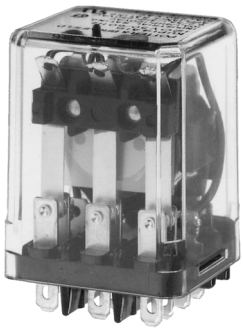
POTTER & BRUMFIELD
KUP SERIES PANEL PLUG-IN RELAY

GENERAL PURPOSE
PANEL/PLUG-IN RELAYS

INTRODUCTION

TE Connectivity (TE)'s Potter & Brumfield KUP Series Panel Plug-In Relay is a reliable solution for industrial and commercial applications. It supports AC (12-240V) and DC (5-110V) coils, with multiple contact configurations and mounting options. Features like push-to-test buttons, indicator lamps, and Class B coil insulation enhance usability. Compatible sockets for panel, DIN rail, or PCB mounting ensure easy installation.



FEATURES

- AC coils: 12-240VAC, 50/60 Hz.; DC coils 5-110VDC
- Contact arrangements of 1-3 form C
- Wide selection of termination and mounting styles
- PC terminals available
- Push-to-test button and indicator lamp options
- Sockets available for panel, DIN rail or PCB mounting
- Class B coil insulation

APPLICATIONS

- Vending
- Commercial sewing
- Tool/die equipment
- Robotics
- Timers
- Welding
- HVAC
- Medical
- Power generators

APPROVALS

- UL E214025
- CSA LR15734

Technical data of approved types on request

CONTACT DATA

Contact arrangement	1-3 form C (CO)	
Rated voltage	240VAC	
Rated current	10A	
Contact material	Ag, AgCdO	
Contact material	Ag	AgCdO
Min. recommended contact load	100mA, 12VDC	300mA, 12VDC
Frequency of operation	360 ops./hour	360 ops./hour
Operate/releases time max.	15/10ms	
Bounce time max.	17ms	

CONTACT RATINGS

Type	Load	Cycles
UL 508		
Ag, 1, 2 and 3 pole	5A, 240VAC	-
	5A, 28VDC	-
	1/6HP, 120VAC	-
	2.5A, 120VAC, tungsten	-
	1/3HP, 240VAC	-
	0.5A, 120VDC	-
	5FLA, 15LRA, 250VAC	-
AgCdO, 1, 2 and 3 pole	10A, 240VAC	-
	10A, 32VDC	-
	5FLA, 15LRA, 250VAC	-
	1/3HP, 120VAC	-

Type	Load	Cycles
AgCdO, 1, 2 and 3 pole	5A, 120VAC, tungsten	-
	1/2HP, 250VAC	-
	0.5A, 125VDC	-
	10FLA, 40LRA, 125VAC	-
	3A, 600VAC	-
	1/2HP, 480VAC	-
	1/2HP, 600VAC	-
	1HP, 480 VAC, 3 phase	-
Mechanical endurance		$10x10^6$ ops.

Note: Indicated contact ratings and electrical endurance data apply only for direct wiring of the relay (according to UL 508/61810-1); for relays mounted on sockets, deratings may apply.

COIL DATA

Coil voltage range	5 to 110VDC 12 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
1, 2 and 3 pole				
5	5	3.75	21	1.2
6	6	4.5	32.1	1.125
12	12	9.0	120	1.2
24	24	18.0	472	1.25
36	36	27.0	1080	1.2
48	48	36.0	1800	1.3
110	110	82.5	10000	1.25

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

COIL VERSIONS, AC COIL

Coil code	Rated voltage VDC	Operate voltage VDC	Coil resistance Ω±10%	Rated coil power W
1 and 2 pole				
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
3 pole				
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

INSULATION DATA

Initial dielectric strength	
between open contacts	1200Vrms
between contact and coil	2200Vrms
between adjacent contacts	2200Vrms
Initial insulation resistance	
between insulated elements	100MΩ, 500VDC

ACCESSORIES

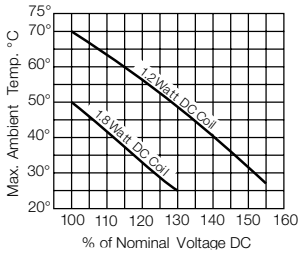
For details see datasheet	Sockets and Accessories, KUP Relays

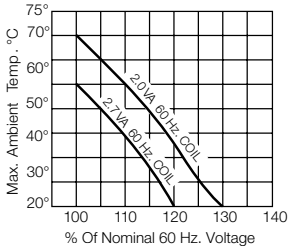
Product Code	Description	TE Part Number
27E893	DIN socket (use 20C318 clip)	2-1419106-5
27E121	Track mount socket (use 20C314 clips)	1393143-5
27E043	Chassis mount/solder eyelet socket (use 20C254 clip)	1393143-1
27E046	Chassis mount/PCB socket (use 20C254 clip)	1419106-4
27E067	Chassis mount/quick connect socket (use 20C254 clip)	1393143-2
27E396	Snap-in/quick connect socket (use 20C254 clip)	3-1393143-8

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
Ambient temperature	
DC coil	Enclosed relays, 1-3 pole: -45ºC to 70ºC
AC coil	Enclosed relays, 3 pole: -45°C to +45°C
	Enclosed relays, 1 and 2 pole: -45ºC to +55ºC
Category of environmental protection	
IEC 61810	RTI - dust protected
Terminal type	Quick connects (QC), .187 PCB-THT
Terminal retention, push force	
QC .187PCB	25 lbs for 3s
Weight	85g
Packaging unit	tray/25 pcs., box/150pcs.

MAXIMUM ALLOWABLE AMBIENT TEMPERATURE VS VOLTAGE (KUP ENLCOSED)

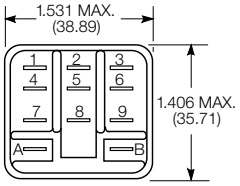




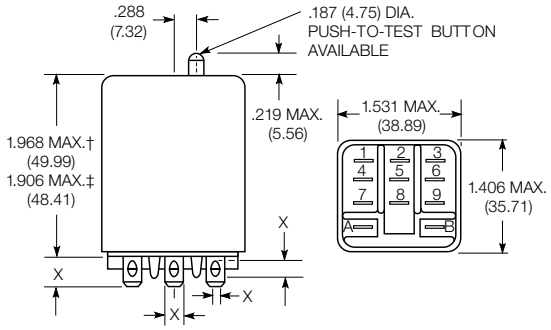
DIMENSIONS (Unit:mm)

RELAY FRONT DIAGRAMS

1-3 pole models

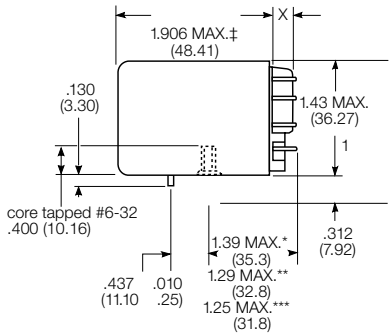


KUP PLAIN CASE



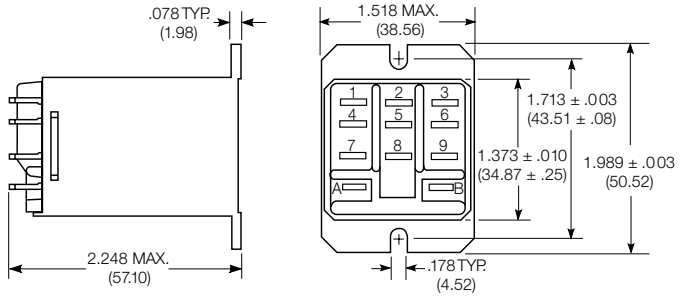
X Is For Terminal Dimensions.
See Teminal Drawings.

KUP CORE / STUD MOUNT CASE

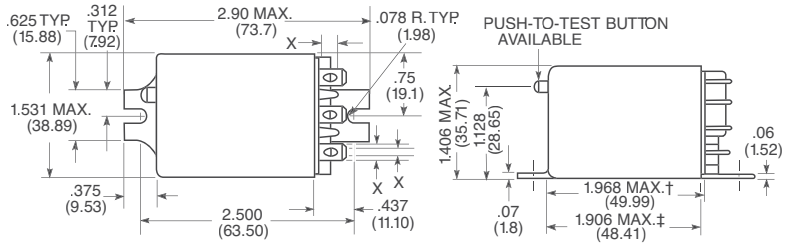


‡ Dimensions with .187" (4.75mm and .205" 5.21mm) terminals
***Dimensions with .187" (4.75mm) terminals.

KUP TOP FLANGE CASE

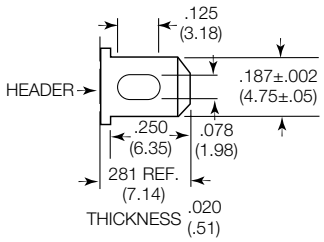


KUP BRACKET MOUNT CASE

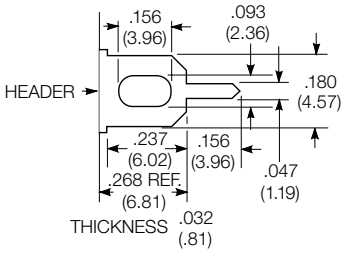


TERMINAL DIMENSIONS

4.75mm (.187) quick connect

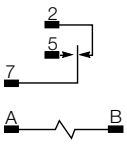


1.19mm (.047) printed circuit

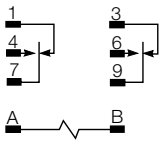


TERMINAL ASSIGNMENT

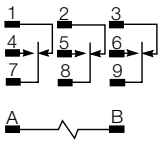
1 form C



2 form C



3 form C

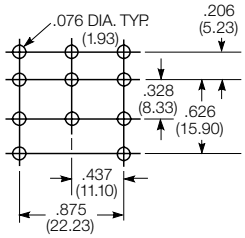


PCB LAYOUT

Bottom view on solder pins

3 Pole Version

(Omit unnecessry holes for 2 pole types)



PRODUCT CODE STRUCTURE

Part Number					
KUP	-14	A	1	5	-120

Type

KUP	Enclosed relay

Contact arrangement

5	1 form C (1 CO)
11	2 form C (2 CO)
14	3 form C (3 CO)

Coil Input

A	AC, 50/60Hz
D	DC

KUP

1	Socket mount (plain) case
2	Socket mount (plain) case with push-to-test button
3	Socket mount (plain) case with indicator lamp 1
4	Socket mount (plain) case with indicator lamp and push-to-test button 1)
5	Bracket mount case
E	Plain case with #6-32 tapped core and locating tab
T	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.

Coil voltage

Coil code:	please refer to coil versions table

Au flashed contact option

Leave Blank	No Au flashing on contacts
F	Optional Au flashing on contacts

Terminal and contact material

1 and 2 pole models	
1	4.75mm (.187in) quick connect/ solder; Ag, 5A
5	4.75mm (.187in) quick connect/ solder; AgCdO, 10A
7	1.19mm (.047in) PCB; AgCdO, 10A
3 pole models	
1	4.75mm (.187in) quick connect/ solder; Ag, 5A
5	4.75mm (.187in) quick connect/ solder; AgCdO, 10A

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