

Miniature contactors

Ex9CSD

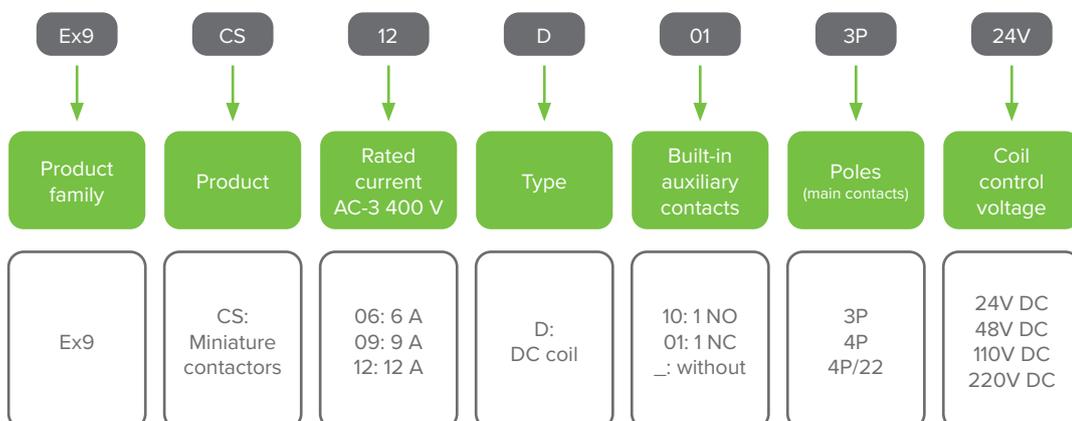


- Tested according to IEC / EN 60947-4-1
- 3 and 4-pole versions
- Rated current AC-3 6, 9 and 12 A at 400 V
- Coil control voltage 24 – 220 V DC
- Rated conditional short circuit current $I_q = 50$ kA
- Suitable for industrial as well as domestic applications
- Mounting onto device rail (DIN) 35 mm or onto panel

Ex9CSD contactors bring excellent electric parameters in the form of very compact device. These contactors can be used for both industrial as well as domestic applications. Thermal current and AC-1 load 20 A at 690 V AC allows switching of resistive loads with maximum currents usual for domestic applications. Thanks to compact dimensions, Ex9CSD contactors are ideal solution for space limited installations.

Contactors are offered as 3 and 4-pole versions and as a 4-pole version with main contacts configuration 2 normally open and 2 normally closed (4P/22).

Type Key



Certification marks



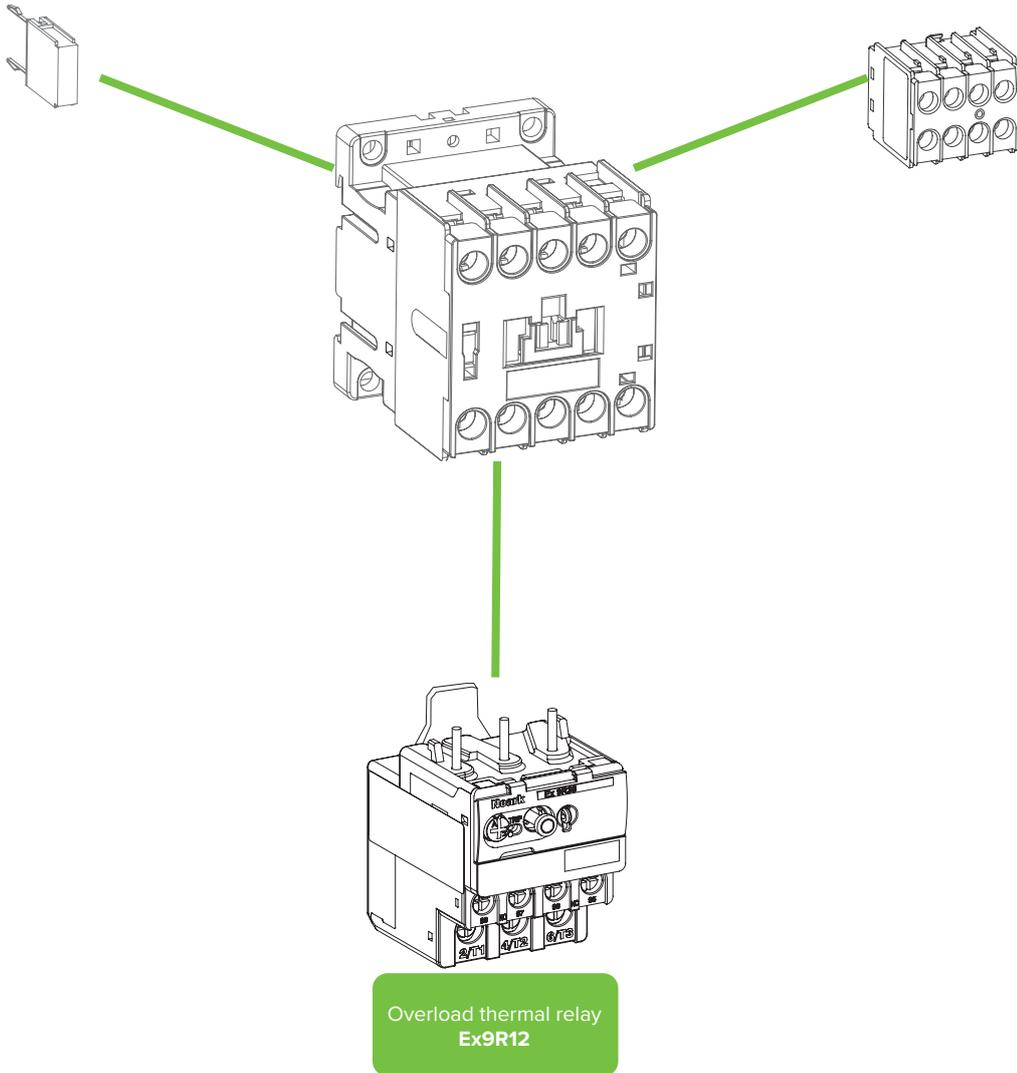
Miniature contactors Ex9CS

Accessories

Surge suppressor block
CCU41

Miniature contactor
Ex9CSD

Front-mounted
auxiliary contact unit
AX41



Auxiliary contacts AX41

Overload thermal relays Ex9R12

Surge suppressor block CCU41

Miniature contactors Ex9CSD

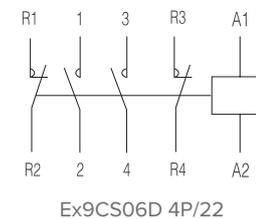
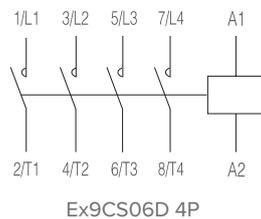
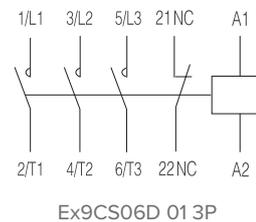
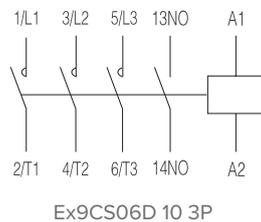
Rated current 6 A, 3 and 4 Pole

- Miniature version of contactor
- Mounting onto device (DIN) rail 35 mm or onto panel
- Front-mounted auxiliary contacts AX41.. can be used
- Can be combined with overload relays Ex9R12
- 4 Pole version doesn't have internal auxiliary contacts



Control voltage	AC-3 I_c	Frame size	Poles	Auxiliary contacts	Article No.	Type	Packing
220 V DC	6 A	S12	3	1 NC	116384	Ex9CS06D 01 3P 220V	1/80
110 V DC	6 A	S12	3	1 NC	116385	Ex9CS06D 01 3P 110V	1/80
48 V DC	6 A	S12	3	1 NC	116386	Ex9CS06D 01 3P 48V	1/80
24 V DC	6 A	S12	3	1 NC	116387	Ex9CS06D 01 3P 24V	1/80
220 V DC	6 A	S12	3	1 NO	116388	Ex9CS06D 10 3P 220V	1/80
110 V DC	6 A	S12	3	1 NO	116389	Ex9CS06D 10 3P 110V	1/80
48 V DC	6 A	S12	3	1 NO	116390	Ex9CS06D 10 3P 48V	1/80
24 V DC	6 A	S12	3	1 NO	116391	Ex9CS06D 10 3P 24V	1/80
220 V DC	6 A	S12	4	-	116392	Ex9CS06D 4P 220V	1/80
110 V DC	6 A	S12	4	-	116393	Ex9CS06D 4P 110V	1/80
48 V DC	6 A	S12	4	-	116394	Ex9CS06D 4P 48V	1/80
24 V DC	6 A	S12	4	-	116395	Ex9CS06D 4P 24V	1/80
220 V DC	6 A	S12	2+2	-	116396	Ex9CS06D 4P/22 220V	1/80
110 V DC	6 A	S12	2+2	-	116397	Ex9CS06D 4P/22 110V	1/80
48 V DC	6 A	S12	2+2	-	116398	Ex9CS06D 4P/22 48V	1/80
24 V DC	6 A	S12	2+2	-	116399	Ex9CS06D 4P/22 24V	1/80

Wiring diagrams



Miniature contactors Ex9CSD

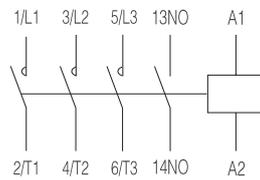
Rated current 9 A, 3 and 4 Pole

- Miniature version of contactor
- Mounting onto device (DIN) rail 35 mm or onto panel
- Front-mounted auxiliary contacts AX41.. can be used
- Can be combined with overload relays Ex9R12
- 4 Pole version doesn't have internal auxiliary contacts

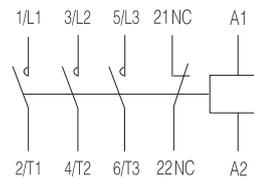


Control voltage	AC-3 I_c	Frame size	Poles	Auxiliary contacts	Article No.	Type	Packing
220 V DC	9 A	S12	3	1 NC	116400	Ex9CS09D 01 3P 220V	1/80
110 V DC	9 A	S12	3	1 NC	116401	Ex9CS09D 01 3P 110V	1/80
48 V DC	9 A	S12	3	1 NC	116402	Ex9CS09D 01 3P 48V	1/80
24 V DC	9 A	S12	3	1 NC	116403	Ex9CS09D 01 3P 24V	1/80
220 V DC	9 A	S12	3	1 NO	116404	Ex9CS09D 10 3P 220V	1/80
110 V DC	9 A	S12	3	1 NO	116405	Ex9CS09D 10 3P 110V	1/80
48 V DC	9 A	S12	3	1 NO	116406	Ex9CS09D 10 3P 48V	1/80
24 V DC	9 A	S12	3	1 NO	116407	Ex9CS09D 10 3P 24V	1/80
220 V DC	9 A	S12	4	-	116408	Ex9CS09D 4P 220V	1/80
110 V DC	9 A	S12	4	-	116409	Ex9CS09D 4P 110V	1/80
48 V DC	9 A	S12	4	-	116410	Ex9CS09D 4P 48V	1/80
24 V DC	9 A	S12	4	-	116411	Ex9CS09D 4P 24V	1/80
220 V DC	9 A	S12	2+2	-	116412	Ex9CS09D 4P/22 220V	1/80
110 V DC	9 A	S12	2+2	-	116413	Ex9CS09D 4P/22 110V	1/80
48 V DC	9 A	S12	2+2	-	116414	Ex9CS09D 4P/22 48V	1/80
24 V DC	9 A	S12	2+2	-	116415	Ex9CS09D 4P/22 24V	1/80

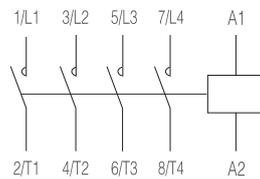
Wiring diagrams



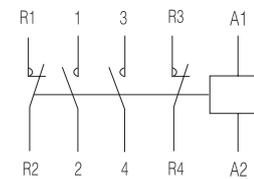
Ex9CS09D 10 3P



Ex9CS09D 01 3P



Ex9CS09D 4P



Ex9CS09D 4P/22

Miniature contactors Ex9CSD

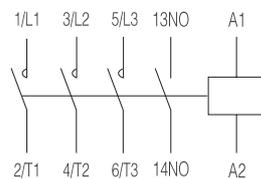
Rated current 12 A, 3 and 4 Pole

- Miniature version of contactor
- Mounting onto device (DIN) rail 35 mm or onto panel
- Front-mounted auxiliary contacts AX41.. can be used
- Can be combined with overload relays Ex9R12
- 4 Pole version doesn't have internal auxiliary contacts

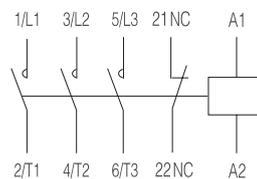


Control voltage	AC-3 I_c	Frame size	Poles	Auxiliary contacts	Article No.	Type	Packing
220 V DC	12 A	S12	3	1 NC	116416	Ex9CS12D 01 3P 220V	1/80
110 V DC	12 A	S12	3	1 NC	116417	Ex9CS12D 01 3P 110V	1/80
48 V DC	12 A	S12	3	1 NC	116418	Ex9CS12D 01 3P 48V	1/80
24 V DC	12 A	S12	3	1 NC	116419	Ex9CS12D 01 3P 24V	1/80
220 V DC	12 A	S12	3	1 NO	116420	Ex9CS12D 10 3P 220V	1/80
110 V DC	12 A	S12	3	1 NO	116421	Ex9CS12D 10 3P 110V	1/80
48 V DC	12 A	S12	3	1 NO	116422	Ex9CS12D 10 3P 48V	1/80
24 V DC	12 A	S12	3	1 NO	116423	Ex9CS12D 10 3P 24V	1/72
220 V DC	12 A	S12	4	-	116424	Ex9CS12D 4P 220V	1/80
110 V DC	12 A	S12	4	-	116425	Ex9CS12D 4P 110V	1/80
48 V DC	12 A	S12	4	-	116426	Ex9CS12D 4P 48V	1/80
24 V DC	12 A	S12	4	-	116427	Ex9CS12D 4P 24V	1/80
220 V DC	12 A	S12	2+2	-	116428	Ex9CS12D 4P/22 220V	1/80
110 V DC	12 A	S12	2+2	-	116429	Ex9CS12D 4P/22 110V	1/80
48 V DC	12 A	S12	2+2	-	116430	Ex9CS12D 4P/22 48V	1/80
24 V DC	12 A	S12	2+2	-	116431	Ex9CS12D 4P/22 24V	1/80

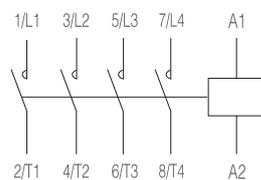
Wiring diagrams



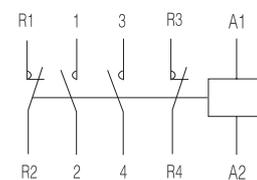
Ex9CS12D 10 3P



Ex9CS12D 01 3P



Ex9CS12D 4P



Ex9CS12D 4P/22

Technical Data **Ex9CSD**

Miniature contactors Ex9CS06D, Ex9CS09D, Ex9CS12D

General parameters		
Very compact dimensions		
Contactors rated at AC-3		
Suitable for industrial as well as domestic applications		
3 and 4-pole versions		
Mounting onto device rail (DIN) 35 mm or onto panel		
With or without built-in auxiliary contacts		
Accessories		
Front-mounted auxiliary contacts	AX41	101435, 101280, 101281, 101282, 101283
Surge suppression blocks	CCU41	104501, 104502, 104503
Overload relays	Ex9R12	101359 — 101370

Electrical parameters - main contacts and general			
	Ex9CS06D	Ex9CS09D	Ex9CS12D
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}	20 A	20 A	20 A
Rated operational current I_e			
AC-1	20 A	20 A	20 A
AC-2/AC-3/AC-4, 380/400 V	6 A	9 A	12 A
AC-2/AC-3/AC-4, 660/690 V	3.8 A	4.9 A	4.9 A
Rated power of 3-phase motor			
AC-3/AC-4, 380/400 V	2.2 kW	4 kW	5.5 kW
AC-3/AC-4, 660/690 V	3 kW	4 kW	4 kW
Maximum short circuit protection fuse			
Coordination type 1 at 500 V AC	25 A gG/gL	25 A gG/gL	25 A gG/gL
Coordination type 2 at 500 V AC	20 A gG/gL	20 A gG/gL	20 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	36 A	36 A	36 A
Power at 230/240 V	8 kW	8 kW	8 kW
Power at 380/400 V	13 kW	13 kW	13 kW
Power at 660/690 V	23 kW	23 kW	23 kW
Rated current $I_e = I_{th}$	20 A	20 A	20 A
1-phase power AC-1, 3 contacts in parallel			
Maximum back-up fuse gG/gL	63 A	63 A	63 A
Power at 230/240 V	18 kW	18 kW	18 kW
Power at 380/400 V	30 kW	30 kW	30 kW
Power at 660/690 V	51 kW	51 kW	51 kW
Rated current $I_e = I_{th}$	45 A	45 A	45 A

Technical Data **Ex9CSD**

Miniature contactors Ex9CS06D, Ex9CS09D, Ex9CS12D

Electrical parameters - main contacts and general

	Ex9CS06D	Ex9CS09D	Ex9CS12D
Making capacity $10 \times I_e$ (AC-3)			
230/240 V	60 A	90 A	120 A
380/400 V	60 A	90 A	120 A
660/690 V	38 A	49 A	49 A
Breaking capacity $8 \times I_e$ (AC-3)			
230/240 V	48 A	72 A	96 A
380/400 V	48 A	72 A	96 A
660/690 V	30.4 A	39.2 A	32.9 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

	Ex9CS06D	Ex9CS09D	Ex9CS12D
Control Voltage U_c	24, 48, 110, 220 V DC		
Tolerance of Control Voltage U_c	$0.8 - 1.1 U_c$	$0.8 - 1.1 U_c$	$0.8 - 1.1 U_c$
Frequency	DC	DC	DC
Power consumption			
Pick-up	40 W	40 W	40 W
Hold	7 W	7 W	7 W
Duty	100 %	100 %	100 %
Closing delay	10 - 18 ms	10 - 18 ms	10 - 18 ms
Opening delay	4 - 16 ms	4 - 16 ms	4 - 16 ms
Closing delay with front-mounted AX	10 - 18 ms	10 - 18 ms	10 - 18 ms

Electrical parameters - built-in auxiliary contacts

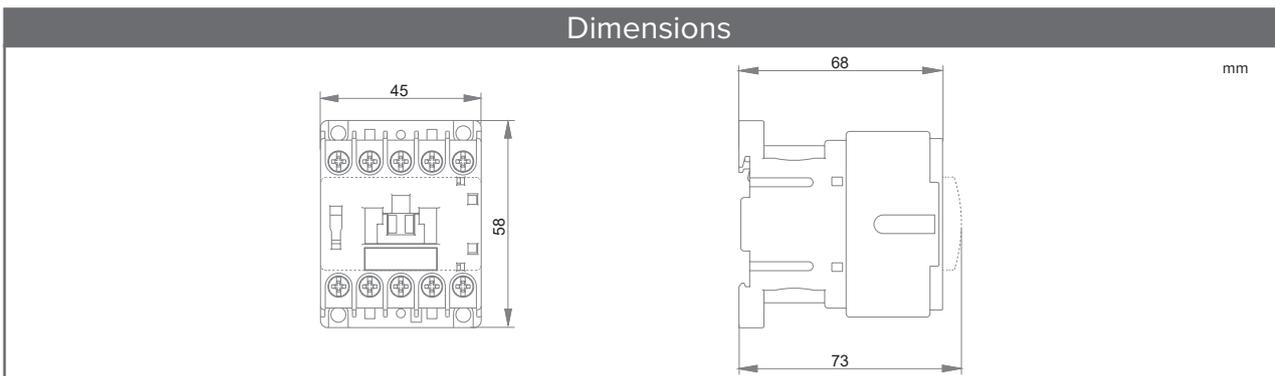
Rated operating voltage U_e	690 V AC
Rated insulating voltage U_i	690 V AC
Rated impulse withstand voltage U_{imp}	6 kV
Rated frequency	50 Hz
Interlocked opposing contacts according to EN 60947-4-1, Annex L	yes
Conventional free air thermal current I_{th}	10 A
Rated operational current I_e	
AC-15	6 A / 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 **Ex9CSD**

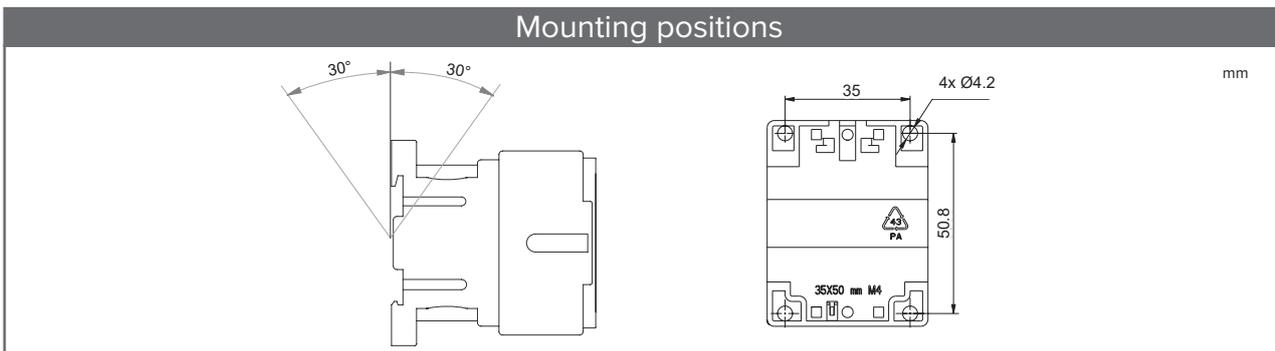
Miniature contactors Ex9CS06D, Ex9CS09D, Ex9CS12D

Mechanical parameters			
	Ex9CS06D	Ex9CS09D	Ex9CS12D
Device width	45 mm		
Device height	59 mm including rail clip		
Device depth	68 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 – 2.5 mm ²		
Fastening torque of terminals	0.7 – 0.8 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	0.18 kg	0.18 kg	0.18 kg
Power loss at I_e	0.2 W	0.2 W	0.2 W

Dimensions



Mounting positions



Wiring diagrams

