

**KUEP Series Panel Plug-in Relay**

- 1 Form X, 2 Form A and 2 Form C contact arrangements
- 10 amp current rating
- Magnetic blow-out
- Various mounting options
- Indicator lamp available



Typical applications  
Locomotives

**Approvals**

UL E22575; CSA LR15734; CE (KUEP-11 only)  
Technical data of approved types on request

**Contact Data**

Contact arrangement	1 form X (NO-DM), 2 form A (NO), 2 form C (CO)	
Rated voltage	150VDC	
Rated current	10A	
Contact material	AgCdO	AgSnOInO
Frequency of operation	360 ops./hour	360 ops./hour
Operate/releases time max.	15/10ms	
Bounce time max.	17ms	

**Contact ratings**

Type	Load	Cycles
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**UL 508**

KUEP, 1 form X, AgCdO		
10A, 150VDC		100x10 <sup>3</sup>
1A, 300VDC		100x10 <sup>3</sup>
2.5 A, 170 VDC, resistive		100x10 <sup>3</sup>
KUEP, 2 form A, AgCdO		
5 A, 150 VDC		
2.5 A, 170 VDC, resistive		100x10 <sup>3</sup>
KUEP, 2 form C, AgCdO		
3 A, 150 VDC		
2.5 A, 170 VDC, resistive		100x10 <sup>3</sup>
10 A, 240 VAC		
10 A, 32 VDC		
5 FLA, 15 LRA, 250 VAC		
1/3 HP, 120 VAC		
5 A, 120 VAC, tungsten		
1/2 HP, 250 VAC		
0.5 A, 125 VDC		
10 FLA, 40 LRA, 125 VAC		
3 A, 600 VAC		
1/2 HP, 480 VAC		
1/2 HP, 600 VAC		
1 HP, 480 VAC, 3 phase		
KUEP, 1 form X, AgSnOInO		
10A, 150VDC, resistive		30x10 <sup>3</sup>
KUEP, 2 form A, AgSnOInO		
5 A, 150 VDC, resistive		100x10 <sup>3</sup>
KUEP, 2 form C, AgSnOInO		
3 A, 150 VDC, resistive		100x10 <sup>3</sup>
Mechanical endurance	10x10 <sup>6</sup> ops.	

**Coil Data**

Coil voltage range	5 to 110VDC 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
One pole versions				
5	5	3.75	21	1.2
6	6	4.5	32	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
Two pole versions				
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
One pole versions				
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
Two pole versions				
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.

**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

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

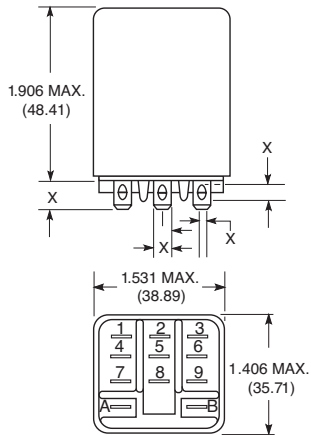
**Other Data**

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	-45°C to 70°C
AC coil	1 pole: -45°C to 55°C 2 pole: -45°C to 45°C
Category of environmental protection	
IEC 61810	RTI - dust protected
Vibration resistance (functional)	.065" double amplitude, 10-55Hz
Shock resistance (functional)	15g, 11ms (non-operating)
Terminal type	Quick connects (QC), .187 or .205 PCB-THT
Terminal retention, push force	
QC .205	17 lbs for 3s
QC .187	25 lbs for 3s

**Dimensions**

Plain case



**Other Data (Continued)**

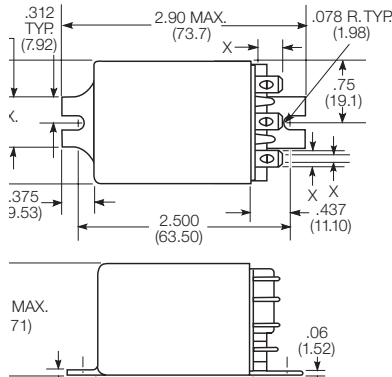
Weight	85g
Packaging/unit	tray/25 pcs., box/150pcs.

**Accessories**

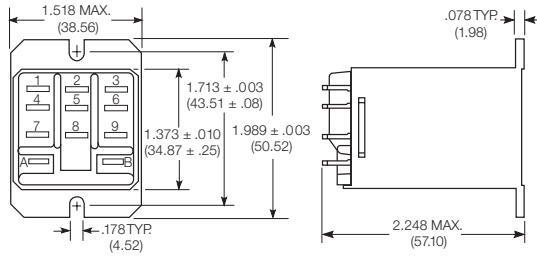
For details see datasheet      Sockets and Accessories, KUP Relays

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

Bracket mount case

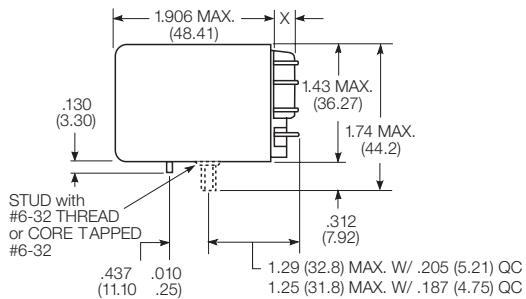


Top flange case



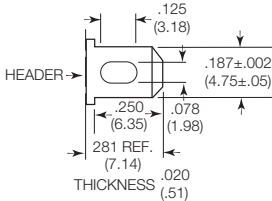
X Is For Terminal Dimensions.  
See Terminal Drawings.

Core / stud mount case

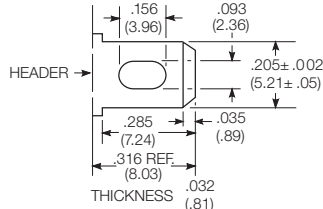


**Terminal dimensions**

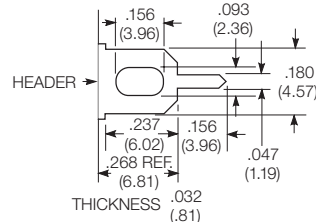
4.75mm (.187) quick connect



5.21mm (.205) quick connect



1.19mm (.047) printed circuit

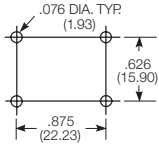


**KUEP Series Panel Plug-in Relay (Continued)**

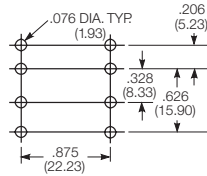
**PCB layout**

Bottom view on solder pins

1 form X version

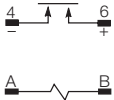


2 form C version shown  
(Omit unnecessary holes for form A types)

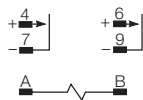


**Terminal assignment**

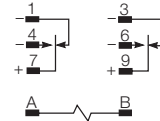
1 Form X



2 Form A



2 Form C



Load polarity noted above is recommended for optimum arc suppression.

**Product code structure**

Typical product code **KUEP -3 A 1 5 -120**

<b>Type</b> KUEP Enclosed relay with magnetic blow-outs	<b>1</b> Socket mount (plain) case <b>5</b> Bracket mount case <b>E</b> Plain case with #6-32 tapped core and locating tab <b>3</b> Socket mount (plain) case, with indicator lamp <sup>1)</sup> <b>A</b> Plain case with #6-32 stud and locating tab <b>T</b> Top flange case 1) 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.	
<b>Contact arrangement and rating</b> <b>3</b> 1 form X (1 NO-DM) <b>11</b> 2 form C (2 CO)		<b>7</b> 2 form A (2 NO)
<b>Coil Input</b> <b>A</b> AC, 50/60Hz <b>D</b> DC		
<b>Terminal and contact material</b> <b>5</b> 4.75mm (.187in) quick connect/solder; AgCdO <b>7</b> 1.19mm (.047in) PCB, AgCdO <b>R</b> 5.21mm (.205in) quick connect/solder; AgSnOInO <b>6</b> 5.21mm (.205in) quick connect/solder; AgCdO <b>P</b> 4.75mm (.187in) quick connect/solder; AgSnOInO <b>S</b> 1.19mm (.047in) PCB, AgSnOInO		
<b>Coil voltage</b> Coil code: please refer to coil versions table		

Product Code	Arrangement	Material	Coil	Terminals	Mounting	Part Number
KUEP-3A15-120	1 Form X, 1 NO-DM	AgCdO	120 VAC	4.75mm (.187in) QC	Socket mount, plain case	9-1393113-4
KUEP-3D15-12			12 VDC			9-1393113-8
KUEP-3D15-24			24 VDC			1393114-1
KUEP-3D15-48			48 VDC			1393114-2
KUEP-3D15-110			110 VDC			9-1393113-7
KUEP-3D35-24			24 VDC		Socket mount, plain case w/ indicator lamp	1393114-5
KUEP-7D15-24	2 Form A, 2 NO				Socket mount, plain case	1-1393114-1
KUEP-11A15-120	2 Form C, 2 CO		120 VAC			8-1393113-3
KUEP-11D15-12			12 VDC			8-1393113-8
KUEP-11D15-24			24 VDC			8-1393113-7
KUEP-11D15-48			48 VDC			8-1393113-6
KUEP-11D15-110			110 VDC			8-1393113-5