

**Contactors type CR**

Products	Contactors				Aux. contact
Rating	20 A	25 A	40 A	63 A	6A
<b>General</b>					
Standards	IEC 60947-4-1, IEC 61095				IEC 60947-5-1
Nominal operating voltage 1-phase U <sub>e</sub> 1-ph.	230 V	230 V	230 V	230 V	230 V
Nominal operating voltage 3-phase U <sub>e</sub> 3-ph.	400 V	400 V	400 V	-	-
Overvoltage protection on coil	430 V (*5)	430 V (*5)	430 V	430 V	
Mechanical endurance (switching cycles)	3.000.000	3.000.000	3.000.000	3.000.000	3.000.000
Protection class (acc. DIN 40 050, IEC 529)	IP20	IP20	IP20	IP20	IP20
Permissible ambient temperature	-5...+55 °C	-5...+55 °C	-5...+55 °C	-5...+40 °C	-5...+55 °C
Storage temperature	-30...+80 °C	-30...+80 °C	-30...+80 °C	-30...+80 °C	-30...+80 °C
<b>Contact rating</b>					
Rated insulation voltage U <sub>i</sub>	440 V	440 V	500 V	500 V	500 V
Frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz'	50/60 Hz
Rated impulse withstand voltage U <sub>imp</sub>	4 kV	4 kV	4 kV	4 kV	4 kV
Rated thermal current I <sub>th</sub>	20 A	25 A	40 A	63 A	6 A
AC1/AC7a Rated operational current I <sub>e</sub>	20 A	25 A	40 A	63 A	-
AC1/AC7a Operational power rating at U <sub>e</sub> = 230 Vac P <sub>max</sub>	4 kW	9 kW	16 kW	24 kW	-
AC1/AC7a Operational power rating at U <sub>e</sub> = 400 Vac P <sub>max</sub>	16 kW	26 kW	40 kW	-	-
AC3/AC7b Operational power rating at U <sub>e</sub> = 230 Vac P <sub>max</sub>	1,3 kW (*1)	2,2 kW	5,5 kW	8,5 kW	-
AC3/AC7b Operational power rating at U <sub>e</sub> = 400 Vac P <sub>max</sub>	4 kW	11 kW	15 kW	-	-
DC1 Rated thermal current at U <sub>e</sub> = 24 Vdc I <sub>e</sub>	20 A	25 A	40 A	63 A	-
DC1 Rated thermal current at U <sub>e</sub> = 110 Vdc I <sub>e</sub>	1A	2A	4A	4A	-
DC1 Rated thermal current at U <sub>e</sub> = 220 Vdc I <sub>e</sub>	0,5 A	0,5 A	0,8 A	0,8 A	-
DC1 Rated thermal current at U <sub>e</sub> = 24 Vdc (2-poles in series) I <sub>e</sub>	20 A	25 A	40 A	63 A	-
DC1 Rated thermal current at U <sub>e</sub> = 110 Vdc (2-poles in series) I <sub>e</sub>	3 A	4 A	10 A	10 A	-
DC1 Rated thermal current at U <sub>e</sub> = 220 Vdc (2-poles in series) I <sub>e</sub>	1,5 A	1,5 A	6 A	6 A	-
DC1 Rated thermal current at U <sub>e</sub> = 24 Vdc (3-poles in series)	-	25 A	40 A	63 A	-
DC1 Rated thermal current at U <sub>e</sub> = 110 Vdc (3-poles in series)	-	6:00 AM	30 A	35 A	-
DC1 Rated thermal current at U <sub>e</sub> = 220 Vdc (3-poles in series)	-	2,5 A	20 A	30 A	-
<b>Electrical endurance</b>					
Maximum operating cycles at AC1/AC7a application	200.000 x	200.000 x	100.000 x	100.000 x	-
Maximum operating cycles at AC3/AC7b application	300.000 x	500.000 x	150.000 x	150.000 x	-
Maximum operating cycles at AC5a application	100.000 x	100.000 x	100.000 x	100.000 x	-
Maximum operating cycles at AC5b application	100.000 x (*2)	100.000 x (*2)	100.000 x (*3)	100.000 x (*4)	-
Maximum operating cycles per hour	600 x	600 x	600 x	600 x	600 x
Power dissipation per contact at I <sub>n</sub>	1,7 W	2,2 W	4 W	8 W	-
Maximum back-up fuse	25 A gL	35 A gL	63 A gL	80 A gL	-
Rating	20 A	25 A	40 A	63 A	6 A
<b>Operating coil (for combined ac/dc types only – CR...)</b>					
Coil inrush power (for all voltage ratings)	2,5 W	3 W	5 W	5 W	-
Coil consumption (for all voltage ratings)	2,5 W	3 W	5 W	5 W	-
Closing delay	15-25 ms	15-30 ms	15-20 ms	15-20 ms	-
Opening delay	35-45 ms	50-80 ms	35-45 ms	35-45 ms	-
<b>Operating coil (for ac types only – CR...A)</b>					
Coil inrush power (for all voltage ratings)	13 W/15 VA	17 W/27 VA	-	-	-
Coil consumption (for all voltage ratings)	2 W/5 VA	1 W/2,7 VA	-	-	-
Closing delay	15 ms	15-25 ms	-	-	-
Opening delay	10 ms	35-45 ms	-	-	-

# 10.1

## Technical data

Control and switching devices dimensions and data

### Contactors type CR (continued)

Products	Contactors				Aux. contact
<b>Dimensions</b>					
Width	18 mm	35 mm	54 mm	54 mm	9 mm
Height	85 mm	85 mm	85 mm	85 mm	85 mm
Depth	60 mm	60 mm	60 mm	60 mm	60 mm
<b>Terminals for main &amp; auxiliary contacts</b>					
Terminal capacity – fine stranded wire	1...6 mm <sup>2</sup>	1...6 mm <sup>2</sup>	1...16 mm <sup>2</sup>	1...16 mm <sup>2</sup>	1...2,5 mm <sup>2</sup>
Terminal capacity – solid wire	1...10 mm <sup>2</sup>	1...10 mm <sup>2</sup>	1...25 mm <sup>2</sup>	1...25 mm <sup>2</sup>	1...2,5 mm <sup>2</sup>
Terminal screw size	M3,5	M3,5	M5	M5	M3
Terminal screw head type (Pozidrive)	PZ Size 1	PZ Size 1	PZ Size 2	PZ Size 2	PZ Size 1
Maximum torque	1,2 Nm	1,2 Nm	2,0 Nm	2,0 Nm	0,8 Nm
<b>Terminals for operating coils</b>					
Terminal capacity – fine stranded wire	1...2,5 mm <sup>2</sup>	1...2,5 mm <sup>2</sup>	1...2,5 mm <sup>2</sup>	1...2,5 mm <sup>2</sup>	
Terminal capacity – solid wire	1...2,5 mm <sup>2</sup>	1...2,5 mm <sup>2</sup>	1...2,5 mm <sup>2</sup>	1...2,5 mm <sup>2</sup>	
Terminal screw size	M3	M3	M3	M3	
Terminal screw head type (Pozidrive)	PZ Size 1	PZ Size 1	PZ Size 1	PZ Size 1	
Maximum torque	0,6 Nm	0,6 Nm	0,6 Nm	0,6 Nm	

Remarks:

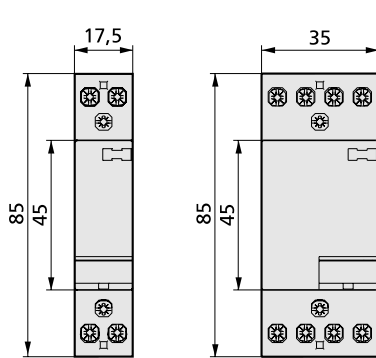
\*1) Only applicable for normally open contact(s)

\*2) At 1,5 kW

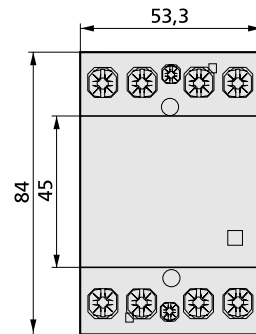
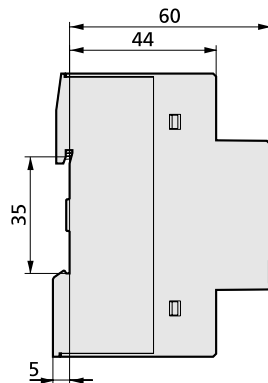
\*3) At 3 kW

\*4) At 5 kW

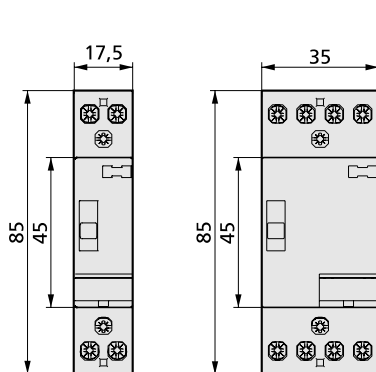
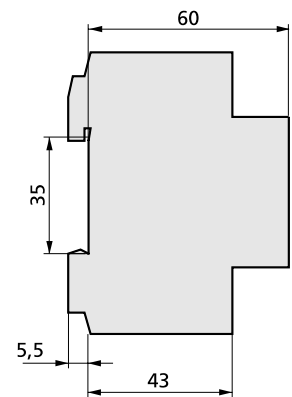
\*5) For CR... types only (combined ac/dc types), NOT for CR... A types



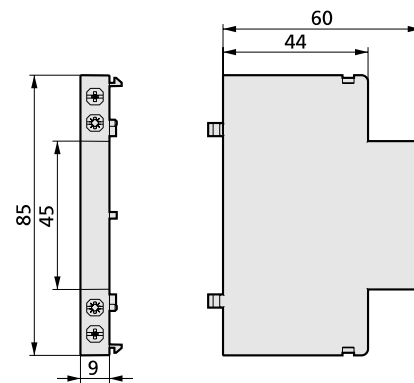
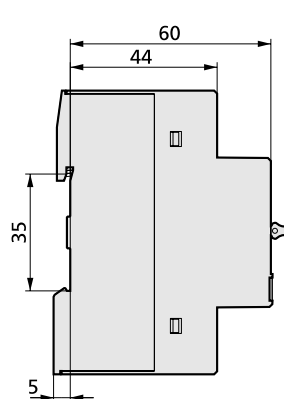
Contactors, type CR20, CR25



Contactors, type CR40, CR63



Day/night contactors, type CRM20, CRM25



Auxiliary contact