PROENS

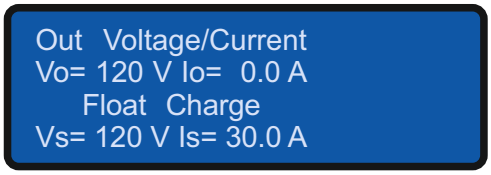
BCS-3000

THREE PHASE REDRESSOR

BCS 3000 processor-controlled stabilized three phase redressor ensures that many parameters such as output current, device temperature etc are monitored or if desired, changed with the help of the LCD monitor and 4 keypads on its front panel. If the user wants, he can make adjustment for quick charge for a certain period and determine the output voltage, maximum current and period to be applied during such period and monitor the remaining period from the monitor or terminate fast charge. BCS 3000 continuously follows the redressor temperature, output voltage, input voltages and whether the output current is between the tolerances indicated in the Condition Warning Table and notifies them to the user from the Condition / Warning menu. Furthermore, through the relay contacts on it , it notifies the problems that may occur in relation with the output voltage or temperature to the system by pulling the relevant contact. The device menu consists of four displays and these displays and their characteristics are explained here under.

1) Main Display: The output voltage, output current, set voltage, set current and fast or normal charge operation condition of the device are monitored from this display.

In case the device is operating in fast charging condition, the period for ending the quick charge can be seen on the display as a countdown counter. In any part of the menu, the main display can be returned to by pressing the ESC key for a few times.



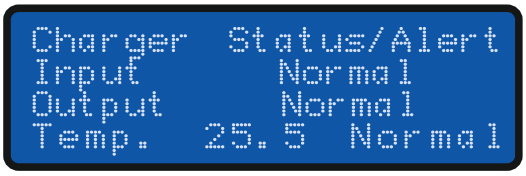
2) Normal Charge Settings: In this case, the user adjusts the output voltage and maximum output current values to be used by the device under normal charging conditions on this display. The device may choose one of the accumulator types defined in it or may determine the output voltage and maximum output current itself. By pressing the set key once on the normal charge settings display, choose the accumulator type or special settings using the up and down keys. When special adjustment is chosen, you can adjust the output voltage and maximum output current to any value you want. In case you choose the accumulator type and press set key, the device will choose an output voltage and current without asking you.

3) Quick Charge Settings: The user may ensure the quick charge of the accumulators by keeping the output voltage and maximum output current of BCS-3000 at a certain value for a certain period. For this purpose, check

the Vs (set voltage) and Is (set current) values and charge period on the lowest row of the display. In case it is desired to change the values. After pressing the set key once, press the down button and then to the set key again. Adjust the hour, minute, output voltage and maximum output currents for the charge period setting by using the up and down keys. In order to pass to the next setting, use the set key. After completing 4 adjustments, quick charge can be commenced by pressing the set key twice.

With the commencement of the quick charge, the device turns to the main display and fast charge period starts counting down. At the end of this period, the device returns to normal charge settings automatically. In case in the fast charge condition, the device input voltage is disconnected, BCS-3000 resumes quick charge when power is recovered.

4) Redressor Condition / Warning: On this display, you can see the conditions and warnings related with the input voltages, output current, output voltage and temperature of BCS-3000. On the input row, the conditions of input voltage being excessive, normal or low can be seen. On the output row, the conditions of output voltage being excessive, normal low or overload condition can be seen. On the temperature row, the device temperature being normal or high can be seen. In case the values indicated in the Condition Warning table are exceeded for a period in excess of 3 seconds, the device pulls the relevant contact on it to notify the condition to the user and the system.



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OPERATION AND COMMISSIONING INSTRUCTIONS

1) Before making the connections of the redressor, make sure that all fuses and the switch are off.

2) Make the connections of RST phases, neutral and ground in an appropriate way.

3) Make sure that fuses appropriate for the redressor powerareusedon RST phases.

4) While making the DC output terminal connections, make sure that the DC load (-) and Accumulator (-) ends are connected to the DC (-) terminals of the redressor, (+) pole of the accumulator to the (+) pole terminal of the redressor, and load (+) pole to the DC Load (+) output terminal.

5) While making accumulator and DC load connections, use proper section cable as a minimum.

6) While energizing the system, provide the input voltage with the output fuses in off condition. Check whe ther the output voltage value is appropriate on BCS3000 control unit. After making sure that all warnings are

normal in the condition / warning menu, ensure that current goes to the accumulator and DC load line. Check whether the output current is at normal values on BCS-3000 control unit.

7) In case any of the output voltages is below 150V, BCS3000 can not trigger and can not give DC voltage output. In case you can not have DC voltage output, please check your input voltages.

WARNINGS

- Even if supervision and management related with the use of the device are ensured by a person responsible for the safety of the devices, this device is not intended for use by people having disabilities in terms of physical condition, senses and mental abilities (including children) or by people not having sufficient experience and knowledge.
- The children must be kept under supervision in order to ensure that they are not playing with the device.
- In case the supply cable is damaged, it must be replaced with a cable or cable set that is specially prepared and supplied from the manufacturer or service agency.
- Before energizing, ensure that the device is fixed.
- The device supply is 380 VAC 50 Hz.
- Ensure that the current continuously drawn by your system is less than the charging current. (Otherwise all of the charging current will be drawn by the system and youraccumulatorswill not hold charge).
- Check the (+) and (-) pole connections once more before commissioning.
- Do not use in external, humid, wet environments.
- Choose the DC and AC supply cables in compliance with the drawn current.

INPUT	
Measurement and control	4x20 lcd mimic dislay Modular 144x144 microprocessor control unit
Input voltage	3x380 VAC 4 wire
Input frequency	50 Hz
Input tolerance	- 20%, +15%
Efficiency	> 80%
Power factor	0.8
OUTPUT	
Output voltage	24V/48V /110 VDC options
Output current	15A /30A / 50 A / 80 A 100 A / 200A / 500 A options
Dynamic response	Maximum voltage variation at 0% - 100% load variation < 0.1%
Softstart	1sec (ramp)
Control type	PID controlled thyristor – diode module group
Filter	L-C filter
Ripple	< 5% in operation without accumulator < 1% in operation with accumulator
DC leakage control	Determining + or – leakage to the ground

GENERAL	
Accumulator selection feature	Choosing the desired accumulator from the device display and automatically charging the accumulator
Opening – closing	3 – pole switch
Assembly type	Ground assembly
	1) AC Input Fault 2) DC Output Fault 3) Over Temperature (Fan) 4)DC High 5)DC Low 6) (+) Leakage 7) (-) Leakage
Connection	Rail type connector
Dimensions	400x 600x 1100
Weight	
Protection class	IP51
Operational temperature	-10 / +50°C
Noise level	<45 DBA
Cooling	Forced
Device color	RAL7035
PROTECTIONS	
DC high, , Over Current , Short circuit, Fuses	

Accumulator line broken warning	The warning showing the disconnection of the connection between the redressor and the accumulator group, accumulator impedance control, pole head oxidation control. **OPTIONAL "CAN BE ADDED IN LINE WITH CUSTOMER REQUESTS".**

Condition Warning Table

	Condition or Warning	Threshold Value		Condition or Warning	Threshold Value
1	Input Fault	<150V veya >250V	5	DC Low	User Selectable.
2	Output Fault	Set Value +/- %5 or Over Load	6	(+) Leakage	2-10-20ma Selectable Threshold
3	Over Temperature	>70 C	7	(-) Leakage	2-10-20ma Selectable Threshold
4	DC High	User Selectable.			

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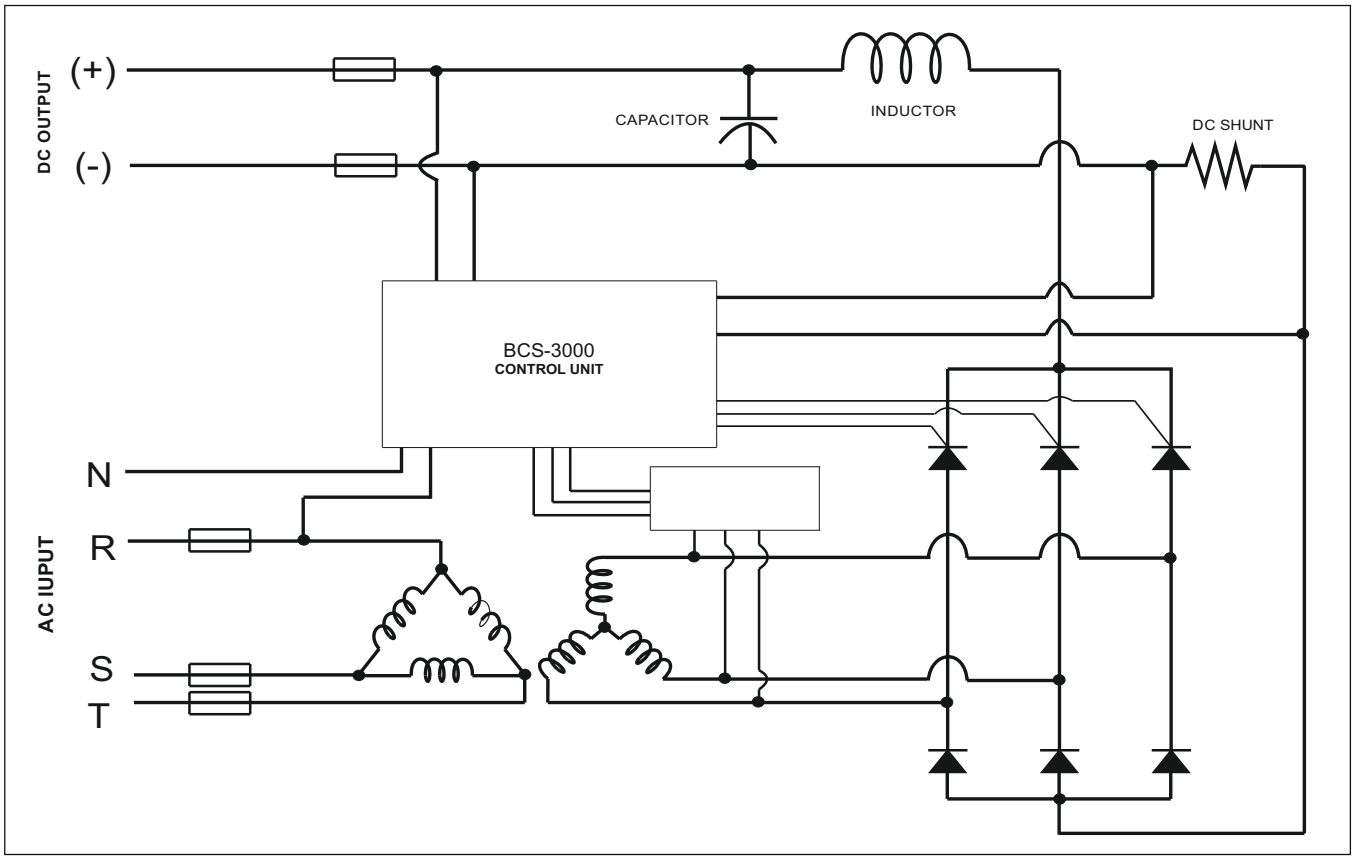
CONNECTION DIAGRAM



TERMINAL CONNECTION