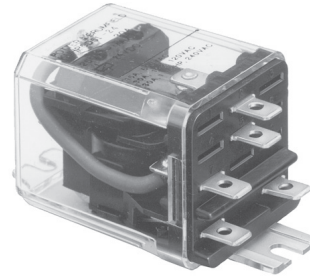


# POTTER & BRUMFIELD KUHP SERIES PANEL PLUG-IN RELAY

## GENERAL PURPOSE PANEL/PLUG-IN RELAYS

### FEATURES

- AC coils 6 to 277VAC 50/60Hz, DC 6 to 110VDC
- 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



### APPLICATIONS

- Commercial HVAC
- Smart-grid communications controllers
- Baggage handling
- Pumps

### APPROVALS

- UL E22575; CSA LR15734



Technical data of approved types on request

# POTTER & BRUMFIELD KUHP SERIES PANEL RELAY

## GENERAL PURPOSE PANEL/PLUG-IN RELAYS

### CONTACT DATA

	1 pole	2 pole
Contact arrangement	1 form C (CO) 1 form A (NO) 1 form B (NC)	2 form C (CO) 2 form A (NO) 2 form B (NC)
Rated voltage	240VAC	240VAC
Rated current	30A	20A
Contact material	AgCdO	AgCdO, AgSnOInO
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

### CONTACT RATINGS

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.
	10A, 480VAC	6x10 <sup>3</sup> ops.
	1/2HP, 480VAC	25x10 <sup>3</sup> ops.
	1HP, 480VAC, 3 phase	6x10 <sup>3</sup> ops.
2 pole, AgCdO	1/2HP, 600VAC	25x10 <sup>3</sup> ops.
	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.
1HP, 480VAC, 3 phase	6x10 <sup>3</sup> ops.	
2 pole AgSnOInO	1/2HP, 600VAC	25x10 <sup>3</sup> ops.
	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
Coil insulation system according UL	Class B

### Coil versions, DC coil

Coil code	Rated voltage VDC	Operate voltage VDC	Release Coil resistance Ω±10%	Rated coil power 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 code	Rated voltage VAC	Operate voltage VAC	Coil resistance Ω±15%	Rated coil power 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

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

# POTTER & BRUMFIELD KUHP SERIES PANEL RELAY

## GENERAL PURPOSE PANEL/PLUG-IN RELAYS

### INSULATION DATA

Initial dielectric strength	
between open contacts	1200 Vrms
between contact and coil	3750 Vrms
between adjacent contacts	3750 Vrms
between coil and frame	2000 Vrms
Initial insulation resistance	
between insulated elements	100MΩ at 500VDC

### ACCESSORIES

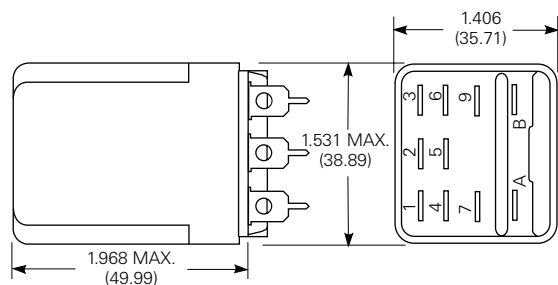
Note: no sockets are available for this relay

### OTHER DATA

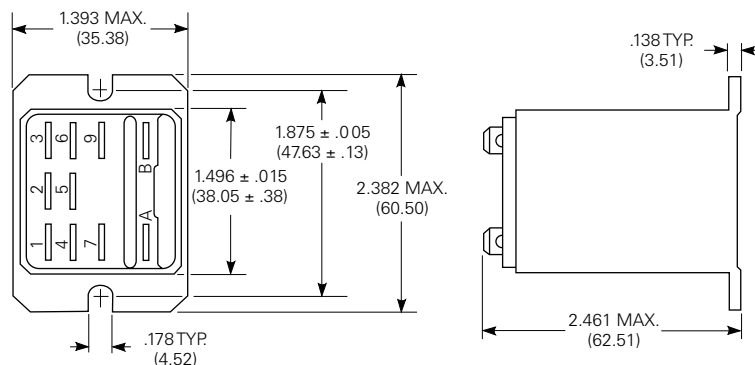
Ambient temperature	
DC coil	-45°C to 70°C
AC coil	-45°C to 70°C
Category of environmental protection	
IEC 61810	RTI- dust protected and RTO- open style
Terminal type	QC.250, PCB .047
Terminal retention, push force	
QC .205	17lbs for 3s
QC .110, QC .187, QC .250, all PCB only.	25lbs for 3s
Weight	92g
Packaging/unit	tray/25 pcs., box/150pcs.

### DIMENSIONS (Unit: mm)

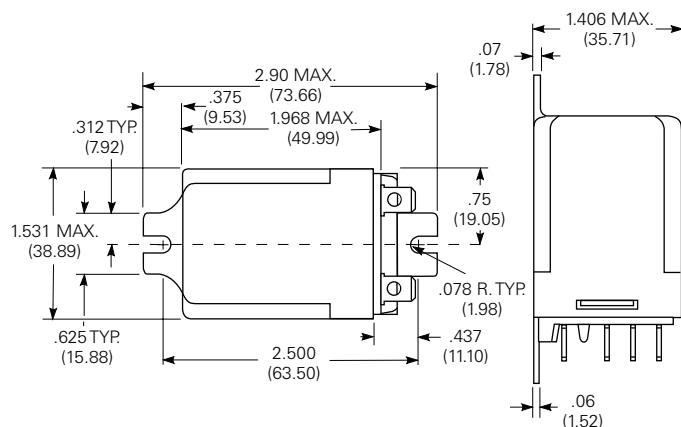
#### Plain case



#### Top flange enclosure



#### Bracket mount case

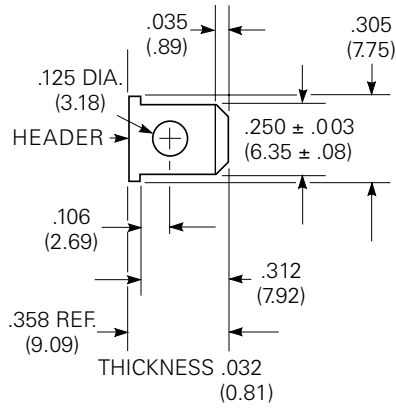


# POTTER & BRUMFIELD KUHP SERIES PANEL RELAY

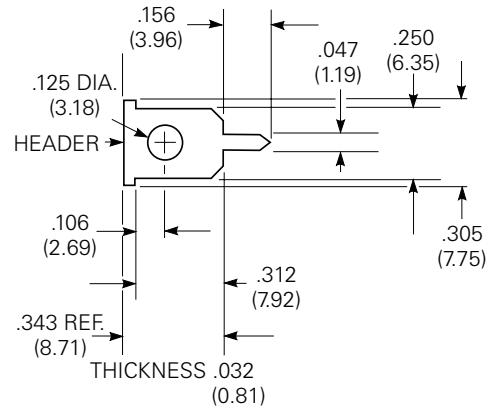
## GENERAL PURPOSE PANEL/PLUG-IN RELAYS

### TERMINAL DIMENSIONS

6.35mm (.250") Quick Connect/Solder

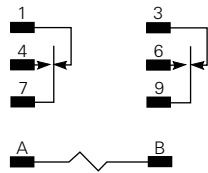
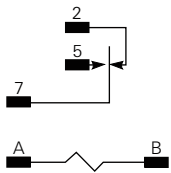


Printed circuit



### TERMINAL ASSIGNMENT

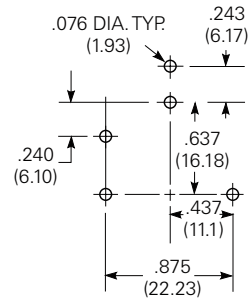
- 1 form C
- 1 form A (delete 2)
- 1 form B (delete 5)
- 2 form C
- 2 form A (delete 1 and 3)
- 2 form B (delete 4 and 6)



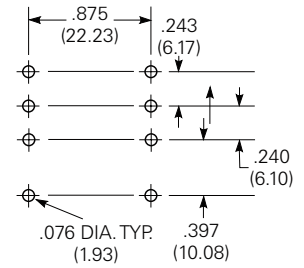
### PCB LAYOUT

Bottom view on solder pins

1 pole version



2 pole version



# POTTER & BRUMFIELD KUHP SERIES PANEL RELAY

## GENERAL PURPOSE PANEL/PLUG-IN RELAYS

### PRODUCT CODE STRUCTURE

**Typical product code**  
**KUHP 11 A 5 1 -120**

#### Type

<b>KUHP</b>	Enclosed Panel Plug-in Relay, 20/30A
<b>KUH</b>	Open Panel Plug-in Relay 20/30A

#### Contact arrangement and rating

<b>1</b>	1 form A (NO); 30A
<b>2</b>	1 form B (NC); 30A
<b>5</b>	1 form C (CO); 30A
<b>7</b>	2 form A (NO); 20A
<b>8</b>	2 form B (NC); 20A
<b>11</b>	2 form C (CO); 20A

#### Coil Input

<b>A</b>	AC, 50/60Hz
<b>D</b>	DC

#### Mountings

KUHP options	
<b>1</b>	Plain case
<b>5</b>	Bracket mount case
<b>T</b>	Top flange mount case
KUH options	
<b>1</b>	#6-32 stud, 0.218" locating tab
<b>4</b>	#6-32 tapped core, 0.218" locating tab

#### Coil Voltage

<b>Coil code</b>	please refer to coil versions table
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#### Terminals and contact materials

<b>1</b>	.250" (6.35mm) quick connect/solder; silver-cadmium oxide
<b>P</b>	.250" quick connect/solder; silver tin oxide indium oxide
<b>7</b>	.047" (1.19mm) printed circuit; silver-cadmium oxide
<b>S</b>	.047" printed circuit; silver tin oxide indium oxide

## PRODUCT INFORMATION

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

### Notes:

1. Datasheets and product specification according to IEC 61810-1 and to be used only together with the 'Definitions' section.
2. Datasheets 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>.
3. Datasheets, product data, 'Definitions' section, application notes and all specifications are subject to change.

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