

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

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

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

Coil versions, DC coil				
Coil code	Rated voltage VDC	Operate voltage VDC	Release resistance Ω±10%	Rated coil power 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.

Coil versions, AC coil				
Coil code	Rated voltage VAC	Operate voltage VAC	Coil resistance Ω±15%	Rated coil power 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

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

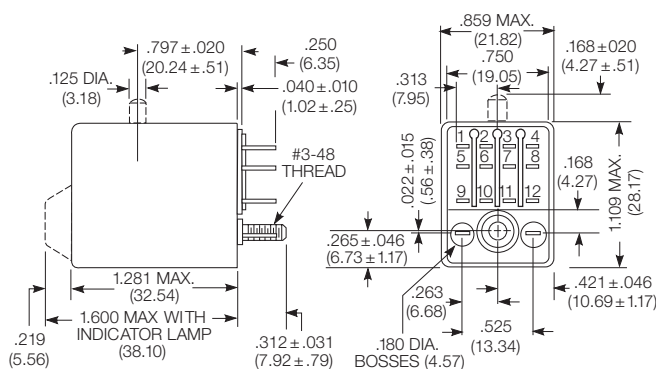
KHA Series Panel Plug-in Relay (Continued)

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.

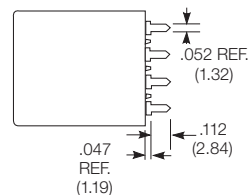
Accessories	
For details see datasheet	
Sockets and Accessories, KHA Relays	
Product Code	Description
27E894	DIN socket and 20C426 clip
27E166	Panel/track mount socket and 20C297 clip
27E006	Solder/grounding socket and 20C217 clip
27E007	PCB/grounding socket and 20C217 clip

Dimensions

KHAU and KHAX types



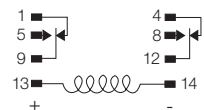
PCB terminals
KHAE and KHAF types



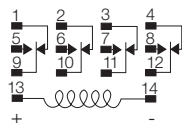
Printed circuit terminal thickness .022 (.558)

Terminal assignment

2 Form C



4 Form C

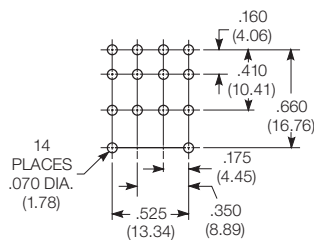


Polarity shown for LED indicator

PCB layout

Bottom view on solder pins

4 pole version



KHA Series Panel Plug-in Relay (Continued)

Product code structure

Typical product code

KHA U -17 A 1 1 B -120

Type		General purpose multi-contact relay Note: Some KHA models available in KH construction. Specify KH instead of KHA	
Version		<p>E Printed circuit terminals, nylon dust cover, contacts rated opposite polarity (UL & CSA). U Solder terminals, clear polycarbonate dust cover, contacts rated same polarity (UL & CSA). F Printed circuit terminals, nylon dust cover, contacts rated same polarity (UL & CSA). X Solder terminals, clear polycarbonate dust cover, contacts rated opposite polarity (UL & CSA).</p>	
Contact arrangement		<p>11 2 form C (2CO) 17 4 form C (4CO)</p>	
Coil Input		<p>A AC D DC</p>	
Mounting and termination		<p>1 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</p>	
Contact material		<p>1 Ag 2 AgCdO 3 Au-AgNi (Note 2) 6 Bifurcated crossbar, Au overlay Ag 8 Au diffused Ag Note 2: Contact material code 3 is not available with relay version E</p>	
Options		<p>B Push to test button. (not available on version E relays with 4 form C contacts) N Neon indicator. Only available with version U, 120VAC or 110VDC coils. H Neon indicator and push to test button. Only available with version U, 120VAC or 110VDC coils. L LED indicator. Only available with version U, 6-48VAC or VDC coils. M LED indicator and push to test button. Only available with version U, 6-48VAC or VDC coils.</p>	
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						12VAC
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