

DC coil contactors **Ex9CD** up to 100 A



- Contactors according to IEC / EN 60947-4-1
- Four frame sizes with rated current up to 100 A at 400 V AC-3
- 3-pole versions
- Coil control voltage 24 – 220 V DC
- Rated conditional short circuit current $I_q = 50$ kA
- Suitable mainly for industrial applications, can be used also for domestic ones
- Mounting onto device rail (DIN) 35 or 75 mm (frame sizes 65 and 100) or onto panel

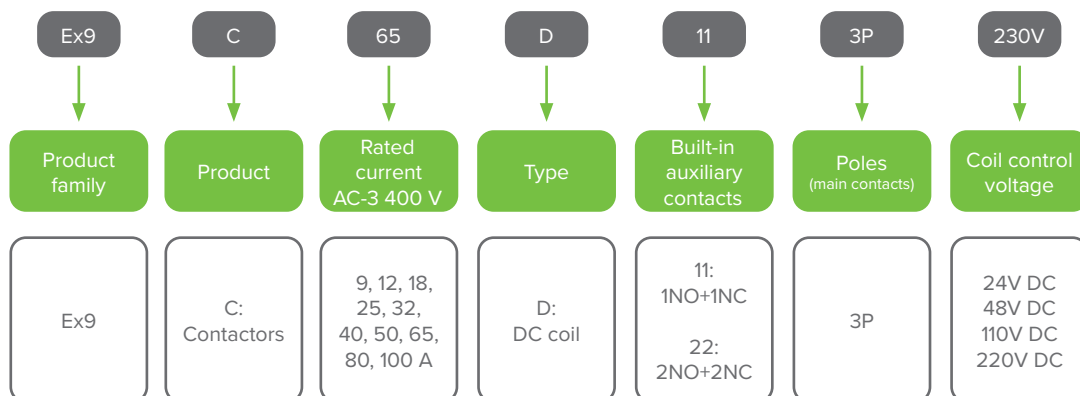
Ex9CD (DC) coil contactors are electromagnetic devices used to control the switching on and off of electrical circuits in applications where direct current is utilized. They are essential in systems where reliability and energy efficiency are critical

Ex9CD control contactors are intended for various applications including heavy industrial ones. Splitting into four frame sizes brings optimization of electrical parameters and mechanical dimensions.

All these frame sizes share accessory auxiliary contacts. Overload relays Ex9R differ with the frame sizes in order to fit respective contactor of given rated current.

Frame size 18 contains contactors with rated currents AC-3 9, 12 and 18 A at 400 V. Size 38 consists of rated currents 25, 32 A. Version 65 is splitted into currents 40, 50 and 65 A. Finally frame size 100 is covered with rated currents 80 and 100 A.

Type Key



Certification marks



Contactors Ex9CD up to 100 A

Frame sizes



Frame size 18
Rated currents 9, 12, 18 A



Frame size 38
Rated currents 25, 32 A



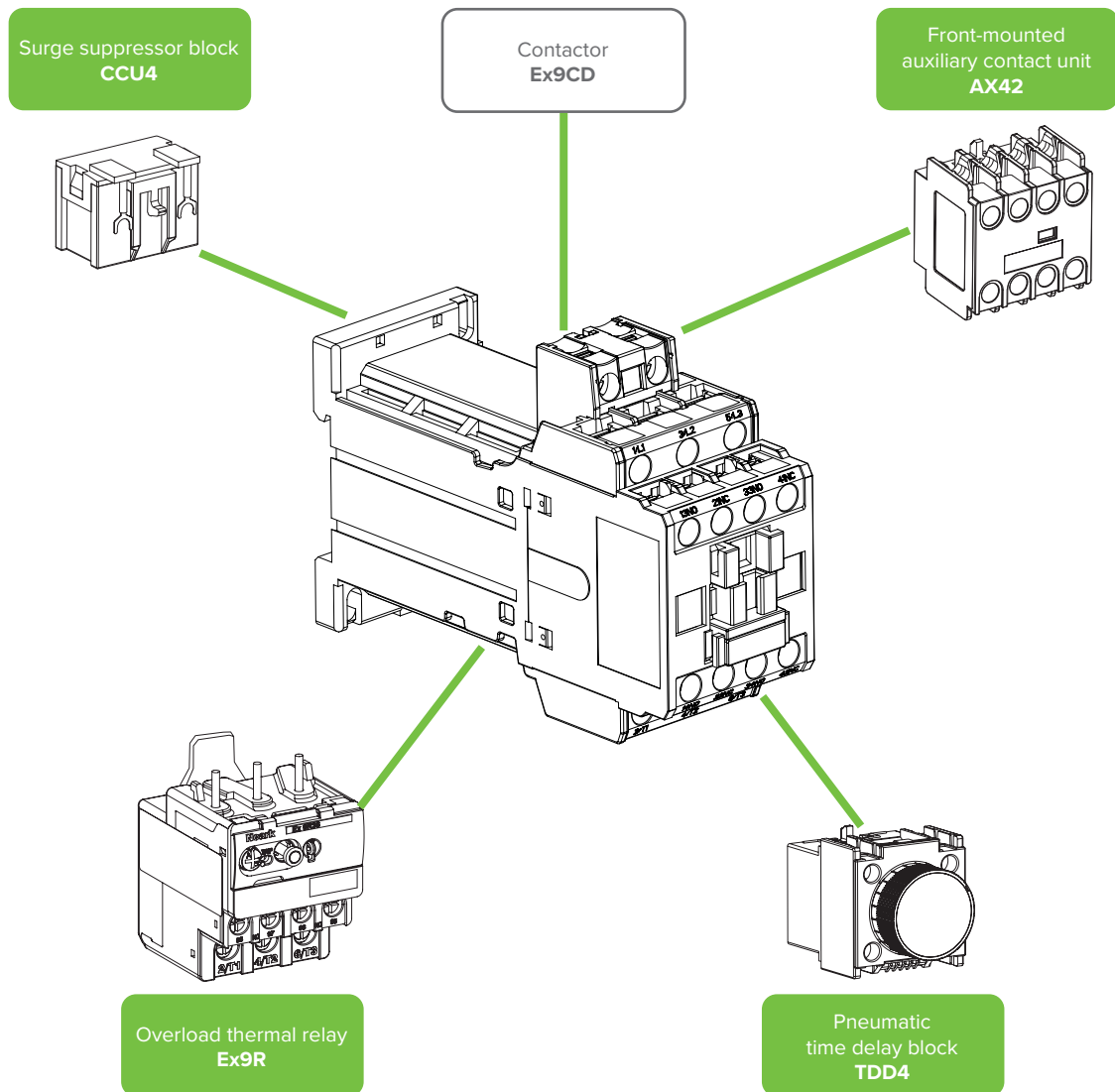
Frame size 65
Rated currents 40, 50, 65 A



Frame size 100
Rated currents 80, 100 A

Contactors **Ex9CD** up to 100 A

Accessories



Surge suppressor block CCU4i

Auxiliary contacts AX42

Overload thermal relays Ex9Ri

Surge suppressor block CCU4i

Contactors Ex9CD, frame size 18

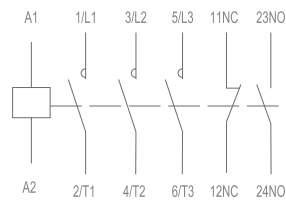
Rated current 9 A, 3-pole

- Low power consumption contactors
- Mounting onto device (DIN) rail 35 mm or onto panel
- Front-mounted auxiliary contacts AX42.. can be used
- Two configurations of auxiliary contacts
- Can be combined with overload relays Ex9R38

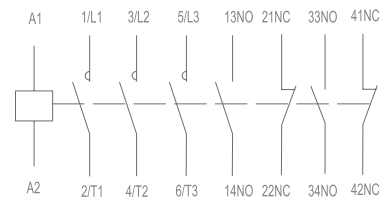


Control Voltage	AC-3 I _e	Frame size	Poles	Auxiliary contacts	Article No.	Type	Packing
220 V DC	9 A	18	3	1 NC+1NO	116432	Ex9C09D 11 3P 220V	1/15
110 V DC	9 A	18	3	1 NC+1NO	116433	Ex9C09D 11 3P 110V	1/15
48 V DC	9 A	18	3	1 NC+1NO	116434	Ex9C09D 11 3P 48V	1/15
24 V DC	9 A	18	3	1 NC+1NO	116435	Ex9C09D 11 3P 24V	1/15
220 V DC	9 A	18	3	2 NC+2NO	116436	Ex9C09D 22 3P 220V	1/15
110 V DC	9 A	18	3	2 NC+2NO	116437	Ex9C09D 22 3P 110V	1/15
48 V DC	9 A	18	3	2 NC+2NO	116438	Ex9C09D 22 3P 48V	1/15
24 V DC	9 A	18	3	2 NC+2NO	116439	Ex9C09D 22 3P 24V	1/15

Wiring diagrams



Ex9C09D 11 3P



Ex9C09D 22 3P

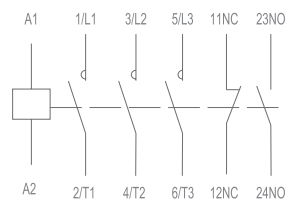
Rated current 12 A, 3-pole

- Low power consumption contactors
- Mounting onto device (DIN) rail 35 mm or onto panel
- Front-mounted auxiliary contacts AX42.. can be used
- Two configurations of auxiliary contacts
- Can be combined with overload relays Ex9R38

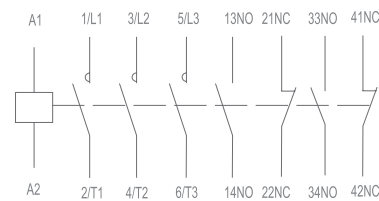


Control Voltage	AC-3 I _e	Frame size	Poles	Auxiliary contacts	Article No.	Type	Packing
220 V DC	12 A	18	3	1 NC+1NO	116448	Ex9C12D 11 3P 220V	1/15
110 V DC	12 A	18	3	1 NC+1NO	116449	Ex9C12D 11 3P 110V	1/15
48 V DC	12 A	18	3	1 NC+1NO	116450	Ex9C12D 11 3P 48V	1/15
24 V DC	12 A	18	3	1 NC+1NO	116451	Ex9C12D 11 3P 24V	1/15
220 V DC	12 A	18	3	2 NC+2NO	116452	Ex9C12D 22 3P 220V	1/15
110 V DC	12 A	18	3	2 NC+2NO	116453	Ex9C12D 22 3P 110V	1/15
48 V DC	12 A	18	3	2 NC+2NO	116454	Ex9C12D 22 3P 48V	1/15
24 V DC	12 A	18	3	2 NC+2NO	116455	Ex9C12D 22 3P 24V	1/15

Wiring diagrams



Ex9C12D 11 3P



Ex9C12D 22 3P

Contactors Ex9CD, frame size 18

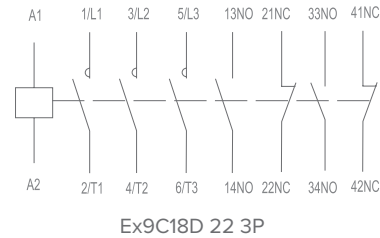
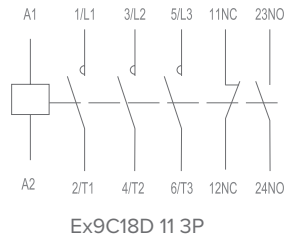
Rated current 18 A, 3-pole

- Low power consumption contactors
- Mounting onto device (DIN) rail 35 mm or onto panel
- Front-mounted auxiliary contacts AX42.. can be used
- Two configurations of auxiliary contacts
- Can be combined with overload relays Ex9R38



Control Voltage	AC-3 I _e	Frame size	Poles	Auxiliary contacts	Article No.	Type	Packing
220 V DC	18 A	18	3	1 NC+1NO	116464	Ex9C18D 11 3P 220V	1/15
110 V DC	18 A	18	3	1 NC+1NO	116465	Ex9C18D 11 3P 110V	1/15
48 V DC	18 A	18	3	1 NC+1NO	116466	Ex9C18D 11 3P 48V	1/15
24 V DC	18 A	18	3	1 NC+1NO	116467	Ex9C18D 11 3P 24V	1/15
220 V DC	18 A	18	3	2 NC+2NO	116468	Ex9C18D 22 3P 220V	1/15
110 V DC	18 A	18	3	2 NC+2NO	116469	Ex9C18D 22 3P 110V	1/15
48 V DC	18 A	18	3	2 NC+2NO	116470	Ex9C18D 22 3P 48V	1/15
24 V DC	18 A	18	3	2 NC+2NO	116471	Ex9C18D 22 3P 24V	1/15

Wiring diagrams



Contactors Ex9CD, frame size 38

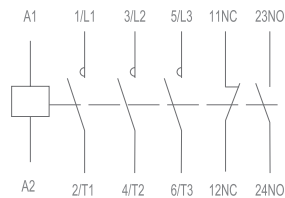
Rated current 25 A, 3-pole

- Low power consumption contactors
- Mounting onto device (DIN) rail 35 mm or onto panel
- Front-mounted auxiliary contacts AX42.. can be used
- Two configurations of auxiliary contacts
- Can be combined with overload relays Ex9R38

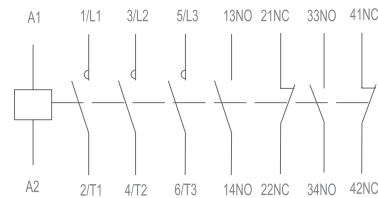


Control Voltage	AC-3 I _e	Frame size	Poles	Auxiliary contacts	Article No.	Type	Packing
220 V DC	25 A	38	3	1 NC+1NO	116480	Ex9C25D 11 3P 220V	1/28
110 V DC	25 A	38	3	1 NC+1NO	116481	Ex9C25D 11 3P 110V	1/28
48 V DC	25 A	38	3	1 NC+1NO	116482	Ex9C25D 11 3P 48V	1/28
24 V DC	25 A	38	3	1 NC+1NO	116483	Ex9C25D 11 3P 24V	1/28
220 V DC	25 A	38	3	2 NC+2NO	116484	Ex9C25D 22 3P 220V	1/28
110 V DC	25 A	38	3	2 NC+2NO	116485	Ex9C25D 22 3P 110V	1/28
48 V DC	25 A	38	3	2 NC+2NO	116486	Ex9C25D 22 3P 48V	1/28
24 V DC	25 A	38	3	2 NC+2NO	116487	Ex9C25D 22 3P 24V	1/28

Wiring diagrams



Ex9C25D 11 3P



Ex9C25D 22 3P

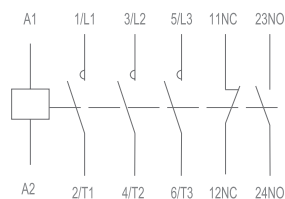
Rated current 32 A, 3-pole

- Low power consumption contactors
- Mounting onto device (DIN) rail 35 mm or onto panel
- Front-mounted auxiliary contacts AX42.. can be used
- Two configurations of auxiliary contacts
- Can be combined with overload relays Ex9R38

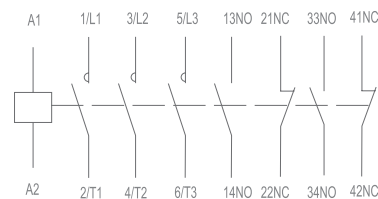


Control Voltage	AC-3 I _e	Frame size	Poles	Auxiliary contacts	Article No.	Type	Packing
220 V DC	32 A	38	3	1 NC+1NO	116496	Ex9C32D 11 3P 220V	1/28
110 V DC	32 A	38	3	1 NC+1NO	116497	Ex9C32D 11 3P 110V	1/28
48 V DC	32 A	38	3	1 NC+1NO	116498	Ex9C32D 11 3P 48V	1/28
24 V DC	32 A	38	3	1 NC+1NO	116499	Ex9C32D 11 3P 24V	1/28
220 V DC	32 A	38	3	2 NC+2NO	116500	Ex9C32D 22 3P 220V	1/28
110 V DC	32 A	38	3	2 NC+2NO	116501	Ex9C32D 22 3P 110V	1/28
48 V DC	32 A	38	3	2 NC+2NO	116502	Ex9C32D 22 3P 48V	1/28
24 V DC	32 A	38	3	2 NC+2NO	116503	Ex9C32D 22 3P 24V	1/28

Wiring diagrams



Ex9C32D 11 3P



Ex9C32D 22 3P

Contactors Ex9CD, frame size 65

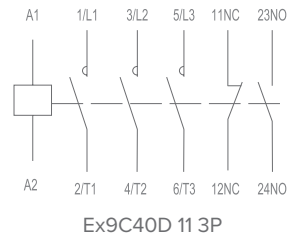
Rated current 40 A, 3-pole

- Lower consumption contactors
- Mounting onto device (DIN) rail 75 mm or onto panel
- Front-mounted auxiliary contacts AX42 can be used
- Can be combined with overload relays Ex9R100



Control Voltage	AC-3 I _e	Frame size	Poles	Auxiliary contacts	Article No.	Type	Packing
220 V DC	40 A	65	3	1 NC+1NO	116528	Ex9C40D 11 3P 220V	1/6
110 V DC	40 A	65	3	1 NC+1NO	116529	Ex9C40D 11 3P 110V	1/6
48 V DC	40 A	65	3	1 NC+1NO	116530	Ex9C40D 11 3P 48V	1/6
24 V DC	40 A	65	3	1 NC+1NO	116531	Ex9C40D 11 3P 24V	1/6

Wiring diagrams



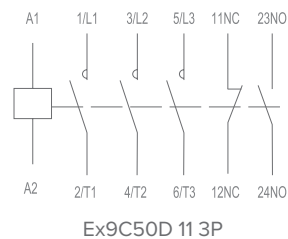
Rated current 50 A, 3-pole

- Lower consumption contactors
- Mounting onto device (DIN) rail 75 mm or onto panel
- Front-mounted auxiliary contacts AX42 can be used
- Can be combined with overload relays Ex9R100



Control Voltage	AC-3 I _e	Frame size	Poles	Auxiliary contacts	Article No.	Type	Packing
220 V DC	50 A	65	3	1 NC+1NO	116540	Ex9C50D 11 3P 220V	1/6
110 V DC	50 A	65	3	1 NC+1NO	116541	Ex9C50D 11 3P 110V	1/6
48 V DC	50 A	65	3	1 NC+1NO	116542	Ex9C50D 11 3P 48V	1/6
24 V DC	50 A	65	3	1 NC+1NO	116543	Ex9C50D 11 3P 24V	1/6

Wiring diagrams



Contactors Ex9CD, frame size 65

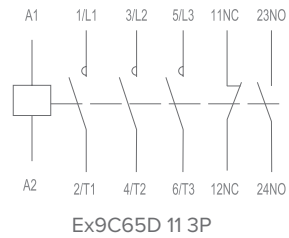
Rated current 65 A, 3-pole

- Low power consumption contactors
- Mounting onto device (DIN) rail 75 mm or onto panel
- Front-mounted auxiliary contacts AX42 can be used
- Can be combined with overload relays Ex9R100



Control Voltage	AC-3 I _e	Frame size	Poles	Auxiliary contacts	Article No.	Type	Packing
220 V DC	65 A	65	3	1 NC+1NO	116552	Ex9C65D 11 3P 220V	1/6
110 V DC	65 A	65	3	1 NC+1NO	116553	Ex9C65D 11 3P 110V	1/6
48 V DC	65 A	65	3	1 NC+1NO	116554	Ex9C65D 11 3P 48V	1/6
24 V DC	65 A	65	3	1 NC+1NO	116555	Ex9C65D 11 3P 24V	1/6

Wiring diagrams



Contactors Ex9CD, frame size 100

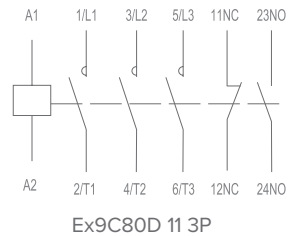
Rated current 80 A, 3-pole

- Low power consumption contactors
- Mounting onto device (DIN) rail 75 mm or onto panel
- Front-mounted auxiliary contacts AX42 can be used
- Can be combined with overload relays Ex9R100



Control Voltage	AC-3 I _e	Frame size	Poles	Auxiliary contacts	Article No.	Type	Packing
220 V DC	80 A	100	3	1 NC+1NO	116564	Ex9C80D 11 3P 220V	1/6
110 V DC	80 A	100	3	1 NC+1NO	116565	Ex9C80D 11 3P 110V	1/6
48 V DC	80 A	100	3	1 NC+1NO	116566	Ex9C80D 11 3P 48V	1/6
24 V DC	80 A	100	3	1 NC+1NO	116567	Ex9C80D 11 3P 24V	1/6

Wiring diagrams



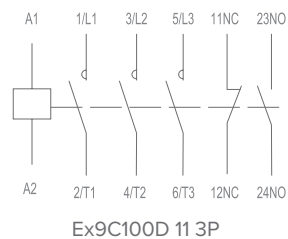
Rated current 100 A, 3-pole

- Low power consumption contactors
- Mounting onto device (DIN) rail 75 mm or onto panel
- Front-mounted auxiliary contacts AX42 can be used
- Can be combined with overload relays Ex9R100



Control Voltage	AC-3 I _e	Frame size	Poles	Auxiliary contacts	Article No.	Type	Packing
220 V DC	100 A	100	3	1 NC+1NO	116576	Ex9C100D 11 3P 220V	1/6
110 V DC	100 A	100	3	1 NC+1NO	116577	Ex9C100D 11 3P 110V	1/6
48 V DC	100 A	100	3	1 NC+1NO	116578	Ex9C100D 11 3P 48V	1/6
24 V DC	100 A	100	3	1 NC+1NO	116579	Ex9C100D 11 3P 24V	1/6

Wiring diagrams



Technical Data **Ex9CD**, frame size 18

Contactors Ex9C09D, Ex9C12D, Ex9C18D

General parameters		
Standard contactors rated at AC-3		
Suitable mainly for industrial applications		
Mounting onto device rail (DIN) 35 mm or onto panel		
With built-in auxiliary contacts		
Accessories		
Front-mounted auxiliary contacts	AX42	101284 — 101291
Surge suppression blocks	CCU42	104501, 104502, 104503
Pneumatic time delay blocks	TDD41/42	104489 — 104494
Overload relays	EX9R38	110327 — 110338

Electrical parameters - main contacts and general			
	Ex9C09D	Ex9C12D	Ex9C18D
Tested according to	IEC/EN 60947-4-1		
Rated operating voltage U_e	690 V AC		
Rated insulating voltage U_i	690 V AC		
Rated impulse withstand voltage U_{imp}	6 kV	6 kV	6 kV
Rated frequency	50/60 Hz		
Interlocked opposing contacts according to EN 60947-4-1, Annex L	yes	yes	yes
Conventional free air thermal current I_{th}	25 A	25 A	32 A
Rated operational current I_e			
AC-1	25 A	25 A	32 A
AC-2/AC-3/AC-4, 380/400 V	9 A	12 A	18 A
AC-3, 660/690 V	6.7 A	9 A	10.6 A
AC-2/AC-4, 660/690 V	4.9 A	4.9 A	6.7 A
Rated power of 3-phase motor			
AC-3/AC-4, 380/400 V	4 kW	5.5 kW	7.5 kW
AC-3, 660/690 V	5.5 kW	7.5 kW	9 kW
AC-4, 660/690 V	4 kW	4 kW	5.5 kW
Maximum short circuit protection fuse			
Coordination type 1 at 500 V AC	25 A gG/gL	40 A gG/gL	50 A gG/gL
Coordination type 2 at 500 V AC	20 A gG/gL	25 A gG/gL	36 A gG/gL
Safe isolation (EN 61140)			
Main contact — main contact	400 V AC	400 V AC	400 V AC
Main contact — coil	400 V AC	400 V AC	400 V AC
3-phase power AC-1			
Maximum back-up fuse gG/gL	50 A	50 A	63 A
Power at 230/240 V	10 kW	10 kW	13 kW
Power at 380/400 V	17 kW	17 kW	21 kW
Power at 660/690 V	29 kW	29 kW	37 kW
Rated current $I_e = I_{th}$	25 A	25 A	32 A
1-phase power AC-1, 3 contacts in parallel			
Maximum back-up fuse gG/gL	80 A	80 A	100 A
Power at 230/240 V	23 kW	23 kW	29 kW
Power at 380/400 V	37 kW	37 kW	48 kW
Power at 660/690 V	64 kW	64 kW	82 kW
Rated current $I_e = I_{th}$	56 A	56 A	72 A

Technical Data **Ex9CD**, frame size 18

Contactors Ex9C09D, Ex9C12D, Ex9C18D

Electrical parameters - main contacts and general			
	Ex9C09D	Ex9C12D	Ex9C18D
Making capacity $10 \times I_e$ (AC-3)			
230/240 V	90 A	120 A	180 A
380/400 V	90 A	120 A	180 A
660/690 V	67 A	90 A	106 A
Breaking capacity $8 \times I_e$ (AC-3)			
230/240 V	72 A	96 A	144 A
380/400 V	72 A	96 A	144 A
660/690 V	53.6 A	72 A	84.8 A
Mechanical service life	10 000 000 operation cycles		
Electrical service life 380/400 V			
AC-3	1 200 000 operation cycles		
AC-4	50 000 operation cycles	40 000 operation cycles	40 000 operation cycles
Overvoltage category	III		
EMC environment	A		
Comparative Tracking Index	400 V		
Prospective short circuit current I_q	50 kA		

Electrical parameters - coil			
	Ex9C09D	Ex9C12D	Ex9C18D
Control Voltage U_c	24, 48, 110, 220 V DC		
Tolerance of Control Voltage U_c	$0.85 - 1.1 U_c$	$0.85 - 1.1 U_c$	$0.85 - 1.1 U_c$
Frequency	DC	DC	DC
Power consumption			
Pick-up	80 W	80 W	80 W
Hold	9.5 W	9.5 W	9.5 W
Duty	100 %	100 %	100 %
Closing delay	12 – 25 ms	12 – 25 ms	12 – 25 ms
Opening delay	5 – 20 ms	5 – 20 ms	5 – 20 ms
Closing delay with front-mounted AX	12 – 25 ms	12 – 25 ms	12 – 25 ms

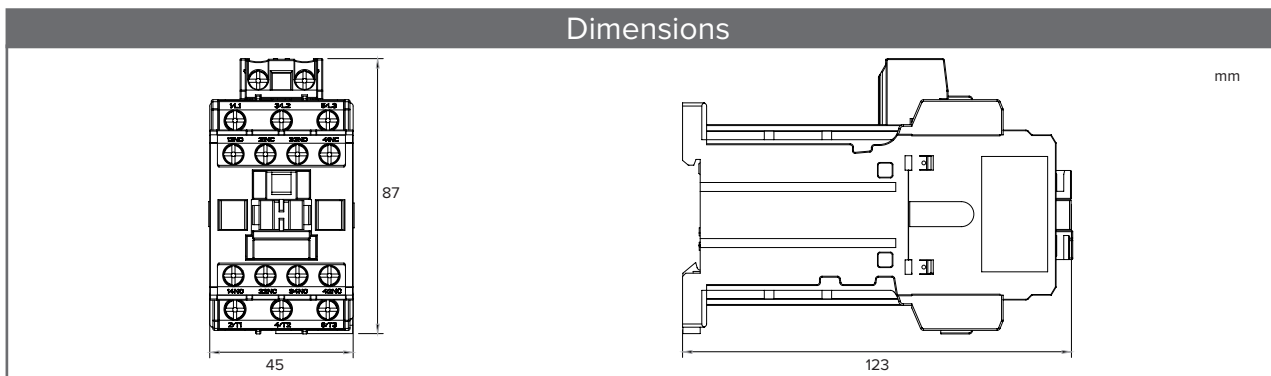
Electrical parameters - built-in auxiliary contacts	
Rated operating voltage U_e	690 V AC
Rated insulating voltage U_i	690 V AC
Rated impulse withstand voltage U_{imp}	6 kV
Rated frequency	50 Hz
Interlocked opposing contacts according to EN 60947-4-1, Annex L	yes
Conventional free air thermal current I_{th}	10 A
Rated operational current I_e	
AC-15	6 A / 120 V, 3 A / 240 V, 1.9 A / 380 V, 1.5 A / 480 V, 1.2 A / 600 V
DC-13	0.55 A / 125 V, 0.27 A / 250 V
Max. back-up fuse	10 A gG/gL
Conditional short circuit current I_k with max. back-up fuse	1 kA

Technical Data **Ex9CD**, frame size 18

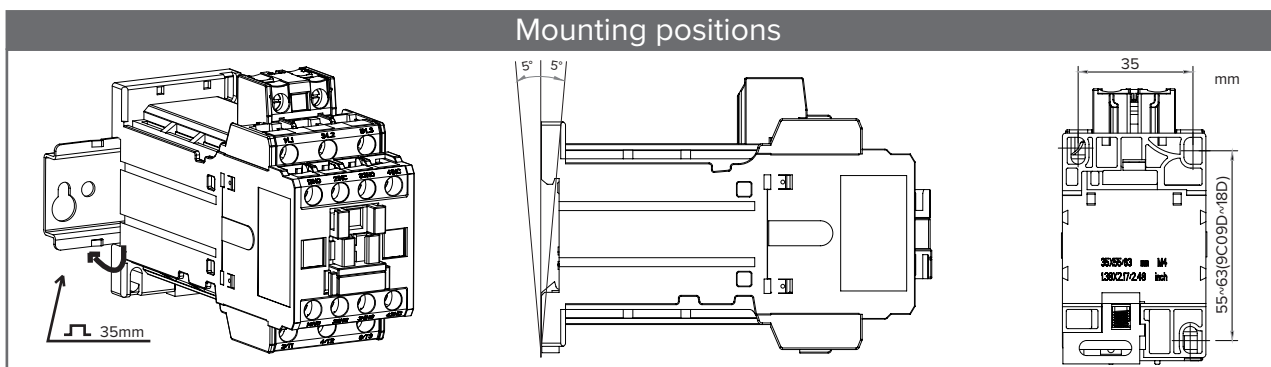
Contactors Ex9C09D, Ex9C12D, Ex9C18D

Mechanical parameters			
	Ex9C09D	Ex9C12D	Ex9C18D
Device width	45 mm (without side-mounted auxiliary contact)		
Device height	89 mm including rail clip		
Device depth	123 mm (without front-mounted auxiliary contact)		
Mounting	easy fastening onto 35 mm device rail (DIN) or onto panel		
Degree of protection	IP20		
Terminals	lift		
Terminal capacity	(1 – 2) x (1.5 – 6 mm ²) wired; 1 x (1 – 6 mm ²), 2 x (1 – 4 mm ²) solid		
Fastening torque of terminals	1.2 – 2 Nm		
Ambient temperature	-20 – +60 °C		
Altitude	≤ 2000 m		
Relative humidity	≤ 95 %		
Resistance to humidity and heat	class 2		
Pollution degree	3		
Installation class	III		
Weight	0.35 kg	0.35 kg	0.35 kg
Power loss at I _e	0.2 W	0.36 W	0.8 W

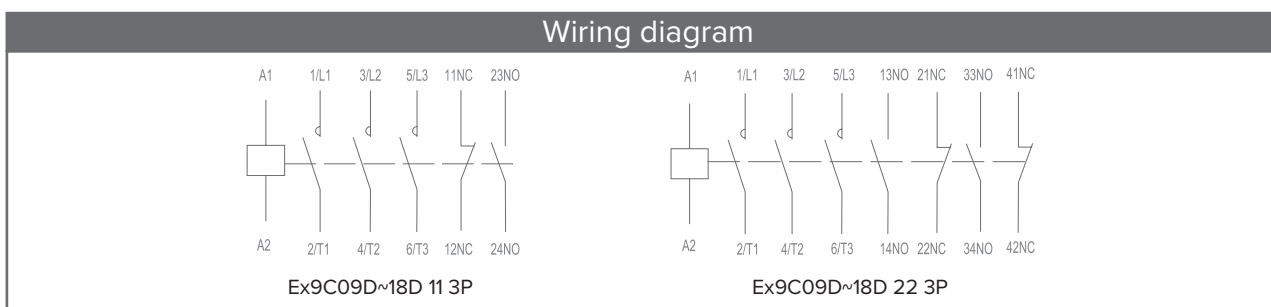
Dimensions



Mounting positions



Wiring diagram



Technical Data **Ex9CD**, frame size 38

Contactors Ex9C25D, Ex9C32D

General parameters		
Standard contactors rated at AC-3		
Suitable mainly for industrial applications		
Mounting onto device rail (DIN) 35 mm or onto panel		
With built-in auxiliary contacts		
Accessories		
Front-mounted auxiliary contacts	AX42	101284 — 101291
Surge suppression blocks	CCU42	104501, 104502, 104503
Pneumatic time delay blocks	TDD41/42	104489 — 104494
Overload relays	EX9R38	110327 — 110338

Electrical parameters - main contacts and general		
	Ex9C25D	Ex9C32D
Tested according to	IEC/EN 60947-4-1	
Rated operating voltage U_e	690 V AC	
Rated insulating voltage U_i	690 V AC	
Rated impulse withstand voltage U_{imp}	6 kV	6 kV
Rated frequency	50/60 Hz	
Interlocked opposing contacts according to EN 60947-4-1, Annex L	yes	yes
Conventional free air thermal current I_{th}	40 A	50 A
Rated operational current I_e		
AC-1	40 A	50 A
AC-2/AC-3/AC-4, 380/400 V	25 A	32 A
AC-3, 660/690 V	17.3 A	21.9 A
AC-2/AC-4, 660/690 V	14 A	17.3 A
Rated power of 3-phase motor		
AC-3/AC-4, 380/400 V	11 kW	15 kW
AC-3, 660/690 V	15 kW	18.5 kW
AC-4, 660/690 V	11 kW	15 kW
Maximum short circuit protection fuse		
Coordination type 1 at 500 V AC	63 A gG/gL	63 A gG/gL
Coordination type 2 at 500 V AC	40 A gG/gL	63 A gG/gL
Safe isolation (EN 61140)		
Main contact — main contact	400 V AC	400 V AC
Main contact — coil	400 V AC	400 V AC
3-phase power AC-1		
Maximum back-up fuse gG/gL	80 A	100 A
Power at 230/240 V	16 kW	20 kW
Power at 380/400 V	26 kW	33 kW
Power at 660/690 V	46 kW	57 kW
Rated current $I_e = I_{th}$	40 A	50 A
1-phase power AC-1, 3 contacts in parallel		
Maximum back-up fuse gG/gL	160 A	160 A
Power at 230/240 V	34 kW	42 kW
Power at 380/400 V	55 kW	69 kW
Power at 660/690 V	96 kW	120 kW
Rated current $I_e = I_{th}$	84 A	105 A

Technical Data **Ex9CD**, frame size 38

Contactors Ex9C25D, Ex9C32D

Electrical parameters - main contacts and general		
	Ex9C25D	Ex9C32D
Making capacity $10 \times I_e$ (AC-3)		
230/240 V	250 A	320 A
380/400 V	250 A	320 A
660/690 V	173 A	219 A
Breaking capacity $8 \times I_e$ (AC-3)		
230/240 V	200 A	256 A
380/400 V	200 A	256 A
660/690 V	138.4 A	175.2 A
Mechanical service life	10 000 000 operation cycles	
Electrical service life 380/400 V		
AC-3	1 200 000 operation cycles	
AC-4	50 000 operation cycles	40 000 operation cycles
Overvoltage category	III	
EMC environment	A	
Comparative Tracking Index	400 V	
Prospective short circuit current I_q	50 kA	

Electrical parameters - coil		
	Ex9C25D	Ex9C32D
Control Voltage U_c	24, 48, 110, 220 V DC	
Tolerance of Control Voltage U_c	0.85 – 1.1 U_c	0.85 – 1.1 U_c
Frequency	DC	DC
Power consumption		
Pick-up	80 W	80 W
Hold	11.4 W	11.4 W
Duty	100 %	100 %
Closing delay	12 – 25 ms	12 – 25 ms
Opening delay	5 – 20 ms	5 – 20 ms
Closing delay with front-mounted AX	12 – 25 ms	12 – 25 ms

Electrical parameters - built-in auxiliary contacts	
Rated operating voltage U_e	690 V AC
Rated insulating voltage U_i	690 V AC
Rated impulse withstand voltage U_{imp}	6 kV
Rated frequency	50 Hz
Interlocked opposing contacts according to EN 60947-4-1, Annex L	yes
Conventional free air thermal current I_{th}	10 A
Rated operational current I_e	
AC-15	6 A / 120 V, 3 A / 240 V, 1.9 A / 380 V, 1.5 A / 480 V, 1.2 A / 600 V
DC-13	0.55 A / 125 V, 0.27 A / 250 V
Max. back-up fuse	10 A gG/gL
Conditional short circuit current I_k with max. back-up fuse	1 kA

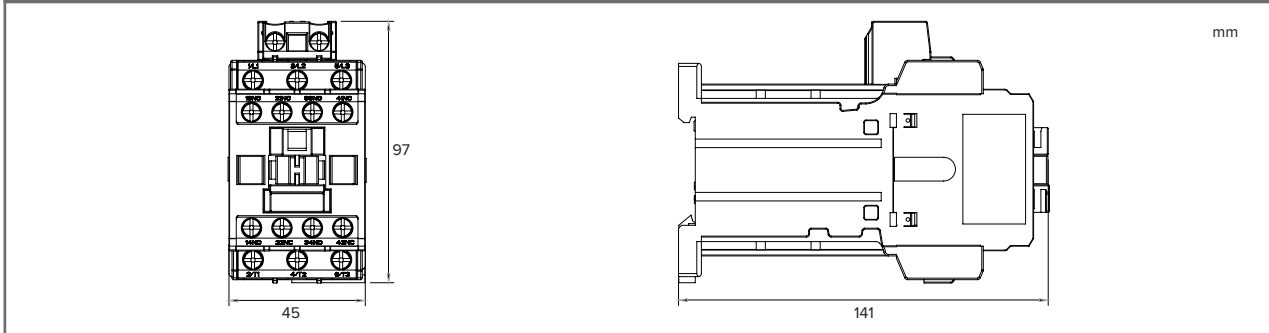
Technical Data **Ex9CD**, frame size 38

Contactors Ex9C25D, Ex9C32D

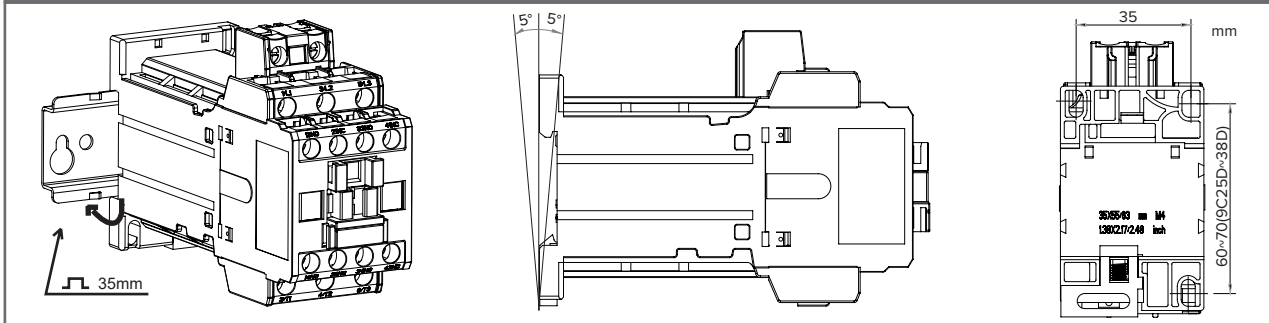
Mechanical parameters

	Ex9C25D	Ex9C32D
Device width	45 mm (without side-mounted auxiliary contact)	
Device height	100 mm including rail clip	
Device depth	141 mm (without front-mounted auxiliary contact)	
Mounting	easy fastening onto 35 mm device rail (DIN) or onto panel	
Degree of protection	IP20	
Terminals	lift	
Terminal capacity	(1 – 2) x (2.5 – 10 mm ²) wired; 1 x (1 – 10 mm ²), 2 x (1.5 – 6 mm ²) solid	
Fastening torque of terminals	2 – 2.5 Nm	
Ambient temperature	-20 – +60 °C	
Altitude	≤ 2000 m	
Relative humidity	≤ 95 %	
Resistance to humidity and heat	class 2	
Pollution degree	3	
Installation class	III	
Weight	0.4 kg	0.4 kg
Power loss at I _e	1.25 W	2 W

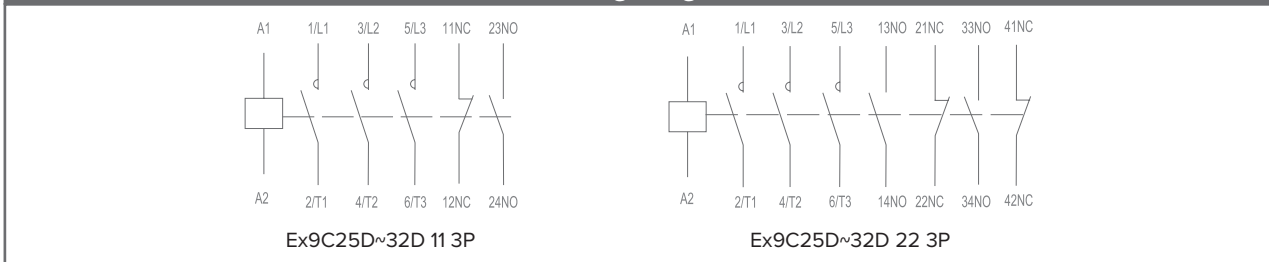
Dimensions



Mounting positions



Wiring diagram



Technical Data **Ex9CD**, frame size 65

Contactors Ex9C40D, Ex9C50D, Ex9C65D

General parameters		
Standard contactors		
Contactors rated at AC-3		
Suitable mainly for industrial applications		
Mounting onto device rail (DIN) 75 mm or onto panel		
With built-in auxiliary contacts		
Accessories		
Front-mounted auxiliary contacts	AX42	101284 — 101291
Pneumatic time delay blocks	TDD41/42	104489 — 104494
Overload relays	EX9R100	101338 — 101386

Electrical parameters - main contacts and general			
	Ex9C40D	Ex9C50D	Ex9C65D
Tested according to	IEC/EN 60947-4-1		
Rated op. voltage U_e	690 V AC		
Rated insulating voltage U_i	1000 V AC		
Rated impulse withstand voltage U_{imp}	6 kV	6 kV	6 kV
Rated frequency	50/60 Hz		
Interlocked opposing contacts according to EN 60947-4-1, Annex L	yes	yes	yes
Conventional free air thermal current I_{th}	60 A	80 A	80 A
Rated operational current I_e			
AC-1	60 A	80 A	80 A
AC-2/AC-3/AC-4, 380/400 V	40 A	50 A	65 A
AC-2/AC-3/AC-4, 660/690 V	34 A	39 A	42 A
Rated power of 3-phase motor			
AC-3/AC-4, 380/400 V	18.5 kW	22 kW	30 kW
AC-3/AC-4, 660/690 V	30 kW	33 kW	37 kW
Maximum short circuit protection fuse			
Coordination type 1 at 500 V AC	80 A gG/gL	100 A gG/gL	160 A gG/gL
Coordination type 2 at 500 V AC	80 A gG/gL	100 A gG/gL	125 A gG/gL
Safe isolation (EN 61140)			
Main contact — main contact	690 V AC	690 V AC	690 V AC
Main contact — coil	690 V AC	690 V AC	690 V AC
3-phase power AC-1			
Maximum back-up fuse gG/gL	125 A	160 A	160 A
Power at 230/240 V	24 kW	32 kW	32 kW
Power at 380/400 V	40 kW	53 kW	53 kW
Power at 660/690 V	69 kW	92 kW	92 kW
Rated current $I_e = I_{th}$	60 A	80 A	80 A
1-phase power AC-1, 3 contacts in parallel			
Maximum back-up fuse gG/gL	200 A	250 A	250 A
Power at 230/240 V	50 kW	67 kW	67 kW
Power at 380/400 V	83 kW	110 kW	110 kW
Power at 660/690 V	144 kW	192 kW	192 kW
Rated current $I_e = I_{th}$	126 A	168 A	168 A

Technical Data **Ex9CD**, frame size 65

Contactors Ex9C40D, Ex9C50D, Ex9C65D

Electrical parameters - main contacts and general			
	Ex9C40D	Ex9C50D	Ex9C65D
Making capacity $10x I_e$ (AC-3)			
230/240 V	400 A	500 A	650 A
380/400 V	400 A	500 A	650 A
660/690 V	340 A	390 A	420 A
Breaking capacity $8x I_e$ (AC-3)			
230/240 V	320 A	400 A	520 A
380/400 V	320 A	400 A	520 A
660/690 V	272 A	312 A	336 A
Mechanical service life	10 000 000 operation cycles		
Electrical service life 380/400 V			
AC-3	1 200 000 operation cycles		
AC-4	50 000 operation cycles	40 000 operation cycles	40 000 operation cycles
Overvoltage category	III		
EMC environment	A		
Comparative Tracking Index	400 V		
Prospective short circuit current I_q	50 kA		

Electrical parameters - coil			
	Ex9C40D	Ex9C50D	Ex9C65D
Control Voltage U_c	24, 48, 110, 220 V DC		
Tolerance of Control Voltage U_c	$0.85 - 1.1 U_c$	$0.85 - 1.1 U_c$	$0.85 - 1.1 U_c$
Frequency	DC	DC	DC
Power consumption			
Pick-up	300 W	300 W	300 W
Hold	34 W	34 W	34 W
Duty	100 %	100 %	100 %
Closing delay	15 – 25 ms	15 – 25 ms	15 – 25 ms
Opening delay	6 – 15 ms	6 – 15 ms	6 – 15 ms
Closing delay with front-mounted AX	15 – 25 ms	15 – 25 ms	15 – 25 ms

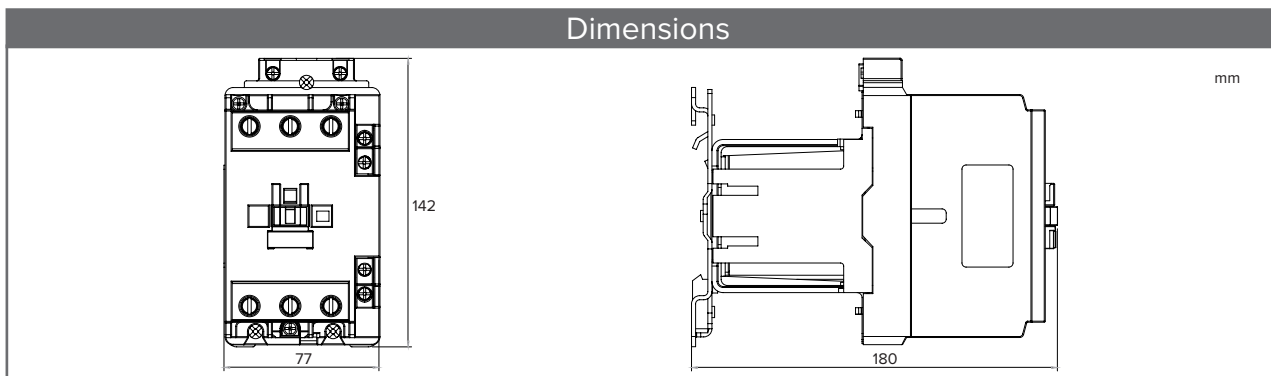
Electrical parameters - built-in auxiliary contacts	
Rated op. voltage U_e	690 V AC
Rated insulating voltage U_i	690 V AC
Rated impulse withstand voltage U_{imp}	6 kV
Rated frequency	50 Hz
Interlocked opposing contacts according to EN 60947-4-1, Annex L	yes
Conventional free air thermal current I_{th}	10 A
Rated operational current I_e	
AC-15	6 A / 120 V, 3 A / 240 V, 1.9 A / 380 V, 1.5 A / 480 V, 1.2 A / 600 V
DC-13	0.55 A / 125 V, 0.27 A / 250 V
Max. back-up fuse	10 A gG/gL
Conditional short circuit current I_k with max. back-up fuse	1 kA

Technical Data **Ex9CD**, frame size 65

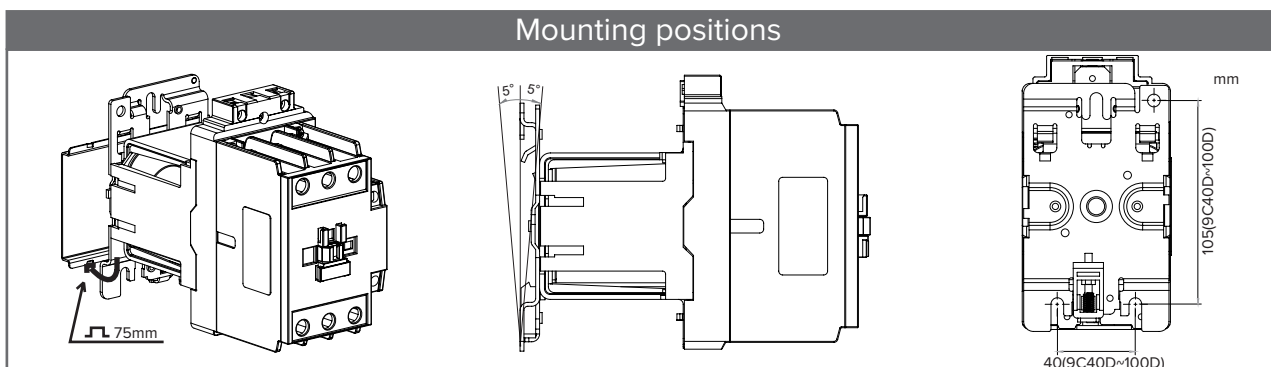
Contactors Ex9C40D, Ex9C50D, Ex9C65D

Mechanical parameters			
	Ex9C40D	Ex9C50D	Ex9C65D
Device width	77 mm		
Device height	145 mm including rail clip		
Device depth	180 mm (without front-mounted auxiliary contact)		
Mounting	easy fastening onto 75 mm device rail (DIN) or onto panel		
Degree of protection	IP20		
Terminals	lift		
Terminal capacity	(1 – 2) x (2.5 – 25 mm ²)		
Fastening torque of terminals	5.5 – 6 Nm		
Ambient temperature	-20 – +60 °C		
Altitude	≤ 2000 m		
Relative humidity	≤ 95 %		
Resistance to humidity and heat	class 2		
Pollution degree	3		
Installation class	III		
Weight	1.23 kg	1.23 kg	1.23 kg
Power loss at I _e	2.4 W	3.7 W	4.2 W

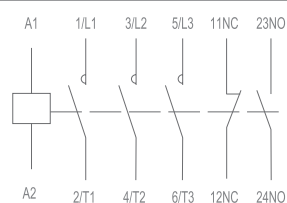
Dimensions



Mounting positions



Wiring diagram



Ex9C40D~65D 11 3P

Technical Data **Ex9CD**, frame size 100

Contactors Ex9C80D, Ex9C100D

General parameters		
Standard contactors		
Contactors rated at AC-3		
Suitable mainly for industrial applications		
Mounting onto device rail (DIN) 75 mm or onto panel		
With built-in auxiliary contacts		
Accessories		
Front-mounted auxiliary contacts	AX42	101284 — 101291
Pneumatic time delay blocks	TDD41/42	104489 — 104494
Overload relays	EX9R100	101338 — 101386

Electrical parameters - main contacts and general		
	Ex9C80D	Ex9C100D
Tested according to	IEC/EN 60947-4-1	
Rated op. voltage U_e	690 V AC	
Rated insulating voltage U_i	1000 V AC	
Rated impulse withstand voltage U_{imp}	6 kV	6 kV
Rated frequency	50/60 Hz	
Interlocked opposing contacts according to EN 60947-4-1, Annex L	yes	yes
Conventional free air thermal current I_{th}	125 A	125 A
Rated operational current I_e		
AC-1	125 A	125 A
AC-2/AC-3/AC-4, 380/400 V	80 A	100 A
AC-2/AC-3/AC-4, 660/690 V	49 A	49 A
Rated power of 3-phase motor		
AC-3/AC-4, 380/400 V	37 kW	45 kW
AC-3/AC-4, 660/690 V	45 kW	45 kW
Maximum short circuit protection fuse		
Coordination type 1 at 500 V AC	200 A gG/gL	200 A gG/gL
Coordination type 2 at 500 V AC	160 A gG/gL	160 A gG/gL
Safe isolation (EN 61140)		
Main contact — main contact	690 V AC	690 V AC
Main contact — coil	690 V AC	690 V AC
3-phase power AC-1		
Maximum back-up fuse gG/gL	250 A	250 A
Power at 230/240 V	50 kW	50 kW
Power at 380/400 V	82 kW	82 kW
Power at 660/690 V	143 kW	143 kW
Rated current $I_e = I_{th}$	125 A	125 A
1-phase power AC-1, 3 contacts in parallel		
Maximum back-up fuse gG/gL	400 A	400 A
Power at 230/240 V	105 kW	105 kW
Power at 380/400 V	172 kW	172 kW
Power at 660/690 V	300 kW	300 kW
Rated current $I_e = I_{th}$	262 A	262 A

Technical Data **Ex9CD**, frame size 100

Contactors Ex9C80D, Ex9C100D

Electrical parameters - main contacts and general		
	Ex9C80D	Ex9C100D
Making capacity $10 \times I_e$ (AC-3)		
230/240 V	800 A	1000 A
380/400 V	800 A	1000 A
660/690 V	490 A	490 A
Breaking capacity $8 \times I_e$ (AC-3)		
230/240 V	640 A	800 A
380/400 V	640 A	800 A
660/690 V	392 A	392 A
Mechanical service life	10 000 000 operation cycles	
Electrical service life 380/400 V		
AC-3	1 200 000 operation cycles	
AC-4	25 000 operation cycles	25 000 operation cycles
Overvoltage category	III	
EMC environment	A	
Comparative Tracking Index	400 V	
Prospective short circuit current I_q	50 kA	

Electrical parameters - coil		
	Ex9C80D	Ex9C100D
Control Voltage U_c	24, 48, 110, 220 V DC	
Tolerance of Control Voltage U_c	0.85 – 1.1 U_c	0.85 – 1.1 U_c
Frequency	DC	DC
Power consumption		
Pick-up	330 W	330 W
Hold	36.6 W	36.6 W
Duty	100 %	100 %
Closing delay	15 – 30 ms	15 – 30 ms
Opening delay	6 – 20 ms	6 – 20 ms
Closing delay with front-mounted AX	15 – 30 ms	15 – 30 ms

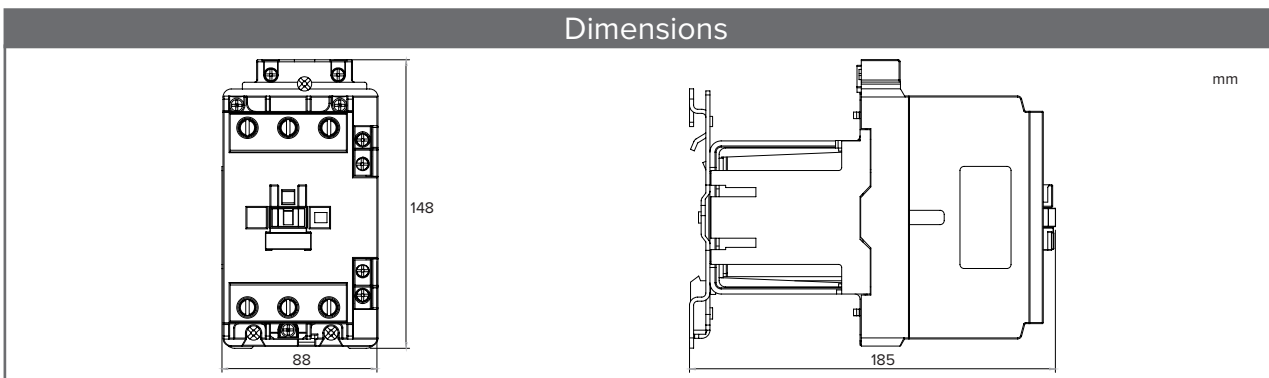
Electrical parameters - built-in auxiliary contacts	
Rated op. voltage U_e	690 V AC
Rated insulating voltage U_i	690 V AC
Rated impulse withstand voltage U_{imp}	6 kV
Rated frequency	50 Hz
Interlocked opposing contacts according to EN 60947-4-1, Annex L	yes
Conventional free air thermal current I_{th}	10 A
Rated operational current I_e	
AC-15	6 A / 120 V, 3 A / 240 V, 1.9 A / 380 V, 1.5 A / 480 V, 1.2 A / 600 V
DC-13	0.55 A / 125 V, 0.27 A / 250 V
Max. back-up fuse	10 A gG/gL
Conditional short circuit current I_k with max. back-up fuse	1 kA

Technical Data **Ex9CD**, frame size 100

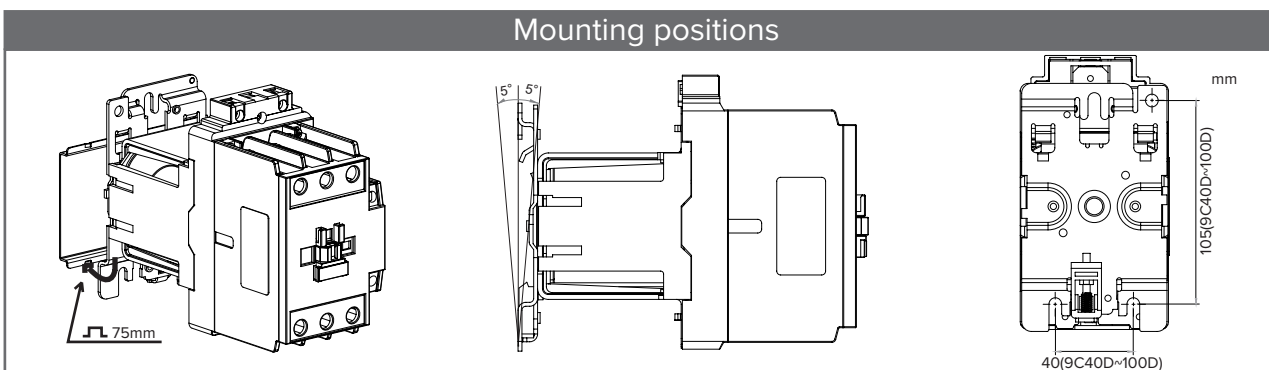
Contactors Ex9C80D, Ex9C100D

Mechanical parameters		
	Ex9C80D	Ex9C100D
Device width	88 mm	
Device height	150 mm including rail clip	
Device depth	185 mm (without front-mounted auxiliary contact)	
Mounting	easy fastening onto 75 mm device rail (DIN) or onto panel	
Degree of protection	IP20	
Terminals	lift	
Terminal capacity	(1 – 2) x (4 – 50 mm ²)	
Fastening torque of terminals	5.5 – 6 Nm	
Ambient temperature	-20 – +60 °C	
Altitude	≤ 2000 m	
Relative humidity	≤ 95 %	
Resistance to humidity and heat	class 2	
Pollution degree	3	
Installation class	III	
Weight	1.5 kg	1.5 kg
Power loss at I _e	5.1 W	7.5 W

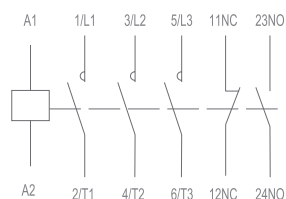
Dimensions



Mounting positions



Wiring diagram



Ex9C80D~100D 11 3P