

PFC LITE

Power Flow Controller LITE

Reactive Power Conditioner 100kVAr –2MVAr



Dynamic Power Factor Correction
Correction of:
Low order harmonics,
Current & voltage unbalance and flicker



tame your power—keep your profits

Areas for Application

The **PFC LITE** is an ideal solution for the improvement of power quality in industrial and commercial electrical installations across a wide variety of applications including:

- Automotive
- Dairy Processing
- Data Centers (HVAC and servers)
- Food & Beverage
- High speed packaging
- Pharmaceutical
- Plastic Film
- Printing machinery
- Semiconductor
- Textiles
- Water and waste pumping

User Benefits

- Improved energy efficiency by reducing system losses
- Simple installation and commissioning
- Touch screen interface for easy operation

Features

- Modular design provides high reliability and simple maintenance
- Integrated solution for Power factor correction, harmonics and inrush generated voltage sags
- Small physical footprint
- Ratings 100kVAR to 2000kVAR voltage 380V AC to 480V AC
- 600/690V and MV systems available as special custom order with transformers

Working Principle

The **PFC LITE** uses high speed IGBT inverter technology to control reactive power flow into an AC network.

Control Mode Options

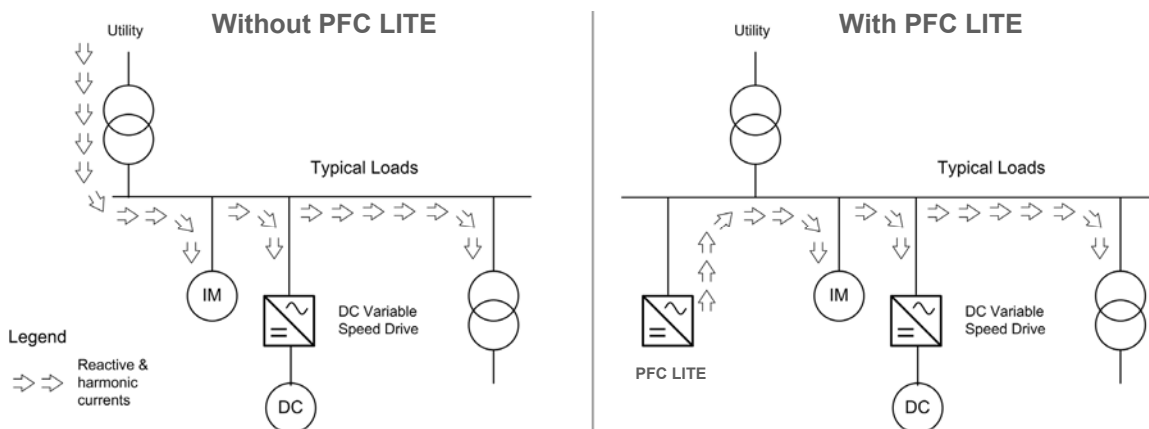
There are two main control modes available for the **PFC LITE**

- **Power factor control**
- **Voltage Control**

The control mode defines the main operation of the **PFC LITE**, either control power factor to a preset value (programmable) or control voltage to a preset value.

Additional functions can then be enabled in addition to the main control mode including

- ⇒ Flicker reduction
- ⇒ Low Order harmonic cancellation
- ⇒ Unbalance (negative sequence) correction
- ⇒ Voltage Clamping



PFC LITE



Responds in less than ½ cycle to power quality events and provides continuous reactive power correction



Automotive



Harmonics
Power factor
Flicker
Unbalance



Cranes/DC drives



Harmonics
Power factor



Data Centers



Harmonics
Power factor (including leading)
Unbalance (generator capability)



Semiconductor



Motor starting
Voltage control
Power factor
Unbalance
Flicker



Motor starting
Harmonics
Power factor
Unbalance
Generator compatibility

PFC LITE

Ratings and Technical

| Inverter Current Rating A | kVAR @ 480V | No of Inverter Modules | Full load losses kW | Weight kg |
|---------------------------|-------------|------------------------|---------------------|-----------|
| 150 | 125 | 1 | 3.1 | 320 |
| 300 | 250 | 2 | 6.2 | 400 |
| 450 | 375 | 3 | 9.3 | 521 |
| 600 | 500 | 4 | 12.4 | 601 |
| 750 | 625 | 5 | 15.5 | 681 |
| 900 | 750 | 6 | 18.6 | 761 |
| 1050 | 875 | 7 | 21.7 | 1122 |
| 1200 | 1000 | 8 | 24.8 | 1202 |
| 1350 | 1125 | 9 | 27.9 | 1282 |
| 1500 | 1250 | 10 | 31.0 | 1362 |
| 1650 | 1375 | 11 | 34.1 | 1442 |
| 1800 | 1500 | 12 | 37.2 | 1522 |
| 1950 | 1625 | 13 | 40.3 | 1882 |
| 2100 | 1750 | 14 | 43.4 | 1962 |
| 2250 | 1875 | 15 | 46.5 | 2042 |
| 2400 | 2000 | 16 | 49.6 | 2122 |
| 2550 | 2125 | 17 | 52.7 | 2202 |
| 2700 | 2250 | 18 | 55.8 | 2282 |

Technical Specifications


Model Range

| | |
|-----------------------------------|--|
| Rating | 100kVAR to 2MVAR (other ratings by request) |
| Harmonic correction | 2 frequencies; up to 7th harmonic |
| Unbalance current capability | 25% of nominal current |
| Harmonic current capability(5th) | 100% of nominal current |
| Harmonic current capability (7th) | 70% of nominal current |

Output

| | |
|-------------------|--|
| Voltage | 380-480 V \pm 10% (Other voltages via transformer) |
| Power System | 3 phase |
| Frequency | 50 or 60Hz |
| Efficiency | >97.7% @ 480V |
| Overload capacity | 120% for 1 min 150% for 30 secs 200% for 2s (from 75% preload) |

Standards

IEC62103 Electrical Equipment for use in Power Installations. 

Environmental

| | |
|-----------------------------|---|
| IEC Pollution degree rating | 2 |
| Operating Temperature | 0° -50°C (derate -2% current per 1°C above 40°C) |
| Capacity derating altitude | 1%/100m above 1000m (2000m max) |
| Humidity | <95% non-condensing |
| Noise | <75dBA typical at 1m |

Interface

| | |
|---------------|---|
| Type | 8.4" LCD Touch screen |
| Communication | Ethernet |
| Functions | HTML server (monitoring only) Modbus-TCP (monitoring only) |

Electromagnetic Compatibility

| | |
|--------------|----------|
| EMC Category | CISPR 11 |
|--------------|----------|



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