, 10A

**Au flashed contact option**

- Leave Blank** No Au flashing on contacts
- F** Optional Au flashing on contacts

**Coil voltage**

Coil code: please refer to coil versions table

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

| Product Code   | Arrangement    | Material          | Coil                                | Terminals                | Mounting                                    | Part Number              |                          |
|----------------|----------------|-------------------|-------------------------------------|--------------------------|---|--------------------------|--------------------------|
| KUP-5A15-24    | 1 form C, 1 CO | AgCdO             | 24VAC                               | 4.75mm (.187in) QC       | Socket mount, plain case                    | 6-1393118-0              |                          |
| KUP-5A15-120   |                |                   | 120VAC                              |                          |   | 5-1393118-9              |                          |
| KUP-5A15-240   |                |                   | 240VAC                              |                          |   | 6-1393118-1              |                          |
| KUP-5A55-120   |                |                   | 120VAC                              |                          |   | Bracket mount case       | 6-1393118-3              |
| KUP-5D15-12    |                |                   | 12VDC                               |                          |   | Socket mount, plain case | 6-1393118-6              |
| KUP-5D15-24    |                |                   | 24VDC                               |                          |   | 6-1393118-7              |                          |
| KUP-5D55-12    |                |                   | 12VDC                               |                          |   | Bracket mount case       | 7-1393118-0              |
| KUP-5D55-24    | 24VDC          | 7-1393118-1       |                                     |                          |   |                          |                          |
| KUP-11A11-120  | 2 form C, 2 CO | Ag                | 120VAC                              | 4.75mm (.187in) QC       | Socket mount, plain case                    | 1-1393117-7              |                          |
| KUP-11A15-12   |                | AgCdO             | 12VDC                               |                          | 1-1393117-8                                 |                          |                          |
| KUP-11A15-24   |                |                   | 24VAC                               |                          | 2-1393117-1                                 |                          |                          |
| KUP-11A15-120  |                |                   | 120VAC                              |                          | 1-1393117-9                                 |                          |                          |
| KUP-11A15-240  |                |                   | 240VAC                              |                          | 2-1393117-2                                 |                          |                          |
| KUP-11A35-120  |                |                   | 120VAC                              |                          | Socket mount case w/ indicator lamp         | 2-1393117-5              |                          |
| KUP-11A55-24   |                |                   | 24VAC                               |                          | Bracket mount case                          | 3-1393117-0              |                          |
| KUP-11A55-120  |                |                   | 120VAC                              |                          | 2-1393117-9                                 |                          |                          |
| KUP-11AT5-120  |                |                   |                                     |                          | Top flange case                             | 1-1393117-4              |                          |
| KUP-11D11-24   |                | Ag                | 24VDC                               |                          | Socket mount, plain case                    | 4-1393117-2              |                          |
| KUP-11D15-5    |                | AgCdO             | 5VDC                                |                          | 4-1393117-8                                 |                          |                          |
| KUP-11D15-12   |                |                   | 12VDC                               |                          | 4-1393117-4                                 |                          |                          |
| KUP-11D15-24   |                |                   | 24VDC                               |                          | 4-1393117-5                                 |                          |                          |
| KUP-11D15-36   |                |                   | 36VDC                               |                          | 4-1393117-6                                 |                          |                          |
| KUP-11D15-110  |                |                   | 110VDC                              |                          | 4-1393117-3                                 |                          |                          |
| KUP-11D35-24   |                | 24VDC             | Socket mount case w/ indicator lamp | 5-1393117-3              |   |                          |                          |
| KUP-11D55-6    |                | 6VDC              | Bracket mount case                  | 6-1393117-0              |   |                          |                          |
| KUP-11D55-12   |                | 12VDC             | 5-1393117-6                         |                          |   |                          |                          |
| KUP-11D55-24   |                | 24VDC             | 5-1393117-8                         |                          |   |                          |                          |
| KUP-11D55-48   |                | 48VDC             | 5-1393117-9                         |                          |   |                          |                          |
| KUP-11D55-110  |                | 110VDC            | 5-1393117-5                         |                          |   |                          |                          |
| KUP-14A11-120  | 3 form C, 3 CO | Ag                | 120VAC                              | 4.75mm (.187in) QC       | Socket mount, plain case                    | 7-1393117-3              |                          |
| KUP-14A15-12   |                | AgCdO             | 12VAC                               |                          | 7-1393117-7                                 |                          |                          |
| KUP-14A15-24   |                |                   | 24VAC                               |                          | 7-1393117-9                                 |                          |                          |
| KUP-14A15-120  |                |                   | 120VAC                              |                          | 7-1393117-8                                 |                          |                          |
| KUP-14A15-240  |                |                   | 240VAC                              |                          | 8-1393117-0                                 |                          |                          |
| KUP-14A25-120  |                |                   | 120VAC                              |                          | Socket mount w/ test button                 | 8-1393117-3              |                          |
| KUP-14A35-120  |                |                   |                                     |                          | Socket mount w/ indicator lamp              | 8-1393117-7              |                          |
| KUP-14A35-240  |                |                   | 240VAC                              |                          | 8-1393117-9                                 |                          |                          |
| KUP-14A35F-120 |                | AgCdO w/ Au flash | 120VAC                              |                          | 9-1393117-0                                 |                          |                          |
| KUP-14A45-120  |                | AgCdO             |                                     |                          | Socket mount w/ test button, indicator lamp | 9-1393117-4              |                          |
| KUP-14A55-24   |                |                   | 24VAC                               |                          | Bracket mount case                          | 1393118-2                |                          |
| KUP-14A55-120  |                |                   | 120VAC                              |                          | 9-1393117-9                                 |                          |                          |
| KUP-14A55-240  |                |                   | 240VAC                              |                          | 1393118-3                                   |                          |                          |
| KUP-14D11-24   |                | Ag                | 24VDC                               |                          | Socket mount, plain case                    | 1-1393118-0              |                          |
| KUP-14D15-6    |                | AgCdO             | 6VDC                                |                          | 1-1393118-8                                 |                          |                          |
| KUP-14D15-12   |                |                   | 12VDC                               |                          | 1-1393118-3                                 |                          |                          |
| KUP-14D15-24   |                |                   | 24VDC                               |                          | 1-1393118-4                                 |                          |                          |
| KUP-14D15-48   |                |                   | 48VDC                               |                          | 1-1393118-7                                 |                          |                          |
| KUP-14D15-110  |                |                   | 110VDC                              |                          | 1-1393118-2                                 |                          |                          |
| KUP-14D25-24   |                |                   | 24VDC                               |                          | Socket mount w/ test button                 | 2-1393118-3              |                          |
| KUP-14D35-24   |                |                   |                                     |                          | Socket mount w/ indicator lamp              | 2-1393118-7              |                          |
| KUP-14D35-110  |                |                   | 110VDC                              |                          | 2-1393118-6                                 |                          |                          |
| KUP-14D35F-110 |                | AgCdO w/ Au flash |                                     |                          | 2-1393118-9                                 |                          |                          |
| KUP-14D45-110  |                | AgCdO             |                                     |                          | Socket mount w/ test button, indicator lamp | 3-1393118-1              |                          |
| KUP-14D55-12   |                |                   | 12VDC                               |                          | Bracket mount case                          | 3-1393118-7              |                          |
| KUP-14D55-24   |                |                   | 24VDC                               |                          | 3-1393118-8                                 |                          |                          |
| KUP-17A19-120  |                | 4 form C, 4 CO    |                                     |                          | 120VAC                                      | 2.79mm (.110in) QC       | Socket mount, plain case |
| KUP-17A55-24   |                |                   | 24VAC                               | Bracket mount case       | 4-1393118-6                                 |                          |                          |
| KUP-17D19-24   |                |                   | 24VDC                               | Socket mount, plain case | 5-1393118-0                                 |                          |                          |
| KUP-17D55-24   |                |                   | 24VDC                               | Bracket mount case       | 5-1393118-3                                 |                          |                          |

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [General Purpose Relays](#) category:*

*Click to view products by [TE Connectivity](#) manufacturer:*

Other Similar products are found below :

[PCN-105D3MH,000](#) [59641F200](#) [LY1SAC110120](#) [5X827E](#) [5X837F](#) [5X840F](#) [5X842F](#) [5X848E](#) [LY2N-AC120](#) [LY2S-AC220/240](#) [LY2-US-AC120](#) [LY3-US-AC120](#) [LY4F-UA-DC12](#) [LY4F-UA-DC24](#) [LY4F-US-AC120](#) [LY4F-US-AC240](#) [LY4F-US-DC24](#) [LY4F-VD-AC110](#) [LYQ20DC12](#) [M115C60](#) [M115N010](#) [M115N0150](#) [6031007G](#) [603-12D](#) [61211T0B4](#) [61212T400](#) [61222Q400](#) [61243B600](#) [61243C500](#) [61243Q400](#) [61311BOA2](#) [61311BOA6](#) [61311BOA8](#) [61311C0A2](#) [61311COA1](#) [61311COA6](#) [61311F0A2](#) [61311QOA1](#) [61311QOA4](#) [61311T0D6](#) [61311TOA6](#) [61311TOA7](#) [61311TOB3](#) [61311TOB4](#) [61311U0A6](#) [61312Q600](#) [61312T400](#) [61312T600](#) [61313U200](#) [61313U400](#)