

MODELS 1604 & 1608



DESCRIPTION

Curtis DME Switch-Mode chargers are compact, portable, light-weight units designed to be used on all international power outlets.

1604CS:	24V, 4A, convection, sealed
1604FV:	24V, 8A, fan, vented
1608FS:	24V, 8A, fan, sealed

APPLICATION

Curtis switch-mode battery chargers are ideal for charging Durable Medical Equipment and electric vehicles utilizing 24V power, such as scooters and wheelchairs.

WARRANTY

Two year limited warranty from time of delivery.

FEATURES

- Users have the ability to customize the charger by programming the charge profiles, battery chemistry, battery size and fan modulation.
- Charging is fast due to the unit's microprocessor control and switch-mode operation.
- The Curtis 1604 and 1608 chargers safely recover deeply discharged batteries and prevent overcharging.
- Light weight and compact size offers substantial space advantages over other chargers.
- All units feature Auto Voltage Select (AVS): One unit operates for 100VAC, 120VAC or 230VAC. This eliminates the need to service and stock multiple models, and allows users to travel internationally and charge at any outlet.
- 1604CS will charge 60 Ah battery in 8 hours. 1604FV and 1608FS will charge 100 Ah battery in 8 hours.
- Automatic shutoff and restart to compensate for battery self discharge.
- Reliable charging is achieved through a multi-stage, multi-mode charging algorithm.
- 1604CS has natural convection/conduction cooling that eliminates the need for a fan. 1604FV and 1608FS have forced air cooling with temperature regulation for long fan life.
- Thermal protection prevents damage from over temperature conditions.
- Output current is limited so as not to exceed the maximum power and/or thermal capacity.
- Output is short circuit and reverse polarity protected.
- Suitable for lead acid or NiMH batteries.
- LEDs indicate AC Power ON, Charging Status and Fault Conditions.
- On-board/off-board interlock provided.
- Optional mounting kit (not shown).
- IP 54 electronics packaging on models 1604CS & 1608FS. (see note under Model Encodement)

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MODELS 1604 & 1608

SPECIFICATIONS

Input:	1604CS		1604FV/1608FS	
	@120V	@230V	@120V	@230V
Voltage:	90 -132 VAC	180 -264 VAC	90 - 132 VAC	180 -264 VAC
Frequency Range:	47- 63 Hz	47- 63 Hz	47- 63Hz	47- 63Hz
Input Current:	2.0 A-rms Max @ 60 Hz	1.0 A-rms Max @ 50 Hz	4.0 A-rms Max @ 60Hz	2.0 A-rms Max @ 50Hz
Input Leakage:	<500uA	<500uA	<500uA	<500uA
Output:				
Voltage:	24-30 VDC		24-30 VDC	
Current:	4.5 A Max		8.5 A Max	
Power Max:	125W		250W	
Power Nom:	100W		200W	

MODEL ENCODEMENT

Model Number	Cooling	Sealing	Input Voltage (see note 1)	Output Voltage	Output Current
1604CS-AVS/24/04-001	Convection	IP54	90 - 264 VAC (AVS)	24	4A
1604FV-AVS/24/08-001	Fan	IP30	90 - 264 VAC (AVS)	24	8A
1608FS-AVS/24/08-001	Fan	IP54 (see note 2)	90 - 264 VAC (AVS)	24	8A

Note 1: AVS = Auto Voltage Select

Note 2: Electronics protected to IP54, Fan protected to IP30

PROGRAMMABLE PARAMETERS AND CHARGE PROFILES

The Models 1604 and 1608 chargers have four parameters that can be programmed by the user, using a Curtis 1311 handheld programmer. These parameters consist of:

- Constant Voltage setpoint:** Optimize the charge profile for different battery chemistries such as AGM, Gel, SLA, VRLA and other special applications.
- Amp hour Capacity:** Allows the charger to indicate potential battery problems, based on charge times, for batteries of different sizes.
- End of Charge Mode:** Allows the user to choose from IVa (End of Charge), I₁V₁I₂V₂ (Equalize after End of Charge), IV₁V₂ (Float), and I₁V₁I₂V₂ (Equalize after Float) charge profiles (see Figures 1, 2, 3 and 4, respectively).
- Fan Modulation:** Provides a quieter mode of operation.

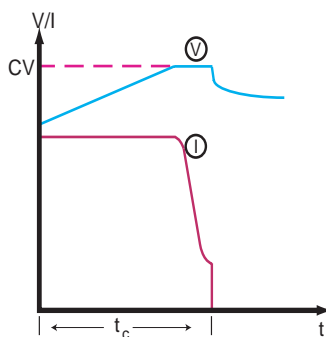


Figure 1

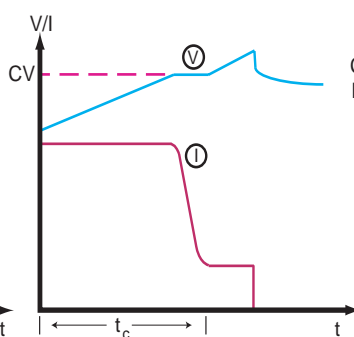


Figure 2

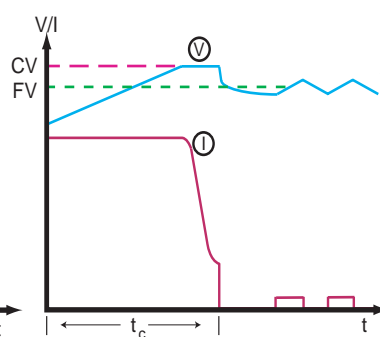


Figure 3

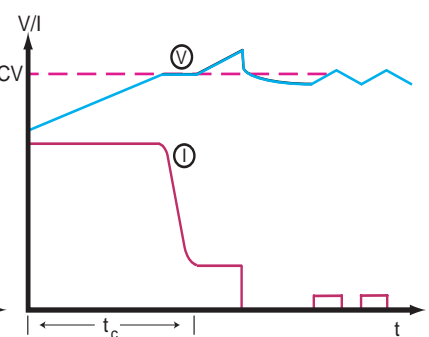
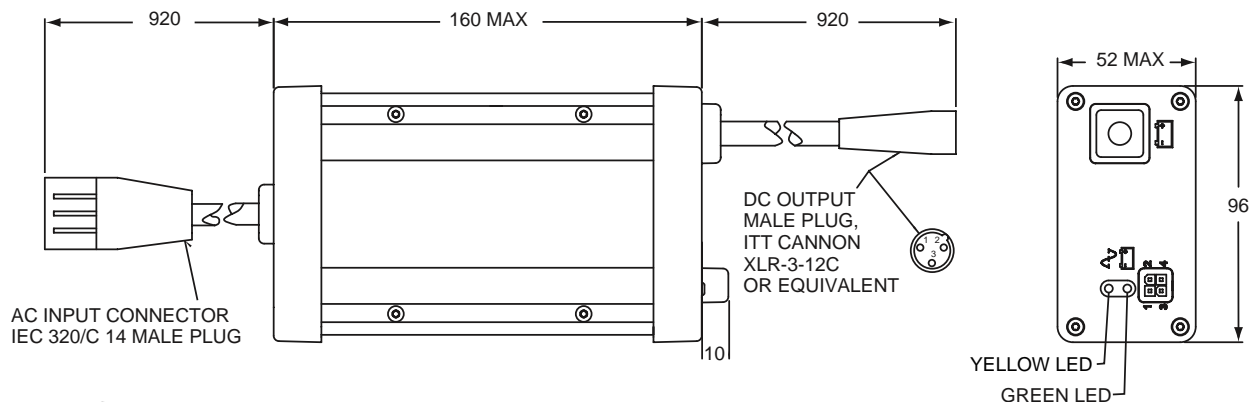


Figure 4

MODELS 1604 & 1608

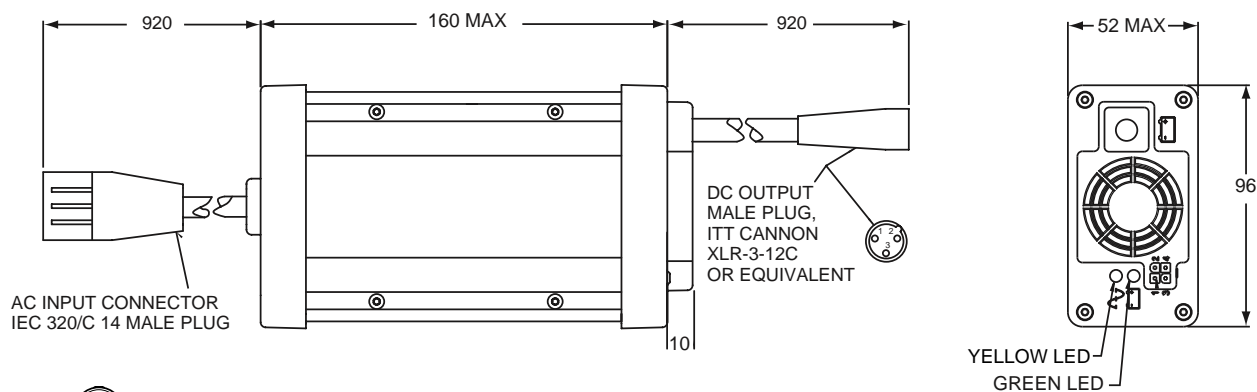
1604CS DIMENSIONS mm



OPTIONAL 3 PIN TO 6 PIN
DIN ADAPTOR

Note: Please specify Optional Curtis P/N 17604348-1 for cable to interface directly with Curtis MC-2 and Model 1288 motor controller.

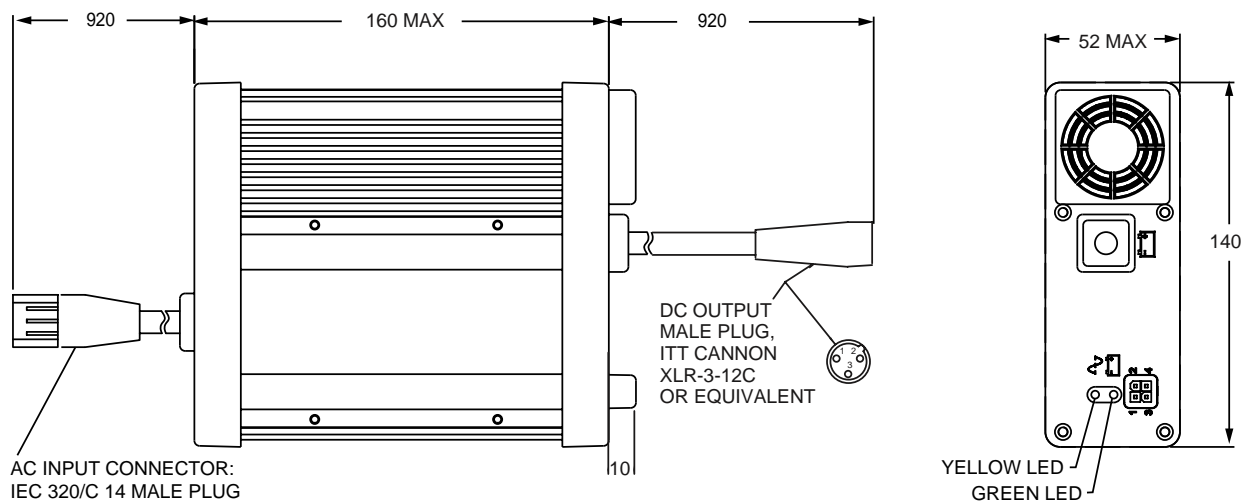
1604FV DIMENSIONS mm



OPTIONAL 3 PIN TO 6 PIN
DIN ADAPTOR

Note: Please specify Optional Curtis P/N 17604348-1 for cable to interface directly with Curtis MC-2 and Model 1288 motor controller.

1608FS DIMENSIONS mm



OPTIONAL 3 PIN TO 6 PIN
DIN ADAPTOR

Note: Please specify Optional Curtis P/N 17604348-1 for cable to interface directly with Curtis MC-2 and Model 1288 motor controller.