

ULTRAMAXX[®]

Interactive SCR

Industrial Battery Charger



Take Advantage of Opportunity Charging for a Consistent State of Charge

- With the Standard Extended Amp Hour Feature, batteries can be charged up to 50A/100 start rate and a 4.5A/100 finish rate
- Charges batteries to 80% in 3 hours or less
- Uses BID module to monitor temperature during charge for longer battery life
- I-E-I charge profile for accurate and efficient charging
- Automatically compensates for battery operating temperatures
- Data Mate™ compatible
- Archive function allows for easy review of the last 99 cycles
- The two line display shows output volts, amps, and amp hours returned during the charge cycle
- Data link port on door
- UL and cUL listed
- Meets BCI standards



The world's most flexible opportunity charger

You might wonder why you can't just opportunity charge with a conventional charger. For years, battery and charger manufacturers have discouraged opportunity charging and that was because the charger controls weren't in place to monitor and control the charge cycle. Now with more intelligent chargers, it is possible to opportunity charge with minimal effect on battery life.

Prestolite Power's Ultra Maxx charges batteries right in the truck – during breaks and shift changes. The result? Your truck batteries can achieve a consistent state of charge without those unproductive trips to the battery room... and without battery changing.

That's because the Ultra Maxx opportunity charger senses battery voltage and temperature from the BID module to optimize charge parameters. The Ultra Maxx can also charge batteries at conventional and valve regulated rates, maximizing your current battery and charger investment.

All-day power and productivity

The Ultra Maxx may allow you to reduce battery to truck ratios to one-to-one. That means you can eliminate costly battery handling equipment and extra batteries, and further boost your bottom line.

Charging starts automatically whenever a battery is connected, and stops automatically whenever the battery is disconnected or reaches charge complete. The Ultra Maxx charge parameters are automatically set for optimum charging, all you do is drive up, plug in and start charging. The Ultra Maxx is simple to operate and safe for all batteries.

From the performance family

The Ultra Maxx is part of the Prestolite Ultra family of chargers, delivering all the features and benefits you've come to expect from this full, flexible line. Everything from the ability to perform in a wide variety of environments to energy-saving features that help you lower utility bills and reduce peak demand.

Opportunity charging

Opportunity charging is exactly what its name implies: the chance to charge your fleet's batteries at every reasonable opportunity: lunch, break times, shift changes... any time the operator is off the truck five minutes or more.

Designed to fill the void between fast charging and conventional charging, opportunity charging offers you

a quick, convenient and cost-effective alternative. Plus, opportunity charging can fit right into your existing infrastructure and requires little or no modification to the battery itself.

With the opportunity charging capabilities of the Ultra Maxx, you need fewer, if any, spare batteries. AC input currents are lower, and battery changing equipment costs can be reduced or even eliminated. All of which reduces your capital expenditures.

The advantages of opportunity charging with the Ultra Maxx

- 120% rated (20%-100% in 5.25 hours; 20%-80% in 2.5 hours when charging at 25A/100AH)
- Lower charger cost (vs. typical rapid charging)
- Lower battery cost (it uses existing batteries)
 - No ventilation slots
 - No dual DC cable requirements
 - No double intercell connectors
 - Uses single (EURO) connector or SB350
- Lower installation costs
- Multi-voltage/AH
- Temperature compensation

More efficient charging

The concept of opportunity charging is to keep your batteries sufficiently charged for more efficient truck operation throughout the entire workday, by charging the batteries for short periods of time.

Designed for two and some three-shift operations, the Ultra Maxx applies higher charging currents when the battery is deeply discharged. That returns more power to the battery than conventional charging in the same amount of time. The optimum operating range of the battery is 40% to 80% state of charge. And with the Ultra Maxx, your batteries are protected from overcharging or overheating.

Here's how it works:

- You should "finish charge" once every 24 hours to ensure that the acid is cleared from the plates and that the electrolyte is thoroughly mixed. Your battery will perform better and last longer when a finish charge is part of your daily routine.
- Typically, you should equalize the batteries once a week for an extended charge time, normally three hours, at a low charge rate. This extended charging cycle keeps the battery cells operating at maximum potential and helps maintain full capacity for the life of the battery.

Temperature compensation

Temperature remains one of the biggest causes of shortened battery life. And with the elevated output currents of the Ultra Maxx, it's more important than ever to make sure you can carefully monitor battery electrolyte temperature. That's why, with all opportunity charge applications, we require the Prestolite Battery Identification Module (BID). The BID not only monitors battery temperature, it allows the charger to compensate by adjusting the output profile to minimize temperature rise, and suspend the charging process if temperatures reach a critical level.

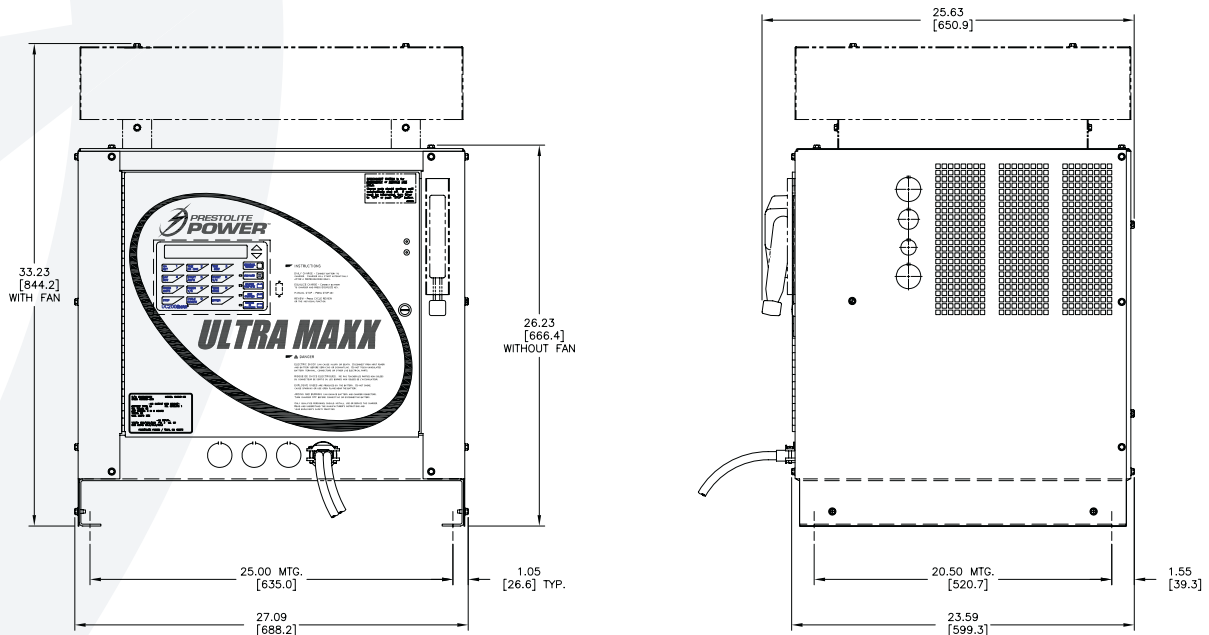
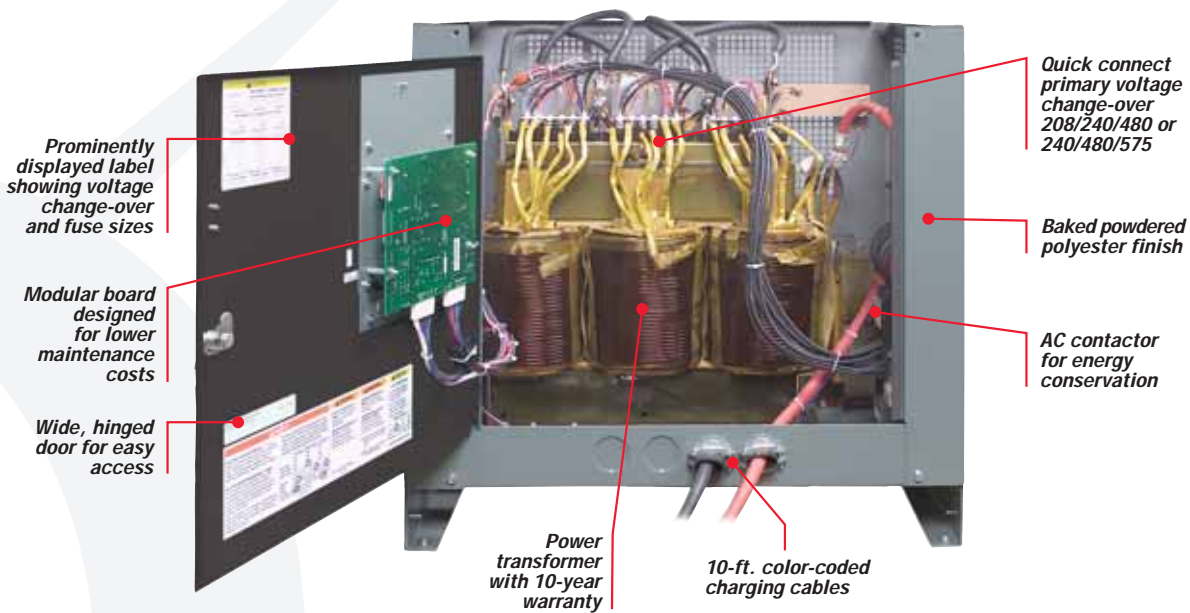
BID or AH (amp hour) Accumulator BID

Only batteries that are equipped with a properly programmed Prestolite BID or AH Accumulator BID module will be charged at the higher charge rates of the Ultra Maxx. When a battery that is not set up for opportunity or fast charging is connected to an Ultra Maxx, the charger will default to a standard charge curve, protecting your batteries that are not intended for opportunity charging. This feature also allows you to charge both flooded and sealed batteries at conventional rates with the Ultra Maxx, since the charger determines battery type from the BID.

The AH Accumulator BID continuously samples both charge and discharge current over 100 times each second, capturing and storing every AH of battery throughput, including fast transient truck controller regeneration currents. This AH data and the battery average temperature can be quickly retrieved from the Ultra Maxx front panel display, allowing the user to gauge the remaining battery life and utilization.



AH Accumulator BID



Ultra Maxx Models

Application		AC Input Amps	AC Input Volts			
Maximum AH Size	Cell Size	DC output amperes	3 PHASE 60 Hz 208/240/480, 575	See configuration chart below	Prestolite Model Number	Approx. Shipping Wgt.
680	6,9,12	171	22/19/10, 8	A,B	680T3-12UM	285
910	6,9,12	228	31.4/27.2/13.6, 11.4	A,B	910T3-12UM	330
680	6,9,12,18	171	31/27/14, 11	A,B	680T3-18UM	310
785	6,9,12,18	196	41/36/18, 15	A,B	785T3-18UM	340
910	6,9,12,18	228	42/36/18, 15	A,B	910T3-18UM	365
1045	6,9,12,18	263	NA/42/21/17	B	1045T3-18UMF	380
1270	6,9,12,18	318	NA/NA/29/24	C	1270T3-18UMF	395
1470	6,9,12,18	368	NA/NA/30/25	C	1470T3-18UMF**	440
1600	6,9,12,18	400	NA/NA/32/26.7	C	1600T3-18UMF**	500
425	6,9,12,18,24	106	27/24/12, 10	A	425T3-24UM	275
680	6,9,12,18,24	171	46/40/20, 17	A,B	680T3-24UM	350
785	6,9,12,18,24	196	48/42/21, 17	A,B	785T3-24UM	400
910	6,9,12,18,24	228	NA/NA/27/22	C	910T3-24UMF	405
1045	6,9,12,18,24	263	NA/NA/31/26	C	1045T3-24UMF	410
1270	6,9,12,18,24	318	NA/NA/34/28	C	1270T3-24UMF	480
555	12,18,24,36,40	139	NA/NA/29/24	C	555T3-40UM	445
785	12,18,24,36,40	196	NA/NA/40/34	C	785T3-40UMF	475
910	12,18,24,36,40	228	NA/NA/43/36	C	910T3-40UMF	510

Models with an "F" suffix come equipped with a fan.

**Arcless Disconnect and dual cables required. Also requires an SBX or Euro Connector.

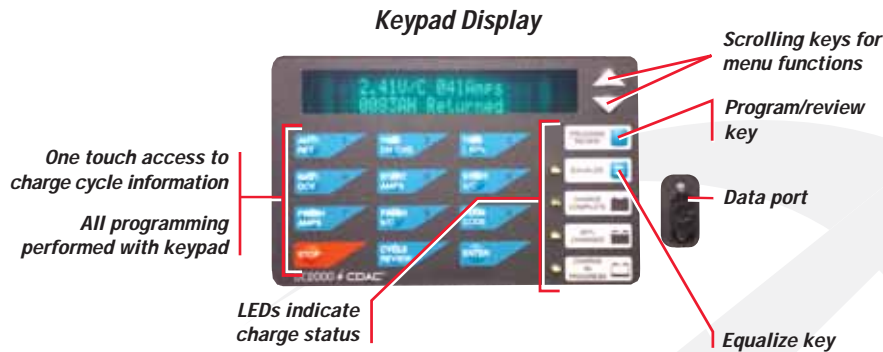
When placing order, must provide battery profile for charger settings. AC Voltage configurations are:

A = 208/240/480

B = 240/480/575

C = 480/575

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Ultra Maxx control features

While on charge, the Ultra Maxx control continuously displays output current, volts per cell, ampere hours returned, and when connected to a BID equipped battery, it also displays battery temperature. This information allows you to monitor your charging operation with a quick look at the charger's control.

Gassing control feature – Because opportunity chargers are often installed throughout your facility, you may want to delay the gassing portion of the charge cycle to a time when there are fewer people working and less activity. This user adjustable feature allows you to delay gassing from 1-8 hours. If during your workday, the battery is never on charge for more than one hour, simply set the delay for one hour. If a connected battery reaches the gassing voltage within one hour, the charger will go into a trickle mode which will continue to charge the battery with minimal gassing. At the end of the delay time, the charger will resume its normal charge routine, taking the battery through the essential gassing portion and finish charge the battery.

Temperature monitoring – The Ultra Maxx continuously monitors the temperature of the battery through the BID and will adjust its output to provide

the maximum charge rate while minimizing temperature rise. The Max Battery Temperature feature allows you to set the maximum allowable temperature for your batteries as determined by your battery supplier, from 80 to 150 degrees Fahrenheit. If the battery temperature reaches this setting, the charger will shutdown and remain in standby until the temperature of the battery cools to a point 5 degrees cooler than the maximum temperature, at which time the charger will resume charging the battery.

Prevent overcharging – Back-up timers protect your batteries from overcharging by shutting the charger off in the event that the battery does not reach 80% charged in 5 hours, or does not reach charge complete within 4 hours of reaching the 80% charged point.

AH shutdown – The charger also monitors the ampere hours returned and if the ampere hours returned exceed the rated ampere hour capacity by 125%, the charger will shutdown, protecting your battery from harmful overcharging. (150% on equalize cycles.)

External access to data report through an RS232 port. Easily download up to 99 cycles of archived data to your laptop with Data Link software. Allows you to evaluate your fleet operation.

Arc-less disconnect option – This option prevents the connector from arcing in the event that an operator disconnects the charger from the battery prior to stopping the charger. Sensing leads in the SBX or Euro connector break a low current signal and de-energize the charger before the high current contacts disconnect.

Fan control – Some models of the Ultra Maxx are equipped with a cooling fan, pulling air in through the bottom of the cabinet and exhausting out the top. To minimize operating costs and extend fan life, the fan turns off as soon as the output drops below 30% of its rated capacity.

Determine if opportunity charging will work for you

The most important factors in determining the feasibility of opportunity charging are:

1. How much energy are you using from your battery during each shift?
2. How much time is available to charge the battery during each shift, and how much time is available each day to finish charge?

The answer to these two questions will determine if opportunity charging is a viable alternative for your operation.

Once it is determined that opportunity charging may work, this same information will help you and your battery/charger supplier to determine the proper ratings for your equipment.



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