





## Trouble Shooting

Problem	Possible cause	Remedy
no display	auxiliary voltage missing	check correct connection of auxiliary voltage, if necessary rectify
display "ALARM"	measurement voltage out of range wrong settings for voltage measurement	check correct connection of measurement voltage, if necessary rectify check settings in menu "SETUP", if necessary rectify
display "ALARM"	measurement current too small	check connection of CT, probably there is a break in the line CT ratio too high, if necessary replace CT remove short circuit link of the CT
wrong display of current or voltage	wrong transformer ratio	check settings PT- or CT-ratio in menu "SETUP", if necessary rectify
wrong power factor is displayed	wrong settings at the regulator	Start "Ai" in menu "SETUP" or check point 206 and rectify the phase compensation if necessary.
power factor doesn't change after switching on a step, step is switched off again	CT mounted in wrong position	check mounting position referring circuit diagram (current of load and capacitors have to be measured!), if necessary rectify
display "ALARM"	current higher than allowed	check CT ratio, probably replace by suitable transformer type
display "ALARM"	permanent overcompensation  permanent undercompensation	check settings check contactors, probably contact stick together check settings check capacitors, possibly fuse defective check dimensioning of the compensation unit
reversed control mode	current or voltage clamps interchanged	correct connection or adapt phase compensation
single steps are not switched on or off	wrong settings	check, if referring steps are defined as fix steps (permanently on or off)
steps are detected as defective	step defective	check capacitor steps, probably fuse, capacitor or contactor defective
steps are not switched on	step size too large	necessary reactive power smaller than switching threshold of step size of the smallest step

### Menu structure:

The table gives an overview about parameters of BLR-CXD settings in menus 100 to 600 that could be done only by using the adapter.

### Menu 100:

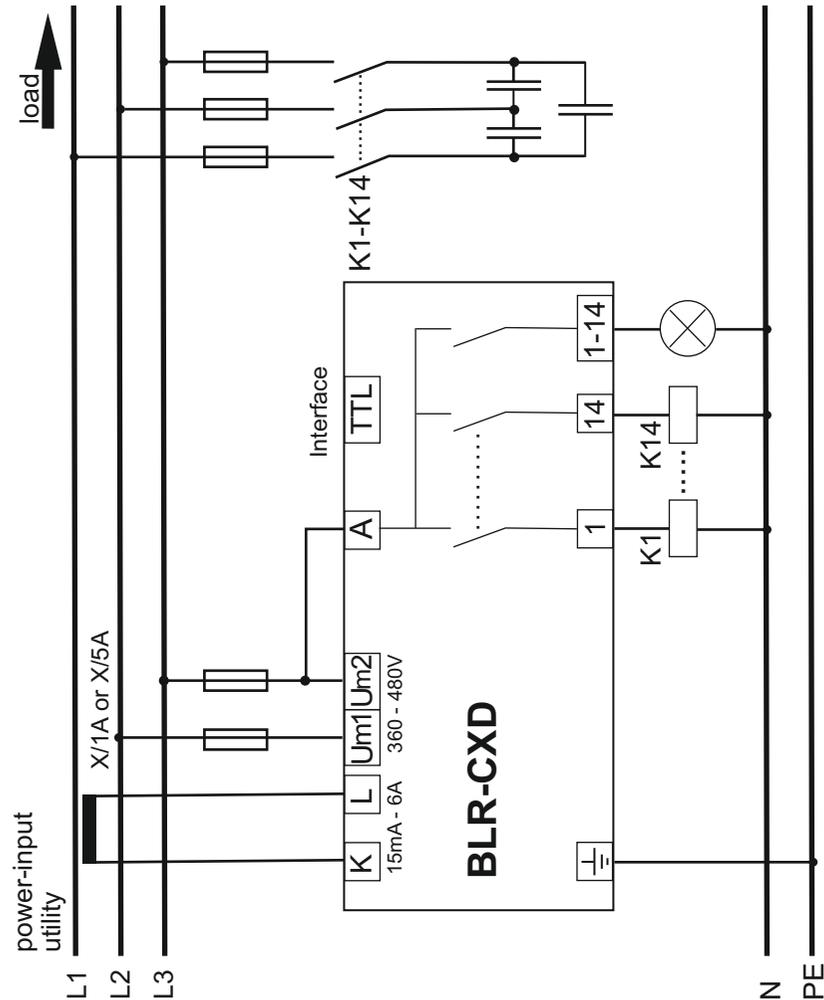
Un nominal voltage (is necessary for over- and undervoltage monitoring and is reference for capacitor database)

Ai start of automatic initialization (this function is running only, when "Auto" is shown in LCD)

CP1 target-PF 1

St switching time delay

MENU	FUNCTION	DEFAULT
<b>100</b>	<b>QUICK START SETUP</b>	
Un	Nominal voltage (phase-phase)	400V
Ai	Start automatic initializing	
CP1	Target-PF 1	1,00
St	Switching time delay	10s
<b>200</b>	<b>SETUP MEASURING SYSTEM</b>	
201	Nominal voltage (phase-phase)	400V
204	Tolerance nominal voltage	15%
206	Phase-offset	90°
207	Start automatic initializing	
208	Activate Ai by every start	N
209	Synchronisation to frequency	Auto
<b>300</b>	<b>SETUP CONTROL SYSTEM</b>	
301	Switching threshold	60%
302	Target-PF 1	1,00
305	Switching time delay	10s
306	Switching time delay for fine control	2s
307	Fine control active	Y
309	Blocking of defective capacitors	Y
311	Control algorithm 1=auto, 4=progressive	1
313	Asymmetrical switching time delay	1
314	Switch-off capacitors in leading condition	N
<b>400</b>	<b>SETUP CAPACITOR DATABASE</b>	
401	Discharging time	75s
403	Type of exit: step 1...max. 14	Auto
404	Switching operations: step 1...max. 14	0
<b>500</b>	<b>SETUP ALARM SYSTEM</b>	
502	THD alarm	N
503	Threshold THD	20%
504	Disconnect capacitors when THD >	N
505	Delay THD Alarm	60sec
515	Control alarm (target cannot be reached)	N
516	Defective steps alarm	N
517	Loss of power alarm	N
<b>600</b>	<b>RESET</b>	<b>600</b>
601	Reset to default values	
602	Reset capacitor database to default	
607	Software revision	



### Technical Data

Measuring- and supply voltage:	360 – 480V AC, L-L, 45-65HZ, 5VA, max. fuse 6A
Current measuring:	15mA – 6A, single phase, burden 20mOhm,
Control Outputs:	Up to 14 relays, n/o, with common point, max. fuse 6A breaking capacity: 250V AC / 5A
Interface:	TTL, rear
Ambient temperature:	Operation: -20°C – 70°C, storage: -40°C – 85°C
Humidity:	0% - 95%, without moisture condensation
Voltage class:	II, dirt class 3 (DIN VDE 0110, part 1 / IEC60664-1)
Standards:	DIN VDE 0110 part 1 (IEC 60664-1:1992) VDE 0411 part 1 (DIN EN 61010-1 / IEC 61010-1:2001) VDE 0843 part 20 (DIN EN 61326 / IEC 61326: 1997 + A1:1998 + A2: 2000)
Conformity and listing:	
Connection	Pluggable terminal block, screw type max. 4qmm
Case:	Front: instrument case PC/ABS (UL94-VO), Rear: metal
Protection class:	Front: IP50, (IP54 by using a gasket), Rear: IP20
Weight:	ca. 0,6kg
Dimension:	144x144x58mm h x w x d, cut out 138 (+0,5) x 138 (+0,5)mm

### Alarms:

BLR-CXD has an extended alarm system. All possible settings are shown in menu structure. When an alarm is active, the sign ALARM in the display is blinking. An error code is shown in LCD. Possible error codes are:

	ALARM	Measuring voltage is out of tolerance
	ALARM	Measuring current is less 15mA (please check current path)
	ALARM	Measuring current is too high.
	ALARM	Target cannot be reached
	ALARM	THD U alarm (harmonic alarm)
	ALARM /	One or more steps are defective. The defective steps are blinking together with the ALARM sign.
	ALARM /	One or more steps have less than 70% of original size. Number of step and alarm text are blinking alternately.
	ALARM	Over temperature alarm. The steps will be switched-off step by step.
	ALARM	Abort of automatic initialization due to not suitable load conditions