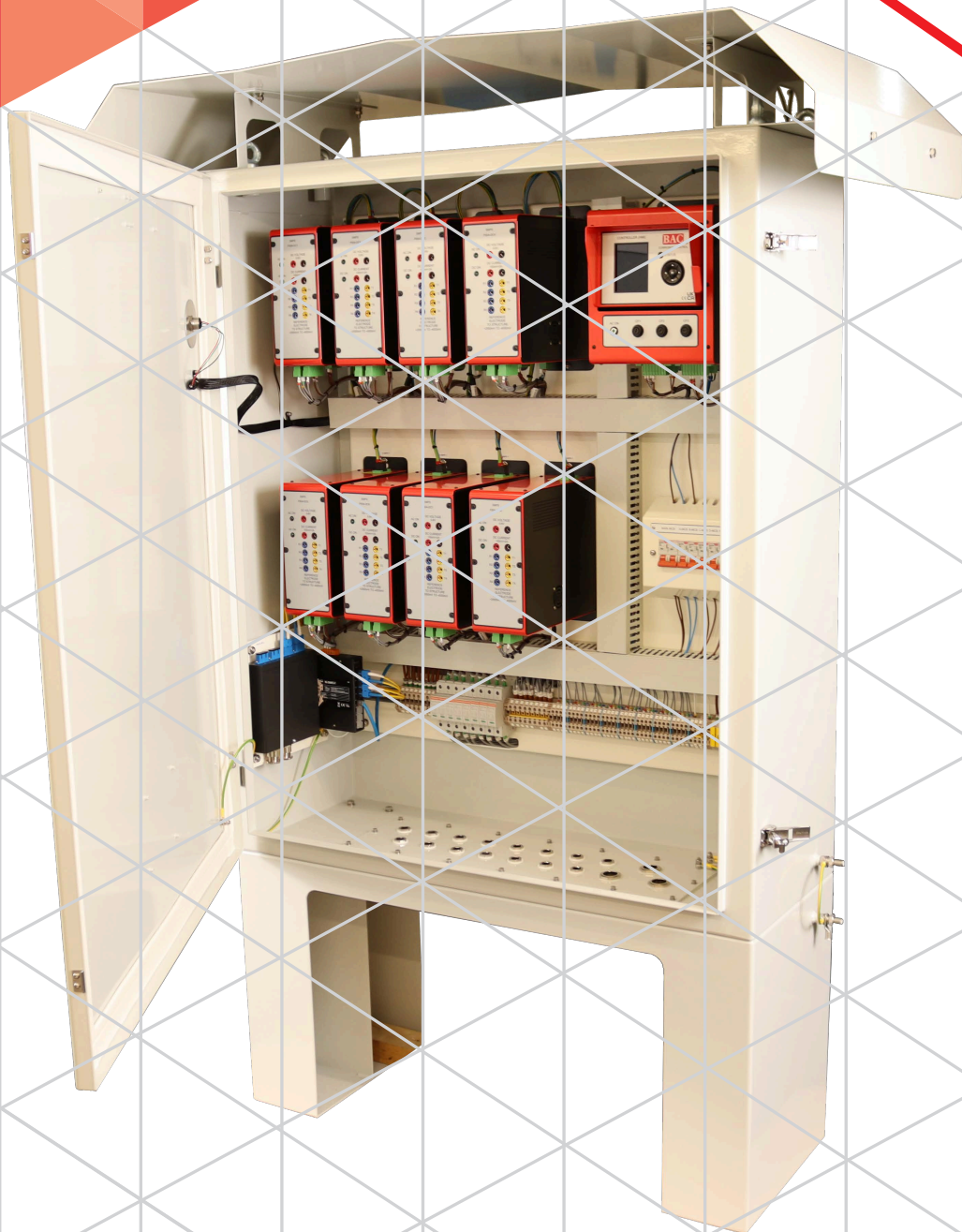


**ENGINEERING
&
PRODUCTS**

BAC[®]

CORROSION CONTROL

**SWITCH MODE
POWER
SUPPLIES**



INFINITY
POWER



CORROSION CONTROL

SWITCH MODE POWER SUPPLIES

BAC Corrosion Control Ltd has developed a range of Switch Mode Power Supply Units (SMPSU) which meet the ever more demanding requirements for impressed current cathodic protection systems in various applications worldwide.

SMPS technology addresses the need for extremely efficient, accurate and low ripple control of both current and voltage at low levels and allows a reliable, compact and lightweight approach to converting mains alternating currents (AC) into a highly controllable and suitable direct current (DC).

The system moves away from traditional transformer rectifiers by using high frequency pulse width modulated switching to control the output which reduces component size and weight. The control system uses our standard HMI controller from which all parameters of the unit can be easily set and controlled.

Time synchronization from a PC time server or BAC HMI with GPS chip, it is now possible to take readings of instantaneous off potentials for entire structures supplied by multiple Cathodic Protection power supplies. This allows for greater accuracy when evaluating the levels of protection being provided.

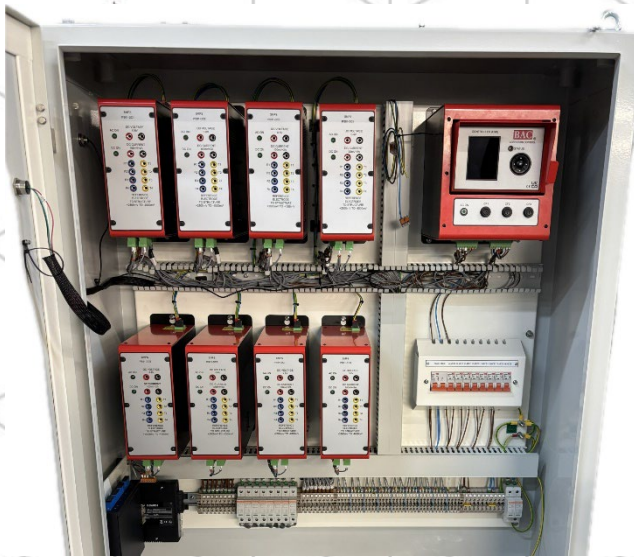


Each SMPS unit is rated at 150 Watts output and can be conjured to a maximum of 24V or 10A DC output





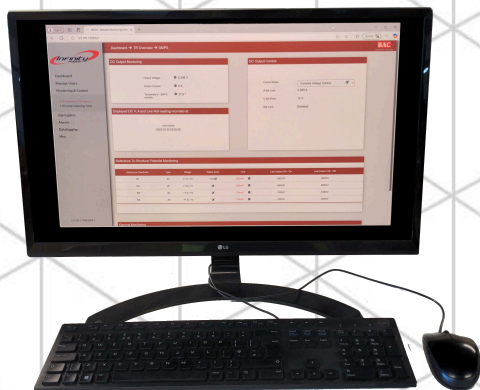
CORROSION CONTROL



Multiple SMPS units can be configured in a wide variety of cabinet designs to suit site conditions and layouts



Local control from our HMI controller , allowing configuration and control of up to 12 SMPS units.



Flexibility to control the units and view data both locally through a server / PC configuration or through a web based platform when operating remotely.

Description:

Switch Mode Power Supply (SMPS) for use in Impressed Cathodic Protection System (ICCP).

Operation and Communications

The SMPS can be controlled with BAC HMI or from any RS485 master.

AC Supply

Wide ranging AC supply 100-264V single phase 50/60 Hz.

Control

DC Output factory set with limits: 150W 24V 10A DC. Option for 12V 12A.

The SMPS has the following inbuilt control modes:

- Constant drive (no feedback loops)
- Constant voltage with current limit and optional reference limit.
- Constant current with voltage limit and optional reference limit.
- Auto-potential control from up to 8 reference to structure inputs with voltage and current limits. All control routines are managed by the SMPS no external controller required.

Connections

All terminals are industrial pluggable 5.08 type.

Local Monitoring

4mm test socket for:

- DC voltage
 - DC current (100mV scaled to suit max output current)
 - Up to 8 reference to structure potential
- LED indicators for AC supply and DC condition

Alarms / Functions

Include but are not limited to:

Alarm thresholds:
 DC output V
 DC output A
 Ref mV
 SMPS Temperature
 Temperature

Alarm status:
 DC output V
 DC output A
 Ref mV
 SMPS

Alarms available via RS485 MODBUS RTU interface or individual alarm can be hard coded to digital inputs and outputs.

SMPS Communications

RS485 MODBUS RTU.

Address set by 8-way DIP switch.



CORROSION CONTROL



SWITCH MODE POWER SUPPLIES

Model:	BAC Infinity Power SMPS
Part Number:	SMPS-150W-mkl
Input Voltage:	100-264V AC single phase 50/60Hz
Output Rating:	Set within limits: 150W, 24V & 10A DC Option for factory configured 12V 12A
Output Control:	Constant voltage 1-24V (in 10mV steps) Constant current 0-10A (0-1A in 1mV steps 1-10A in 10mA step) Auto-potential control (up to 8 refs) +2500mV to -4000mV (in 1mV steps)
Output accuracy:	0.5% of rated output
Communications:	RS485 MODBUS RTU. Address set by 8-way DIP switch.
Efficiency:	>90%
Standards:	Front end Meanwell 400W brick power supply: EN62368-1, 60335-1, 61558-1/-2-16 and 60601-1 BAC back-end DC controller tested to EN6100-6-2
Features:	Programable 12V DC GPIO: <ul style="list-style-type: none">- 2x Outputs- 4x Inputs Built in DC switch (SSR) for time synchronised DC switching. 4mm test socket for DC V, A and up to 8 Reference inputs. 2x LED indicators.
Ingress protection:	IP2x (SMPS body only)
Enclosure:	Built in IP rated cabinets up to IP67 1.5mm aluminium power coated 100mm W, 281mm H, 260mm D Storage Temperature: -40 to +85degC
Operating and storage temp :	Operating Temperature: -20 to +70degC
Options	We can also offer switch modes in hazardous area rated enclosures if required and we offer Certification type IECEx, ATEX & UKEX



Please contact for further details

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