

# Vacuum Contactors

## V 630 and V 820

1SFC 280002-EN ed.1, February 1998

Supersedes 1SFC 18059-EN



ABB Control

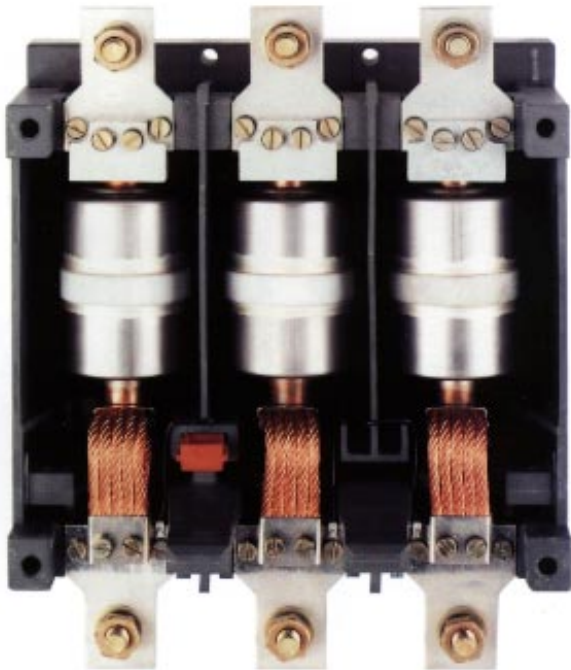


## Description

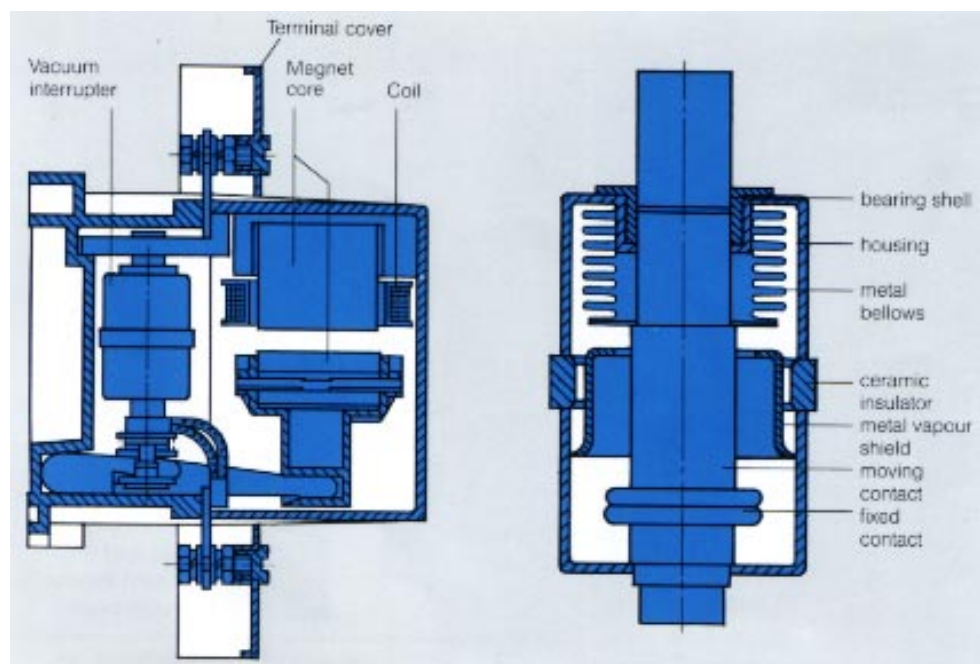
### Vacuum Contactor V 630 and V 820

The vacuum contactors can be used for special applications, where the following is of importance:

- Switching without open arcs (the vacuum interrupter is totally sealed)
- Where a very long electrical endurance is needed



A section through the vacuum interrupter, totally sealed maintenance free design.



A section of the vacuum contactor from the inside.

# Technical data

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### V 630-30-44

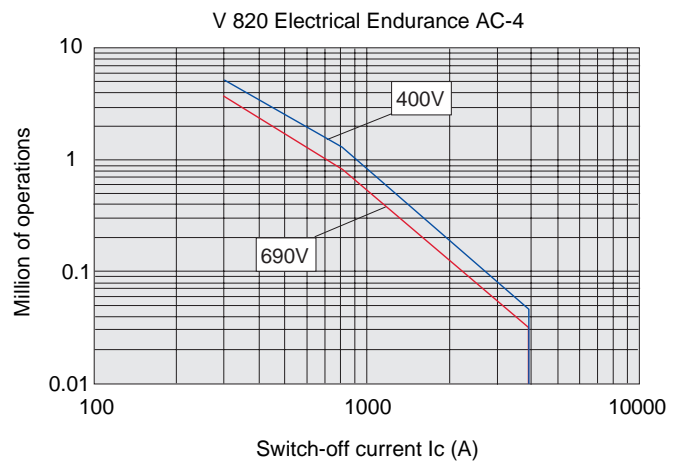
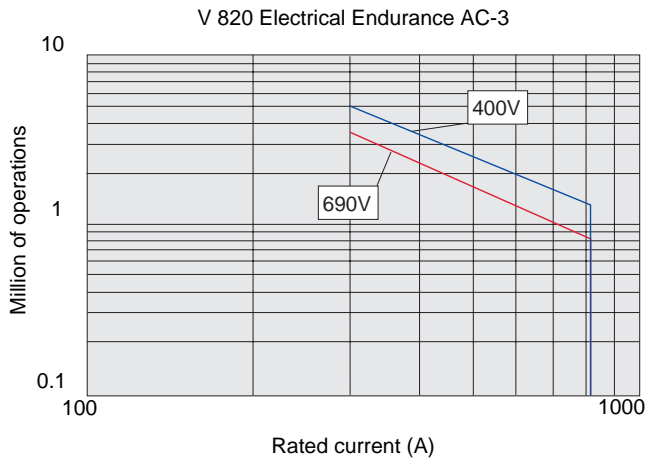
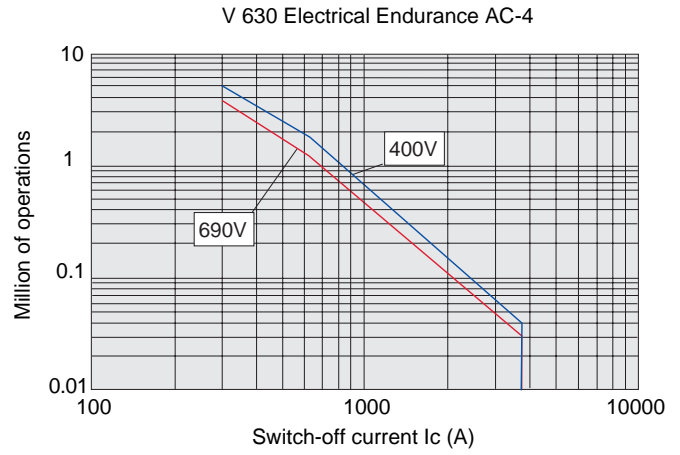
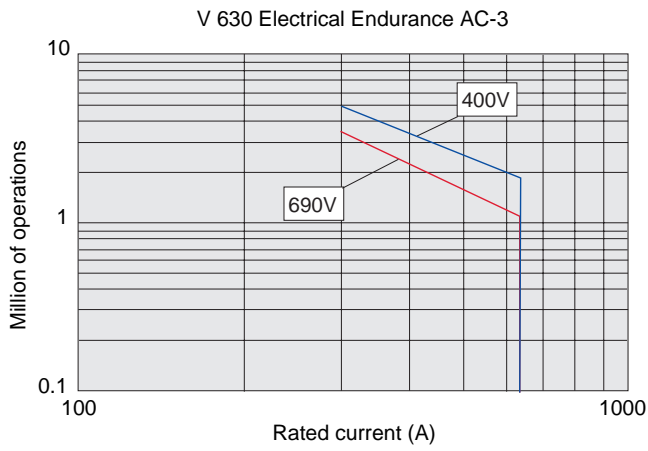
### V 820-30-44

General			V 630-30-44	V 820-30-44
Standards			IEC 947-4-1, VDE 0660, NF C 63-110 BS 5424	
Mechanical endurance			5	5
Permissible ambient temperature	°C		-25...+55	-25...+55
Main poles characteristics.				
Number of main poles			3	3
Rated insulation voltage $U_i$	V		1000	1000
Rated operating current $I_n$ max AC-1				
at ambient temperature	40 °C max 690 V	A	700	910
	55 °C max 690 V	A	630	850
Motor max power rating AC-2 and AC-3				
50/60 Hz, 3-phase	220-240 V	kW	200	260
	380-400 V	kW	315	450
	415 V	kW	355	470
	440 V	kW	400	500
	500 V	kW	450	600
	690 V	kW	600	750
Motor rated operating current $I_e$ max AC-2 and AC-3				
50/60 Hz, 3-phase	up to 690 V	A	630	820
UL/CSA approved data				
Continuous ampere rating		A	630	820
Motor ratings 3-phase	200-208 V	HP	200	290
	220-240 V	HP	250	350
	440-480 V	HP	500	700
	550-600 V	HP	660	860
Conductor cross section				
	with lugs flexible cable	mm <sup>2</sup>	2x50...240	2x50...240
	with lugs stranded cable	mm <sup>2</sup>	2x70...240	2x70...240
	Busbar max width	mm	50	60 (U <sub>e</sub> max 690V)
Terminal				
	screw		M 10 x 30	M 12 x 40
	torque		14...24 Nm	20...35 Nm

## Magnet System

Coil consumption				
	Pull-in 50/60 Hz	VA	lower 1200	600
			upper 1850	950
	Holding 50/60 Hz	VA/W	lower 13.5/6.3	12.9/5.5
			upper 49/7.4	30.6/9.5
Coil operating limits			0,8...1.1 x U <sub>e</sub>	0,8...1.1 x U <sub>e</sub>
Drop out voltage			0.4 - 0.55	0.4 - 0.55
Operating time				
	closing	ms	70-120	80-120
	opening	ms	70-100	70-80

# Electrical Endurance curves



# Ordering details

## 3-pole AC-operated contactors



AC-1	AC-3	Motor output AC-3		Aux. contacts		Type	Order code		Weight	
max. <40 °C A	max. <55 °C A	380- 400 V kW	660- 690 V kW	NO	NC	Supplement for coil voltage see table	□□	Supplement for coil voltage see table	□□	Pack. 1 pc.
700	630	315	600	4	4	V630-30-44-	□□	1SFL 68 10 01 R	□□ 44	15
910	820	450	750	4	4	V820-30-44-	□□	1SFL 69 10 01 R	□□ 44	19

## Accessories

	Type	For Contactor	Order code	Qty./Pack.	Weight kg
Shrouds for terminal	LT 630-V	V 630	1SFN 12 68 01 R 1000	2	0.17
Shrouds for terminal	LT 820-V	V 820	1SFN 12 69 01 R 1000	2	0.17
Thermal overload relays	T 900DU/T 900 SU see our catalogue FCRTL 0058 95GB				

## Spare parts

### Auxiliary contact block

First block next to the contactor 1 NO + 1 NC	CAL 17-11A	V 630/820	1SFN 01 68 20 R 1011	1	0.042
Second block on out side of first 1 NO + 1 NC	CAL 17-11B	V 630/820	1SFN 01 68 20 R 1111	1	0.042

### Coils

For suffix see table below	ZV 630	V 630	1SFN 15 68 10 R □□06	1	0.65
For suffix see table below	ZV 820	V 820	1SFN 15 69 10 R □□06	1	0.65

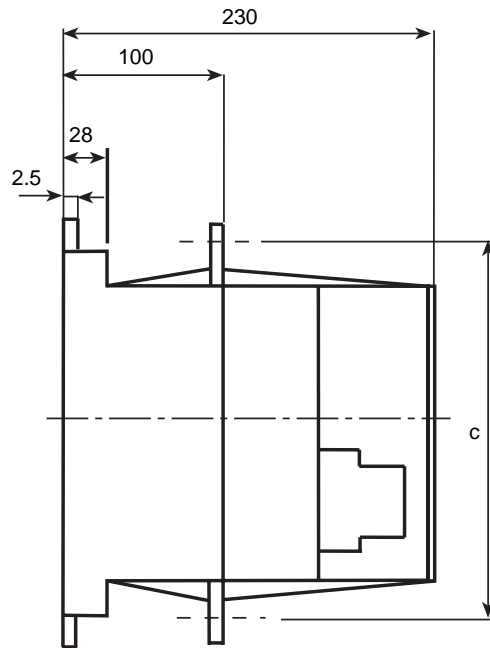
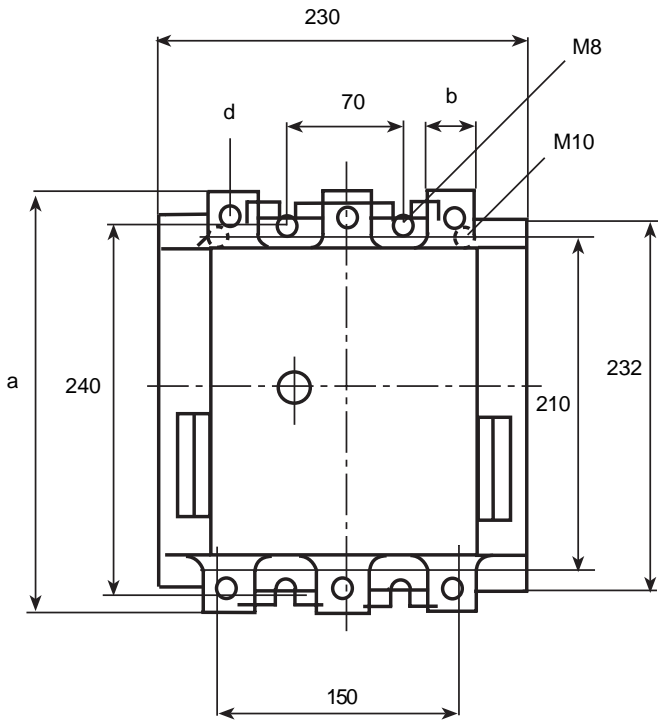
### Vacuum bottles

ZLV 630	V 630	1SFN 16 68 03 R 1000	1set	3.2
ZLV 820	V 820	1SFN 16 69 03 R 1000	1set	3.2

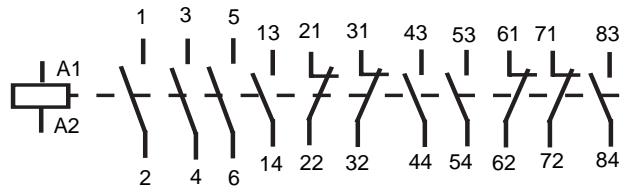
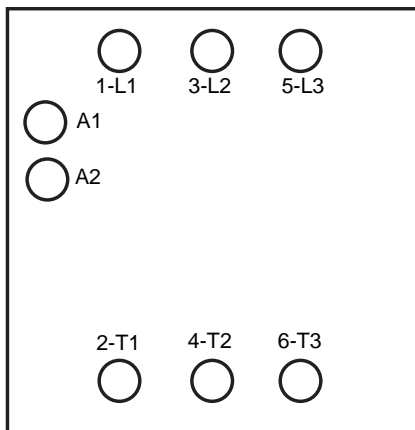
## Order code supplement for AC coils

Coil voltage	Code
<b>50/60 Hz</b>	□□
110-132 V	84
200-240 V	80
230-276 V	88
380-460 V	85
500-600 V	90

# Dimension drawings



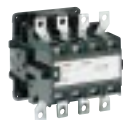
	a	b	c	d
V 630-30-11	276	30 x 5	245	M10
V 820-30-11	296	40 x 6	255	M12



# Large Contactors standard applications



Power Rating AC3, 400V		75kW	90kW	110kW	140kW	160kW	200kW	280kW	370kW	400kW
<b>Types</b>	<b>3P</b>	<b>EH145</b>	<b>EH175</b>	<b>EH210</b>	<b>EH260</b>	<b>EH300</b>	<b>EH370</b>	<b>EH550</b>	<b>EH700</b>	<b>EH800</b>
Order code										
(Voltage in clear text)		EH145-30-11	EH175-30-11	EH210-30-11	EH260-30-11	EH300-30-11	EH370-30-11	EH550-30-11	EH700-30-11	EH-800-30-11
<b>Rated current AC-3,</b>										
<b>400V</b>	<b>A</b>	<b>145</b>	<b>185</b>	<b>210</b>	<b>260</b>	<b>305</b>	<b>400</b>	<b>550</b>	<b>700</b>	<b>750</b>
415V	A	145	185	210	260	300	400	550	700	720
690V	A	120	170	210	220	280	370	550	700	720
Rated current AC-1, 40°C	A	230	260	300	400	445	550	800	1000	1000
<b>Thermal O/L relays</b>		T 200 DU 100...135 110...150 130...175 150...200			T 450 DU 165...235 220...310 285...400				T 900 DU 355...500 465...650 610...850	
<b>Auxiliary contacts</b>		Side mounting, 1 NO + 1 NC, CAL 16-11 B								
<b>Timers</b>		Electronic : separate mounting								
<b>Interlocks</b>		Mech./elec. VH 145	Mechanical / electrical VH 300				Mechanical VH 550 (on a plate)		Mechanical VH 800 (on a plate)	
<b>Surge suppressors</b>			24...48V~ 110...415V~	RC-EH 250/48 RC-EH 250/415			48...110V~ 220...600V~	RC-EH 800/110 RC-EH 800/600		



Rated current AC-1, 40°C		200 A	250 A	300 A	350 A	550 A	800 A
<b>Types</b>	<b>4P</b>	<b>EK110</b>	<b>EK150</b>	<b>EK175</b>	<b>EK210</b>	<b>EK370</b>	<b>EK550</b>
Order code							
(Voltage in clear text)		EK110-40-11	EK150-40-11	EK175-40-11	EK210-40-11	EK370-40-11	EK550-40-1



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