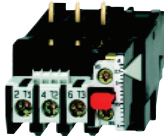


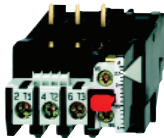
Thermal Overload Relays for Contactors K3-..



Setting Range D.O.L. (A)	$\Upsilon\Delta$	(A)	Type	Order No	Pack pcs.	Weight kg/pc.	Wiring Diagram
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With Manual Reset, for contactors K(G)3-10.. to K(G)3-22..

0,12 - 0,18	-	-	U12/16E 0,18 K3	LA 300 100 K3	1	0,10	<p>manual reset</p>
0,18 - 0,27	-	-	U12/16E 0,27 K3	LA 300 101 K3	1	0,10	
0,27 - 0,4	-	-	U12/16E 0,4 K3	LA 300 102 K3	1	0,10	
0,4 - 0,6	-	-	U12/16E 0,6 K3	LA 300 103 K3	1	0,10	
0,6 - 0,9	-	-	U12/16E 0,9 K3	LA 300 104 K3	1	0,10	
0,8 - 1,2	-	-	U12/16E 1,2 K3	LA 300 105 K3	1	0,10	
1,2 - 1,8	-	-	U12/16E 1,8 K3	LA 300 106 K3	1	0,10	
1,8 - 2,7	-	-	U12/16E 2,7 K3	LA 300 107 K3	1	0,10	
2,7 - 4	-	-	U12/16E 4 K3	LA 300 108 K3	1	0,10	
4 - 6	7 - 10,5	-	U12/16E 6 K3	LA 300 109 K3	1	0,10	
6 - 9	10,5 - 15,5	-	U12/16E 9 K3	LA 300 110 K3	1	0,10	
8 - 11	14 - 19	-	U12/16E 11 K3	LA 300 111 K3	1	0,10	
10 - 14	18 - 24	-	U12/16E 14 K3	LA 300 112 K3	1	0,10	<p>manual reset</p>
13 - 18	23 - 31	-	U12/16E 18 K3	LA 300 113 K3	1	0,10	
17 - 23	30 - 40	-	U12/16E 23 K3	LA 300 114 K3	1	0,10	
22 - 30	38 - 52	-	U12/16E 30 K3	LA 300 126 K3	1	0,13	



With Quick Tripping Characteristic, for contactors K(G)3-10.. to K(G)3-22..

0,4 - 0,6	-	-	U12/16EQ 0,6 K3	LA 300 100 EQ K3	1	0,10	<p>manual reset</p>
0,6 - 0,9	-	-	U12/16EQ 0,9 K3	LA 300 101 EQ K3	1	0,10	
0,8 - 1,2	-	-	U12/16EQ 1,2 K3	LA 300 102 EQ K3	1	0,10	
1,2 - 1,8	-	-	U12/16EQ 1,8 K3	LA 300 103 EQ K3	1	0,10	
1,8 - 2,7	-	-	U12/16EQ 2,7 K3	LA 300 104 EQ K3	1	0,10	
2,7 - 4	-	-	U12/16EQ 4 K3	LA 300 105 EQ K3	1	0,10	
4 - 6	7 - 10,5	-	U12/16EQ 6 K3	LA 300 106 EQ K3	1	0,10	
6 - 9	10,5 - 15,5	-	U12/16EQ 9 K3	LA 300 107 EQ K3	1	0,10	
8 - 11	14 - 19	-	U12/16EQ 11 K3	LA 300 108 EQ K3	1	0,10	
10 - 14	18 - 24	-	U12/16EQ 14 K3	LA 300 109 EQ K3	1	0,10	



For contactors K(G)3-10A.. to K(G)3-40A..

0,12 - 0,18	-	-	U3/32 0,18	LA 300 000	1	0,14	<p>manual and auto reset</p>
0,18 - 0,27	-	-	U3/32 0,27	LA 300 001	1	0,14	
0,27 - 0,4	-	-	U3/32 0,4	LA 300 002	1	0,14	
0,4 - 0,6	-	-	U3/32 0,6	LA 300 003	1	0,14	
0,6 - 0,9	-	-	U3/32 0,9	LA 300 004	1	0,14	
0,8 - 1,2	-	-	U3/32 1,2	LA 300 005	1	0,14	
1,2 - 1,8	-	-	U3/32 1,8	LA 300 006	1	0,14	
1,8 - 2,7	-	-	U3/32 2,7	LA 300 007	1	0,14	
2,7 - 4	-	-	U3/32 4	LA 300 008	1	0,14	
4 - 6	7 - 10,5	-	U3/32 6	LA 300 009	1	0,14	
6 - 9	10,5 - 15,5	-	U3/32 9	LA 300 010	1	0,14	
8 - 11	14 - 19	-	U3/32 11	LA 300 011	1	0,14	<p>manual and auto reset</p>
10 - 14	18 - 24	-	U3/32 14	LA 300 012	1	0,14	
13 - 18	23 - 31	-	U3/32 18	LA 300 013	1	0,14	
17 - 24	30 - 41	-	U3/32 24	LA 300 014	1	0,14	
23 - 32	40 - 55	-	U3/32 32	LA 300 026	1	0,14	



For contactors K(G)3-24A.. to K(G)3-40A ..

10 - 14	18 - 24	-	U3/42 14	LA 300 015	1	0,30	<p>manual and auto reset</p>
14 - 20	24 - 35	-	U3/42 20	LA 300 016	1	0,30	
20 - 28	35 - 48	-	U3/42 28	LA 300 017	1	0,30	
28 - 42	48 - 73	-	U3/42 42	LA 300 018	1	0,30	

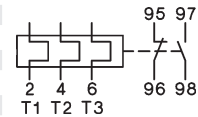
Thermal Overload Relays for plug-in mounting



Setting Range D.O.L. (A)	$\Upsilon\Delta$ (A)	Type	Order No	Pack pcs.	Weight kg/pc.	Wiring Diagram
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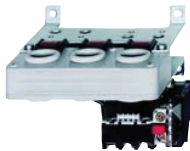
For contactors K3-50A.. to K3-74A..

20 - 28	35 - 48	U3/74 28	LA 300 019	1	0,40	
28 - 42	48 - 73	U3/74 42	LA 300 020	1	0,40	
40 - 52	70 - 90	U3/74 52	LA 300 021	1	0,40	
52 - 65	90 - 112	U3/74 65	LA 300 022	1	0,40	
60 - 74	104 - 128	U3/74 74	LA 300 027	1	0,40	



manual and auto reset

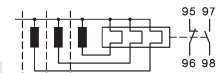
Thermal Overload Relays for separate mounting



Setting Range D.O.L. (A)	$\Upsilon\Delta$ (A)	Type	Order No	Pack pcs.	Weight kg/pc.	Wiring Diagram
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For contactors K3-90, K3-115, K85, K110

60 - 90	104 - 156	U85 90	LA 100 123	1	0,90	
80 - 120	140 - 207	U85 120	LA 100 124	1	0,90	

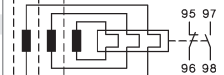


manual reset



For contactors K3-151.. and K3-176.., busbar sets see accessories

120 - 180	208 - 312	U180 180		1	1,5	
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manual and auto reset

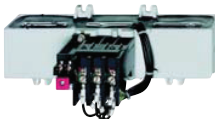


For contactors K3-210.. up to K3-316.., busbars included

144 - 216	250 - 374	U320 216		1	1,8	
216 - 320	374 - 554	U320 320				



manual and auto reset



For contactors K3-315.., K3-450.., K3-550.., K3-700.., K3-860..

240 - 360	416 - 623	U800 360		1	4,1	
360 - 540	623 - 935	U800 540		1	4,1	
540 - 800	935 - 1385	U800 800		1	4,1	



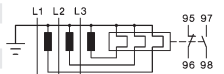
manual and auto reset

With Slow Tripping Characteristic for heavy duty starting with long run up times

For separate mounting, suitable for all contactors

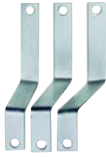


0,8 - 1,2	1,2 - 2,1	UAT21 1,2		1	1,0	
1,2 - 1,8	2,1 - 3,1	UAT21 1,8		1	1,0	
1,6 - 2,4	2,8 - 4,2	UAT21 2,4		1	1,0	
2,4 - 3,7	4,2 - 6,4	UAT21 3,7		1	1,0	
3,7 - 5,7	6,4 - 9,9	UAT21 5,7		1	1,0	
5,3 - 8,2	9,2 - 14,2	UAT21 8,2		1	1,0	
8 - 12	13,9 - 20,1	UAT21 12		1	1,0	
12 - 18	20,1 - 31,2	UAT21 18		1	1,0	
16 - 24	27,7 - 41,6	UAT22 24		1	1,1	
24 - 37	41,6 - 64	UAT23 37		1	1,3	
32 - 49	55,4 - 85	UAT23 49		1	1,3	
48 - 72	83 - 125	UAT23 72		1	1,3	



manual reset

Accessories



for overload relays	for contactors	Type	Order No	Pack set	Weight kg/set
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Busbar Sets

U800	K3-450.., K3-550..	SU840/550		1	1,7
U800	K3-700.., K3-860..	SU840/860		1	2,1



for overload relay	Cable Cross-section (mm ²) solid or stranded	flexible	Type	Order No	Pack pcs.	Weight kg/pc.
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Set for Single Mounting on DIN-rail with terminals

U12/16..K3	0,75 - 6	0,75 - 4	U12SM K3	LA 100 125	1	0,035
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Additional Terminals with fingertouch protection

U3/32	0,75 - 6	0,75 - 4	U3/32SM	LA 300 025	1	0,035
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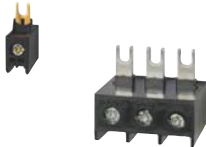
Set for Single Mounting on DIN-rail

U3/42, U3/74	-	-	U3/42G		1	0,030
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Connecting Wire Set for U3/42, U3/74 with Single Mounting

U3/42, U3/74	150mm lang	10mm ²	LG5830-4		1	0,060
U3/42, U3/74	250mm lang	10mm ²	LG5830-2		1	0,100



Additional Terminals with fingertouch protection

1-pole f. U12/16, U3/32	0,75 - 10	0,75 - 6	LG9339		1	0,009
3-pole for U3/42	4 - 35	6 - 25	LG7559		1	0,052

Thermal Overload Relays

Data according to IEC 947-4-1, IEC 947-5-1, VDE 0660, EN 60947-4-1, EN 60947-5-1

Type		U3/32	U12/16 ⁶⁾	U3/42	U3/74	U85	U180	U320	U800	UAT21	UAT22	UAT23	
Rated insulation voltage U_i¹⁾	V~	690	690	690	690	750	690	1000	1000	690	690	690	
Permissible ambient temperature													
operation	open °C			-25 to +60					-25 to +55		-25 to +60		
storage	°C			-50 to +70					-40 to +70		-50 to +70		
Trip class according to IEC 947-4-1	10A	10A	10A	10A	20	10A	10A		10	30	30	30	
Cable cross-section													
main connector	solid or stranded	mm ²	0,75-6	0,75-6+0,75-2,5 ²⁾	0,75-10	4-35 ²⁾	3)	7)	-	7)	0,5-10	0,5-16	0,5-25
	flexible	mm ²	1-4	0,75-4+0,5-2,5 ²⁾	0,75-6	6-25 ²⁾					0,5-6	0,5-10	0,5-16
	flexible with multicore cable end	mm ²	0,75-4	0,5-2,5+0,5-1,5	0,75-6	4-25					0,5-6	0,5-10	0,5-16
Cables per clamp	number		2	1+1	2	1					1	1	1
auxiliary connector	solid	mm ²		0,75-2,5 ²⁾					1-2,5 ²⁾		0,75-2,5 ²⁾		
	flexible	mm ²		0,5-2,5 ²⁾					1-2,5 ²⁾		0,5-2,5 ²⁾		
	flexible with multicore cable end	mm ²		0,5-1,5					1-2,5 ²⁾		0,5-1,5		
Cables per clamp	number			2					2		2		
Type		U3/32	U12/16A	U12/16E	U12/16EQ	U3/42	U85	U180	U800	UAT21	UAT22	UAT23	
Auxiliary contacts				U12/16EM		U3/42		U320					
Rated insulation voltage U_i¹⁾													
same potential	V~	690	690	690	690	690	690	690	500	690			
different potential	V~	440	-	440	440	250	440	440	500	440			
Utilization category AC15													
Rated operational current I _e	24V A	3	4	5	5	4	5	3	4 ⁵⁾	5			
	230V A	2	2,5	3	3	2,5	3	2	2,5	3			
	400V A	1	1,5	2	2	1,5	2	1	1,5	2			
	690V A	0,5	0,6	0,6	0,6	0,6	0,6	0,5	0,6	0,6			
Utilization category DC13													
Rated operational current I _e	24V A	1	1,2	1,2	1,2	1,2	1,2	1,2	1,2	1,2			
	110V A	0,15	0,15	0,15	0,15	0,15	0,15	0,15	0,15	0,15			
	220V A	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1			
Short circuit prot. (without welding 1kA)													
highest fuse rating	gL (gG) A	4	4	6	6	6	6	4	6	6			
Type		U3/32	U12/16	U12/16E	U3/42	U3/42	U3/74	U3/74	U85				
Setting range		all	to 23A	22 - 30A	to 28A	28 - 42A	to 52A	52 - 65A	all				
Power loss per current path (max.)													
minimum setting value	W	1,1	1,1	1,7	1,3	1,3	2,0	2,9	1,1				
maximum setting value	W	2,3	2,3	3,7	2,6	3,3	3,7	4,5	2,5				

Data according to cULus

Type		U3/32	U12/16A	U12/16E	U12/16EQ	U3/42	U3/74	U85
Rated insulation voltage	V~	600	600	600	600	600	600	600
Rated current	A	32	23	23	23	42	74	85
Auxiliary contacts								
Rated voltage								
same potential	V AC	600	600	600	600	600	600	600
different potential	V~	150	-	150	150	150	150	150
Switching capacity AC								
of aux. contacts	VA	500	500	500	500	600	600	600
	A	2	3	4	4	4	4	4

Temperature Compensation

In case of higher ambient temperature use the following formula:
 (Ambient temperature - 20) x 0,125 = correction factor in % of the full load motor current

Example: Ambient temperature 70°C, full load motor current 7A
 (70 - 20) x 0,125 = 6,25%
 Setting value: 7A + 6,25% = 7,44A

1) Suitable for: earthed-neutral systems, overvoltage category I to III, pollution degree 3 (standard-industry): U_{imp} = 4kV (at 440V), 6kV (at 690V).

Data for other conditions on request.

2) Maximum cable cross-section with prepared conductor

3) Without terminals, suitable for bushing one connector 70mm² (stranded) per phase

4) Switching capacity of the start contact: AC15 300VA, max. 1,5A, DC13 (max. 220V) 30W, max. 1,5A

5) Switching capacity of the make contact: AC15 400VA, max. 1,7A, DC13 (max. 220V) 10W, max. 1A

6) U12/16E 30: Cable cross-section for main connector like type U3/42, one connector only

7) Busbar sets see accessories page 105