

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 EN50155 standard.

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 EN50155 standard
- 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	
Storage Humidity		5	--	95	%
Casing Temperature Rise	110VDC @100W	--	25	--	°C
Withstand voltage	+Vin~ $\frac{1}{2}$ leakage current < 5mA	--	1500	--	VAC
MTBF	MIL-HDBK-217F@40°C	--	1000	--	K hours

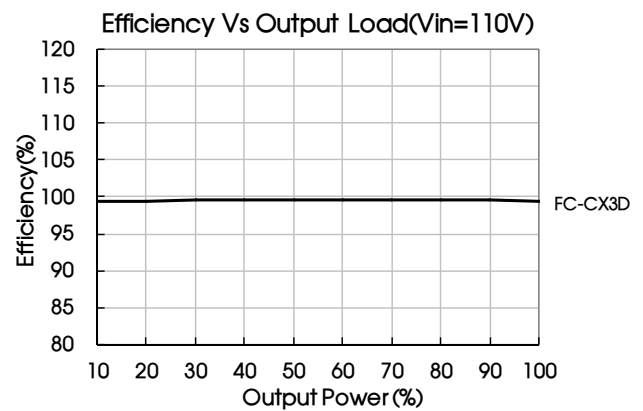
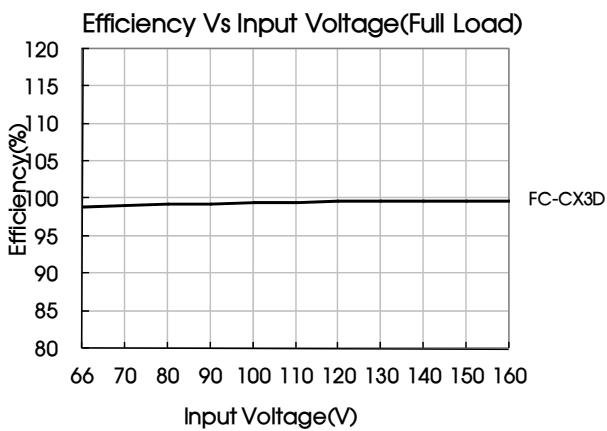
General Specifications

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 60.00/80.00/100.00g(Typ.)	

SAFE & EMC

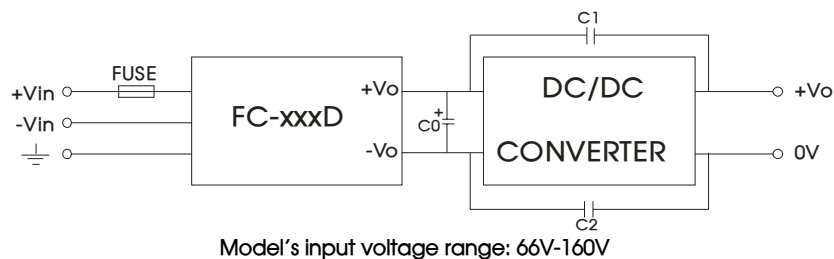
Item	Test Conditions		Test Procedure	
EMI	Conducted disturbance	150KHz-30MHz Class B (With MORNSUN's Module)	CISPR22,EN55022	
	Radiated emission	30MHz-1GHz Class B (With MORNSUN's Module)	CISPR22,EN55022	
EMS	Electrostatic discharge	Air ±8KV Contact ±6KV	perf.Criteria B IEC/EN61000-4-2,GB/T17626.2	
	Radiation immunity	10V/m (With MORNSUN's Module)	perf.Criteria A IEC/EN61000-4-3,GB/T17626.3	
EMS	Conducted disturbance immunity	10Vr.m.s (With MORNSUN's Module)	perf.Criteria A IEC/EN61000-4-6,GB/T17626.6	
	EFT	±2KV (5KHz,100KHz)	perf. Criteria B IEC/EN61000-4-4,GB/T17626.4	
	Surge immunity	±2KV(1.2µs/50µs 2Ω) ±4KV(1.2µs/50µs 12Ω)	perf. Criteria B	IEC/EN61000-4-5,GB/T17626.5
		±1.8KV(5/50µs 5Ω)	perf. Criteria B	EN50155
Voltage interruption	100%—0%, 10ms	perf. Criteria A	EN50155	

Product Typical Curve

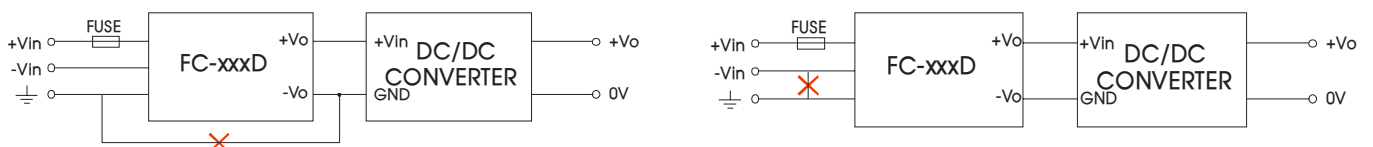


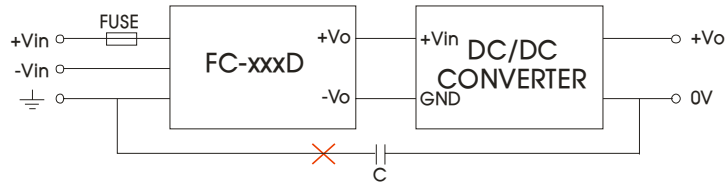
Design Reference

1. Typical application



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.



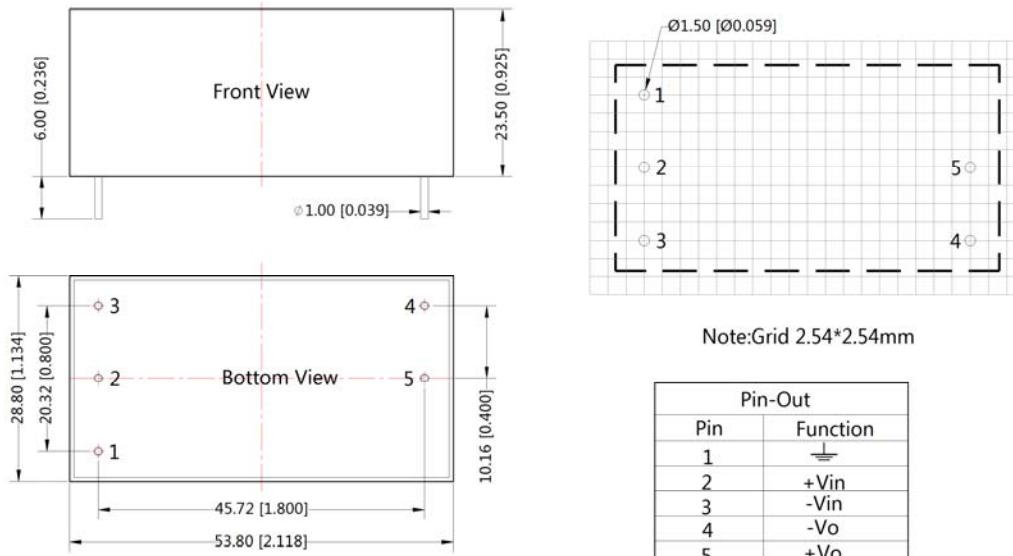


Note: These applications is not supported for this model.

2. For more information Please find the application notes on [www.mornsun-power.com](http://www.mornsun-power.com)

Dimensions and Recommended Layout

THIRD ANGLE PROJECTION



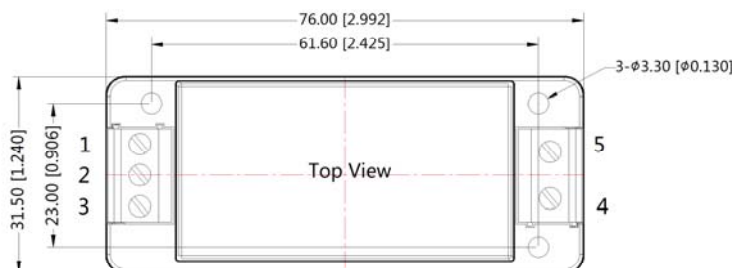
Note:Grid 2.54\*2.54mm

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

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

A2S wiring package Dimensions

THIRD ANGLE PROJECTION

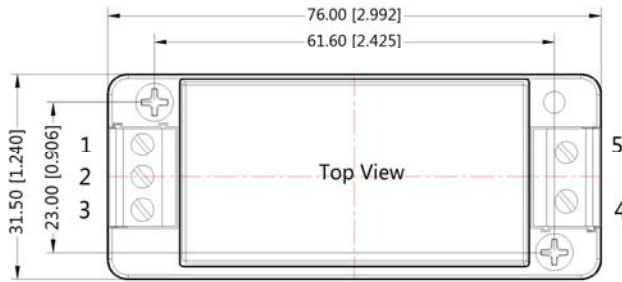


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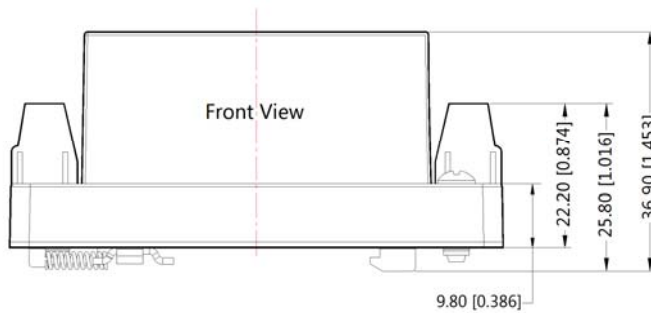
Note:  
Unit :mm[inch]  
Pin diameter tolerances :±0.10[±0.004]  
General tolerances:±0.50[±0.020]

A4S rail package Dimensions

THIRD ANGLE PROJECTION



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



Note:  
Unit :mm[inch]  
Pin diameter tolerances :±0.10[±0.004]  
General tolerances:±0.50[±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 Ta=25°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.

MORNSUN Guangzhou Science & Technology Co., Ltd.

Address: No. 5, Kehui St. 1, Kehui Development Center, Science Ave., Guangzhou Science City, Luogang District, Guangzhou, P. R. China  
Tel: 86-20-38601850-8801 Fax: 86-20-38601272 E-mail: [info@mornsun.cn](mailto:info@mornsun.cn)