

CV-Charger

Single-Port 2.0 and 3.1 USB Charger



The USB CV-Charger is designed to charge electronic devices compatible with 2.0 or 3.1 USB types. The CV-Charger delivers fast charging times even in extreme temperatures from -40 °C to +85 °C. This innovative product features a spring-loaded access door that automatically closes to safeguard its electronics, assuring prolonged safe and reliable operation. The center LED indicates charging is in progress.

3.6A

Fast Charging

9-32V

Operating Voltage

IP64 Sealing

For Above-Panel Components

Typical Applications

- On/Off-Highway Equipment
- Golf Carts
- Lawn & Garden Equipment
- Marine
- Military

Tech Specs

Electrical

| | |
|-----------------------|--|
| USB Type | 2.0 for type A (4 pins) 3.1 for type C (16 pins) |
| Number of USB Ports | 1 |
| Operating Voltage | 9-32VDC |
| Max. Output Power | 18W for single port A, 18W for single port C |
| Max. Output Current | 3.6A |
| Charging Protocol | BC1.2, Apple, Samsung, Qualcomm QC2.0/QC3.0, MTK PE1.1/2.0, Huawei FCP/SCP, Samsung AFC for single port A. |
| LED Indicator | Green LED brightens when charging is in progress. |
| Reverse Polarity | ISO 16750-2: 2012 4.7; Apply power supply with -28 VDC for 60s |
| ESD | ISO 10605: 2008; ±15kV air discharges, ±8kV contact discharges |
| Electrical Endurance | 5000 cycles USB plug push in pull out with charging |
| Over Voltage | ISO 16750-2: 2012 4.3; Power up with 36VDC for 60 min at 65 °C |
| Withstand Voltage | ISO 16750-2: 2012 4.11; Apply 500VRMS with a duration of 60s |
| Insulation Resistance | ISO 16750-2: 2012 4.12; Measure with 500VDC for 60s, resistance value >10MΩ |

Physical

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|-----------------|---|
| Mounting Method | Snap |
| Panel Opening | .83" x 1.45"; 21.08mm x 36.83mm |
| Panel Thickness | 0.76mm to 3.96mm |
| Connectors | Carling VC2, VC1 housing Two pin connectors |
| Mating Terminal | Tyco/AMP .25 QC faston series for VC2 housing, Delphi GT 630 series for VC1 |
| Weight | 196 grams [.43 lbs] |
| Size | L47.73 X W25.9 X H64.2mm |

Mechanical

| | |
|-------------|---|
| Life Cycles | 5000 cycles for USB port; 30,000 cycles for door |
|-------------|---|

Agency Certifications

| | |
|---------|-----------------------------|
| CE Mark | 2014/30/EU EN 50498:2010 |
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Environmental

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|--|---|
| Sealing Protection (when doors closed) | IEC 60529: 2013; IP64, for above-panel components of the actual switch only |
| Operating Temperature | - 40 °C to + 85 °C |
| Storage Temperature | ISO 16750-4: 2010; - 50 °C to + 95 °C |
| Thermal, Hot Soak | IEC 60068-2-2: 2007; Test Bb, +85 °C for 24 hours |
| Thermal, Cold Soak | IEC 60068-2-1: 2007; Test Ab, -40 °C for 24 hours |
| Thermal Shock | IEC 60068-2-14: 2009; Test Na -40 °C to +85 °C, soak for 1hrs at each extreme and transfer within 3min, repeat 10 cycles |
| Thermal Cycling | IEC 60068-2-14: 2009; Test Nb, -40 °C to 85 °C, dwell for 2h at each extremes with transfer rate 3 °C/min, 2 cycles |
| Humidity, Soak | IEC 60068-2-78: 2012; Test Cab, +40 °C at 93±3% RH for 4 days |
| Damp Heat Cyclic | IEC 60068-2-30: 2005; Test Db Method 1, 25 °C to 55 °C cycling change with 93± 3% RH for 6 cycles, totally 144h |
| Salt Spray | IEC 60068-2-11:1981; Salt mist with 35°C, totally 48h |
| Chemical Resistance (Resistance to Solvents) | ISO 16750-5: 2010; Brushing engine oil, hydraulic oil, diesel fuel, urea at 85°C for 22hrs. Dipping battery fluid for 22hrs and alcohol for 10min at 25°C |
| Vibration, Random | IEC 60068-2-64: 2008; Range:10-2000Hz. Acceleration 57.088m/s ² (RMS), Duration 8h per axial |
| Vibration, Resonance | IEC 60068-2-6: 2007; Sweep 10Hz-500Hz per axis with amplitude 0.5mm (10-50Hz) and 19.6m/s ² (50-500Hz). Apply 100 m/s ² at resonance point for 1h |
| Vibration, Sinusoidal | IEC 60068-2-6: 2007; Sweep 10Hz-500Hz with amplitude 0.75mm (10-58.1Hz), 100m/s ² (58.1-200Hz) for 4h at Z axis and 2h at X/Y axis |
| Mechanical Shock | IEC 60068-2-27: 2008; Acceleration: 500m/s ² , dwell 11ms. 3 pulse per axial, Total 18 times |
| Mechanical Bump | IEC 60068-2-27: 2009; Acceleration: 400m/s ² , dwell 6ms. 100 pulse per axial, total 600 times |
| Drop test | IEC 60068-2-31: 2008; Test Ec Free Fall -Procedure 1 drop in each direction of the 3 axis (6 total drops) from 1000mm |

Ordering Scheme

Sample Part Number CHG - A 2 A - 001

Selection 1 2 3 4 5

1. SERIES

CHG CV-Charger

2. POWER

A 18W

3. PORT TYPE

1 Single Port A (2.0 USB) 2 Single Port C (3.1 USB)

4. INDICATOR LIGHT COLOR

A Green

5. LEGEND

000 No Legend
001 Legend 1



Dimensional Specs

inches [millimeters]

