EPM Elektropřístroj	Technical data sheet	Contactors	Date: 10. 01. 2024



minicontactor type:

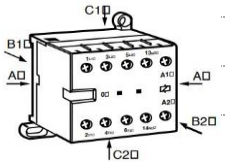
MC09.10 , MC09.01
with coil 220..240V / 40..450Hz
or coil 24V DC

EAN Code:

MC09.10 220..240V / 40..450Hz	8590206782067
MC09.01 220..240V / 40..450Hz	8590206783613
MC09.10 24V DC	8590206782739
MC09.01 24V DC	8590206783736

Technical data

Rated insulation voltage	U_i	690	[V]
Impulse withstand voltage	U_{imp}	6	[kV]
Overvoltage category according to ČSN EN 60947-1		III	[-]
Working environment - degree of pollution		3	[-]
Ambient temperature range		-25 .. +55	[°C]
Storage temperature		-40 .. +80	[°C]
Operating altitude		2000	[m]
Environmental conditions		any acc. to EN 60721-2-1	
Flammability of materials according to EN 60695-11-10 or UL94		V-0	[-]
Shock rezistance with normal installation position		Semi-sinusoidal shock, 10ms: with no change in contact state	



Shock rezistance	A	B1	B2	C1	C2
Contactors switched off	20 g	20 g	20 g	20 g	20 g
Contactors switched on	10 g	20 g	20 g	20 g	20 g

Resistance to vibrations		5g 5 .. 150 Hz		
Switching times		AC coil	DC coil	
NO	Closing delay	14 to 26		ms
	Opening delay	16 to 40	4 to 10	ms
NC	Closing delay	18 to 42	6 to 12	ms
	Opening delay	14 to 26		ms
Main dimensions W x H x D		47,5 x 45 x 46,5		[mm]
Main dimensions including removable bracket for M4 screw W x H x D		52,5 x 57,5 x 46,5		[mm]
Mass		0,18		[kg]
Degree of protection acc. to VDE 0106, part 100		IP20		

Main poles

Number and type of contacts		3 x NO		
Conventional free air thermal current	I_{th}	32		[A]
Rated operational current I_e		55 °C	40 °C	
in AC-1 at 230 V	I_e	16	20	[A]
in AC-1 at 400 V	I_e	16	20	
in AC-1 at 500 V	I_e	12	12	
in AC-3 at 230 V	I_e	9		
in AC-3 at 400 V	I_e	9		
in AC-3 at 500 V	I_e	5,5		
in DC-1 at 220 V DC (all three poles connected in series)	I_e	14		
in DC-3 at 220 V DC (all three poles connected in series)	I_e	4		
in DC-5 at 220 V DC (all three poles connected in series)	I_e	2		
Max. output power of controlled motor in AC-3				
at 220-230 V		2,2		[kW]
at 380-400 V		4		
at 500 V		3		
Short time withstand currents from the cold state at the max. ambient temp. 40 °C:				
10 sec		64		[A]
Max. on-load switching rate:				
in AC-1		300		[op. cycles/hour]
in AC-3		600		
in DC-1		600		
in DC-3		600		
Electrical durability in AC-1 at 400V for rated op. current		$0,1 \times 10^6$		[op. cycles]
Electrical durability in AC-3 at 400V for rated op. current		$0,3 \times 10^6$		[op. cycles]
Recommended fuse char. gL		20		[A]
Type of coordination with SCPD		2		
Mechanical durability		10×10^6		[op. cycles]
Power loss per pole	P	2 at 20A		[W]
Positively guided contacts according to IEC 60947-4-1/A1 ed. 2 - Annex F (auxiliary contacts linked with power contacts - mirror contact).		MC09.10	non aplicable	
		MC09.01	YES	

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Terminal type			screw-type terminal	
Screw type			Pozidriv 1	
Screw size			M3	
Tightening torque			0,8 .. 1,1	[Nm]
Max. conductor cross-section:				
Rigid		2 x	1 .. 4	[mm^2]
Flexible		2 x	1 .. 2,5	[mm^2]

Auxiliary contacts

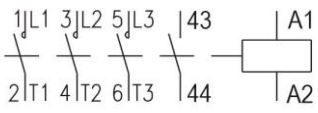
Number and type of contacts		MC09.10	1 x NO	
		MC09.01	1 x NC	
		can be completed with additional block MPK11, MPK20, MPK02 or MPKB11		
Rated operational voltage	U_i	AC	12 to 500	[V]
		DC	12 to 240	[V]
Impulse withstand voltage	U_{imp}		6	[kV]
Conventional free air thermal current	I_{th}		6	[A]
Short-circuit protection, type fuses gG(gl)			10	[A]
Rated operational current in AC-15:				
at 24-240 V	I_e		4	[A]
at 380-400 V	I_e		3	[A]
at 500 V	I_e		2	[A]
Rated operational current in DC-13:				
at 24 V	I_e		1,5	[A]
at 60 V	I_e		0,5	
at 110 V	I_e		0,4	[A]
at 220 -240 V	I_e		0,04	[A]
Mechanical durability			10 x 10^6	[op. cycles]
Min. making/breaking capacity of the auxiliary contacts			17 V and 5 mA	
Dissipation on main pole (ea)	P		0,32	[W]
Terminal type			screw-type terminal	
Screw type			Pozidriv 1	
Screw size			M3	
Tightening torque			0,8 .. 1,1	[Nm]
Max. conductor cross-section:				
Rigid		2 x	1 .. 4	[mm^2]
Flexible		2 x	1 .. 2,5	[mm^2]

Control circuit

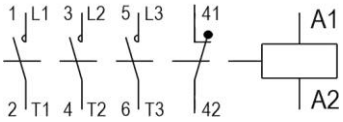
Tolerance of control voltage			85 .. 110	[%]
Pull-in input power of AC control coil ±10%			3,5	[VA]
Hold-in input power of AC control coil ±10%			3,5	[VA/W]
Pull-in input power of DC control coil ±10%			3,5	[W]
Hold-in input power of DC control coil ±10%			3,5	[W]
Terminal type			screw-type terminal	
Screw size			M3	
Tightening torque			0,8 .. 1,1	[Nm]
Max. conductor cross-section:				
Rigid		2 x	1 .. 4	[mm^2]
Flexible		2 x	1 .. 2,5	[mm^2]

Marking of terminals

MC09.10



MC09.01



All terminals facilitate connecting of either single conductor up to the maximum cross-section, or two conductors of the same or by one degree different cross-sections except for the maximum one. Flexible conductors must not be compacted by brazing.

Ecological sustainability

REACH Regulation	REACh Declaration
REACH free of SVHC	Yes
EU RoHS Directive	Compliant
Mercury free	Yes
OEEZ - certificate of involvement in the system	AK-6-019136