

# OPTIM

## Automatic capacitor banks



### Description

The **OPTIM** series automatic capacitor banks have been designed for the automatic compensation of reactive energy in networks with fluctuating loads and power variations during seconds, by switching operations carried out by contactors.

### Application

Their simple installation, high-technology and robustness make the **OPTIM** series the ideal unit for compensating reactive energy in installations with fluctuating load levels.

### Technical features

<b>Electrical features</b>	Operating voltage	400 V (please ask about other voltages)
	Support voltage	440 V
	Frequency	50 Hz (please ask about other frequencies)
	Capacity tolerance	-5%, +10%
	Impulse test	15 kV, ray type wave 1.2 / 50 $\mu$ s
	Current transformer input	250 mA in <b>OPTIM 2</b> model 5 A in <b>OPTIM 3</b> , <b>OPTIM 3 A</b> , <b>OPTIM 4</b> , <b>OPTIM 6</b> , <b>OPTIM 8</b> , <b>OPTIM SC8</b> , <b>OPTIM SC12</b> and <b>OPTIM SC16</b> models
	Contactor operating voltage	230 V
<b>Capacitors</b>	<b>CLZ</b> -type capacitor in <b>OPTIM 2</b> , <b>OPTIM 6</b> , <b>OPTIM 12</b> and <b>OPTIM 8</b> models	
	<b>CEUB</b> -type capacitor in <b>OPTIM 3</b> , <b>OPTIM 3 A</b> and <b>OPTIM 4</b> models	
<b>Protection</b>	<b>CSB</b> -type capacitor in <b>OPTIM SC8</b> , <b>OPTIM SC12</b> and <b>OPTIM SC16</b> models	
	Appropriate contactors for capacitive currents	
<b>Reactive energy regulator</b>	Built-in circuit breaker protection in models <b>OPTIM 2</b> , <b>OPTIM 3</b> and <b>OPTIM 3 A</b>	
	Fuses with high cut-off power ( <b>APR</b> ): <b>NH-00</b> type in <b>OPTIM 4</b> , <b>OPTIM 6</b> , <b>OPTIM 12</b> , <b>OPTIM 8</b> , <b>OPTIM SC8</b> , <b>OPTIM SC12</b> and <b>OPTIM SC16</b> models	
<b>Add-ons (optional)</b>	Computer <b>TWO</b> , with 2 relay outputs, in <b>OPTIM 2</b> model	
	Computer <b>MAX</b> with digital indication and 6 or 12 relay outputs depending on the type, in <b>OPTIM 3</b> , <b>OPTIM 4</b> , <b>OPTIM 6</b> , <b>OPTIM 8</b> , <b>OPTIM SC8</b> , <b>OPTIM SC12</b> and <b>OPTIM SC16</b> models	
<b>Residual discharge voltage</b>	Manual switch on capacitor bank header	
	Circuit breaker on capacitor bank header	
	Circuit breaker + earth leakage protection on capacitor bank header	
	Forced ventilation unit + thermostat	
	Polycarbonate sheet for protection against direct contacts	
	400/230 V autotransformer	
	<b>Computer SMART III</b> regulator with built-in power analyzer and three-phase measurement system	
<b>Computer PLUS</b> regulator with built-in power analyzer and three-phase measurement system		
<b>Capacitor losses</b>	75 V / 3 minutes	
<b>Overload</b>	< 0.5 W / kvar	
<b>Overvoltage</b>	1.3 times the nominal hold current	
<b>Temperature</b>	10%, 8 over 24 hours	20%, up to 5 minutes over 24 hours
	15%, up to 15 minutes over 24 hours	30%, up to 1 minute over 24 hours
<b>Environmental conditions</b>	Class D according to <b>IEC-60831</b> : Daily mean: 45 °C, annual mean: 35 °C, maximum: 55 °C, minimum: -50 °C	
	Humidity	80% without condensation
<b>Mechanical features</b>	Altitude	<2,000 m above sea level.
	Enclosure material	Thermoplastic in <b>OPTIM 2</b> model Sheet metal in all other models
	Protection Degree	IP 21
<b>Assembly conditions</b>	Colour	RAL 7035 grey RAL 3005 maroon
	Wall-mounted in models <b>OPTIM 2</b> , <b>OPTIM 3</b> , <b>OPTIM 3 A</b> and <b>OPTIM 4</b>	
	Free-standing in models <b>OPTIM 6</b> , <b>OPTIM 12</b> , <b>OPTIM 8</b> , <b>OPTIM SC8</b> , <b>OPTIM SC12</b> and <b>OPTIM SC16</b>	
Positioning the unit	Vertical	
Ventilation	Natural or forced, in accordance with the options	
<b>Standards</b>	<b>IEC 60831-1</b> , <b>UNE 60831-1</b> , <b>IEC 61921</b> , <b>IEC 60439</b> , <b>IEC 61439</b>	

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## References

Type	Code	kvar		Composition	Switch (A)	Cable section (mm <sup>2</sup> )	Weight (kg)	Dimensions (mm) width x height x depth
		440 V	400 V					
OPTIM 2-7.5-440	R3Q761EN	7.5	6.25	2.5 + 5	Included	6	7	362 x 500 x 166
OPTIM 2-10.5-440	R3Q771EN	10.5	8.5	3 + 7.5	Included	6	7	362 x 500 x 166
OPTIM 2-12.5-440	R3Q781EN	12.5	10	5 + 7.5	Included	6	7	362 x 500 x 166
OPTIM 2-17.5-440	R3Q7E1EN	17.5	14	5 + 12.5	Included	6	7	362 x 500 x 166
OPTIM 2-20-440	R3Q7F1EN	20	16.5	7.5 + 12.5	Included	6	7	362 x 500 x 166
OPTIM 2-22.5-440	R3Q7G1EN	22.5	18.5	7.5 + 15	Included	6	7	362 x 500 x 166
OPTIM 2-25-440	R3Q7H1EN	25	21	10 + 15	Included	10	8	362 x 500 x 166
OPTIM 2-30-440	R3Q7J1EN	30	25	15 + 15	Included	10	8	362 x 500 x 166
OPTIM 3-7.5-440	R3J105	7.5	6.2	2.5+5	Included	6	28	290 x 464 x 170
OPTIM 3-12.5-440	R3J110	12.5	10	2.5+5+10	Included	6	28	290 x 464 x 170
OPTIM 3-17.5-440	R3J115	17.5	14	5+10+10	Included	6	30	290 x 464 x 170
OPTIM 3-25-440	R3J120	25	20	5+10+10	Included	10	31	290 x 464 x 170
OPTIM 3-31.25-440	R3J130	31.25	26	6.25+12.5+12.5	Included	10	32	290 x 464 x 170
OPTIM 3A-37.5-440	R3J135	37.5	31.25	7.5+15+15	Included	16	33	335 x 560 x 170
OPTIM 3A-43.75-440	R3J140	43.75	36	6.25+12.5+25	Included	25	36	335 x 560 x 170
OPTIM 3A-50-440	R3J145	50	41	10+20+20	Included	25	37	335 x 560 x 170
OPTIM 3A-62.5-440	R3J150	62.5	51	12.5+25+25	Included	35	40	335 x 560 x 170
OPTIM 4-52.5-440	R3J204	52.5	43	7.5+15+30	125	35	40	460 x 930 x 230
OPTIM 4-55-440	R3J205	55	45	5+10+20+20	125	35	40	460 x 930 x 230
OPTIM 4-70-440	R3J210	70	58	10+3x20	125	50	41	460 x 930 x 230
OPTIM 4-75-440	R3J220	75	62	15+30+30	200	70	42	460 x 930 x 230
OPTIM 4-90-440	R3J230	90	74	15+15+30+30	200	70	43	460 x 930 x 230
OPTIM 4-105-440	R3J240	105	87	15+30+30+30	200	70	46	460 x 930 x 230
OPTIM 4-120-440	R3J250	120	99	4x30	250	95	48	460 x 930 x 230
OPTIM 6-135-440	R3J320	135	112	15+4x30	250	95	81	615 x 1330 x 400
OPTIM 6-135-440	R3J330	150	124	5x30	400	120	82	615 x 1330 x 400
OPTIM 6-150-440	R3J340	165	136	15+5x30	400	120	83	615 x 1330 x 400
OPTIM 6-165-440	R3J350	180	149	6x30	400	150	87	615 x 1330 x 400
OPTIM 6-180-440	R3J520	195	161	15+6x30	400	150	117	1180 x 1340 x 360
OPTIM 12-195-440	R3J530	210	173	7x30	400	185	119	1180 x 1340 x 360
OPTIM 12-210-440	R3J540	225	186	15+7x30	400	185	121	1180 x 1340 x 360
OPTIM 12-225-440	R3J545	240	198	8x30	630	185	124	1180 x 1340 x 360
OPTIM 12-240-440	R3J550	255	210	15+8x30	630	240	127	1180 x 1340 x 360
OPTIM 12-255-440	R3J560	270	223	9x30	630	240	130	1180 x 1340 x 360
OPTIM 12-270-440	R3J565	285	235	15+9x30	630	240	133	1180 x 1340 x 360
OPTIM 12-285-440	R3J570	300	248	10x30	630	240	136	1180 x 1340 x 360
OPTIM 12-300-440	R3J575	315	260	15+10x30	630	240	139	1180 x 1340 x 360
OPTIM 12-315-440	R3J580	330	273	11x30	630	2x150	142	1180 x 1340 x 360
OPTIM 12-330-440	R3J585	345	285	15+11x30	630	2x150	145	1180 x 1340 x 360
OPTIM 12-345-440	R3J590	360	298	12x30	630	2x150	155	1180 x 1340 x 360
OPTIM 12-360-440	R3J405	330	273	30+5x60	630	2x150	232	1180 x 1340 x 360
OPTIM 8-330-440	R3J410	360	298	6x60	630	2x185	240	1180 x 1650 x 360
OPTIM 8-360-440	R3J420	390	322	30+6x60	800	2x185	245	1180 x 1805 x 460
OPTIM 8-390-440	R3J430	420	347	7x60	800	2x240	250	1180 x 1805 x 460
OPTIM 8-420-440	R3J440	450	372	30+7x60	800	2x240	255	1180 x 1805 x 460
OPTIM 8-450-440	R3J445	480	397	8x60	1,000	2x240	260	1180 x 1805 x 460
OPTIM 8-450-440	R3J640	450	372	50+4x100	800	2x185	270	1180 x 1805 x 460
OPTIM SC8-500-440	R3J650	500	413	5x100	1,000	2x240	275	1180 x 1805 x 460
OPTIM SC8-550-440	R3J655	550	454	50+5x100	1,000	2x240	280	1180 x 1805 x 460
OPTIM SC8-600-440	R3J660	600	496	6x100	1250	2x240	285	1180 x 1805 x 460
OPTIM SC8-650-440	R3J665	650	537	50+6x100	1250	3x150	290	1180 x 1805 x 460
OPTIM SC8-700-440	R3J670	700	579	7x100	1250	3x150	295	1180 x 1805 x 460
OPTIM SC8-750-440	R3J675	750	620	50+7x100	1600	3x185	300	1180 x 1805 x 460
OPTIM SC8-800-440	R3J680	800	661	8x100	1600	3x185	305	1180 x 1805 x 460

Switch and cable section for installations with  $U_n = 400$  V. The installer must ensure compliance with the Low Voltage Directive in real time, in accordance with the particularities of each installation and the type of cable.

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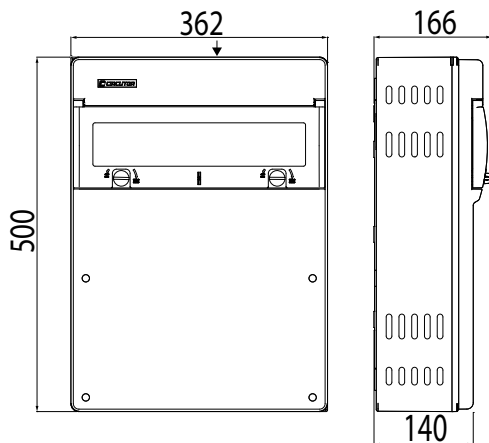
### References

kvar									
440 V	400 V	Composition	Switch (A)	Cable section (mm <sup>2</sup> )	Weight (kg)	Dimensions (mm) width x height x depth	Type	Code	
900	744	9x100	1250 / 400	3x150 / 185	525	1930 x 1805 x 460	OPTIM SC12-900-440	R3J765	
950	785	50+9x100	1600 / 400	3x185 / 185	535	1930 x 1805 x 460	OPTIM SC12-950-440	R3J770	
1000	826	10x100	1600 / 400	3x185 / 185	545	1930 x 1805 x 460	OPTIM SC12-1000-440	R3J775	
1050	868	50+10x100	1600 / 630	3x185 / 240	555	1930 x 1805 x 460	OPTIM SC12-1050-440	R3J780	
1100	909	11x100	1600 / 630	3x185 / 2x120	565	1930 x 1805 x 460	OPTIM SC12-1100-440	R3J785	
1150	950	50+11x100	1600 / 800	3x185 / 2x150	575	1930 x 1805 x 460	OPTIM SC12-1150-440	R3J790	
1200	992	12x100	1600 / 800	3x185 / 2x185	585	1930 x 1805 x 460	OPTIM SC12-1200-440	R3J795	
1300	1074	100+6x200	1250 / 1250	3x185 / 2x240	590	2460 x 1805 x 460	OPTIM SC16-1300-440	R3J880	
1400	1157	100+100+6x200	1600 / 1250	3x185 / 3x120	595	2460 x 1805 x 460	OPTIM SC16-1400-440	R3J885	
1500	1240	100+7x200	1600 / 1600	3x185 / 3x150	600	2460 x 1805 x 460	OPTIM SC16-1500-440	R3J890	
1600	1322	100+100+7x200	1600 / 1600	3x185 / 3x185	605	2460 x 1805 x 460	OPTIM SC16-1600-440	R3J895	

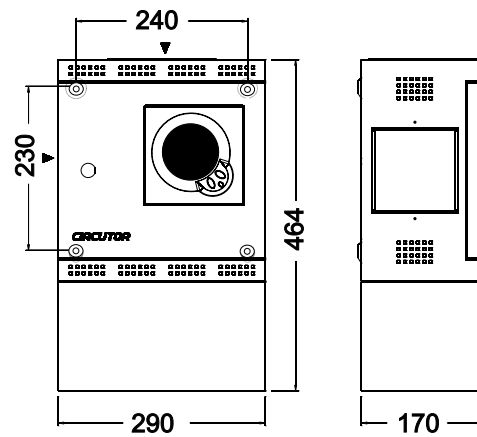
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### Dimensions

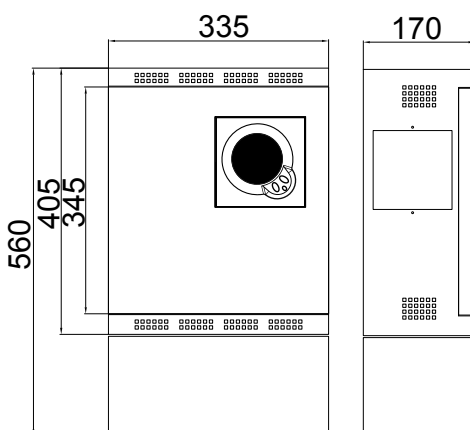
OPTIM 2



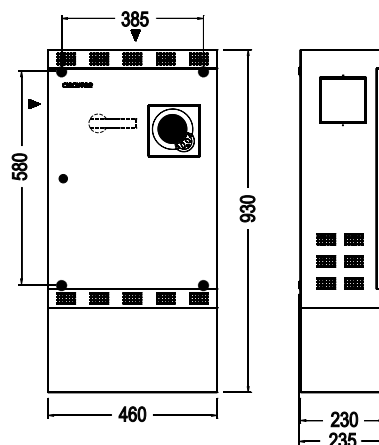
OPTIM 3



OPTIM 3 A



OPTIM 4

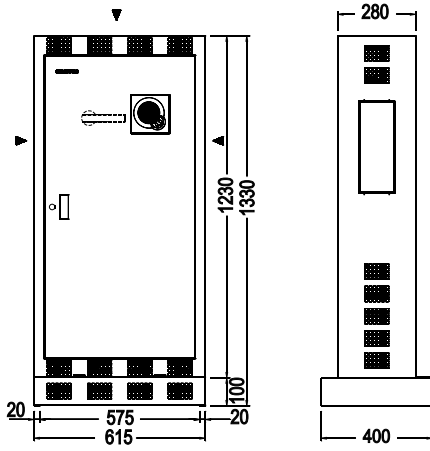


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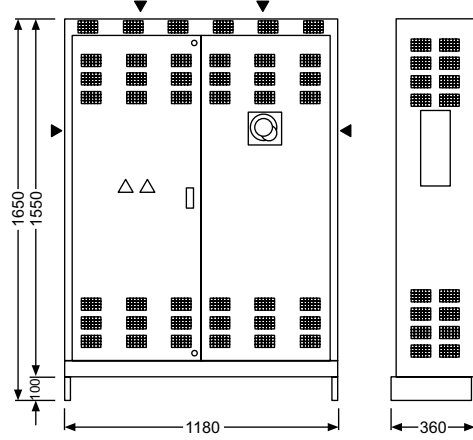
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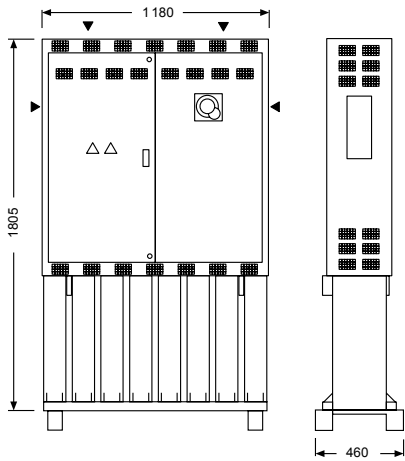
OPTIM 6



OPTIM 8



OPTIM SC8



OPTIM 12

