

Installation contactor with manual operation **Ex9CHM**



- Meet requirements of IEC / EN 61095
- Rated current up to 16, 20, 25, 32, 40, 63 A
- Rated voltage 24, 110, 220~240 V AC
- Rated frequency 50/60 Hz
- 2 or 4-contact versions
- Various contact combinations
- 4 selectable position (O , AUTO , I , I+P)

Installation contactors with manual operation Ex9CHM are suitable for household and building modular distribution boards. It is used as remote or manual switch for circuit control under AC-7b and AC-7a application category (e.g. mixers, blenders, fans, central vacuum).

The contactor shall not be used for breaking short-circuit current, therefore it should be used with a proper short-circuit protection device.

The contactor has 4 selectable positions:

- O - permanently OFF
- AUTO - switched while the supply voltage is provided to the coil
- I - manually switched, automatically returns to "AUTO" position after the supply voltage ends
- I+P - permanently ON

Type Key

Ex9	CH	16	M	20	24V
Product family	Product	Rated current	Operation	NO+NC main contacts	Rated voltage
Ex9	CH: Installation contactors	16 A 20 A 25 A 32 A 40 A 63 A	M: Manual operation	20 02 11 40 22 04 31	24 V AC 110 V AC 220-240 V AC

Certification marks



Installation contactor with manual operation **Ex9CHM**

Accessories



Installation
Contactor
Ex9CHM

Auxiliary contacts
AX-CHM11
AX-CHM20
1 unit

Auxiliary contact AX-CHM11

Auxiliary contact AX-CHM20

All accessories are mounted to the Ex9CHM from the right side.

Installation contactor with manual operation **Ex9CHM**

Installation contactors with manual operation **16 A, 2 contacts**



Control voltage	Contacts NO+NC	Article No.	Type	Packing
24V AC	2+0	111595	Ex9CH16M 20 24V	1/12/120
24V AC	0+2	111596	Ex9CH16M 02 24V	1/12/120
24V AC	1+1	111597	Ex9CH16M 11 24V	1/12/120
110V AC	2+0	111602	Ex9CH16M 20 110V	1/12/120
110V AC	0+2	111603	Ex9CH16M 02 110V	1/12/120
110V AC	1+1	111604	Ex9CH16M 11 110V	1/12/120
220~240V AC	2+0	111609	Ex9CH16M 20 220-240V	1/12/120
220~240V AC	0+2	111610	Ex9CH16M 02 220-240V	1/12/120
220~240V AC	1+1	111611	Ex9CH16M 11 220-240V	1/12/120

Installation contactors with manual operation **16 A, 4 contacts**



Control voltage	Contacts NO+NC	Article No.	Type	Packing
24V AC	4+0	111598	Ex9CH16M 40 24V	1/6/60
24V AC	2+2	111599	Ex9CH16M 22 24V	1/6/60
24V AC	0+4	111600	Ex9CH16M 04 24V	1/6/60
24V AC	3+1	111601	Ex9CH16M 31 24V	1/6/60
110V AC	4+0	111605	Ex9CH16M 40 110V	1/6/60
110V AC	2+2	111606	Ex9CH16M 22 110V	1/6/60
110V AC	0+4	111607	Ex9CH16M 04 110V	1/6/60
110V AC	3+1	111608	Ex9CH16M 31 110V	1/6/60
220~240V AC	4+0	111612	Ex9CH16M 40 220-240V	1/6/60
220~240V AC	2+2	111613	Ex9CH16M 22 220-240V	1/6/60
220~240V AC	0+4	111614	Ex9CH16M 04 220-240V	1/6/60
220~240V AC	3+1	111615	Ex9CH16M 31 220-240V	1/6/60

Installation contactor with manual operation **Ex9CHM**

Installation contactors with manual operation 20 A, 2 contacts



Control voltage	Contacts NO+NC	Article No.	Type	Packing
24V AC	2+0	111616	Ex9CH20M 20 24V	1/12/120
24V AC	0+2	111617	Ex9CH20M 02 24V	1/12/120
24V AC	1+1	111618	Ex9CH20M 11 24V	1/12/120
110V AC	2+0	111623	Ex9CH20M 20 110V	1/12/120
110V AC	0+2	111624	Ex9CH20M 02 110V	1/12/120
110V AC	1+1	111625	Ex9CH20M 11 110V	1/12/120
220~240V AC	2+0	111630	Ex9CH20M 20 220-240V	1/12/120
220~240V AC	0+2	111631	Ex9CH20M 02 220-240V	1/12/120
220~240V AC	1+1	111632	Ex9CH20M 11 220-240V	1/12/120

Installation contactors with manual operation 20 A, 4 contacts



Control voltage	Contacts NO+NC	Article No.	Type	Packing
24V AC	4+0	111619	Ex9CH20M 40 24V	1/6/60
24V AC	2+2	111620	Ex9CH20M 22 24V	1/6/60
24V AC	0+4	111621	Ex9CH20M 04 24V	1/6/60
24V AC	3+1	111622	Ex9CH20M 31 24V	1/6/60
110V AC	4+0	111626	Ex9CH20M 40 110V	1/6/60
110V AC	2+2	111627	Ex9CH20M 22 110V	1/6/60
110V AC	0+4	111628	Ex9CH20M 04 110V	1/6/60
110V AC	3+1	111629	Ex9CH20M 31 110V	1/6/60
220~240V AC	4+0	111633	Ex9CH20M 40 220-240V	1/6/60
220~240V AC	2+2	111634	Ex9CH20M 22 220-240V	1/6/60
220~240V AC	0+4	111635	Ex9CH20M 04 220-240V	1/6/60
220~240V AC	3+1	111636	Ex9CH20M 31 220-240V	1/6/60

Installation contactor with manual operation **Ex9CHM**

Installation contactors with manual operation **25 A, 2 contacts**



Control voltage	Contacts NO+NC	Article No.	Type	Packing
24V AC	2+0	111637	Ex9CH25M 20 24V	1/12/120
24V AC	0+2	111638	Ex9CH25M 02 24V	1/12/120
24V AC	1+1	111639	Ex9CH25M 11 24V	1/12/120
110V AC	2+0	111644	Ex9CH25M 20 110V	1/12/120
110V AC	0+2	111645	Ex9CH25M 02 110V	1/12/120
110V AC	1+1	111646	Ex9CH25M 11 110V	1/12/120
220~240V AC	2+0	111651	Ex9CH25M 20 220-240V	1/12/120
220~240V AC	0+2	111652	Ex9CH25M 02 220-240V	1/12/120
220~240V AC	1+1	111653	Ex9CH25M 11 220-240V	1/12/120

Installation contactors with manual operation **25 A, 4 contacts**



Control voltage	Contacts NO+NC	Article No.	Type	Packing
24V AC	4+0	111640	Ex9CH25M 40 24V	1/6/60
24V AC	2+2	111641	Ex9CH25M 22 24V	1/6/60
24V AC	0+4	111642	Ex9CH25M 04 24V	1/6/60
24V AC	3+1	111643	Ex9CH25M 31 24V	1/6/60
110V AC	4+0	111647	Ex9CH25M 40 110V	1/6/60
110V AC	2+2	111648	Ex9CH25M 22 110V	1/6/60
110V AC	0+4	111649	Ex9CH25M 04 110V	1/6/60
110V AC	3+1	111650	Ex9CH25M 31 110V	1/6/60
220~240V AC	4+0	111654	Ex9CH25M 40 220-240V	1/6/60
220~240V AC	2+2	111655	Ex9CH25M 22 220-240V	1/6/60
220~240V AC	0+4	111656	Ex9CH25M 04 220-240V	1/6/60
220~240V AC	3+1	111657	Ex9CH25M 31 220-240V	1/6/60

Installation contactor with manual operation **Ex9CHM**

Installation contactors with manual operation **32 A, 2 contacts**



Control voltage	Contacts NO+NC	Article No.	Type	Packing
24V AC	2+0	111700	Ex9CH32M 20 24V	1/6/60
24V AC	0+2	111701	Ex9CH32M 02 24V	1/6/60
24V AC	1+1	111702	Ex9CH32M 11 24V	1/6/60
110V AC	2+0	111707	Ex9CH32M 20 110V	1/6/60
110V AC	0+2	111708	Ex9CH32M 02 110V	1/6/60
110V AC	1+1	111709	Ex9CH32M 11 110V	1/6/60
220~240V AC	2+0	111714	Ex9CH32M 20 220-240V	1/6/60
220~240V AC	0+2	111715	Ex9CH32M 02 220-240V	1/6/60
220~240V AC	1+1	111716	Ex9CH32M 11 220-240V	1/6/60

Installation contactors with manual operation **32 A, 4 contacts**



Control voltage	Contacts NO+NC	Article No.	Type	Packing
24V AC	4+0	111703	Ex9CH32M 40 24V	1/4/40
24V AC	2+2	111704	Ex9CH32M 22 24V	1/4/40
24V AC	0+4	111705	Ex9CH32M 04 24V	1/4/40
24V AC	3+1	111706	Ex9CH32M 31 24V	1/4/40
110V AC	4+0	111710	Ex9CH32M 40 110V	1/4/40
110V AC	2+2	111711	Ex9CH32M 22 110V	1/4/40
110V AC	0+4	111712	Ex9CH32M 04 110V	1/4/40
110V AC	3+1	111713	Ex9CH32M 31 110V	1/4/40
220~240V AC	4+0	111717	Ex9CH32M 40 220-240V	1/4/40
220~240V AC	2+2	111718	Ex9CH32M 22 220-240V	1/4/40
220~240V AC	0+4	111719	Ex9CH32M 04 220-240V	1/4/40
220~240V AC	3+1	111720	Ex9CH32M 31 220-240V	1/4/40

Installation contactor with manual operation **Ex9CHM**

Installation contactors with manual operation 40 A, 2 contacts



Control voltage	Contacts NO+NC	Article No.	Type	Packing
24V AC	2+0	111658	Ex9CH40M 20 24V	1/6/60
24V AC	0+2	111659	Ex9CH40M 02 24V	1/6/60
24V AC	1+1	111660	Ex9CH40M 11 24V	1/6/60
110V AC	2+0	111665	Ex9CH40M 20 110V	1/6/60
110V AC	0+2	111666	Ex9CH40M 02 110V	1/6/60
110V AC	1+1	111667	Ex9CH40M 11 110V	1/6/60
220~240V AC	2+0	111672	Ex9CH40M 20 220-240V	1/6/60
220~240V AC	0+2	111673	Ex9CH40M 02 220-240V	1/6/60
220~240V AC	1+1	111674	Ex9CH40M 11 220-240V	1/6/60

Installation contactors with manual operation 40 A, 4 contacts



Control voltage	Contacts NO+NC	Article No.	Type	Packing
24V AC	4+0	111661	Ex9CH40M 40 24V	1/4/40
24V AC	2+2	111662	Ex9CH40M 22 24V	1/4/40
24V AC	0+4	111663	Ex9CH40M 04 24V	1/4/40
24V AC	3+1	111664	Ex9CH40M 31 24V	1/4/40
110V AC	4+0	111668	Ex9CH40M 40 110V	1/4/40
110V AC	2+2	111669	Ex9CH40M 22 110V	1/4/40
110V AC	0+4	111670	Ex9CH40M 04 110V	1/4/40
110V AC	3+1	111671	Ex9CH40M 31 110V	1/4/40
220~240V AC	4+0	111675	Ex9CH40M 40 220-240V	1/4/40
220~240V AC	2+2	111676	Ex9CH40M 22 220-240V	1/4/40
220~240V AC	0+4	111677	Ex9CH40M 04 220-240V	1/4/40
220~240V AC	3+1	111678	Ex9CH40M 31 220-240V	1/4/40

Installation contactor with manual operation **Ex9CHM**

Installation contactors with manual operation **63 A, 2 contacts**



Control voltage	Contacts NO+NC	Article No.	Type	Packing
24V AC	2+0	111679	Ex9CH63M 20 24V	1/6/60
24V AC	0+2	111680	Ex9CH63M 02 24V	1/6/60
24V AC	1+1	111681	Ex9CH63M 11 24V	1/6/60
110V AC	2+0	111686	Ex9CH63M 20 110V	1/6/60
110V AC	0+2	111687	Ex9CH63M 02 110V	1/6/60
110V AC	1+1	111688	Ex9CH63M 11 110V	1/6/60
220~240V AC	2+0	111693	Ex9CH63M 20 220-240V	1/6/60
220~240V AC	0+2	111694	Ex9CH63M 02 220-240V	1/6/60
220~240V AC	1+1	111695	Ex9CH63M 11 220-240V	1/6/60

Installation contactors with manual operation **63 A, 4 contacts**



Control voltage	Contacts NO+NC	Article No.	Type	Packing
24V AC	4+0	111682	Ex9CH63M 40 24V	1/4/40
24V AC	2+2	111683	Ex9CH63M 22 24V	1/4/40
24V AC	0+4	111684	Ex9CH63M 04 24V	1/4/40
24V AC	3+1	111685	Ex9CH63M 31 24V	1/4/40
110V AC	4+0	111689	Ex9CH63M 40 110V	1/4/40
110V AC	2+2	111690	Ex9CH63M 22 110V	1/4/40
110V AC	0+4	111691	Ex9CH63M 04 110V	1/4/40
110V AC	3+1	111692	Ex9CH63M 31 110V	1/4/40
220~240V AC	4+0	111696	Ex9CH63M 40 220-240V	1/4/40
220~240V AC	2+2	111697	Ex9CH63M 22 220-240V	1/4/40
220~240V AC	0+4	111698	Ex9CH63M 04 220-240V	1/4/40
220~240V AC	3+1	111699	Ex9CH63M 31 220-240V	1/4/40

Technical Data **Ex9CHM**

Installation contactors with manual operation

General parameters

Shall not be used for breaking short-circuit current, therefore it should be used with a proper short-circuit protection device.

Indication window help users to know the status of device

4 adjustable positions (I , AUTO , O , I+P)

Electrical parameters

		16A	20A	25A	32A	40A	63A
Tested according to		IEC/EN 61095					
Rated operational voltage U_e		250 (2P), 400 (4P) V					
Rated control power voltage U_s		24 V AC / 110 V AC / 220~240V AC					
Rated insulation voltage U_i		500 V					
Rated impulse withstand voltage U_{imp}		4 kV					
Rated conventional thermal current I_{th}		25 A	25 A	25 A	63 A	63 A	63 A
Rated current I_n							
	AC-7a	16 A	20 A	25 A	32 A	40 A	63 A
	AC-7b	6 A	7 A	9 A	12 A	18 A	25 A
Controlled power							
AC-7a	250 V	3.5 kW	4.5 kW	5.5 kW	8 kW	9 kW	14 kW
	400 V	6 kW	7.5 kW	9.5 kW	12 kW	15 kW	24 kW
AC-7b	250 V	1.4 kW	1.6 kW	2 kW	3 kW	4 kW	5.5 kW
	400 V	2.2 kW	2.5 kW	3.2 kW	4.5 kW	6 kW	8 kW
Electrical service life		80 000 operating cycles					
Number of main contacts							
	2P	1NO 1NC, 2NO, 2NC					
	4P	2NO 2NC, 3NO 1NC, 4NO, 4NC					
Rated duty system							
	Intermittent	30 times/h load factor 40%					
	Eight hours	basic duty system					
Ambient temperature		-25 — +70 °C					

Installation contactors with manual operation

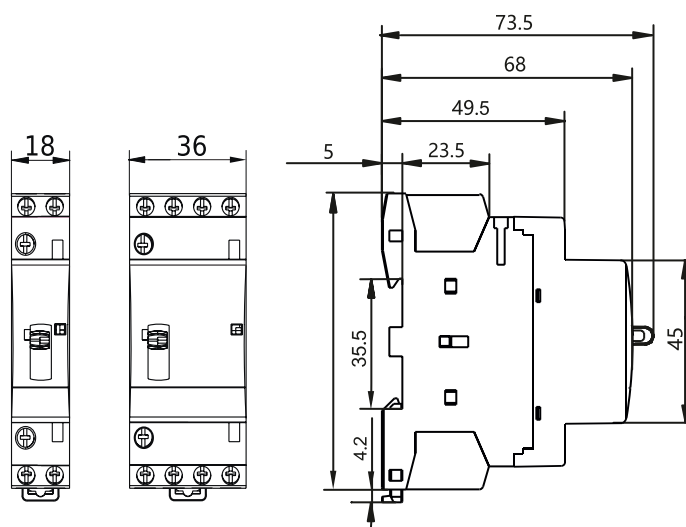
Mechanical parameters							
		16A	20A	25A	32A	40A	63A
Frame size		45 mm					
Width (2P / 4P)		18 / 36 mm			36 / 54 mm		
Mounting		easy fastening onto 35 mm device rail (DIN)					
Degree of protection		IP20					
Terminals		M3.5 screws			M5 screws		
Terminal capacity		1 — 4 mm ²			2.5 — 16 mm ²		
Fastening torque of terminals		0.8 Nm			3.5 Nm		
Control coil terminal		M3.5 screws					
Fastening torque of control terminals		0.8 Nm					
Wiring							
Control circuit	Hard wire	1.5~2.5 mm ²			2×1.5 mm ²		
	Flexible wire	1.5~2.5 mm ²			2×2.5 mm ²		
Power circuit	Hard wire	1.5~6 mm ²			6~25 mm ²		
	Flexible wire	1.5~4 mm ²			6~16 mm ²		
Mechanical service life		1 000 000 operating cycles					
Pollution degree		2					
Installation class		II					
Weight		0.119 kg (2 pole), 0.207 kg (4 pole)			0.233 kg (2 pole), 0.336 kg (4 pole)		

Technical Data **Ex9CHM**

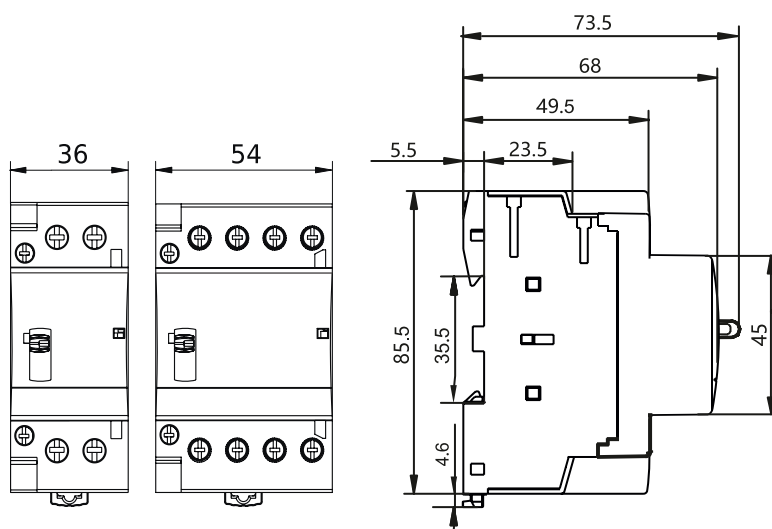
Installation contactors with manual operation

Dimensions

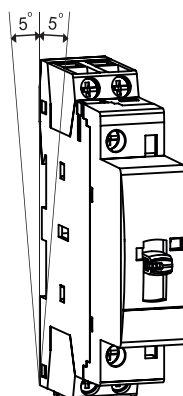
Ex9CH16/20/25M



Ex9CH32/40/63M



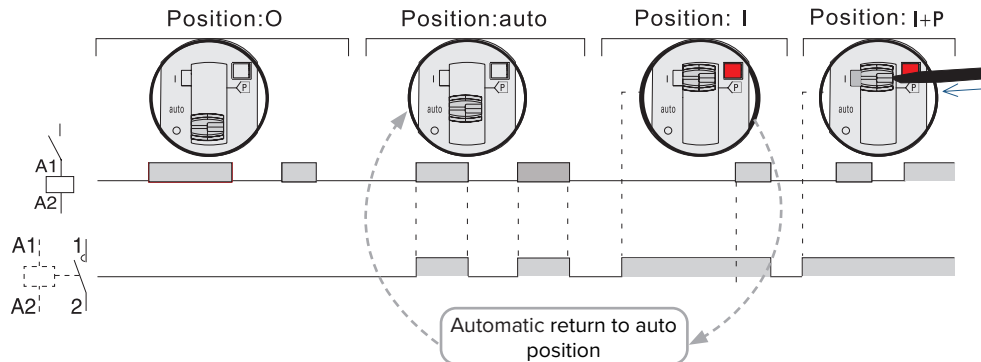
Mounting position



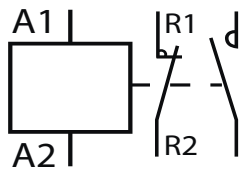
Technical Data **Ex9CHM**

Installation contactors with manual operation

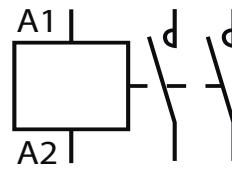
Operation principles



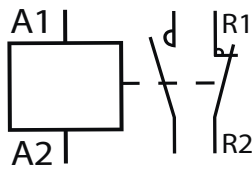
Wiring diagrams



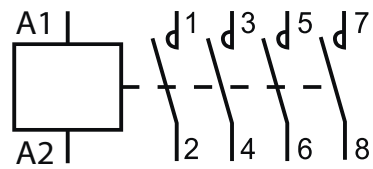
Ex9CH16~25 M
1NO+1NC



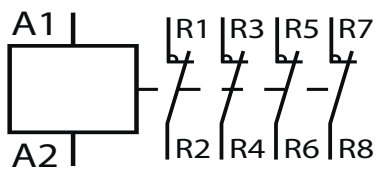
Ex9CH16~63 M
2NO



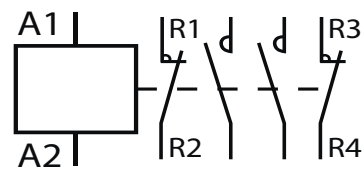
Ex9CH32~63 M
1NO+1NC



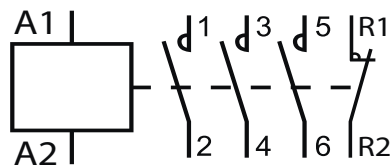
Ex9CH16~63 M
4NO



Ex9CH16~63 M
4NC



Ex9CH16~63 M
2NO+2NC



Ex9CH16~63 M
3NO+1NC