

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



FL

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	
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	r) 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

Operate/release time max.		10/01115	
Contact i	ratings		
Туре	Load		Cycles

s **UL 508** 5A, 120VAC, general purpose Ag 2.5A, 240VAC, general purpose 1/10HP, 120/240VAC 180VA, 250VAC, pilot duty 42VA, 28VDC, pilot duty 5A, 240VAC, general purpose AgCdO 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 5A, 120VAC, general purpose Au diffused Ag 2.5A, 240VAC, general purpose 1/10HP, 120/240VAC

Note: The relay should only carry \leq 15A continuously (all poles combined). Mechanical endurance 10x10 6 ops.

180VA, 250VAC, pilot duty

42VA, 28VDC, pilot duty

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 11K Ω		

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

Coil	versions,	AC	coil
0011	versions,	70	0011

Coil	Rated	Operate	Coil	Rated coil
code	voltage	voltage	resistance	power
	VAC	VAC	$\Omega \pm 15\%$	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 _{rms}
between contact and coil	1500V _{rms}
between adjacent contacts	1500V _{rms}
between coil and frame	1500V _{rms}
Initial insulation resistance	
between insulated elements	100MΩ at 500VDC

Othor	Doto
OHIE	Dala

Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at www.te.com/customersupport/rohssupportcenter

-45°C to 70°C	
RTI - dust protected	



KHA Series Panel Plug-in Relay (Continued)

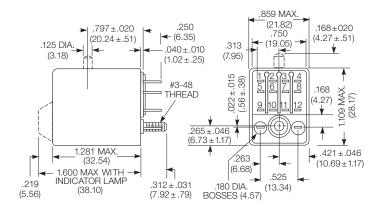
Other Data (continued)	
Terminal type	solder/plug-in .105" (2.67mm),
	pcb-tht .112" (2.84mm)
Weight	45g
Packaging/unit	tray/50 pcs., box/250pcs.

datasheet	Sockets and Accessories, KHA Relays
Description	
DIN socket (use 20C426 clip)	
Panel/track mount socket (use 20C297 clip)	
Solder/grounding socket (use 20C217 clip)	
PCB/grounding socket (use 20C217 clip)	
	Description DIN socket (use 20 Panel/track mount Solder/grounding:

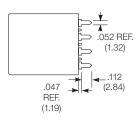
NOTE: Relays with contact current <50mA are not recommended for use in sockets.

Dimensions

KHAU and KHAX types



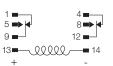
PCB terminals KHAE and KHAF types

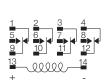


Printed circuit terminal thickness .022 (.558)

Terminal assignment







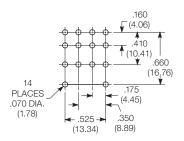
4 form C

Polarity shown for LED indicator

PCB layout

Bottom view on solder pins

4 pole version





KHA Series Panel Plug-in Relay (Continued)

Product code structure **KHA** U -17 Α 1 В -120 Typical product code

General purpose multi-contact relay **KHA**

Note: Some KHA models available in KH construction. Specify KH instead of KHA.

Version

Printed circuit terminals, nylon dust cover, contacts rated opposite polarity (UL & CSA) F

U

Solder terminals, clear polycarbonate dust cover, contacts rated same polarity (UL & CSA) Printed circuit terminals, nylon dust cover, contacts rated same polarity (UL & CSA) Solder terminals, clear polycarbonate dust cover, contacts rated opposite polarity (UL & CSA) Χ

Contact arrangement 11 2 form C (2CO)

17 4 form C (4CO)

Coil input

D Α DC

Mounting and termination

Socket mount, solder terminals on U versions; printed circuit terminals on E versions

T Top flange mount, solder terminals on U versions: printed circuit terminals on E versions Note 1: Mounting options with solder terminals and stud on narrow, broad and end side on request

Contact material

Ag AgCdO

Au-AgNi (Note 2) 6 Bifurcated crossbar, Au overlay Ag

Au diffusèd Ag

Note 2: contact material code 3 is not available with relay version E

Push to test button. (not available on version E relays with 4 form C contacts)

N H

Neon indicator. Only available with version U, 120VAC or 110VDC coils.

Neon indicator and push to test button. Only available with version U, 120VAC or 110VDC coils.

LED indicator. Only available with version U, 6-48VAC or VDC coils.

LED indicator and push to test button. Only available with version U, 6-46VAC or VDC coils.

Coil voltage

Coil code: please refer to coil versions table

Product Code	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