Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

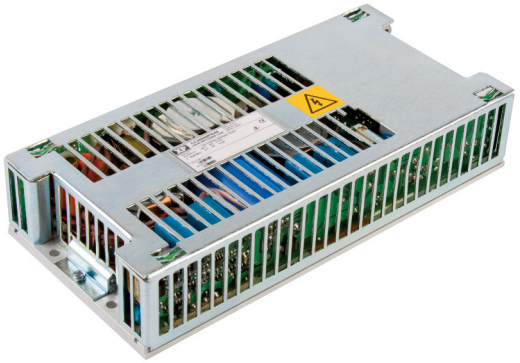
With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832
Email & Skype: info@chipsmall.com Web: www.chipsmall.com
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

400/600 Watts
CCH400–600 Series



- Baseplate Cooled
- High Efficiency up to 90%
- –40 °C to +85 °C Operation
- Industrial & MIL–STD461E EMC Compliance
- Power Fail, Inhibit, Overtemp & Current Share
- 5V Standby Output
- 3 Year Warranty

Specification

Input

Input Voltage	90-264 VAC
Input Frequency	47-400 Hz[1]
Input Current	CCH400: 4.3/2.1 A typ. at 115/230 VAC, CCH600: 6.3/3.1 A typ. at 115/230 VAC, full load
Inrush Current	60 A max at 230 VAC, 25 °C cold start
Power Factor	>0.9
Earth Leakage Current	0.7/1.1 mA at 115/230 VAC at 60/50 Hz
Input Protection	Internal F10 A/250 V fuse

Output

Output Voltage	12-48 VDC
Output Voltage Trim	±10%
Initial Set Accuracy	±1% V1, ±3% V2
Minimum Load	No minimum load required
Start Up Delay	Typically 1 s
Start Up Rise Time	50 ms typical
Hold Up Time	20 ms min
Drift	±0.2% after 20 min warm up
Line Regulation	±0.5% max
Load Regulation	±1% V1, ±5% V2 max
Over/Undershoot	1% typical
Transient Response	4% max. deviation, recovery to within 1% in 500 µs for a 50-75-50% load change
Ripple & Noise	Typically 1% pk-pk V1, V2 2%, 20 MHz bandwidth
Overvoltage Protection	110-140% Vnom, recycle input to reset
Overload Protection	105-140% V1 only
Short Circuit Protection	Continuous, approximately constant current
Temperature Coefficient	0.05%/°C
Overtemp. Protection	Fitted
Remote Sense	Compensates for 0.5 V total voltage drop
Remote On/Off	Uncommitted isolated optocoupler diode, powered diode inhibits V1

General

Efficiency	89% typical
Isolation	3000 VAC Input to Output, 1500 VAC Input to Ground, 500 VDC Output to Ground
Switching Frequency	30-333 kHz PFC, 51.1 kHz main and 138 kHz standby converter
Signals	Power Fail, Inhibit, Current Share, Overtemperature Warning and 5 V Standby
MTBF	300 kHrs to MIL-HDBK-217F at 25 °C, GB

Environmental

Operating Temperature	-40 °C to +85 °C baseplate, see thermal considerations
Cooling	Baseplate, conduction cooling
Operating Humidity	95% RH, non-condensing
Storage Temperature	-40 °C to +85 °C
Operating Altitude	3000 m
Shock	MIL-STD 810F Clause 516.5 proc 1
Vibration	MIL-STD 810F figure 514.5C-17

EMC & Safety

Low Voltage PSU EMC	EN61204-3, high severity level
Emissions	EN55022 level B conducted, level A radiated, MIL-STD 461D-F, CE102
Harmonic Currents	EN61000-3-2, class A
Voltage Flicker	EN61000-3-3
Radiated Immunity	EN61000-4-3, level 3 Perf Criteria A
EFT/Burst	EN61000-4-4, level 3 Perf Criteria A
Surge	EN61000-4-5, installation class 3 Perf Criteria A
Conducted Immunity	EN61000-4-6, level 3 Perf Criteria A, MIL-STD 461 CS114
Dips & Interruptions	EN61000-4-11, 30% 10 ms, 60% 100 ms, 100% 5000 ms, Perf Criteria A, B, B
Safety Approvals	IEC60950-1 CB report, UL60950-1, TUV EN60950-1
Equipment Protection Class	Class I

Notes

1. Safety approvals cover frequency 47-63 Hz.

Models and Ratings

Output Power	Output Voltage V1	Output Current V1	Standby Supply V2	Model Number
411 W	12.0 VDC	34.0 A	5.0 V/0.5 A	CCH400PS12
411 W	24.0 VDC	17.0 A	5.0 V/0.5 A	CCH400PS24
409 W	28.0 VDC	14.5 A	5.0 V/0.5 A	CCH400PS28
411 W	48.0 VDC	8.5 A	5.0 V/0.5 A	CCH400PS48
603 W	12.0 VDC	50.0 A	5.0 V/0.5 A	CCH600PS12
603 W	24.0 VDC	25.0 A	5.0 V/0.5 A	CCH600PS24
605 W	28.0 VDC	21.5 A	5.0 V/0.5 A	CCH600PS28
603 W	48.0 VDC	12.5 A	5.0 V/0.5 A	CCH600PS48

Mechanical Details

3D MODELS AVAILABLE ONLINE

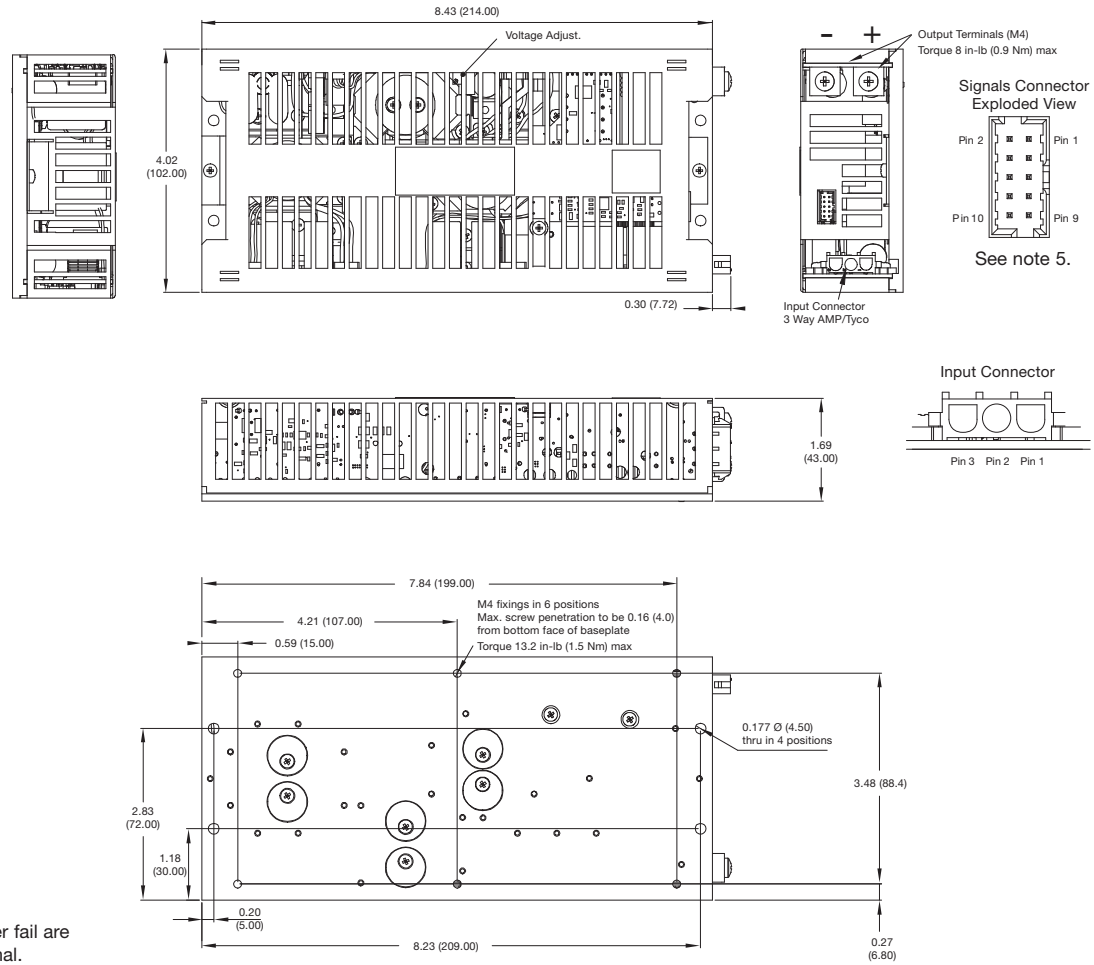
Signal Connector	
Pin	Function
1	Current Share
2	Inhibit
3	Overtemp. Warning
4	Power Fail
5	+Sense
6	-Sense
7	-Standby
8	-Standby
9	+Standby
10	+Standby

Connector: 10 WAY 2mm pitch p/n
MOLEX 87833-1031
Mating half: p/n MOLEX 51110-1056
Contact: p/n MOLEX 50394-8100

Input Connector	
Pin	Function
1	Earth
2	Neutral
3	Line

Connector: 3 way AMP/Tyco
type MATE-N-LOK 1-350943-0

Mates with MATE-N-LOK 350766-1



Notes

1. All dimensions in inches (mm).
2. Tolerance .xx = ±0.02 (0.50);
   .xxx = ±0.01 (0.25)
3. Weight 3.3 lbs (1.5 kg)
4. Connector kit available,
   order part no. 'CCH CONKIT'
5. Inhibit, overtemperature and power fail are referenced to the OV power terminal.

Thermal Considerations

The baseplate must be maintainedat or below 85 °C and therefore a suitable heatsink must be selected to remove the heat from the power supply. Details of the heatsink calculations and other considerations can be found in the longform datasheet.