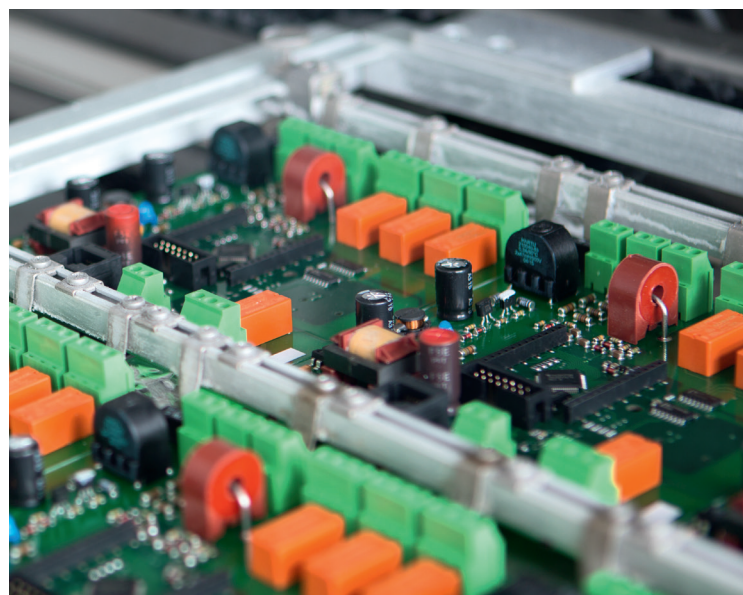


BLR-CM



High-Tech Power Factor Control aiming at fastest possible hitting of target Cos-Phi, and doing so with least amount of switches.

High- Tech Power Factor Control with the aim to reach target Cos Phi as fast as possible and with the least switching amount. The various regulating algorithms of the BLR CM (real-time algorithm / mixed algorithm / Best Fit algorithm) are the brain in this powerful PFC. With all the different options and wide range of alarms it is adaptable to all challenging regulating tasks, like i.e. dynamic compensations.



As "Hybrid Version" with 6 relay outputs and 6 transistor outputs, which are controlled by two algorithms working in parallel, static and dynamic changing loads can be controlled simultaneously with optimal results. The regulating characteristic Q(U), which was especially designed for this controller, makes the BLR CM suitable for controlling and maintaining grid voltage of power generation facilities.

Relay or Transistor outputs

The BLR CM controller is pre-destined to trigger thyristor switches with either 6 or 12 transistor outputs. Also available: 6 relay plus 6 Transistor outputs (Hybrid Controller). The relay outputs are used for the static loads, the transistor outputs control the dynamic parts of the load.

Automatic Step Recognition

No matter if reactor or capacitor- the BLR CM recognizes the size automatically. It does not matter which output is connected to a reactor or a capacitor. There are no limitations regarding order or size of the connected impedances.

Optional 3-Phase Measurement

In networks with asymmetric loads (i.e. office buildings), the BLR CM can measure the current of each phase in this variant. In addition, the controller recognizes if a 1- or 3- phase capacitor is being used. In conjunction with the intelligent controller algorithm the result is an optimal compensation of reactive power also in asymmetric networks.

Graphic LCD Display

The operator can browse the menus and adjust the settings via softkeys (keys with variable functions); the adjustments and measurement values are displayed in a back-lit graphical display in high resolution, using plain text messages. The controller will support English, German and French languages.

Suitable for MV and HV Applications

The BLR CM can be ordered with a pre-set reaction time of 8 seconds. This will be enough time for a vacuum contactor to switch. After this switching time the controller will re-measure to register the effective changes in load.

Real-Time Algorithm

Equipped with a real-time algorithm and transistor outputs, the BLR-CM is ideal for triggering thyristor switches (in dynamic compensations). Deviations are determined immediately (about 1ms) after measurement of one period. Thus, a reaction time of about 20 ms can be achieved.

Data Memory Optional

Optionally the BLR CM can be equipped with a data memory, which will store all changes of parameters including a time stamp, all alarms with time stamp, as well as measurement values in adjustable intervals and system parameters, like number of switches per step. The data output is via a TTL interface in CSV MS Excel compatible format.

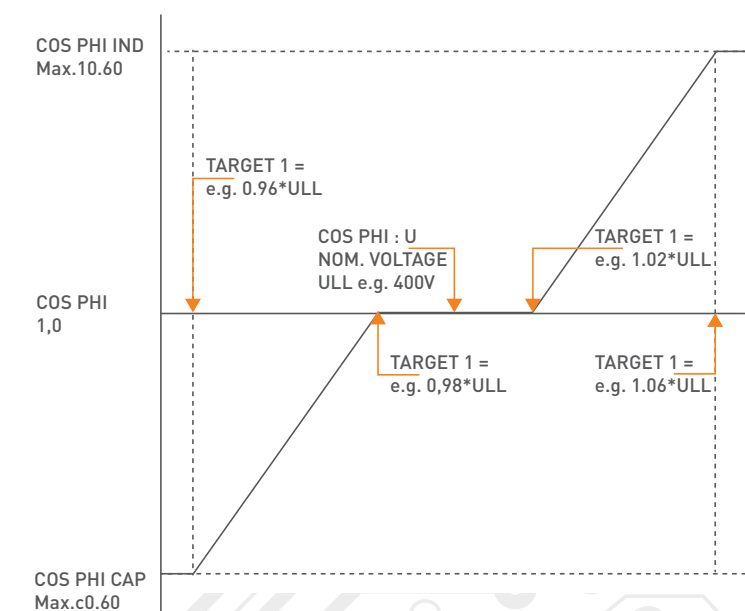
Best Fit Algorithm

The BLR CM range of controllers have the patented and proven "Best Fit" algorithm. Both capacitive steps and inductive steps can be used simultaneously for PF control. Therefore the BLR CM can react to and control both inductive as well as capacitive loads.

BLR CM Controller with Q(U) Regulation Characteristics

The target parameter of the BLR Q(U) is the voltage of electric power plants which has to be maintained. In case the measured voltage deviates from the target voltage (undervoltage or overvoltage) the Cos Phi will be adapted dynamically. Then the controller will switch capacitors or chokes accordingly.

The demand for inductive or capacitive reactive power will be calculated by the controller with the help of an adjustable characteristic curve. The advantage of this adjustable curve against a static Cos Phi is, that the regulation target is adjusted dynamically according to the target voltage.



| Technical Data | |
|-------------------------------|--|
| Measuring- and supply voltage | 50 – 530V AC, 45-65Hz, PT ratio 1 - 350, 100 - 132V / 207 - 253V, 45-65Hz, max. fuse 6A |
| Current measuring | 0 – 5A, sensitivity 15mA, burden 15mOhm (option -3A: 3x 0 – 5A) overload 20% continuous, CT-ratio 1 - 6500 |
| Control exits | 6R, 12R, 6T, 12T, 12RT, relays: N/O, one common point, max. fuse 6A |
| Breaking capacity | 250V AC / 5A, 400V AC / 2A, 110V DC / 0,4A, 30V DC / 5A |
| Static outputs | open-collector, breaking capacity: 8 – 48V DC / 100mA |
| | Alarm contact C/O, voltfree, programmable, max. fuse 6A, breaking capacity 250V AC / 5A |
| Data-logger | optional |