

AC/DC Rectifier-Battery Charger, Double Branch

ALM/d**60 A, In 400 Vac, Out 48 Vdc, 160 Ah**

ALM/D is a series of double branch rectifier-battery charger (also known as BTU, Battery Tripping Unit), single-phase and three-phase input, and 24, 48 and 110 Vdc output.

The "double branch" technology, particularly suitable for currents > 40-60 A, involves the use of an AC/DC converter for powering the loads, and a second rectifier for recharging the storage batteries.

Unlike the single branch typology (ALM/S series), with the double branch configuration the output voltage (in presence of network) is always stabilized $\pm 1.5\%$. The correct sizing of the load branch is necessary, since without the aid of buffer batteries (as in the single branch version) the maximum permissible overload is equal to 1.1 In the nominal current of the module itself.

Applications

Auxiliary circuits of MV/LV substations
Emergency lighting
Industrial users
Telecommunications systems

General features

Front panel LCD Display
Compact cabinet
Input isolation transformer (for three-phase input)

| | |
|------------------------------------|---|
| Code | ALMD34860160 |
| Rated Input voltage | 400 Vac three-phase 50/60 Hz |
| Rated Output Voltage | 48 Vdc $\pm 1,5\%$ in presence of network, In absence of network the output voltage follows the full charge and discharge of batteries 1,13x110Vdc with batteries full charged 0,9x110Vdc with batteries full discharged |
| Output voltage stability | $\pm 1,5\%$ (in presence of network) |
| Ripple | <1 % |
| Current of load branch | 60 A |
| Current of batteries branch | 20 A |
| Power | 2880 W |
| Backup time | 120 min at full load |

Display

LCD Display on front panel with indication for: funzionamento da rete

- mains operation
- battery operation
- load branch output voltage and current
- battery branch voltage and current
- panel internal temperature
- signals for general fault, power failure and low battery voltage

Protection

3-pole switch disconnecter with lock / door operation, properly sized
Storage batteries are protected by fuses

Batteries

Hermetic lead acid, expected life of 10 years, at an average temperature of 25°C, as prescribed by the manufacturer - batteries installed inside.
no. 8 x 12V 80 Ah – total capacity 160 Ah

Cabinet**Enclosure**

Sheet steel, painted with epoxy powders, color RAL 7035 (others on request).
Degree of protection IP31 external, IP00 internal (IP20 with door open on AC parts)

| | |
|------------------------------|--|
| Input of cables | From the top |
| Dimensions / Weight | (W*H*D) 600*2200*600 mm / 345 Kg |
| Ventilation | Natural |
| Operating temperature | 0 /+ 40°C |
| Humidity | < 95% not condensing |
| Noise | < 55 dB |
| Altitude | < 1000 m |
| Reference standards | IEC62040-1, IEC62040-2 IEC62040-4, IEC62040-5-3 |



Available optional

Code KITALL

Kit Alarms; terminal board with voltage-free contacts for remote alarm of general fault, power failure and low voltage of batteries

Code KITSGB

Kit for disconnection of batteries at minimum voltage; in the absence of network beyond the required autonomy, the kit will disconnect the batteries, to prevent their complete discharge, which would irreversibly compromise their use

Code KITISL

Insulation control kit (earth pole) in case of short circuit or other malfunction.

Code KITPAR

Parallel kit; provision for connection of a system with equal characteristics for parallel operation.

Code KITEPO**

EPO kit (Emergency Power Off), with release button (bound to purchase also KITSGB)

Code KITMCB

Kit for MCBa on front panel (on request)

Functional diagram

