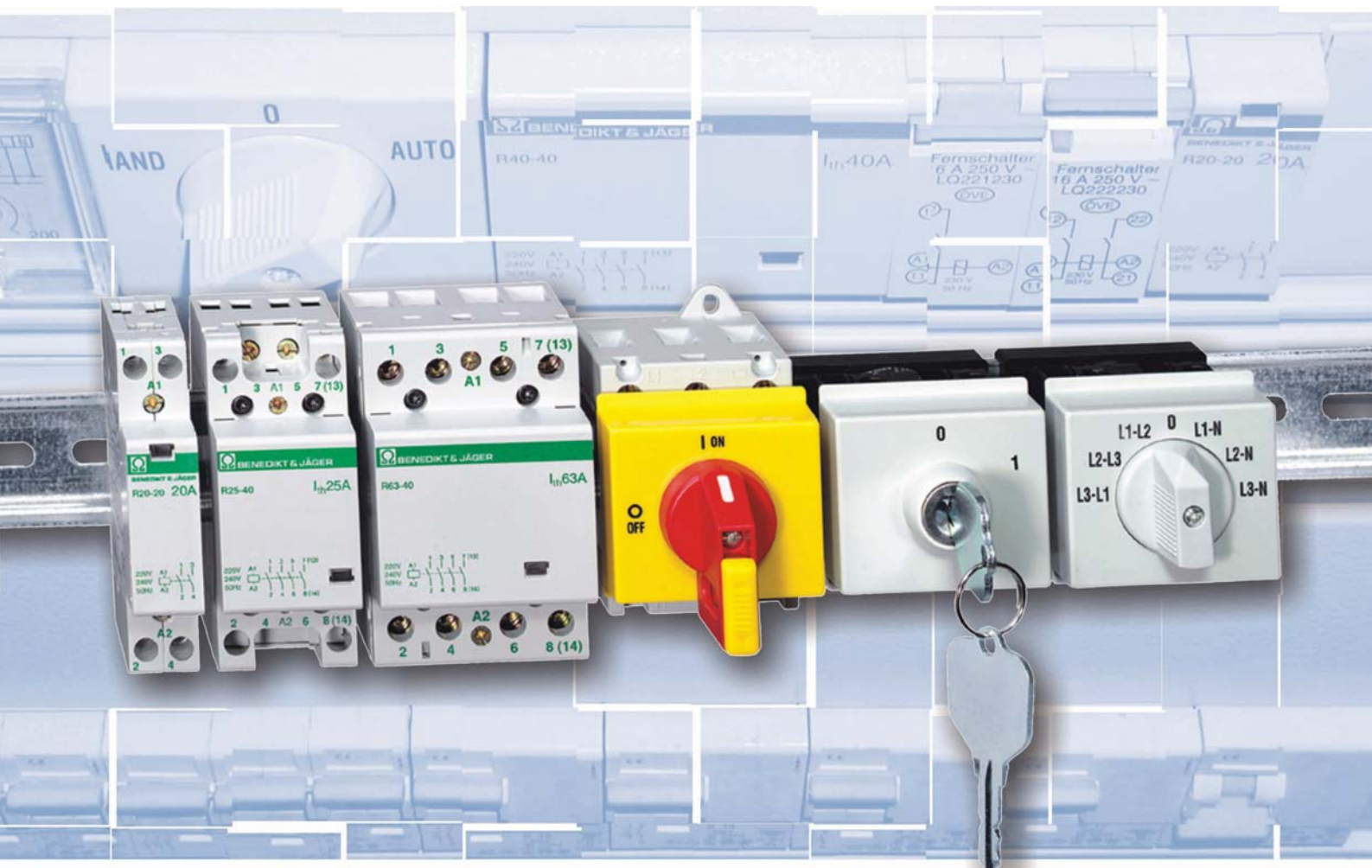










Modular Contactors and Switches



D681E121

Modular Contactors and Switches

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Modular Contactors low noise, low coil power consumption

1-, 2-Pole 1 Module (17,5mm)



Diagram	Rated Current 400V AC1 A	Power Rating		Motor AC3 400V 3~ kW	Type	Pack	Weight
		AC1	AC3				
	20	4,6	-	-	R20-10 230	12	0,12
		4,6	-	-			
	20	4,6	-	-	R20-20 230	12	0,12
		4,6	-	-			
	20	4,6	-	-	R20-11 230	12	0,12
		4,6	-	-			
	20	4,6	-	-	R20-02 230	12	0,12
		4,6	-	-			
	25	5,5	-	-	R25-20 230	12	0,14
		5,5	-	-			
	25	5,5	-	-	R25-20 24	12	0,14
		5,5	-	-			
	25	5,5	-	-	R25-11 230	12	0,14
		5,5	-	-			
	25	5,5	-	-	R25-02 230	12	0,14
		5,5	-	-			

4-Pole 2 Modules (35mm) ¹⁾



Diagram	Rated Current 400V AC1 A	Power Rating		Motor AC3 400V 3~ kW	Type	Pack	Weight
		AC1	AC3				
	25	5,7	17	4	R25-40 230	6	0,21
		5,7	17	4			
	25	5,7	17	4	R25-31 230	6	0,21
		5,7	17	4			
	25	5,7	17	4	R25-13 230	6	0,21
		5,7	17	4			
	25	5,7	-	-	R25-22 230	6	0,21
		5,7	-	-			
	25	5,7	17	4	R25-04 230	6	0,21
		5,7	17	4			

4-Pole 2 Modules (35mm), AC/DC-operated ²⁾ **NEW** available at november 2009!



Diagram	Rated Current 400V AC1 A	Power Rating		Motor AC3 400V 3~ kW	Type	Pack	Weight
		AC1	AC3				
	25	5,7	17	4	R25-40 230VM	6	0,22
		5,7	17	4			
	25	5,7	17	4	R25-31 230VM	6	0,22
		5,7	17	4			
	25	5,7	17	4	R25-13 230VM	6	0,22
		5,7	17	4			
	25	5,7	-	-	R25-22 230VM	6	0,22
		5,7	-	-			
	25	5,7	17	4	R25-04 230VM	6	0,22
		5,7	17	4			

1) Sealable with Sealing Cover P721, available aux. contact block RH11(see page 3)

2) Sealable with Sealing Cover P721, available aux. contact block RH11-1(see page 3)

Modular Contactors low noise, low coil power consumption

4-Pole 3 Modules (52,5mm) ¹⁾



Rated Current 400V AC1 A	Power Rating		Motor AC3 400V 3~ kW	Type	Pack	Weight
	AC1 kW	AC3 kW				
	9	27,5	12,5	R40-40 230	4	0,35
	9	27,5	12,5	R40-40 24	4	0,35
	9	27,5	12,5	R40-31 230	4	0,35
	9	27,5	12,5	R40-31 24	4	0,35
	9	-	-	R40-22 230	4	0,35
	9	-	-	R40-22 24	4	0,35
	9	27,5	12,5	R40-04 230	4	0,35
	9	27,5	12,5	R40-04 24	4	0,35
	14,3	43	15	R63-40 230	4	0,36
	14,3	43	15	R63-40 24	4	0,36
	14,3	43	15	R63-31 230	4	0,36
	14,3	43	15	R63-31 24	4	0,36
	14,3	-	-	R63-22 230	4	0,36
	14,3	-	-	R63-22 24	4	0,36
	14,3	43	15	R63-04 230	4	0,36
	14,3	43	15	R63-04 24	4	0,36

Accessories for Modular Contactors

Auxiliary Contact Block



1 TE (8,75mm)
for 4-pole contactors
R25, R40 and R63



Rated current AC15 230V A	Therm. Current I_{th} A	for contactor	Type	Pack	Weight
				Pcs.	kg/pc.
2	10	R25 ²⁾ , R40, R63	RH11	3	0,026
2	10	R25-...VM	RH11-1	3	0,026

Sealing cover



Sealing cover for R25..
Sealing cover for R40..., R63..

P721	10	0,002
P690	10	0,003

Suppressor unit



RC-unit
2x for R20.. to R63..
for 12V to 250V AC
1 module (17,5mm)

RC-R 230	2	0,05
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Spacing piece



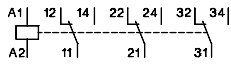
½ module (8,8mm)
for R20.. to R63..

P730	10	0,012
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1) Sealable with Sealing Cover P690, available aux. contact block RH11(see page 117)
2) AC-operated R25-..., 4-pole

Day- Night Reloading Contactors

Compact Module, for separate tariff counters 2 modules (35mm)



400V
I_{th} A

25

Type

R25-TN 230

Pack
Pcs.

1

Weight
kg/pc.

0,22

2 Switch positions:

Day (Reloading, contact 11-14 ... closed, remains in position Night, until the next occurs)

Night (Basis operation) contact 11-12 ... closed

Contactor Module, for double tariff counters 1 module (17,5mm)



25

R25-TN20 230

1

0,13

4 Switch position:

Day (Reloading, contact 1-2 ... closed, remains in position Night, until the next occurs)

Night (automatic operation, contact 1-2 ... only at night closed)

On (Permanently On)

Off (permanently Off)

Switch Module 1 module (17,5mm)




25

RH25-20

1

0,13


Safety Switches for installation boards

	AC21 690V	AC23 3x400V	Plate	Type	Pack Pcs.	Weight kg/pc.
3-pole, 60mm, IP40						
						

4-pole, 60mm, IP40

	AC21 690V	AC23 3x400V	Plate	Type	Pack Pcs.	Weight kg/pc.
4-pole, 60mm, IP40						
						

Add-on Switching Pole, attachable to 3- and 4-pole LTS.. Switches, max 1pc. on left and right side

	for switches:r	Type	Pack Pcs.	Weight kg/pc.
				

Auxiliary Contact Block, attachable to LTS.. Switches, compatible electronic signal, max 1pc. on left and right side

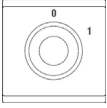
		Type	Pack Pcs.	Weight kg/pc.
	1NO + 1NC			
	1NO + 1NC overlapping			
	2NO			

Cam Switches for Installation boards, 60mm



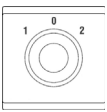
Pole	AC21 I_{th}	Motor 3x400V	Plate	Type	Pack Pcs.	Weight g/pc.
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ON-OFF-Switches



	1	20A	-	52x45	M10H SMA A1	1	95
	1	32A	-	52x45	M20 SMA A1	1	102
	2	20A	-	52x45	M10H SMA A2	1	100
	2	32A	-	52x45	M20 SMA A2	1	111
	3	20A	5,5kW	52x45	M10H SMA A3	1	105
	3	32A	11kW	52x45	M20 SMA A3	1	120
	4	20A	5,5kW	52x45	M10H SMA A4	1	110
	4	32A	11kW	52x45	M20 SMA A4	1	129

Changeover Switches with 0-Position



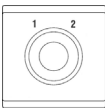
	1	20A	-	52x45	M10H SMA U1	1	100
	2	20A	-	52x45	M10H SMA U2	1	110
	2	20A	-	52x45	M10H SMA U2	1	110
	2	32A	-	52x45	M20 SMA U2	1	129
	3	20A	-	52x45	M10H SMA U3	1	120

Changeover Switches with 0-Position



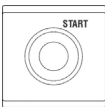
	1	20A	-	52x45	M10H SMA U1+009	1	100
	2	20A	-	52x45	M10H SMA U2+009	1	110

Changeover Switches without 0-Position



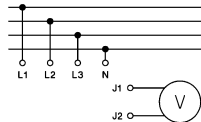
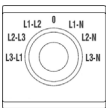
	1	20A	-	52x45	M10H SMA W1	1	100
	2	20A	-	52x45	M10H SMA W2	1	110
	2	20A	-	52x45	M10H SMA W2	1	110
	2	32A	-	52x45	M20 SMA W2	1	129

Start-Switch



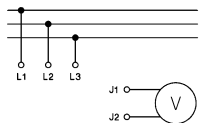
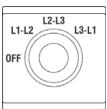
	1	20A	-	52x45	M10H SMA SE	1	100
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Voltmeter Selector Switch, 3 line voltages, 3 phase voltages



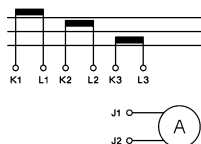
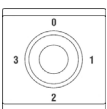
1	20A	-	52x45	M10H SMA V1	1	120
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Voltmeter Selector Switch, 3 line voltages



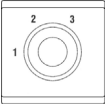
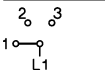
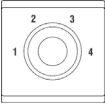
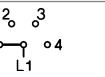
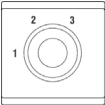
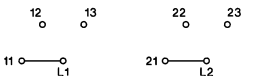
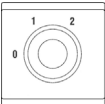

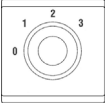
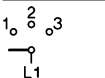
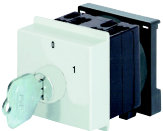
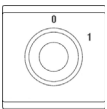


1	20A	-	52x45	M10H SMA V3	1	120
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Ammeter Selector Switch



1	20A	-	52x45	M10H SMA M31	1	120
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Cam Switches for Installation boards, 60mm

	Pole	AC21 I _{th}	Motor 3x400V	Plate	Type	Pack Pcs.	Weight g/pc.
3 Step Switches without 0-Position							
							
	1	20A	-	52x45	M10H SMA ST31	1	105
	1	32A	-	52x45	M20 SMA ST31	1	120
4 Step Switches without 0-Position							
							
	1	20A	-	52x45	M10H SMA ST41	1	110
	1	32A	-	52x45	M20 SMA ST41	1	129
3 Step Switches without 0-Position							
							
	2	20A	-	52x45	M10H SMA ST32	1	120
2 Step Switches with 0-Position							
							
	1	20A	-	52x45	M10H SMA ST021	1	110
	1	32A	-	52x45	M20 SMA ST021	1	111
3 Step Switches with 0-Position							
							
	1	20A	-	52x45	M10H SMA ST031	1	105
	1	32A	-	52x45	M20 SMA ST031	1	120
ON-OFF-Switches Key operated Lock Willenhal FT101							
							
							
	1	20A	-	52x45	M10H SMA A1+SA	1	117
	2	20A	-	52x45	M10H SMA A2+SA	1	122

Technical Data
Dimensions

see page 10
see page 11

Modular Contactors

Switching of lamps

Lamp Type	Power W	Current A	Capacitors μF	Max. lamps per pole at 230V 50Hz and max. 60°C			
				R20..	R25..	R40..	R63..
Incandescent lamps	60	0,27	-	22	50	92	129
	100	0,45	-	13	30	55	77
	200	0,91	-	10	15	27	38
	300	1,36	-	4	10	19	26
	500	2,27	-	3	6	11	16
	1000	4,5	-	1	3	6	8
Fluorescent lamps uncompensated or serial compensated	11	0,16	1,3	60	75	210	310
	18	0,37	2,7	25	30	90	140
	24	0,35	2,5	25	30	90	140
	36	0,43	3,4	20	25	70	140
	58	0,67	5,3	14	17	45	70
	65	0,67	5,3	13	16	40	65
	85	0,8	5,3	11	14	35	60
	Fluorescent lamps dual-connection	11	0,07	-	2 x 100	2 x 110	2 x 220
18		0,11	-	2 x 50	2 x 55	2 x 130	2 x 200
24		0,14	-	2 x 40	2 x 44	2 x 110	2 x 160
36		0,22	-	2 x 30	2 x 33	2 x 70	2 x 100
58		0,35	-	2 x 20	2 x 22	2 x 45	2 x 70
65		0,35	-	2 x 15	2 x 16	2 x 40	2 x 60
85		0,47	-	2 x 10	2 x 11	2 x 30	2 x 40
Fluorescent lamps parallel compensated		11	0,09	2,0	30	43	67
	18	0,13	2	20	32	50	80
	24	0,16	3	15	32	50	80
	36	0,27	4	10	32	50	80
	58	0,45	7	6	18	36	46
	65	0,5	7	5	18	36	46
	85	0,6	8	4	16	33	44
	Fluorescent lamps with electronic fluorescent lamp ballast	18	0,09	-	40	40	100
36		0,16	-	20	20	52	75
58		0,25	-	15	15	30	55
80		0,4	-	7	10	20	30
2 x 18		0,17	-	(2x) 20	(2x) 20	(2x) 50	(2x) 60
2 x 28		0,25	-	(2x) 15	(2x) 15	(2x) 37	(2x) 45
2 x 36		0,32	-	(2x) 10	(2x) 10	(2x) 25	(2x) 30
2 x 58		0,49	-	(2x) 7	(2x) 7	(2x) 15	(2x) 20
2 x 80		0,7	-	(2x) 4	(2x) 4	(2x) 8	(2x) 10
Transformers for metal halid low voltage lamps		20	0,09	-	40	52	110
	50	0,22	-	20	24	50	80
	75	0,33	-	13	16	35	54
	100	0,43	-	10	12	27	43
	150	0,65	-	7	9	19	29
	200	0,87	-	5	5	14	23
	300	1,30	-	3	4	9	14
Mercury-vapour lamps (high-pressure lamps), uncompensated e. g. HQL, HPL	50	0,61	-	16	21	38	55
	80	0,8	-	12	16	29	40
	125	1,15	-	8	11	20	28
	250	2,15	-	4	6	11	15
	400	3,25	-	3	4	7	10
	700	5,4	-	1	2	4	6
	1000	7,5	-	1	1	3	4
Mercury-vapour lamps (high-pressure lamps), compensated e. g. HQL, HPL	50	0,28	7	7	18	36	50
	80	0,41	8	5	16	31	44
	125	0,65	10	3	13	25	35
	250	1,22	18	2	7	14	19
	400	1,95	25	1	5	10	14
	700	3,45	45	1	3	6	8
	1000	4,8	60	-	2	4	6

Modular Contactors

Switching of lamps

Lamp Type	Power W	Current A	Capacitors mF	Max. lamps per pole at 230V 50Hz and max. 60°C				
				R20..	R25..	R40..	R63..	
Metal halide lamps uncompensated e. g. HQI, HPI, CDM	35	0,53	-	22	24	57	65	
	70	1	-	12	14	30	35	
	150	1,8	-	6	8	17	18	
	250	3	-	4	5	10	12	
	400	3,5	-	3	4	8	10	
	1000	9,5	-	1	1	3	4	
	2000	16,5	-	-	-	2	2	
	400V per pole	2000	10,5	-	-	2	2	
	3500	18	-	-	-	1	1	
	Metal halide lamps compensated e. g. HQI, HPI, CDM	35	0,25	6	8	21	42	58
70		0,45	12	4	11	21	29	
150		0,75	20	2	7	13	18	
250		1,5	33	1	4	9	11	
400		2,1	35	1	4	9	10	
1000		5,8	95	-	1	3	4	
2000		11,5	148	-	-	2	2	
400V per pole		2000	6,6	58	-	-	3	4
3500		11,6	100	-	-	2	3	
Metal halide lamps with electronic fluorescent with electronic fluorescent lamp ballast (e. g.: PCI) 50-125 x I _{n lamp} for 0,6ms		20	0,1	integrated	9	9	18	20
	28	0,15	integriert	-	-	-	18	
	35	0,2	integrated	6	6	11	13	
	70	0,36	integrated	5	5	10	12	
	150	0,7	integrated	4	4	8	10	
Sodium-vapour lamps (low pressure lamps), uncompensated	35	1,5	-	7	9	22	30	
	55	1,5	-	7	9	22	30	
	90	2,4	-	4	6	13	19	
	135	3,3	-	3	4	10	14	
	150	3,3	-	3	4	10	14	
	180	3,3	-	3	4	10	14	
	200	3,3	-	3	4	10	14	
	Sodium-vapour lamps (low pressure lamps), compensated	35	0,31	20	3	6	15	18
55	0,42	20	2	6	15	18		
90	0,63	30	1	4	10	12		
135	0,94	45	1	3	7	8		
150	1	40	1	3	8	9		
180	1,16	40	1	3	8	9		
200	1,32	25	-	-	10	12		
Sodium-vapour lamps (high pressure lamps), uncompensated	150	1,8	-	5	8	17	22	
	250	3	-	4	5	10	13	
	330	3,7	-	3	4	8	10	
	400	4,7	-	2	3	6	8	
	1000	10,3	-	1	1	3	4	
Sodium-vapour lamps (high pressure lamps), compensated	150	0,83	20	2	7	20	25	
	250	1,5	33	1	4	12	15	
	330	2	40	1	3	10	13	
	400	2,4	48	1	2	8	12	
	1000	6,3	106	-	1	4	6	
Sodium-vapour lamps (high pressure lamps) with serial electronic (e. g.: PCI) 50-125 x I _{n lamp} for 0,6ms	20	0,1	integrated	9	9	18	20	
	35	0,2	integrated	6	6	11	13	
	70	0,36	integrated	5	5	10	12	
	150	0,7	integrated	4	4	8	10	

Modular Contactors

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

Type		R20	R25 (2p.)	R25 (4p.)	R25-..VM	R40	R63	RH11
Main Contacts ^{5) 6) 7)}								
Rated insulation voltage U_i	V~	440²⁾	440²⁾	440²⁾	440²⁾	440²⁾	440²⁾	440²⁾
Rated operation voltage U_e	V~	440	440	440	440	440	440	440
Frequency of operations zAC1, AC3	1/h	300	300	600	600	600	600	600
Mechanical life	$S \times 10^6$	1	1	1	1	1	1	1
Utilization category AC1								
Rated operational current I_e (= I_{th}) open at 60°C	A	20	25	25	25	40	63	-
Contact life	$S \times 10^6$	0,1	0,1	0,1	0,1	0,1	0,1	-
Minimum Switch Voltage	V/mA	24/100	24/100	24/100	24/100	24/100	24/100	17/5
Short time current 10s-current	A	72	72	72	72	216	240	-
Power loss per pole at I_e /AC1	W	2	3	2	2	3	7	0,5
Utilization category AC3								
Switching of three-phase motors								
Rated operational current I_e	A	-	-	9	9	27	30	-
Rated operational power of three-phase motors	220V kW	-	-	2,2	2,2	7,5	8	-
50-60Hz	230-240V kW	1,1 ⁴⁾	1,3 ⁴⁾	2,5	2,5	8	8,5	-
	380-415V kW	-	-	4	4	12,5	15	-
Contact life	$S \times 10^6$	-	-	0,15	0,15	0,15	0,15	-
Power consumption of coils								
AC operated								
	inrush VA	7 - 9	7 - 9	20 - 25	3 - 4	33 - 45	33 - 45	-
	sealed VA	2,2 - 4,2	2,2 - 4,2	4 - 6	3 - 4	6 - 8	6 - 8	-
	W	0,8 - 1,6	0,8 - 1,6	1,5 - 2,5	3 - 4	2,6	2,6	-
Operation range of coils								
in multiples of control voltage U_s (-40°C to +40°C)		0,85 - 1,1	0,85 - 1,1	0,85 - 1,1	0,85 - 1,1	0,85 - 1,1	0,85 - 1,1	-
Short circuit protection								
max. fuse Coordination-type "1"gL (gG)	A	35	35	35	35	63	80	-
Rated short circuit current	"I _r " kA	3	3	3	3	3	3	-
	"I _q " kA	3	3	10	10	10	10	-
Switching time at control voltage $U_s \pm 10\%$								
	make time ms	7 - 16	7 - 16	9 - 15	17 - 24	11 - 15	11 - 15	-
	release time ms	6 - 12	6 - 12	4 - 8	17 - 23	6 - 13	6 - 13	-
	arc duration ms	10 - 15	10 - 15	10 - 15	10 - 15	10 - 15	10 - 15	-
Cable cross-sections								
Main connector								
	solid or stranded mm ²	1,5 - 10	1,5 - 10	1,5 - 10	1,5 - 10	2,5 - 25	2,5 - 25	0,5 - 2,5 ³⁾
	flexible mm ²	1,5 - 6	1,5 - 6	1,5 - 6	1,5 - 6	2,5 - 16	2,5 - 16	0,5 - 2,5 ³⁾
	flexible with multicore cable end mm ²	1,5 - 6	1,5 - 6	1,5 - 6	1,5 - 6	2,5 - 16	2,5 - 16	0,5 - 1,5
Clamps per pole		1	1	1	1	1	1	2
Magnetic coil								
	solid or stranded mm ²	0,75 - 2,5	0,75 - 2,5	0,75 - 2,5	0,75 - 2,5	0,75 - 2,5	0,75 - 2,5	-
	flexible mm ²	0,5 - 2,5	0,5 - 2,5	0,5 - 2,5	0,5 - 2,5	0,5 - 2,5	0,5 - 2,5	-
	flexible with multicore cable end mm ²	0,5 - 1,5	0,5 - 2,5	0,5 - 1,5	0,5 - 1,5	0,5 - 1,5	0,5 - 1,5	-
Clamps per pole		1	1	1	1	1	1	-
Auxiliary Contacts ^{5) 6) 7)}								
Rated insulation voltage U_i ¹⁾	V AC	-	-	-	-	-	-	440 ²⁾
Thermal rated current I_{th}	40°C A	-	-	-	-	-	-	10
Ambient temperature	60°C A	-	-	-	-	-	-	6
Utilization category AC15								
Rated operational current I_e								
	220-240V A	-	-	-	-	-	-	3
	380-415V A	-	-	-	-	-	-	2
	440V A	-	-	-	-	-	-	1,6
Utilization category DC13								
Rated operational current I_e								
	24-60V A	-	-	-	-	-	-	2
	110V A	-	-	-	-	-	-	0,4
	per pole 220V A	-	-	-	-	-	-	0,1
Short circuit protection								
short-circuit current 1kA, contact welding not accepted								
max. fuse size	gL (gG) A	-	-	-	-	-	-	10

1) Suitable for: earthed-neutral systems, overvoltage category I to IV, pollution degree 3 (standard-industry): $U_{imp} = 8kV$.

2) Suitable for: earthed-neutral systems, overvoltage category I to III, pollution degree 3 (standard-industry): $U_{imp} = 4kV$.

3) Maximum cable cross-section with prepared conductor 4) AC7b motor 2-pole 230V 1,1kW

5) Rated frequency 50/60Hz 6) Max. occ. switching overvoltage <4kV 7) Duty cycle: 100%

Switch Disconnectors, Switches

Technical Data according to IEC 947-3, IEC 947-5-1, VDE 0660, EN 60947-3, EN 60947-5-1

Type		LTS20	LTS25	LTS32	LTS40	LTS63	LTS80	LTS85	LTS100	LTS125	M10H
Main contacts											
Rated thermal current I_{th} open	A	20	25	32	40	63	80	85	100	125	20
Rated thermal current I_{the} enclosed	A	20	25	32	40	63	80	85	100	110	20
Rated insulation voltage U_i 1)	V	690	690	690	690	690	690	1000 ⁵⁾	1000 ⁵⁾	1000 ⁵⁾	690
Rated operational current I_e AC21A	A	20	25	32	40	63	80	85	100	125	20
Making capacity I_{eff} 3x380-440V	A	160	190	220	300	370	440	600	725	850	160
Breaking capacity 3x220-240V	A	160	180	200	250	330	380	480	580	680	160
	A	160	180	200	250	330	380	480	580	680	160
	A	80	110	140	170	190	220	250	330	420	80
3x660-690V	A	80	110	140	170	190	220	250	330	420	80
Disconnection property performed up to	V	690	690	690	690	690	690	1000	1000	1000	690
Motor Switch AC3 3x400V	A	12	16	23	30	37	37	45	60	72	12
Motor Switch AC3 3x220-240V kW	kW	3	4	5,5	7,5	11	11	15	18,5	22	3
	kW	5,5	7,5	11	15	18,5	18,5	22	30	37	5,5
	kW	5,5	7,5	11	15	18,5	18,5	18,5	22	30	5,5
3x380-440V	kW	5,5	7,5	11	15	18,5	18,5	18,5	22	30	5,5
3x660-690V	kW	5,5	7,5	11	15	18,5	18,5	18,5	22	30	5,5
Main Switch AC23 3x400V	A	16	20	25	32	45	45	60	72	85	15
Motor Switch, AC23A, 3x220-240V kW	kW	4	5,5	7,5	9	15	15	18,5	22	30	4
	kW	7,5	10	12,5	16	22	22	30	37	45	7,5
Main Switch, AC23B 3x380-440V kW	kW	7,5	10	12,5	16	22	22	30	37	45	7,5
Safety Switch 3x660-690V kW	kW	5,5	7,5	11	15	18,5	18,5	22	30	37	7,5
Rated conditional short-circuit current	kA _{eff}	10	10	10	10	10	10	10	10	10	10
Max. fuse size gL (gG)	A	25	35	40	50	63	80	80	100	125	20
Mechanical life	x10 ³	200	200	200	200	100	100	100	100	100	200
Rated short-time withstand current (1sec. current)	A	250	300	400	500	600	850	1000	1200	1500	250
Maximum cable cross sections											
solid	mm ²	10	10	10	10	25	25	50	50	50	2,5
	AWG	8	8	8	8	4	4	0	0	0	12
flexible (+ multicore cable end)	mm ²	6	6	6	6	16	16	35	35	35	2,5
	AWG	10	10	10	10	6	6	2	2	2	14
Size of terminal screw		M3,5	M3,5	M3,5	M3,5	M5	M5	M6	M6	M6	M3,5
Tightening torque	Nm	0,8-1,7	0,8-1,7	0,8-1,7	0,8-1,7	2-4	2-4	3,5-4,5	3,5-4,5	3,5-4,5	0,8-1,4
	lb.inch	7-15	7-15	7-15	7-15	18-35	18-35	31-40	31-40	31-40	7-15
Auxiliary contacts											
Rated insulation voltage U_i 1)	V	690	690	690	690	690	690	690	690	690	-
Rated thermal current I_{th} , I_{the}	A	10	10	10	10	10	10	10	10	10	-
Switching capacity AC15 220-240V	A	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	-
	A	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	-
AC15 380-440V	A	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5	-
Rated conditional short-circuit current	kA _{eff}	3	3	3	3	3	3	3	3	3	-
Max. short circuit protection gL (gG)	A	10	10	10	10	10	10	10	10	10	-
Maximum cable cross sections											
solid	mm ²	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	-
	AWG	12	12	12	12	12	12	12	12	12	-
flexible (+ multicore cable end)	mm ²	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	2,5	-
	AWG	14	14	14	14	14	14	14	14	14	-

Data according to UL und cUL

Type		LTS20	LTS25	LTS32	LTS40	LTS63	LTS80	LTS85	LTS100	LTS125	M10H	
Rated voltage	V	600	600	600	600	600	600	600	600	600	600	
Ampere-Rating "General use"	A	20	25	32	40	63	80	80	100	125	20	
DOL-Rating 3-phase	110-120V HP	1	1,5	2	2	3	5	7,5	10	15	1,5	
	220-240V HP	3	5	5	5	10	10	20	25	30	3	
	440-480V HP	7,5	10	10	10	20	20	40	50	60	5	
	550-600V HP	10	10	15	15	25	25	50	60	60	7,5	
DOL-Rating 1-phase	110-120V HP	1	1	1	1	2	2	3	5	7,5	0,5	
	200-208V HP	1	2	2	2	3	3	7,5	10	10	1	
	220-240V HP	2	2	3	3	5	5	10	15	15	1,5	
Fuse size (RK5) 5kA / 600V	Manual Motor Controller	A	40	50	50	70	90	110	200	250	300	40
	Motor Disconnect	A	40	50	50	50	70	70	-	-	-	-

1) suitable for: earthed-neutral systems, overvoltage category I to III, pollution degree 3 (standard-industry): $U_{imp} = 6kV$. Data for other conditions on request

2) the values after the slash are valid for switches 6-pole or more

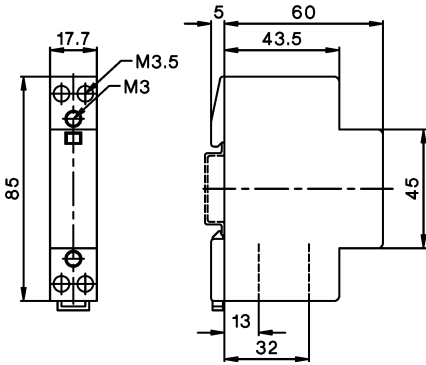
3) Suitable for no load applications (AC20A) above 690V

4) Fuse RK1 / 10kA / 600V

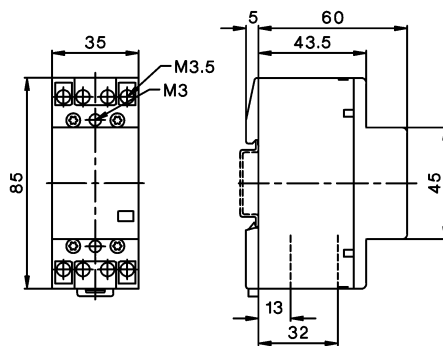
5) $U_{imp} = 8kV$

Dimensions

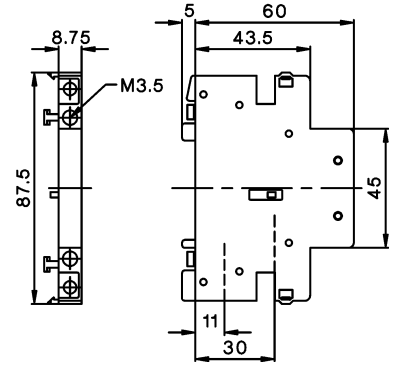
R20-..., R25-... (2-pole)
RC-R 230, RH25-20



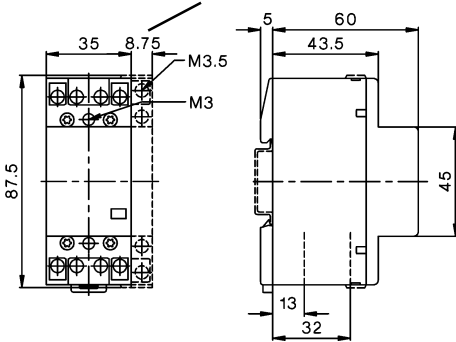
R25-TN



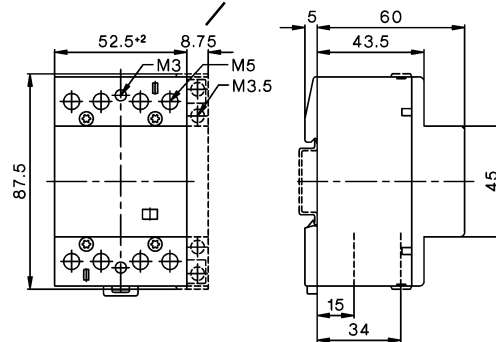
Aux. contact block
RH11, RH11-1



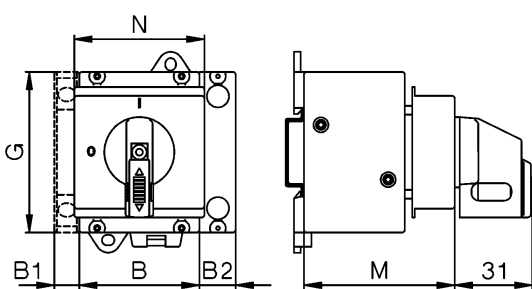
R25-... (4-pole) (+RH11)
R25-...VM (+RH11-1)



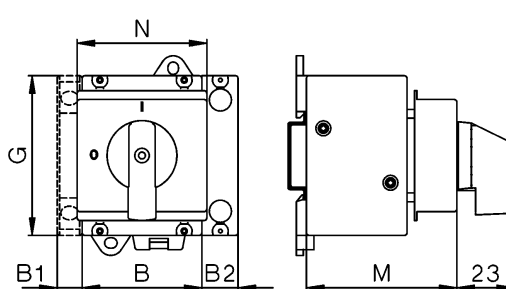
R40-... (+RH11)
R63-... (+RH11)



Main Switch LTS.. SMAHN..
LTS20 - LTS125



Switch Disconnecter LTS.. SMA..
LTS20 - LTS125



Type	3-pole		4-pole	aux. contact	4.Pole PE	G	M	N
	A	B	B	B1	B2			
LTS20 to LTS40	-	48	48	10	-	54	60	52
LTS63, LTS80	-	48	62,5	10	14,5	54	60	52
LTS85 to LTS125	-	78	78	10	-	85	70	78

Cam Switches for Installation boards

