EPM Elektropřístroj	Technical data sheet	Contactors	01.09.2024



DC controlled contactor

V250F with AC coil

Designation / Marking:

V205F _ _ V AC
_ _ = nominal control voltage

Technical data			
Rated insulation voltage	U_i	1000	[V]
Impulse withstand voltage	U_{imp}	8	[kV]
Overvoltage category according to ČSN EN 60947-1		III	[-]
Working environment - degree of pollution		3	[-]
Ambient temperature range		-50 .. +55	[°C]
Operating altitude		2000	[m]
Storage temperature		-55 .. +55	[°C]
Environmental conditions		any acc. to EN 60721-2-1	
Level of safety and reliability according to EN 13849-1		B10d = 2 000 000 cycles	
Flammability of materials according to EN 60695-11-10 or UL94		V-0	[-]
Fire behaviour acc. to EN45545-2		hazard level HL3 - product category EL10, requirement set R26	
Vibration and shock resistance according to ČSN EN 61373 ed. 2		category 1, class A	
Main dimensions W x H x D		154 x 204 x 191,5	[mm]
Mass		5,5	[kg]
Mass including unit packing		5,6	[kg]
Degree of protection acc. to VDE 0106, part 100		IP20/IP10	
Main poles			
Number and type of contacts		3 x NO	[-]
Conventional free air thermal current - conductor cross-section 16 / 10 mm^2	I_{th}	370	[A]
Rated operational current I_e			
in AC-1 at 400 V	I_e	350	[A]
in AC-3 at 400 V	I_e	250	
in AC-4 at 400 V	I_e	72	
in DC-1 at 220 V DC - 500 V DC	I_e	250	
in DC-3 at 220 V DC	I_e	125	
in DC-5 at 220 V DC	I_e	80	
Max. output power of controlled motor in AC-3 (AC-4)			
at 220-230 V		75	[kW]
at 380-400 V		132	
at 500 V		132	
at 660-690 V		110	
Max. output power of controlled motor in AC-3 (AC-4)			
at 220-230 V		30	[kW]
at 380-400 V		37	
at 500 V		37	
Short time withstand currents from the cold state at the max. ambient temp. 40°C:			
1 sec	Min. conductor cross section 120 mm^2	3000	[A]
5 sec		2180	
10 sec		2000	
30 sec		1400	
1 min		1050	
3 min		630	
10 min		480	
Max. number of on-load op. cycles per hour			
in AC-1		300	[op. cycles/hour]
in AC-3		600	
in AC-4		600	
Recommended fuse char. aM		250	[A]
Type of coordination according to IEC 60947-4-1		2	
Mechanical durability		$5x10^6$	[op. cycles]
Electrical durability in AC-1 at 400V for rated op. current		$0,5x10^6$	[op. cycles]
Electrical durability in AC-3 at 400V for rated op. current		$0,5x10^6$	[op. cycles]
Voltage drop on each main pole	ΔU	61	[mV]
	I	350	[A]
Power dissipation per pole	P	21,4	[W]
Operating times from coil energization to			[ms]
closing of the N.O. contact		21	[ms]
opening of the N.C. contact		non aplicable	[ms]
Operating times from coil deenergization to			
opening of the N.O. contact		18	[ms]
closing of the N.C. contact		non aplicable	[ms]
Positively guided contacts acc. to IEC 60947-4-1/A1 ed. 2 - Annex F (auxiliary contacts linked with power contacts - mirror contact).			- YES -
Terminal type		Lug terminal	
Screw type / Screw size		hexagonal head / M10	
Tightening torque		10 ,, 20	[Nm]
Conductor cross-section:		70..150	[mm^2]
Max. width of connected bar or cable lug for connected wire		40	[mm]
Auxiliary contacts			
Number of contacts		2 x NO + 2 x NC	
Rated insulation voltage	U_i	690	[V]
Impulse withstand voltage	U_{imp}	8	[kV]
Conventional free air thermal current	I_{th}	12	[A]
Rated operational current in AC-15:			
at 220-230 V	I_e	4	[A]
at 380-400 V	I_e	2	[A]
Electrical durability in AC-15:			
at 220-230 V, 4 A		0.8×10^6	[op. cycles]
at 380-400 V, 2 A		1×10^6	[op. cycles]
Operating times from coil energization to			[ms]
closing of the N.O. contact		30	[ms]
opening of the N.C. contact		18	[ms]
Operating times from coil deenergization to			
opening of the N.O. contact		17	[ms]
closing of the N.C. contact		20	[ms]
Non overlapp. time of the cont. betw. N.O. and N.C.		2 - 6	[ms]

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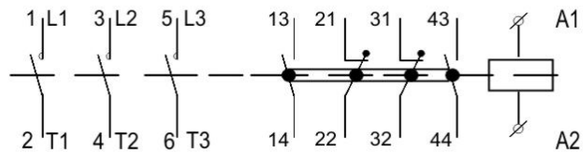
Positively guided contacts according to IEC 60947-5-1/A2 ed. 2 - Annex L (mechanically linked contacts).		- YES -
Terminal type	screw-type terminal	
Screw type	combined PH2 + simple slots	
Screw size	M3,5	
Tightening torque	0,8	[Nm]
Max. conductor cross-section:		
Rigid	1 .. 2.5	[mm^2]
Flexible	0.75 .. 1.5	[mm^2]

Control circuit

Tolerance of control voltage	85 .. 110	[%]
Drop-out voltage	>25% Uc	[%]
Pull-in input power of AC control coil ±10%	700	[VA]
Hold-in input power of AC control coil ±10%	75 / 23	[VA/W]
Terminal type	screw-type terminal	
Screw size	M3.5	
Tightening torque	0.8	[Nm]
Max. conductor cross-section:		
Rigid	1 .. 2.5	[mm^2]
Flexible	0.75 .. 1.5	[mm^2]

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.

Marking of terminals



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 systém	AK-6-019136