

# Reversible contactors Ex9CR



- Reversible combinations of contactors
- Tested 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 — 415 V AC
- Rated conditional short circuit current I<sub>q</sub> 50 kA
- Mechanical interlock between contactors
- Mounting onto device rail (DIN) 35 or 75 mm or onto panel

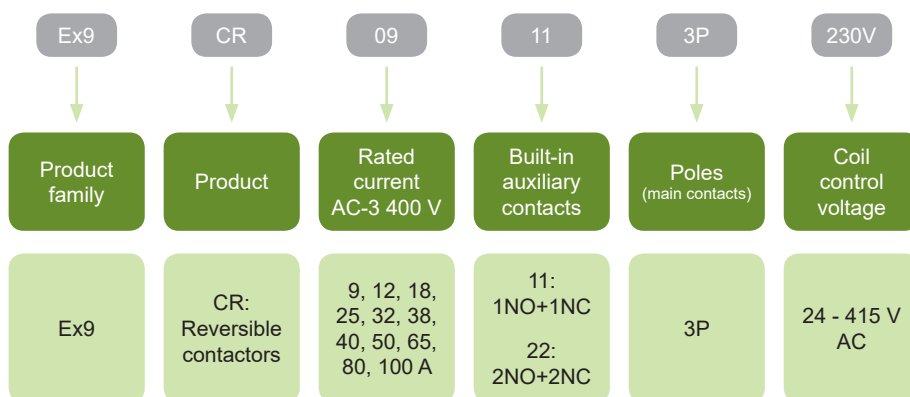
Reversible contactors Ex9CR are intended mainly for switching of asynchronous motors with possibility of change of rotation direction. They can also be used for switching of two circuits when it is necessary to ensure that maximum one circuit is connected.

The combinations are equipped with mechanical interlock. Additional electrical interlock of control voltages (e.g. for EN 60204) can be implemented by means of auxiliary contacts AX42 or built-in auxiliary contacts.

Splitting into four frame sizes brings optimization of electrical parameters and mechanical dimensions. All these frame sizes share full range of accessories. Overload relays Ex9R differ with the frame sizes in order to fit respective contactor of given rated current.

The same function can be achieved by combination of two contactors Ex9C with mechanical interlock MIT4.

## Type Key



## Certification marks



# Reversible contactors Ex9CR

## Frame sizes



**Frame size 18**  
Rated currents 9, 12, 18 A



**Frame size 38**  
Rated currents 25, 32, 38 A



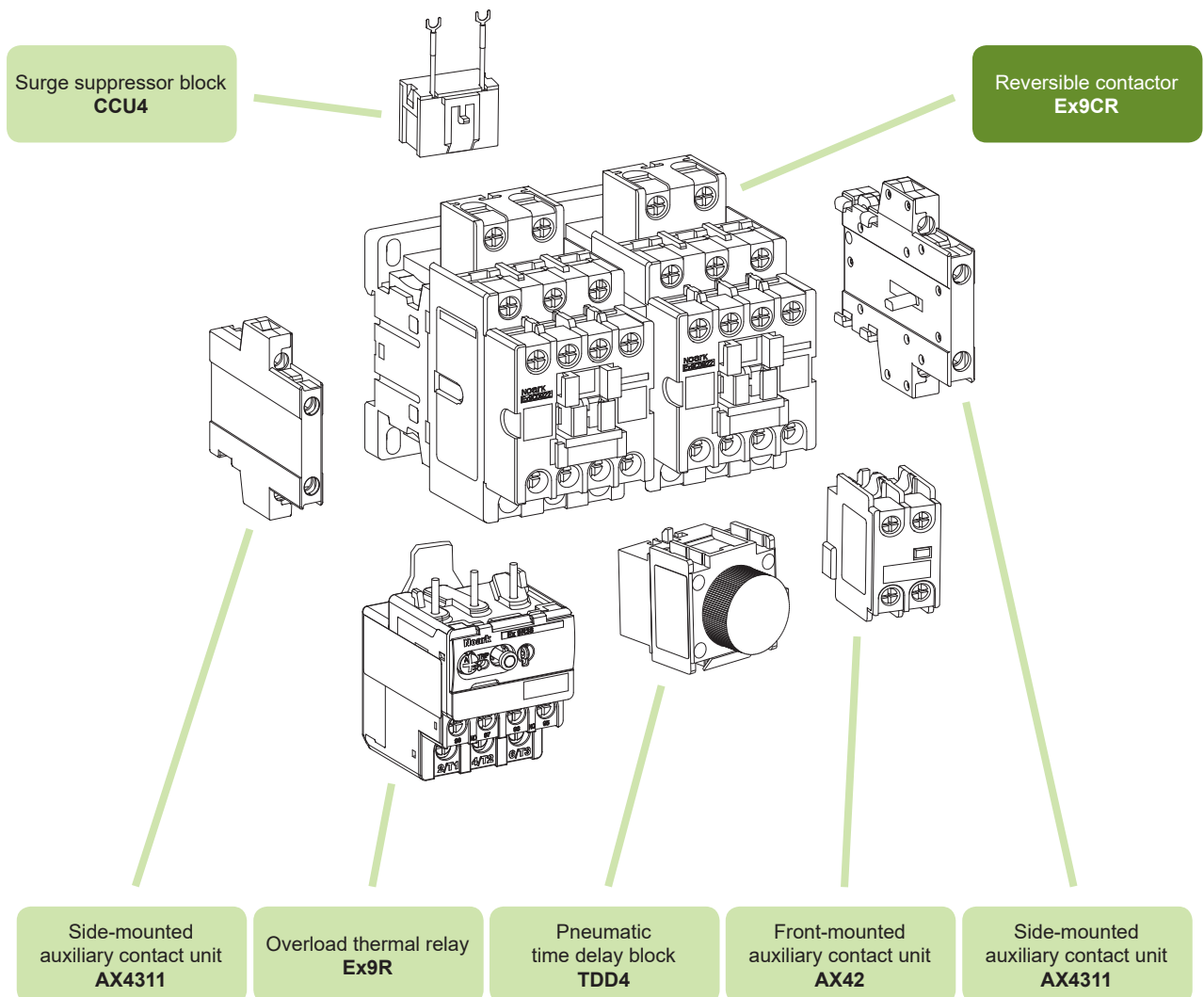
**Frame size 65**  
Rated currents 40, 50, 65 A



**Frame size 100**  
Rated currents 80, 100 A

# Reversible contactors Ex9CR

## Accessories



Auxiliary contacts AX4311

Auxiliary contacts AX42

Overload thermal relays Ex9R

Pneumatic time delay block TDD4

Surge suppressor block CCU4

# Reversible contactors Ex9CR, frame size 18

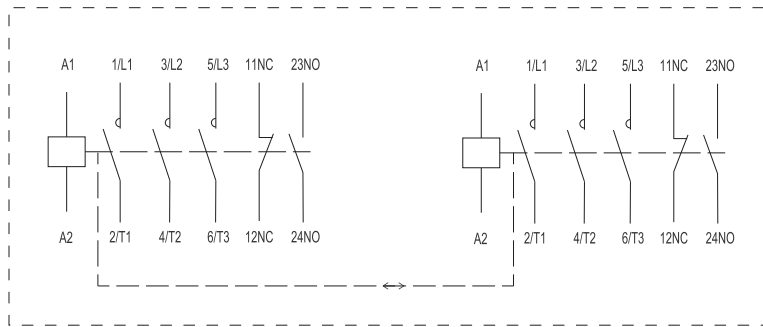
## Rated current 9 A, 3-pole

- Reversible version of contactor
- Mounting onto device (DIN) rail 35 mm or onto panel
- Front-mounted auxiliary contacts AX42.. as well as side-mounted ones AX43 can be used
- Can be combined with overload relays Ex9R38M
- A given number of built-in auxiliary contacts belongs to single contactor unit in the pair

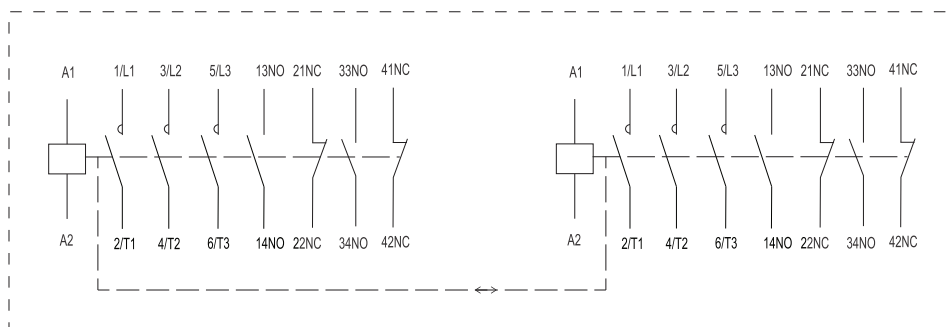


Control Voltage	AC-3 $I_e$	Frame size	Auxiliary contacts	Article No.	Type	Packing
415 V AC	9 A	18	1 NO + 1 NC	104662	Ex9CR09 11 3P 415V	1/40
400 V AC	9 A	18	1 NO + 1 NC	104663	Ex9CR09 11 3P 400V	1/40
380 V AC	9 A	18	1 NO + 1 NC	104664	Ex9CR09 11 3P 380V	1/40
240 V AC	9 A	18	1 NO + 1 NC	104667	Ex9CR09 11 3P 240V	1/40
<b>230 V AC</b>	<b>9 A</b>	<b>18</b>	<b>1 NO + 1 NC</b>	<b>104668</b>	<b>Ex9CR09 11 3P 230V</b>	<b>1/40</b>
220 V AC	9 A	18	1 NO + 1 NC	104669	Ex9CR09 11 3P 220V	1/40
127 V AC	9 A	18	1 NO + 1 NC	104670	Ex9CR09 11 3P 127V	1/40
110 V AC	9 A	18	1 NO + 1 NC	104671	Ex9CR09 11 3P 110V	1/40
48 V AC	9 A	18	1 NO + 1 NC	104660	Ex9CR09 11 3P 48V	1/40
42 V AC	9 A	18	1 NO + 1 NC	104661	Ex9CR09 11 3P 42V	1/40
36 V AC	9 A	18	1 NO + 1 NC	104665	Ex9CR09 11 3P 36V	1/40
<b>24 V AC</b>	<b>9 A</b>	<b>18</b>	<b>1 NO + 1 NC</b>	<b>104666</b>	<b>Ex9CR09 11 3P 24V</b>	<b>1/40</b>
415 V AC	9 A	18	2 NO + 2 NC	104650	Ex9CR09 22 3P 415V	1/40
400 V AC	9 A	18	2 NO + 2 NC	104651	Ex9CR09 22 3P 400V	1/40
380 V AC	9 A	18	2 NO + 2 NC	104652	Ex9CR09 22 3P 380V	1/40
240 V AC	9 A	18	2 NO + 2 NC	104655	Ex9CR09 22 3P 240V	1/40
<b>230 V AC</b>	<b>9 A</b>	<b>18</b>	<b>2 NO + 2 NC</b>	<b>104656</b>	<b>Ex9CR09 22 3P 230V</b>	<b>1/40</b>
220 V AC	9 A	18	2 NO + 2 NC	104657	Ex9CR09 22 3P 220V	1/40
127 V AC	9 A	18	2 NO + 2 NC	104658	Ex9CR09 22 3P 127V	1/40
110 V AC	9 A	18	2 NO + 2 NC	104659	Ex9CR09 22 3P 110V	1/40
48 V AC	9 A	18	2 NO + 2 NC	104648	Ex9CR09 22 3P 48V	1/40
42 V AC	9 A	18	2 NO + 2 NC	104649	Ex9CR09 22 3P 42V	1/40
36 V AC	9 A	18	2 NO + 2 NC	104653	Ex9CR09 22 3P 36V	1/40
<b>24 V AC</b>	<b>9 A</b>	<b>18</b>	<b>2 NO + 2 NC</b>	<b>104654</b>	<b>Ex9CR09 22 3P 24V</b>	<b>1/40</b>

### Wiring diagrams



Ex9CR09 11 3P



Ex9CR09 22 3P

# Reversible contactors Ex9CR, frame size 18

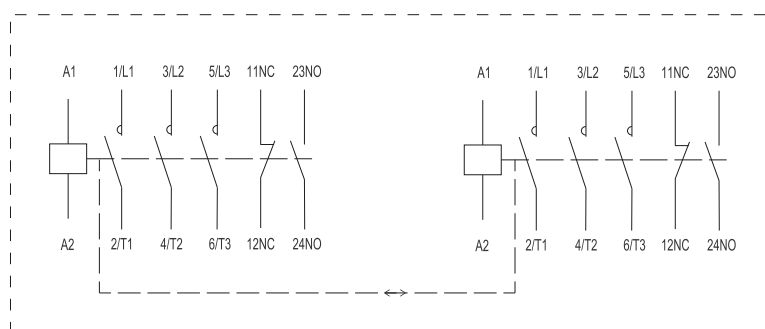
## Rated current 12 A, 3-pole

- Reversible version of contactor
- Mounting onto device (DIN) rail 35 mm or onto panel
- Front-mounted auxiliary contacts AX42.. as well as side-mounted ones AX43 can be used
- Can be combined with overload relays Ex9R38
- A given number of built-in auxiliary contacts belongs to single contactor unit in the pair

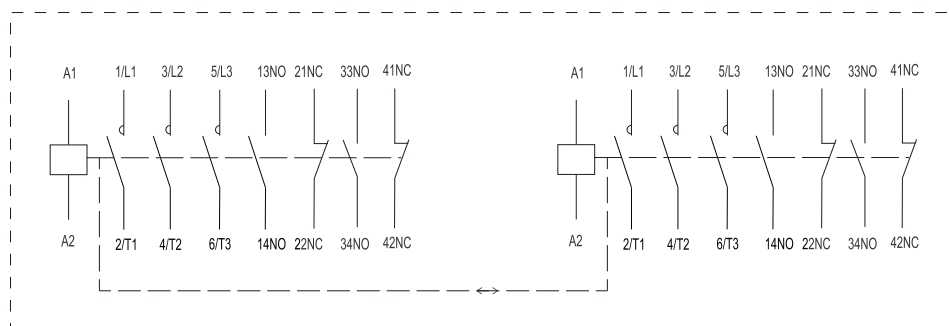


Control Voltage	AC-3 $I_e$	Frame size	Auxiliary contacts	Article No.	Type	Packing
415 V AC	12 A	18	1 NO + 1 NC	104686	Ex9CR12 11 3P 415V	1/40
400 V AC	12 A	18	1 NO + 1 NC	104687	Ex9CR12 11 3P 400V	1/40
380 V AC	12 A	18	1 NO + 1 NC	104688	Ex9CR12 11 3P 380V	1/40
240 V AC	12 A	18	1 NO + 1 NC	104691	Ex9CR12 11 3P 240V	1/40
<b>230 V AC</b>	<b>12 A</b>	<b>18</b>	<b>1 NO + 1 NC</b>	<b>104692</b>	<b>Ex9CR12 11 3P 230V</b>	<b>1/40</b>
220 V AC	12 A	18	1 NO + 1 NC	104693	Ex9CR12 11 3P 220V	1/40
127 V AC	12 A	18	1 NO + 1 NC	104694	Ex9CR12 11 3P 127V	1/40
110 V AC	12 A	18	1 NO + 1 NC	104695	Ex9CR12 11 3P 110V	1/40
48 V AC	12 A	18	1 NO + 1 NC	104684	Ex9CR12 11 3P 48V	1/40
42 V AC	12 A	18	1 NO + 1 NC	104685	Ex9CR12 11 3P 42V	1/40
36 V AC	12 A	18	1 NO + 1 NC	104689	Ex9CR12 11 3P 36V	1/40
<b>24 V AC</b>	<b>12 A</b>	<b>18</b>	<b>1 NO + 1 NC</b>	<b>104690</b>	<b>Ex9CR12 11 3P 24V</b>	<b>1/40</b>
415 V AC	12 A	18	2 NO + 2 NC	104674	Ex9CR12 22 3P 415V	1/40
400 V AC	12 A	18	2 NO + 2 NC	104675	Ex9CR12 22 3P 400V	1/40
380 V AC	12 A	18	2 NO + 2 NC	104676	Ex9CR12 22 3P 380V	1/40
240 V AC	12 A	18	2 NO + 2 NC	104679	Ex9CR12 22 3P 240V	1/40
<b>230 V AC</b>	<b>12 A</b>	<b>18</b>	<b>2 NO + 2 NC</b>	<b>104680</b>	<b>Ex9CR12 22 3P 230V</b>	<b>1/40</b>
220 V AC	12 A	18	2 NO + 2 NC	104681	Ex9CR12 22 3P 220V	1/40
127 V AC	12 A	18	2 NO + 2 NC	104682	Ex9CR12 22 3P 127V	1/40
110 V AC	12 A	18	2 NO + 2 NC	104683	Ex9CR12 22 3P 110V	1/40
48 V AC	12 A	18	2 NO + 2 NC	104672	Ex9CR12 22 3P 48V	1/40
42 V AC	12 A	18	2 NO + 2 NC	104673	Ex9CR12 22 3P 42V	1/40
36 V AC	12 A	18	2 NO + 2 NC	104677	Ex9CR12 22 3P 36V	1/40
<b>24 V AC</b>	<b>12 A</b>	<b>18</b>	<b>2 NO + 2 NC</b>	<b>104678</b>	<b>Ex9CR12 22 3P 24V</b>	<b>1/40</b>

### Wiring diagrams



Ex9CR12 11 3P



Ex9CR12 22 3P

# Reversible contactors Ex9CR, frame size 18

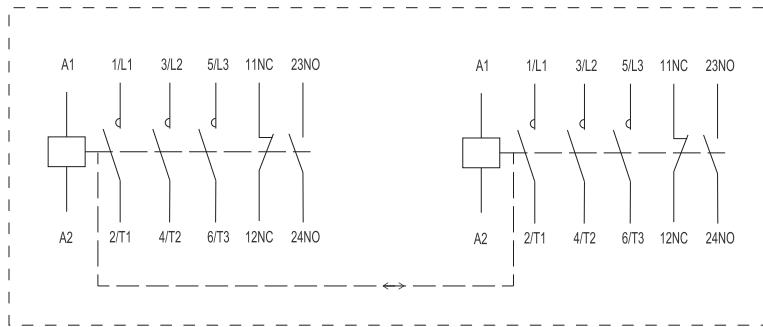
## Rated current 18 A, 3-pole

- Reversible version of contactor
- Mounting onto device (DIN) rail 35 mm or onto panel
- Front-mounted auxiliary contacts AX42.. as well as side-mounted ones AX43 can be used
- Can be combined with overload relays Ex9R38
- A given number of built-in auxiliary contacts belongs to single contactor unit in the pair

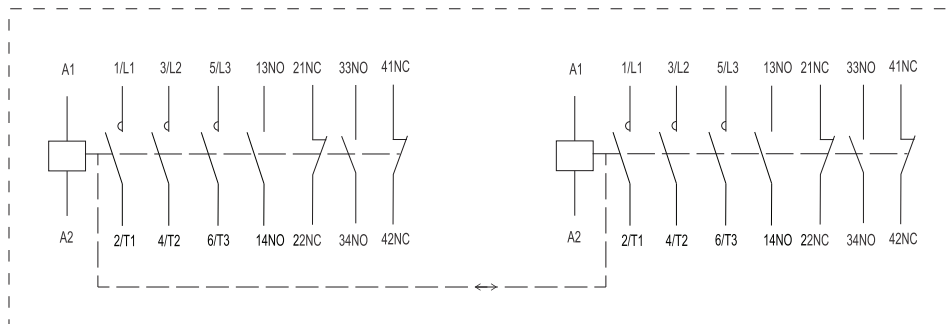


Control Voltage	AC-3 $I_e$	Frame size	Auxiliary contacts	Article No.	Type	Packing
415 V AC	18 A	18	1 NO + 1 NC	104710	Ex9CR18 11 3P 415V	1/40
400 V AC	18 A	18	1 NO + 1 NC	104711	Ex9CR18 11 3P 400V	1/40
380 V AC	18 A	18	1 NO + 1 NC	104712	Ex9CR18 11 3P 380V	1/40
240 V AC	18 A	18	1 NO + 1 NC	104715	Ex9CR18 11 3P 240V	1/40
<b>230 V AC</b>	<b>18 A</b>	<b>18</b>	<b>1 NO + 1 NC</b>	<b>104716</b>	<b>Ex9CR18 11 3P 230V</b>	<b>1/40</b>
220 V AC	18 A	18	1 NO + 1 NC	104717	Ex9CR18 11 3P 220V	1/40
127 V AC	18 A	18	1 NO + 1 NC	104718	Ex9CR18 11 3P 127V	1/40
110 V AC	18 A	18	1 NO + 1 NC	104719	Ex9CR18 11 3P 110V	1/40
48 V AC	18 A	18	1 NO + 1 NC	104708	Ex9CR18 11 3P 48V	1/40
42 V AC	18 A	18	1 NO + 1 NC	104709	Ex9CR18 11 3P 42V	1/40
36 V AC	18 A	18	1 NO + 1 NC	104713	Ex9CR18 11 3P 36V	1/40
<b>24 V AC</b>	<b>18 A</b>	<b>18</b>	<b>1 NO + 1 NC</b>	<b>104714</b>	<b>Ex9CR18 11 3P 24V</b>	<b>1/40</b>
415 V AC	18 A	18	2 NO + 2 NC	104698	Ex9CR18 22 3P 415V	1/40
400 V AC	18 A	18	2 NO + 2 NC	104699	Ex9CR18 22 3P 400V	1/40
380 V AC	18 A	18	2 NO + 2 NC	104700	Ex9CR18 22 3P 380V	1/40
240 V AC	18 A	18	2 NO + 2 NC	104703	Ex9CR18 22 3P 240V	1/40
<b>230 V AC</b>	<b>18 A</b>	<b>18</b>	<b>2 NO + 2 NC</b>	<b>104704</b>	<b>Ex9CR18 22 3P 230V</b>	<b>1/40</b>
220 V AC	18 A	18	2 NO + 2 NC	104705	Ex9CR18 22 3P 220V	1/40
127 V AC	18 A	18	2 NO + 2 NC	104706	Ex9CR18 22 3P 127V	1/40
110 V AC	18 A	18	2 NO + 2 NC	104707	Ex9CR18 22 3P 110V	1/40
48 V AC	18 A	18	2 NO + 2 NC	104696	Ex9CR18 22 3P 48V	1/40
42 V AC	18 A	18	2 NO + 2 NC	104697	Ex9CR18 22 3P 42V	1/40
36 V AC	18 A	18	2 NO + 2 NC	104701	Ex9CR18 22 3P 36V	1/40
<b>24 V AC</b>	<b>18 A</b>	<b>18</b>	<b>2 NO + 2 NC</b>	<b>104702</b>	<b>Ex9CR18 22 3P 24V</b>	<b>1/40</b>

### Wiring diagrams



Ex9CR18 11 3P

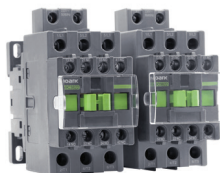


Ex9CR18 22 3P

# Reversible contactors Ex9CR, frame size 38

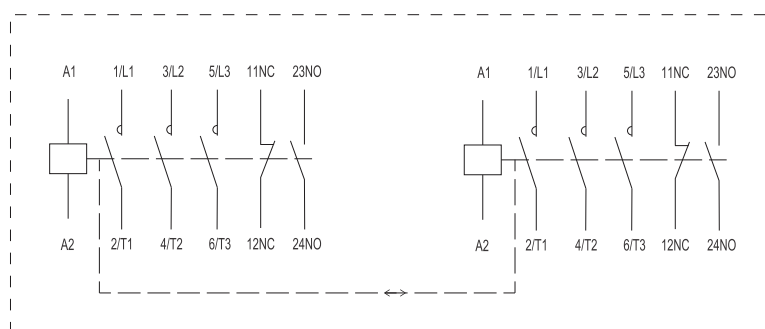
## Rated current 25 A, 3-pole

- Reversible version of contactor
- Mounting onto device (DIN) rail 35 mm or onto panel
- Front-mounted auxiliary contacts AX42.. as well as side-mounted ones AX43 can be used
- Can be combined with overload relays Ex9R38
- A given number of built-in auxiliary contacts belongs to single contactor unit in the pair

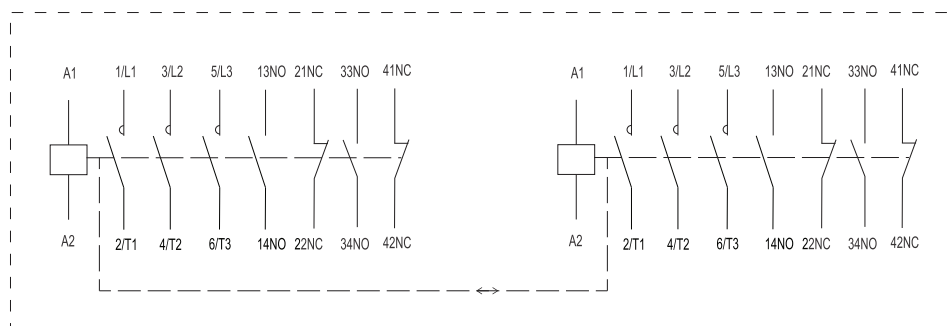


Control Voltage	AC-3 $I_e$	Frame size	Auxiliary contacts	Article No.	Type	Packing
415 V AC	25 A	38	1 NO + 1 NC	104734	Ex9CR25 11 3P 415V	1/20
400 V AC	25 A	38	1 NO + 1 NC	104735	Ex9CR25 11 3P 400V	1/20
380 V AC	25 A	38	1 NO + 1 NC	104736	Ex9CR25 11 3P 380V	1/20
240 V AC	25 A	38	1 NO + 1 NC	104739	Ex9CR25 11 3P 240V	1/20
<b>230 V AC</b>	<b>25 A</b>	<b>38</b>	<b>1 NO + 1 NC</b>	<b>104740</b>	<b>Ex9CR25 11 3P 230V</b>	<b>1/20</b>
220 V AC	25 A	38	1 NO + 1 NC	104741	Ex9CR25 11 3P 220V	1/20
127 V AC	25 A	38	1 NO + 1 NC	104742	Ex9CR25 11 3P 127V	1/20
110 V AC	25 A	38	1 NO + 1 NC	104743	Ex9CR25 11 3P 110V	1/20
48 V AC	25 A	38	1 NO + 1 NC	104732	Ex9CR25 11 3P 48V	1/20
42 V AC	25 A	38	1 NO + 1 NC	104733	Ex9CR25 11 3P 42V	1/20
36 V AC	25 A	38	1 NO + 1 NC	104737	Ex9CR25 11 3P 36V	1/20
<b>24 V AC</b>	<b>25 A</b>	<b>38</b>	<b>1 NO + 1 NC</b>	<b>104738</b>	<b>Ex9CR25 11 3P 24V</b>	<b>1/20</b>
415 V AC	25 A	38	2 NO + 2 NC	104722	Ex9CR25 22 3P 415V	1/20
400 V AC	25 A	38	2 NO + 2 NC	104723	Ex9CR25 22 3P 400V	1/20
380 V AC	25 A	38	2 NO + 2 NC	104724	Ex9CR25 22 3P 380V	1/20
240 V AC	25 A	38	2 NO + 2 NC	104727	Ex9CR25 22 3P 240V	1/20
<b>230 V AC</b>	<b>25 A</b>	<b>38</b>	<b>2 NO + 2 NC</b>	<b>104728</b>	<b>Ex9CR25 22 3P 230V</b>	<b>1/20</b>
220 V AC	25 A	38	2 NO + 2 NC	104729	Ex9CR25 22 3P 220V	1/20
127 V AC	25 A	38	2 NO + 2 NC	104730	Ex9CR25 22 3P 127V	1/20
110 V AC	25 A	38	2 NO + 2 NC	104731	Ex9CR25 22 3P 110V	1/20
48 V AC	25 A	38	2 NO + 2 NC	104720	Ex9CR25 22 3P 48V	1/20
42 V AC	25 A	38	2 NO + 2 NC	104721	Ex9CR25 22 3P 42V	1/20
36 V AC	25 A	38	2 NO + 2 NC	104725	Ex9CR25 22 3P 36V	1/20
<b>24 V AC</b>	<b>25 A</b>	<b>38</b>	<b>2 NO + 2 NC</b>	<b>104726</b>	<b>Ex9CR25 22 3P 24V</b>	<b>1/20</b>

### Wiring diagrams



Ex9CR25 11 3P

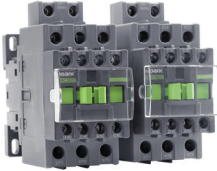


Ex9CR25 22 3P

# Reversible contactors Ex9CR, frame size 38

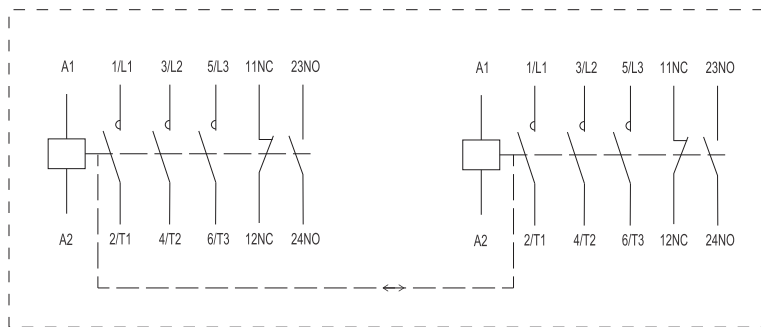
## Rated current 32 A, 3-pole

- Reversible version of contactor
- Mounting onto device (DIN) rail 35 mm or onto panel
- Front-mounted auxiliary contacts AX42.. as well as side-mounted ones AX43 can be used
- Can be combined with overload relays Ex9R38
- A given number of built-in auxiliary contacts belongs to single contactor unit in the pair

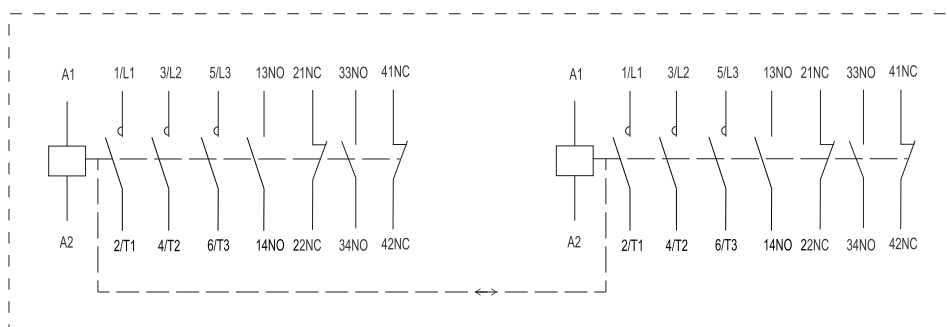


Control Voltage	AC-3 $I_e$	Frame size	Auxiliary contacts	Article No.	Type	Packing
415 V AC	32 A	38	1 NO + 1 NC	104758	Ex9CR32 11 3P 415V	1/20
400 V AC	32 A	38	1 NO + 1 NC	104759	Ex9CR32 11 3P 400V	1/20
380 V AC	32 A	38	1 NO + 1 NC	104760	Ex9CR32 11 3P 380V	1/20
240 V AC	32 A	38	1 NO + 1 NC	104763	Ex9CR32 11 3P 240V	1/20
<b>230 V AC</b>	<b>32 A</b>	<b>38</b>	<b>1 NO + 1 NC</b>	<b>104764</b>	<b>Ex9CR32 11 3P 230V</b>	<b>1/20</b>
220 V AC	32 A	38	1 NO + 1 NC	104765	Ex9CR32 11 3P 220V	1/20
127 V AC	32 A	38	1 NO + 1 NC	104766	Ex9CR32 11 3P 127V	1/20
110 V AC	32 A	38	1 NO + 1 NC	104767	Ex9CR32 11 3P 110V	1/20
48 V AC	32 A	38	1 NO + 1 NC	104756	Ex9CR32 11 3P 48V	1/20
42 V AC	32 A	38	1 NO + 1 NC	104757	Ex9CR32 11 3P 42V	1/20
36 V AC	32 A	38	1 NO + 1 NC	104761	Ex9CR32 11 3P 36V	1/20
<b>24 V AC</b>	<b>32 A</b>	<b>38</b>	<b>1 NO + 1 NC</b>	<b>104762</b>	<b>Ex9CR32 11 3P 24V</b>	<b>1/20</b>
415 V AC	32 A	38	2 NO + 2 NC	104746	Ex9CR32 22 3P 415V	1/20
400 V AC	32 A	38	2 NO + 2 NC	104747	Ex9CR32 22 3P 400V	1/20
380 V AC	32 A	38	2 NO + 2 NC	104748	Ex9CR32 22 3P 380V	1/20
240 V AC	32 A	38	2 NO + 2 NC	104751	Ex9CR32 22 3P 240V	1/20
<b>230 V AC</b>	<b>32 A</b>	<b>38</b>	<b>2 NO + 2 NC</b>	<b>104752</b>	<b>Ex9CR32 22 3P 230V</b>	<b>1/20</b>
220 V AC	32 A	38	2 NO + 2 NC	104753	Ex9CR32 22 3P 220V	1/20
127 V AC	32 A	38	2 NO + 2 NC	104754	Ex9CR32 22 3P 127V	1/20
110 V AC	32 A	38	2 NO + 2 NC	104755	Ex9CR32 22 3P 110V	1/20
48 V AC	32 A	38	2 NO + 2 NC	104744	Ex9CR32 22 3P 48V	1/20
42 V AC	32 A	38	2 NO + 2 NC	104745	Ex9CR32 22 3P 42V	1/20
36 V AC	32 A	38	2 NO + 2 NC	104749	Ex9CR32 22 3P 36V	1/20
<b>24 V AC</b>	<b>32 A</b>	<b>38</b>	<b>2 NO + 2 NC</b>	<b>104750</b>	<b>Ex9CR32 22 3P 24V</b>	<b>1/20</b>

### Wiring diagrams



Ex9CR32 11 3P



Ex9CR32 22 3P



# Reversible contactors Ex9CR, frame size 38

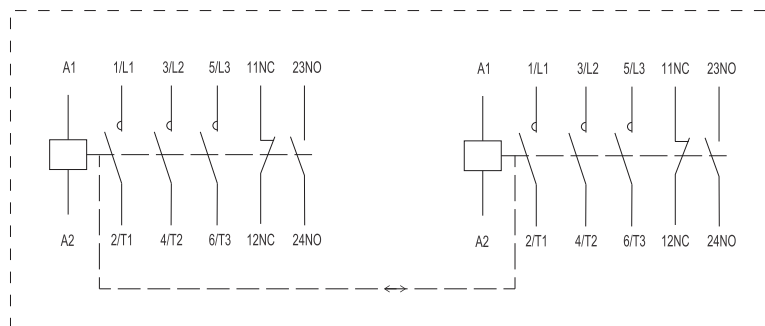
## Rated current 38 A, 3-pole

- Reversible version of contactor
- Mounting onto device (DIN) rail 35 mm or onto panel
- Front-mounted auxiliary contacts AX42.. as well as side-mounted ones AX43 can be used
- Can be combined with overload relays Ex9R38
- A given number of built-in auxiliary contacts belongs to single contactor unit in the pair

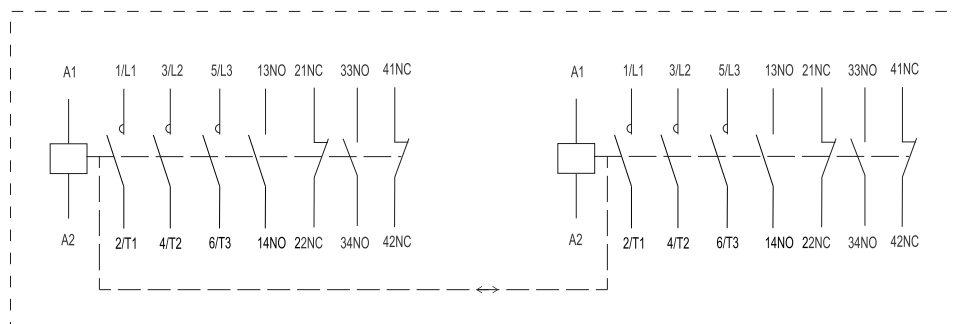


Control Voltage	AC-3 $I_e$	Frame size	Auxiliary contacts	Article No.	Type	Packing
415 V AC	38 A	38	1 NO + 1 NC	104782	Ex9CR38 11 3P 415V	1/20
400 V AC	38 A	38	1 NO + 1 NC	104783	Ex9CR38 11 3P 400V	1/20
380 V AC	38 A	38	1 NO + 1 NC	104784	Ex9CR38 11 3P 380V	1/20
240 V AC	38 A	38	1 NO + 1 NC	104787	Ex9CR38 11 3P 240V	1/20
<b>230 V AC</b>	<b>38 A</b>	<b>38</b>	<b>1 NO + 1 NC</b>	<b>104788</b>	<b>Ex9CR38 11 3P 230V</b>	<b>1/20</b>
220 V AC	38 A	38	1 NO + 1 NC	104789	Ex9CR38 11 3P 220V	1/20
127 V AC	38 A	38	1 NO + 1 NC	104790	Ex9CR38 11 3P 127V	1/20
110 V AC	38 A	38	1 NO + 1 NC	104791	Ex9CR38 11 3P 110V	1/20
48 V AC	38 A	38	1 NO + 1 NC	104780	Ex9CR38 11 3P 48V	1/20
42 V AC	38 A	38	1 NO + 1 NC	104781	Ex9CR38 11 3P 42V	1/20
36 V AC	38 A	38	1 NO + 1 NC	104785	Ex9CR38 11 3P 36V	1/20
<b>24 V AC</b>	<b>38 A</b>	<b>38</b>	<b>1 NO + 1 NC</b>	<b>104786</b>	<b>Ex9CR38 11 3P 24V</b>	<b>1/20</b>
415 V AC	38 A	38	2 NO + 2 NC	104770	Ex9CR38 22 3P 415V	1/20
400 V AC	38 A	38	2 NO + 2 NC	104771	Ex9CR38 22 3P 400V	1/20
380 V AC	38 A	38	2 NO + 2 NC	104772	Ex9CR38 22 3P 380V	1/20
240 V AC	38 A	38	2 NO + 2 NC	104775	Ex9CR38 22 3P 240V	1/20
<b>230 V AC</b>	<b>38 A</b>	<b>38</b>	<b>2 NO + 2 NC</b>	<b>104776</b>	<b>Ex9CR38 22 3P 230V</b>	<b>1/20</b>
220 V AC	38 A	38	2 NO + 2 NC	104777	Ex9CR38 22 3P 220V	1/20
127 V AC	38 A	38	2 NO + 2 NC	104778	Ex9CR38 22 3P 127V	1/20
110 V AC	38 A	38	2 NO + 2 NC	104779	Ex9CR38 22 3P 110V	1/20
48 V AC	38 A	38	2 NO + 2 NC	104768	Ex9CR38 22 3P 48V	1/20
42 V AC	38 A	38	2 NO + 2 NC	104769	Ex9CR38 22 3P 42V	1/20
36 V AC	38 A	38	2 NO + 2 NC	104773	Ex9CR38 22 3P 36V	1/20
<b>24 V AC</b>	<b>38 A</b>	<b>38</b>	<b>2 NO + 2 NC</b>	<b>104774</b>	<b>Ex9CR38 22 3P 24V</b>	<b>1/20</b>

### Wiring diagrams



Ex9CR38 11 3P



Ex9CR38 22 3P

# Reversible contactors Ex9CR, frame size 65

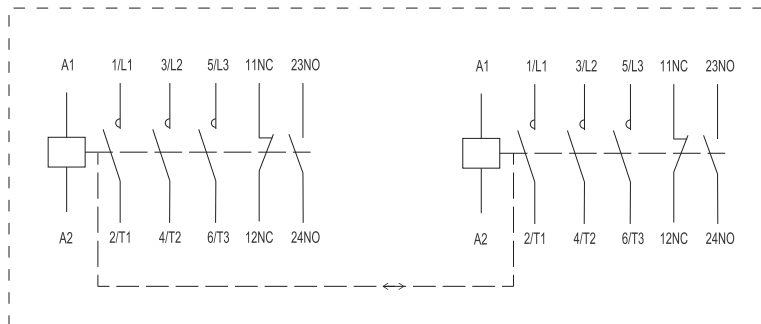
## Rated current 40 A, 3-pole

- Reversible version of contactor
- Mounting onto device (DIN) rail 35 mm and 75 mm or onto panel
- Front-mounted auxiliary contacts AX42.. as well as side-mounted ones AX43 can be used
- Can be combined with overload relays Ex9R100
- A given number of built-in auxiliary contacts belongs to single contactor unit in the pair



Control Voltage	AC-3 $I_e$	Frame size	Auxiliary contacts	Article No.	Type	Packing
415 V AC	40 A	65	1 NO + 1 NC	104794	Ex9CR40 11 3P 415V	1/12
400 V AC	40 A	65	1 NO + 1 NC	104795	Ex9CR40 11 3P 400V	1/12
380 V AC	40 A	65	1 NO + 1 NC	104796	Ex9CR40 11 3P 380V	1/12
240 V AC	40 A	65	1 NO + 1 NC	104799	Ex9CR40 11 3P 240V	1/12
<b>230 V AC</b>	<b>40 A</b>	<b>65</b>	<b>1 NO + 1 NC</b>	<b>104800</b>	<b>Ex9CR40 11 3P 230V</b>	<b>1/12</b>
220 V AC	40 A	65	1 NO + 1 NC	104801	Ex9CR40 11 3P 220V	1/12
127 V AC	40 A	65	1 NO + 1 NC	104802	Ex9CR40 11 3P 127V	1/12
110 V AC	40 A	65	1 NO + 1 NC	104803	Ex9CR40 11 3P 110V	1/12
48 V AC	40 A	65	1 NO + 1 NC	104792	Ex9CR40 11 3P 48V	1/12
42 V AC	40 A	65	1 NO + 1 NC	104793	Ex9CR40 11 3P 42V	1/12
36 V AC	40 A	65	1 NO + 1 NC	104797	Ex9CR40 11 3P 36V	1/12
<b>24 V AC</b>	<b>40 A</b>	<b>65</b>	<b>1 NO + 1 NC</b>	<b>104798</b>	<b>Ex9CR40 11 3P 24V</b>	<b>1/12</b>

### Wiring diagram



Ex9CR40 11 3P

# Reversible contactors Ex9CR, frame size 65

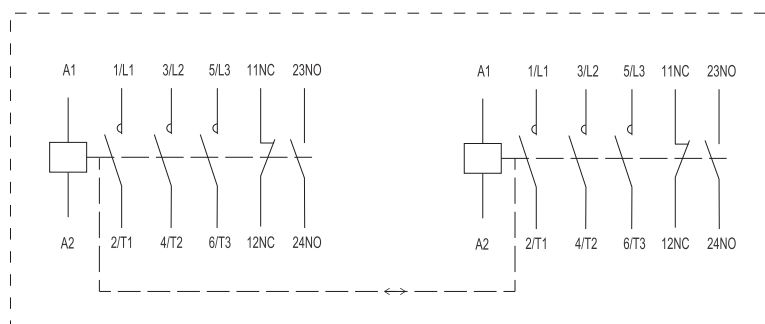
## Rated current 50 A, 3-pole

- Reversible version of contactor
- Mounting onto device (DIN) rail 35 mm and 75 mm or onto panel
- Front-mounted auxiliary contacts AX42.. as well as side-mounted ones AX43 can be used
- Can be combined with overload relays Ex9R100
- A given number of built-in auxiliary contacts belongs to single contactor unit in the pair



Control Voltage	AC-3 $I_e$	Frame size	Auxiliary contacts	Article No.	Type	Packing
415 V AC	50 A	65	1 NO + 1 NC	104806	Ex9CR50 11 3P 415V	1/12
400 V AC	50 A	65	1 NO + 1 NC	104807	Ex9CR50 11 3P 400V	1/12
380 V AC	50 A	65	1 NO + 1 NC	104808	Ex9CR50 11 3P 380V	1/12
240 V AC	50 A	65	1 NO + 1 NC	104811	Ex9CR50 11 3P 240V	1/12
<b>230 V AC</b>	<b>50 A</b>	<b>65</b>	<b>1 NO + 1 NC</b>	<b>104812</b>	<b>Ex9CR50 11 3P 230V</b>	<b>1/12</b>
220 V AC	50 A	65	1 NO + 1 NC	104813	Ex9CR50 11 3P 220V	1/12
127 V AC	50 A	65	1 NO + 1 NC	104814	Ex9CR50 11 3P 127V	1/12
110 V AC	50 A	65	1 NO + 1 NC	104815	Ex9CR50 11 3P 110V	1/12
48 V AC	50 A	65	1 NO + 1 NC	104804	Ex9CR50 11 3P 48V	1/12
42 V AC	50 A	65	1 NO + 1 NC	104805	Ex9CR50 11 3P 42V	1/12
36 V AC	50 A	65	1 NO + 1 NC	104809	Ex9CR50 11 3P 36V	1/12
<b>24 V AC</b>	<b>50 A</b>	<b>65</b>	<b>1 NO + 1 NC</b>	<b>104810</b>	<b>Ex9CR50 11 3P 24V</b>	<b>1/12</b>

### Wiring diagram



Ex9CR50 11 3P

# Reversible contactors Ex9CR, frame size 65

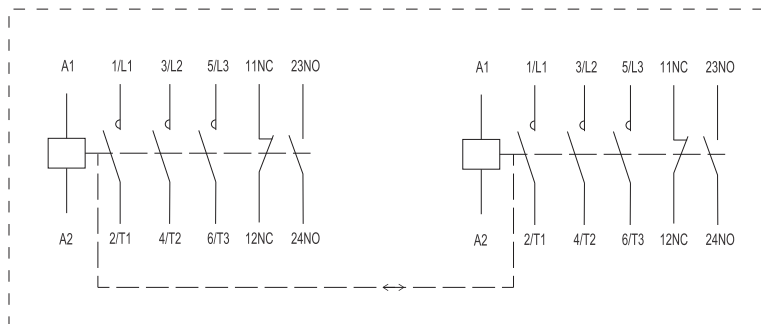
## Rated current 65 A, 3-pole

- Reversible version of contactor
- Mounting onto device (DIN) rail 35 mm and 75 mm or onto panel
- Front-mounted auxiliary contacts AX42.. as well as side-mounted ones AX43 can be used
- Can be combined with overload relays Ex9R100
- A given number of built-in auxiliary contacts belongs to single contactor unit in the pair



Control Voltage	AC-3 $I_e$	Frame size	Auxiliary contacts	Article No.	Type	Packing
415 V AC	65 A	65	1 NO + 1 NC	104818	Ex9CR65 11 3P 415V	1/12
400 V AC	65 A	65	1 NO + 1 NC	104819	Ex9CR65 11 3P 400V	1/12
380 V AC	65 A	65	1 NO + 1 NC	104820	Ex9CR65 11 3P 380V	1/12
240 V AC	65 A	65	1 NO + 1 NC	104823	Ex9CR65 11 3P 240V	1/12
<b>230 V AC</b>	<b>65 A</b>	<b>65</b>	<b>1 NO + 1 NC</b>	<b>104824</b>	<b>Ex9CR65 11 3P 230V</b>	<b>1/12</b>
220 V AC	65 A	65	1 NO + 1 NC	104825	Ex9CR65 11 3P 220V	1/12
127 V AC	65 A	65	1 NO + 1 NC	104826	Ex9CR65 11 3P 127V	1/12
110 V AC	65 A	65	1 NO + 1 NC	104827	Ex9CR65 11 3P 110V	1/12
48 V AC	65 A	65	1 NO + 1 NC	104816	Ex9CR65 11 3P 48V	1/12
42 V AC	65 A	65	1 NO + 1 NC	104817	Ex9CR65 11 3P 42V	1/12
36 V AC	65 A	65	1 NO + 1 NC	104821	Ex9CR65 11 3P 36V	1/12
<b>24 V AC</b>	<b>65 A</b>	<b>65</b>	<b>1 NO + 1 NC</b>	<b>104822</b>	<b>Ex9CR65 11 3P 24V</b>	<b>1/12</b>

### Wiring diagram



Ex9CR65 11 3P

# Reversible contactors Ex9CR, frame size 100

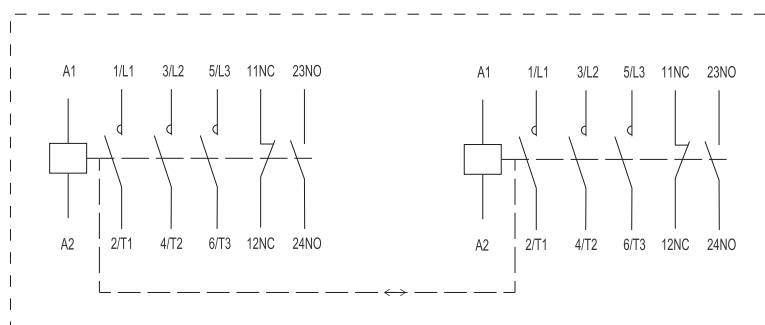
## Rated current 80 A, 3-pole

- Reversible version of contactor
- Mounting onto device (DIN) rail 35 mm and 75 mm or onto panel
- Front-mounted auxiliary contacts AX42.. as well as side-mounted ones AX43 can be used
- Can be combined with overload relays Ex9R100
- A given number of built-in auxiliary contacts belongs to single contactor unit in the pair



Control Voltage	AC-3 $I_e$	Frame size	Auxiliary contacts	Article No.	Type	Packing
415 V AC	80 A	100	1 NO + 1 NC	104830	Ex9CR80 11 3P 415V	1/12
400 V AC	80 A	100	1 NO + 1 NC	104831	Ex9CR80 11 3P 400V	1/12
380 V AC	80 A	100	1 NO + 1 NC	104832	Ex9CR80 11 3P 380V	1/12
240 V AC	80 A	100	1 NO + 1 NC	104835	Ex9CR80 11 3P 240V	1/12
<b>230 V AC</b>	<b>80 A</b>	<b>100</b>	<b>1 NO + 1 NC</b>	<b>104836</b>	<b>Ex9CR80 11 3P 230V</b>	<b>1/12</b>
220 V AC	80 A	100	1 NO + 1 NC	104837	Ex9CR80 11 3P 220V	1/12
127 V AC	80 A	100	1 NO + 1 NC	104838	Ex9CR80 11 3P 127V	1/12
110 V AC	80 A	100	1 NO + 1 NC	104839	Ex9CR80 11 3P 110V	1/12
48 V AC	80 A	100	1 NO + 1 NC	104828	Ex9CR80 11 3P 48V	1/12
42 V AC	80 A	100	1 NO + 1 NC	104829	Ex9CR80 11 3P 42V	1/12
36 V AC	80 A	100	1 NO + 1 NC	104833	Ex9CR80 11 3P 36V	1/12
<b>24 V AC</b>	<b>80 A</b>	<b>100</b>	<b>1 NO + 1 NC</b>	<b>104834</b>	<b>Ex9CR80 11 3P 24V</b>	<b>1/12</b>

### Wiring diagram



Ex9CR80 11 3P

# Reversible contactors Ex9CR, frame size 100

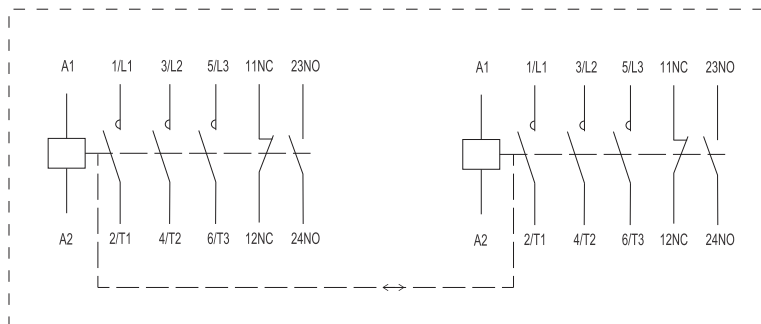
## Rated current 100 A, 3-pole

- Reversible version of contactor
- Mounting onto device (DIN) rail 35 mm and 75 mm or onto panel
- Front-mounted auxiliary contacts AX42.. as well as side-mounted ones AX43 can be used
- Can be combined with overload relays Ex9R100
- A given number of built-in auxiliary contacts belongs to single contactor unit in the pair



Control Voltage	AC-3 $I_e$	Frame size	Auxiliary contacts	Article No.	Type	Packing
415 V AC	100 A	100	1 NO + 1 NC	104842	Ex9CR100 11 3P 415V	1/12
400 V AC	100 A	100	1 NO + 1 NC	104843	Ex9CR100 11 3P 400V	1/12
380 V AC	100 A	100	1 NO + 1 NC	104844	Ex9CR100 11 3P 380V	1/12
240 V AC	100 A	100	1 NO + 1 NC	104847	Ex9CR100 11 3P 240V	1/12
<b>230 V AC</b>	<b>100 A</b>	<b>100</b>	<b>1 NO + 1 NC</b>	<b>104848</b>	<b>Ex9CR100 11 3P 230V</b>	<b>1/12</b>
220 V AC	100 A	100	1 NO + 1 NC	104849	Ex9CR100 11 3P 220V	1/12
127 V AC	100 A	100	1 NO + 1 NC	104850	Ex9CR100 11 3P 127V	1/12
110 V AC	100 A	100	1 NO + 1 NC	104851	Ex9CR100 11 3P 110V	1/12
48 V AC	100 A	100	1 NO + 1 NC	104840	Ex9CR100 11 3P 48V	1/12
42 V AC	100 A	100	1 NO + 1 NC	104841	Ex9CR100 11 3P 42V	1/12
36 V AC	100 A	100	1 NO + 1 NC	104845	Ex9CR100 11 3P 36V	1/12
<b>24 V AC</b>	<b>100 A</b>	<b>100</b>	<b>1 NO + 1 NC</b>	<b>104846</b>	<b>Ex9CR100 11 3P 24V</b>	<b>1/12</b>

### Wiring diagram



Ex9CR100 11 3P

# Technical Data Ex9CR, frame size 18

## Reversible contactors Ex9CR09, Ex9CR12, Ex9CR18

### General parameters

Reversible combinations of contactors rated at AC-3		
Suitable mainly for industrial applications		
3-pole versions		
Built-in mechanical interlock between particular contactors		
With built-in auxiliary contacts		
Accessories		
Front-mounted auxiliary contacts	AX42	101284 — 101291
Side-mounted auxiliary contacts	AX4311	101292
Surge suppressor block	CCU42	104498, 104499, 104500

### Electrical parameters - main contacts and general

	Ex9CR09	Ex9CR12	Ex9CR18
Tested according to	IEC/EN 60947-4-1		
Rated op. 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 Ex9CR, frame size 18

## Reversible contactors Ex9CR09, Ex9CR12, Ex9CR18

### Electrical parameters - main contacts and general

	Ex9CR09	Ex9CR12	Ex9CR18
Making capacity			
230/240 V	144 A	144 A	216 A
380/400 V	144 A	144 A	216 A
660/690 V	144 A	144 A	216 A
Breaking capacity			
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
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

	Ex9CR09	Ex9CR12	Ex9CR18
Control Voltage $U_c$	24, 36, 42, 48, 110, 127, 220, 230, 240, 380, 400, 415 V AC		
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	50 Hz	50 Hz	50 Hz
Power consumption			
Pick-up	90 VA / 40 W	90 VA / 40 W	90 VA / 40 W
Hold	9.5 VA / 4 W	9.5 VA / 4 W	9.5 VA / 4 W
Duty	100 %	100 %	100 %
Closing delay	12 — 24 ms	12 — 24 ms	12 — 24 ms
Opening delay	6 — 20 ms	6 — 20 ms	6 — 20 ms
Closing delay with front-mounted AX	8 — 18 ms	8 — 18 ms	8 — 18 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



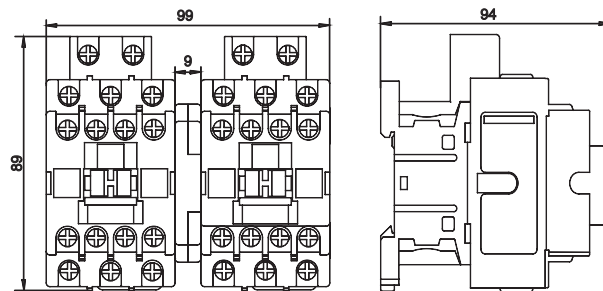
# Technical Data Ex9CR, frame size 18

## Reversible contactors Ex9CR09, Ex9CR12, Ex9CR18

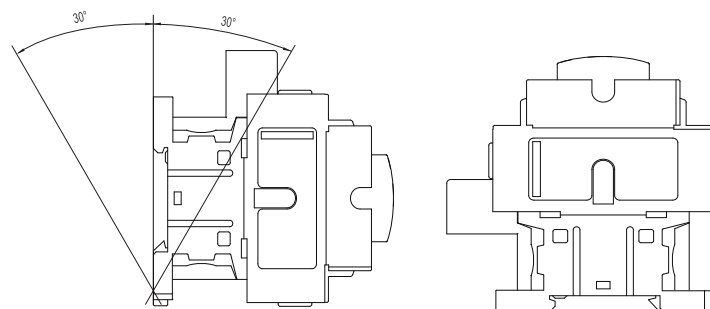
### Mechanical parameters

	Ex9CR09	Ex9CR12	Ex9CR18
Device width	99 mm		
Device height	89 mm (including rail clip)		
Device depth	94 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 <sup>2</sup> ) wired; 1 x (1 — 6 mm <sup>2</sup> ), 2 x (1 — 4 mm <sup>2</sup> ) solid		
Fastening torque of terminals	1.5 — 1.7 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	0.72 kg	0.72 kg	0.72 kg
Power loss at $I_e$ (per contactor)	0.2 W	0.36 W	0.8 W

### Dimensions



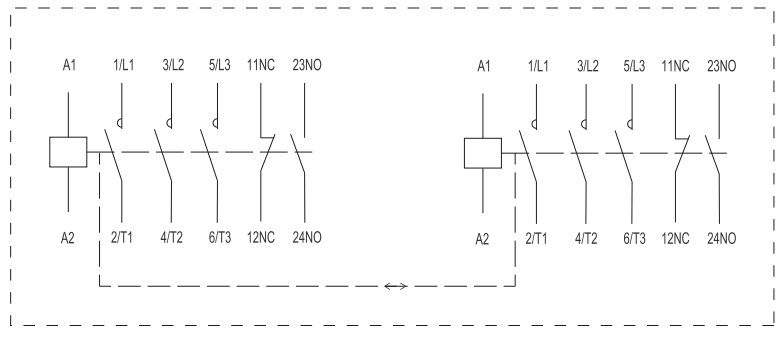
### Mounting positions



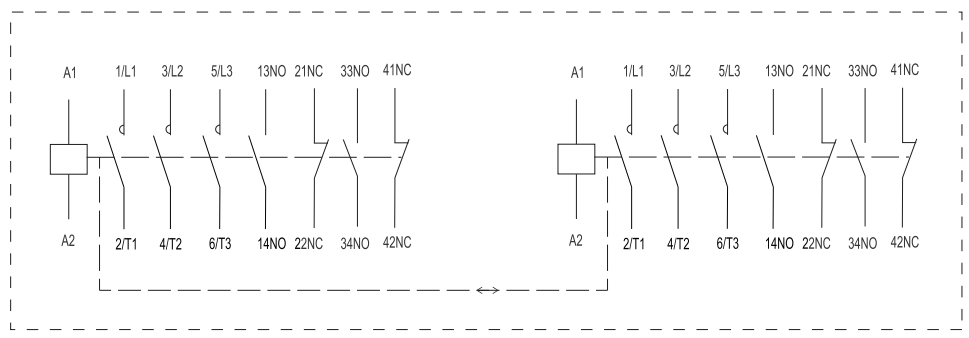
# Technical Data Ex9CR, frame size 18

## Reversible contactors Ex9CR09, Ex9CR12, Ex9CR18

### Wiring diagram



Ex9CR.. 11 3P



Ex9CR.. 22 3P

# Technical Data Ex9CR, frame size 38

## Reversible contactors Ex9CR25, Ex9CR32, Ex9CR38

### General parameters

Reversible combinations of contactors rated at AC-3		
Suitable mainly for industrial applications		
3-pole versions		
Built-in mechanical interlock between particular contactors		
With built-in auxiliary contacts		
Accessories		
Front-mounted auxiliary contacts	AX42	101284 — 101291
Side-mounted auxiliary contacts	AX4311	101292
Surge suppressor block	CCU42	104498, 104499, 104500

### Electrical parameters - main contacts and general

	Ex9CR25	Ex9CR32	Ex9CR38
Tested according to	IEC/EN 60947-4-1		
Rated op. 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 $I_{th}$	40 A	50 A	50 A
Rated operational current $I_e$			
AC-1	40 A	50 A	50 A
AC-2/AC-3/AC-4, 380/400 V	25 A	32 A	38 A
AC-3, 660/690 V	17.3 A	21.9 A	21.9 A
AC-2/AC-4, 660/690 V	14 A	17.3 A	17.3 A
Rated power of 3-phase motor			
AC-3/AC-4, 380/400 V	11 kW	15 kW	18.5 kW
AC-3, 660/690 V	15 kW	18.5 kW	18.5 kW
AC-4, 660/690 V	11 kW	15 kW	15 kW
Maximum short circuit protection fuse			
Coordination type 1 at 500 V AC	63 A gG/gL	63 A gG/gL	63 A gG/gL
Coordination type 2 at 500 V AC	40 A gG/gL	63 A gG/gL	63 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	80 A	100 A	100 A
Power at 230/240 V	16 kW	20 kW	20 kW
Power at 380/400 V	26 kW	33 kW	33 kW
Power at 660/690 V	46 kW	57 kW	57 kW
Rated current $I_e = I_{th}$	40 A	50 A	50 A
1-phase power AC-1, 3 contacts in parallel			
Maximum back-up fuse gG/gL	160 A	160 A	160 A
Power at 230/240 V	34 kW	42 kW	42 kW
Power at 380/400 V	55 kW	69 kW	69 kW
Power at 660/690 V	96 kW	120 kW	120 kW
Rated current $I_e = I_{th}$	84 A	105 A	105 A

# Technical Data Ex9CR, frame size 38

## Reversible contactors Ex9CR25, Ex9CR32, Ex9CR38

### Electrical parameters - main contacts and general

	Ex9CR25	Ex9CR32	Ex9CR38
Making capacity			
230/240 V	300 A	384 A	456 A
380/400 V	300 A	384 A	456 A
660/690 V	300 A	384 A	456 A
Breaking capacity			
230/240 V	250 A	320 A	320 A
380/400 V	250 A	320 A	320 A
660/690 V	173 A	219 A	219 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

	Ex9CR25	Ex9CR32	Ex9CR38
Control Voltage $U_c$	24, 36, 42, 48, 110, 127, 220, 230, 240, 380, 400, 415 V AC		
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	50 Hz	50 Hz	50 Hz
Power consumption			
Pick-up	100 VA / 50 W	100 VA / 50 W	100 VA / 50 W
Hold	10.5 VA / 5 W	10.5 VA / 5 W	10.5 VA / 5 W
Duty	100 %	100 %	100 %
Closing delay	14 — 27 ms	14 — 27 ms	14 — 27 ms
Opening delay	7 — 22 ms	7 — 22 ms	7 — 22 ms
Closing delay with front-mounted AX	9 — 20 ms	9 — 20 ms	9 — 20 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

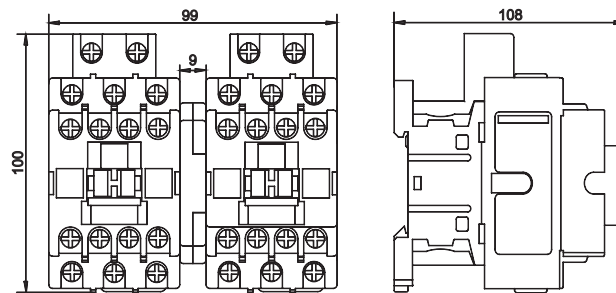
# Technical Data Ex9CR, frame size 38

## Reversible contactors Ex9CR25, Ex9CR32, Ex9CR38

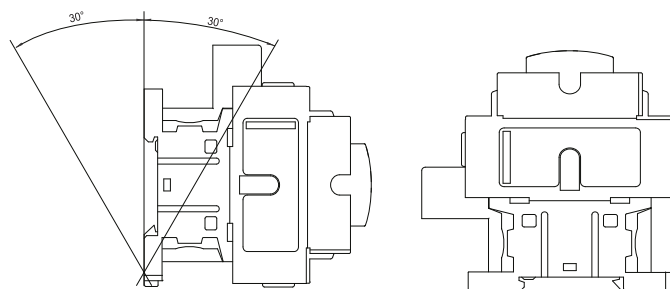
### Mechanical parameters

	Ex9CR25	Ex9CR32	Ex9CR38
Device width	99 mm		
Device height	100 mm (including rail clip)		
Device depth	108 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 <sup>2</sup> ) wired; 1 x (1 — 10 mm <sup>2</sup> ), 2 x (1.5 — 6 mm <sup>2</sup> ) 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	0.82 kg	0.82 kg	0.82 kg
Power loss at $I_e$ (per contactor)	1.25 W	2 W	3 W

### Dimensions



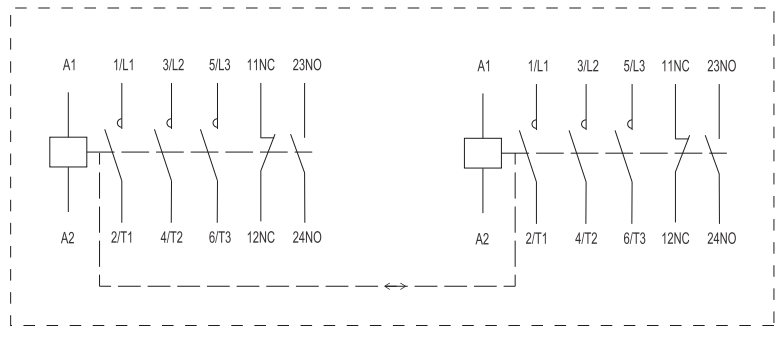
### Mounting positions



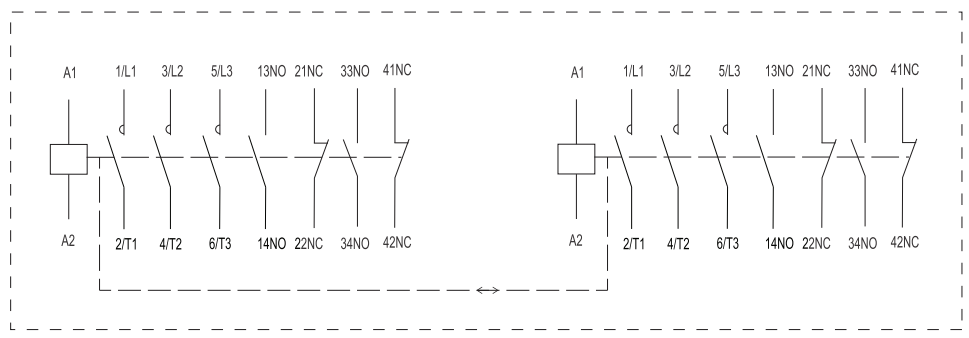
# Technical Data Ex9CR, frame size 38

## Reversible contactors Ex9CR25, Ex9CR32, Ex9CR38

### Wiring diagram



Ex9CR.. 11 3P



Ex9CR.. 22 3P

# Technical Data Ex9CR, frame size 65

## Reversible contactors Ex9CR40, Ex9CR50, Ex9CR65

### General parameters

Reversible combinations of contactors		
Contactors rated at AC-3		
Suitable mainly for industrial applications		
3-pole versions		
Built-in mechanical interlock between particular contactors		
With built-in auxiliary contacts		
Accessories		
Front-mounted auxiliary contacts	AX42	101284 — 101291
Side-mounted auxiliary contacts	AX4311	101292
Surge suppressor block	CCU43	104495, 104496, 104497

### Electrical parameters - main contacts and general

	Ex9CR40	Ex9CR50	Ex9CR65
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 Ex9CR, frame size 65

## Reversible contactors Ex9CR40, Ex9CR50, Ex9CR65

### Electrical parameters - main contacts and general

	Ex9CR40	Ex9CR50	Ex9CR65
Making capacity			
230/240 V	480 A	600 A	780 A
380/400 V	480 A	600 A	780 A
660/690 V	480 A	600 A	780 A
Breaking capacity			
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
Mechanical service life	10 000 000 operation cycles		
Electrical service life 380/400 V			
AC-3	1 200 000 operation cycles		
AC-4	35 000 operation cycles	30 000 operation cycles	30 000 operation cycles
Overvoltage category	III		
EMC environment	A		
Comparative Tracking Index	400 V		
Prospective short circuit current $I_q$	50 kA		

### Electrical parameters - coil

	Ex9CR40	Ex9CR50	Ex9CR65
Control Voltage $U_c$	24, 36, 42, 48, 110, 127, 220, 230, 240, 380, 400, 415 V AC		
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	50 Hz	50 Hz	50 Hz
Power consumption			
Pick-up	240 VA / 100 W	240 VA / 100 W	240 VA / 100 W
Hold	25 VA / 10 W	25 VA / 10 W	25 VA / 10 W
Duty	100 %	100 %	100 %
Closing delay	20 — 30 ms	20 — 30 ms	20 — 30 ms
Opening delay	8 — 20 ms	8 — 20 ms	8 — 20 ms
Closing delay with front-mounted AX	12 — 25 ms	12 — 25 ms	12 — 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



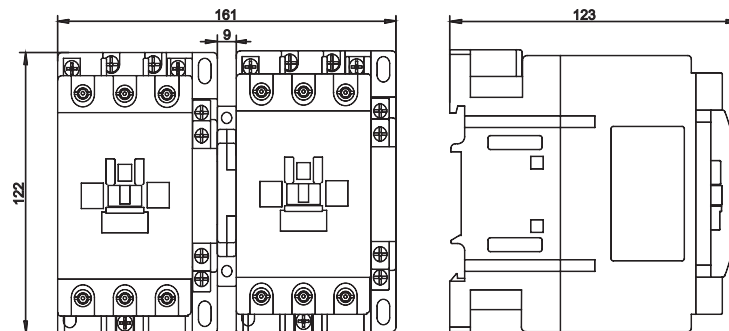
# Technical Data Ex9CR, frame size 65

## Reversible contactors Ex9CR40, Ex9CR50, Ex9CR65

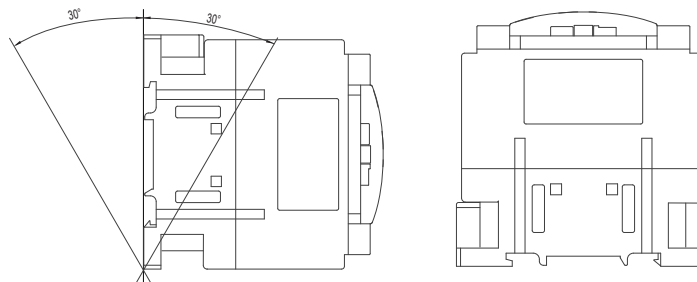
### Mechanical parameters

	Ex9CR40	Ex9CR50	Ex9CR65
Device width	161 mm		
Device height	122 mm (including rail clip)		
Device depth	123 mm (without front-mounted auxiliary contact)		
Mounting	easy fastening onto 35 or 75 mm device rail (DIN) or onto panel		
Degree of protection	IP20		
Terminals	lift		
Terminal capacity	(1 — 2) x (2.5 — 25 mm <sup>2</sup> )		
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	2.5 kg	2.5 kg	2.5 kg
Power loss at $I_e$ (per contactor)	2.4 W	3.7 W	4.2 W

### Dimensions



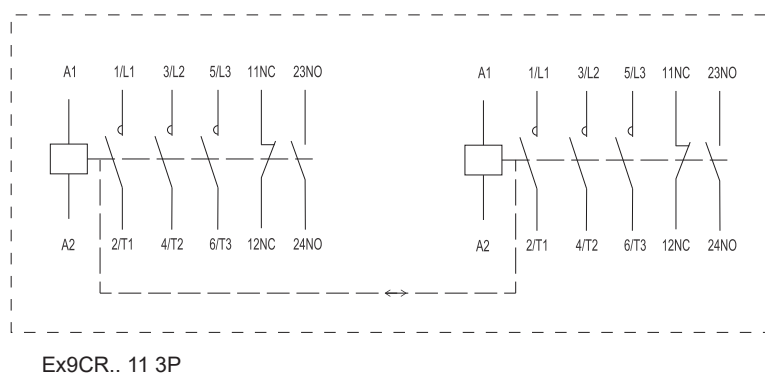
### Mounting positions



# Technical Data Ex9CR, frame size 65

Reversible contactors Ex9CR40, Ex9CR50, Ex9CR65

## Wiring diagram



# Technical Data Ex9CR, frame size 100

## Reversible contactors Ex9CR80, Ex9CR100

### General parameters

Reversible combinations of contactors		
Contactors rated at AC-3		
Suitable mainly for industrial applications		
3-pole versions		
Built-in mechanical interlock between particular contactors		
With built-in auxiliary contacts		
Accessories		
Front-mounted auxiliary contacts	AX42	101284 — 101291
Side-mounted auxiliary contacts	AX4311	101292
Surge suppressor block	CCU43	104495, 104496, 104497

### Electrical parameters - main contacts and general

	Ex9CR80	Ex9CR100
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 Ex9CR, frame size 100

## Reversible contactors Ex9CR80, Ex9CR100

### Electrical parameters - main contacts and general

	Ex9CR80	Ex9CR100
Making capacity		
230/240 V	960 A	1200 A
380/400 V	960 A	1200 A
660/690 V	960 A	1200 A
Breaking capacity		
230/240 V	800 A	1000 A
380/400 V	800 A	1000 A
660/690 V	490 A	490 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 $I_g$	50 kA	

### Electrical parameters - coil

	Ex9CR80	Ex9CR100
Control Voltage $U_c$	24, 36, 42, 48, 110, 127, 220, 230, 240, 380, 400, 415 V AC	
Tolerance of Control Voltage $U_c$	0.8 — 1.1 $U_c$	
Frequency	50 Hz	
Power consumption		
Pick-up	280 VA / 120 W	280 VA / 120 W
Hold	30 VA / 12 W	30 VA / 12 W
Duty	100 %	
Closing delay	20 — 35 ms	
Opening delay	6 — 20 ms	
Closing delay with front-mounted AX	12 — 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

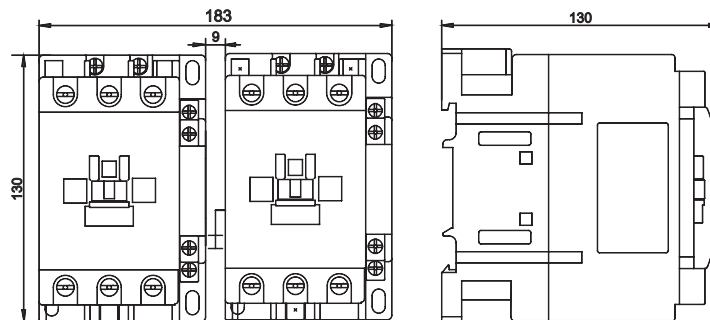
# Technical Data Ex9CR, frame size 100

## Reversible contactors Ex9CR80, Ex9CR100

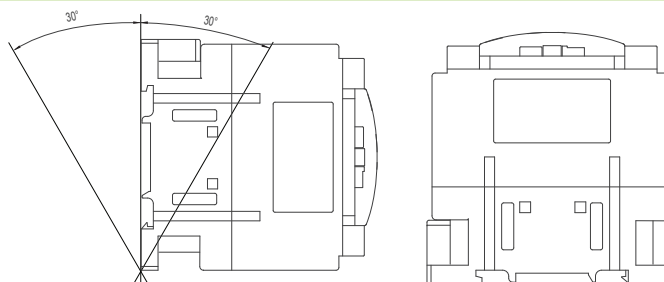
### Mechanical parameters

	Ex9CR80	Ex9CR100
Device width	183 mm	
Device height	130 mm (including rail clip)	
Device depth	130 mm (without front-mounted auxiliary contact)	
Mounting	easy fastening onto 35 or 75 mm device rail (DIN) or onto panel	
Degree of protection	IP20	
Terminals	lift	
Terminal capacity	(1 — 2) x (4 — 50 mm <sup>2</sup> )	
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	3 kg	3 kg
Power loss at $I_e$ (per contactor)	5.1 W	7.5 W

### Dimensions



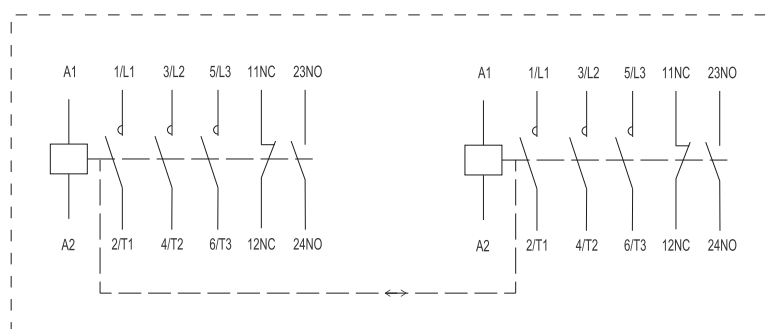
### Mounting positions



# Technical Data Ex9CR, frame size 100

## Reversible contactors Ex9CR80, Ex9CR100

### Wiring diagram



Ex9CR.. 11 3P