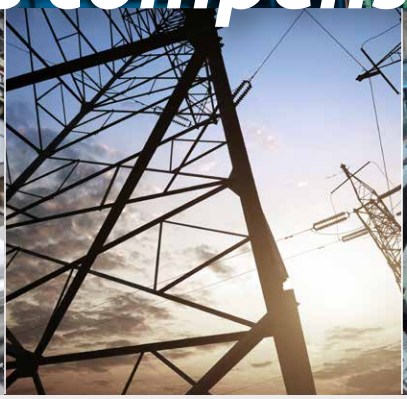
PowerTech Blue Line Converters for active mains compensation






- Active circuit breakers for active front end (AFE) functionality
- Highly dynamic control properties
- Configurable reactive power characteristics
- Individual customisable with scalable, modular performance levels
- The easiest operation with internally developed service software and user-friendly interface design
- Support of the common field bus systems (CAN, PROFIBUS, ETHERCAT and others), binary interfaces also available
- Adjustable high dynamics of reactive power construction
- Independent adjustment to the grid requirements by an intelligent electronic control system (drive control unit)

PowerTech

POWERTECH BLUE LINE CONVERTERS:
OPTIMIZED POWER SUPPLY - POWER QUALITY IMPROVES.

Blue line converters improve quality in electric energy distribution grids. These meet a variety of requirements, such as optimising the mains voltage as well as compensating reactive power transfer, harmonics and flicker.

ENSURE STABLE GRIDS

High energy quality, reduced energy costs and stabilisation of the grids are just some of the new requirements that electricity consumers nowadays have. Industrial applications require a stable grid for safe operation. In particular, consumers who do very precise work must be protected against mains fluctuations or outages. On the other hand, they may not burden the grid themselves, e.g. due to reactive current outputs. With the use of regulated PowerTech Blue Line compensation systems, the grid operator's grid connection conditions can completely be fulfilled. At the same time, the efficient, reliable operation of machinery and equipment is assured.

THE BLUE LINE OVERVIEW

- Active grid compensation to ensure quality in production processes
- Measures to support the power system
- Active harmonic compensation for best possible grid quality
- individually customisable with scalable, modular performance levels
- Flicker compensation against negative feedback in the network
- Reduction of the total harmonic distortion factor (THDi)
- Reactive power management for the entire system with the adjustable power factor cos φ
- Reactive power deployment at LVRT, symmetric or asymmetric

Customer benefits
Optimised grid quality and reduced burden on operating equipment through customer-specific compensation systems
Stabilisation and support of the public or industrial grids through active harmonic management
Reduced energy costs through compliance with the contractually agreed performance factor
Reduction of losses in transmission and distribution grids as well as in industrial plants

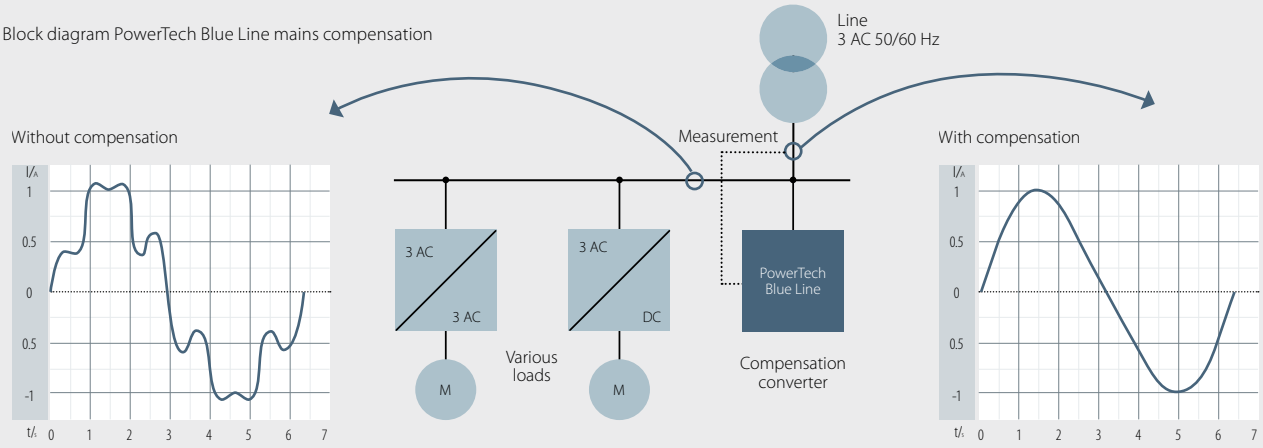
We build and test every system at PowerTech: electrically, thermally, mechanically and also with regard to the electro-magnetic compatibility. PowerTech also operates a private, state-of-the-art test field for load testing with air or liquid-cooled systems and for the simulation of artificial grids.

PowerTech Blue Line converters can be used as permanent or temporary solutions. For temporary use, the converter is only active in the event of a line-side voltage drop when it initiaties the required filtering. For line-side reference conditions, they remain in stand-by operation. PowerTech Blue Line converters meet divers technical and mechanical requirements. Their modular design guarantees a high degree of flexibility and an excellent ability to integrate in control technology and communication systems.

1 Electronic control systems
2 Power module with air cooling

TECHNICAL FEATURES

Block diagram PowerTech Blue Line mains compensation



Rated voltage	IGBT-based four-quadrant technology voltage link
Rated voltage range	3 AC 380-690 V
Line frequency	50 Hz/60 Hz
Rated power range	300 kVAr up to 6 000 kVAr
Cooling	Forced air cooling, optional liquid cooling
Response times	< 1 ms in online mode
Interfaces	Profibus DP (RS 485), Ethernet, CAN, USB interface, digital in/out, potential-free indication contacts
Protection rating	IP54
Certificates	CE

PowerTech Blue Line compensation converters compensate for harmonics throughout the network - and ensure the supply of consumers with electricity at reference conditions.

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