



AC controlled contactor

Registracion number:

V105F DC D coil

Technical data

Rated insulation voltage	$U_i$	1000	[V]
Impulse withstand voltage	$U_{imp}$	8	[kV]
Conventional free air thermal current	$I_{th}$	140	[A]
Ambient temperature range		-50 .. +55	[°C]
Main dimensions W x H x D		108x124x140	[mm]
Mass		1,65	[kg]
Mass including unit packing		1,7	[kg]
Degree of protection acc. to VDE 0106, part 100		IP20/10	

Main poles

Rated operational current:			
in AC-1 at 400 V	$I_e$	140	[A]
in AC-3 at 400 V	$I_e$	105	[A]
in AC-4 at 400 V	$I_e$	38	[A]
in DC-1 at 220 V DC	$I_e$	105	[A]
in DC-3 at 220 V DC	$I_e$	63	[A]
in DC-5 at 220 V DC	$I_e$	40	[A]
Max. output power of controlled motor in AC-3:			
at 220-230 V		30	[kW]
at 380-400 V		55	[kW]
at 500 V		55	[kW]
at 660-690 V		45	[kW]
Max. output power of controlled motor in AC-4:			
at 220-230 V		12,5	[kW]
at 380-400 V		18,5	[kW]
at 500 V		18,5	[kW]
Max. on-load switching rate:			
in AC-1		300	[op. cycles/hour]
in AC-3		600	[op. cycles/hour]
in AC-4		600	[op. cycles/hour]
Electrical durability in AC-1 at 400V for rated op. current		$0,5 \times 10^6$	[op. cycles]
Electrical durability in AC-3 at 400V for rated op. current		$0,7 \times 10^6$	[op. cycles]
Recommended fuse char. aM		100	[A]
Type of coordination according to IEC 60947-4-1		2	
Mechanical durability		$10 \times 10^6$	[op. cycles]
Voltage drop on each main pole			
	$\Delta U$	64	[mV]
	$I$	145	[A]
	$P$	9,3	[W]
Power dissipation per pole			
Operating times from coil energization to			
closing of the N.O. contact		16	[ms]
opening of the N.C. contact		-	[ms]
Operating times from coil deenergization to			
opening of the N.O. contact		10	[ms]
closing of the N.C. contact		-	[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 / M6			
Tightening torque			
3 [Nm]			
Conductor cross-section:			
16..50 [mm <sup>2</sup> ]			
Max. width of connected bar or cable lug for connected wire			
22 [mm]			
Short time withstand currents from the cold state at the max. ambient temp. 40°C:			
1 sec		1270	[A]
5 sec		1060	[A]
10 sec		840	[A]
30 sec		600	[A]
1 min		450	[A]
3 min		280	[A]
10 min		170	[A]

Auxiliary contacts

Number of contacts			
2 x NO + 1 x NC			
Rated insulation voltage	$U_i$	690,0	[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		$0,8 \times 10^6$	[op. cycles]
at 380-400 V, 2 A		$1 \times 10^6$	[op. cycles]
Operating times from coil energization to			
closing of the N.O. contact		17	[ms]
opening of the N.C. contact		12	[ms]
Operating times from coil deenergization to			
opening of the N.O. contact		13	[ms]
closing of the N.C. contact		16	[ms]
Non overlapp. time of the cont. betw. N.O. and N.C.			
3 - 6 [ms]			
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 <sup>2</sup> ]
Flexible		0,75 .. 1,5	[mm <sup>2</sup> ]

Control circuit

Tolerance of control voltage		85 .. 110	[%]
Pull-in input power of DC control coil $\pm 10\%$		56..70	[W]
Hold-in input power of DC control coil $\pm 10\%$		3,2..4,5	[W]
Terminal type			
screw-type terminal			
Screw size			
M3,5			
Tightening torque			
0,8 [Nm]			
Max. conductor cross-section:			
Rigid		1 .. 2,5	[mm <sup>2</sup> ]
Flexible		0,75 .. 1,5	[mm <sup>2</sup> ]

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

