

Disturbances of mains voltage which are caused by fast fluctuating inductive load, can only be reduced by fast power factor correction. Compensation panels which are switching capacitors by contactors are not fulfilling these challenges. Suitable solutions from Process Technique for real time power factor correction are thyristor switches of series BEL-TS and power factor controller BLR-CM-T. This system is working fast and free of attrition and free of distortion.

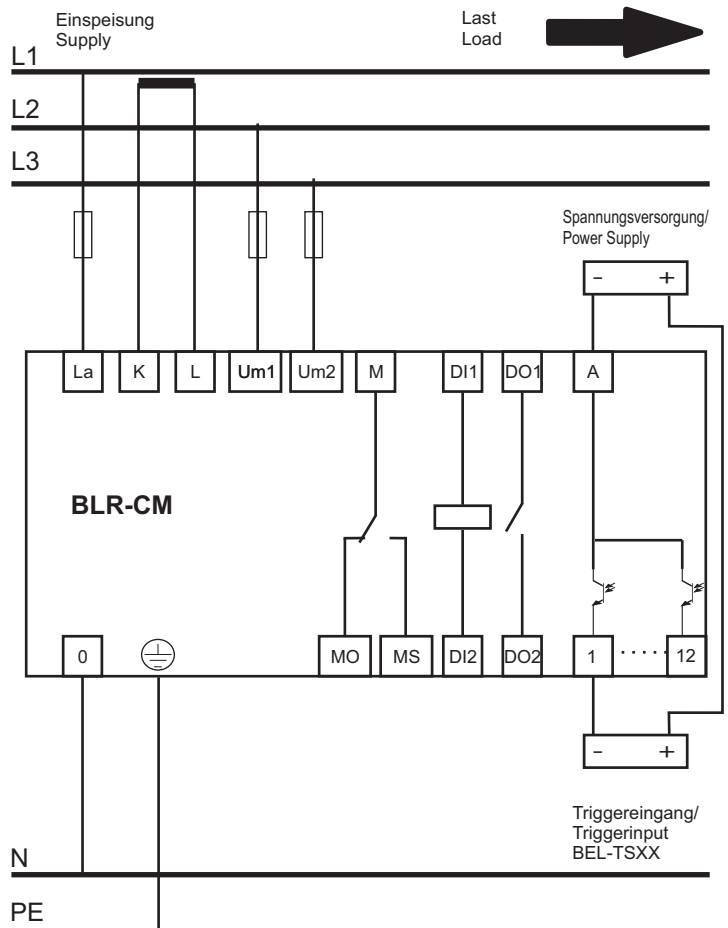
For fast applications, which do not require compensation in real-time, Process Technique is offering with power factor controller BLR-CX-T a suitable solution. BLR-CM-T-3A allows in combination with single-phase thyristor-switches an exact power factor correction individually per phase. Process Technique also offers thyristor-switches for single phase applications, different voltage levels and different power ratings, as mentioned in this catalogue. Please send us your inquiry with all details.

## DYNAMIC AND FAST POWER FACTOR CONTROLLER

### BLR-CM-T

#### DSP-controlled power factor controller with 1-ph. measuring system

- Uses additionally a second "fast" algorithm
- Fast Steps provide compensation in 20 to 30 msec  
Response time < 1ms after one period measuring  
The controller switches all needed steps by one switch cycle  
The nominal step size is free adjustable for every step (connection of different capacitor step sizes possible)
- Normal Steps  
Automatic Stepsize detection and supervision of connected capacitors  
Automatic usage of the optimum capacitor step  
Individually configurable discharging time allows quicker switching time  
Normal steps adjust the operating point for the fast steps
- Full-automatic c/k-value setting
- Manual mode possible
- Multiple connection types possible through adjustable phase compensation angle
- Capable for 4-quadrant operation
- 1-phase measurement system also suitable for non sinusoidal currents and voltages
- Graphical LCD for display of step status, measurement values and system data
- Measurement display for U, I, P, Q, S, THD U, THD I, ΔQ, F, T
- Harmonics measurement for voltage and current up to the 30th order
- Counter for active and reactive work
- Flexible alarm system with up to 15 alarms
- Programmable digital input and digital output
- Programmable alarm relay with voltfree c/o contact
- Step database with storage of origin step size, actual step size and amount of switching cycles for each step
- Real time clock (only option DM)
- Storage of min., max., average value and operating parameters in adjustable time intervals and possibility to synchronize via 2. digital input (24VDC)  
Storage of changing from any system parameter with date and time  
Storage of events, e.g. alarm with date and time  
Download of data via TTL/USB (with optional cable) or partly via Modbus or LCD of the controller (only option DM)
- Supply voltage 115/230V, 45-65Hz, other voltages on request
- Voltage measuring 50 - 530V, 45 65Hz
- Current measuring 15mA - 5A, suitable for CT x/1A and x/5A
- Connection with pluggable screw terminals
- Instrument casing for cutout 144 x 144mm, depth 49mm
- Protection class IP20 (casing), IP50 (front)



Power factor controller for real time applications (20msec control time)	Type
Dynamic power factor controller with 06 transistor outputs	BLR-CM06T
Dynamic power factor controller with 12 transistor outputs	BLR-CM12T
Dynamic hybrid power factor controller with 06 transistor and 06 relay outputs	BLR-CM12RT
<b>Fast power factor correction individually per phase (100msec per step)</b>	
Three phase measuring power factor controller with 06 transistor outputs	BLR-CM06T-3A
Three phase measuring power factor controller with 12 transistor outputs	BLR-CM12T-3A
<b>Fast power factor controller in basic version (1sec per step)</b>	
Power factor controller with 06 transistor outputs	BLR-CX06T
Power factor controller with 12 transistor outputs	BLR-CX12T
<b>Optionale Ausstattung</b>	
RS485 with Modbus RTU protocol	-MB
Data-logger, RTC, RS485 with Modbus RTU protocol (only BLR-CM)	-DM
<b>Accessories</b>	
Communication cable TTL/USB	3UMS
Power supply for DIN-rail 85-265VAC / 12VDC; 0,83A; 10W	NG 12DC/Hutsch