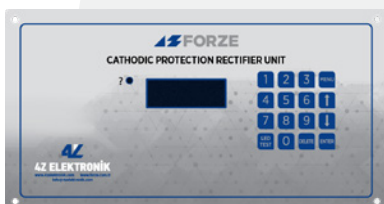




CATHODIC PROTECTION

BTH-50V20A Automatic Cathodic Protection Rectifier

High Efficiency CP Rectifier
with Built-in GPS Interrupter
and MODBUS Scada Connection



BTH-50V20A is a DSP controlled, fully programmable, high efficiency cathodic protection rectifier designed to keep up with the severe conditions faced in harsh working environment, equipped with all the necessary protective components and functions to protect itself under extreme conditions such as overcurrent and overheat or surges coming from any cable connection.

BTH-50V20A has a high efficiency insulating step down transformer with an efficiency of greater than %90 and is designed to withstand an overload condition of %125 continuously.

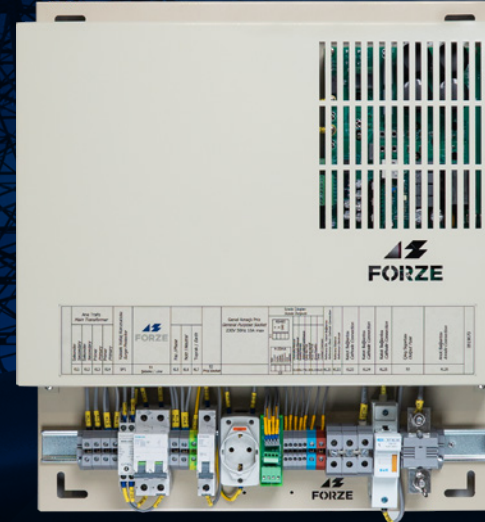
BTH-50V20A Power Module consists of a Low output ripple High efficiency step down DC to DC converter operating at 50 KHz. High switching frequency allows fast output control and line voltage compensation. Utilisation of a DC to DC converter provides an overall efficiency of greater than %85.

The System is able to diagnose and report critical conditions such as Anode, Cathode or Reference electrode cable breaks and also logs the error codes with time stamp for future analyses (-420 model).

It's unique feature of being able to **synchronize multiple rectifiers through GPS satellites** (optional) makes it possible to conduct pipeline diagnostic works without using expensive external interrupters.



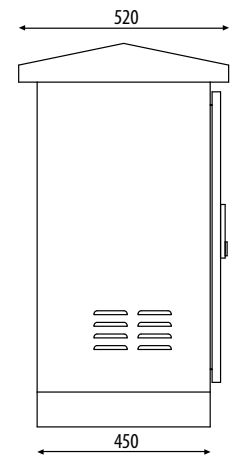
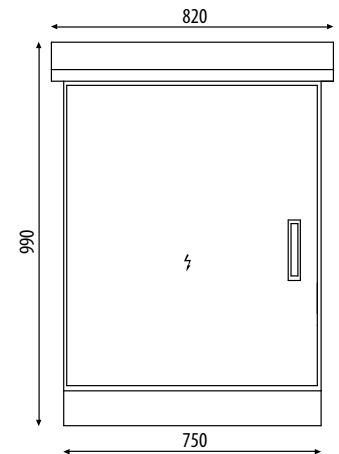
Reliable power topology,
precise output control



Technical Specifications

Input Voltage	230V 50/60 Hz ($\pm 20\%$)
Output Voltage	0.25 – 50V DC
Output Current	0 – 20A DC
Output Fuse	32A Semiconductor Fuse
Short Circuit Protection	Electronic
Thermal Protection	90°C $\pm$ 5°C (Heat Sink Temperature)
Efficiency	>85%
Operating Temperature Range	-30, +60°C
Output Voltage Meter	0-81.92V DC ($\pm 1\%$ +0.25V)
Output Current Meter	0-25.5A DC ($\pm 1\%$ +0.1A)
Pipe to Soil Voltmeter	$\pm 10V$ DC ($\pm 1\%$ +20mV)
IP Protection	IP54
Dimensions	820 x 990 x 520 mm
Power Control Method	High Frequency DC-DC Converter with MOSFET switch
High Voltage Protection	Protection over all inputs and outputs
Operating Modes	• Automatic, Adjustable Voltage Limit • Automatic, Adjustable Current limit • Manual, Constant Current, Interrupted • Manual, Constant Current, Continuous • Manual, Constant Voltage, Interrupted • Manual, Constant Voltage, Continuous
Interrupted Mode of Operation	
On Time Adjustment Range	0.1 – 99.9s (0.1 sec resolution)
Off Time Adjustment Range	0.1 – 99.9s (0.1 sec resolution)
Reference Electrode	1 true differential isolated input
Input Voltage Range	$\pm 10V$ DC ($\pm 1\%$ +20mV)
Filtering	50-60Hz Notch Filter allows unaffected DC measurements with superimposed AC voltages up to 18V
SCADA Output 1	RS485-MODBUS RTU(YYY=MB)
SCADA Output 2	3 Channels 4-20mA Self Powered • Anode - Cathode Current • Anode - Cathode Voltage • Reference Electrode Voltage
Contact Outputs	4 Pcs Dry Contact Outputs • Automatic / Manual Operation • Interrupted / Continuous Operation • Faulty / Healthy • Power On / Off
Statistical Datalog	Modbus Readable Last 30 Error Records
Warranty	2 years (components and workmanship)
Parts and Service Warranty	10 Years

All measurement devices are integrated with user interface in system.
All measurements can be seen on LCD display.



* Please note that all products, product specifications and data presented in this datasheet or web site are believed to be free of errors and subject to change without prior notification for continued improvement. It is the users responsibility to ensure the suitability of the product for a specific application.