



Hyperion Air Cooled Thyristor Plating Rectifier 500 - 50000 Amp Technical Specifications

GENERAL		
Phase	Single-Phase	Three-Phase
Technology	Forced Air Cooled Transformer Based Full Bridge AC/DC Rectifier	
Control	6 or 12 Pulse Thyristor Controlled	
INPUT		
AC Voltage	220/230/240 Vac (or 110/120/127 Vac)	380/400/415 Vac (or 208/480/600 Vac)
Voltage Tolerance	±20%	
Frequency	50 Hz / 60 Hz ±10%	
Power Factor	≥ 0.8 Inductive	
THDi	≤5% (6 Pulse), ≤2.5% (12 Pulse)	
Input Protection	MCB, Overload Protection, Over Voltage, Phase Sequence Protection	
OUTPUT		
DC Voltage	6 - 900 Vdc Custom Outputs Available	
Output Accuracy	±1%	
Current Adjustment	0 - 100% Digitally Adjustable	
Voltage Adjustment	0 - 100% Digitally Adjustable	
Operation Time	Digitally Adjustable (1 sec accuracy)	
Voltage Ripple	<3 at Full Load (lower ripple is available on request)	
Control Mode	Constant Current / Constant Voltage Selectable	
Working Mode	100% Load 24 hours Continuous Working	
Operation Mode	Local, Remote or Both	
Process Programming	Available from Digital Panel (up to 100 programs)	
Polarity Reversing	Available as an Option	
Overload Operation	100% - 125% load: 10 min, 125% - 150% load: 1 min, > 150% load: 3 sec	
Output Protection	Over Current / Over Temp / Short Circuit / AC High-Low / DC High-Low	
Efficiency	>95% at Full Load	
CONTROL PANEL		
Display	4x20 LCD and 7" Touchscreen HMI	
Displayed Parameters	Polarity Change, Dosage, Operation Timer, Alarms Adjust, Password	
Displayed Units	AC/DC Voltage, Frequency, Input/Output Current, Battery Voltage/Current Operation Time (S:M:H), Start/Stop, PT100 External Temp Input	
Event Log	256 Events Recorded	
COMMUNICATION		
Standard	Dry Contact Card (up to 10 adjustable relays), RS485 MODBUS	
Optional	SNMP, CANBUS, Profibus, IEC 61850, RS232, USB	
Parallel Operation	Available for Power Increase (up to 8 units)	
SAFETY and STANDARDS		
Over Voltage	IEEE 587 4500 A, 40kA Surge Arrestor	
Interference Reduction	Class A	
Standards	IEC 62040-1-2-3, EN 50091-1 (Security), EN 50091-2 (EMC), ISO 9001, CE	
ENVIRONMENT		
Heat and Humidity	-10 C° / + 60 C°, 0 - 90% (non-condensing)	
Noise Level	Less than 60 dB	
Protection Level	IP21 (higher protection levels are available on request)	
Cooling	Forced Air Cooling with Axial Fans	
MTBF	250 000 hrs	

Highlights

- High Current Applications
- Remote Panel
- Thyristor Controlled
- 6 or 12 Pulse Options
- Transformer Based Technology
- Forced Air Cooling
- Quiet Operation
- Simple Program Menu
- Up to 100 Program Record
- Parallel Operation
- Automatic Start-Up After Power Cut
- Low/High Voltage Error Warning
- Standard RS485 Modbus
- Remote Start/Stop (Optional)
- Polarity Reversal (Optional)
- Adjustable Voltage/Current
- Over Temperature Protection
- 2 Years Warranty

General Features

Hyperion plating rectifiers can be used in anodizing, plating, galvanizing process which provides strength to metal having a wide range of usage area. Hyperion model is manufactured as fully automatic controlled and can easily be integrated into the automation infrastructure existing in the plant.

Air cooling provides less footprint and weight for the rectifier. Automatic micron control system provides complete process control including bath temperature control, Ah counter and automatic dosing. IP65 protection level touchscreen panel is long-lasting and reliable. Touchscreen HMI remote panel can be extended to provide monitoring and control of the rectifier in a separate room.