

# EX BATTERY CHARGER

## Explosion proof Battery Charger

Space efficient, natural cooled, high-tech modular battery charger solution with optimized electrical performance and no maintenance by design. Completely designed for reliable operation in extreme harsh environment and ATEX/IECEx certified for hazardous area zone 1.



### KEY FEATURES

- Highest Power density / Smallest footprint
- Galvanic Isolation between input and output
- Best in class THD
- Modular units for flexible N+1 or dual/triple redundant system configurations
- No maintenance by design (no replacement of parts during its lifetime)
- Suitable for installation in offshore/desert and other harsh environments
- Modular design and internal redundancy provides maximum availability
- Smart local and remote control and monitoring by Ex-d touchscreen (access with door closed)
- Natural cooling design optimizes reliability, not reliant on forced cooling
- Maximum safety with Ex-d and Ex-e enclosures

### PERFORMANCE CHARACTERISTICS

- Wide ambient temperature range, -40 to +55°C without derating
- Short circuit proof
- Automatic current limiting (adjustable)
- Battery bank condition monitoring with DC bus bar load management facilities
- Temperature charge voltage compensation
- Voltage drop compensation by battery voltage measurement devices on battery terminals

### PHYSICAL CHARACTERISTICS

- Battery charger modules and DC distribution pre-assembled onto free standing support frame
- Incorporates DC distribution facilities with solid busbar design
- Different Ex enclosure configurations and support frame designs possible
- Degree of protection: IP66 minimum
- Available in front access aluminium alloy Ex-d enclosures pre-installed on floor mounted frames, stainless steel 316 Ex-d enclosures are optional
- Stainless steel 316 Ex-e enclosures pre-installed for easy bottom or top cable entry
- Orga standard or customer specific paint options



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### STANDARDS/CERTIFICATION

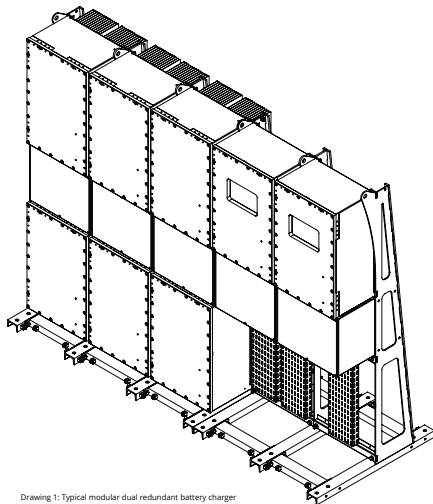
- Cenelec EN 60079-0, EN 60079-1 and EN 60079-7
- KEMA 02ATEX2103 X; ATEX [expr] II 2G Ex de IIB T4-T6
- IEC 60079-0, IEC 60079-1 and IEC 60079-7
- IECEx KEM 09.0089X; Ex de IIB T4-T6
- ABNT NBR IEC 60079-0, ABNT NBR IEC 60079-1 and ABNT NBR IEC 60079-7 (optional)
- Inmetro NCC 16.0160 X (optional)

### ELECTRICAL CHARACTERISTIC

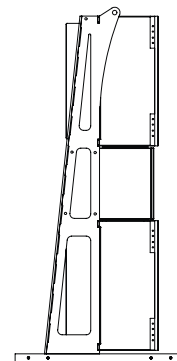
- Wide nominal input voltage range: 380 Vac – 440 Vac 3ph, 50-60 Hz
- Nominal system voltage: 24 Vdc (other voltages on request)
- Power rating: as per customer requirements (modular)
- Suitable to charge all major battery technologies (Nicad, VRLA, LA)
- Output protected from reverse current

### SYSTEM DESIGN, CONTROL AND MONITORING

- Ex certified touchscreen interface, with MIMIC panel, provides comprehensive measurement, indication and fault monitoring information on battery charger and battery on front of Ex-d enclosure
- The system controller can manage multiple battery charger modules, with dual redundant controller option available
- System controller records and stores key system status changes
- Serial communication facilities using Modbus and/or Webserver over Ethernet, via UTP (copper)
- Optional; Serial communication facilities using Modbus, via RS-485 (copper)
- Custom system setups and integrated AC and DC distribution available depending on client requirements
- Optional battery system pre-installed in separate Ex-e battery enclosure



Drawing 1: Typical modular dual redundant battery charger



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