

BOM-(KIT-RELAY8-12V-1)-x.xx		Copyright 2012 Korak Technologies Inc., Released to Customers									
Relay 8 Board, +12 Volt Relays, Parallel Logic-Level Inputs (or UEXT / I2C option)											
Update the document revision level (and file name) whenever changes are released to others.											
Rev.	Date	Who	Description								
1.00	12-Mar-2014	Scot Kornak	Created for Relay8-1.20								
1.01	1-Jun-2015	Scot Kornak	Optional parts put in separate sections.								
1.02	27-Jul-2015	Scot Kornak	Alternate parts added.								
									Build Qty.		
									8		
Qty	Reference	KT Part#	Value	Rating	Description (dimensions in mils, 0.001")	Manufacturer	Man. #		Qty Required		
<b>Included - +12V Relay Build Option (part# KIT-RELAY8-12V-1)</b>											
1	C1	C1-1/104	100n	50V	Capacitor, 10%, X7R, 50V, Radial 100sp	Kemet	C320C104K5R5TA		8		
1	C5	C1-8/477	470u	25V	Capacitor, Electrolytic, 470uF, 25V, 20%,-55to105C, Radial, 400d, 200sp, TH	Panasonic	EEU-FC1E471		8		
8	D1-8	D1-2	200mA	75V	Diode, 1N4148, Signal, DO35, TH	Fairchild	1N4148		64		
9	DS1-9	DS1-3/G	Green		LED, Green, Diffused, T1-3/4, TH	LiteOn	LTL-4233		72		
16	J21-28 J47-54	J1-89/3			Terminal Block, 1x3 Removable, Side Panels, 5.08mm, Vert. Green, TH	FCI	20020107-H031A01LF		128		
					Alternative	Phoenix Contact	1755749		0		
16	J21-28 J47-54	P-89/3	300V	12A	Plug, 1x3 Removable, 5.08mm, 180-entry, Housing-high, Green, TH	FCI	20020007-H031B01LF		128		
					Alternative	Phoenix Contact	1757022		0		
8	K1-8	K-2/12	DPDT		Relay, +12V Coil, DPDT, 2-Form-C, TH	Omron	G5V-2-H-DC12		64		
1	PCB	PCB-521-1.20			PCB, Relay8 Printed Circuit Board, 2-layer, 100x160mm	Kornak Tech	PCB-521-1.20		8		
8	Q1-8	Q1-1	600mA	40V	Transistor, 2N4401, NPN, TO92	Fairchild	2N4401BU		64		
17	R1-17	R1-1/102	1k	1/4W	Resistor, 1k, 5%, 1/4W, Axial, TH	Stackpole	CF14JT1K00		136		
8	R23-30	R1-1/103	10k	1/4W	Resistor, 10k, 5%, 1/4W, Axial, TH	Stackpole	CF14JT10K0		64		
<b>Included - Parallel Interface</b>											
1	J29	J1-142/16	2x8pin		Connector, Shrouded Header, 2x8 pin, Male, Polarized, Vert., 100sp, Gold, TH	FCI	52601-S16-4LF		8		
					Alternative Blue	Tyco	2-1761603-6				
<b>Included - Right-Angle terminal Block DC Power Input</b>											
1	J2	J1-61/2			Terminal Block, 2x1, Removable, Side Panels, 5.08mm, RA, Green, TH	FCI	20020110-H021A01LF		8		
1	J2	P-89/2	300V	12A	Plug, 1x2 Removable, 5.08mm, 180-entry, Screw-Bottom, Green, TH	FCI	20020007-H021B01LF		8		
<b>Optional Parts (part# KIT-RELAY8-J+Px8) - Additional 16 pieces of 3-pin Terminal Blocks and plugs (give 2 connectors in parallel)</b>											
16	J13-20 J38-45	J1-89/3			Terminal Block, 1x3 Removable, Side Panels, 5.08mm, Vert. Green, TH	FCI	20020107-H031A01LF		128		
					Alternative	Phoenix Contact	1755749		0		
16	J13-20 J38-45	P-89/3	300V	12A	Plug, 1x3 Removable, 5.08mm, 180-entry, Housing-high, Green, TH	FCI	20020007-H031B01LF		128		
					Alternative	Phoenix Contact			0		
<b>Optional Parts (part# KIT-RELAY8-I2C) - I2C Interface with UEXT Connector</b>											
1	C3	C2-1/104	100n	50V	Capacitor, 100nF, X7R, 50V, 10%, 0805	Kemet			8		
1	JU2-4	J1-91/6			Header, DIL, 3x2, 100sp, 330h, Gold Flash, TH	MajorLeague			8		
1	JU2-4	P-42			Jumper Block, I2C Address Select Jumpers	MajorLeague			8		
1	J55	J1-7/10	10pin		Connector, DIL, 2x5 pin, Male, Polarized, Shrouded, Vertical, 100sp, TH	FCI			8		
3	R18-20	R2-1/103	10k	1/10W	Resistor, 10k, 5%, 1/10W, 0805				24		
1	U1	U2-15			IC, Octal IO Port, I2C, 0to70C, SO16-300	Philips	PCF8574T		8		

<b>Optional Parts - Alternative DC Power Input Options. Installed Instead of J2 Above</b>								
1	J1	J1-62	5A	24VDC	Connector, DC Power Coaxial, 2.1mm pin, -25to85C, RA, TH	CUI Stack	PJ-002AH	8
OR								
1	J2	J1-89/2	2-pin		Terminal Block, 2x1, Removable, Side Panels, 5.08mm, Vert, Green, TH	FCI	20020107-H021A01LF	8
1	J2	P-89/2	300V	12A	Plug, 1x2 Removable, 5.08mm, 180-entry, Screw-Bottom, Green, TH	FCI	20020007-H021B01LF	8
OR								
1	J12	J1-5/2			Connector, MTA-100, 2 pin, Male, Vertical, 100sp	AMP	640456-2	8
<b>Parts Not Installed</b>								
1	C2	C1-8/127	120u	25V	Capacitor, Electrolytic, 120uF, 25V, 20%, -55to105C, Radial, 591h, 250d, 100sp, TH	Panasonic	EEU-FC1E121	
1	J3	J1-25			Ground Bar, 2 pin, 300sp			
2	TP1-2	TP-TH			PCB Test Point			
2	R21-22	R1-1/NFIT	NO FIT	1/4W	Resistor, 5%, 1/4W, Axial			
16	J4-11 J30-37	J1-90/3	3pin		Jumper, SIL, 1x3 pin, 100sp, 330h, Gold Flash, TH	Tyco	103185-3	
1	JU1	J1-12/2			Jumper, 2 pin, 100sp			
1	J46	J1-5/4			Connector, MTA-100, Male, 4-pin, Vertical, 100sp	AMP	640456-4	
1	C4	C1-7/227	220u	10V	Capacitor, Electrolytic, 220uF, 10V, 20%, -55to105C, Radial, 441h, 250d, 100sp, TH	Panasonic	EEU-FC1A221S	
1	C5	C1-8/477	470u	25V	Capacitor, Electrolytic, 470uF, 25V, 20%, 055to105C, Radial, 400d, 200sp, TH	Panasonic	EEU-FC1E471	