

ETICON

Modular Contactors 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:

- n lightning
- n all types of pumps
- n air-conditioning
- n electric heating
- n 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:

- n A: the contactor functions as an installation contactor without manual control
- n O: permanently OFF
- n 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:

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

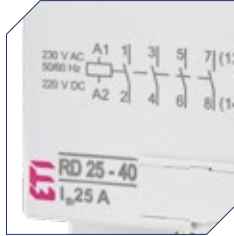
Technical specifications according to:

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

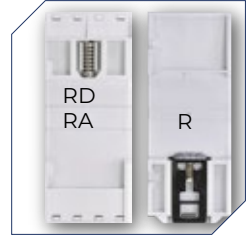
Special terminals provide reliable connection with cables.



Contactors RD series are universal power supply AC/DC with built-in varistor surge protection. RD contactors produce less noise (DC coil inside)



Spring-loaded latch ensures reliable mounting on DIN rail TH 35



Contactors series R-R have operating mode switch:
 Automatic mode (normal operation with control circuit-coil)
 Manual mode (0 - permanently open, I - constantly closed).



In manual mode constantly close operation I presence of voltage on control circuit-coil returns contactor in automatic mode operation.

Contact status can be monitored visually or remote by auxiliary contacts



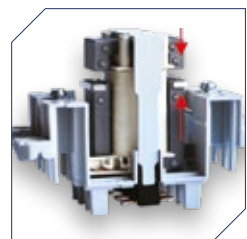
Silver contacts provide the best conductivity and lowest contact resistance



Spring loaded contacts to reduce bouncing effect and prolong contact life time



Specially designed mechanism consisting of two movable cores significantly reduces the noise level at switching





Modular contactors RA

RA series contactors are used for remote control and automatic monitoring of electrical devices and equipment in both industrial and domestic settings (lighting systems, heating and ventilation systems, switching of small power motors, etc.). They feature a modular design (1, 2, and 3 modules). The range of nominal currents is from 20 to 63 A. Coil control voltage - 230V AC.

Features:
 Low power consumption;
 High switching speed;
 Sealing Possibility;
 Supports additional contact blocks;
 Versatile applications across different industries.

Technical data

			RA 20 (2p)	RA 25 (2p)	RA 25 (4p)	RA 32 (2p)	RA 32 (4p)	RA 40 (4p)	RA 63 (4p)	
Rated insulation voltage	U_i	V	440							
Thermal rated current	I_{th}	A	20	25	25	32	32	40	63	
Protection rating according to IEC / EN 60529			IP20							
Number of modules			1	1	2	1	2	3		
Operating temperature / Storage temperature		°C	-15...+55 / -30...+80							
Pollution degree			3							
Permissible humidity			95 % RH @ +55 °C							
Minimum load values			≥ 17V; ≥ 50 mA							
Power loss per pole		W	1,7	2,0	2,2	2,5	2,5	4,0	8,0	
Backup fuse	I_v	A	20	25	25	32	32	63	80	
Noise level during operation		dB	30	30	30	30	30	30	30	
Rated impulse voltage	U_{imp}	kV	4							
Rated frequency	f	Hz	50/60							
Coil control voltage	U_c	V	230 (AC)							
Switching time:	make time	ms	15-25	15-25	10-30	15-25	10-30	15-20		
	release time		10-30	10-30	10-30	10-30	10-30	35-45		
Coil consumption:	during activation	VA / W	12/10	12/10	33/25	12/10	33/25	15,4/6	15,4/6	
	during operation		2,8/1,2	2,8/1,2	5,5/1,6	2,8/1,2	5,5/1,6	7,7/3	7,7/3	
Mechanical life			3x106	3x106	3x106	3x106	3x106	3x106	3x106	
Electrical life	• AC-1, AC-7a, AC-21	cycles	200 000		200 000	150 000	150 000	100 000		
	• AC-3, AC-7b, AC-23		300 000		500 000	300 000	500 000	150 000		
Switching capacity for AC-1, AC-7a, AC-21	1-phase connection, 230 V	P_e	kW	4	5,4	5,4	7	7	8,7	13,3
	3-phase connection, 230 V			-	-	9	-	12	16	24
	3-phase connection, 400 V			-	-	16	-	21	26	40
Switching capacity for AC-3, AC-7b, AC-23	1-phase connection, 230 V	P_e	kW	NO:1,3 / NC:0,75	1,3	1,3	NO:1,3 / NC:0,75	1,3	3,7	5
	3-phase connection, 230 V			-	-	2,2	-	2,2	5,5	8,5
	3-phase connection, 400 V			-	-	4	-	4	11	15
Maximum switching frequency (AC-1, AC-7, AC-21)			cycles							
Maximum switching frequency (no load)			cycles							
Magnetic coil	solid or stranded		mm ²							
	Insulation stripping length 		mm							
	Tightening torque		Nm							
Main connector	solid		mm ²							
	stranded		mm ²							
	Insulation stripping length 		mm							
	Tightening torque		Nm							
	Installation of multiple contactors side by side:									
standards			IEC/EN 61095, IEC/EN 60947-4-1, IEC/EN 60947-5-1							

¹⁾ At temperatures above +40°C, and also when using more than two contactors in a row, it is necessary to install an intermediate spacer IKV (code 2464074) to ensure an air gap.

Rated operating current DC-1 (L/R ≤ 1 ms) U_e=24/ 60/ 110/ 220V DC

U _e /I _e	RA 20 (2p)				RA 25 (2p)				RA 25 (4p)				RA 32 (2p)				RA 32 (4p)				RA 40 (4p)				RA 63 (4p)										
	(V)	24	60	110	220	(V)	24	60	110	220	(V)	24	60	110	220	(V)	24	60	110	220	(V)	24	60	110	220	(V)	24	60	110	220	(V)	24	60	110	220
1p	(A)	20	10	6	0,6	(A)	25	15	6	0,6	(A)	25	15	6	0,6	(A)	32	15	6	0,6	(A)	32	15	6	0,6	(A)	40	18	4	1,2	(A)	63	20	4	1,2
2p*	(A)	20	15	10	6	(A)	25	20	10	6	(A)	25	20	10	6	(A)	32	20	10	6	(A)	32	20	10	6	(A)	40	32	10	8	(A)	63	34	10	8
3p*									(A) 25 25 20 15								(A) 40 40 30 20				(A) 63 30 35 30														
4p*	* Series connection																(A) 40 40 40 40				(A) 63 63 63 63														

2-pole, 1 module (17,5 mm), 20 A (AC1, 400 V)

Type	Un,V (AC)	Code No.	Wiring diagram	Contacts		g	Box
				NO	NC		
RA 20-20 230V AC	230V	002464092		2	-	130	10/80
RA 20-11 230V AC	230V	002464097		1	1	130	10/80

Important: At an ambient temperature of t ≤ +40 °C, the maximum number of contactors that can be installed side by side is 3 units. At temperatures from +40 to +55 °C, the maximum is 2 units. When using more units, it is necessary to install an intermediate spacer IKV, Code No. 002464074.

2-pole, 1 module (17,5 mm), 25 A (AC1, 400 V)

Type	Un,V (AC)	Code No.	Wiring diagram	Contacts		g	Box
				NO	NC		
RA 25-20 230V AC	230V	002464093		2	-	130	10/80

Important: At an ambient temperature of t ≤ +40 °C, the maximum number of contactors that can be installed side by side is 3 units. At temperatures from +40 to +55 °C, the maximum is 2 units. When using more units, it is necessary to install an intermediate spacer IKV, Code No. 002464074.

4-pole, 2 modules (35 mm), 25 A (AC1, 400 V)

Type	Un,V (AC)	Code No.	Wiring diagram	Contacts		g	Box
				NO	NC		
RA 25-40 230V AC	230V	002464094		4	0	240	5/40
RA 25-22 230V AC	230V	002464089		2	2		

Important: At an ambient temperature of t ≤ +40 °C, the maximum number of contactors that can be installed side by side is 3 units. At temperatures from +40 to +55 °C, the maximum is 2 units. When using more units, it is necessary to install an intermediate spacer IKV, Code No. 002464074.

2-pole, 1 module (17,5 mm), 32 A (AC1, 400 V)

Type	Un,V (AC)	Code No.	Wiring diagram	Contacts		g	Box
				NO	NC		
RA 32-20 230V AC	230V	002464075		2	-	130	10/80

Important: At an ambient temperature of t ≤ +40 °C, the maximum number of contactors that can be installed side by side is 3 units. At temperatures from +40 to +55 °C, the maximum is 2 units. When using more units, it is necessary to install an intermediate spacer IKV, Code No. 002464074.

4-pole, 2 modules (35 mm), 32 A (AC1, 400 V)

Type	Un,V (AC)	Code No.	Wiring diagram	Contacts		g	Box
				NO	NC		
RA 32-40 230V AC	230V	002464076		4	-	240	5/40

Important: At an ambient temperature of t ≤ +40 °C, the maximum number of contactors that can be installed side by side is 3 units. At temperatures from +40 to +55 °C, the maximum is 2 units. When using more units, it is necessary to install an intermediate spacer IKV, Code No. 002464074.



2-pole, 2 module (17,5 mm), 40 A (AC1, 400 V)

Type	Un,V (AC)	Code No.	Wiring diagram	Contacts		g	
				NO	NC		
RA 40-20 230V AC	230V	002464079		2	-	240	3/75

Important: At an ambient temperature of $t \leq +40^\circ\text{C}$, the maximum number of contactors that can be installed side by side is 3 units. At temperatures from $+40$ to $+55^\circ\text{C}$, the maximum is 2 units. When using more units, it is necessary to install an intermediate spacer IKV, Code No. 2464074.

4-pole, 3 modules (52,5 mm), 40 A (AC1, 400 V)

Type	Un,V (AC)	Code No.	Wiring diagram	Contacts		g	
				NO	NC		
RA 40-40 230V AC	230V	002464095		4	-	400	5/50

Important: At an ambient temperature of $t \leq +40^\circ\text{C}$, the maximum number of contactors that can be installed side by side is 3 units. At temperatures from $+40$ to $+55^\circ\text{C}$, the maximum is 2 units. When using more units, it is necessary to install an intermediate spacer IKV, Code No. 2464074.

4-pole, 3 modules (52,5 mm), 63 A (AC1, 400 V)

Type	Un,V (AC)	Code No.	Wiring diagram	Contacts		g	
				NO	NC		
RA 63-40 230V AC	230V	002464096		4	-	400	5/50
RA 63-22 230V AC	230V	002464098		2	2		

Important: At an ambient temperature of $t \leq +40^\circ\text{C}$, the maximum number of contactors that can be installed side by side is 3 units. At temperatures from $+40$ to $+55^\circ\text{C}$, the maximum is 2 units. When using more units, it is necessary to install an intermediate spacer IKV, Code No. 2464074.

**Overall dimensions / mounting position.**