

# **KHA Series Panel Plug-in Relay**

- **■** Compact package
- Two and four pole Form C contact arrangements
- Polycarbonate or nylon dust cover
- **Various mounting configurations**
- Indicator lamp and push-to-reset options available
- Various contact materials available for specific load requirements



Typical applications

**Approvals** 

Industrial sewing/stitching machines, fitness, elevators, pumps, robotics, solar panels

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UL E22575; CSA LR15734	
Technical data of approved types on request	
Contact Data	
Contact arrangement	2 form C (2CO), 4 form C (4CO)
Rated voltage	240VAC
Rated current	1-5A
Contact material	Ag, AgCdO, Au-AgNi,
	Au overlay Ag, Au diffused Ag
Contact style	Single contact or bifurcated crossbar
Min. recommended contact load	
Ag (single contact)	100mA, 12VDC
AgCdO (single contact)	300mA, 12VDC
Au-AgNi (single contact)	10mA, 12VDC
Au overlay Ag (bifurcated crossbar	) Dry circuit
Au diffused Ag (single contact)	50mA, 12VDC
Initial contact resistance	
Ag, AdCdO	100mΩ
Au-AgNi, Au overlay Ag, Au diffuse	ed Ag 200mΩ
Frequency of operation	360 ops./hour
Operate/release time max.	13/6ms

Туре	Load	Cycles
UL 508		
Ag	5A, 120VAC, general purpose	
	2.5A, 240VAC, general purpose	
	1/10HP, 120/240VAC	
	180VA, 250VAC, pilot duty	
	42VA, 28VDC, pilot duty	
AgCdO	5A, 120VAC, general purpose	
· ·	2.5A, 240VAC, general purpose	
	1/10HP, 120/240VAC	
	180VA, 250VAC, pilot duty	
	42VA, 28VDC, pilot duty	
	5A, 240VAC, general purpose	
	5A, 28VDC, resistive	
Au-AgNi	2A, 120VAC, resistive	
Au overlay Ag	1A, 120VAC	
, 3	1A, 30VDC	
Au diffused Ag	5A, 120VAC, general purpose	
Ü	2.5A, 240VAC, general purpose	
	1/10HP, 120/240VAC	
	180VA, 250VAC, pilot duty	
	42VA, 28VDC, pilot duty	

Note: The relay should only carry ≤15A continuously (all poles combined).

Coil Data		
Coil voltage range	5 to 240VDC	
	6 to 240VAC	
Coil insulation system according UL	Class B	

Coil ver	sions, DC coil			
Coil	Rated	Operate	ReleaseCoil	Rated coil
code	voltage	voltagevoltage	resistance	power
	VDC	VDC	Ω±10%	mW
5	5	3.75	32	800
6	6	4.5	40	900
12	12	9.0	160	900
24	24	18.0	690	850
48	48	36.0	2600	900
110	110	82.5	11000	1100
	220/240	Use 110V relay with series dropping 5W resistor of 11KΩ		

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

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COII	versions,	AC	COII

Coil	Rated	Operate	Coil	Rated coil
code	voltage	voltage	resistance	power
	VAC	VAC	Ω±15%	VA
6	6	5.1	10.5	1.2
12	12	10.2	43	1.2
24	24	20.4	160	1.25
48	48	40.8	668	1.2
120	120	102.0	3900	1.35
240	240	204.0	12000	1.5

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

1000V <sub>rms</sub>	
1500V <sub>rms</sub>	
1500V <sub>rms</sub>	
1500V <sub>rms</sub>	
100MΩ at 500VDC	
	1500V <sub>rms</sub> 1500V <sub>rms</sub> 1500V <sub>rms</sub>

### **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 -45°C to 70°C Category of environmental protection

IEC 61810 RTI - dust protected

09-2010, Rev. 0910

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Mechanical endurance

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

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

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



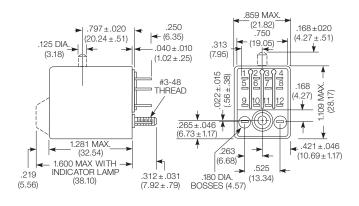
# KHA Series Panel Plug-in Relay (Continued)

Other Data (continued)	
Vibration resistance (destructive)	.062" double amplitude, 5-55Hz,
	6h, mechanical
Shock resistance (functional)	15g, 11ms (mechanical)
Terminal type	solder/plug-in .105" (2.67mm),
	pcb-tht .112" (2.84mm)
Weight	45g
Packaging/unit	tray/50 pcs., box/250pcs.

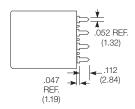
Accessories				
For details see datasheet		Sockets and Accessories, KHA Relays		
Product Code	Description			
27E894	DIN socket and 20C426 clip			
27E166	Panel/track mount socket and 20C297 clip			
27E006	Solder/grounding	socket and 20C217 clip		
27E007	PCB/grounding s	ocket and 20C217 clip		

#### **Dimensions**

KHAU and KHAX types



PCB terminals KHAE and KHAF types

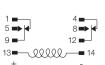


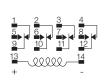
Printed circuit terminal thickness .022 (.558)

### Terminal assignment

2 Form C

4 Form C



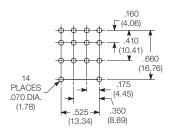


Polarity shown for LED indicator

## **PCB** layout

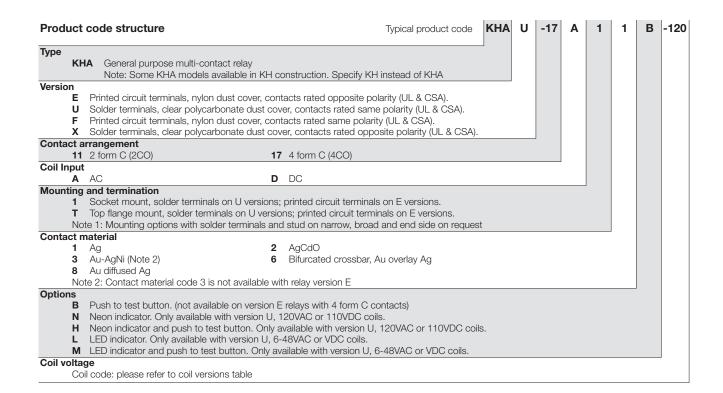
Bottom view on solder pins

4 pole version





## KHA Series Panel Plug-in Relay (Continued)



<b>Product Code</b>	Arrangement	Contact Material	Coil	Terminals	Options	Part Number
KHAU-11A11-120	2 form C, 2 CO	Ag	120VAC	Solder/Plug-in	None	1-1393122-0
KHAU-11D11-24			24VDC			1-1393122-5
KHAE-17D12-24	4 Form C, 4 CO	AgCdO		PCB		1393122-1
KHAU-17A11-12		Ag	12VAC	Solder/Plug-in		1-1393122-9
KHAU-17A11-24			24VAC	Solder		2-1393122-1
KHAU-17A11-120			120VAC			2-1393122-0
KHAU-17A11N-120					Indicator	2-1393122-6
KHAU-17A12-120		AgCdO			None	2-1393122-8
KHAU-17A13-120		Au-Ag-Ni				3-1393122-6
KHAU-17A16-24		Bifurcated, Au overlay Ag	24VAC			3-1393122-8
KHAU-17A16-120		Ag	120VAC			3-1393122-7
KHAU-17A18-120		Au diffused Ag				3-1393122-9
KHAU-17D11-6		Ag	6VDC			4-1393122-7
KHAU-17D11-12			12VDC			4-1393122-3
KHAU-17D11-24			24VDC			4-1393122-4
KHAU-17D11-48			48VDC			4-1393122-5
KHAU-17D11-110			110VDC			4-1393122-2
KHAU-17D12-12		AgCdO	12VDC			5-1393122-5
KHAU-17D12-24			24VDC			5-1393122-7
KHAU-17D12-48			48VDC			5-1393122-8
KHAU-17D12-110			110VDC			5-1393122-4
KHAU-17D16-12		Bifurcated, Au overlay Ag	12VDC			7-1393122-0
KHAU-17D16-24			24VDC			7-1393122-1
KHU-17A11N-120		Ag	120VAC		Indicator, Old Const.	2-1393123-8
KHU-17D11-12			12VDC		Old Construction	4-1393123-0
KHU-17D12-24		AgCdO	24VDC			4-1393123-8

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