

# KUHP-5A51-120 Product Details



KUHP-5A51-120

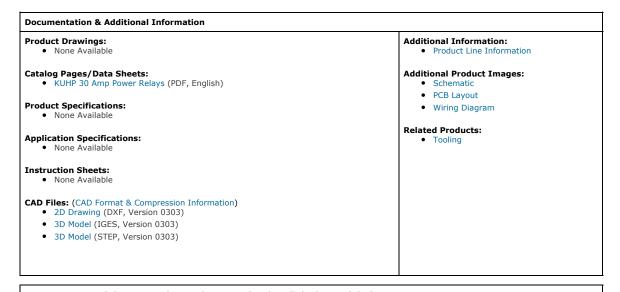
TE Internal Number: 8-1393114-4 🚽 Active

## **Industrial Relays (General Purpose)**

Converted to EU RoHS but not ELV Compliant (Statement of Compliance)

## **Product Highlights:**

- KUHP Series
- Contact Current Class = 20A to 30A Class, Greater Than 16A
- Contact Rated Current = 30 A
- Terminal Type = Quick Connect, Solder
- Contact Arrangement = 1 Form C (CO)



#### Product Features (Please use the Product Drawing for all design activity) Product Type Features: **Body Features:**

# Series = KUHP

• Terminal Type = Quick Connect, Solder

## Mechanical Attachment:

# Mounting Options = Bracket Mount

## **Electrical Characteristics:**

- Contact Current Class = 20A to 30A Class, Greater Than 16A
- Contact Rated Current (A) = 30
- Contact Limiting Continuous Current (A) = 30
- Contact - Limiting Making Current (A) = 30
- Contact Limiting Breaking Current (A) = 30
- Insulation Initial Dielectric Between Coil/Contact Class = 3500V to 4000V Class
- Insulation Initial Dielectric Between Open Contacts (V rms) = 1200
- Insulation Initial Dielectric Between Contacts and Coil (V rms) = 3750
- Contact Rated Voltage (VAC) = 240
- Contact Limiting Short-Time Current (A) = 30
- Contact Switching Recommended Load, Min. = 300mA at 12V
- Coil Rated Voltage (VAC) = 120
- Coil Resistance  $(\Omega) = 1700$
- Coil Rated Power, AC (VA) = 3.00
- Coil Rated Power Class = 2.0VA to 3.0VA Class
- Insulation - Initial Insulation Resistance (M $\Omega$ ) = 100000

# Dimensions:

- Mechanical Length Class = 40mm to 50mm Class
- Length (mm [in]) = 50.00 [1.970]
- Mechanical Width Class = 30mm to 40mm Class
- Width (mm [in]) = 38.90 [1.531] •
- Mechanical Height Class = 30mm to 40mm Class
- Height (mm [in]) = 35.70 [1.405]

- Mount Type = Panel Mount
  - Weight (g [oz]) = 92.00 [3.245]
- Contact Features:
  - Contact Material = AgCdO
  - Contact Number of Poles = 1

## **Configuration Features:**

- Contact Arrangement = 1 Form C (CO)
- Coil Magnetic System = Monostable, AC
- Coil Special Features = UL Coil Insulation Class B

#### Industry Standards:

- RoHS/ELV Compliance = RoHS/Not ELV Compliant
- Lead Free Solder Processes = Not relevant for lead free process
- RoHS/ELV Compliance History = Converted to comply with RoHS not ELV directives
- Approved/Registered Standards = CSA, UL

## Environmental:

- Environmental Category of Protection = RTI
- Environmental Ambient Temperature, Max. (°C [°F]) = 45 [113]
- Environmental Ambient Temperature Class = 0 to 50°C Class

# **Packaging Features:**

- Packaging Method = Tray
- Other:
  - Brand = Potter & Brumfield



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# **KUHP Series Panel Relay**

# AC coils 6 to 277VAC 50/60Hz, DC 6 to 110VCD

- Contact arrangement up to 2 form C (CO)
- 250" combination push-on/solder terminals or PC terminals
- Side flange and top flange mounting
- Designed to meet VDE space requirements: Class B coil insulation



Typical applications

Commercial HVAC, smart-grid communications controllers, baggage handling, pumps.

# Approvals

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

Contact Data1 pole2 poleContact arrangement1 form C (CO)2 form A (NO)1 form A (NO)2 form B (NC)Rated voltage240VACRated voltage240VACRated current30A20AContact materialAgCdOAgCdO, AgSnOlnOMin. recommended contact load300mA, 12VDCInitial contact resistance200mΩ200mΩPrequency of operation360 ops./hour360 ops./hourOperate/release time max.20/20ms20/20msBounce time max.20ms20msContacts ratingsTypeLoadTypeLoad100x10³ ops.1 hPl, 120VAC100x10³ ops.1 hPl, 120VAC100x10³ ops.30A, 28 VDC50x10° ops.30A, 28 VDC50x10° ops.10A, 480VAC25x10° ops.1/2HP, 480VAC25x10° ops.1/2HP, 480VAC100x10° ops.2 pole, AgCdO20A, 240VAC2 pole AgSnOlnO <t< th=""><th>lechnical data of a</th><th>pproved types on reques</th><th>st.</th><th></th></t<>	lechnical data of a	pproved types on reques	st.	
1 form A (NO)   2 form A (NO)     1 form B (NC)   2 form B (NC)     Rated voltage   240VAC     Rated current   30A     200mΩ   200mΩ     Min. recommended contact load   300mA, 12VDC     Initial contact resistance   200mΩ     Prequency of operation   360 ops./hour     Operate/release time max.   20/20ms     Bounce time max.   20/20ms     20ms   20ms     Contacts ratings     Type   Load     Type   Load     1 1/2HP, 240VAC   100x10° ops.     1 1/2HP, 240VAC   100x10° ops.     1 1/2HP, 480VAC   50x10° ops.     1 1/2HP, 480VAC   25x10° ops.     1/2HP, 480VAC   25x10° ops.     1/2HP, 480VAC   25x10° ops.     1/2HP, 480VAC   50x10° ops.     20A, 240VAC   100x10° ops.     20A, 240VAC   100x10° ops.     20A, 240VAC   25x10° ops.     1/2HP, 480VAC   25x10° ops.     1/2HP, 480VAC   25x10° ops.     1/2HP, 480VAC   25x10° ops.  <	<b>Contact Dat</b>	a		
1 form B (NC)       2 form B (NC)         Rated voltage       240VAC       240VAC         Rated current       30A       20A         Contact material       AgCdO       AgCdO, AgSnOlnO         Min. recommended contact load       300mA, 12VDC       300mA, 12VDC         Initial contact resistance       200mΩ       200mΩ         Frequency of operation       360 ops./hour       360 ops./hour         Operate/release time max.       20/20ms       20/20ms         Bounce time max.       20/20ms       20ms         Contacts ratings       20ms       20ms         Type       Load       Cycles         1 hole, AgCdO       100x10 <sup>3</sup> ops.       11/2HP, 240VAC         1 bole, AgCdO       100x10 <sup>3</sup> ops.       100x10 <sup>3</sup> ops.         30A, 28 VDC       50x10 <sup>3</sup> ops.       102x10 <sup>3</sup> ops.         1/2HP, 480VAC       25x10 <sup>3</sup> ops.       1/2HP, 480VAC       25x10 <sup>3</sup> ops.         1/2HP, 480VAC       50x10 <sup>3</sup> ops.       1/2HP, 480VAC       25x10 <sup>3</sup> ops.         20A, 240VAC       100x10 <sup>3</sup> ops.       20A, 240VAC       100x10 <sup>3</sup> ops.         20A, 240VAC       50x10 <sup>3</sup> ops.       1/2HP, 600VAC       25x10 <sup>3</sup> ops.	Contact arrange	ement	1 form C (CO)	2 form C (CO)
Rated voltage       240VAC       240VAC         Rated current       30A       20A         Contact material       AgCdO       AgCdO, AgSOInO         Min. recommended contact load       300mA, 12VDC       300mA, 12VDC         Initial contact resistance       200mΩ       200mΩ         Frequency of operation       360 ops./hour       360 ops./hour         Operate/release time max.       20/20ms       20/20ms         Bounce time max.       20ms       20ms         Contacts ratings       Type       Load       Cycles         1 pole, AgCdO       100x10 <sup>3</sup> ops.       11/2HP, 240VAC       100x10 <sup>3</sup> ops.         30 FLA, 96 LRA       100x10 <sup>3</sup> ops.       30A, 28 VDC       50x10 <sup>3</sup> ops.         30A, 28 VDC       50x10 <sup>3</sup> ops.       1/2HP, 480VAC       25x10 <sup>3</sup> ops.         1/2HP, 480VAC       25x10 <sup>3</sup> ops.       1/2HP, 600VAC       25x10 <sup>3</sup> ops.         2 pole, AgCdO       20A, 240VAC       100x10 <sup>3</sup> ops.       20 FLA, 83 LRA       100x10 <sup>3</sup> ops.         2 pole, AgCdO       20A, 240VAC       100x10 <sup>3</sup> ops.       20 FLA, 83 LRA       100x10 <sup>3</sup> ops.         2 pole, AgCdO       20 A, 240VAC       100x10 <sup>3</sup> ops.       20 FLA, 83 LRA			1 form A (NO)	2 form A (NO)
Rated current30A20AContact materialAgCdOAgCdO, AgSnOlnOMin. recommended contact load300mA, 12VDC300mA, 12VDCInitial contact resistance200mQ200mQPrequency of operation360 ops./hour360 ops./hourOperatir/release time max.20/20ms20/20msBounce time max.20/20ms20/20msTypeLoadCycles1 pole, AgCdO30A, 240VAC100x10³ ops.1 HP, 120VAC100x10³ ops.11/2HP, 240VAC30 FLA, 96 LRA100x10³ ops.30A, 28 VDC30A, 28 VDC50x10³ ops.1/2HP, 480VAC1/2HP, 480VAC25x10³ ops.1/2HP, 600VAC25x10³ ops.2 pole, AgCdO20A, 240VAC100x10³ ops.2 pole, AgCdO20A, 240VAC50x10³ ops.2 pole, AgCdO20A, 240VAC50x10³ ops.2 pole, AgCdO20A, 240VAC50x10³ ops.2 pole AgSnOlnO20 A, 240 VAC25x10³			1 form B (NC)	2 form B (NC)
Contact materialAgCdOAgCdO, AgSnOlnOMin. recommended contact load300mA, 12VDC300mA, 12VDCInitial contact resistance200mQ200mQFrequency of operation360 ops./hour360 ops./hourOperate/release time max.20/20ms20/20msBounce time max.20ms20msContacts ratingsTypeLoadCycles1 pole, AgCdO100x10³ ops.1 hP, 120VAC100x10³ ops.1 hP, 120VAC100x10³ ops.1 hP, 120VAC100x10³ ops.30 FLA, 96 LRA100x10³ ops.30A, 28 VDC50x10³ ops.10A, 480VAC6x10³ ops.1/2HP, 480VAC25x10³ ops.1/2HP, 480VAC100x10³ ops.1/2HP, 480VAC100x10³ ops.2 pole, AgCdO20A, 240VAC20 FLA, 83 LRA100x10³ ops.20 FLA, 83 LRA100x10³ ops.1/2HP, 480VAC50x10³ ops.20 FLA, 83 LRA100x10³ ops.1/2HP, 480VAC6x10³ ops.20 FLA, 83 LRA100x10³ ops.1/2HP, 480VAC6x10³ ops.1/2HP, 480VAC25x10³ ops.20 FLA, 83 LRA100x10³ ops.1/2HP, 480VAC25x10³ ops.20 FLA, 83 LRA100x10³ ops.1/2HP, 480VAC25x10³ ops.20 A, 240 VAC25x10³ ops.<	Rated voltage		240VAC	240VAC
Min. recommended contact load       300mA, 12VDC       300mA, 12VDC         Initial contact resistance       200mΩ       200mΩ         Frequency of operation       360 ops./hour       360 ops./hour         Operate/release time max.       20/20ms       20/20ms         Bounce time max.       20ms       20ms         Contacts ratings       20ms       20ms         Type       Load       Cycles         1 pole, AgCdO       100x10³ ops.       100x10³ ops.         1 HP, 120VAC       100x10³ ops.       300 FLA, 96 LRA       100x10° ops.         300 FLA, 96 LRA       100x10° ops.       300 A, 28 VDC       50x10° ops.         1/2HP, 480VAC       25x10° ops.       1/2HP, 480VAC       25x10° ops.         1/2HP, 600VAC       25x10° ops.       1/2HP, 480VAC       100x10° ops.         2 pole, AgCdO       100x10° ops.       3/4HP, 120VAC       100x10° ops.         2 pole, AgCdO       100x10° ops.       3/4HP, 120VAC       100x10° ops.         2 pole, AgCdO       20A, 240VAC       100x10° ops.       2/20A, 28 VDC       50x10° ops.         2 pole, AgCdO       102HP, 600VAC       25x10° ops.       2/20A, 28 VDC       50x10° ops.				
Initial contact resistance $200m\Omega$ $200m\Omega$ Frequency of operation360 ops./hour360 ops./hourOperate/release time max. $20/20ms$ $20/20ms$ Bounce time max. $20ms$ $20ms$ Contacts ratingsTypeLoadCycles1 pole, AgCdO100x10³ ops.1 HP, 120VAC100x10³ ops.1 1/2HP, 240VAC100x10³ ops.30A, 240VAC100x10³ ops.30FLA, 96 LRA100x10³ ops.30A, 28 VDC50x10³ ops.10A, 480VAC6x10³ ops.1/2HP, 480VAC25x10³ ops.1/2HP, 600VAC25x10° ops.2 pole, AgCdO20A, 240VAC2 pole, AgCdO100x10° ops.2 pole, AgCdO50x10° ops.2 pole, AgCdO50x10° ops.2 pole, AgCdO50x10° ops.2 pole, AgCdO50x10° ops.2 pole, AgCdO100x10° ops.2 pole, AgCdO50x10° ops.2 pole, AgCdO25x10° ops.2 pole, AgSnOlnO20 A, 240 VAC				
Frequency of operation       360 ops./hour       360 ops./hour         Operate/release time max.       20/20ms       20/20ms         Bounce time max.       20ms       20ms         Contacts ratings         Type       Load       Cycles         1 pole, AgCdO       30A, 240VAC       100x10 <sup>3</sup> ops.         1HP, 120VAC       100x10 <sup>3</sup> ops.       11/2HP, 240VAC         306 FLA, 96 LRA       100x10 <sup>3</sup> ops.       30A, 28 VDC         30A, 28 VDC       50x10 <sup>3</sup> ops.       100x10 <sup>3</sup> ops.         10A, 480VAC       6x10 <sup>3</sup> ops.       1/2HP, 480VAC       25x10 <sup>3</sup> ops.         1/2HP, 480VAC       25x10 <sup>3</sup> ops.       1/2HP, 600VAC       25x10 <sup>3</sup> ops.         2 pole, AgCdO       20A, 240VAC       100x10 <sup>3</sup> ops.       3/4HP, 120VAC         2 pole, AgCdO       20A, 240VAC       100x10 <sup>3</sup> ops.       2/2HP, 600VAC         2 pole, AgCdO       20A, 240VAC       100x10 <sup>3</sup> ops.       1/2HP, 480VAC       25x10 <sup>3</sup> ops.         2 pole, AgCdO       20A, 28 VDC       50x10 <sup>3</sup> ops.       2/2HP, 600VAC       25x10 <sup>3</sup> ops.         2 pole AgSnOlnO       20 A, 240 VAC       25x10 <sup>3</sup> ops.       1/2HP, 480VAC, 3 phase       6x10 <sup>3</sup> ops. <t< td=""><td></td><td></td><td>,</td><td>'</td></t<>			,	'
Operate/release time max.       20/20ms       20/20ms         Bounce time max.       20ms       20ms         Contacts ratings         Type       Load       Cycles         1 pole, AgCdO       30A, 240VAC       100x10 <sup>3</sup> ops.         1 HP, 120VAC       100x10 <sup>3</sup> ops.       11/2HP, 240VAC       100x10 <sup>3</sup> ops.         30 FLA, 96 LRA       100x10 <sup>3</sup> ops.       30A, 28 VDC       50x10 <sup>3</sup> ops.         30A, 28 VDC       50x10 <sup>3</sup> ops.       10A, 480VAC       6x10 <sup>3</sup> ops.         1/2HP, 480VAC       25x10 <sup>3</sup> ops.       1/2HP, 480VAC       25x10 <sup>3</sup> ops.         1/2HP, 600VAC       25x10 <sup>3</sup> ops.       1/2HP, 600VAC       25x10 <sup>3</sup> ops.         2 pole, AgCdO       20A, 240VAC       100x10 <sup>3</sup> ops.       3/4HP, 120VAC       100x10 <sup>3</sup> ops.         2 pole, AgCdO       20A, 240VAC       100x10 <sup>3</sup> ops.       2/2 hP, 480VAC       50x10 <sup>3</sup> ops.         2 pole, AgCdO       50x10 <sup>3</sup> ops.       10/2HP, 480VAC       25x10 <sup>3</sup> ops.       2/2 hP, 480VAC         2 pole, AgCdO       20A, 28 VDC       50x10 <sup>3</sup> ops.       10/2HP, 480VAC       25x10 <sup>3</sup> ops.         2 pole AgSnOlnO       20 A, 240 VAC       25x10 <sup>3</sup> ops.       1/2HP, 480VAC       25x10 <sup>3</sup> ops. <td></td> <td></td> <td></td> <td></td>				
Bounce time max.       20ms       20ms         Contacts ratings         Type       Load       Cycles         1 pole, AgCdO       30A, 240VAC       100x10³ ops.         1HP, 120VAC       100x10³ ops.       11/2HP, 240VAC         30FLA, 96 LRA       100x10³ ops.       30A, 28 VDC       50x10³ ops.         30A, 28 VDC       50x10³ ops.       10A, 480VAC       6x10° ops.         1/2HP, 480VAC       25x10° ops.       1/2HP, 600VAC       25x10° ops.         2 pole, AgCdO       20A, 240VAC       100x10° ops.       3/4HP, 120VAC         2 pole, AgCdO       20A, 240VAC       100x10° ops.       3/4HP, 120VAC         2 pole, AgCdO       20A, 240VAC       100x10° ops.       3/4HP, 120VAC         2 pole, AgCdO       20A, 240VAC       100x10° ops.       2/2HP, 600VAC       2/2h10° ops.         2 pole, AgCdO       20A, 28 VDC       50x10° ops.       5/2h10° ops.       10/2HP, 480VAC       2/2h10° ops.         2 pole, AgCdO       20A, 28 VDC       50x10° ops.       5/2h10° ops.       1/2HP, 480VAC       2/2h10° ops.         2 pole AgSnOlnO       2/2D A, 240 VAC       2/2h10° ops.       2/2h10° ops.       2/2h10° ops.				
Contacts ratings         Type       Load       Cycles         1 pole, AgCdO       30A, 240VAC       100x10³ ops.         1 HP, 120VAC       100x10³ ops.       11/2HP, 240VAC         30 FLA, 96 LRA       100x10³ ops.       30A, 28 VDC       50x10³ ops.         30A, 28 VDC       50x10³ ops.       10A, 480VAC       6x10³ ops.         1/2HP, 480VAC       25x10³ ops.       1/2HP, 600VAC       25x10³ ops.         1/2HP, 600VAC       25x10° ops.       1/2HP, 600VAC       25x10° ops.         2 pole, AgCdO       20A, 240VAC       100x10° ops.       3/4HP, 120VAC         20A, 240VAC       100x10° ops.       3/4HP, 120VAC       100x10° ops.         20A, 28 VDC       50x10° ops.       10/2HP, 480VAC       6x10° ops.         20A, 28 VDC       100x10° ops.       20A, 28 VDC       50x10° ops.         20 FLA, 83 LRA       100x10° ops.       20A, 480VAC       6x10° ops.         1/2HP, 480VAC, 3 phase       6x10° ops.       10/2HP, 480VAC       25x10° ops.         1/2HP, 600VAC       25x10° ops.       1/2HP, 600VAC       25x10° ops.         2 pole AgSnOlnO       20 A, 240 VAC       25x10° ops.         2 optic AgSnOlnO				
Type       Load       Cycles         1 pole, AgCdO       30A, 240VAC       100x10 <sup>3</sup> ops.         1HP, 120VAC       100x10 <sup>3</sup> ops.         1 1/2HP, 240VAC       100x10 <sup>3</sup> ops.         30 FLA, 96 LRA       100x10 <sup>3</sup> ops.         30A, 28 VDC       50x10 <sup>3</sup> ops.         30A, 480VAC       6x10 <sup>3</sup> ops.         1/2HP, 480VAC       25x10 <sup>3</sup> ops.         1/2HP, 480VAC       25x10 <sup>3</sup> ops.         1/2HP, 600VAC       25x10 <sup>3</sup> ops.         1/2HP, 600VAC       25x10 <sup>3</sup> ops.         2 pole, AgCdO       100x10 <sup>3</sup> ops.         2 pole, AgCdO       20A, 240VAC         20A, 240VAC       100x10 <sup>3</sup> ops.         20 FLA, 83 LRA       100x10 <sup>3</sup> ops.         20 A, 28 VDC       50x10 <sup>3</sup> ops.         20A, 28 VDC       50x10 <sup>3</sup> ops.         10A, 480VAC       6x10 <sup>3</sup> ops.         1/2HP, 480VAC       25x10 <sup>3</sup> ops.         1/2HP, 600VAC       25x10 <sup>3</sup> ops.         1/2HP, 480VAC       25x10 <sup>3</sup> ops.         1/2HP, 600VAC       25x10 <sup>3</sup> ops.         1/2HP, 600VAC       25x10 <sup>3</sup> ops.         2 pole AgSnOlnO       20 A, 240 VAC       25x10 <sup>3</sup> ops.         2 ol A, 240 VAC </td <td>Bounce time m</td> <td>ax.</td> <td>20ms</td> <td>20ms</td>	Bounce time m	ax.	20ms	20ms
Type       Load       Cycles         1 pole, AgCdO       30A, 240VAC       100x10 <sup>3</sup> ops.         1HP, 120VAC       100x10 <sup>3</sup> ops.         1 1/2HP, 240VAC       100x10 <sup>3</sup> ops.         30 FLA, 96 LRA       100x10 <sup>3</sup> ops.         30A, 28 VDC       50x10 <sup>3</sup> ops.         30A, 480VAC       6x10 <sup>3</sup> ops.         1/2HP, 480VAC       25x10 <sup>3</sup> ops.         1/2HP, 480VAC       25x10 <sup>3</sup> ops.         1/2HP, 600VAC       25x10 <sup>3</sup> ops.         1/2HP, 600VAC       25x10 <sup>3</sup> ops.         2 pole, AgCdO       100x10 <sup>3</sup> ops.         2 pole, AgCdO       20A, 240VAC         20A, 240VAC       100x10 <sup>3</sup> ops.         20 FLA, 83 LRA       100x10 <sup>3</sup> ops.         20 A, 28 VDC       50x10 <sup>3</sup> ops.         20A, 28 VDC       50x10 <sup>3</sup> ops.         10A, 480VAC       6x10 <sup>3</sup> ops.         1/2HP, 480VAC       25x10 <sup>3</sup> ops.         1/2HP, 600VAC       25x10 <sup>3</sup> ops.         1/2HP, 480VAC       25x10 <sup>3</sup> ops.         1/2HP, 600VAC       25x10 <sup>3</sup> ops.         1/2HP, 600VAC       25x10 <sup>3</sup> ops.         2 pole AgSnOlnO       20 A, 240 VAC       25x10 <sup>3</sup> ops.         2 ol A, 240 VAC </td <td></td> <td></td> <td></td> <td></td>				
1 pole, AgCdO     30A, 240VAC     100x10 <sup>3</sup> ops.       1 HP, 120VAC     100x10 <sup>3</sup> ops.       1 1/2HP, 240VAC     100x10 <sup>3</sup> ops.       30 FLA, 96 LRA     100x10 <sup>3</sup> ops.       30A, 28 VDC     50x10 <sup>3</sup> ops.       30A, 28 VDC     50x10 <sup>3</sup> ops.       10A, 480VAC     6x10 <sup>3</sup> ops.       1/2HP, 480VAC     25x10 <sup>3</sup> ops.       1/2HP, 600VAC     25x10 <sup>3</sup> ops.       1/2HP, 600VAC     25x10 <sup>3</sup> ops.       2 pole, AgCdO     20A, 240VAC       2 pole, AgCdO     100x10 <sup>3</sup> ops.       2 pole, AgCdO     20A, 240VAC       2 pole, AgCdO     100x10 <sup>3</sup> ops.       2 pole, AgCdO     20A, 240VAC       20A, 28 VDC     50x10 <sup>3</sup> ops.       20 FLA, 83 LRA     100x10 <sup>3</sup> ops.       20 A, 28 VDC     50x10 <sup>3</sup> ops.       10A, 480VAC     6x10 <sup>3</sup> ops.       1/2HP, 480VAC     25x10 <sup>3</sup> ops.       1/2HP, 600VAC     25x10 <sup>3</sup> ops.       1/2HP, 600VAC     25x10 <sup>3</sup> ops.       2 pole AgSnOlnO     20 A, 240 VAC     25x10 <sup>3</sup> ops.       2 pole AgSnOlnO     20 A, 240 VAC     25x10 <sup>3</sup> ops.       2 pole AgSnOlnO     20 A, 240 VAC     25x10 <sup>3</sup> ops. <td></td> <td>-</td> <td></td> <td></td>		-		
30A, 240VAC       100x10 <sup>3</sup> ops.         1HP, 120VAC       100x10 <sup>3</sup> ops.         1/2HP, 240VAC       100x10 <sup>3</sup> ops.         30 FLA, 96 LRA       100x10 <sup>3</sup> ops.         30A, 28 VDC       50x10 <sup>3</sup> ops.         10A, 480VAC       6x10 <sup>3</sup> ops.         1/2HP, 480VAC       25x10 <sup>3</sup> ops.         1/2HP, 480VAC       25x10 <sup>3</sup> ops.         1/2HP, 600VAC       25x10 <sup>3</sup> ops.         1/2HP, 480VAC       100x10 <sup>3</sup> ops.         1/2HP, 480VAC       100x10 <sup>3</sup> ops.         1/2HP, 480VAC       100x10 <sup>3</sup> ops.         2 pole, AgCdO       20A, 240VAC         2 pole, AgCdO       100x10 <sup>3</sup> ops.         20 FLA, 83 LRA       100x10 <sup>3</sup> ops.         20 FLA, 83 LRA       100x10 <sup>3</sup> ops.         20 FLA, 83 LRA       100x10 <sup>3</sup> ops.         10A, 480VAC       6x10 <sup>3</sup> ops.         1/2HP, 480VAC       25x10 <sup>3</sup> ops.         1/2HP, 480VAC       25x10 <sup>3</sup> ops.         1/2HP, 480VAC       25x10 <sup>3</sup> ops.         1/2HP, 600VAC       25x10 <sup>3</sup> ops.         1/2HP, 600VAC       25x10 <sup>3</sup> ops.         2 pole AgSnOlnO       20 A, 240 VAC         20 A, 240 VAC       25x10 <sup>3</sup> ops.		Load		Cycles
1HP, 120VAC       100x10³ ops.         1 1/2HP, 240VAC       100x10³ ops.         30 FLA, 96 LRA       100x10³ ops.         30A, 28 VDC       50x10³ ops.         10A, 480VAC       6x10³ ops.         1/2HP, 480VAC       25x10³ ops.         1/2HP, 480VAC       25x10³ ops.         1/2HP, 600VAC       25x10³ ops.         2 pole, AgCdO       20A, 240VAC         2 pole, AgCdO       100x10³ ops.         2 pole, AgCdO       20A, 240VAC         20 A, 240VAC       100x10³ ops.         3/4HP, 120VAC       100x10³ ops.         20 FLA, 83 LRA       100x10³ ops.         20 FLA, 83 LRA       100x10³ ops.         20 A, 28 VDC       50x10³ ops.         10A, 480VAC       6x10³ ops.         10A, 480VAC       25x10³ ops.         10A, 480VAC       25x10³ ops.         1/2HP, 600VAC       25x10³ ops.         1/2HP, 600VAC       25x10³ ops.         2 pole AgSnOlnO       20 A, 240 VAC         2 op A, 240 VAC       25x10³ ops.         2 op A, 240 VAC       25x10³ ops.         2 op A, 240 VAC       25x10³ ops.         2 op A, 240 VAC       25x10³ o	i pole, Agodo	201 2401/00		100v103 000
1 1/2HP, 240VAC     100x10³ ops.       30 FLA, 96 LRA     100x10³ ops.       30A, 28 VDC     50x10³ ops.       10A, 480VAC     6x10³ ops.       1/2HP, 480VAC     25x10³ ops.       1/2HP, 480VAC     25x10³ ops.       1/2HP, 600VAC     25x10³ ops.       2 pole, AgCdO     20A, 240VAC       2 pole, AgCdO     100x10³ ops.       2 pole, AgCdO     20A, 240VAC       2 pole, AgCdO     100x10³ ops.       2 pole, AgCdO     20A, 240VAC       2 pole, AgCdO     100x10³ ops.       2 pole, AgCdO     20A, 240VAC       2 pole, AgCdO     100x10³ ops.       2 pole, AgSnOlnO     25x10³ ops.       1/2HP, 480VAC     25x10³ ops.       1/2HP, 480VAC     25x10³ ops.       2 pole AgSnOlnO     20 A, 240 VAC       2 pole AgSnOlnO     20 A, 240 VAC       2 pole AgSnOlnO     20 A, 240 VAC       2 pole AgSnOlnO     25x10³ ops.       Mechanical endurance     10x10 <sup>6</sup> ops.       Coil voltage range <t< td=""><td></td><td></td><td></td><td></td></t<>				
30 FLA, 96 LRA       100x10 <sup>3</sup> ops.         30A, 28 VDC       50x10 <sup>3</sup> ops.         10A, 480VAC       6x10 <sup>3</sup> ops.         1/2HP, 480VAC       25x10 <sup>3</sup> ops.         1/2HP, 600VAC       25x10 <sup>3</sup> ops.         2 pole, AgCdO       20A, 240VAC         2 pole, AgCdO       100x10 <sup>3</sup> ops.         2 pole, AgCdO       20A, 240VAC         2 pole, AgCdO       100x10 <sup>3</sup> ops.         2 pole, AgSNOlnO       25x10 <sup>3</sup> ops.         1/2HP, 600VAC       25x10 <sup>3</sup> ops.         1/2HP, 600VAC       25x10 <sup>3</sup> ops.         2 pole AgSnOlnO       20 A, 240 VAC         2 op A, 240 VAC       25x10 <sup>3</sup> ops.         Mechanical endurance       10x10 <sup>6</sup> ops.         Coil Data       6 to 110VDC         6 to 277VAC       6 to 277VAC				
30A, 28 VDC       50x10³ ops.         10A, 480VAC       6x10³ ops.         1/2HP, 480VAC       25x10³ ops.         1/2HP, 480VAC       25x10³ ops.         1/2HP, 600VAC       25x10³ ops.         2 pole, AgCdO       20A, 240VAC       100x10³ ops.         3/4HP, 120VAC       100x10³ ops.         3/4HP, 240VAC       100x10³ ops.         2 0 FLA, 83 LRA       100x10³ ops.         20A, 28 VDC       50x10³ ops.         20A, 28 VDC       50x10³ ops.         10A, 480VAC       6x10³ ops.         1/2HP, 480VAC       25x10³ ops.         10A, 480VAC       6x10³ ops.         1/2HP, 480VAC       25x10³ ops.         1/2HP, 480VAC       25x10³ ops.         1/2HP, 600VAC       25x10³ ops.         1/2HP, 600VAC       25x10³ ops.         1/2HP, 600VAC       25x10³ ops.         2 pole AgSnOlnO       20 A, 240 VAC       25x10³ ops.         2 ops.       20 A, 240 VAC       25x10³ ops.         Mechanical endurance       10x10 <sup>6</sup> ops.       50x10 <sup>3</sup> ops.         Coil voltage range       6 to 110VDC       6 to 277VAC		,		
10Å, 480VAC       6x10³ ops.         1/2HP, 480VAC       25x10³ ops.         1/2HP, 480VAC, 3 phase       6x10³ ops.         1/2HP, 600VAC       25x10³ ops.         2 pole, AgCdO       20A, 240VAC         2 pole, AgCdO       100x10³ ops.         3/4HP, 120VAC       100x10³ ops.         3/4HP, 120VAC       100x10³ ops.         20 FLA, 83 LRA       100x10³ ops.         20A, 28 VDC       50x10³ ops.         10A, 480VAC       6x10³ ops.         10A, 480VAC       6x10³ ops.         10A, 480VAC       6x10³ ops.         10A, 480VAC       25x10³ ops.         10A, 480VAC       25x10³ ops.         1/2HP, 480VAC       25x10³ ops.         1/2HP, 480VAC       25x10³ ops.         1/2HP, 600VAC       25x10³ ops.         2 pole AgSnOlnO       20 A, 240 VAC         20 A, 240 VAC       25x10³ ops.         Mechanical endurance       10x10 <sup>6</sup> ops.         Coil Data       Coil voltage range       6 to 110VDC         6 to 277VAC       6 to 277VAC				
1/2HP, 480VAC     25x10³ ops.       1HP, 480VAC, 3 phase     6x10³ ops.       1/2HP, 600VAC     25x10³ ops.       2 pole, AgCdO     20A, 240VAC     100x10³ ops.       3/4HP, 120VAC     100x10³ ops.       3/4HP, 120VAC     100x10³ ops.       20 FLA, 83 LRA     100x10³ ops.       20 A, 28 VDC     50x10³ ops.       20A, 28 VDC     50x10³ ops.       10A, 480VAC     6x10³ ops.       1/2HP, 480VAC     25x10³ ops.       1/2HP, 480VAC     25x10³ ops.       1/2HP, 480VAC     25x10³ ops.       1/2HP, 600VAC     25x10³ ops.       1/2HP, 600VAC     25x10³ ops.       20 A, 240 VAC     25x10³ ops.       Mechanical endurance     10x10 <sup>6</sup> ops.       Coil Data       Coil voltage range     6 to 110VDC       6 to 277VAC     6 to 277VAC		· · · · · · · · · · · · · · · · · · ·		
1HP, 480VAC, 3 phase       6x10³ ops.         1/2HP, 600VAC       25x10³ ops.         2 pole, AgCdO       20A, 240VAC       100x10³ ops.         3/4HP, 120VAC       100x10³ ops.         1 1/2HP, 240VAC       100x10³ ops.         20 A, 28 VDC       50x10³ ops.         20A, 28 VDC       50x10³ ops.         20A, 28 VDC       50x10³ ops.         10A, 480VAC       6x10³ ops.         1/2HP, 480VAC       25x10³ ops.         1/2HP, 480VAC       25x10³ ops.         1/2HP, 600VAC       25x10³ ops.         1/2HP, 600VAC       25x10³ ops.         2 pole AgSnOlnO       20 A, 240 VAC         20 A, 240 VAC       25x10³ ops.         2 pole AgSnOlnO       20 A, 240 VAC         20 A, 240 VAC       25x10³ ops.         2 pole AgSnOlnO       20 A, 240 VAC         20 A, 240 VAC       25x10³ ops.         Mechanical endurance       10x10 <sup>6</sup> ops.         Coil Data       Coil voltage range         6 to 110VDC       6 to 277VAC		- ,		
1/2HP, 600VAC       25x10³ ops.         2 pole, AgCdO       20A, 240VAC       100x10³ ops.         3/4HP, 120VAC       100x10³ ops.       3/4HP, 120VAC         1 1/2HP, 240VAC       100x10³ ops.       20 FLA, 83 LRA       100x10³ ops.         20 FLA, 83 LRA       100x10³ ops.       20A, 28 VDC       50x10³ ops.         10A, 480VAC       6x10³ ops.       1/2HP, 480VAC       25x10³ ops.         1/2HP, 480VAC       25x10³ ops.       1/2HP, 600VAC       25x10³ ops.         2 pole AgSnOlnO       20 A, 240 VAC       25x10³ ops.         2 pole AgSnOlnO       20 A, 240 VAC       25x10³ ops.         2 pole AgSnOlnO       20 A, 240 VAC       25x10³ ops.         Coil Data       Coil voltage range       6 to 110VDC         6 to 277VAC       6 to 277VAC       100x10°			2000	
2 pole, AgCdO       20A, 240VAC       100x10 <sup>3</sup> ops.         3/4HP, 120VAC       100x10 <sup>3</sup> ops.         1 1/2HP, 240VAC       100x10 <sup>3</sup> ops.         20 FLA, 83 LRA       100x10 <sup>3</sup> ops.         20A, 28 VDC       50x10 <sup>3</sup> ops.         10A, 480VAC       6x10 <sup>3</sup> ops.         1/2HP, 480VAC       25x10 <sup>3</sup> ops.         1/2HP, 480VAC       25x10 <sup>3</sup> ops.         1/2HP, 600VAC       25x10 <sup>3</sup> ops.         2 pole AgSnOlnO       20 A, 240 VAC         20 A, 240 VAC       25x10 <sup>3</sup> ops.         2 pole AgSnOlnO       20 A, 240 VAC         20 A, 240 VAC       25x10 <sup>3</sup> ops.         Coil Data       Coil voltage range         6 to 110VDC       6 to 277VAC			IdSE	
20A, 240VAC       100x10 <sup>3</sup> ops.         3/4HP, 120VAC       100x10 <sup>3</sup> ops.         1 1/2HP, 240VAC       100x10 <sup>3</sup> ops.         20 FLA, 83 LRA       100x10 <sup>3</sup> ops.         20A, 28 VDC       50x10 <sup>3</sup> ops.         10A, 480VAC       6x10 <sup>3</sup> ops.         1/2HP, 480VAC       25x10 <sup>3</sup> ops.         1/2HP, 480VAC       25x10 <sup>3</sup> ops.         1/2HP, 600VAC       25x10 <sup>3</sup> ops.         2 pole AgSnOlnO       20 A, 240 VAC         20 A, 240 VAC       25x10 <sup>3</sup> ops.         Mechanical endurance       10x10 <sup>6</sup> ops.         Coil Data       Coil voltage range       6 to 110VDC         6 to 277VAC       6 to 277VAC		1/2111,000VAO		20/10/00/3.
3/4HP, 120VAC     100x10³ ops.       1 1/2HP, 240VAC     100x10³ ops.       20 FLA, 83 LRA     100x10³ ops.       20A, 28 VDC     50x10³ ops.       10A, 480VAC     6x10³ ops.       1/2HP, 480VAC     25x10³ ops.       1/2HP, 480VAC     25x10³ ops.       1/2HP, 600VAC     25x10³ ops.       1/2HP, 600VAC     25x10³ ops.       20 A, 240 VAC     25x10³ ops.       20 A, 240 VAC     25x10³ ops.       Mechanical endurance     10x10 <sup>6</sup> ops.       Coil Data       Coil voltage range     6 to 110VDC       6 to 277VAC     6 to 277VAC	2 poie, Agouo	204 2401/40		$100 \times 10^3 \text{ one}$
1 1/2HP, 240VAC       100x10³ ops.         20 FLA, 83 LRA       100x10³ ops.         20A, 28 VDC       50x10³ ops.         10A, 480VAC       6x10³ ops.         1/2HP, 480VAC       25x10³ ops.         1/2HP, 480VAC       25x10³ ops.         1/2HP, 600VAC       25x10³ ops.         2 pole AgSnOlnO       20 A, 240 VAC         20 A, 240 VAC       25x10³ ops.         Mechanical endurance       10x10 <sup>6</sup> ops.         Coil Data         Coil voltage range       6 to 110VDC         6 to 277VAC       6 to 277VAC				
20 FLA, 83 LRA       100x10 <sup>3</sup> ops.         20A, 28 VDC       50x10 <sup>3</sup> ops.         10A, 480VAC       6x10 <sup>3</sup> ops.         1/2HP, 480VAC       25x10 <sup>3</sup> ops.         1/2HP, 480VAC, 3 phase       6x10 <sup>3</sup> ops.         1/2HP, 600VAC       25x10 <sup>3</sup> ops.         2 pole AgSnOlnO       20 A, 240 VAC         20 A, 240 VAC       25x10 <sup>3</sup> ops.         Mechanical endurance       10x10 <sup>6</sup> ops.         Coil Data         Coil voltage range       6 to 110VDC         6 to 277VAC       6 to 277VAC		,		
20A, 28 VDC       50x10³ ops.         10A, 480VAC       6x10³ ops.         1/2HP, 480VAC       25x10³ ops.         1/2HP, 480VAC, 3 phase       6x10³ ops.         1/2HP, 600VAC       25x10³ ops.         2 pole AgSnOlnO       20 A, 240 VAC         20 A, 240 VAC       25x10³ ops.         Mechanical endurance       10x10 <sup>6</sup> ops.         Coil Data         Coil voltage range       6 to 110VDC         6 to 277VAC       6 to 277VAC				
10A, 480VAC       6x10³ ops.         1/2HP, 480VAC       25x10³ ops.         1/2HP, 480VAC, 3 phase       6x10³ ops.         1HP, 480VAC       25x10³ ops.         1/2HP, 600VAC       25x10³ ops.         2 pole AgSnOlnO       20 A, 240 VAC         20 A, 240 VAC       25x10³ ops.         Mechanical endurance       10x10 <sup>6</sup> ops.         Coil Data         Coil voltage range       6 to 110VDC         6 to 277VAC       6 to 277VAC				
1/2HP, 480VAC       25x10³ ops.         1HP, 480VAC, 3 phase       6x10³ ops.         1/2HP, 600VAC       25x10³ ops.         2 pole AgSnOlnO       20 A, 240 VAC       25x10³ ops.         Mechanical endurance       10x10 <sup>6</sup> ops.       25x10³ ops.         Coil Data         Coil voltage range       6 to 110VDC         6 to 277VAC       6 to 277VAC				
1HP, 480VAC, 3 phase       6x10³ ops.         1/2HP, 600VAC       25x10³ ops.         2 pole AgSnOlnO       20 A, 240 VAC       25x10³ ops.         Mechanical endurance       10x10 <sup>6</sup> ops.       20x10 <sup>3</sup> ops.         Coil Data       Coil voltage range       6 to 110VDC       6 to 277VAC				
1/2HP, 600VAC       25x10³ ops.         2 pole AgSnOlnO       20 A, 240 VAC       25x10³ ops.         Mechanical endurance       10x10 <sup>6</sup> ops.       25x10³ ops.         Coil Data       Coil voltage range       6 to 110VDC       6 to 277VAC			220	
2 pole AgSnOlnO     20 A, 240 VAC     25x10 <sup>3</sup> ops.       Mechanical endurance     10x10 <sup>6</sup> ops.       Coil Data       Coil voltage range     6 to 110VDC       6 to 277VAC			030	$25 \times 10^3 \text{ ops.}$
20 A, 240 VAC   25x10 <sup>3</sup> ops.     Mechanical endurance   10x10 <sup>6</sup> ops.     Coil Data   6 to 110VDC     Coil voltage range   6 to 277VAC	2 nole AgSnOlr			20/10 003.
Mechanical endurance   10x10 <sup>6</sup> ops.     Coil Data   Coil voltage range     6 to 110VDC     6 to 277VAC	2 2010 / 90/10/1			25x10 <sup>3</sup> ops.
Coil Data         Coil voltage range       6 to 110VDC         6 to 277VAC	Mechanical end	,	10x	
Coil voltage range 6 to 110VDC 6 to 277VAC				1
6 to 277VAC	Coil Data			
	Coil voltage ran	ge		
Coil insulation system according UL Class B				
	Coil insulation s	system according UL	C	lass B

Coil vers	sions, DC coil			
Coil	Rated	Operate	ReleaseCoil	Rated coil
code	voltage	voltagevoltage	resistance	power
	VDC	VDC	Ω±10%	W
006	6	4.5	32.1	1.13
012	12	9.0	120	1.20
024	24	18.0	472	1.23
048	48	36.0	1800	1.30

110 110 82.5 10000 1.22 All figures are given for coil without preenergization, at ambient temperature +23°C

## Coil versions, AC coil

Coil	Rated	Operate	Coil	Rated coil
code	voltage	voltage	resistance	power
	VAC	VAC	Ω±15%	VA
006	6	5.1	4.2	2.8
012	12	10.2	18	2.8
024	24	20.4	72	2.8
120	120	102.0	1700	2.9
240	240	204.0	7200	2.9
277	277	235.5	10250	2.5
A 11 C				0000 0011

# All figures are given for coil without preenergization, at ambient temperature +23°C, 60 Hz.

#### **Insulation Data** Initial dielectric strength 1200V<sub>rms</sub> 3750V<sub>rms</sub> between open contacts between contact and coil 3750V<sub>rms</sub> between adjacent contacts between coil and frame 2000V Initial insulation resistance 100MΩ at 500VDC between insulated elements **Other Data** Ambient temperature -45°C to 45°C DC coil AC coil -45°C to 70°C Category of environmental protection IEC 61810 RTI - dust protected and RT0 - open style QC.250, PCB .047 Terminal type Terminal retention, push force QC .205 17lbs for 3s QC .110, QC .187, QC .250, all PCB 25lbs for 3s 9<u>2g</u> Weight

# Packaging/unit Accessories

NOTE: no sockets are available for this relay

Catalog and product specification according to IEC 61810-1 and to be used only together with the 'Definitions' section.

Catalog and product data is subject to the terms of the disclaimer and all chapters of the 'Definitions' section, available at http://relays.te.com/definitions

Catalog product data, 'Definitions' section. application notes and all specifications are subject to change.

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tray/25 pcs., box/150pcs

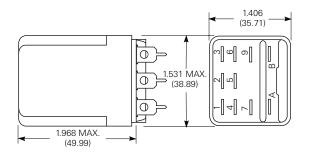


# General Purpose Panel/Plug-in Relays

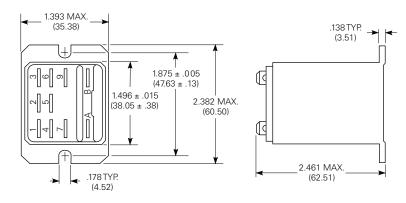
# KUHP Series Panel Relay (Continued)

# Dimensions

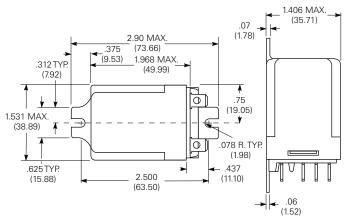
Plain case



Top flange enclosure



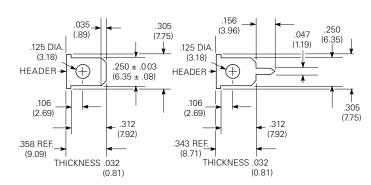
Bracket mount case



## Terminal dimensions

6.35mm (.250") Quick Connect/Solder

Printed circiot

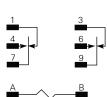


# **Terminal assignment**

1 form C

- 1 form A (delete 2)
- 1 form B (delete 5)





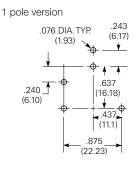
2 form A (delete 1 and 3)

2 form B (delete 4 and 6)

2 form C

PCB layout

Bottom view on solder pins

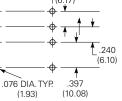


2 pole version

¢

Φ





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2

Catalog and product specification according to IEC 61810-1 and to be used only together with the 'Definitions' section. Catalog and product data is subject to the terms of the disclaimer and all chapters of the 'Definitions' section, available at <a href="http://relays.te.com/definitions">http://relays.te.com/definitions</a>

Catalog product data, 'Definitions' section, application notes and all specifications are subject to change.



# General Purpose Panel/Plug-in Relays

# KUHP Series Panel Relay (Continued)

Product code structure	Typical product code	11	A 5	1
уре				
<b>KUHP</b> Enclosed Panel Plug-in Relay, 20/30A <b>KUH</b> Open Panel Plug-in Relay 20/30A				
Contact arrangement and rating				
1 1 form A (NO); 30A	7 2 formA (NO); 20A			
2 1 form B (NC); 30A	8 2 form B (NC); 20A			
5 1 form C (CO); 30A	<b>11</b> 2 form C (CO); 20A			
Coil Input				
A AC, 50/60Hz	D DC			
Nountings				
KUHP options	KUH options			
1 Plain case	<b>1</b> #6-32 stud, 0.218" locating tab			
5 Bracket mount case	4 #6-32 tapped core, 0.218" locating tab			
T Top flange mount case				
Ferminals and contact materials				_
1 .250" (6.35mm) guick connect/solder; silv	r-cadmium oxide <b>7</b> .047" (1.19mm) printed circu	uit; silver-ca	admium oxide	
	indium oxide <b>S</b> .047" printed circuit; silver ti			

Product Code	Arrangement	Mounting	Coil	Terminals	Part Number
KUHP-5DT1-12	1 form C, 1 CO	top flange	12VDC	.250" quick connect	8-1393114-7
KUHP-5DT1-24			24VDC		8-1393114-8
KUHP-5D51-24		bracket			9-1393114-1
KUHP-5D51-12			12VDC		9-1393114-0
KUHP-5A51-24			24VAC		8-1393114-5
KUHP-5A51-120			120VAC		8-1393114-4
KUHP-5AT1-120		top flange			8-1393114-1
KUHP-11A51-24		bracket	24VAC		7-1393114-0
KUHP-11A51-240	2 form C, 2 CO		240VAC		7-1393114-1
KUHP-11AT1-120		top flange	120VAC		6-1393114-5
KUHP-11DT1-24			24VDC		7-1393114-3
KUHP-11D51-12		bracket	12VDC		7-1393114-7
KUHP-11D51-24			24VDC		7-1393114-8
KUHP-11DT1-12		top flange	12VDC		7-1393114-2

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