

DISTRIBUTION SOLUTIONS

# ConVac

## Medium voltage vacuum contactor



### ConVac:

its strengths, your benefits



**Productivity** Maximize your result

#### Easy to install

- All electrical connections are plug-and-socket with integrated terminal box. This method saves up to 40% of wiring time.



**Efficiency** Optimize investments

#### Affordable range

- Panel design optimization thanks to common fixing and terminals position between ConVac 7 and ConVac 12 and flexible installation position.

#### Optimized logistic

- One single product conforming to IEC, UL and CSA standards at 7,2kV and for both 7,2 and 12kV common and interchangeable plug in accessories to reduce the customization time up to 80%.

ABB ConVac vacuum contactor is suitable for the following standards:

Standard	ConVac 7	ConVac 12
IEC 62271-106	•	•
UL347 6th edition	•	
CSA C22.2	•	

ConVac is suitable for applications that require a high number of operations and/or a very high switching frequency such as:

#### Three-phase motors

- AC-3 or AC-4 class according IEC standards
- E1 and E2 class according UL/CSA standards (7,2kV)

#### Capacitors

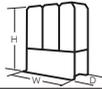
Single and back to back application according IEC 62271-106 and IEEE C39.09a:

- ConVac 7: Class C2
- ConVac 12 : Class C1

#### Transformers

Small footprint, flexible and user friendly solution for switching.

## Technical Characteristics

Parameters			
Rated voltages			
Rated voltage [Ur]		[kV]	
Rated insulation level [Ud] @50/60Hz		(1 min)[kV]	
Rated insulation level (Up), impulse		[kVp]	
Rated frequency [fr]		[Hz]	
Rated current			
Rated operational current (Ie)		[A]	
Thermal current (Ith)		[A]	
Short circuit and overload performance			
Short-time withstand current [Ik] + rated duration [tk] or rated momentary current		[A]	
Rated peak current		[kA peak]	
Short-time withstand current for 30 s		[A]	
Short circuit breaking current (Isc)- combined with fuses		[kA rms]	
Rated short-circuit making current (Ima)- combined with fuses		[kA rms]	
Damage classification			
Short-circuit breaking capacity at 7.2kV		[kA]	
Short circuit making capacity		[kA]	
Short circuit sequence			
Rated making and breaking capacities, by utilization category of use		Category	
Rated making and breaking capacities and overload		[kA]	
Capacitive switching capabilities ( 62271-106 / IEEE C37.09a)			
Configuration			
Restrike performance		Class	
Rated current		[A]	
Inrush peak		[kA peak]	
Inrush current frequency		[Hz]	
Mechanical life			
Rated duty		[Cycles/hour]	
Life	Electrical latching	[Cycles]	
	Mechanical latching	[Cycles]	
Rated supply voltage of switching devices, and of auxiliary and control circuits (Ua)			
Feeder type 1 (Drive unit and closing coil)		[Vdc - Vac 50-60Hz]	
Feeder type 2 (Drive unit and closing coil)		[Vdc - Vac 50-60Hz]	
Start-up current (Drive unit and closing coil)		[A peak] x 200ms	
Holding		[W]	
Pick-up voltage		[Vdc - Vac 50-60Hz]	
Drop-out voltage		[Vdc - Vac 50-60Hz]	
Opening coil-Kit RiMe (only for latched contactors)		[Vdc - Vac 50-60Hz]	
Start-up current RiMe kit 24V dc		[A peak]x100ms	
Start-up current RiMe kit 48V dc		[A peak]x100ms	
Start-up current RiMe kit 110-125Vac dc 50-60Hz		[A peak]x100ms	
Start-up current RiMe kit 220-240Vac dc 50-60Hz		[A peak]x100ms	
Operating time			
Opening time - Electrically latched		[ms]	
Opening time - Mechanically latched (kit RiMe)		[ms]	
Closing time		[ms]	
Operating temperature (*)		[°C]	
Weight			
Overall dimensions		High	H
		Width	W
		Depth	D

IEC62271-106 (10-2012)			UL347 6th edition	
Ref. std	Value	Value	Ref. std	Value
4.1	7.2	12	4.1	7.2
4.2	20 (32)	28 (42)	4.2	20 (32)
4.2	60	75	4.2	60
4.3	50-60	50-60	-	50-60
4.101	400	400	4.101	400
4.4.101	400	400	4.4.101	400
4.5	6000x1sec	"6000x1sec	4.6.2	6000x1sec
4.7	4000x4sec	4000x4sec"	4.7.2	
4.6	15.6	15,6	4.6.1	-
6.6	2400	2400	6.202	2400
4.107	50	•	4.107 4.202	50 (Class E2*)
4.107	130***	•	4.107 4.202	•
4.107	C	•	-	-
4.107	5	6	4.202	6@60Hz (Class E1)
4.107	13	15,6	4.202	15@60Hz (Class E1)
6.104	CO-3'-CO-3'CO	CO-3'-CO-3'CO	4.202	CO-2'-CO-2'CO
4.104	AC-4	AC-4	-	-
-	-	-	4.103 6.102	10CO @ 4kA 40CO @ 2.4kA
4.112	-	-	IEEE C37.09a	-
	back to back	back to back		back to back
	class C2	class C1		class C2
	250	250		250
	8	8		8
	2500	2500		2500
4.102.2	1200	1200	4.102.2	1200
6.101	1000000	1000000	6.101	1000000
6.101	100000	100000	6.101	100000
4.8, 4.9	-	-	4.8, 4.9	-
-	110÷125	110÷125	-	110÷125
-	220÷240	220÷240	-	220÷240
-	7÷10.5	7÷10.5	-	7÷10.5
-	50	50	-	50
-	80%	80%	-	80%
-	65%	65%	-	65%
-	24-48 Vdc only 110-125 Vac dc 220-240 Vac dc	24-48 Vdc only 110-125 Vac dc 220-240 Vac dc	-	24-48 Vdc only 110-125 Vac dc 220-240 Vac dc
-	40	40	-	40
-	25	25	-	25
-	10	10	-	10
-	7	7	-	7
-	80÷100	80÷100	-	80÷100
-	80÷100	15÷35	-	80÷100
-	40÷70	40÷70	-	40÷70
IEC 60068	-30÷ +70	-30÷ +70	C37.09	-30÷ +40 **
15-20 [kg] /33-44 [lbs]	15-20 [kg] /33-44 [lbs]	15-20 [kg] /33-44 [lbs]	15-20 [kg] /33-44 [lbs]	15-20 [kg] /33-44 [lbs]
377 [mm] /14,8 [inch]	377 [mm] /14,8 [inch]	380 [mm]	380 [mm]	377 [mm] /14,8 [inch]
342 [mm] /13,5 [inch]	342 [mm] /13,5 [inch]	342 [mm]	342 [mm]	342 [mm] /13,5 [inch]
210 [mm] /8,3 [inch]	210 [mm] /8,3 [inch]	230 [mm]	230 [mm]	210 [mm] /8,3 [inch]

\* For UL Class E2 interrupting capability with R/C Mersen fuse A072B2DARO-18R

\*\* For higher temperature please contact ABB

\*\*\* Highest prospective peak current. Highest cut-off current of the SCPD intended is 45kA

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For further details please contact:



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More product information:

[abb.com/mediumvoltage](http://abb.com/mediumvoltage)

Your contact center:

[abb.com/contactcenters](http://abb.com/contactcenters)

More service information:

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