

## Modular contactor for installation into distribution boards

### Description

Modular contactors are used for installation in consumer units in dwellings, business premises, hotels, hospitals, shopping centres, sport centers, production halls, warehouses etc.

They are used for remote switching and automatic control of electric devices and equipment, such as:

- lightning
- all types of pumps
- air-conditioning
- electric heating
- single-phase and three-phase motors

They excel in silent operation, long mechanical life time and high quality.

The contactors are designed for mounting on 35 mm mounting rail in accordance with the EN 60715 standard and they can be leaded by means of lead covers. The auxiliary contact block is available for signalization and ventilation module is available for preventing exceeded heating when contactors are used side-by-side.

All contactors have degree of protection IP20.

Besides the basic AC controlled types R20, R25, R40 and R63, types with increased silent operation RD20, RD25, RD40 and RD63 are available. Due to DC magnet and rectifier enable DC and AC voltage control. Surge arrestor is built in for over voltage protection.

Types R20-R, RD20-R, R25-R and RD25-R are upgraded versions of basic types of modular contactors. Besides basic functions they enable manual control with a handle.

Description of the handle positions:

- A: the contactor functions as an installation contactor without manual control
- O: permanently OFF
- I: manual shifting the handle from position A to I causes the contactor to close; when control voltage is applied, the handle is automatically set to position A.

Types RD20-R and RD25-R are provided with a varistor for over voltage protection and a rectifier, which enables control with AC and DC voltage.

Contactors with manual control enable:

- switching depending on tariff (selection of the most convenient tariff)
- switching when control voltage is not applied

Technical specifications according to:

EN60947-4-1; EN60947-5-1; VDE 0660, IEC 947-4-1; IEC 947-5-1

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)	R40	R63	RH11	
<b>Main Contacts</b>								
Rated insulation voltage $U_i$	V AC	440 <sup>2)</sup>	440 <sup>2)</sup>	440 <sup>2)</sup>	440 <sup>2)</sup>	440 <sup>2)</sup>	440 <sup>2)</sup>	
Rated operation voltage $U_e$	V AC	250	440	440	440	440	440	
Frequency of operations with AC1, AC3	1/h	300	300	300	600	600	600	
Mechanical life	$S \times 10^6$	1	1	1	1	1	1	
<b>Utilization category AC1</b>								
Rated operational current $I_e (=I_{th})$	open at 60°C	A	20	25	25	40	60	-
Contact life		$S \times 10^6$	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	17/5
Short time current	10s-current	A	72	72	72	216	240	-
Power loss per pole at $I_e/AC1$		W	2	3	2	3	7	0,5
<b>Utilization category AC3</b>								
<b>Switching of three-phase motors</b>								
Rated operational current $I_e$		A	-	-	9	27	30	-
Rated operational power of three-phase motors 50-60Hz	220V	kW	-	-	2,2	7,5	8	-
	230-240V	kW	1,1 <sup>4)</sup>		2,5	8	8,5	-
	380-415V	kW	-	-	4	12,5	15	-
Contact life		$S \times 10^6$	-	-	0,15	0,15	0,15	-
<b>Power consumption of coils</b>								
AC operated	inrush sealed	VA	7-9	7-9	14-18	33-45	33-45	-
		VA	2,2-4,2	2,2-4,2	4,4-8,4	7	7	-
		W	0,8-1,6	0,8-1,6	1,6-3,2	2,6	2,6	-
Operation range of coils in multiples of control voltage $U_s$	(-40...+40°C)		0,85-1,1	0,85-1,1	0,85-1,1	0,85-1,1	0,85-1,1	-
<b>Short-circuit protection</b>								
Coordination-type "1" according to IEC 947-4-1 max. fuse size	gG/gL	A	35	35	35	63	80	-
<b>Cable cross-sections</b>								
Main connector	solid or stranded	mm <sup>2</sup>	1,5-10	1,5-10	1,5-10	2,5-25	2,5-25	0,5-2,5 <sup>3)</sup>
	flexible	mm <sup>2</sup>	1,5-6	1,5-6	1,5-6	2,5-16	2,5-16	0,5-2,5 <sup>3)</sup>
	flexible with multicore cable end	mm <sup>2</sup>	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	2
Magnetic coil	solid or stranded	mm <sup>2</sup>	0,75-2,5	0,75-2,5	0,75-2,5	0,75-2,5	0,75-2,5	-
	flexible	mm <sup>2</sup>	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 <sup>2</sup>	0,5-1,5	0,5-1,5	0,5-1,5	0,5-1,5	0,5-1,5	-
Clamps per pole			1	1	1	1	1	-
<b>Auxiliary Contacts</b>								
Rated insulation voltage $U_i^{1)}$	V AC	-	-	-	-	-	440 <sup>2)</sup>	
Thermal rated current $I_{th}$	40°C	[A]	-	-	-	-	10	
Ambient temperature	60°C	[A]	-	-	-	-	6	
<b>Utilization category AC 15</b>								
Rated operational current $I_e$	220-240V	[A]	-	-	-	-	-	3
	380-415V	[A]	-	-	-	-	-	2
	440V	[A]	-	-	-	-	-	1,6
<b>Utilization category DC13</b>								
Rated operational current $I_e$ per pole	24-60V	[A]	-	-	-	-	-	2
	110V	[A]	-	-	-	-	-	0,4
	220V	[A]	-	-	-	-	-	0,1
<b>Short circuit protection</b>								
short-circuit current 1kA, contact welding not accepted max. fuse size	gG/gL	[A]	-	-	-	-	-	10
<b>Switching time at control voltage <math>U_c \pm 10\%</math></b>								
	make time	ms	7-16	7-16	9-15	11-15	11-15	-
	release time		6-12	6-12	4-8	6-13	6-13	-
	arc duration		10-15	10-15	10-15	10-15	10-15	-

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) ACSb motor 2-pole 230 V 1,1 kW.

**Switching of Lamps**

Lamp Type	Power [W]	Current [A]	Capacitors μF	Max. lamps per pole at 230V 50Hz			
				R20	R25	R40	R63
Incandescent lamps	60	0,27	-	22	28	58	85
	100	0,45	-	13	17	35	51
	200	0,91	-	7	8	17	25
	300	1,36	-	4	5	11	16
	500	2,27	-	3	3	7	10
	1000	4,5	-	1	1	3	5
Fluorescent lamps, uncompensated or serial compensated	11	0,16	-	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	-	11	14	35	60
Fluorescent lamps, dual-connection	11	0,07	-	2x100	2x110	2x220	2x250
	18	0,11	-	2x50	2x55	2x130	2x200
	24	0,14	-	2x40	2x44	2x110	2x160
	36	0,22	-	2x30	2x33	2x70	2x100
	58	0,35	-	2x20	2x22	2x45	2x70
	65	0,35	-	2x15	2x16	2x40	2x60
	85	0,47	-	2x10	2x11	2x30	2x40
Fluorescent lamps, parallel compensated	11	0,16	2,0	30	30	100	140
	18	0,37	2,0	20	20	70	90
	24	0,35	3,0	15	15	55	75
	36	0,43	4,5	10	10	38	51
	58	0,67	7,0	6	6	25	30
	65	0,67	7,0	5	5	24	28
	85	0,8	8,0	4	4	18	23
Fluorescent lamps, with serial electronic	18	0,09	-	40	40	100	150
	36	0,16	-	20	20	50	75
	58	0,25	-	15	15	30	55
	2x18	0,17	-	2x20	2x20	2x50	2x60
	2x36	0,32	-	2x10	2x10	2x25	2x30
	2x58	0,49	-	2x7	2x7	2x15	2x20
Transformers for metal halid low voltage lamps	20		-	40	52	110	174
	50		-	20	24	50	80
	75		-	13	16	35	54
	100		-	10	12	27	43
	150		-	7	9	19	29
	200		-	5	5	14	23
	300		-	3	4	9	14
Mercury-vapour lamps (high pressure lamps), uncompensated e. g. HQL, HPL	50	0,61	-	16	18	38	55
	80	0,8	-	12	14	28	40
	125	1,15	-	8	9	20	28
	250	2,15	-	4	5	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	7	32	46
	80	0,41	8	5	5	25	35
	125	0,65	10	3	3	16	22
	250	1,22	18	2	2	8	12
	400	1,95	25	1	1	5	7
	700	3,45	45	1	1	3	4
	1000	4,8	60	-	-	2	3

Switching of Lamps							
Lamp Type	Power [W]	Current [A]	Capacitors μF	Max. lamps per pole at 230V 50Hz			
				R20	R25	R40	R63
Metal halide lamps uncompensated e. g. HQI, HPI, CDM  400 V per pole	35	0,53	-	22	24	45	65
	70	1	-	12	14	24	35
	150	1,8	-	6	8	13	18
	250	3	-	4	5	8	12
	400	3,5	-	3	4	6	10
	1000	9,5	-	1	1	2	4
	2000	16,5	-	-	-	1	2
	2000	10,5	-	-	-	1	2
	3500	18	-	-	-	-	1
Metal halide lamps compensated e. g. HQI, HPI  400 V per pole	35	0,25	6	8	8	38	50
	70	0,45	12	4	4	20	28
	150	0,75	20	2	2	12	17
	250	1,5	33	1	1	7	10
	400	2,1	35	1	1	5	7
	1000	5,8	95	-	-	2	3
	2000	11,5	148	-	-	1	1
	2000	6,5	58	-	-	1	2
	3500	11,6	100	-	-	-	1
Metal halide lamps with serial electronic (e.g. PCI) 50 - 125 x I <sub>nlamps</sub> for 0,6 ms	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
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	3,5	-	3	4	10	13
	150	3,3	-	3	4	10	13
	180	3,3	-	3	4	10	13
	200	3,3	-	3	4	10	13
	200	3,3	-	3	4	10	13
Sodium-vapour lamps (low pressure lamps), compensated	35	0,31	20	3	3	12	16
	55	0,42	20	2	2	8	14
	90	0,63	30	1	1	5	9
	135	0,94	45	1	1	3	6
	150	1	40	1	1	3	6
	180	1,16	40	1	1	2	5
	200	1,32	25	-	-	2	4
	200	1,32	25	-	-	2	4
Sodium-vapour lamps (high pressure lamps), uncompensated	150	1,8	-	5	6	11	22
	250	3	-	4	5	7	13
	330	3,7	-	3	4	6	10
	400	4,7	-	2	2	5	8
	1000	10,3	-	1	1	2	4
	1000	10,3	-	1	1	2	4
Sodium-vapour lamps (high pressure lamps), compensated	150	0,83	20	2	2	7	14
	250	1,5	33	1	1	4	8
	330	2	40	1	1	3	6
	400	2,4	48	1	1	2	5
	1000	6,3	106	-	-	1	2
	1000	6,3	106	-	-	1	2
Sodium-vapour lamps (high pressure lamps) with serial electronic (e.g. PCI) 50 - 125 x I <sub>nlamps</sub> for 0,6 ms	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

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

Type				RD20	RD25	RD40	RD63			
General	Standards			IEC/EN 61095 , IEC/EN 60947-4-1, IEC/EN 60947-5-1						
	Module width			1	2	3				
	Mechanical endurance		op. c.	3 x 106		3 x 106				
	Ambient temperature		°C	-5 ... +55						
	Storage temperature		°C	-30 ... +80						
	No. of contactors (side-by-side)		≤ 40 °C	max. 3						
			40 - 55 °C	max. 2						
	Contact reliability			17 V; ≥ 50 mA						
	Min. distance of open contacts		mm	3,6						
	Power dissipation per pole		W	1,7	2,2	4	8			
	Overload current withstand capability		A	72	68	176	240			
	Max. back-up fuse for short-circuit protection gL		lv	A	20	25	63	80		
	Coordination type 2		DC-1 AC-1/AC-3/AC-5b/AC-6b AC-15 no load	op. c./h	300					
					600					
					1200					
3000										
Weight		kg	0,13	0,24	0,42					
Main circuit	Rated insulation voltage		Ui	V	230	440				
	Rated impulse withstand voltage		Uimp	kV	4					
	Thermal current		Ith	A	20	25	40	63		
	Rated operational voltage		Ue	V	230	400				
	Rated frequency		f	Hz	50/60					
	Rated operational current		AC-1/AC-7a	le	A	20	25	40	63	
	Operational power AC-1/AC-7a		single-phase	230 V		4	5,4	8,7	13,3	
			three-phase	230 V	Pe	kW	-	9	16	24
			three-phase	400 V			-	16	26	40
	Electrical endurance		AC-1/AC-7a	op. c.	200.000		100.000			
	Rated operational current		AC-3/AC-7b	le	A	9	8,5	22	30	
	Operational power AC-3/AC-7b		single-phase motor	230 V		1.3 only for NO <sup>1)</sup>	1.3 <sup>2)</sup>	3.7 <sup>2)</sup>	5 <sup>2)</sup>	
			three-phase motor	230 V	Pe	kW	-	2,2	5,5	8,5
			three-phase motor	400 V			-	4	11	15
	Electrical endurance		AC-3/AC-7b	op. c.	300.000	500.000	150.000			
Switching of capacitors		AC-6b	230 V	C	μF	30	36	220	330	
Electrical endurance		AC-6b	op. c.	100.000						

1) Make contacts are marked NO

2) Data for single-phase power are valid for versions -22, -20 and -02

Type					RD20	RD25	RD63	RD63	
Main circuit	Rated operational current		DC-1						
	1 pole	Ue = 24 V DC				20	25	40	63
		Ue = 110 V DC		le	A	6	6	4	4
		Ue = 220 V DC				0,6	0,6	1,2	1,2
	2 poles connected in series	Ue = 24 V DC				20	25	40	63
		Ue = 110 V DC		le	A	10	10	10	10
		Ue = 220 V DC				6	6	8	8
	3 poles connected in series	Ue = 24 V DC				-	25	40	63
		Ue = 110 V DC		le	A	-	20	30	35
		Ue = 220 V DC				-	15	20	30
	4 poles connected in series	Ue = 24 V DC				-	25	40	63
		Ue = 110 V DC		le	A	-	20	40	63
		Ue = 220 V DC				-	15	40	63
	Electrical endurance		DC-1		op. c.		100.000		
Terminal capacity	rigid		S	mm <sup>2</sup>	1 ... 10		1.5 ... 25		
	flexible				1 ... 6		1.5 ... 16		
Screw				M3.5		M5			
Screw Head				PZ1		PZ2			
Tightening torque				Nm		1,2		3,5	
Auxiliary circuit	Rated operational voltage		Ue	V	230	400	400	400	
	Rated insulation voltage		Ui	V	230	440	440	440	
	Rated impulse withstand voltage		Uimp	kV	4				
	Thermal current		Ith	A	20	25	40	63	
	AC-15								
	Rated operational current	single-phase	230 V	le	A	6			
		single-phase	400 V			-	4		
Electrical endurance		AC-15		op. c.		300.000	500.000	150.000	
Range of control voltage		Uc		%	85 ... 110				
Control voltages		Uc		V	12 ... 230				
Surge immunity test (1.2/50 µs), acc. to IEC/EN 61000-4-5				kV	2				
Coil consumption	switch-on		VA/W		2.1/2.1	2.6/2.6 <sup>3)</sup>	5/5	5/5	
	operation				2.1/2.1	2.6/2.6 <sup>3)</sup>	5/5	5/5	
Make/break delays	make		ms		15 – 45	15 – 45	15 – 20	15 – 20	
	break				20 – 50	20 – 70	35 – 45	35 – 45	
Terminal capacity	rigid		S	mm <sup>2</sup>	1 ... 2.5		1 ... 2.5		
	flexible				1 ... 2.5		1 ... 2.5		
Screw				M 3.5		M3			
Screw head				PZ1					
Tightening torque				Nm				0,6	

3) Coil consumption for version -04 is 3.8 VA/3.8 W

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

Type		R 20-R	RD 20-R	R 25-R	R D25-R			
General	Standards	IEC/EN 61095, IEC/EN 60947-4-1, IEC/EN 60947-5-1						
	Module width	1		2				
	Mechanical endurance	op. c.		3 x 106				
	Ambient temperature	°C		-5 ... +55				
	Storage temperature	°C		-30 ... +80				
	No. of contactors (side-by-side)	≤ 40 °C	max. 3	max. 3	no limit	max. 3		
		40 - 55 °C	max. 2	max. 2		max. 2		
	Contact reliability	17 V; ≥ 50 mA						
	Min. distance of open contacts	mm		3,6				
	Power dissipation per pole	W		1,7	1,7	2,2		
	Overload current withstand capability	A		72	72	68		
	Max. back-up fuse for short-circuit protection gL	Iv		20	20	25		
	Coordination type 2	A		20	20	25		
	Max. operating frequency	DC-1		op. c./h		300		
		AC-1/AC-3/AC-5b/AC-6b				600		
		AC-15				1200		
no load				3000				
Weight	kg		0,13	0,13	0,24			
Main circuit	Rated insulation voltage	Ui		V	230	440		
	Rated impulse withstand voltage	Uimp		kV	4			
	Thermal current	Ith		A	20	20	25	
	Rated operational voltage	Ue		V	230	230	400	
	Rated frequency	f		Hz	50/60			
	Rated operational current	AC-1/AC-7a		le	A	20	20	25
	Operational power AC-1/AC-7a	single-phase	230 V			4	4	5,4
		three-phase	230 V	Pe	kW	-	-	9
		three-phase	400 V			-	-	16
	Electrical endurance	AC-1/AC-7a		op. c.		200.000		
	Electrical endurance	AC-3/AC-7b		op. c.		300.000	500.000	150.000
	Switching of capacitors							
		AC-6b	230 V	C	μF	30	30	36
	Electrical endurance	AC-6b		op. c.		100.000		
	Rated operational current	AC-1/AC-7a		le	A	9	9	8,5
	Operational power AC-3/AC-7b	single-phase motor	230 V			1.3 only for NO <sup>1)</sup>	1.3 only for NO <sup>1)</sup>	1.3 <sup>2)</sup>
		three-phase motor	230 V	Pe	kW	-	-	2,2
		three-phase motor	400 V			-	-	4
	Electrical endurance	AC-3/AC-7b		op. c.		300.000	500.000	
	Switching of capacitors							
	AC-6b	230 V	C	μF	30	30	36	
Electrical endurance	AC-6b		op. c.		100.000			

1) Make contacts are marked NO

2) Data for single-phase power are valid for versions -22, -20 and -02

Type		R 20-R	RD 20-R	R 25-R	RD 25-R				
Main circuit	Rated operational current	DC-1							
	1 pole	Ue = 24 V DC		20	20	25	25		
		Ue = 110 V DC		le				A	6
		Ue = 220 V DC						0,6	
	2 poles connected in series	Ue = 24 V DC		20		25			
		Ue = 110 V DC		le				A	10
		Ue = 220 V DC						6	
	3 poles connected in series	Ue = 24 V DC		-	-	25	25		
		Ue = 110 V DC		le				A	20
		Ue = 220 V DC						15	
	4 poles connected in series	Ue = 24 V DC		-	-	25	25		
		Ue = 110 V DC		le				A	20
		Ue = 220 V DC						15	
	Electrical endurance	DC-1			op. c.		100.000		
Terminal capacity	rigid	S		mm <sup>2</sup>		1 ... 10			
	flexible					1 ... 6			
Screw						M3.5			
Screw Head						PZ1			
Tightening torque						Nm	1,2		
Auxiliary circuit	Rated operational voltage	Ue		V	230	230	400	400	
	Rated insulation voltage	Ui		V	230	230	440	440	
	Rated impulse withstand voltage	Uimp		kV	4				
	Thermal current	Ith		A	20	20	25	25	
	AC-15	single-phase							
	Rated operational current	230 V		le				A	6
		single-phase							
	AC-15	400 V				-	-	4	4
Electrical endurance				op. c.		300.000	500.000		
Control circuit	Range of control voltage	Uc		%	85 ... 110				
	Control voltages	Uc		V	12 ... 230				
	Surge immunity test (1.2/50 µs), acc. to IEC/EN 61000-4-5			kV	2				
	Coil consumption	switch-on (handle in A)		VA/W		12/10	2.1/2.1	33/25	2.6/2.6
		switch-on (handle in B)				6/3.8	2.1/2.1	10/5	2.6/2.6
		operation				2.8/1.2	2.1/2.1	5.5/1.6	2.6/2.6
	Make/break delays	make		ms		15 – 25	15 – 45	10 – 30	15 – 45
		break				10 – 30	20 – 50	10 – 30	20 – 70
	Terminal capacity	rigid	S		mm <sup>2</sup>		1 ... 2.5		
		flexible					1 ... 2.5		
Screw						M3			
Screw head						PZ1			
Tightening torque						Nm	0,6		



Technical data						
Type				RN		
Standards				IEC/EN 60947-5-1		
Module width				1/2		
Rated insulation voltage $U_i$		$U_i$	V	500		
Rated impulse withstand voltage $U_{imp}$		$U_{imp}$	kV	4		
Thermal current		$I_{th}$	A	6		
Rated operational voltage		$U_e$	V	230		
				400		
Rated operational current						
	AC-15	$U_e = 230 V$	$I_e$	A	6	
		$U_e = 400 V$			4	
Electrical endurance				op. c.	50.000	
Mechanical endurance				op. c.	$3 \times 10^6$	
Min. distance of open contacts				mm	4	
Contact reliability					12 V; $\geq 5$ mA	
Power loss per pole				W	0,3	
Weight				kg	0,035	
Max. back-up fuse for short-circuit protection gL						
Coordination type 2				$I_v$	A	6
Terminal capacity	rigid	S		mm <sup>2</sup>	1...2.5	
	flexible				1...2.5	
Screw					M3	
Screw head					PZ1	
Tightening torque				Nm	0,6	

Type	Power (W)	Current (A)	C (μF)	Max. number of lamps per pole at 230 V 50 Hz			
				RD20	RD25	RD40	RD63
Incandescent lamps (tungsten filament)	60	0,26	—	33	33	65	85
	100	0,44	—	20	20	40	50
	200	0,87	—	10	10	20	25
	500	2,17	—	3	3	8	10
	1000	4,35	—	1	1	4	5
Fluorescent lamps. uncorrected or series correction	18	0,37	2,7	22	24	90	140
	24	0,35	2,5	22	24	90	140
	36	0,43	3,4	17	20	65	95
	58	0,67	5,3	14	17	45	70
Fluorescent lamps. lead-lag circuit	2 x 18	0,11	—	2 x 30	2 x 40	2 x 100	2 x 150
	2 x 24	0,14	—	2 x 24	2 x 31	2 x 78	2 x 118
	2 x 36	0,22	—	2 x 17	2 x 24	2 x 65	2 x 95
	2 x 58	0,35	—	2 x 10	2 x 14	2 x 40	2 x 60
Fluorescent lamps. parallel correction	18	0,12	4,5	7	8	48	73
	24	0,15	4,5	7	8	48	73
	36	0,00	4,5	7	8	48	73
	58	0,32	7	4	5	31	47
Fluorescent lamps with electronic ballast units (EVG)	18	0,09	—	25	35	100	140
	36	0,16	—	15	20	52	75
	58	0,25	—	14	19	50	72
	2 x 18	0,17	—	2 x 12	2 x 17	2 x 50	2 x 70
	2 x 36	0,32	—	2 x 7	2 x 10	2 x 26	2 x 38
	2 x 58	0,49	—	2 x 7	2 x 9	2 x 25	2 x 36
	50	0,61	—	14	18	38	55
High-pressure mercury-vapour lamps. uncorrected	80	0,01	—	10	13	29	42
	125	1,15	—	7	9	20	29
	250	2,15	—	4	5	10	15
	400	3,25	—	2	3	7	10
	700	0,05	—	1	2	4	6
	1000	0,08	—	1	1	3	4
	50	0,28	7	4	5	31	47
High-pressure mercury- vapour lamps, parallel correction	80	0,41	8	4	5	27	41
	125	0,65	10	3	4	22	33
	250	1,22	18	1	2	12	18
	400	1,95	25	1	1	9	13
	700	3,45	45	—	—	5	7
	1000	0,05	60	—	—	4	5
	Halogen metal-vapour lamps. uncorrected	35	0,53	—	18	22	43
70		0,01	—	10	12	23	32
150		0,02	—	5	7	12	18
250		0,03	—	3	4	7	10
400		0,04	—	3	3	6	9
1000		0,10	—	1	1	2	3
2000		16,5	—	—	—	1	1
Halogen metal-vapour lamps, parallel correction	35	0,25	6	5	6	36	50
	70	0,45	12	2	3	18	25
	150	0,75	20	1	1	11	15
	250	0,02	33	—	1	6	9
	400	0,03	35	—	1	6	8
	1000	0,06	95	—	—	2	3
	2000	0,12	148	—	—	1	2

Type	Power (W)	Current (A)	C (μF)	Max. number of lamps per pole at 230 V 50 Hz			
				RD20	RD25	RD40	RD63
Halogen metal-vapour lamps with electronic ballast unit PCI 50-125 x l n lamp for 0.6 ms	20	000	integrated	9	9	18	20
	35	000	integrated	6	6	11	13
	70	0,36	integrated	5	5	10	12
	150	001	integrated	4	4	8	10
Transformers for halogen metal-vapour lamps	20	–	–	40	52	110	174
	50	–	–	20	24	50	80
	75	–	–	13	16	35	54
	100	–	–	10	12	27	43
	150	–	–	7	9	19	29
	200	–	–	5	6	14	23
	300	–	–	3	4	9	14
High-pressure sodium-vapour lamps. uncorrected	150	002	–	5	6	17	22
	250	003	–	3	4	10	13
	400	005	–	2	2	6	8
	1000	10,3	–	–	1	3	3
High-pressure sodium-vapour lamps. parallel correction	150	0,83	20	1	1	11	16
	250	002	33	–	1	6	10
	400	002	48	–	–	4	6
	1000	006	106	–	–	2	3
Halogen metal-vapour lamps with electronic ballast unit PCI 50-125 x l n lamp for 0.6 ms	20	000	integrated	9	9	18	20
	35	000	integrated	6	6	11	13
	70	0,36	integrated	5	5	10	12
	150	001	integrated	4	4	8	10
Low-pressure sodium-vapour lamps. uncorrected	18	0,35	–	22	27	71	90
	35	002	–	7	9	23	30
	55	002	–	7	9	23	30
	90	002	–	4	5	14	19
	135	004	–	3	4	10	13
	180	003	–	3	4	10	13
Low-pressure sodium-vapour lamps. parallel correction	18	0,35	5	6	7	44	66
	35	0,31	20	1	1	11	16
	55	0,42	20	1	1	11	16
	90	0,63	26	1	1	8	12
	135	0,94	45	–	–	5	8
	180	1,16	40	–	–	4	7

Type	Power (W)	Current (A)	C (μF)	Max. number of lamps per pole at 230 V 50 Hz			
				RD20	RD25	RD40	RD63
Fluorescent lamps LUMILUX T5 with electronic ballast unit (EVG)	22	0,11	FC	22	30	80	110
	40	0,21		12	15	40	60
	55	0,28		8	12	30	45
	14	0,08	HE	30	40	105	150
	21	0,11		22	30	80	115
	28	0,14		18	22	60	90
	35	0,18		14	18	48	70
	24	0,12	HO	20	26	70	100
	39	0,20		12	16	42	62
	49	0,24		10	14	35	52
	54	0,27		9	13	32	47
	80	0,39		6	8	22	32
	2 x 22	0,23	2 x FC	2 x 11	2 x 15	2 x 40	2 x 55
	2 x 40	0,42		2 x 6	2 x 7	2 x 20	2 x 30
	2 x 55	0,55		2 x 4	2 x 6	2 x 15	2 x 22
	2 x 14	0,15	2 x HE	2 x 15	2 x 20	2 x 52	2 x 75
	2 x 21	0,22		2 x 11	2 x 15	2 x 40	2 x 57
	2 x 28	0,28		2 x 9	2 x 11	2 x 20	2 x 45
	2 x 35	0,36		2 x 7	2 x 9	2 x 24	2 x 35
	2 x 24	0,24	2 x HO	2 x 10	2 x 13	2 x 35	2 x 50
	2 x 39	0,39		2 x 6	2 x 8	2 x 21	2 x 31
	2 x 49	0,48		2 x 5	2 x 7	2 x 17	2 x 26
	2 x 54	0,54		2 x 4	2 x 6	2 x 16	2 x 23
2 x 80	0,74	2 x 3		2 x 4	2 x 11	2 x 16	

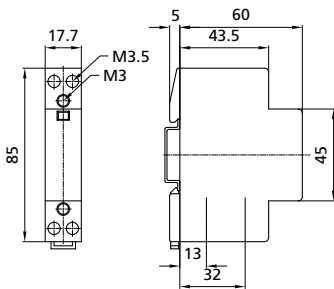
Type	Power (W)	Current (A)	C (μF)	Max. number of lamps per pole at 230 V 50 Hz			
				R20-R	RD20-R	R25-R	RD25-R
Incandescent lamp (tungsten filament)	60	0,26	—	33	33	33	33
	100	0,44	—	20	20	20	20
	200	0,87	—	10	10	10	10
	500	2,17	—	3	3	3	3
	1000	4,35	—	1	1	1	1
Fluorescent lamps uncorrected or series correction	18	0,37	2,7	22	22	24	24
	24	0,35	2,5	22	22	24	24
	36	0,43	3,4	17	17	20	20
	58	0,67	5,3	14	14	17	17
Fluorescent lamps lead-lag circuit	2 x 18	0,11	—	2 x 30	2 x 30	2 x 40	2 x 40
	2 x 24	0,14	—	2 x 24	2 x 24	2 x 31	2 x 31
	2 x 36	0,22	—	2 x 17	2 x 17	2 x 24	2 x 24
	2 x 58	0,35	—	2 x 10	2 x 10	2 x 14	2 x 14
Fluorescent lamps parallel correction	18	0,12	4,5	7	7	8	8
	24	0,15	4,5	7	7	8	8
	36	0,00	4,5	7	7	8	8
	58	0,32	7	4	4	5	5

Type	Power (W)	Current (A)	C (µF)	Max. number of lamps per pole at 230 V 50 Hz			
				R20-R	RD20-R	R25-R	RD25-R
Fluorescent lamps with electronic ballast units (EVG)	18	0,09	—	25	25	35	35
	36	0,16	—	15	15	20	20
	58	0,25	—	14	14	19	19
	2 x 18	0,17	—	2 x 12	2 x 12	2 x 17	2 x 17
	2 x 36	0,32	—	2 x 7	2 x 7	2 x 10	2 x 10
	2 x 58	0,49	—	2 x 7	2 x 7	2 x 9	2 x 9
High-pressure mercury-vapour lamps uncorrected	50	0,61	—	14	14	18	18
	80	0,01	—	10	10	13	13
	125	1,15	—	7	7	9	9
	250	2,15	—	4	4	5	5
	400	3,25	—	2	2	3	3
	700	0,05	—	1	1	2	2
High-pressure mercury-vapour lamps. parallel correction	1000	0,08	—	1	1	1	1
	50	0,28	7	4	4	5	5
	80	0,41	8	4	4	5	5
	125	0,65	10	3	3	4	4
	250	1,22	18	1	1	2	2
	400	1,95	25	1	1	1	1
Halogen metal-vapour lamps uncorrected	700	3,45	45	—	—	—	—
	1000	0,05	60	—	—	—	—
	35	0,53	—	18	18	22	22
	70	0,01	—	10	10	12	12
	150	0,02	—	5	5	7	7
	250	0,03	—	3	3	4	4
Halogen metal-vapour lamps, parallel correction	1000	0,10	—	1	1	1	1
	2000	16,5	—	—	—	—	—
	35	0,25	6	5	5	6	6
	70	0,45	12	2	2	3	3
	150	0,75	20	1	1	1	1
	250	0,02	33	—	—	1	1
Halogen metal-vapour lamps with electronic ballast unit PCI 50-125 x In lamp for 0.6 ms	400	0,03	35	—	—	1	1
	1000	0,06	95	—	—	—	—
	2000	11,5	148	—	—	—	—
	20	0,00	integrated	9	9	9	9
Transformers for halogen metal-vapour lamps	35	0,00	integrated	6	6	6	6
	70	0,36	integrated	5	5	5	5
	150	0,01	integrated	4	4	4	4
	20	—	—	40	40	52	52
	50	—	—	20	20	24	24
	75	—	—	13	13	16	16
	100	—	—	10	10	12	12
High-pressure sodium-vapour lamps, uncorrected	150	—	—	7	7	9	9
	200	—	—	5	5	6	6
	300	—	—	3	3	4	4
	150	0,02	—	5	5	6	6
High-pressure sodium-vapour lamps, uncorrected	250	0,03	—	3	3	4	4
	400	0,05	—	2	2	2	2
	1000	10,3	—	—	—	1	1

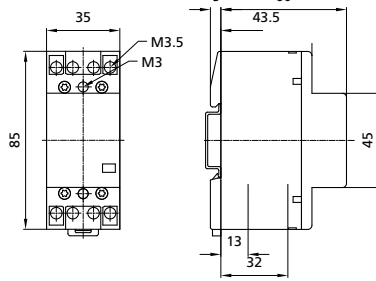
Type	Power (W)	Current (A)	C (µF)	Max. number of lamps per pole at 230 V 50 Hz			
				R20-R	RD20-R	R25-R	RD25-R
High-pressure sodium-vapour lamps, parallel correction	150	0,83	20	1	1	1	1
	250	002	33	—	—	1	1
	400	002	48	—	—	—	—
	1000	006	106	—	—	—	—
Halogen metal-vapour lamps with electronic ballast unit PCI 50-125 x ln lamp for 0.6 ms	20	000	integrated	9	9	9	9
	35	000	integrated	6	6	6	6
	70	0,36	integrated	5	5	5	5
	150	001	integrated	4	4	4	4
Low-pressure sodium-vapour lamps, uncorrected	18	0,35	—	22	22	27	27
	35	002	—	7	7	9	9
	55	002	—	7	7	9	9
	90	002	—	4	4	5	5
	135	004	—	3	3	4	4
	180	003	—	3	3	4	4
Low-pressure sodium-vapour lamps, parallel correction	18	0,35	5	6	6	7	7
	35	0,31	20	1	1	1	1
	55	0,42	20	1	1	1	1
	90	0,63	26	1	1	1	1
	135	0,94	45	—	—	—	—
	180	1,16	40	—	—	—	—
Fluorescent lamps LUMILUX T5 with electronic ballast unit (EVG)	22	0,11	FC	22	22	30	30
	40	0,21		12	12	15	15
	55	0,28		8	8	12	12
	14	0,08	HE	30	30	40	40
	21	0,11		22	22	30	30
	28	0,14		18	18	22	22
	35	0,18		14	14	18	18
	24	0,12	HO	20	20	26	26
	39	000		12	12	16	16
	49	0,24		10	10	14	14
	54	0,27		9	9	13	13
	80	0,39		6	6	8	8
	2 x 22	0,23		2 x FC	2 x 11	2 x 11	2 x 15
	2 x 40	0,42	2 x 6		2 x 6	2 x 7	2 x 7
	2 x 55	0,55	2 x 4		2 x 4	2 x 6	2 x 6
	2 x 14	0,15	2 x HE	2 x 15	2 x 15	2 x 20	2 x 20
	2 x 21	0,22		2 x 11	2 x 11	2 x 15	2 x 15
	2 x 28	0,28		2 x 9	2 x 9	2 x 11	2 x 11
	2 x 35	0,36		2 x 7	2 x 7	2 x 9	2 x 9
	2 x 24	0,24		2 x 10	2 x 10	2 x 13	2 x 13
2 x 39	0,39	2 x HO		2 x 6	2 x 6	2 x 8	2 x 8
2 x 49	0,48		2 x 5	2 x 5	2 x 7	2 x 7	
2 x 54	0,54		2 x 4	2 x 4	2 x 6	2 x 6	
2 x 80	0,74		2 x 3	2 x 3	2 x 4	2 x 4	

**Dimensions**

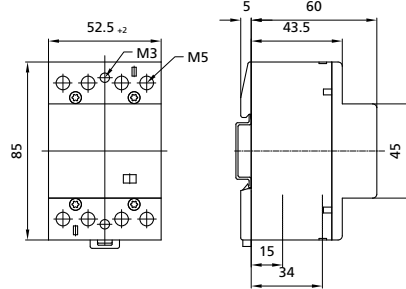
R20



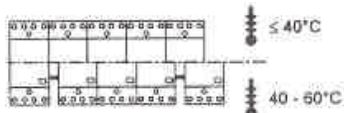
R25  
165,150



R40,R63  
Limits 190,120

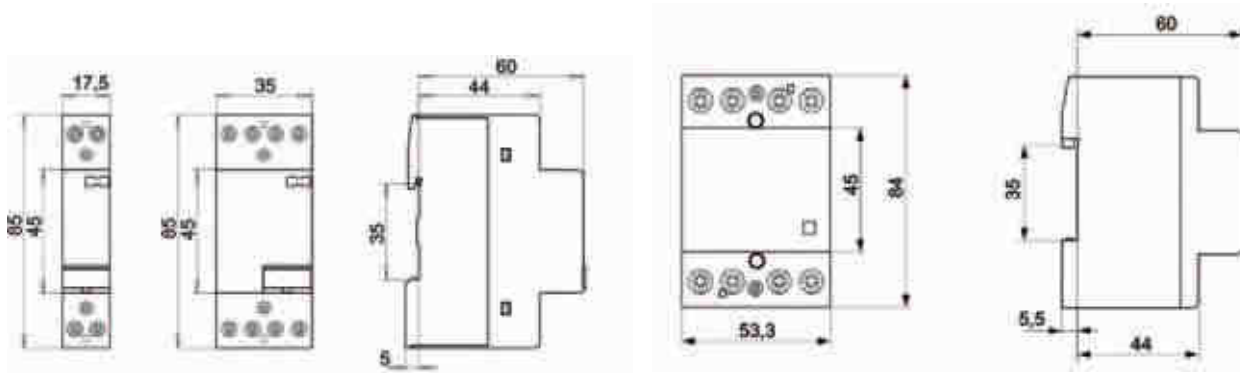
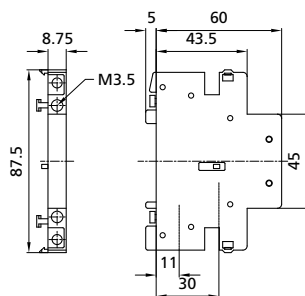


**Distance piece**



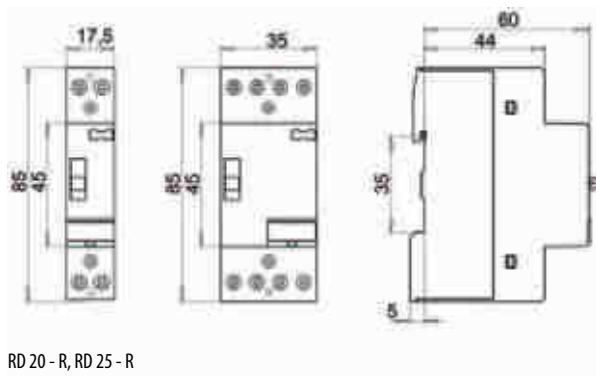
Distance piece is used where ambient temperature is higher than 40°C. Piece width is 1/2 module (8,8 mm)

RH11  
165,150



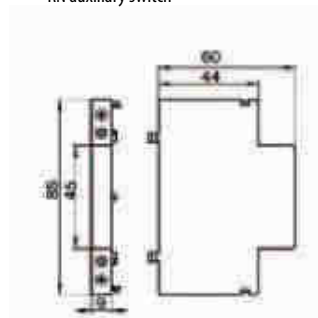
RD 20, RD 25,

RD 40, RD 63



RD 20 - R, RD 25 - R

RN auxiliary switch



## Mounting position

