

PLUS E

Automatic capacitor banks with static system



Description

State-of-the-art intelligent capacitor banks that are capable of measuring the three installation phases and compensating the power factor consumption of each phase in real time. In addition, they correct the total zero power factor and balance the active power in each phase.

The **PLUS E** Power factor correction unit has been designed with **CIRCUTOR's** measurement system technology, effectively creating a compensation + measurement unit. As a power quality analyzer, it displays any electrical parameter of the network in real time and records it in its internal memory, with maximum and minimum values, date and hour.

Application

Plus capacitor banks are ideal to compensate modern installations that often have unbalanced loads. Its three-phase measurement system, phase-by-phase compensation and power analyzer functions make it the ideal solution to compensate installations with a variation of quick loads, between 20 ms and 4 s, and/or large unbalances between phases, such as welding units, cranes, lifts and lifting units, smelters, hospitals, automotive industry or any other sector or unit that requires an efficient compensation of the power factor.

Features

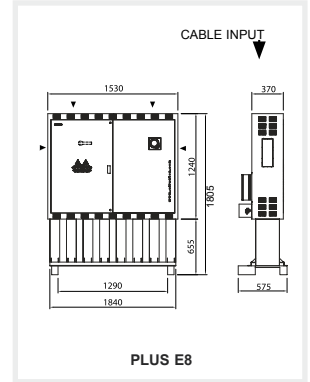
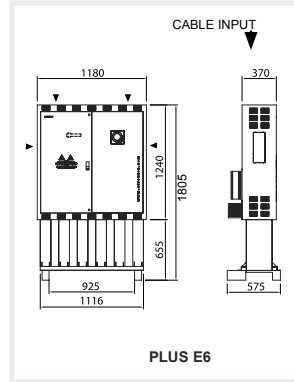
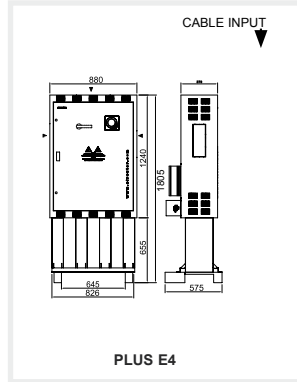
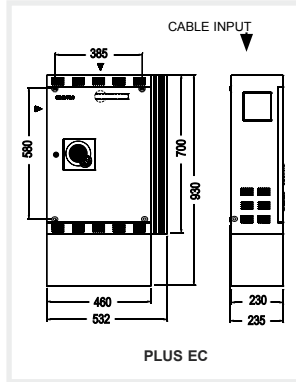
Features		
Operating voltage		230, 400 V (for other voltages, please ask)
Support voltage		440 V (400 V)
Capacity tolerance		± 10%
Unit composed of		<ul style="list-style-type: none"> • CS capacitor. Three-phase measurement • Static switching unit on each step, composed of static contactors (thyristors). Power analyzer function. • Individual protection of each step with high rupture power (HRP). NH-00 or Neozed series, depending on the type • Two-pole earth leakage protection system for regulator and capacitor bank switching operations • Power factor regulator of the computer Plus series, three-phase measurement and power quality analyzer function • Heat removal radiators Built-in thermostat on the radiator for the disconnection of each step in case of high temperatures (90 °C).
Add-ons		<ul style="list-style-type: none"> • Manual capacitor bank header switch • Automatic capacitor bank header switch • Automatic switch + Earth leakage protection at the capacitor bank's header • Forced ventilation unit + thermostat • Polycarbonate board to protect against direct contacts • Auto-transformer 400/230 V
Insulation level		3 / 15 kV
Discharge resistance		75 V / 3 minutes
Overload		1.3 times the nominal hold current
Overvoltage		<ul style="list-style-type: none"> • 10 % 8 over 24 hours • 15 % up to 15 minutes over 24 hours • 20 % up to 5 minutes over 24 hours • 30 % up to 1 minutes over 24 hours
Switching voltage		400 V
Ambient conditions		
Class D temperature	Daily mean	45 °C
	Annual mean	35 °C
	Maximum	50 °C
	Minimum	-25 °C
Humidity		80% RH
Altitude		2,000 m
Construction features		
Degree of protection		IP 21
Colour		RAL 7035 Grey RAL 3005 Maroon
Assembly conditions		
Type of assembly		Vertical
Ventilation		Natural or forced, depending on the option
Distance between capacitors		Minimum, 2 cm
Standards		
CEI 60831-1, CEI 70/7, UNE 20827, UNE 20010, BS 1650, VDE 560		

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Dimensions



References

kvar	Composition	Switch (A)	Cable section (mm ²)	Weight (kg)	Dimensions (mm) width x height x depth	Type	Code
440 V 400 V							
7,5	6,2 (2,5 + 5)	63	6	44	532 x 930 x 235	PLUS EC-7.5-440	R48300
12,5	10 (2,5 + 5 + 5)	63	6	50	532 x 930 x 235	PLUS EC-12.5-440	R48302
17,5	14 (2,5 + 5 + 10)	63	16	51	532 x 930 x 235	PLUS EC-17.5-440	R48304
25	21 (5 + (2 x 10))	100	16	52	532 x 930 x 235	PLUS EC-25-440	R48306
35	29 (5 + 10 + 20)	100	25	54	532 x 930 x 235	PLUS EC-35-440	R48308
43,75	36 (6,25 + (3 x 12,5))	160	25	55	532 x 930 x 235	PLUS EC-43.75-440	R48310
50	41 (10 + (2 x 20))	160	35	56	532 x 930 x 235	PLUS EC-50-440	R48312
55	45 (5 + 10 + (2 x 20))	160	35	57	532 x 930 x 235	PLUS EC-55-440	R48314
60	50 (3 x 20)	160	50	59	532 x 930 x 235	PLUS EC-60-440	R48316
70	58 (10 + (3 x 20))	160	70	59	532 x 930 x 235	PLUS EC-70-440	R48318
75	62 (3 x 25)	250	70	60	532 x 930 x 235	PLUS EC-75-440	R48320
80	66 (4 x 20)	250	70	61	532 x 930 x 235	PLUS EC-80-440	R48322
87,5	72 (12,5 + (3 x 25))	250	70	62	532 x 930 x 235	PLUS EC-87.5-440	R48324
100	83 (4 x 25)	250	70	63	532 x 930 x 235	PLUS EC-100-440	R48326
100	83 (25 + 25 + 50)	250	70	132	880 x 1895 x 575	PLUS E4-100-440	R48405
125	103 (25 + 50 + 50)	250	95	137	880 x 1895 x 575	PLUS E4-125-440	R48410
150	124 (3 x 50)	400	120	142	880 x 1895 x 575	PLUS E4-150-440	R48415
175	147 (25 + 50 + 100)	400	150	147	880 x 1895 x 575	PLUS E4-175-440	R48420
200	165 (50 + 50 + 100)	400	185	152	880 x 1895 x 575	PLUS E4-200-440	R48421
250	207 (50 + (2 x 100))	630	240	157	880 x 1895 x 575	PLUS E4-250-440	R48422
275	227 (25 + 50 + (2 x 100))	630	240	157	880 x 1895 x 575	PLUS E4-275-440	R48423
300	248 (50 + 50 + (2 x 100))	630	2 x 120	162	880 x 1895 x 575	PLUS E4-300-440	R48424
350	289 (50 + (3 x 100))	800	2 x 150	167	880 x 1895 x 575	PLUS E4-350-440	R48425
400	331 (4 x 100)	800	2 x 185	172	880 x 1895 x 575	PLUS E4-400-440	R48426
400	331 (50 + 50 + (3 x 100))	800	2 x 185	168	1180 x 1895 x 575	PLUS E6-400-440	R48431
450	372 (50 + (4 x 100))	1000	2 x 185	174	1180 x 1895 x 575	PLUS E6-450-440	R48435
500	413 (5 x 100)	1000	2 x 240	178	1180 x 1895 x 575	PLUS E6-500-440	R48436
550	455 (50 + (5 x 100))	1250	2 x 240	182	1180 x 1895 x 575	PLUS E6-550-440	R48437
600	496 (6 x 100)	1250	2 x 240	186	1180 x 1895 x 575	PLUS E6-600-440	R48438
600	496 (50 + 50 + (5 x 100))	1250	2 x 240	168	1530 x 1895 x 575	PLUS E8-600-440	R48442
650	537 (50 + (6 x 100))	1600	3 x 150	179	1530 x 1895 x 575	PLUS E8-650-440	R48444
700	579 (7 x 100)	1600	3 x 150	185	1530 x 1895 x 575	PLUS E8-700-440	R48448
750	620 (50 + (7 x 100))	1600	3 x 185	195	1530 x 1895 x 575	PLUS E8-750-440	R48450
800	661 (8 x 100)	1600	3 x 185	200	1530 x 1895 x 575	PLUS E8-800-440	R48455
800	661 (50 + 50 + (7 x 100))	1000 / 630	2 x 240 / 240	335	2360 x 1895 x 575	PLUS E12-800-440	R48500
850	702 (50 + (8 x 100))	1250 / 630	2 x 240 / 240	341	2360 x 1895 x 575	PLUS E12-850-440	R48505
900	744 (9 x 100)	1250 / 630	2 x 240 / 240	347	2360 x 1895 x 575	PLUS E12-900-440	R48603
950	785 (50 + (9 x 100))	1250 / 800	2 x 240 / 185	353	2360 x 1895 x 575	PLUS E12-950-440	R48604
1000	826 (10 x 100)	1250 / 800	2 x 240 / 185	359	2360 x 1895 x 575	PLUS E12-1000-440	R48605
1050	868 (50 + (10 x 100))	1250 / 1000	2x240/ 2x240	362	2360 x 1895 x 575	PLUS E12-1050-440	R48606
1100	909 (11 x 100)	1250 / 1000	2x240/ 2x240	365	2360 x 1895 x 575	PLUS E12-1100-440	R48607
1150	950 (50 + (11 x 100))	2 x 1250	2x240/ 2x240	368	2360 x 1895 x 575	PLUS E12-1150-440	R48608
1200	992 (12 x 100)	2 x 1250	2x240/ 2x240	371	2360 x 1895 x 575	PLUS E12-1200-440	R48609