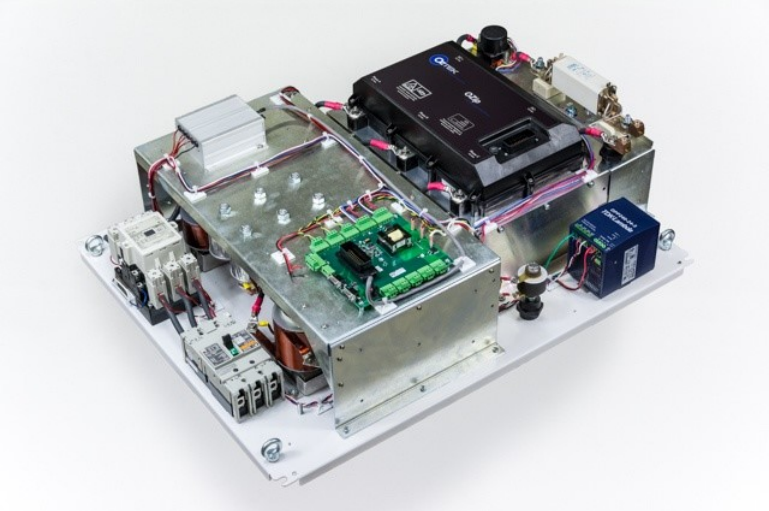
OZip-AFE10APA
100kW Active Front-End

Features

- 100kW, 480VAC 3-phase Active Front-End
- Low current distortion—IEEE 519 compliant
- Unity power factor
- Regulated DC link voltage with source/sink load capability
- Compact, open-frame construction
- Optimized grid interface filter
- Includes switchgear and cooling fans
- -40 to +45°C operation
- Easy setup via serial port with included Oztek Power Studio™ configuration tool



Innovative Thinking for Power Control

Description

OZip-AFE provides a complete Active Front End (AFE) solution for OEMs. Built around Oztek's OZip-R1230H Intelligent Power Module, the compact, open frame system includes power circuitry, controls, grid interface filter, switchgear, cooling fans, bias supply, and control software, ready for integration into your electrical enclosure. OZip-AFE gets you to market quickly, minimizing development cost and risk, while also being more cost-effective in production volumes.

OZip-AFE leverages Oztek's 15+ years of experience providing digital power solutions to demanding OEMs. All necessary functions are included, and it's easy to use. OZip-AFE integrates cleanly into your product, providing custom solution flexibility and cost-optimization, without a long development cycle and its associated costs and risks.

OZip-AFE transfers power between an AC power input and an intermediate DC link, while maintaining low distortion, sinusoidal AC line currents. It operates as a rectifier when transferring power from the AC line to the DC link, and as an inverter in the opposite direction. With inherent, bidirectional power transfer, OZip-AFE is compatible with systems that both produce and consume power.

OZip-AFE provides numerous application advantages. The ability to absorb as well as deliver power eliminates the need for large braking resistor banks in regenerative systems, saving size and cost, reducing waste heat, and improving efficiency. The inherently low current harmonic distortion meets IEEE 519 specifications. Power factor defaults to unity, but reactive current levels can also be programmed to offset non-unity power factor from other loads. The DC link voltage is boosted and regulated, greatly reducing end-equipment sensitivity to line voltage variations.

OZip-AFE is controllable through a CAN or Modbus RS-485 serial interface, and easily configured using the supplied Oztek Power Studio™ configuration tool. General purpose I/O are provided to facilitate system integration, connecting through pluggable terminal blocks.

OZip-AFE is part of the OZip™ Intelligent Power Module family of OEM inverter, motor drive, and DC/DC converter solutions. Visit oztekcorp.com for more info.

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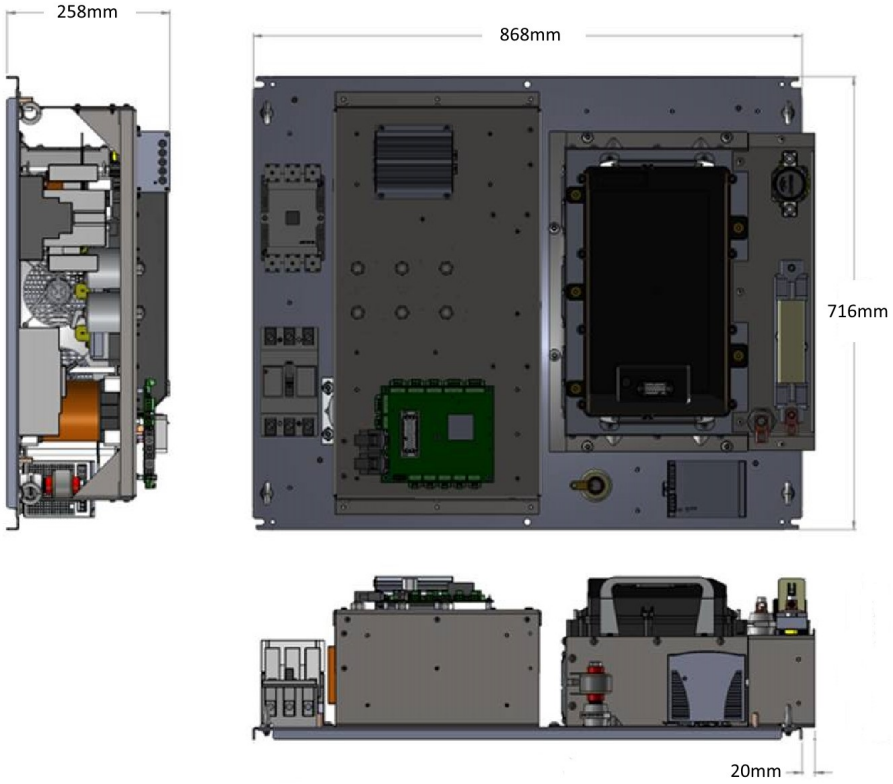
Absolute Maximum Ratings	
Operating Temperature	-40°C to 55°C
Storage Temperature	-55°C to 65°C
DC Link Voltage [1]	1000V
Phase Current	300 A_{RMS}
Humidity non-condensing	0-95% RH
Mechanical	
Outline Dimensions	868mm x 715mm x 257mm
Power Terminals	Compression, AWG 1/0-4
Control Connections	Pluggable terminal block, AWG 18-26

Recommended Operating Conditions (cont.)	
Ambient Temperature Rated Capacity Reduced Capacity	 -40°C to 45°C -40°C to 45°C
Maximum continuous phase current	120 A_{RMS}
Maximum transient load current (10 seconds max)	240 A_{RMS}
DC Link Voltage	850V max
DC Output Continuous Current Capacity 45°C Ambient, V_{DC}=800V 55°C Ambient, V_{DC}=800V	 +/- 125A_{DC} +/- 80A_{DC}

Notes 1. Over-voltage protection disables switching when DC link voltage exceeds 900V.



How To Specify

Product Family	Model Series	Cooling Method	Line Voltage	Custom Options
OZip-AFE Active Front End	A OZip-R Platform	A Forced Air Cooled	480 480 V_{RMS}	(blank) Standard (other) Consult Factory
OZip-AFE	**10**	**A**	**P**	**A**	**C**	**480**	**B**	**_ _**

Power Rating	Packaging	Interface Standard	Contactor Configuration
10 100 kW	C Enclosed Cabinet P Open-Frame Plate	C CAN Protocol M Modbus RS-485	A AC Contactor Only B Both AC & DC Contactors D DC Contactor Only N No Contactors

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