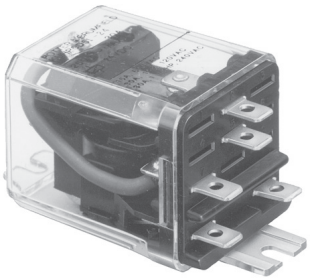
POTTER & BRUMFIELD
KUHP SERIES PANEL PLUG-IN RELAY

GENERAL PURPOSE
PANEL/PLUG-IN RELAYS

FEATURES

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



APPLICATIONS

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

APPROVALS

- UL E22575; CSA LR15734

Technical data of approved types on request

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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	$100x10^3$ ops.
	1HP, 120VAC	$100x10^3$ ops.
	1 1/2HP, 240VAC	$100x10^3$ ops.
	30 FLA, 96 LRA	$100x10^3$ ops.
	30A, 28 VDC	$50x10^3$ ops.
	10A, 480VAC	$6x10^3$ ops.
	1/2HP, 480VAC	$25x10^3$ ops.
	1HP, 480VAC, 3 phase	$6x10^3$ ops.
	1/2HP, 600VAC	$25x10^3$ ops.
2 pole, AgCdO	20A, 240VAC	$100x10^3$ ops.
	3/4HP, 120VAC	$100x10^3$ ops.
	1 1/2HP, 240VAC	$100x10^3$ ops.
	20 FLA, 83 LRA	$100x10^3$ ops.
	20A, 28 VDC	$50x10^3$ ops.
	10A, 480VAC	$6x10^3$ ops.
	1/2HP, 480VAC	$25x10^3$ ops.
	1HP, 480VAC, 3 phase	$6x10^3$ ops.
	1/2HP, 600VAC	$25x10^3$ ops.
2 pole AgSnOInO	20 A, 240 VAC	$25x10^3$ ops.
Mechanical endurance	$10x10^6$ 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

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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 avaliable 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 RT0- open style

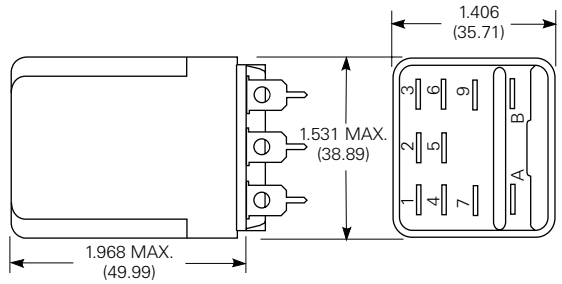
Terminal type	QC.250, PCB .047

Terminal retention, push force	
QC .205	17lbs for 3s
QC .110, QC .187, QC .250, all PCB only.	25lbs for 3s

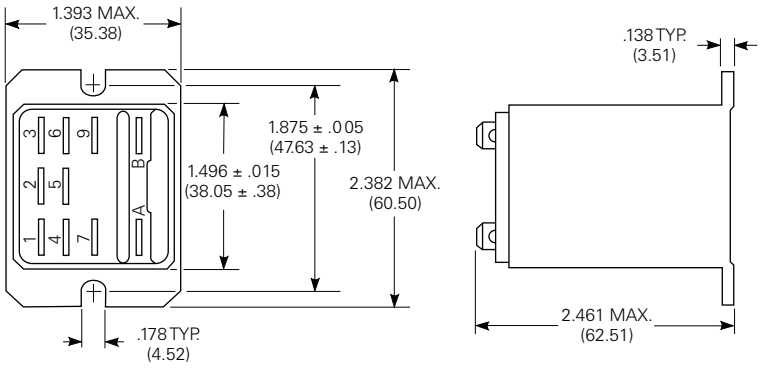
Weight	92g
Packaging/unit	tray/25 pcs., box/150pcs.

DIMENSIONS (Unit: mm)

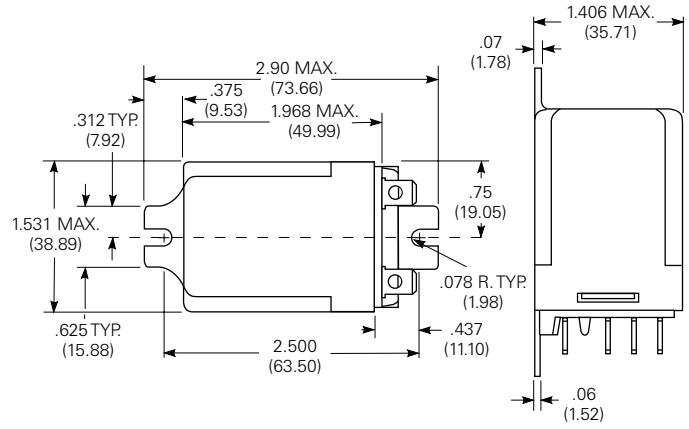
Plain case



Top flange enclosure



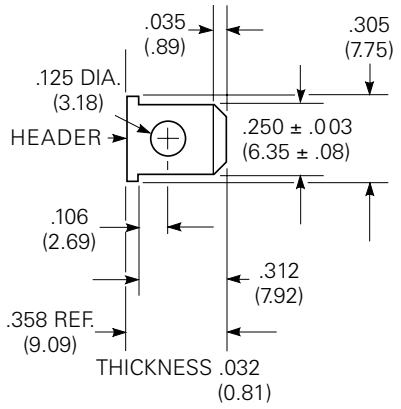
Bracket mount case



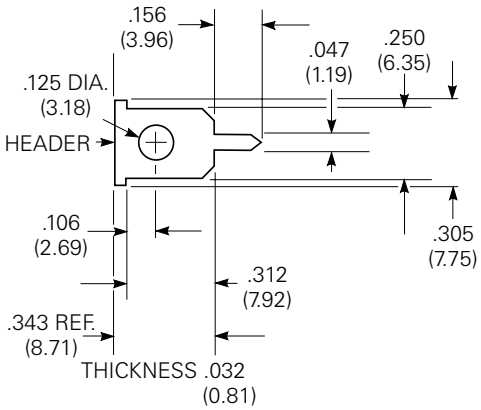
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TERMINAL DIMENSIONS

6.35mm (.250") Quick Connect/Solder

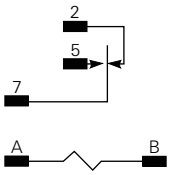


Printed circiot

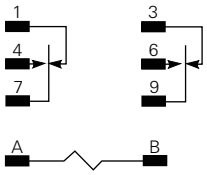


TERMINAL ASSIGNMENT

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



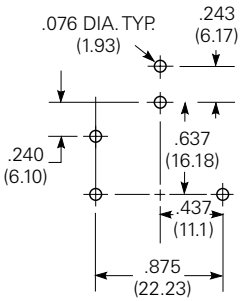
2 form C
2 form A (delete 1 and 3)
2 form B (delete 4 and 6)



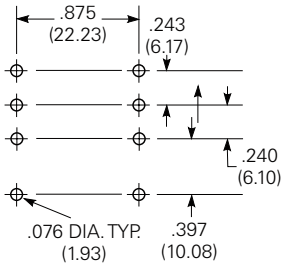
PCB LAYOUT

Bottom view on solder pins

1 pole version



2 pole version



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PRODUCT CODE STRUCTURE

Typical product code
KUHP 11 A 5 1 -120

Type

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

Contact arrangement and rating

1	1 form A (NO); 30A
2	1 form B (NC); 30A
5	1 form C (CO); 30A
7	2 formA (NO); 20A
8	2 form B (NC); 20A
11	2 form C (CO); 20A

Coil Input

A	AC, 50/60Hz
D	DC

Mountings

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

Coil Voltage

Coil code	please refer to coil versions table

Terminals and contact materials

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

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PRODUCT INFORMATION

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

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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