

IEC Power Devices IEC Control Relays Selection Guide C-2000

Section 5

AC Operated Standard Terminals

Contact Configuration	Product Number
4NO	RL4RA040T*
3NO-1NC	RL4RA031T*
2NO-2NC	RL4RA022T*
4NC	RL4RA004T*

AC Operated with Ring Terminal Capacity

Contact Configuration	Product Number
4NO	RL4RA040R*
3NO-1NC	RL4RA031R*
2NO-2NC	RL4RA022R*
4NC	RL4RA004R*

To complete the product number, replace the asterisk (*) with the appropriate digit from the Coil Selection table. Contact Rating: A600, P600.

AC Coil Selection

AC Voltage		* Coil Suffix
60 Hz	50 Hz	
24	24	1
48	42	F
120	110	J
208	—	L
277	220/230	N
240	—	S
480	380/400	U
—	415	W
600	500	Y

DC Operated Standard Terminals

Contact Configuration	Product Number
4NO	RL4RD040T#
3NO-1NC	RL4RD031T#
2NO-2NC	RL4RD022T#
4NC	RL4RD004T#

DC Operated with Ring Terminal Capacity

Contact Configuration	Product Number
4NO	RL4RD040R#
3NO-1NC	RL4RD031R#
2NO-2NC	RL4RD022R#
4NC	RL4RD004R#

To complete the product number, replace the crosshatch (#) with the appropriate digit from the Coil Selection table. Contact Rating: A600, P600.

DC Coil Selection

DC Voltage	# Coil Suffix
12	B
24	D
48	G
125	K
250	T

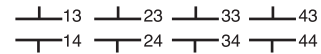
Reference Publications

Instructions	
GEH-6248	RL Relay

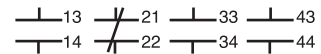


Control Relay

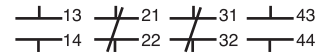
Control Terminal Relay Markings



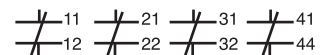
RL4R_040_



RL4R_031_



RL4R_022_



RL4R_004_



Product Number Selection Instructions: See page 5-37

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IEC Contactors Technical Data

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CL/CK Contactors

		CL00A310**, CL00D310**, LAR00A*, LDR00A*	CL01A310**, CL01D310**, LAR01A*, LDR01A*	CL02A310**, CL02D310**, LAR02A*, LDR02A*	CL25A310**, CL25D310**, LAR25A*, LDR25A*	CL04A310**, CL04D310**, LAR04A*, LDR04A*	CL45A310**, CL45D310**, LAR45A*, LDR45A*
Main Contacts							
Continuous Amp Rating (UL508)		25	25	32	32	54	55
AC-1 Amps (IEC 947)		25	25	32	45	60	60
AC-2/AC3 FLA (max)	200 Volts	10	13.8	17.5	22	32	34
	460 Volts	10	13.8	17.5	22	32	34
	575 Volts	10	13.8	17.5	17.5	32	27
AC-2/AC-3 HP(max) 1 Phase	115 Volts	0.5	0.75	1	1.5	2	3
	230 Volts	1.5	2	3	3	5	5
AC-2/AC-3 HP(max) 3 Phase	200 Volts	3	3	5	5	10	10
	230 Volts	3	3	5	7.5	10	10
	460 Volts	5	7.5	10	15	20	25
	575 Volts	7.5	10	15	15	25	25
AC2/3 kW	380/400 Volts	4	5.5	7.5	11	16	18.5
AC2/3 Amps IEC 947	380/400 Volts	9	12	18	25	32	40
AC-4 HP (max) 3 Phase	200 Volts	3	3	5	5	10	10
	230 Volts	3	3	5	7.5	10	10
	460 Volts	5	7.5	10	15	20	25
	575 Volts	7.5	10	15	15	25	25
Maximum Operational Current 460V and below	AC-1 < 300 ops/hour	25	25	32	32	54	55
	AC-1 < 600 ops/hour	25	25	32	32	54	55
	AC-1 < 1200 ops/hour	25	25	32	32	54	55
	AC-1 3000 ops/hour	12.5	12.5	16	16	27	27.5
	AC-3 < 300 ops/hour	10	13.8	17.5	22	32	34
	AC-3 < 600 ops/hour	10	13.8	17.5	22	32	34
	AC-3 < 1200 ops/hour	10	13.8	17.5	22	32	34
	AC-3 3000 ops/hour	3.5	4.8	6.1	7.7	11.2	11.9
	AC-4 200 ops/hour max	10	13.8	17.5	22	32	34
	AC-4 300 ops/hour max	10	13.8	17.5	22	32	34
	AC-4 360 ops/hour max	10	13.8	17.5	22	32	34
	Wire size - Power Terminals 75C(Cu)		14-10 AWG	14-10 AWG	14-10 AWG	14-10 AWG	14-10 AWG
Torque (Main) in.-lb.		15	15	15	20	16	16
Terminal Type		Clamp	Clamp	Clamp	Clamp	Clamp	Clamp
Terminal Hole (Contactor Bar)	Diameter	-	-	-	-	-	-
	Bolt Size	-	-	-	-	-	-
Noise	dba	25	25	25	25	25	35
Coil and Switching Data Coil Burden	Inrush (AC Voltage)	45 va	45 va	45 va	45 va	88 va	88 va
	Holding (AC Voltage)	6 va	6 va	6 va	6 va	9 va	9 va
	Inrush (DC Voltage)	5.5 w	5.5 w	5.5 w	5.5 w	7.5 w	7.5 w
	Holding (DC Voltage)	5.5 w	5.5 w	5.5 w	5.5 w	7.5 w	7.5 w
	Inrush (AC/DC Module)						
	Holding (AC/DC Module)						
Pick-up (% coil voltage)	AC Voltage	85-110	85-110	85-110	85-110	85-110	85-110
	DC Voltage	80-110	80-110	80-110	80-110	80-110	80-110
	AC/DC Module	-	-	-	-	-	-
Drop-out (% coil voltage)	AC Voltage	40-55	40-55	40-55	40-55	40-55	40-55
	DC Voltage	20-40	20-40	20-40	20-40	15-30	15-30
	AC/DC Module	-	-	-	-	-	-
Switching Delay ON (ms)	AC Voltage (at rated voltage)	8-20	8-20	8-20	8-20	10-19	10-19
	AC Voltage (at +10% to -20%)	6-25	6-25	6-25	6-25	7-25	7-25
	DC Voltage (at rated voltage)	40-50	40-50	40-50	40-50	40-65	40-65
	DC Voltage (at +10% to -20%)	35-65	35-65	35-65	35-65	35-70	35-70
	AC/DC Module (at rated voltage)	-	-	-	-	-	-
	AC/DC Module (at +10% to -20%)	-	-	-	-	-	-
Switching Delay OFF (ms)	AC Voltage (at rated voltage)	6-13	6-13	6-13	6-13	5-25	5-25
	AC Voltage (at +10% to -20%)	6-13	6-13	6-13	6-13	5-25	5-25
	DC Voltage (at rated voltage)	30-60	30-60	30-60	30-60	40-65	40-65
	DC Voltage (at +10% to -20%)	30-60	30-60	30-60	30-60	40-65	40-65
	AC/DC Module (at rated voltage)	-	-	-	-	-	-
	AC/DC Module (at +10% to -20%)	-	-	-	-	-	-
Maximum Operations per Hour	AC Voltage (No Load)	9000	9000	9000	9000	9000	9000
	AC Voltage (Rated Load -AC1, AC3)	1200	1200	1200	1200	1200	1200
	AC Voltage (Rated Load -AC4)	360	360	360	360	360	360
	DC Voltage (No Load)	3600	3600	3600	3600	3600	3600
	DC Voltage (Rated Load -AC1, AC3)	1200	1200	1200	1200	1200	1200
	DC Voltage (Rated Load -AC4)	360	360	360	360	360	360
	AC/DC(Module) Voltage (No Load)	-	-	-	-	-	-
	AC/DC(Module) Module (Rated Load -AC1, AC3)	-	-	-	-	-	-
	AC/DC(Module) Module (Rated Load -AC4)	-	-	-	-	-	-
	AC/DC(Module) Module (Rated Load -AC4)	-	-	-	-	-	-
Mechanical Life (millions of Operations)		20	20	20	20	20	20
Aux. Contacts Std Product	Rating A600, Q300	1NO (Built-in)	1NO (Built-in)	1NO (Built-in)	1NO Front	1NO (Built-in)	1NO Front
Aux. Contacts	Maximum Number of Aux. Contacts	4	4	4	4	6	6
	Maximum Aux. Block Configuration	4 front or 1 side-mount each side	4 front or 1 side-mount each side	4 front or 1 side-mount each side	4 front or 1 side-mount each side	4 front plus 1 side or 2 front plus 1 side mount each side	4 front plus 1 side or 2 front plus 1 side mount each side



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 460V and below	AC-1 < 300 ops/hour	80	100	110				
	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 75C(Cu)		14-10 AWG	14-10 AWG	14-10 AWG	10-2/0 AWG	10-2/0 AWG	6 AWG - 250kcmil
	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 (Contactor Bar)	Diameter	-	-	-	-	-	0.32	
	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	-	-	-	-	-	-	
Drop-out (% coil voltage)	AC/DC Module	80-110	80-110	80-110	80-110	80-110	80-110	
	AC Voltage	40-60	40-60	40-60	40-60	40-60		
Switching Delay ON (ms)	DC Voltage	-	-	-	-	-	-	
	AC/DC Module	40-60	40-60	40-60	40-60	40-60	40-60	
	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%)	-	-	-	-	-	-	
Switching Delay OFF (ms)	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	-	
	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	-	-	-	-	-	
Maximum Operations per Hour	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		
	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	

