

## **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

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

## Approvals

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

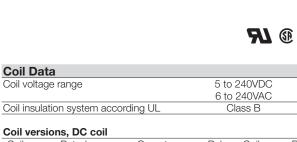
## **Contact Data**

oontaot bata	
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	d Ag 200mΩ
Frequency of operation	360 ops./hour
Operate/release time max.	13/6ms

#### **Contact ratings**

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, 240VAC, general purpose	
	5A, 28VDC, resistive	
	1/10HP, 120/240VAC	
	180VA, 250VAC, pilot duty	
	42VA, 28VDC, pilot duty	
Au-AgNi	2A, 120VAC, resistive	
Au overlay Ag	1A, 120VAC	
	1A, 30VDC	
Au diffused Ag	5A, 120VAC, general purpose	
	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) Mechanical endurance 10x106 ops.



0011101	0.0.10, 20 00.					
Coil	Rated	Operate	ReleaseCoil	Rated coil		
code	voltage	voltagevoltage	voltagevoltage resistance			
	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	650	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.

## Coil versions. AC coil

**Coil Data** 

	SIGHS, AC COIL			
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.

## Insulation Data

Initial dielectric strength	
between open contacts	1000V <sub>rms</sub>
between contact and coil	1500V <sub>rms</sub>
between adjacent contacts	1500V <sub>rms</sub>
between coil and frame	1500V <sub>rms</sub>
Initial insulation resistance	
between insulated elements	100MΩ at 500VDC

## **Other Data**

Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content					
refer to the Product Compliance Support Center					
www.te.com/ci	ustomersupport/rohssupportcenter				
Ambient temperature	-45°C to 70°C				

Category of environmental protection	
IEC 61810	RTI - dust protected

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.

1



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

Other Data (continued)	
Terminal type	solder/plug-in .105" (2.67mm),
	pcb-tht .112" (2.84mm)
Weight	45g
Packaging/unit	tray/50 pcs., box/250pcs.

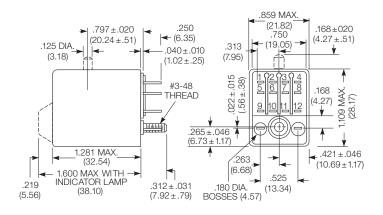
## Accessories

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

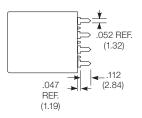
NOTE: Relays with contact current <50mA are not recommended for use in sockets.

#### Dimensions

KHAU and KHAX types



PCB terminals KHAE and KHAF types



Printed circuit terminal thickness .022 (.558)

## Terminal assignment

2 form C

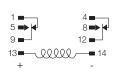
4 form C

10

22222

13

+

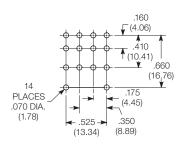


Polarity shown for LED indicator

PCB layout

Bottom view on solder pins

4 pole version



2

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 <a href="http://relays.te.com/definitions">http://relays.te.com/definitions</a>

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



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

Prod	uct code structure		Typical product code KHA U	-1	17	Α	1	1	В	-120
Туре										
KH			ay e in KH construction. Specify KH instead of KHA.							
Versio E U F X	Printed circuit terminals, nylon Solder terminals, clear polycart Printed circuit terminals, nylon	oonat dust (	over, contacts rated opposite polarity (UL & CSA) e dust cover, contacts rated same polarity (UL & CSA) over, contacts rated same polarity (UL & CSA) e dust cover, contacts rated opposite polarity (UL & CS/	A)						
	2 form C (2CO)	17	4 form C (4CO)							
Coil in A	AC	D	DC							
1 T	Top flange mount, solder termin	nals c	versions; printed circuit terminals on E versions n U versions: printed circuit terminals on E versions ninals and stud on narrow, broad and end side on reque	est						
1 3 8	<b>ict material</b> Ag Au-AgNi (Note 2) Au diffused Ag e 2: contact material code 3 is n	<b>2</b> 6 ot ava	AgCdO Bifurcated crossbar, Au overlay Ag ilable with relay version E					1		
Optio B N H L M	Push to test button. (not availal Neon indicator. Only available w Neon indicator and push to test LED indicator. Only available w	vith v t butt ith ve	version E relays with 4 form C contacts) ersion U, 120VAC or 110VDC coils. on. Only available with version U, 120VAC or 110VDC c sion U, 6-48VAC or VDC coils. n. Only available with version U, 6-46VAC or VDC coils.							
	oltage code: please refer to coil version	ns tak	le							

Product Code	Arrangement	<b>Contact Material</b>	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

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 <u>http://relays.te.com/definitions</u>

Datasheets, product data, 'Definitions' section, application notes and all specifications are subject to change. 3

# **Mouser Electronics**

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

TE Connectivity: KHAU-17D13-24