EverExceed®
power your applications

INDUSTRIAL BATTERY CHARGER / DC DISTRIBUTION

uXcel premium series

uXcel Premium Series

The EverExceed uXcel premium range industrial battery charger is the flagship charger of EverExceed Industrial Power solutions. It integrates proven design topology with the latest advanced digital control technology to control the 12-pulse thyristor bridge rectifier and provide the most reliable and trouble-free performances in any electrical and industrial environments.

Benefits

- **Flexibly customized** power solutions to perfectly meet the specific requirements of customer's industrial applications.
- **Ruggedized solutions** to withstand harsh environments, extreme temperatures, humidity, dust and vibrations etc. Up to IP55 protection.
- **Complete power protection solutions,** including switchgear, DC distribution, monitoring suite.

Key Features

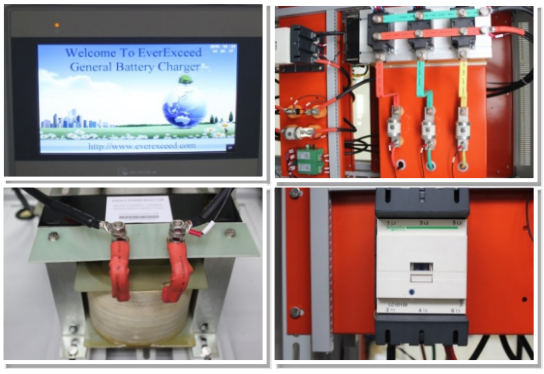
- **More efficient and reliable power supply network -**12 pulse phase thyristor rectifier system, Input THDi as low as 10%-15%, input power factor more than 0.9, to provide customers with higher power quality.
- **High Reliability and High MTBF** Precise adjustable temperature compensation, robust and unique design allows the charger to continuously operate at 40°C ambient temperature on full load. Natural ventilation and cooling are available on most of the cases.
- **Versatile constant voltage and constant** current charging modes.
- **Enhanced Robustness -** Mechanical design to withstand vertical and horizontal acceleration stress up to 0.5g as standard.
- **Leading Technology- 12 pulse phase controlled Thyristor technology-** The embedded micro-computer controller processes signals 10 times faster than standard analog methods.
- **Flexible maintenance and Reduced MTTR-** The design make it easy for front-access to all vital modules of the charger.
- **Long design life up to 20+ years-** system design life up to 20+ years in continuous operation under the condition of appropriate maintenance.
- **Isolation transformer.**
- Multilingual digital graphic display with embedded event log.
- Full compatibility with lead-acid and nickel- cadmium batteries, sealed or vented.
- **Large LCD display-** User friendly operation with large LCD display, optional touch screen with the choices of 8 languages ensure easy maintenance and operation.
- **Smart communication and Remote Monitoring** through isolated RS232, RS485, Ethernet. Full data logging.

Applications

The EverExceed uXcel Premium Rectifier Charger range suits all DC applications requiring a large battery back-up:

- Power Transmission and Distribution
- Continuous process industries
- Oil and Gas and Petrochemical industries
- Transportation (rail, metro, tramway)

The EverExceed uXcel premium range charger is based on interchangeable sub-assemblies to allow full customization on and full compliance with the technical specifications required by the clients. It is designed to meet the versatile and stringent electrical and mechanical requirements in industrial environments.Combined with industrial standard battery banks,EverExceed uXcel range rectifier chargers can continuously protect your critical DC power industrial equipments and operations from the damage of power failures and interruptions, with its high reliability and superior performance.



The picture is for reference only. Please refer to the actual order requirements or customized requirements.



The uXcel series premium consists mainly of a thyristor-controlled power unit and a microprocessor-controlled monitoring and control unit.

The following main components are included

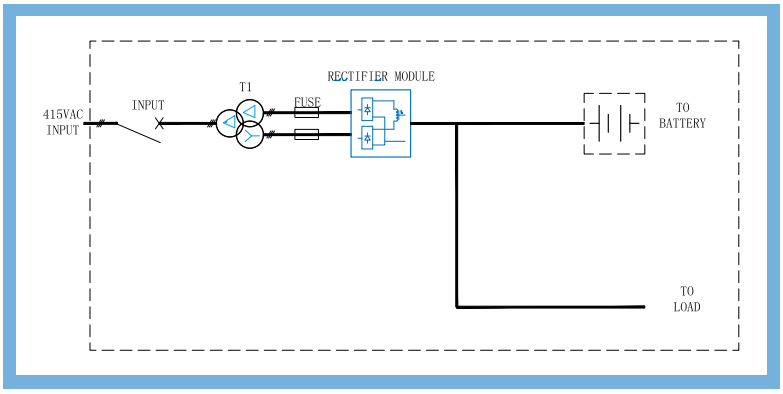
- Mains input MCCB with contactor
- Mains transformer with separate windings
- Fully controlled 12 pulse three phase bridge with semi conductor protection fuse
- Smoothing chokes and capacitor bank to reduce ripple
- Control unit with digital set point setting
- Display and operation unit with Touch Screen
- Display on the front door
- Output fuse protect battery and load

Display and operation

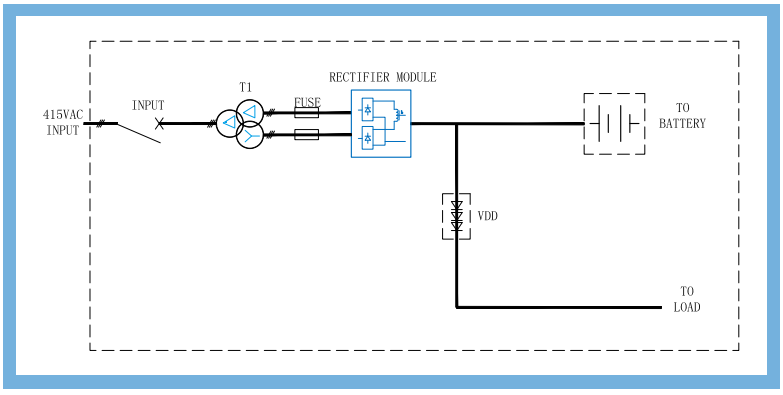
- Display of charging voltage, current, charging mode, charging time and charging capacity;5 charging steps are set, flexible and changeable, or the uniform charging floating charging interface can be customized;
- Multiple protection settings for charger protection
- Multiple language choices
- System date and time settings
- Brightness adjustment and password setting
- History alarm query and download
- Storage and import function of charging program

Mode of Operation

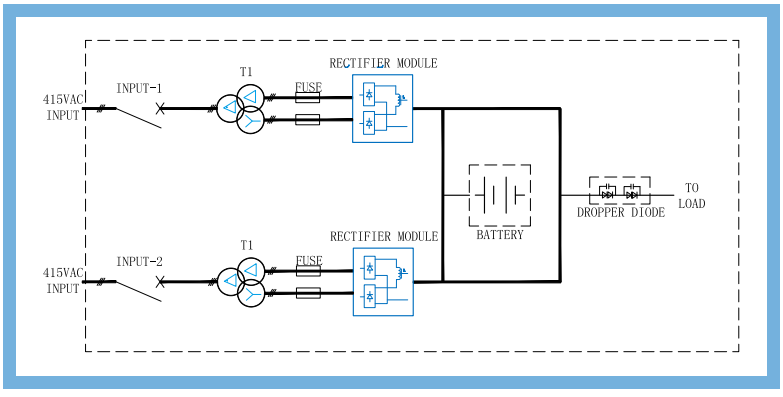
Battery Charger-
Single Load-Single Battery



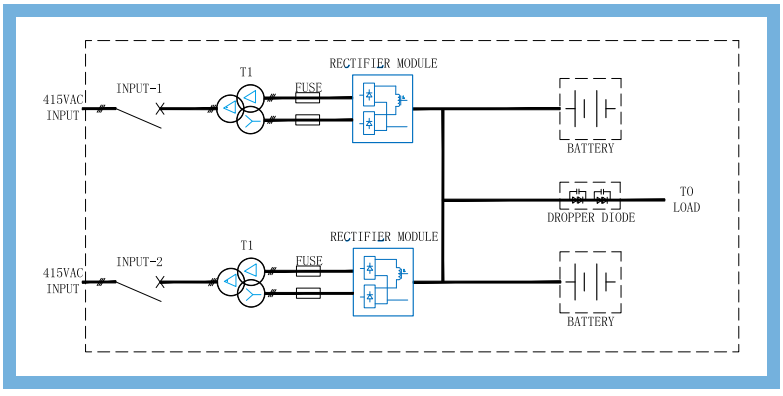
Battery Charger
with Diode Dropper-Single Load-
Single Battery



Redundant Float Cum Boost Charger
with Diode Dropper-Single Load-
Single Battery



Redundant Float Cum Boost Charger
with Diode Dropper-Single Load-
Dual Battery Bank



Technical Parameters

INPUT	
AC voltage	
Three phase	3×400V (380,415)
Input voltage tolerance	±10%
Input Wiring	3 Phase 3 Wirse or 3 Phase 4 Wires
Input frequecny	50Hz(60Hz)
Input frequecny tolerance	±5%
Input Protection	Thermic Magnetic Overcurrent protection via MCCB
Input power factor	>0.9
Input THDi	10%-15%

OUTPUT	
Nominal DC voltage	24/48/110/125/220/240/400
Output voltage range	0-1.5×nominal voltage (adjustable)
Nominal DC current	10-1500A
Output current range	0-1.1×nominal current(adjustable)
Voltage stability	±1% in float mode, input within tolerance
Voltage ripple	1% RMS(with battery connected)
Current Limitation	Battery current limitation can be adjusted
Filtering	L-C Filter
Output Protection	Short Circuit, NH Fuse and Overvoltage protection

OPTIONS	
Rectifier	Other input voltage
	Blocking diode
	Surge and Lightning protections
	Voltage ripple filter
	Battery circuit protection box
Battery	Battery reversed polarity detection
	Battery low-voltage disconnection contactor (LVD)
	Battery room temperature sensor
	Battery cabinet / rack
	Battery monitoring system
	Parallel configurations
System	Dropping diodes/DC-DC converter
	Earth fault monitoring
	Internal cabinet lighting
	Anti-condensation heater
	Output breaker
	Front-panel analog meters/digtal meters
	DC distribution
	Temparature compensation
	AC high and AC low alarm/protection
	DC high and DC low alarm/protection
	AC fault alarm
	LED test function
	Other frame colour
Mechanical	Up to IP55 external
	Plate thickness
	Galvanized sheet
	Front access maintenance
	Top cable entry
	Special keylock
	Specified cabinet identification (tag, nameplate)
	Modbus TCP/IP
Communication	modbus RTU(RS485)
	DNP3.0 protocol
	Volt-free contacts
	Transducers 4-20mA
	Remote monitoring

BATTERY	
Type	Lead acid or nickel cadmium, vented or recombination and Lithium battery

COMMUNICATION	
Communication	RS232, Modbus RTU

GENERAL DATA	
Operating temperature	0 to 50 °C
Storage temperature	-20 to +70 °C
Relative humidity	< 95 % non condensing
Operating altitude	1000 m max without derating
Cooling	Fan cooling or Natural cooling according to rating
Efficiency	90% according to rating
External protection	IP20
Noise (at 1m in front of the unit)	55 – 65 dB according to rating
Cabinet color	RAL 7035
Dimensions	Varying according to ratings & options

STANDARDS	
IEC60146-1-1:2009	Semiconductor converters - Specification of basic requirements
IEC62040- 1:2008+AMD1:2013	Uninterruptible power systems (UPS) - Part 1-2: General and safety requirements for UPS in restricted access locations
IEC62040-2:2006	Uninterruptible power systems (UPS) – Part 2: Electromagnetic compatibility (EMC) requirements
IEC61439-1:2011	Low voltage switchgear and controlgear assemblies - Part 1: General rules
IEC60529:1989+ AMD1:1999	Degrees of protection provided by enclosures (IP Code)
IEC60076-11:2004	Power transformers – Part 11: Dry type transformers

EUROPEAN DIRECTIVES
Low voltage directive: 2006/95/EC and 2014/35/EU EMC directive: 2004/108/EC and 2014/30/EU CE Mark

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