

19" Power supply system

The Industrial bulk feed (IBF) unit is designed for systems with 24-220 VDC output, from 2-16 kW output power. The Power Core is built around the Flatpack2 rectifiers, and designed for applications such as switchgear, telecom, emergency lighting and alarm systems.

Its compact design and simple installation makes it a powerful 19" power supply package.

The IBF unit can be used as a stand-alone system or as an integrated unit into our IBB systems together with our Flat Pack 2 Rectifiers



IBF AC/DC

24VDC, 48 VDC, 60 VDC, 110 VDC, 125 VDC & 220 VDC

DOC. NO: CIO20806.400.DS3, rev4

MODULAR ARCHITECTURE

RECTIFIER MODULE

The most efficient power conversion module in the industry!

Since the launch the Flatpack 2 family has expanded into a wide selection of power ratings and voltages.

The modular architecture, industry-leading efficiency, compact size, innovative design and comprehensive monitoring and control features provide significant benefits over the current industry standard.



FP2 Rectifier Module

APPLICATIONS

POWER UTILITIES

- Low & High voltage switchgear
- Transformer & substations
- Power generation & distribution
- Control & protection
- Scada system
- Communication equipment

RAILWAY & METRO INFRASTRUCTURE

- Control & protection
- Signaling
- Safety Systems

TELECOM-MOBILE/WIRELESS

- LTE/4G/WiMAX
- Distributed antenna system
- Broadband
- Radio base stations/cell sites

KEY FEATURES

- COMPACT DESIGN
- SIMPLE INSTALLATION
- 85-300 VAC INPUT
- HOUSE UP TO 8 RECTIFIERS
- 2-16 KW OUTPUT
- BULK FEED OUTPUT
- MAXIMUM 300 A DC OUTPUT
- GRAPHICAL 3.2" TFT
- ETHERNET FOR REMOTE
- SNMP PROTOCOL WITH TRAPS
- 6 DIGITAL RELAY OUTPUTS
- 6 DIGITAL INPUTS
- GLOBAL COMPLIANCE
- PATENTED HE TECHNOLOGY

MODEL	24V/7,2 KW
INPUT DATA	
Voltage range AC	85-300 V
OUTPUT DATA	
Adjustable range DC	21,7-36V depending on Module
Output power DC	≤ 7,2 kW
Output current DC@24 V	300A
Efficiency	≤ 95,4%
Output protection	fuse

Specifications are subject to change without notice
See preferred specific module data sheet for details

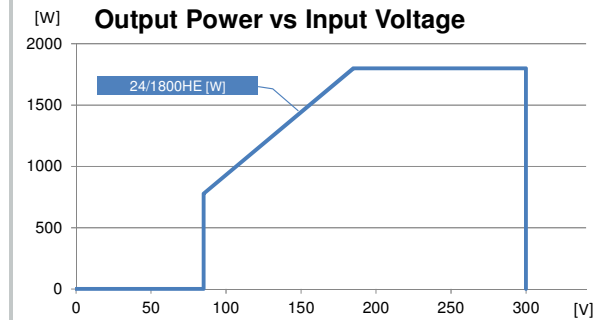
MODEL	48V/14 KW
INPUT DATA	
Voltage range AC	85-300 V
OUTPUT DATA	
Adjustable range DC	43,2-57,6 V
Output power DC	≤14 kW
Output current DC@48V	291A
Efficiency	≤ 96,5%
Output protection	fuse

Specifications are subject to change without notice
See preferred specific module data sheet for details

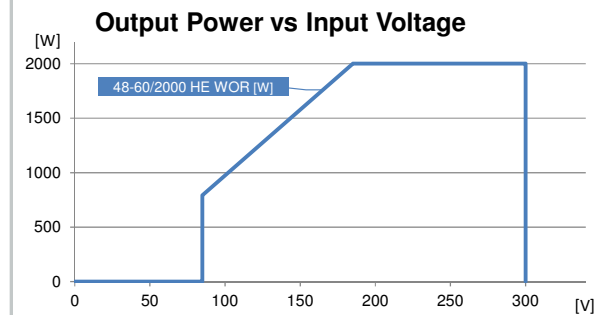
MODEL	60V/14 KW
INPUT DATA	
Voltage range AC	85-300 V
OUTPUT DATA	
Adjustable range DC	39,9-72 V
Output power DC	≤16 kW
Output current DC@60 V	266A
Efficiency	≤ 96,1%
Output protection	fuse

Specifications are subject to change without notice
See preferred specific module data sheet for details

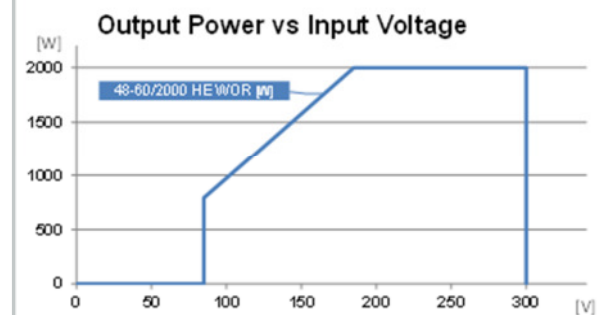
FLATPACK2 24 V RECTIFIERS



FLATPACK2 48 V RECTIFIERS

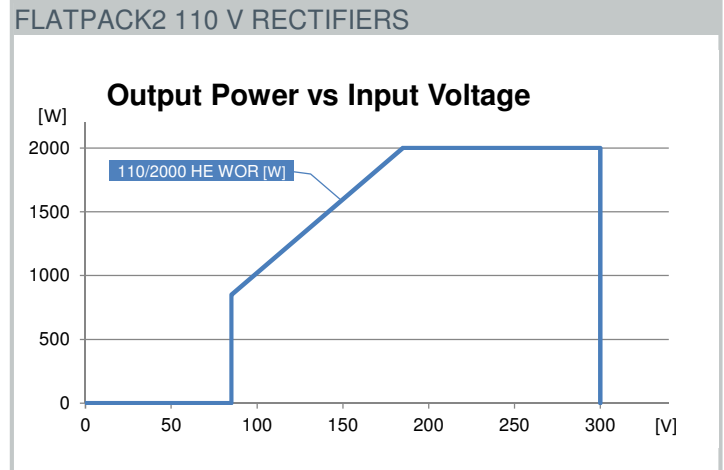


FLATPACK2 60 V RECTIFIERS



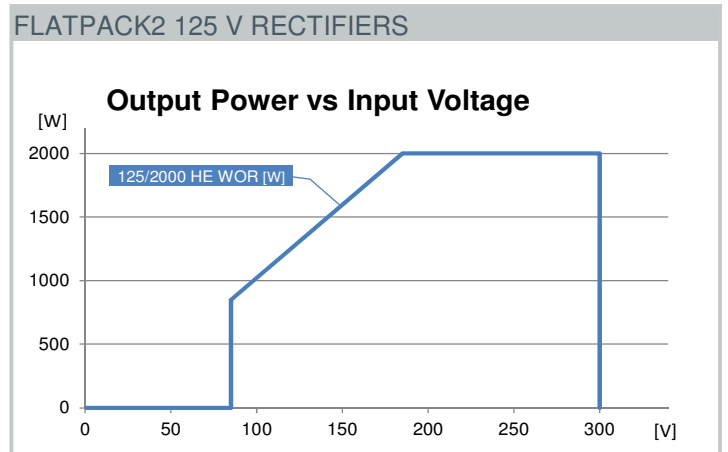
MODEL	110V/16 KW
INPUT DATA	
Voltage range AC	85-300 V
OUTPUT DATA	
Adjustable range DC	89,2-171,6 V
Output power DC	≤ 16 kW
Output current DC@110 V	145 A
Efficiency	≤ 94,4%
Output protection	Oring diode

Specifications are subject to change without notice
See preferred specific module data sheet for details



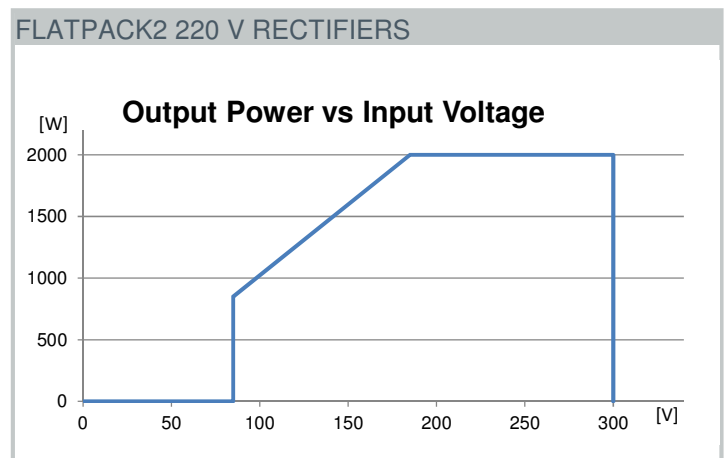
MODEL	125V/16 KW
INPUT DATA	
Voltage range AC	85-300 V
OUTPUT DATA	
Adjustable range DC	89,2-171,6 V
Output power DC	≤ 16 kW
Output current DC@125 V	144 A
Efficiency	≤ 94,4%
Output protection	Oring diode

Specifications are subject to change without notice
See preferred specific module data sheet for details



MODEL	220V/16 KW
INPUT DATA	
Voltage range AC	85-300 V
OUTPUT DATA	
Adjustable range DC	178,5-297 V
Output power DC	16 kW
Output current DC@220 V	72,7A
Efficiency	≤ 94%
Output protection	Diode

Specifications are subject to change without notice
See preferred specific module data sheet for details



TECHNICAL SPECIFICATIONS

Model	IBF-AC/DC-1PR-Std.Basic	IBF-AC/DC-2PR-Std.Basic	IBF-AC/DC-1PR-Ind.Basic	IBF-AC/DC-2PR-Ind.Basic
Part number	CIO20405.xxx	CIO20806.xxx	CIO20405.xxx	CIO20806.xxx
INPUT DATA				
Voltage (range)	85 - 300 _{AC}			
Surge Protection	OVP Class 2			
AC Input protection TN network	3*25 A MCB (single pol)	3*40 A MCB (single pol)	3*25 A MCB (single pol)	3*40 A MCB (single pol)
AC Input protection IT network	1*32 A MCB (three pol)	1*63 A MCB (three pol)	1*32 A MCB (three pol)	1*63 A MCB (three pol)
Input protection in rectifiers	Individual fuse in rectifier modules			
Connection	Individual screw terminal 6 mm ² PE screw terminal, max 6 mm ² and M5 cable lug directly to chassis			
OUTPUT DATA				
Voltage (default)	24-125 V _{DC}		24-220 V _{DC}	
Power (maximum) @ nominal input	8000 W	16000 W	8000 W	16000 W
Current (maximum) @ nominal input	See previous page or applicable Flatpack2 datasheet			
Unprotected bulk output	•			
Connection bulk output	M8 bolt			
Built in battery shunt	•			
Output Protection in rectifiers	Blocking OR-ing FET or fuse, Short circuit proof & High temperature protection			
CONTROL AND MONITORING				
Monitoring Unit	Smartpack 2 Control System with Standard Basic		Smartpack 2 Control System with Industrial Basic	
Local Operation	Display and keys, WEB interface via standard browser			
Remote Operation	WebPower (WEB Interface, SNMP protocol and email)			
Alarm Relays (Connection: clamp ≤ 1.5 mm ²)	6 x Potential free contacts (NO, NC, C) [Max 75 VDC/1,0 A]			
Alarm Relays (Connection: clamp ≤ 1.5 mm ²)	-		3 x Potential free contacts (NO,NC,C) [Max 300 VDC/0,1 A]	
Digital Inputs	6x NO/NC			
MODBUS	TCP/IP		TCP/IP & RTU	
Communication ports	RJ45		RJ45, RS232, RS485	
Battery symmetry measurements	-		•	
Current measurements	Rectifier, Battery & Load Current			
Alarms	Low & high output voltage alarms (Minor and major levels) Earth fault alarm, Temperature alarm, AC Input outage alarm, load breaker & battery breaker alarm and much more			
OTHER SPECIFICATIONS				
Isolation	3.0 kV _{AC} - input to output 1.5 kV _{AC} - input to earth 0.5 kV _{DC} - output to earth (1.5 kV _{DC} for 110 & 220 V rectifiers)			
Operating temperature	-40 to +45°C (-40 to +113°F), humidity 5 - 95% RH non-condensing Output power de-rates at high temperature, see datasheet for applicable rectifier			
Storage temperature	-40 to +85°C (-40 to +185°F), humidity 0 - 99% RH non-condensing			
Dimensions[WxDxH]	482*432*222mm (5U)	482*432*267mm (6U)	482*432*222mm (5U)	482*432*267mm (6U)
Weight (without rectifiers)	17 kg	16 kg	17 kg	16 kg
DESIGN STANDARDS				
Electrical safety	EN 60950-1			
EMC	ETSI EN 300 386 V.1.6.1 EN 61000-6-1 / -2 / -3 / -4 / -5 (Depending on module)			
Environment	ETSI EN 300 019, ETSI EN 300 132 - 2			