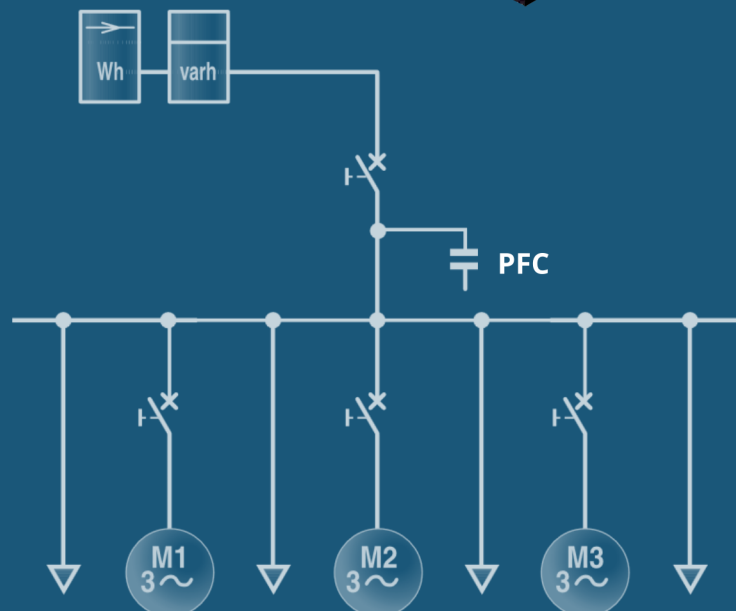


AUTOMATIC POWER FACTOR CORRECTION



MERTECH PFC

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Motors can come in many forms, machines, conveyors, mixers, compressors, HVAC, escalators, lifts, all these can be considered as motors and an inductive load that in most cases will require some form of automatic power factor correction.

Power factor correction can considerably reduce circuit currents to allow for additional loads to be introduced to an otherwise overloaded electrical supply and in some cases negate the need for larger electrical supplies and infrastructure when expansion occurs.

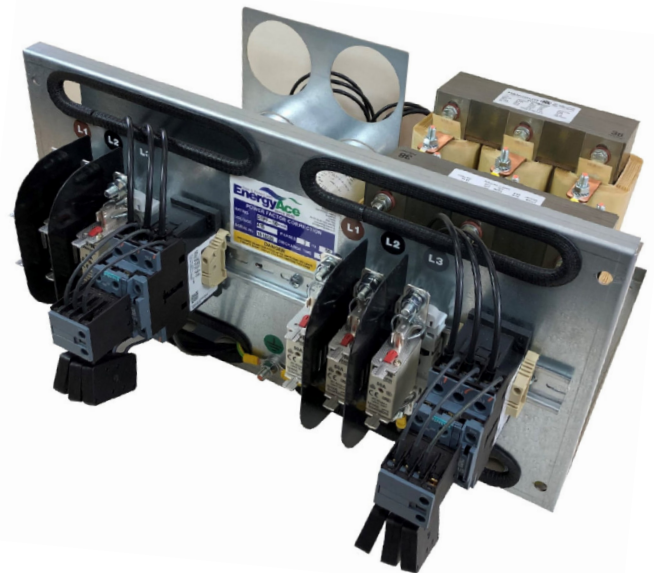
Renewable generation can considerably benefit from power factor correction, the reduction of reactive power in the process of power generation with turbine technologies greatly increases export and reduces import of energy offering two opportunities to reduce overall energy costs.

In countries with a developing electrical network and economy, a demand for power commonly outstrips capacity leading to the loss of electrical supply, brownouts and wild voltage swings, power factor correction is vital in these circumstances to relieve pressure on the network .

Mertech, have a range of power factor correction systems designed and developed in association with Vishay a world leader in capacitor manufacture and design, our expertise is reflected with many decades of internal experience and award winning business performance.

Sectors utilising the Mertech Power Factor Correction system include:

- Food
- Plastics
- Chemical
- General Manufacturing
- Agriculture
- Retail
- Leisure / Fitness & Hotel
- Telecommunications
- Medical & Scientific
- Commercial & Educational
- Developing Power Networks



Harmonics & Standard Non-Detuned Capacitors

Many modern electrical equipments use thyristors, invertors and rectifiers e.g. to effect speed control of motors and temperature control of heater banks. Other power electronics are used in such items as UPS and battery chargers. Such non-linear devices produce harmonic disturbance and can dramatically increase the current flowing in the system in addition to other harmful effects.

Capacitors and other electrical devices can be damaged by these harmonics.

If you have any harmonic producing loads, please advise us so that we can ensure that your capacitors do not suffer as a consequence



The Mertech range of Power Factor Correction systems have been designed to address the challenges found in many of today's diverse power needs and encompass many years of development and experience to deliver reliable and cost effective energy saving solutions world-wide

THE KEY FEATURES & BENEFITS MERTECH POWER FACTOR CORRECTION

- Heavy Duty Long Life Vishay Capacitors
- Minimum 440v (525v Detuned) ~ Heavy Duty
- Long Life Detuning Reactors (189Hz Detuned)
- ~ Correction to 1.00pf (100% Efficiency)
- ~ Automatic Plug & Play Set Up (No Need for Commissioning)
- ~ Installer Friendly Design for Ease of Installation
- ~ Power Factor Display, Harmonic Alarm and Multi Meter Function
- ~ Fully Extendable for Future Expansion
- ~ Flexibility in Manufacture, Dimensions & Rating
- ~ High Overload Capability
- ~ Protection Systems
- ~ Reassuringly Long Warranties
- ~ Low Maintenance
- ~ Maintenance Friendly Design
- ~ Wide Range of Models to Suit All Environments & Performance Requirements

STANDARDS & SPECIFICATIONS

Supply:

400 / 415V 3 phase 50Hz (other voltages & frequency available on request)

Installation:

3 wire (no neutral required)

Standards:

BSEN60831 (IEC831 & IEC70/70), BSEN60439, BSEN60204

IP Rating:

IP42 min (other IP rating available on request.)

Operating temp:

-25oC/group D (others available on request)

Losses:

Standard 0.2 watts / kVar

Construction:

14g mild steel fully welded enclosure with hinged lockable door

Finish:

RAL7035 textured light grey (others available on request)

Discharge:

Less than 50V one minute after switch off

Cable termination:

M10 on to Busbar, MCCB or Isolator (cable box available for bottom entry)

STANDARD AUTOMATIC POWER FACTOR CORRECTION

Standard PFC Panels	Part No	Total kVAr	No. of Stages	Stage kVAr	Height (mm)	Width (mm)	Depth (mm)	Weight (kg)
Standard 25 kVAr PFC Panel	MER PFC S 25	25	2	2 x 12.5	1000	600	320	25
Standard 31 kVAr PFC Panel	MER PFC S 31	31	2	1 x 20 + 1 x 11.2	1000	600	320	35
Standard 50 kVAr PFC Panel	MER PFC S 50	50	3	2 x 12.5 + 1 x 25	1000	600	320	54
Standard 62.5 kVAr PFC Panel	MER PFC S 62.5	62.5	3	1 x 12.5 + 1 x 50	1000	600	320	54
Standard 75 kVAr PFC Panel	MER PFC S 75	75	2	1 x 25 + 1 x 50	1000	600	320	56
Standard 87.5 kVAr PFC Panel	MER PFC S 87.5	87.5	3	1 x 12.5 + 1 x 25 + 1 x 50	1000	600	320	60
Standard 100 kVAr PFC Panel	MER PFC S 100	100	3	2 x 25 + 1 x 50	1000	600	320	61
Standard 125 kVAr PFC Panel	MER PFC S 125	125	3	1 x 25 + 2 x 50	1000	600	320	65
Standard 150 kVAr PFC Panel	MER PFC S 150	150	4	2 x 25 + 2 x 50	1600	600	520	70
Standard 175 kVAr PFC Panel	MER PFC S 175	175	4	1 x 25 + 3 x 50	1600	600	520	72
Standard 200 kVAr PFC Panel	MER PFC S 200	200	5	2 x 25 + 3 x 50	1600	600	520	77
Standard 250 kVAr PFC Panel	MER PFC S 250	250	6	2 x 25 + 4 x 50	1600	600	520	104
Standard 300 kVAr PFC Panel	MER PFC S 300	300	7	2 x 25 + 5 x 50	1600	600	520	112
Standard 350 kVAr PFC Panel	MER PFC S 350	350	7	7 x 50	2100	600	600	172
Standard 400 kVAr PFC Panel	MER PFC S 400	400	8	8 x 50	2100	600	600	182

STANDARD PFC TRAYS



AUTOMATIC POWER FACTOR CORRECTION WITH REACTORS

De-Tuned PFC Panels	Part No	Total kVAr	No. of Stages	Stage kVAr	Height (mm)	Width (mm)	Depth (mm)	Weight (kg)
De-Tuned 37.5 kVAr PFC Panel	MER PFC D 37.5	37.5	2	1 x 12.5 + 1 x 25	1600	600	520	180
De-Tuned 50 kVAr PFC Panel	MER PFC D 50	50	3	2 x 12.5 + 1 x 25	1600	600	520	195
De-Tuned 75 kVAr PFC Panel	MER PFC D 75	75	2	1 x 25 + 1 x 50	1600	600	520	240
De-Tuned 100 kVAr PFC Panel	MER PFC D 100	100	4	2 x 25 + 1 x 50	1600	600	520	282
De-Tuned 125 kVAr PFC Panel	MER PFC D 125	125	3	2 x 50 + 1 x 25	1600	600	520	318
De-Tuned 150 kVAr PFC Panel	MER PFC D 150	150	3	3 x 50	2100	600	600	356
De-Tuned 175 kVAr PFC Panel	MER PFC D 175	175	3	1 x 25 + 1 x 50 + 1 x 100	2100	600	600	345
De-Tuned 200 kVAr PFC Panel	MER PFC D 200	200	4	4 x 50	2100	800	600	373
De-Tuned 250 kVAr PFC Panel	MER PFC D 250	250	5	5 x 50	2100	800	600	457
De-Tuned 300 kVAr PFC Panel	MER PFC D 300	300	6	6 x 50	2100	800	600	553
De-Tuned 350 kVAr PFC Panel	MER PFC D 350	350	7	7 x 50	2100	1200	600	677
De-Tuned 400 kVAr PFC Panel	MER PFC D 400	400	8	8 x 50	2100	1200	600	742
De-Tuned 450 kVAr PFC Panel	MER PFC D 450	450	9	9 x 50	2100	1200	600	859
De-Tuned 500 kVAr PFC Panel	MER PFC D 500	500	10	10 x 50	2100	1600	600	909
De-Tuned 550 kVAr PFC Panel	MER PFC D 550	550	11	11 x 50	2100	1600	600	1035
De-Tuned 600 kVAr PFC Panel	MER PFC D 600	600	12	12 x 50	2100	1600	600	1104

REACTOR PFC TRAYS

