

Auto CP Interface Panel - Constant Potential

Global's Auto CP Interface Panel incorporates a fully featured DC/DC converter that maintains a preset constant voltage potential based on a permanently mounted reference half cell (CuSO_4) signal. The Auto CP Interface Panel automatically adjusts the CP output to evolving CP circuit characteristics, as monitored by the reference half cell, providing a constant potential between Anode (+) and the structure to be protected. The Auto CP Interface Panel is available in 500, 300 & 200 Watt versions with 12 or 24 VDC inputs and 0-12, 0-24 outputs (consult factory for custom outputs).



AUTOCP - 500 WATT - 24 - 12 WITH MODEL 8550 TEG

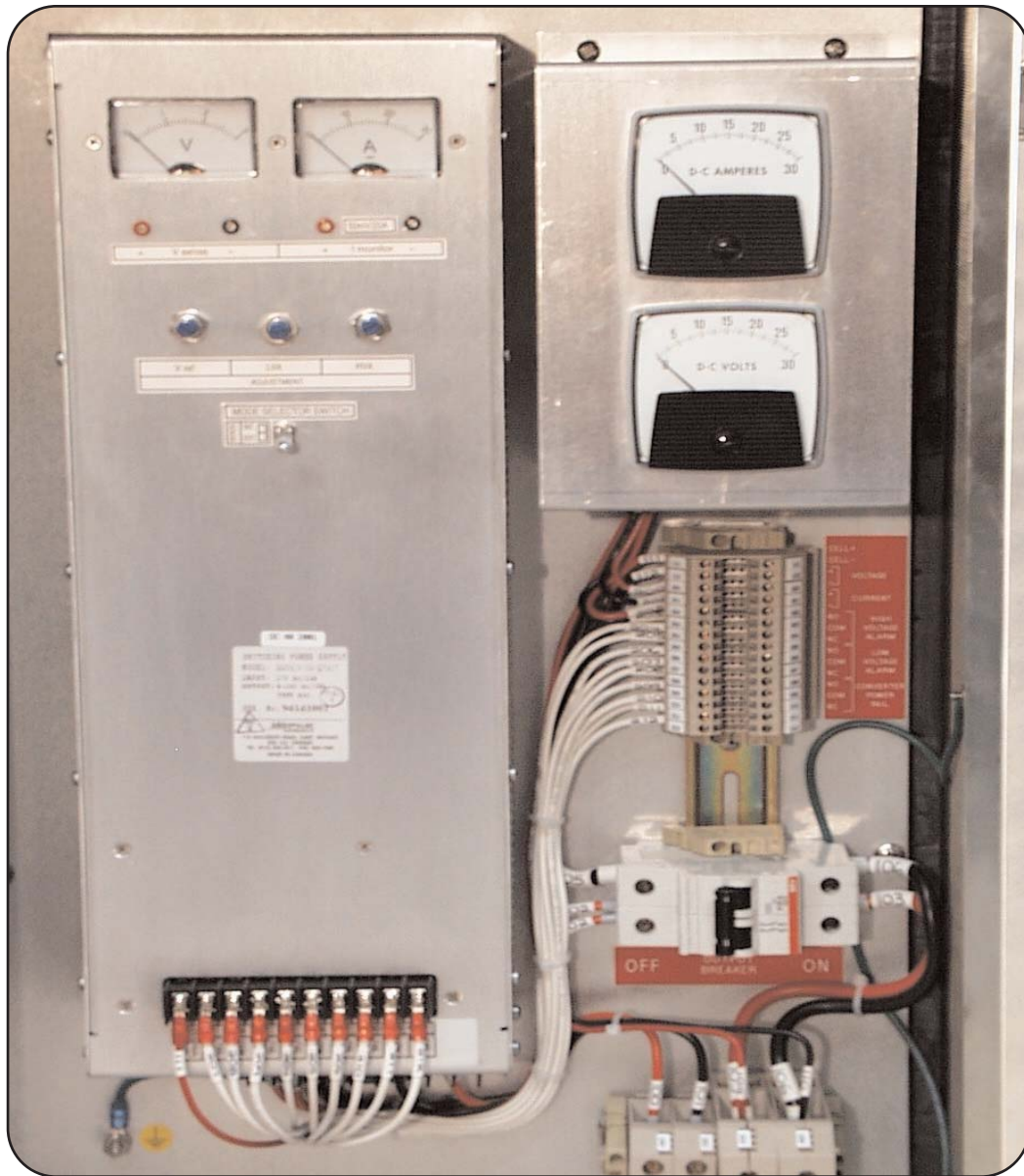
Features

- Constant potential operating mode (auto adjusting DC/DC converter)
- Constant voltage operating mode (manually adjusted power output)
- Stainless steel enclosure for harsh environmental conditions
- Standard input / output high voltage transient protection
- High impedance monitoring circuit to eliminate "polarizing" effect
- Accessible test points and adjustment potentiometer
- Pipe to soil potential analog meter
- Terminals available for monitoring of half cell voltage, DC/DC converter voltage / current output & alarm conditions
- Optional current interrupter for IR free potential testing (Instant Off)
- Form – C relay contacts for DC/DC converter LVA, HVA and fail alarm
- Optional visual beacon for pipeline CP operation monitoring



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AUTOCP - 500 WATT - 24 VDC INPUT - 0-24 VDC OUTPUT



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CP circuit resistances change with the changes in humidity (water content) and the age of the pipe or valve being protected. Reliable measurement of actual impressed pipe to soil voltage potentials are easily obtained with the use of high quality, permanent copper/copper sulfate reference cells, which act as the missing hydrogen side of the theoretical electrolysis cell created by the anode – cathode current passing through the local soil. The ability to monitor the pipe to soil potential and automatically adjust the applied DC voltage to maintain a constant, preset potential will ensure the pipe to be protected, is driven to a negative potential with respect to the surrounding soil. The consistent negative potential over the surface area of pipe or structure overcomes the local galvanic interaction with the moisture laden soil. The Auto CP Interface Panel can save both maintenance/calibration time and equipment by always maintaining the preset constant potential through the evolving CP circuit.

The Auto CP Interface Panel includes a custom DC to DC converter in a Cathodic Protection, 304 S.S., weather resistant enclosure with mounting bracket and hardware for easy installation on to the TEG mounting bench stand. The Auto CP Interface Panel connects directly to the TEG voltage limiter, which is standard with all Global thermoelectric generators. In addition to providing and calibrating a high quality CuSO_4 half cell, Global can also supply cycling power interrupters (see *NACE standard RP0#169) and visual beacons, as optional peripherals, for a completely autonomous system.

***NACE**

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AUTO CP INTERFACE PANEL GENERAL SPECIFICATIONS				
Models:	Power (W)	Input (V)	Output (V)	Maximum Current (A)
AUTOCP-500-24-12	500 Watts	24-30 VDC	0 - 12 VDC	41.7 Amps
AUTOCP-500-24-24	500 Watts	24-30 VDC	0 - 24 VDC	20.8 Amps
AUTOCP-500-24-40	500 Watts	24-30 VDC	0 - 40 VDC	12.5 Amps
AUTOCP-500-24-60	500 Watts	24-30 VDC	0 - 60 VDC	8.3 Amps
AUTOCP-300-24-12	300 Watts	24-30 VDC	0 - 12 VDC	25.0 Amps
AUTOCP-300-24-24	300 Watts	24-30 VDC	0 - 24 VDC	12.5 Amps
AUTOCP-200-24-12	200 Watts	24-30 VDC	0 - 12 VDC	16.7 Amps
AUTOCP-200-24-24	200 Watts	24-30 VDC	0 - 24 VDC	8.3 Amps
AUTOCP-300-12-12	200 Watts	12-18 VDC	0 - 12 VDC	16.7 Amps
AUTOCP-300-12-24	200 Watts	12-18 VDC	0 - 24 VDC	8.3 Amps

Input Protection	Reverse polarity protection by crossbar diode and fusible link. MOV's installed for high voltage transient protection. No inrush protection required.
Output Protection	Rectangular current limiting. Thermal shutdown with automatic recovery in case of insufficient cooling. High voltage protection by second regulator loop. MOV's installed for high voltage transient protection. No inrush protection required.
Dielectric	1,000 VDC input to output (input & output floating)
Output Control	<i>External:</i> Output is adjustable by external control signal of the CuSO ₄ 1/4 cell <i>Internal:</i> Output is adjustable by internal Potentiometer in manual (voltage) mode.
Line Regulation	0.5%
Output Ripple Voltage	Better than 50mV or 300mVpp (20MHz BW)
Temperature Drift	0.03% per degree celsius over operating temperature range
Operating Temperature	-40°C to +50°C for full specifications (derating above +50°C to +70°C by 2.5% per degree rise)
Efficiency	Minimum 80% at full load and nominal input
Alarms/Indicators	LVA / HVA, Output fail alarm via Form C relay contacts (Optional visual beacon) Monitoring test points: V out, I out and mode of operation
Environmental	316 Stainless Steel NEMA type 3R enclosure designed for harsh outdoor use
Input/Output Connections	Screw type terminal Block



ISO 9001:2000 Registered

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