

EMC Filter



RoHS

This model applies to analog circuit which is noise-sensitive. Put FC-CX3D on to the input of DC/DC module can ensure the module meet the EMC request of EN50155standard.

FC-CX3D used with the MORNSUN DC/DC railway module. DC/DC railway module's max. Input voltage must less than FC-CX3D's max. Voltage.

FEATURES

- Cost-effective
- Meet IEC/EN61000-4 series standard and CISPR22/EN55022
- Meet railway industry EN50155standard
- Input over-voltage protection
- Efficiency up to 98%
- Mounting: PCB mounting, chassis mounting with screw terminals, din-rail mounting

Selection Guide

Model	Input Voltage Range (VDC)	Max. output power(W)
FC-CX3D	66-160	100

Note: series with suffix "A2S" are chassis mounting, with suffix "A4S" are DIN-Rail mounting, for example FC-CX3DA4S.

Input Specifications

Item	Test Conditions	Min.	Typ.	Max.	Unit
Input Voltage	Operating temperature range	66	110	160	VDC
No-load Current	110VDC @ No-load	--	4	--	mA

Output Specifications

Item	Test Conditions	Min.	Typ.	Max.	Unit
Efficiency	110VDC @100W	--	98	--	%
Max. Output Voltage Limit	Operating temperature range	--	165	--	

General Specifications

Item	Test Conditions	Min.	Typ.	Max.	Unit
Operating Temperature		-40	--	85	°C
Storage Temperature		-55	--	105	
Welding Temperature	Wave soldering welding,10 seconds MAX	+255	+260	+265	
Storage Humidity		5	--	95	%
Casing Temperature Rise	110VDC @100W	--	25	--	°C
Withstand voltage	+Vin~ leakage current<5mA	--	1500	--	VAC
MTBF	MIL-HDBK-217F@40°C	--	1000	--	K hours

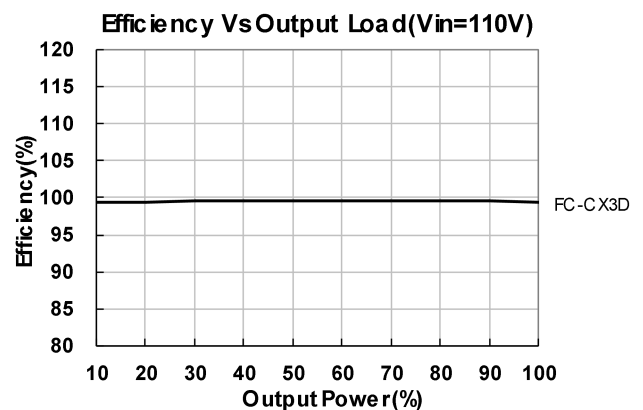
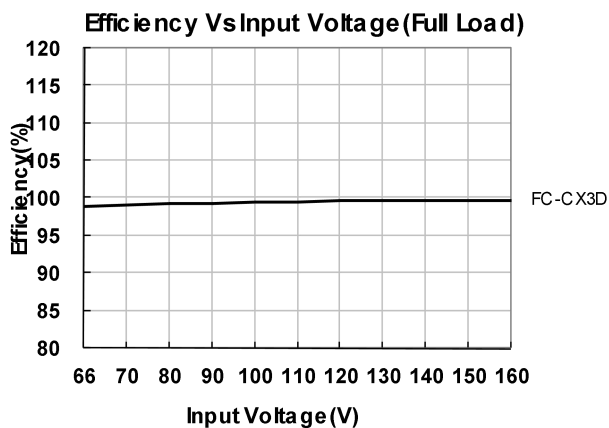
General Specifications

Casing Material		Black flame-retardant heat-proof epoxy resin (UL94-V0)
Package Dimensions	Horizontal package	53.80*28.80*23.50 mm
	A2S wiring package	76.00*31.50*32.30 mm
	A4S rail package	76.00*31.50*36.90 mm
Weight	Horizontal package / A2S wiring package/ A4S rail package	52.00/72.00/92.00g(Typ.)

SAFE & EMC

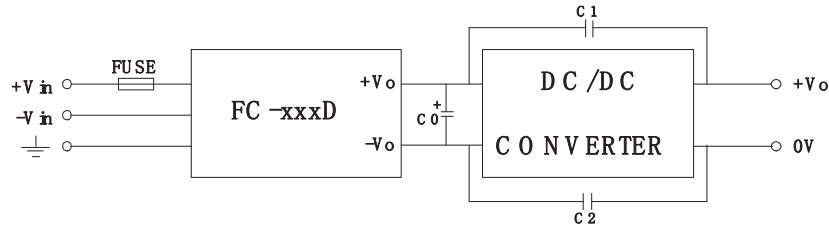
Item	Test Conditions		Test Procedure	
EMI	Conducted disturbance		150KHz-30MHz Class B (With MORNSUN's Module)	
	Radiated emission		30MHz-1GHz Class B (With MORNSUN's Module)	
EMS	Electrostatic discharge	Air ±8KV Contact ±6KV	perf.Criteria B	
	Radiation immunity	10V/m (With MORNSUN's Module)	perf.Criteria A	
EMS	Conducted disturbance immunity	10Vr.m.s (With MORNSUN's Module)	perf.Criteria A	
	EFT	±2KV (5KHz,100KHz)	perf. Criteria B	
	Surge immunity	±2KV(1.2μs/50μs 2Ω)	perf. Criteria B	IEC/EN61000-4-5,QB/T1762
		±4KV(1.2μs/50μs 12Ω)		
Voltage interruption	±1.8KV(5/50μs 5Ω)	perf. Criteria B	EN50155	
		100%-0%, 10ms	perf. Criteria A	EN50155

Product Typical Curve



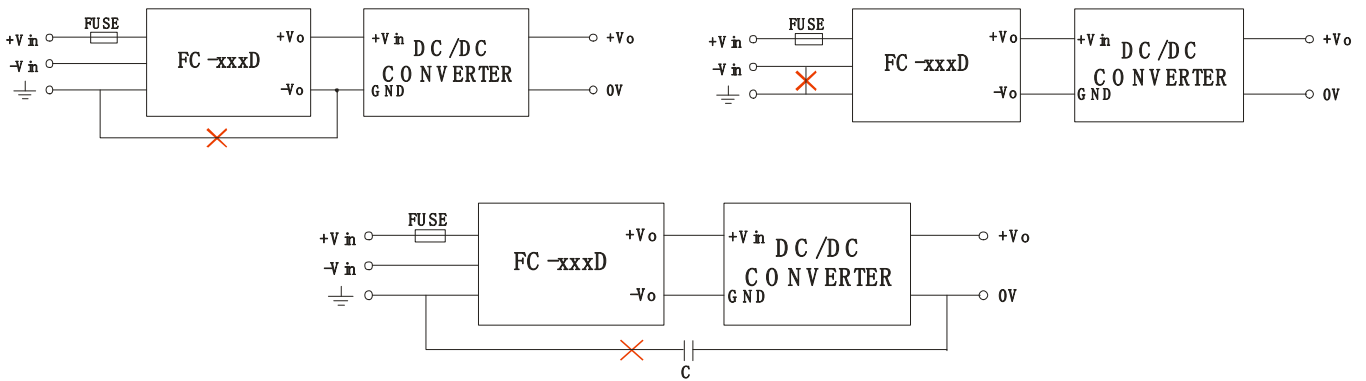
Design Reference

1. Typical application



Model's input voltage range: 66V-160V

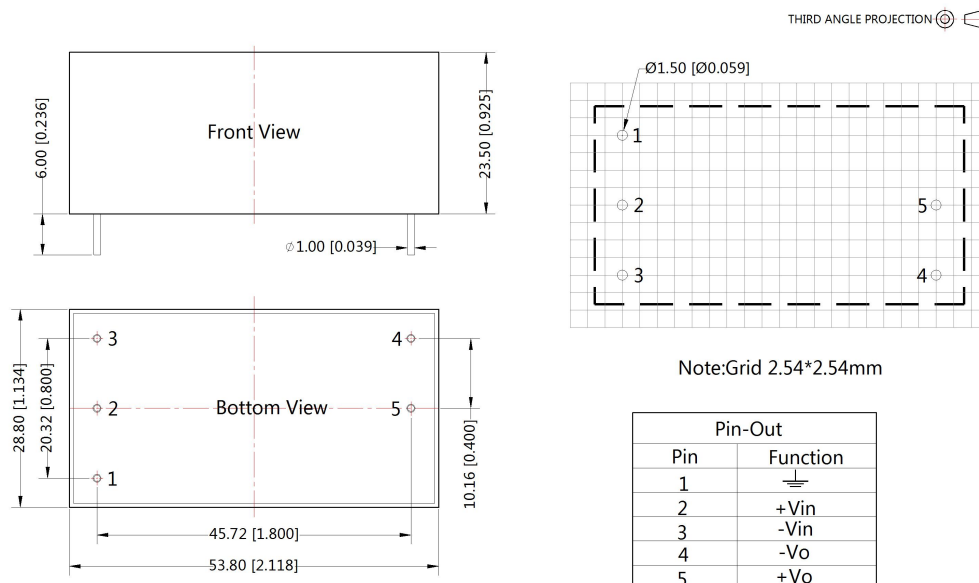
Model	Recommended external circuit parameters
C0	Recommend to use 82uF/200V electrolytic capacitor
C1, C2	2200pF/400VAC capacitor
FUSE	Due to the difference of the power module input current, the fuse of the recommended values, please refer to the Technical Manual for the power module.



Note: These applications is not supported for this model.

2. For more information Please find the application notes on www.mornsun-power.com

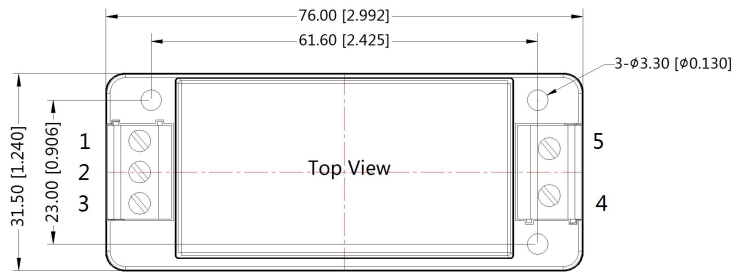
Dimensions and Recommended Layout



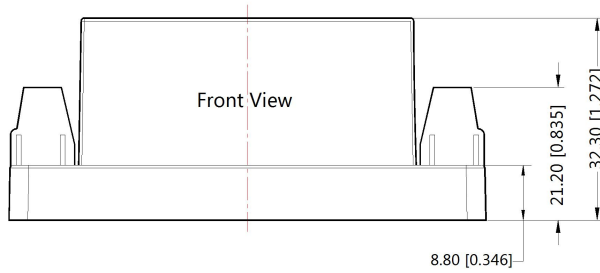
Note:
Unit :mm[inch]
Pin diameter tolerances :±0.10[±0.004]
General tolerances:±0.50[±0.020]

A2S wiring package Dimensions

THIRD ANGLE PROJECTION



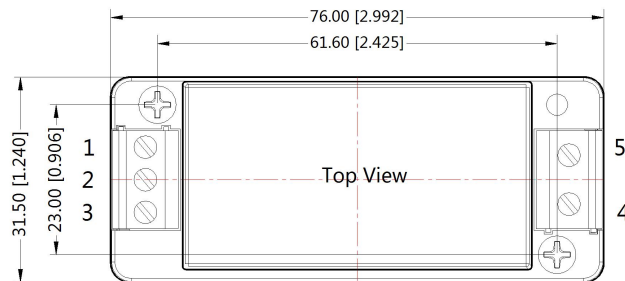
Pin-Out	
Pin	Function
1	GND
2	+Vin
3	-Vin
4	-Vo
5	+Vo



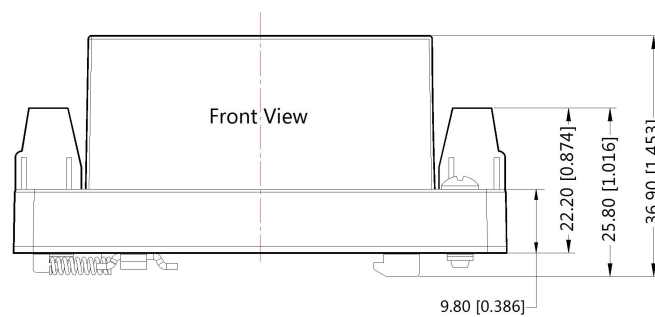
Note:
Unit :mm[inch]
Pin diameter tolerances : $\pm 0.10[\pm 0.004]$
General tolerances: $\pm 0.50[\pm 0.020]$

A4S rail package Dimensions

THIRD ANGLE PROJECTION



Pin-Out	
Pin	Function
1	GND
2	+Vin
3	-Vin
4	-Vo
5	+Vo



Note:
Unit :mm[inch]
Pin diameter tolerances : $\pm 0.10[\pm 0.004]$
General tolerances: $\pm 0.50[\pm 0.020]$

Note:

1. Packing Information please refer to 'Product Packing Information'. Packing bag number: 58220011, the Packing bag number of A2S/ A4S package:58220022
2. Unless otherwise specified, data in this data sheet should be tested under the conditions of $T_a=25^{\circ}\text{C}$, humidity<75% ;
3. All index testing methods in this datasheet are based on our Company's corporate standards;
4. The performance indexes of the product models listed in this manual are as above, but some indexes of non-standard model products will exceed the above-mentioned requirements, and please directly contact our technicians for specific information;
5. We can provide product customization service;
6. Specifications of this product are subject to changes without prior notice.

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