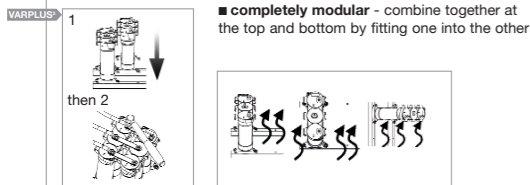


with the ultimate capacitor



100% simplicity

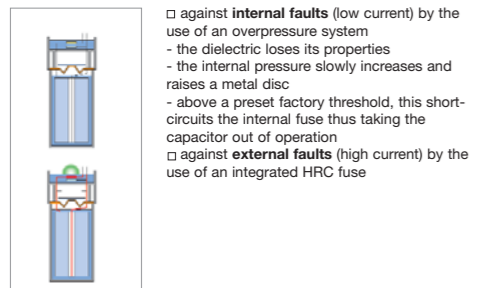


- **completely modular** - combine together at the top and bottom by fitting one into the other
- at the time of installation, all positions are allowed
- no earth link required (plastic case)
- top connection
- fixing by 2 M6 bolts
- kit for substituting Varplus by Varplus²

- ready-to-use installation kits for Prisma Plus, Blokset and Okken panels and for SAREL universal panels
- simplified handling and connection
 - specific support design
 - lowering of centre of gravity
 - top and bottom entry cables

100% safety

■ a patented design, the only one of its kind in the world; 100% warning of possible internal or external faults:



- against **internal faults** (low current) by the use of an overpressure system
 - the dielectric loses its properties
 - the internal pressure slowly increases and raises a metal disc
 - above a preset factory threshold, this short-circuits the internal fuse thus taking the capacitor out of operation
- against **external faults** (high current) by the use of an integrated HRC fuse

100% reliability

- 15 year (130,000 hour) service life
- maintenance free static capacitors

100% performance

- 10% lower power consumption than the VARPLUS M offer
- controlled thermal withstand
 - simulation on each panel at maximum power
 - thermal cooling optimisation
 - above standards requirements taken into account (continuous 35°C ambient temperature + maximum in-service power)
 - thermal testing in the most severe conditions



100% green

- Varplus² complies with the ROHS (Restriction Of Hazardous Substances) circular
- Varplus² contains no liquid substance
- RECTIPHASE is ISO 9001 and ISO 14001 certified



Schneider Electric power factor correction and filtering

An industrial unit at the cutting edge of technology.

The Total Quality approach, which has been fully adopted by Merlin Gerin for many years, has enabled us to make use of the launch of this new offer to completely re-think the company's industrial organisation.



The 2 production sites (RECTIPHASE in PRINGY-France and SSAM in SHANGAI - China) have been completely re-organised to provide the highest possible levels of

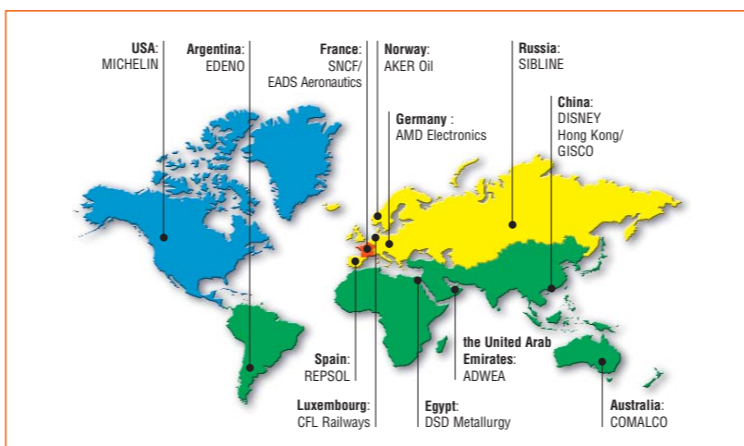
- quality,
- safety,
- reactivity

by combining the advantages of automation for repetitive and tiresome tasks with the human touch and perspicacity for the supervision, control and organisation.



The power of the Schneider Electric Group

Being part of an international group, the flexibility of a small team and the experience of tens of MVAR installed in all possible environments over the last 40 years, are assurance that each installation is fitted with the best possible equipment.

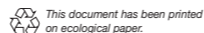


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As standards, specifications and designs change from time to time, please ask for confirmation of the information given in this publication.



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VARPLUS², VARPACK, VARSET Power factor correction

Give oxygen to your electrical network



Give oxygen to your electrical network

Energy efficiency, a global approach

LISTEN, UNDERSTAND, ACT

There comes a day when all electrical installations are confronted with power factor correction, power quality or reliability problems. The economic impacts of these types of malfunctioning are immediate and unacceptable. The increasing quantity of "polluting" equipment (electronic devices, variable speed drives, etc) and the ever increasing environmental pressure (sustainable development, disappearing fossil fuel resources and the opening-up of the European energy market) give even more urgency to the **increasing need to optimise the use of electrical power.**

The 3 steps to the approach:

- 1. LISTEN** to or measure the network's characteristics,
- 2. UNDERSTAND** or establish a diagnosis to identify and decide upon corrective actions,
- 3. ACT**, clean-up, correct the power factor, install standby or battery back-up networks... the choice of solutions is vast and capacitors have an important role to play.

Power factor correction, a key element

- optimise power consumption, reduce electricity bills,
 - compensate for voltage drops and dips and other transient supply cuts detrimental to process functioning,
- there are many examples where the installation of power factor correction equipment has been the best solution. In addition, there is often a need to reduce harmonic content to avoid the premature ageing of equipment, the destruction of sensitive components and nuisance tripping.

This is where all the know-how developed over 50 years has earned **Merlin Gerin** its place as the world's number 2 manufacturer.

An intelligent approach, to get underway as soon as possible

Why wait until the bill arrives before acting? Including corrective equipment from the outset of an installation's design has many advantages:

- maximum process performance,
- optimum operational availability,
- no need for equipment oversizing!

It is never too soon to think about power factor correction... and filtering.

Improving electrical power quality and availability, and reducing its cost are foremost in the minds of everyone: producers, consultant engineers, contractors and the maintenance teams of large industrial and tertiary sites.

+ Quality
+ Availability
- Cost



New generation capacitors – The ultimate capacitor



Capacitors and accessories

VARPLUS², the best of Varplus... and more

The **VARPLUS²** range of capacitors is completely modular. The various assembly combinations enable all the necessary peak powers (kVAR) to be covered depending on the network's voltage, frequency and harmonic pollution level.



- losses < 0.5 W/kVAR (with integrated discharge resistor)
- IP00, IP 20 and IP 42
- standards: IEC 60831 1/2, CSA 22-2 No.190, UL 810
- fixing holes for M6 bolts
- Varplus substitution kit
- offer extras:
 - Varlogic regulators
 - LCD1 contactors
 - detuned reactors

Offer

	230V	400V	415V	440V	480V	525V	600V	690V
50 Hz								
60 Hz								

Modules

VARPACT, simplified installation

The **VARPACT** range of modules groups together pre-cabled assemblies which have the panelbuilder in mind! This offer groups together capacitive, switching and protective functions, is 100% tested and is ready to be installed into universal or functional panels.



- additional circuit-breaker protection possible for individual isolation of each bank
- 2 variants, with or without busbars
- 50Hz or 60Hz
- IP00 and IP 20
- standards: IEC 60831 1/2, CSA 22-2 No.190, UL 810 for **Varplus²** capacitors and IEC 60439-1 + IEC 61921 for the cabling
- cable insulation 1000V
- installation possible on cross bars and extension pieces
- fixing holes for M6 bolts
- 100% factory tested
- offer extras:
 - Varlogic regulators

Offer

	Classic	Comfort	Harmony
Network characteristics	Slightly polluted (Gh/Sn >15%)	Polluted (25% > Gh/Sn > 15%)	Highly polluted (50% > Gh/Sn > 25%)
Losses	< 1,9 W/kVAR		< 8 W/kVAR

Enclosures < 120KVar Panels > 120KVar

VARSET, the complete solution

The **VARSET** enclosure or panel is the solution that can be directly connected on site and which fits all possible network configurations.



- 50Hz
- IP 23
- 2 enclosure sizes and 4 panel sizes
- standards: IEC 60831 1/2, CSA 22-2 No.190, UL 810 for **Varplus²** capacitors and IEC 60439-1 + IEC 61921 for the cabling
- cable insulation 1000V
- 100% factory tested

Offer

	Classic	Comfort	Harmony
Varset*	7.5 to 1200 kVAR automatic correction with Varlogic regulator		
Varset Fast*	100 kVAR to 600 kVAR rapid regulation – "real time" automatic correction (computer < 20ms + static switches)		
Varset Direct*	10 kVAR to 160 kVAR fixed correction enclosures or panels, without regulator		

* Supplied with or without incoming circuit-breaker