

PROENS BCS-1000 series REDRESSOR is designed so as to ensure that the user can see the status and information on the REDRESSOR, including remotely, thanks to the large graphic LCD. On the main display on the REDRESSOR the following information is included:

REDRESSOR OPERATIONAL CONDITION:

This shows the mode, in which the REDRESSOR is operated.

Operation modes of REDRESSOR: normal charge, quick charge, smart charge, battery maintenance.

REDRESSOR INPUT VOLTAGE:

This shows the REDRESSOR input voltage.

REDRESSOR OUTPUT VOLTAGE:

This shows DC output voltage.

- DC output voltage must be equal to the output voltage set value.
- When the REDRESSOR output current limitation, battery charge current limitation and input voltage are off, DC output voltage shall not be equal to the set value.

REDRESSOR OUTPUT CURRENT

This shows the REDRESSOR output current.

- When the REDRESSOR output current tries to reach above the current output value set in operation without battery, the REDRESSOR takes itself to protection and reduces the output voltage and keeps the output current at the set value.
- In operation with REDRESSOR battery, when the output tries to reach above the set output current, the REDRESSOR protects itself and reduces its own output voltage. Since the voltage of the batteries is at a higher level, high current need is met by the batteries. In case the high current need continues for a long period, the batteries will discharge and the output will remain completely to the REDRESSOR and the REDRESSOR output current will reduce the output voltage and keep it at the set value.

REDRESSOR BATTERY CHARGE CURRENT

It shows the REDRESSOR battery charge current.

- The REDRESSOR battery charge current limit is limited from the REDRESSOR settings in accordance with the battery percentage and battery charge current percentage. The recommended battery charge current limit is 10% of the battery capacity.
- Before commissioning the REDRESSOR, the battery capacity and charge current percentage must be correctly entered.

REDRESSOR OUTPUT CURRENT SET VALUE

It shows the REDRESSOR output current limitation set

REDRESSOR SETTING LOCK STATUS

SYMBOL

It shows the lock status for REDRESSOR setting page.



REDRESSOR Operation Modes

PROENS - BCS - 1000 series REDRESSOR has 4 operation modes. The operation mode of the REDRESSOR can be changed by the user from the setting pages.

Normal charge= The REDRESSOR provides output at normal charge set voltage. NORMAL CHARGE expression is seen in the main display operation status section.

Quick Charge= The REDRESSOR provides output at quick charge set voltage. On the upper side of the display, QUICK CHARGE expression is seen. The REDRESSOR shall return to the previous mode at the end of the quick charge period.

Smart Charge= The REDRESSOR adjusts its output voltage in accordance with the fullness level of the battery. Ensure that the quick charge voltage and normal charge voltage are correctly entered. The battery capacity has to be correctly entered.

Battery Maintenance= it lowers the REDRESSOR output voltage to the maintenance voltage in the battery maintenance period and waits for the batteries to bring the voltage to the maintenance voltage. When the batteries go down to maintenance voltage, the REDRESSOR shall return to the previous operation mode. In case the battery voltage is not reduced to the maintenance voltage within the set maintenance day, the REDRESSOR will automatically return to the previous operational mode.

REDRESSOR Alarm Statuses Page

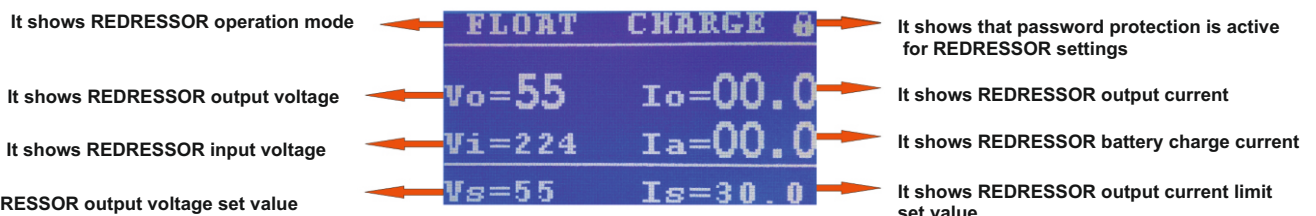
The alarm and failure signals that may occur within the REDRESSOR can be monitored from the alarm status page. In alarm condition, the REDRESSOR alarm signal makes transition between pages with certain intervals and ensures that the alarm signal can be seen by the user. In case the buzzer is activated between the page transitions, the REDRESSOR shall also give an audible warning. In case the alarm is temporary, the sign "*" is seen near the alarm name. In this case, the contact position belonging to the alarm is not changed until the temporary alarm is deleted by the user. The explanations for the abbreviations belonging to the alarms in the alarm status page are indicated here under:

DC LOW - DC LOW - It shows that the output voltage is lower than the threshold value.

DC HGH - DC HIGH – It shows that the output voltage is higher than the threshold value.

AC LOW - AC LOW - It shows that the input voltage is lower than the threshold value.

REDRESSOR MONITORING DISPLAY



- AC HGH** AC High - It shows that the input voltage is higher than the threshold value.
- +LEAK** Positive Leakage – It shows that ground DC(+) leakage amount is higher than 10 mA.
- LEAK** Negative Leakage – It shows that ground DC(-) leakage amount is higher than 10 mA.
- BAT SU** Battery Supply Period Low – It indicates that system feed period of the battery is lower than the catalog values.
- RED FL** It is REDRESSOR failure general alarm. It gives output in case of continuity of alarms except No AC alarm.
- HGH LD** Overload – Battery charge failure- It shows a current in excess of the output current of REDRESSOR is needed. In this case the batteries will not be charged.
- HGH TM** Temperature high – it shows that the inner temperature of the REDRESSOR is above the threshold value.
- AC SUP** Input Voltage Off – It shows that the REDRESSOR feed voltage is off.
- FAN FN** It shows that the fan has failed.
- BAT BR** Battery line is disconnected – it indicates that the battery connection is disconnected.

REDRESSOR Password Protection

The REDRESSOR is password protected in order to prevent unauthorized entries. There is a symbol on the main display showing that password protection is active. The first password belonging to the REDRESSOR is “11111”. It must not be forgotten to change the password after installation. In order to deactivate the password protection of the REDRESSOR, the up or down key shall be pressed to reach the password display and password entry operation is activated by pressing the set button and each password digit is changed and set via the up-down keys and then password protection is deactivated. When the REDRESSOR password is entered correctly, it can be seen from the protection symbol on the main display that password protection has been deactivated. In case no key is pressed within 60 seconds, the REDRESSOR shall automatically switch on password protection.

REDRESSOR temperature and input current, Date and Time Monitoring

The measurement parameters belonging to the REDRESSOR and not seen on the main display can be monitored on the messages page. On this page, the inner temperature belonging to the REDRESSOR can be monitored as XX.X°C, the input current can be monitored as XX.X A and the date and time information belonging to the REDRESSOR can be monitored on this display.

REDRESSOR Alarm Deletion

In order to delete the contact outputs belonging to the temporary alarms that may occur in the REDRESSOR, the set button on the REDRESSOR alarm page as to be pressed once. The REDRESSOR can also perform remote alarm deletion operation through digital input for remote alarm deletion. Never apply voltage to the Digital Input. The input ends has to be short-circuited for deletion operation.

REDRESSOR Fan Control

It is possible to digitally perform fan control over the control unit for the REDRESSOR. The fan control can be activated/ deactivated over the fan control page. After setting the fan control active and fan degree to the desired value, the REDRESSOR shall automatically perform the operation control of the fan. When the temperature reaches over the set degree, the fan shall automatically switch on.

REDRESSOR Alarm Thresholds and Audible Warning System

It is possible to change the DC LOW, DC HIGH, AC LOW, AC HIGH, TEMPERATURE HIGH failure threshold values over the REDRESSOR control unit. Furthermore, audible warning can be activated – deactivated.

DC LOW alarm: When DC output voltage goes below the DC Low alarm threshold, a signal will be given.

DC HIGH alarm: When DC output voltage goes above the set DC High alarm threshold, a signal will be given.

AC LOW alarm: When AC input voltage goes below the set AC Low alarm threshold, a signal will be given.

AC HIGH alarm: When AC input voltage goes above the set AC High alarm threshold, a signal will be given.

Temperature High alarm: When the REDRESSOR inner temperature goes above the set temperature high alarm threshold, a signal will be given.

REDRESSOR Deep Discharge Protection

REDRESSOR deep discharge protection function can be activated – deactivated and deep discharge protection voltage can be adjusted. When the REDRESSOR input voltage is disconnected and deep discharge function is active, it continues to feed the system until the output voltage goes down to the deep discharge protection voltage. When the output voltage goes below the protection voltage, the REDRESSOR disconnects the output load from the REDRESSOR with the help of the contactor. Since load disconnection is made, even if the output voltage is above the deep discharge voltage, it shall not give output to the system until the REDRESSOR input voltage is resumed. The REDRESSOR performs the deep discharge protection and control operation being fed from the battery source.

REDRESSOR AC Low High Protection

REDRESSOR AC Low High protection function can be activated and deactivated and AC low and high protection threshold can be adjusted. In case the REDRESSOR input voltage is lower than AC low protection threshold or higher than the AC high protection threshold, the REDRESSOR disconnects the power transformer disconnects the power transformer supply input for protection purposes with the help of the relay/ contactor. When the input voltage returns to the normal operation conditions, the REDRESSOR shall return to the normal operation mode.

REDRESSOR RS485 Communication

The REDRESSOR can communicate over RS485 serial communication port by using MODBUS RTU protocol. It is possible to monitor the measurement, failure information of the REDRESSOR over the communication port. Furthermore, it is possible to change all setting parameters belonging to the REDRESSOR over the communication port. The REDRESSOR communication ID and BAUDRATE can be changed over the control display.

The main settings for REDRESSOR RS485 communication are as follows:

Protocol MODBUS RTU, PARITY NONE, DATA BIT 8, STOP BIT 2

See the communication guide for REDRESSOR communication settings and data information.

REDRESSOR SETTINGS:

Abstract of the screens and changable parameters are listed as table.

NORMAL CHARGE (DISPLAY 2)

CHANGEABLE PARAMETERS

- NORMAL CHARGE VOLTAGE
- OUTPUT CURRENT LIMIT
- BATTERY CHARGE CURRENT PERCENTAGE

QUICK CHARGE (DISPLAY 3)

CHANGEABLE PARAMETERS

- QUICK CHARGE ACTIVE/ PASSIVE
- QUICK CHARGE VOLTAGE
- QUICK CHARGE PERIOD

SMART CHARGE (DISPLAY 4)

CHANGEABLE PARAMETERS

- SMART CHARGE ACTIVE/ PASSIVE
- BATTERY CAPACITY

BATTERY MAINTENANCE (DISPLAY 5)

CHANGEABLE PARAMETERS

- BATTERY MAINTENANCE ACTIVE/PASSIVE
- BATTERY MAINTENANCE VOLTAGE
- BATTERY MAINTENANCE RANGE
- BATTERY MAINTENANCE END DATE

FAILURE SET (DISPLAY 6)

CHANGEABLE PARAMETERS

- DC HIGH THRESHOLD
- DC LOW THRESHOLD
- AC LOW THRESHOLD
- AC HIGH THRESHOLD
- OVERTEMPERATURE THRESHOLD
- BATTERY DISCONNECTED ACTIVE/ PASSIVE

DEEP DISCHARGE PROTECTION (DISPLAY 7)

CHANGEABLE PARAMETERS

- DEEP DISCHARGE PROTECTION ACTIVE/ PASSIVE
- DEEP DISCHARGE PROTECTION VOLTAGE

AC LOW HIGH PROTECTION (DISPLAY 8)

CHANGEABLE PARAMETERS

- AC DY PROTECTION ACTIVE/ PASSIVE
- AC LOW PROTECTION VOLTAGE
- AC HIGH PROTECTION VOLTAGE

PASSWORD (DISPLAY 9)

CHANGEABLE PARAMETERS

- PASSWORLD (5 DIGITS)

DATE/ TIME (DISPLAY 10)

CHANGEABLE PARAMETERS

- DAY/ MONTH/ YEAR SEC/ MIN/ H

FAN CONTROL (DISPLAY 11)

CHANGEABLE PARAMETERS

- FAN CONTROL ACTIVE/ PASSIVE
- FAN CONTROL TEMPERATURE THRESHOLD

COMMUNICATION (DISPLAY 12)

CHANGEABLE PARAMETERS

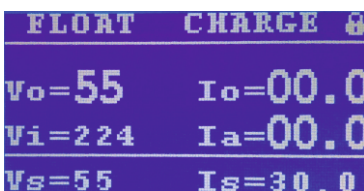
- MODBUS ID BAUDRATE

REDRESSOR SETTINGS (DISPLAY 13)

CHANGEABLE PARAMETERS

- AUDIBLE WARNING ACTIVE/ PASSIVE
- RELAY TEST ACTIVE/ PASSIVE
- FIRST SETTINGS ACTIVE / PASSIVE

REDRESSOR PARAMETER CHANGE



REDRESSOR PASSWORD PROTECTION ACTIVE, PRESS UP OR DOWN BUTTON FOR ENTERING PASSWORD



PRESS SET BUTTON



AFTER SETTING THE PASSWORD DIGIT WITH THE UP DOWN BUTTONS, PRESS SET BUTTON AND APPLY THE SAME OPERATION FOR ALL 5 DIGITS.

```
FLOAT CHARGE SET
Vo=55   Io=00.0
Vi=224  Ia=00.0
Vs=55   Is=30.0
```

REDRESSOR PASSWORD PROTECTION PASSIVE,
PRESS UP OR DOWN BUTTON
FOR GOING TO THE SETTINGS PAGE

```
FLOAT CHARGE SET
Vs=55
Is=30.0
Ia= 10
```

REACH THE PAGE, WHERE YOU WANT TO
MAKE SETTINGS BY USING
THE UP AND DOWN BUTTONS.

```
FLOAT CHARGE SET
Vs=55>
Is=30.0
Ia= 10
```

ACTIVATE THE SETTING OPERATION
BY PRESSING THE SET BUTTON ON
THE SETTINGS PAGE YOU WANT.

```
FLOAT CHARGE SET
Vs=55
Is=30.0>
Ia= 10
```

AFTER SETTING THE VALUE YOU WANT,
PERFORM ALL SETTINGS IN THE PAGE
BY PRESSING THE SET BUTTON.

```
FLOAT CHARGE SET
Vs=55
Is=30.0
Ia= 10>
```

AFTER SETTING THE LAST CHANGEABLE
PARAMETER ON THE SETTING PAGE,
RETURN TO THE MAIN DISPLAY
BY PRESSING THE SET BUTTON.

REDRESSOR COMMISSIONING

1. Make sure that the grounding of the device is correctly performed.
2. W automates have to be taken to zero position before making the supply connection of the REDRESSOR.
3. Perform the control of placement of batteries on the shelves and perform the control of battery interconnection.
4. Make the alarm dry contact connector connections.
5. Make the supply connection of the REDRESSOR.
6. Make the load connection of the REDRESSOR to DC output.
7. After providing REDRESSOR supply, AC automate is taken to position one to energize the REDRESSOR.
8. The necessary settings are performed over the control unit.
9. Take the battery automate to position one to ensure the connection of batteries with the REDRESSOR.
10. Energize the system by taking DC output automate to position one.

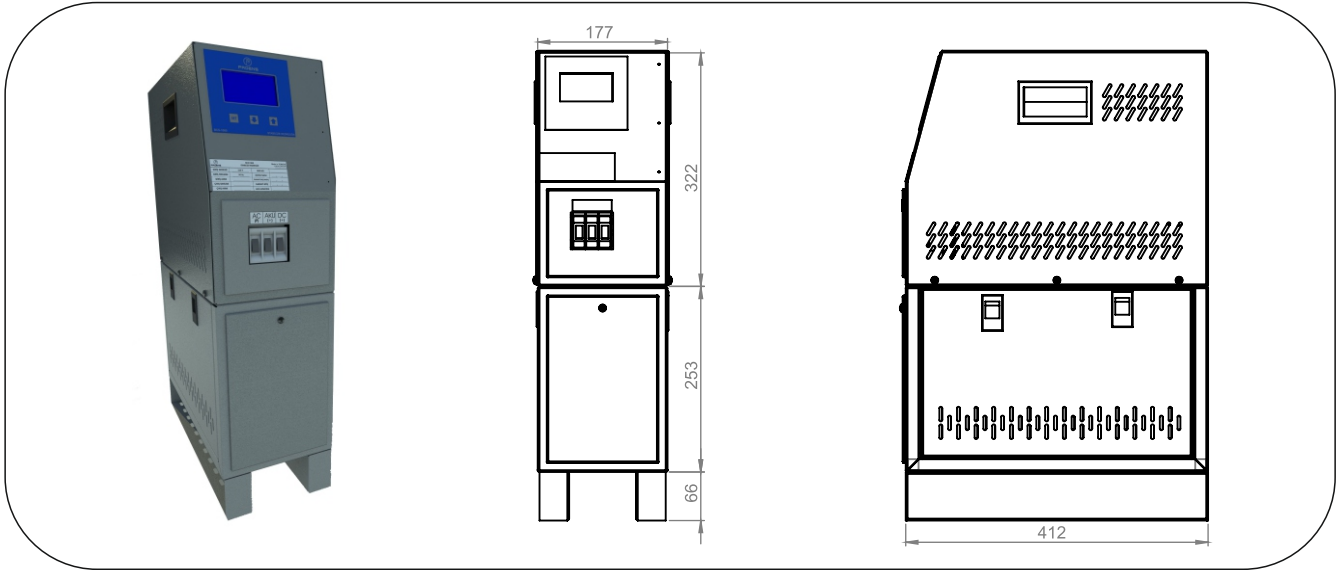
SPECIFICATION	
ONE CONTROL UNIT FOR MEASURE, PROTECTION AND ALARMS	STD
ALARM INFORMATIONS AND WORKING PARAMETERS CAN BE READ WITHOUT INPUT SUPPLY.	STD
EASILY READABLE WIDE GRAPHIC LCD	
IN SINGLE SCREEN ON GRAPHIC LCD	STD
WORKING MOD OUTPUT VOLTAGE SYSTEM CURRENT BATTERY CHARGE VOLTAGE OUTPUT SET VOLTAGE OUTPUT SET CURRENT	
FLOAT CHARGE	STD
FLOAT CHARGE VOLTAGE IS CHANGEABLE.	
BOOST CHARGE	STD
IT CAN BE ACTIVATED OR PASSIVED.	
BOOST CHARGE VOLTAGE IS CHANGEABLE.	
BOOST CHARGE TIME IS CHANGEABLE.	
SMART CHARGE	STD
IT CAN BE ACTIVATED OR PASSIVED.	
BATTERY MAINTENANCE	STD
IT CAN BE ACTIVATED OR PASSIVED.	
MAINTENANCE PERIOD IS CHANGEABLE.	
MAINTENANCE VOLTAGE IS CHANGEABLE.	
MAINTENANCE OUT DATE IS CHANGEABLE.	
CURRENT LIMITATION	STD
OUTPUT CURRENT LIMIT IS CHANGEABLE.	
BATTERY CHARGE CURRENT LIMITATION	STD
AKÜ ŞARJ AKIM SINIRI AYARLANABİLİR.	
MCB PROTECTION	STD
INPUT, OUTPUT, BATTERY	
SHORT CIRCUIT PROTECTION	STD
MEASUREMENT PARAMETERS;	STD
OUTPUT VOLTAGE	
OUTPUT CURRENT	
BATTERY CHARGE CURRENT	
INPUT VOLTAGE	
REDRESSOR TEMPERATURE	
INPUT CURRENT	
BATTERY LEVEL INDICATOR	STD.
BATTERY MAINTENANCE DISCHARGE LOAD	OPT.

-Standart/Option Table-

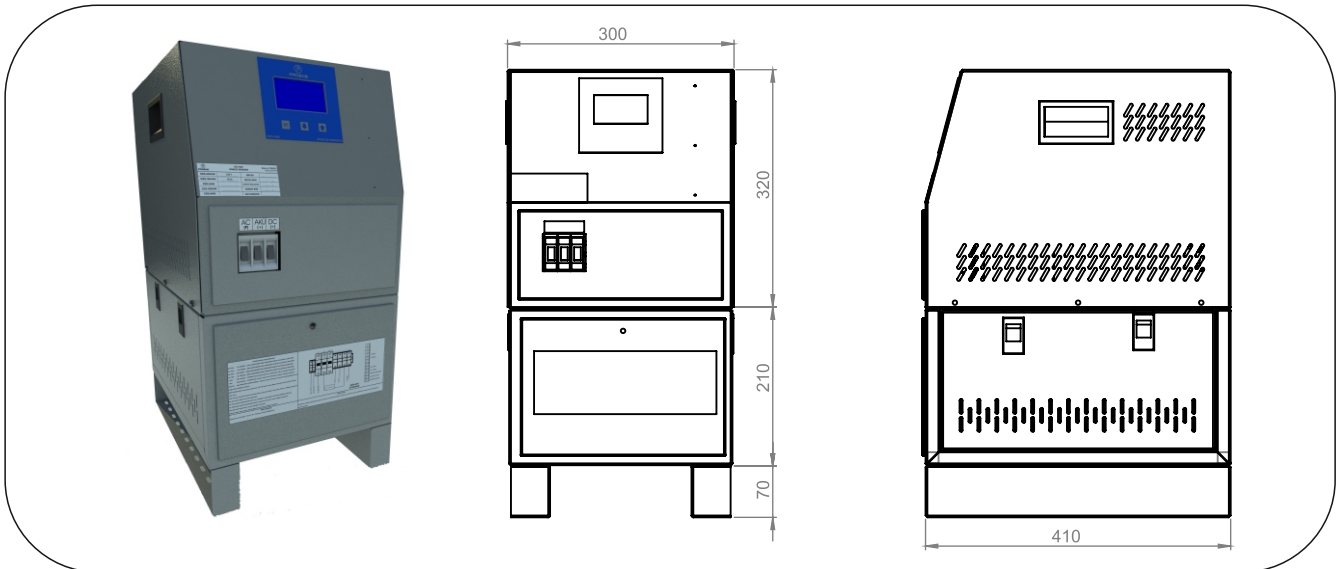
SPECIFICATION	
FAILURE INFORMATIONS (WITH SOUND, ON SCREEN)	STD
REDRESSOR FAILURE	
HIGH LOAD	
INPUT SUPPLY OFF	
DC LOW	
DC HIGH	
AC LOW	
AC HIGH	
(+) LEAKAGE	
(-) LEAKAGE	
HIGH TEMPERATURE	
BATTERY LINE BROKEN	
FAN FAILURE INFORMATION(ON SCREEN)	OPT.
SOFT START BAŞLAMA	STD
THYRISTOR CONTROLLED	STD
ISOLATION TRANSFORMER	STD
PASSWORD PROTECTION	STD
TIME VIEW	STD
BUZZER	STD
CHANGEABLE ALARM THRESHOLDS	STD
RS485 MODBUS RTU	OPT.
COMPUTER INTERFACE	OPT.
ALARM DELETE INPUT	OPT.
DEEP DISCHARGE PROTECTION	OPT.
INPUT SUPPLY OVER/LOW PROTECTION	OPT.
ALARM INFORMATIONS WITH TIME STAMP.(LAST 10)	OPT.
HARDWARE RESET INPUT	OPT.
FAN COOLING	OPT.
TEMPERATURE CONTROLLED FAN(DIGITALLY)	OPT.
SERIAL AND PARALLEL CONNECTIVITY	OPT.
ALARM CONTACTS (DRY TYPE)	
REDRESSOR FAILURE	STD
HIGH LOAD	OPT.
INPUT VOLTAGE OFF	OPT.
BATTERY SUPPLY PERIOD LOW	OPT.
DC LOW	OPT.
DC HIGH	OPT.
AC LOW	OPT.
BATTTERY LINE BROKEN	OPT.
AC HIGH	OPT.
+ LEAKAGE	OPT.
- LEAKAGE	OPT.
HIGH TEMPERATURE	OPT.
FAN FAILURE	OPT.
AC MCB DOWN	OPT.
DC MCB DOWN	OPT.
BATTERY MCB DOWN	OPT.

MECHANICAL DIMENSIONS

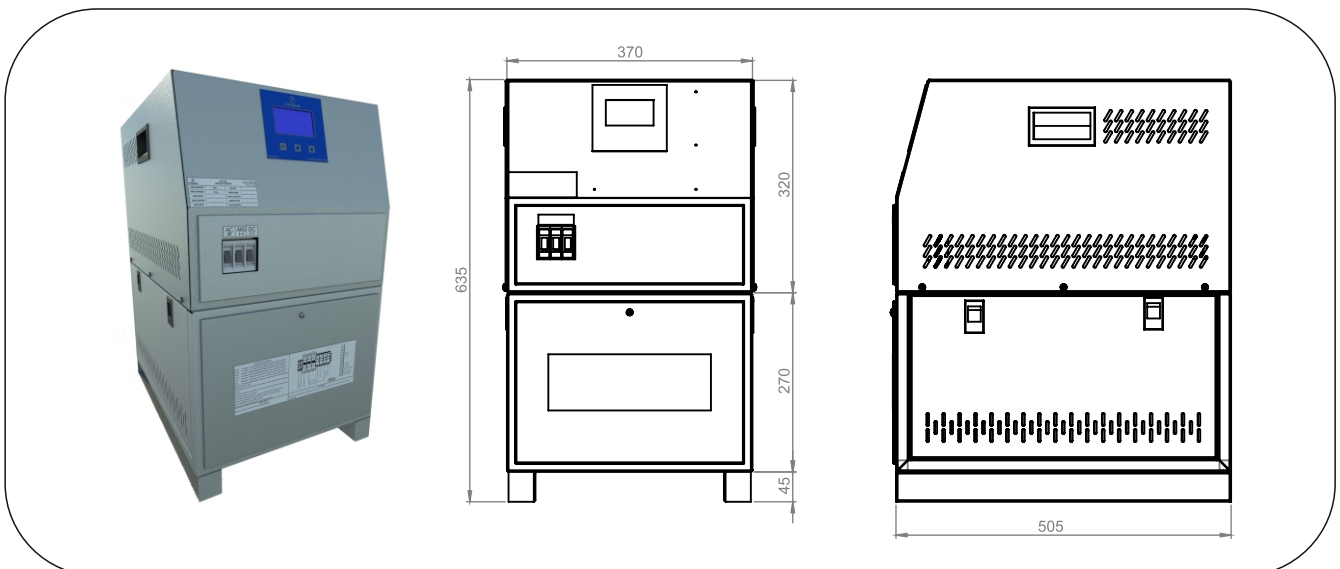
BCS101



BCS102



BC103

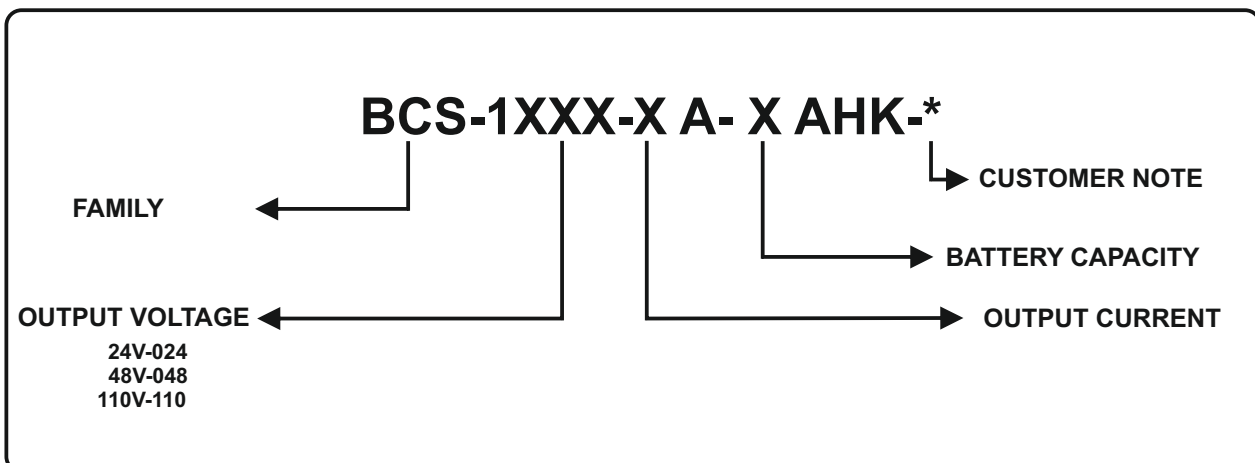


REDRESSOR ENCLOSER TABLE

PRODUCT CODE	ENCLOSER	PRODUCT CODE	ENCLOSER
BCS-1024-5A-12AHK	BCS101	BCS-1048-20A-120AHK	Please Ask.
BCS-1024-5A-18AHK	BCS101	BCS-1048-30A-26AHK	BCS103
BCS-1024-5A-26AHK	BCS101	BCS-1048-30A-40AHK	Please Ask.
BCS-1024-10A-18AHK	BCS101	BCS-1048-30A-65AHK	Please Ask.
BCS-1024-10A-26AHK	BCS101	BCS-1048-30A-100AHK	Please Ask.
BCS-1024-10A-40AHK	BCS102	BCS-1048-30A-120AHK	Please Ask.
BCS-1024-10A-65AHK	BCS103	BCS-1048-30A-160AHK	Please Ask.
BCS-1024-20A-26AHK	BCS102	BCS-1048-30A-200AHK	Please Ask.
BCS-1024-20A-40AHK	BCS102	BCS-1110-5A-12AHK	BCS103
BCS-1024-20A-65AHK	BCS103	BCS-1110-5A-18AHK	BCS103
BCS-1024-20A-100AHK	BCS103	BCS-1110-5A-26AHK	Please Ask.
BCS-1024-20A-120AHK	BCS103	BCS-1110-10A-18AHK	BCS103
BCS-1024-30A-26AHK	BCS102	BCS-1110-10A-26AHK	Please Ask.
BCS-1024-30A-40AHK	BCS102	BCS-1110-10A-40AHK	Please Ask.
BCS-1024-30A-65AHK	BCS103	BCS-1110-10A-65AHK	Please Ask.
BCS-1024-30A-100AHK	BCS103	BCS-1110-20A-26AHK	Please Ask.
BCS-1024-30A-120AHK	BCS103	BCS-1110-20A-40AHK	Please Ask.
BCS-1024-30A-160AHK	Please Ask.	BCS-1110-20A-65AHK	Please Ask.
BCS-1024-30A-200AHK	Please Ask.	BCS-1110-20A-100AHK	Please Ask.
BCS-1048-5A-12AHK	BCS102	BCS-1110-20A-120AHK	Please Ask.
BCS-1048-5A-18AHK	BCS102	BCS-1110-30A-26AHK	Please Ask.
BCS-1048-5A-26AHK	BCS103	BCS-1110-30A-40AHK	Please Ask.
BCS-1048-10A-18AHK	BCS102	BCS-1110-30A-65AHK	Please Ask.
BCS-1048-10A-26AHK	BCS103	BCS-1110-30A-100AHK	Please Ask.
BCS-1048-10A-40AHK	Please Ask.	BCS-1110-30A-120AHK	Please Ask.
BCS-1048-10A-65AHK	Please Ask.	BCS-1110-30A-160AHK	Please Ask.
BCS-1048-20A-26AHK	BCS103	BCS-1110-30A-200AHK	Please Ask.
BCS-1048-20A-40AHK	Please Ask.		
BCS-1048-20A-65AHK	Please Ask.		
BCS-1048-20A-100AHK	Please Ask.		

Not: Enclosers can change as customer specifications. This table is for standard device.

REDRESSOR PRODUCT CODING



info@proens.com.tr