

## AC/DC Rectifier-Battery Charger, Single Branch

**ALM/s****60 A, In 230 Vac, Out 48 Vdc, 160 Ah**

ALM/S is a series of single-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 "single branch" technology involves the use of a single AC/DC converter, which both powers the loads and recharge the storage batteries; optimal solution for currents up to 20-30 A, and especially when powering loads with large inrush currents; thanks to the storage batteries in buffer of the converter module, it is possible to compensate for overcurrents of up to 15-20 In.

However, since the converter module must provide both the power supply to the users and the recharging of the batteries, correct sizing of the current of the module itself is necessary based on the loads with steady state operation and not taking into account the inrush; the correct choice allows the module to recharge the batteries without the risk of damage.

**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)

<b>Code</b>	<b>ALMS4860160</b>
<b>Rated Input voltage</b>	230 Vac single-phase 50/60 Hz
<b>Rated Output Voltage</b>	48 Vdc, in presence and 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
<b>Output voltage stability</b>	± 1,5 % (in presence of network)
<b>Ripple</b>	<1 %
<b>Current of load / batteries branch</b>	60 A
<b>Power</b>	2880 W
<b>Backup time</b>	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)

<b>Input of cables</b>	From the top
<b>Dimensions / Weight</b>	(W*H*D) 600*1410*400 mm / 245 Kg
<b>Ventilation</b>	Natural
<b>Operating temperature</b>	0 /+ 40°C
<b>Humidity</b>	< 95% not condensing
<b>Noise</b>	< 55 dB
<b>Altitude</b>	< 1000 m
<b>Reference standards</b>	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

