



La MARCHÉ[®]

ISO 9001:2000 CERTIFIED

A75D/A75DE SERIES SCR BATTERY CHARGER / ELIMINATOR SINGLE PHASE



SCR BATTERY CHARGER WITH DIGITAL DISPLAY

The La Marche Model A75D/A75DE Series Battery Chargers are engineered for the demanding requirements of Switchgear, Process Control and Oil Exploration to name a few.

The A75D/A75DE battery charger is a solid state unit utilizing SCR technology and has $\pm 0.5\%$ regulation from no load to full load over the specified input voltage, frequency and ambient temperature range.

The A75D/A75DE series is offered with DC output voltages of 24, 48 or 130 VDC with DC output currents from 6 to 100 Amps. These chargers can be powered with 120, 208, 240 or 480 VAC. The current limit is factory set at 105% and is adjustable from 50 to 110%.

The battery chargers are designed for dependable operation in harsh environments at temperatures up to 122° F (50° C). The unit is convection cooled and the components are designed to achieve MTBF in excess of 100,000 hours.

The enclosures are very versatile. Some units can be wall, floor or rack mounted and others can be wall or floor mounted. See the Case Specifications chart on the other side of this Data Sheet for further details.

Standard Features

- A75D - Unfiltered Battery Charger
- A75DE - Filtered Battery Charger/Power Supply/Battery Eliminator (DC Output filtering 30mv rms or less)
- SCR Technology
- Automatic AC Voltage Compensation
- AC & DC Surge Protection (MOV)
- AC Input Breaker
- DC Output Breaker
- Internal Temperature Compensation
- Float/Equalize Mode Switch
- Separate Float and Equalize Adjustments
- Adjustable current limit 50 to 110% (factory set at 105%)
- $\pm 0.5\%$ DC Voltage Regulation
- Load Sharing
- LCD Display for DC Voltage, DC Current & Alarms
- LED Indications
 - Float/Equalize
 - AC "ON"
 - AC Failure
 - Summary Alarm
 - Low DC Current
 - Low DC Voltage
 - Battery End of Discharge
 - High DC Voltage
 - High DC Voltage Shutdown
 - Positive & Negative Ground Detection
- Remote Annunciation 2 Form "C" Contact
 - AC Failure
 - Summary Alarm
- Equalize Timer - adjustable from 1-144 hours with five selectable modes of operation (manual, automatic every 7, 14 or 30 days and equalize after sensing a low DC voltage)
- 2-Year Warranty
- UL1012 Pending

Options

- Discrete Alarm Relays
- High Interrupting Capacity Breakers
- External Temperature Compensation Probe (15ft)
- Communication Protocols DNP3 & Modbus

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Made in USA

ELECTRICAL

AC Input Operating Voltage Range

Voltage range: +10, -12% from nominal
Frequency range: 60Hz ±5%

Single Phase Model Voltages:

120, 208, 240, and 480 VAC.
(Tap selectable 120/208/240 on units up to 25 amps output. All other units must specify single input voltage)

DC Output: 6 to 100 Amps
24, 48 & 130 Volts

DC Output Voltage Range:

| | Volts | | Cells | |
|------|---------|----------|-----------|--------|
| | Float | Equalize | Lead Acid | Ni-Cad |
| 24V | 23-29.5 | 24-31 | 11-13L | 17-20N |
| 48V | 46-57 | 48-61 | 22-26L | 33-39N |
| 130V | 115-140 | 123-145 | 53-62L | 83-93N |

Note: Typical cell ranges are based on the following:
Lead Acid 2.17 vpc Float, 2.33 vpc Equalize
NiCad 1.44 vpc Float, 1.55 vpc Equalize

Output Filtering (A75DE Models):
30mv rms with or without a battery

DC Regulation

± 0.5% of setting from no load to full load over the specified input voltage, frequency and ambient temperature ranges.

Audible Noise

Less than 65dBA at any point 5 feet from any vertical surface of the charger/power supply.

Load Sharing

Load Sharing terminal located inside of unit. When connected, identical La Marche units are forced to share the load.

PROTECTION

Current Walk-In

The output current will gradually increase after the charger is turned on, eliminating surges and overshoot.

Current Limit

Electronic current limiting control circuitry provides for an adjustable value of 50 to 110% of the rated output current. Factory set at 105%.

AC Breaker

A 2-pole breaker opens both legs of the AC Service to 208VAC and 240VAC. Breaker opens phase side of 120VAC service. (10KAIC @ 240VAC / 14KAIC @ 480VAC) Units with 120 VAC single input are equipped with single pole AC Breaker.

DC Breaker

Standard units are equipped with a 2-pole circuit breaker. (5KAIC @ 125VDC)

ENVIRONMENTAL

Operating Temperature: 0 to 50°C (32 to 122°F)
Storage Temperature: -40 to 85°C (-40 to 185°F)
Relative Humidity: 0 to 95% (non-condensing)
Cooling: Convection Cooled

ENCLOSURES

Mounting

Our enclosures are very versatile. Some units can be wall, floor or rack mounted, and others can be wall or floor mounted. See the Case Specifications Chart on page 3 of this data sheet for further details.

Finish

Pretreated with three step iron phosphate wash and deionized rinse. Finished with environmentally safe water based ANSI 61 gray.

Ordering Information

When ordering, please specify:

- La Marche Model Number
- DC Amps
- DC Volts
- Special Frequency, When Required
- AC Voltage Code
- AC Phase Code
- Battery Cell Type Code
- Optional Accessories (Option Code)

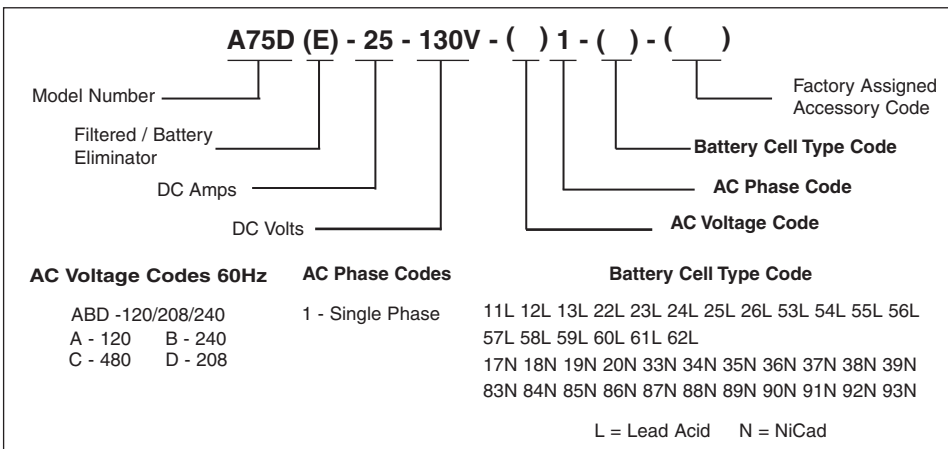
Battery Charger Sizing Guidelines

- Required Battery Backup Time (Hours)
- DC Output Voltage
- Ampere Hour Capacity of Battery
- Allowable Recharge Time From Full Discharge (Hours), Where Applicable
- Continuous & Intermittent DC Loads and Duration (Amps)

Options

- 01C 2-Pole High Interrupting Capacity AC Breaker 65KAIC @ 240VAC / 25KAIC @ 480VAC (Only available for units with current draws above 12 amps.)
- 01D 2-Pole High Interrupting Capacity AC Breaker 100KAIC @ 240VAC / 65KAIC @ 480VAC (Only available for units with current draws above 12 amps.)
- 11W External Temperature Probe Standard length of 15'
- 21P DNP3 Communications / SCADA
- 21Q Modbus Interface Module
- 09C I.D. Tags - White text on black background
- 09V I.D. Tags - Black text on white background
- 09W Heat Shrink Wire Markers with Electrical Schematic
- 46R Discrete Alarm Relays
 - Positive Ground •Low DC Volts
 - Negative Ground •Low DC Amps
 - High DC Volts •Battery End of Discharge
 - Charger Failure •High Voltage Shutdown

Model Number Nomenclature



A75D/A75DE SERIES

SCR BATTERY CHARGER / ELIMINATOR

A75D/A75DE Charger Chart

| | Model Number | DC Amps | AC Input Current Draw Single Phase @ 100% Load (Amps) | | | | | Case Size | Shipping Weight (Approximate) | |
|------------------|-----------------|---------|---|------|------|------|------|-----------|-------------------------------|-----|
| | | | ABD 120/240/208 | A | B | D | C | | lbs | kgs |
| | | | | 120 | 240 | 208 | 480 | | | |
| 24 Volt Systems | A75D(E)-6-24V | 6 | 2.4 / 1.2 / 1.4 | --- | --- | --- | --- | 4B75 | 87 | 40 |
| | A75D(E)-12-24V | 12 | 4.8 / 2.4 / 2.8 | --- | --- | --- | --- | 4B75 | 92 | 42 |
| | A75D(E)-16-24V | 16 | 7 / 3.5 / 4 | --- | --- | --- | --- | 4B75 | 98 | 45 |
| | A75D(E)-20-24V | 20 | 9.6 / 4.8 / 5.6 | --- | --- | --- | --- | 4B75 | 100 | 46 |
| | A75D(E)-25-24V | 25 | 12.3 / 6.1 / 7 | --- | --- | --- | --- | 4B75 | 104 | 48 |
| | A75D(E)-30-24V | 30 | --- | 14 | 7 | 8 | 4 | 475 | 130 | 59 |
| | A75D(E)-35-24V | 35 | --- | 17.1 | 8.5 | 9.8 | 4.3 | 475 | 150 | 69 |
| | A75D(E)-40-24V | 40 | --- | 19.5 | 9.8 | 11.2 | 4.9 | 475 | 160 | 73 |
| | A75D(E)-50-24V | 50 | --- | 24.5 | 12.3 | 14 | 6.1 | 475 | 185 | 84 |
| | A75D(E)-60-24V | 60 | --- | 28 | 14 | 16 | 7 | 475 | 208 | 95 |
| | A75D(E)-75-24V | 75 | --- | 35 | 17.5 | 20 | 8.8 | 975 | 240 | 109 |
| A75D(E)-100-24V | 100 | --- | 49.1 | 24.5 | 28 | 12.2 | 975 | 275 | 125 | |
| 48 Volt Systems | A75D(E)-6-48V | 6 | 4.8 / 2.4 / 2.8 | --- | --- | --- | --- | 4B75 | 90 | 41 |
| | A75D(E)-12-48V | 12 | 9.6 / 4.8 / 5.6 | --- | --- | --- | --- | 4B75 | 99 | 45 |
| | A75D(E)-16-48V | 16 | 14 / 7 / 8 | --- | --- | --- | --- | 475 | 137 | 62 |
| | A75D(E)-20-48V | 20 | 19.5 / 9.8 / 11.2 | --- | --- | --- | 4.9 | 475 | 166 | 76 |
| | A75D(E)-25-48V | 25 | 24.5 / 12.3 / 14 | --- | --- | --- | 6.1 | 475 | 150 | 68 |
| | A75D(E)-30-48V | 30 | --- | 28 | 14 | 16 | 7 | 475 | 170 | 77 |
| | A75D(E)-35-48V | 35 | --- | 32.6 | 16.3 | 18.7 | 8.2 | 475 | 180 | 82 |
| | A75D(E)-40-48V | 40 | --- | 39 | 19.5 | 22.5 | 9.8 | 475 | 195 | 89 |
| | A75D(E)-50-48V | 50 | --- | 48.8 | 24.4 | 28.2 | 12.2 | 475 | 205 | 93 |
| | A75D(E)-60-48V | 60 | --- | 58.6 | 29.3 | 33.9 | 14.8 | 975 | 300 | 137 |
| | A75D(E)-75-48V | 75 | --- | 73.2 | 36.6 | 42.3 | 16.5 | 975 | 350 | 159 |
| A75D(E)-100-48V | 100 | --- | 97.6 | 48.7 | 56.4 | 24.4 | 975 | 448 | 204 | |
| 130 Volt Systems | A75D(E)-6-130V | 6 | 14 / 7 / 8 | --- | --- | --- | 3.5 | 475 | 178 | 81 |
| | A75D(E)-12-130V | 12 | 28 / 14 / 16 | --- | --- | --- | 7 | 475 | 185 | 84 |
| | A75D(E)-16-130V | 16 | 33 / 16.5 / 19 | --- | --- | --- | 9.6 | 475 | 200 | 91 |
| | A75D(E)-20-130V | 20 | 44 / 22 / 25.3 | --- | --- | --- | 11 | 475 | 235 | 107 |
| | A75D(E)-25-130V | 25 | 55 / 27.5 / 31.7 | --- | --- | --- | 13.8 | 475 | 255 | 116 |
| | A75D(E)-30-130V | 30 | --- | 66 | 33 | 38 | 16.5 | 475 | 300 | 137 |
| | A75D(E)-35-130V | 35 | --- | 77 | 38.5 | 44 | 19.2 | 975 | 375 | 171 |
| | A75D(E)-40-130V | 40 | --- | 88 | 44 | 50.6 | 22 | 975 | 422 | 192 |
| | A75D(E)-50-130V | 50 | --- | --- | 55 | 63.3 | 27.5 | 975 | 480 | 218 |
| | A75D(E)-75-130V | 75 | --- | --- | 77 | 88 | 38.4 | 72 | 625 | 284 |

Case Specifications

| Case No | Overall Dimensions | | | | | | Cable Entry | | Standard Mounting | Optional Mounting Kits | |
|---------|--------------------|-------|-------|--------|--------|--------|------------------|-----------------|-------------------|------------------------|-------|
| | Width | | Depth | | Height | | AC Input | DC Output | | Rack | Floor |
| | in | mm | in | mm | in | mm | | | | | |
| 4B75 | 19 | 482.6 | 15.1 | 383.54 | 1222 | 310.39 | Right Top/Bottom | Left Top/Bottom | Wall | 19"/23" | ✓ |
| 475 | 19 | 482.6 | 15.1 | 383.54 | 24 | 609.6 | Right Top/Bottom | Left Top/Bottom | Wall | 19"/23" | ✓ |
| 975 | 23 | 584.2 | 15.1 | 383.54 | 37.9 | 962.66 | Right Top/Bottom | Left Top/Bottom | Floor | 23" | --- |
| 72 | 27 | 685.8 | 23.5 | 596.9 | 44.5 | 1130.3 | Bottom Right | Bottom Left | Floor | --- | --- |

Alternate Technologies For Your Utility Needs



A12B...Controlled Magnetic Amplifier Circuitry battery charger/battery eliminator designed with extremely high MTBF. Meets the demanding requirements for switchgear, process control and communications applications. Available in 12, 24, 48 and 130VDC and 3 to 400 amps output.

TPSD...Microprocessor Controlled **Ferroresonant** design battery charger / battery eliminator is ideal for switchgear and process control. The TPSD comes fully equipped with standard features such as digital display, alarm indications, electronic timer and temperature compensation.



A96/A97...130VDC Switchmode Utility Charger is a compact rectifier system with current limiting, voltage regulation, high efficiency and high power factor. AC input line regulation operates over a range of 185-264 volts, with a frequency range of 45-66Hz. The systems are available as rack, wall, floor or mobile cart mount.

Specifications subject to change without notice

P25-DSA75D-1

ECN 18380

07/09



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