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SAVE ON YOUR ELECTRICITY BILLS

BY INSTALLING SMART POWER FACTOR PANEL

Specifications	ES-1	ES-1L
Applicable Load	200 Amps. 240V, Split φ	100 Amps. 120V
Power Rating	3.3 kVAr	1.07 kVAr
Full Load Current	14.6 Amps.	8.95 Amps.
Steps	6	6
kVAr Each Step	0.11, 0.22, 0.44, (0.88 x 3)	
Size	12" x 8" (5" deep)	

Model No.	Rating
ES-1	3.3 kVAr
ES-1L	1.07 kVAr

Residential
240V / 120V

Specifications	
Applicable Load	400 Amps. 240V, Split Phase
Power Rating	11 kVar
Full Load Current	42 Amps.
Steps	9
kVAr Each Step	0.11, 0.22, 0.44, (0.88 x 3), (2.61 x 3)
Size	16" x 20" (5" deep)

Model No.	Rating
ES-11	11kVAr

Small Business & Commercial
240V, Split Phase

Specifications	
Applicable Load	200 - 400 Amps. 208V, 3φ
Power Rating	7.8 kVAr
Full Load Current	21.6 Amps.
Steps	4
kVAr Each Step	1.32, 2.64, 2.64, 3.96
Size	16" x 12" (5" deep)

* ES-10E is Nema 4 Enclosure.

Model No.	Rating
ES-10	7.8 kVAr
ES-10E*	7.8 kVAr

Small Business & Commercial
208V / 230V, 3φ 4W

Specifications	S-15	M-21	M-25
Voltage	208V	480V	480V
Applicable Load	200 - 400 Amps. 3φ		
Power Rating	14.6 kVAr	21 kVAr	25 kVAr
Full Load Current	41 Amps.	25 Amps.	30 Amps.
Steps	5	5	5
kVAr Each Step	1, 2, (4 x 3)	1, 2, 3, 5, 10	2, 3, 5, 5, 10
Size	20" x 20" (8" deep)		

Model No.	Rating
S-15	15 kVAr
M-21	21 kVAr
M-25	25 kVAr

Gas Station & Small Commercial
208V / 240V / 480V, 3φ 3W

Specifications	S-25	M-65
Voltage	208 V	480 V
Applicable Load	400 - 600 Amps. 3φ	
Power Rating	25 kVAr	65 kVAr
Full Load Current	70 Amps.	79 Amps.
Steps	6	7
kVAr Each Step	1, 2, 4, (6 x 3)	2, 3, 5, 10, (15 x 3)
Size	24" x 30" (8" deep)	

Model No.	Rating
S-25	25 kVAr
M-65	65 kVAr

Industrial & Commercial
208V / 240V / 480V, 3φ 3W

Specifications	S-50	M-100	M-150
Voltage	208 V	480 V	
Applicable Load	600 - 1000 Amps. 3φ		
Power Rating	50 kVAr	100 kVAr	150 kVAr
Full Load Current	140 Amps.	120 Amps.	180 Amps.
Steps	7	7	8
kVAr Each Step	3, 5, (8.3 X 5)	5,10,10,15,(20 x3)	10, (20 x 7)
Size	32" x 40"(12" deep)		

Model No.	Rating
S-50	50 kVAr
M-100	100 kVAr
M-150	150 kVAr

Gas Station & Small Commercial
208V / 240V / 480V, 3φ 3W

Specifications	S-100	M-240
Voltage	208V	480V
Applicable Load	1000 - 2000 Amps. 3φ	
Power Rating	100 kVAr	240 kVAr
Full Load Current	280 Amps.	289 Amps.
Steps	12	12
kVAr Each Step	8.32 x 12	20 x 12
Size	40" x 60" (12" deep)	

Model No.	Rating
S-100	100 kVAr
M-240	240 kVAr

Industrial & Commercial
208V / 230V / 480V, 3φ 3W

Specifications	M-300	M-400
Voltage	480V	
Applicable Load	2000 Amps. 3φ	
Power Rating	300 kVAr	400 kVAr
Full Load Current	361 Amps.	481 Amps.
Steps	6	8
kVAr Each Step	50 x 6	50 x 8
Size	78" x 36" (22" deep)	

Model No.	Rating
M-300	300 kVAr
M-400	400 kVAr

Industrial & Commercial
480V, 3φ 3W

Here is the Look Up Table to Select Right Device for your Location.

Use Clamp Meter to determine Amps and Power Factor of Location

208V

Current (Amps.)	Existing Power Factor 0.90	0.85	0.80	0.75	0.70	0.65	0.60
20	ES-10	ES-10	ES-10	ES-10	ES-10	ES-10	ES-10
30	ES-10	ES-10	ES-10	ES-10	ES-10	ES-10	ES-10
40	ES-10	ES-10	ES-10	ES-10	ES-10	S-15	S-15
50	ES-10	ES-10	ES-10	S-15	S-15	S-15	S-15
75	S-15	S-15	S-15	S-15	S-15	S-25	S-25
100	S-15	S-15	S-25	S-25	S-25	S-25	S-25
150	S-15	S-25	S-25	S-50	S-50	S-50	S-50
200	S-25	S-25	S-50	S-50	S-50	S-50	S-50
300	S-25	S-50	S-50	S-50	S-100	S-100	S-100
400	S-50	S-50	S-100	S-100	S-100	S-100	S-100
500	S-50	S-100	S-100	S-100	S-100	115 kVAr	120 kVAr
650	S-100	S-100	S-100	120 kVAr	135 kVAr	150 kVAr	160 kVAr
800	S-100	S-100	110 kVAr	150 kVAr	165 kVAr	185 kVAr	195 kVAr
1000	S-100	130 kVAr	160 kVAr	185 kVAr	210 kVAr	230 kVAr	245 kVAr
1250	S-100	160 kVAr	200 kVAr	230 kVAr	255 kVAr	290 kVAr	305 kVAr
1500	125 kVAr	190 kVAr	240 kVAr	275 kVAr	310 kVAr	350 kVAr	370 kVAr
2000	165 kVAr	260 kVAr	315 kVAr	370 kVAr	415 kVAr	445 kVAr	490 kVAr
2500	205 kVAr	330 kVAr	350 kVAr	450 kVAr	500 kVAr	575 kVAr	600 kVAr
3000	250 kVAr	400 kVAr	480 kVAr	550 kVAr	620 kVAr	690 kVAr	730 kVAr

Example: **If the Current is 200 Amps. & Power Factor is 0.85,**
Then, Suitable Panel is S-25 as shown in Table.

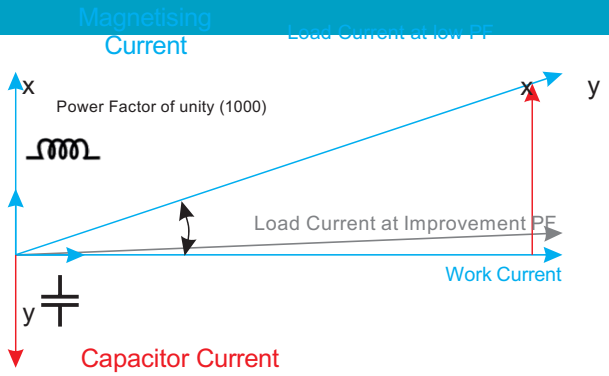
480V

Current (Amps.)	Existing Power Factor 0.90	0.85	0.80	0.75	0.70	0.65	0.60
30	M-25	M-25	M-25	M-25	M-25	M-25	M-25
40	M-25	M-25	M-25	M-25	M-25	M-25	M-25
50	M-25	M-25	M-25	M-25	M-25	M-25	M-50
75	M-25	M-25	M-50	M-50	M-50	M-50	M-50
100	M-25	M-50	M-50	M-50	M-50	M-65	M-65
150	M-50	M-50	M-65	M-65	M-100	M-100	M-100
200	M-50	M-65	M-100	M-100	M-100	M-100	M-150
300	M-65	M-100	M-150	M-150	M-150	M-200	M-200
400	M-100	M-150	M-150	M-200	M-200	M-250	M-250
500	M-100	M-150	M-200	M-250	M-250	260 kVAr	290 kVAr
650	M-150	M-200	M-250	275 kVAr	315 kVAr	340 kVAr	370 kVAr
800	M-200	M-250	295 kVAr	345 kVAr	375 kVAr	415 kVAr	455 kVAr
1000	M-200	300 kVAr	365 kVAr	425 kVAr	475 kVAr	525 kVAr	565 kVAr
1250	M-250	375 kVAr	460 kVAr	525 kVAr	600 kVAr	650 kVAr	760 kVAr
1500	292 kVAr	450 kVAr	549 kVAr	630 kVAr	720 kVAr	780 kVAr	847 kVAr
2000	390 kVAr	600 kVAr	730 kVAr	845 kVAr	950 kVAr	1050 kVAr	1130 kVAr
2500	490 kVAr	750 kVAr	915 kVAr	1050 kVAr	1200 kVAr	1300 kVAr	1400 kVAr
3000	585 kVAr	900 kVAr	1095 kVAr	1260 kVAr	1440 kVAr	1560 kVAr	1695 kVAr

Example: **If the Current is 300 Amps. & Power Factor is 0.8,**
Then, Suitable Panel is M-150 as shown in Table.

What is Power Factor ?

Power Factor is the ratio between KW and KVA drawn by an electrical load where the KW is the actual power and KVA is the apparent power. It is a measure of how effectively the current is being converted into useful work output and more particularly power factor is a good indicator of the effect of the current on the efficiency of the power system. A load with results in the most efficient loading of the supply. Low PF is generally the result of an inductive load such as an induction motor, Power transformer, lighting ballasts, welder or induction furnace. A low power factor due to an inductive load can be improved by the addition of power factor correction panel.



(fig.i)

Technical Explanation

Total power (KVA) consist of real power KW (Power consumed in Phase) and Reactive Power kVAr (Power consumed out of Phase).
The Power Factor is ratio between real power and total power,
If load is running for H hours.
Then Total Power = kVAr, Real Power + Kwh, Power Factor = Kwh / kVA.
This is the method used by energy meter.

About Us

Voyage Power Partners' product manufacturer, Celec Enterprises offers hi-tech & most efficient power saving solutions and has worked with fortune 100 & 500 companies and government agencies globally to enhance power saving and green energy solutions. First company in Asia Awarded with Prestigious UL Listing within house facilities for live testing up to 500 kVAr. capacitor panels, fully furnished floor plan of 25,000 sq. feet with all the ultra-modern manufacturing facilities backed with trained workers and professionals.

PRODUCTION TESTING LABORATORY PACKING

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