

Wye-Delta Wiring Kits

Wiring kit consists of incoming terminal block and power wires.

Delta Contactor M1	Delta Contactor M2	Wye Contactor S1	Product Number	Motor Hp - 60 Hz, Three-Phase			List Price GO-10C2	
				200-208	230	460		575
CL01, CL02	CL01, CL02	CL00, CL01	CLXC02	-	-	15	20	\$58.00
CL25	CL25	CL01	CLXC12	-	-	25	25	\$63.00
CL04	CL04	CL04	CLXC22	15	20	40	50	\$63.00
CL06	CL06	CL04	CLXC42	25	30	60	75	\$125.00
CL07	CL07	CL06	CLXC43	30	40	75	100	\$125.00
CL09, CL10	CL09, CL10	CL07	CLXC52	40, 60	50, 60	100, 125	125	\$160.00

Wye-Delta Bus Bar Kits

Connection set for main power poles for assembling wye-delta starters. Includes straps for connection to overload relay.

For Use With	Product Number	List Price GO-10C2
CK75C, CK08C contactors, with RT3 overload	CKXC05	\$150.00
CK09B, CK95B contactors, with RT4 overload	CKXC03	\$180.00
CK10C, CK11C contactors, with RT5 overload	CKXC13	\$255.00
CK10B, CK11B, CK12B contactors, with RT5 overload	CKXC12	\$295.00

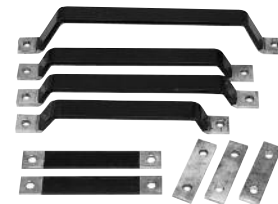


Wye-Delta Wiring Kit

Electronic Timing Relay

For use with wye-delta starters.

Input voltage	Time range	Product Number	List Price GO-10RT
24 V (min.) to 240 V (max.) AC or DC	1-60 sec. with 100ms pause between wye contacts(17-18) opening and delta contact (17-28) closing	METV	\$89.00



Wye-Delta Bus Bar Kit

Lugs

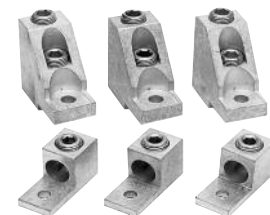
Connector lugs with anti-turn feature. Suitable for copper wire only. Each lug kit contains three lugs.

For Use With	Wire Size	Product Number	List Price GO-10C2
CK75C, CK08C contactors w/wo RT3 Overload	6-250 kcmil	CKX03	\$52.00
CK09B, CK95B contactors w/wo RT4 Overload	6-350 kcmil	CKX02 ¹	\$60.00
CK10, CK11, CK12 contactors w/wo RT5 Overload	6-500 kcmil 2/0-600 kcmil (2 wire lug)	CKX01	\$80.00

¹CK95: use 2 lugs per terminal above 218 Amps.



Electronic Timing Relay



Lugs



IEC Power Devices

IEC Contactors Technical Data

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Section 5

CL/CK Contactors

		CL06A311**, CL06E311**, LAR06A*, LER06A*	CL07A311**, CL07E311**, LAR07A*, LER07A*	CL08A311**, CL08E311**, LAR08A*, LER08A*	CL09A311**, CL09E311**, LAR09A*, LER09A*	CL10A311**, CL10E311**, LAR10A*, LER10A*	CK75CE311*, KAR75C*
Main Contacts							
Continuous Amp Rating (UL508)		80	100	110(O),102(E)	140(O),120(E)	140(O),120(E)	150
AC-1 Amps (IEC 947)		80	100	110	140	140	200
AC-2/AC3 FLA (max)	200 Volts	48	62	68	80	104	140
	460 Volts	48	62	68	80	96	140
	575 Volts	48	62	68	80	80	140
AC-2/AC-3 HP(max) 1 Phase	115 Volts	3	3	5	7.5	10	10
	230 Volts	7.5	7.5	15	15	20	25
AC-2/AC-3 HP(max) 3 Phase	200 Volts	15	20	20	25	30	40
	230 Volts	15	20	25	30	40	50
	460 Volts	30	40	50	60	75	100
	575 Volts	40	50	60	75	75	125
AC2/3 kW	380/400 Volts	22	30	37	45	55	75
AC2/3 Amps IEC 947	380/400 Volts	50	65	80	95	105	150
AC-4 HP (max) 3 Phase	200 Volts	15	20	20	25	30	40
	230 Volts	15	20	25	30	40	50
	460 Volts	30	40	50	60	75	100
	575 Volts	40	50	60	75	75	125
Maximum Operational Current	AC-1 < 300 ops/hour	80	100	110			
460V and below	AC-1 < 600 ops/hour	80	100	110	120	140(O), 120(E)	150
	AC-1 < 1200 ops/hour	80	100	110	96	112(O), 96(E)	125
	AC-1 3000 ops/hour	40	50	55	48	56(O), 48(E)	50
	AC-3 < 300 ops/hour	48	62	68			
	AC-3 < 600 ops/hour	48	62	68	80	96	140
	AC-3 < 1200 ops/hour	48	62	68	60	72	100
	AC-3 3000 ops/hour	16.8	21.7	23.8	20	24	30
	AC-4 200 ops/hour max	48	62	68	80	96	140
	AC-4 300 ops/hour max	48	62	68	-	-	-
	AC-4 360 ops/hour max	48	62	68	-	-	-
Wire size - Power Terminals		14-10 AWG	14-10 AWG	14-10 AWG	10-2/0 AWG	10-2/0 AWG	6 AWG - 250kcmil
75C(Cu)							
Torque (Main) in.-lb.		40	40	40	60	60	275
Terminal Type		Box Lug	Box Lug	Box Lug	Box Lug	Box Lug	Optional Lug CKX03
Terminal Hole	Diameter	-	-	-	-	-	0.32
(Contactor Bar)	Bolt Size	-	-	-	-	-	M-8
Noise	dba	45	45	45	45	45	45
Coil and Switching Data Coil Burden							
	Inrush (AC Voltage)	191 va	191 va	191 va	191 va	191 va	
	Holding (AC Voltage)	17 va	17 va	17 va	17 va	17 va	
	Inrush (DC Voltage)						
	Holding (DC Voltage)						
	Inrush (AC/DC Module)	125 w	125 w	125 w	125 w	125 w	350 va
	Holding (AC/DC Module)	2.5 w	2.5 w	2.5 w	2.5 w	2.5 w	20 va
Pick-up (% coil voltage)	AC Voltage	85-110	85-110	85-110	85-110	85-110	
	DC Voltage	-	-	-	-	-	
	AC/DC Module	80-110	80-110	80-110	80-110	80-110	80-110
Drop-out (% coil voltage)	AC Voltage	40-60	40-60	40-60	40-60	40-60	
	DC Voltage	-	-	-	-	-	
	AC/DC Module	40-60	40-60	40-60	40-60	40-60	40-60
Switching Delay ON (ms)	AC Voltage (at rated voltage)	15-30	15-30	15-30	15-30	15-30	
	AC Voltage (at +10% to -20%)	9-35	9-35	9-35	9-35	9-35	
	DC Voltage (at rated voltage)	-	-	-	-	-	
	DC Voltage (at +10% to -20%)	-	-	-	-	-	
	AC/DC Module (at rated voltage)	50-60	50-60	50-60	55-60	55-60	60-70
	AC/DC Module (at +10% to -20%)	60-80	60-80	60-80	40-50	40-50	
Switching Delay OFF (ms)	AC Voltage (at rated voltage)	9-15	9-15	9-15	9-15	9-15	
	AC Voltage (at +10% to -20%)	9-15	9-15	9-15	9-15	9-15	
	DC Voltage (at rated voltage)	55-60	-	-	-	-	
	DC Voltage (at +10% to -20%)	40-50	-	-	-	-	
	AC/DC Module (at rated voltage)	55-60	55-60	55-60	55-60	55-60	13-17
	AC/DC Module (at +10% to -20%)	40-50	40-50	40-50	40-50	40-50	
Maximum Operations per Hour	AC Voltage (No Load)	9000	9000	9000	5000	5000	-
	AC Voltage (Rated Load -AC1, AC3)	1200	1200	1200	1200	1200	-
	AC Voltage (Rated Load -AC4)	200	200	200	200	200	-
	DC Voltage (No Load)	-	-	-	-	-	-
	DC Voltage (Rated Load -AC1, AC3)	-	-	-	-	-	-
	DC Voltage (Rated Load -AC4)	-	-	-	-	-	-
	AC/DC(Module) Voltage (No Load)	2500	2500	2500	2500	2500	1200
	AC/DC(Module) Module (Rated Load -AC1, AC3)	1200	1200	1200	1200	1200	600
	AC/DC(Module) Module (Rated Load -AC4)	200	200	200	200	200	150
Mechanical Life (millions of Operations)		15	15	15	15	15	10
Aux. Contacts Std Product	Rating A600, Q300	1N0, 1NC Front	1N0, 1NC Front	1N0, 1NC Front	1N0, 1NC Front	1N0, 1NC Front	1N0, 1NC Side
Aux. Contacts	Maximum Number of Aux. Contacts	8	8	8	8	8	8
	Maximum Aux. Block Configuration	6 front plus 1 side mount or 2 side mount each side	6 front plus 1 side mount or 2 side mount each side	6 front plus 1 side mount or 2 side mount each side	6 front plus 1 side mount or 2 side mount each side	6 front plus 1 side mount or 2 side mount each side	2 side mount each side



IEC Power Devices

IEC Contactors Technical Data

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CL/CK Contactors

		CK08CE311*, KAR08C*	CK09BE311*, KAR09B*	CK95BE311*, KAR95B*	CK10CE311*, KAR10C*	CK11CE311*, KAR11C*	CK12BE311*, KAR12B*	
Main Contacts								
Continuous Amp Rating (UL508)		175	200	310	500	600	750 (O), 650(E)	
AC-1 Amps (IEC 947)		250	315	500	600	700	1000	
AC-2/AC3 FLA (max)	200 Volts	156	192	302	398	480	602	
	460 Volts	156	192	302	398	480	602	
	575 Volts	156	192	302	398	480	602	
AC-2/AC-3 HP(max) 1 Phase	115 Volts	15						
	230 Volts	30						
AC-2/AC-3 HP(max) 3 Phase	200 Volts	50	60	100	125	150	200	
	230 Volts	60	75	100	150	200	250	
	460 Volts	125	150	250	300	400	500	
	575 Volts	150	150	300	400	500	600	
AC2/3 kW	380/400 Volts	90	132	160	220	280	375	
AC2/3 Amps IEC 947	380/400 Volts	185	250	310	420	550	700	
AC-4 HP (max) 3 Phase	200 Volts	50	60	100	125	150	200	
	230 Volts	60	75	100	150	200	250	
	460 Volts	125	150	250	300	400	500	
	575 Volts	150	150	250	400	500	600	
Maximum Operational Current 460V and below	AC-1 < 300 ops/hour				500	600	810	
	AC-1 < 600 ops/hour	175	200	310	400	500	648	
	AC-1 < 1200 ops/hour	140	160	250	-	-	-	
	AC-1 3000 ops/hour	70	80	120	-	-	-	
	AC-3 < 300 ops/hour				398	480	602	
	AC-3 < 600 ops/hour	156	192	302	299	360	452	
	AC-3 < 1200 ops/hour	115	144	227	-	-	-	
	AC-3 3000 ops/hour	39	48	76	-	-	-	
	AC-4 200 ops/hour max	156	192	302	398	480	602	
	AC-4 300 ops/hour max	-	-	-	398	480	602	
	AC-4 360 ops/hour max	-	-	-	-	-	-	
	Wire size - Power Terminals 75C(Cu)		6 AWG - 250kcmil	6 AWG - 350kcmil	6 AWG - 350kcmil	2 AWG -500kcmil ; 2/0 AWG -600kcmil	2 AWG -500kcmil ; 2/0 AWG -600kcmil	2 AWG -500kcmil ; 2/0 AWG -600kcmil
	Torque (Main) in.-lb.		275	200	200	375	375	375
Terminal Type		Optional Lug CKX03	Optional Lug CKX02	Optional Lug CKX02	Optional Lug CKX01	Optional Lug CKX01	Optional Lug CKX01	
Terminal Hole (Contactor Bar)	Diameter	0.32	0.43	0.43	0.43	0.43	0.43	
	Bolt Size	M-8	M-10	M-10	M-10	M-10	M-10	
Noise	dba	45	45	45	45	45	45	
Coil and Switching Data Coil Burden								
	Inrush (AC Voltage)							
	Holding (AC Voltage)							
	Inrush (DC Voltage)							
	Holding (DC Voltage)							
	Inrush (AC/DC Module)	350 va	425 va	425 va	750 va	750 va	750 va	
	Holding (AC/DC Module)	20 va	20 va	20 va	25 va	25 va	25 va	
Pick-up (% coil voltage)	AC Voltage							
	DC Voltage	-	-	-	-	-	-	
Drop-out (% coil voltage)	AC/DC Module	80-110	80-110	80-110	80-110	80-110	80-110	
	DC Voltage	-	-	-	-	-	-	
Switching Delay ON (ms)	AC Voltage (at rated voltage)	-	-	-	-	-	-	
	AC Voltage (at +10% to -20%)	-	-	-	-	-	-	
	DC Voltage (at rated voltage)	-	-	-	-	-	-	
	DC Voltage (at +10% to -20%)	-	-	-	-	-	-	
	AC/DC Module (at rated voltage)	60-70	60-70	60-70	110-115	110-115	70-80	
	AC/DC Module (at +10% to -20%)	-	-	-	-	-	-	
Switching Delay OFF (ms)	AC Voltage (at rated voltage)	-	-	-	-	-	-	
	AC Voltage (at +10% to -20%)	-	-	-	-	-	-	
	DC Voltage (at rated voltage)	-	-	-	-	-	-	
	DC Voltage (at +10% to -20%)	-	-	-	-	-	-	
	AC/DC Module (at rated voltage)	13-17	13-17	13-17	70-80	70-80	70-80	
	AC/DC Module (at +10% to -20%)	-	-	-	-	-	-	
Maximum Operations per Hour	AC Voltage (No Load)	-	-	-	-	-	-	
	AC Voltage (Rated Load -AC1, AC3)	-	-	-	-	-	-	
	AC Voltage (Rated Load -AC4)	-	-	-	-	-	-	
	DC Voltage (No Load)	-	-	-	-	-	-	
	DC Voltage (Rated Load -AC1, AC3)	-	-	-	-	-	-	
	DC Voltage (Rated Load -AC4)	-	-	-	-	-	-	
	AC/DC(Module) Voltage (No Load)	1200	1200	1200	900	900	900	
	AC/DC(Module) Module (Rated Load -AC1, AC3)	600	600	600	300	300	300	
	AC/DC(Module) Module (Rated Load -AC4)	150	150	150	120	120	120	
	Mechanical Life (millions of Operations)	10	10	10	10	10	10	
Aux. Contacts Std Product								
Aux. Contacts	Rating A600, Q300	1NO,1NC Side	1NO,1NC Side	1NO,1NC Side	1NO,1NC Side	1NO,1NC Side	1NO,1NC Side	
	Maximum Number of Aux. Contacts	8	8	8	8	8	8	
	Maximum Aux. Block Configuration	2 side mount each side	2 side mount each side	2 side mount each side	2 side mount each side	2 side mount each side	2 side mount each side	



IEC Power Devices

IEC Overload Relays Technical Data

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Section 5

RT Overload Relays

	RT1	RT2	RT3	RT4 Suffix K-M	RT4 Suffix N-R	RT5
Trip Class	10/20	10/20	10/20	10/30	10/30	10/30
Contactor Size	CL00	CL06	CK75	CK09	CK09	CK10
	CL01	CL07	CK08	CK95	CK95	CK11
	CL02	CL08				CK12
	CL25	CL09				
	CL04	CL10				
	CL45					
Rated Insulation Voltage	690V	1000V	1000V	1000V	1000V	1000V
Frequency Limits	50-60 Hz	50-60 Hz	50-60 Hz	50-60 Hz	50-60 Hz	50-60 Hz
Terminal Capacity	14-8 AWG	14-1/0 AWG	6 AWG-250kcmil	14-2/0 AWG	6 AWG-350kcmil	8 AWG-500 kcmil 2/0 AWG-600 kcmil
Terminal Type	Clamp	Box	Optional Lug CKX03	Box	Optional Lug CKX02	Optional Lug CKXC01
Torque (in.-lb.)	24-14	50	275	105	200	375
Auxiliary Contact 1NO-1NC	B660/Q600	B660/Q600	B660/Q600	B660/Q600	B660/Q600	B660/Q600
Terminal Capacity	22-12 AWG	22-12 AWG	22-12 AWG	22-12 AWG	22-12 AWG	22-12 AWG
Terminal Torque (lb.-in.)	7-12 AWG solid or stranded 75°C copper wire	7-12 AWG solid or stranded 75°C copper wire	7-12 AWG solid or stranded 75°C copper wire	7-12 AWG solid or stranded 75°C copper wire	7-12 AWG solid or stranded 75°C copper wire	7-12 AWG solid or stranded 75°C copper wire

