

## KUL Series Latching Panel Plug-in Relay

- Magnetic latching relay
- Single or dual wound DC coils or single wound AC coils
- 1, 2, and 3 pole Form C contact arrangement
- Reset occurs by reversing polarity in a single coil relay or by energizing the reset winding in dual coil relays
- Various mounting and socket styles

### Typical applications

Alarm systems, machine tools, battery chargers, process and power controls, pressure washers, paving equipment



### Approvals

UL E22575; CSA LR15734

Technical data of approved types on request

### Contact Data

|                               |                                             |              |
|-------------------------------|---------------------------------------------|--------------|
| Contact arrangement           | 1 form C (CO), 2 form C (CO), 3 form C (CO) |              |
| Rated voltage                 | 240VAC                                      |              |
| Rated current                 | 10A                                         |              |
| Contact material              | Ag                                          | AgCdO        |
| Min. recommended contact load | 100mA, 12VDC                                | 300mA, 12VDC |
| Frequency of operation        | 360 ops./hour                               |              |
| Operate/release time max.     | 25/25ms                                     |              |

### Contact ratings

| Type | Load | Cycles |
|------|------|--------|
|------|------|--------|

#### UL 508

|    |                        |                     |
|----|------------------------|---------------------|
| Ag | 5A, 240VAC             | 100x10 <sup>3</sup> |
|    | 1/6HP, 120VAC          |                     |
|    | 1/3HP, 240VAC          |                     |
|    | 0.5A, 120VDC           |                     |
|    | 2.5A, 120VAC, tungsten |                     |

|       |                               |                     |
|-------|-------------------------------|---------------------|
| AgCdO | 10A, 250VAC                   | 100x10 <sup>3</sup> |
|       | 1/3HP, 120VAC                 |                     |
|       | 1/2HP, 250VAC                 |                     |
|       | 5A, 120VAC, tungsten          |                     |
|       | 0.5A, 125VDC                  |                     |
|       | 10A, 28VDC                    |                     |
|       | 10FLA, 30LRA, 125VAC          |                     |
|       | 5FLA, 15LRA, 250VAC           | 100x10 <sup>3</sup> |
|       | 125VA, pilot duty, 125/250VAC |                     |
|       |                               |                     |

|                      |                         |
|----------------------|-------------------------|
| Mechanical endurance | 10x10 <sup>6</sup> ops. |
|----------------------|-------------------------|

### Coil Data

|                                     |                                                                                               |
|-------------------------------------|-----------------------------------------------------------------------------------------------|
| Coil voltage range                  | 12 to 110VDC (single and dual coil)<br>24 to 240VAC (single coil)<br>24 to 120VAC (dual coil) |
| Coil insulation system according UL | Class B                                                                                       |

### Coil versions, DC coil 1)

| Coil code    | Rated voltage VDC | Operate voltage VDC | Coil resistance $\Omega \pm 10\%$ | Rated coil power W |
|--------------|-------------------|---------------------|-----------------------------------|--------------------|
| Single coil  |                   |                     |                                   |                    |
| 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               |
| Dual coil 2) |                   |                     |                                   |                    |
| 12           | 12                | 9.0                 | 90                                | 1.6                |
| 24           | 24                | 18.0                | 350                               | 1.65               |
| 48           | 48                | 36.0                | 1400                              | 1.65               |
| 110          | 110               | 82.5                | 7400                              | 1.65               |

1) Latch and reset coil voltages and resistances are the same (unlike coils on request).

2) Dual coil available only with 1 or 2 form C contacts.

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

### Coil versions, AC coil 3)

| Coil code   | Rated voltage VAC | Operate voltage VAC | Latch coil resistance $\Omega \pm 15\%$ | Reset coil resistance $\Omega \pm 15\%$ | Reset coil resistor $\Omega$ |
|-------------|-------------------|---------------------|-----------------------------------------|-----------------------------------------|------------------------------|
| Single coil |                   |                     |                                         |                                         |                              |
| 24          | 24                | 20.4                | 176                                     | —                                       | 680                          |
| 120         | 120               | 102.0               | 3700                                    | —                                       | 15000                        |
| 240         | 240               | 204.0               | 179000                                  | —                                       | 68000                        |
| Dual coil   |                   |                     |                                         |                                         |                              |
| 24          | 24                | 20.4                | 100                                     | 250                                     | —                            |
| 120         | 120               | 102.0               | 2525                                    | 2200                                    | 5600                         |

3) AC coils use diodes. Diodes and resistors included inside relay with 1 and 2 Form C contacts. For 3 Form C relay, the customer must furnish and wire diodes and resistors externally (1N4007 is recommended diode).

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

### Insulation Data

|                               |                      |
|-------------------------------|----------------------|
| Initial dielectric strength   |                      |
| between open contacts         | 500V <sub>rms</sub>  |
| between contact and coil      | 1500V <sub>rms</sub> |
| between adjacent contacts     | 1500V <sub>rms</sub> |
| Initial insulation resistance |                      |
| between insulated elements    | 100M $\Omega$        |

## KUL Series Latching Panel Plug-in Relay (Continued)

### 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                              | Single coil: -45°C to 70°C<br>Dual coil: -45°C to 50°C |
| AC coil                              | Single coil: -45°C to 70°C                             |
| Category of environmental protection |                                                        |
| IEC 61810                            | RTI - dust protected                                   |
| Terminal type                        | Quick connects (QC) .187                               |
| Weight                               | 96g                                                    |
| Packaging/unit                       | tray/25 pcs., box/150pcs.                              |

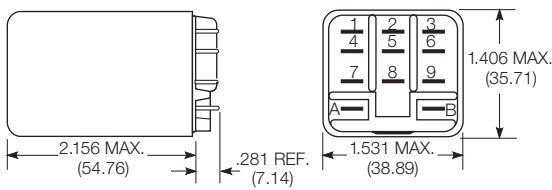
### Accessories

For details see datasheet      Sockets and Accessories, KUP Relays

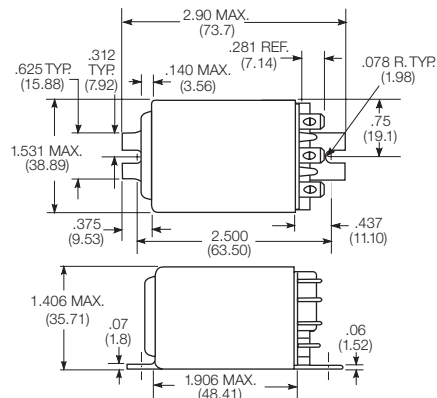
| Product Code | Description                                          |
|--------------|------------------------------------------------------|
| 27E893       | DIN socket (use 20C318 clip)                         |
| 27E121       | Track mount socket (use 20C314 clips)                |
| 27E043       | 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

Plain case

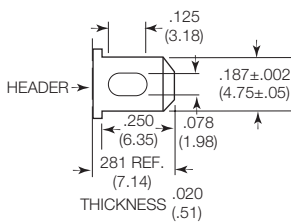


Bracket mount case



### Terminal dimensions

4.75mm (.187) quick connect



## 3