

EMC Filter



RoHS

FEATURES

- Ultra wide input voltage range: 0-305VAC / 0-430VDC
- Operating ambient temperature range: -40°C to +85°C
- EMC compliance : IEC/EN61000-4、 CISPR32/EN55032
- High surge suppression capability: 2KV/4KV、 4KV/6KV
- Insertion loss DM up to 75dB & CM up to 50dB
- Compliance with safety standards IEC62368/IEC60939

This product is suitable for analog circuits and other noise sensitive occasions. The EMC grade of IEC/EN61000-4 series and CISPR32/EN55032 standards can be improved by adding FC-L03WX and FC-L06WX to the front end of AC/DC chassis power supply respectively. The maximum input voltage of the power supply should not be greater than the maximum operating voltage of the product, and the maximum input current should be less than the maximum operating current of the product.

Selection Guide

Model	Operating Voltage(VAC)		Operating Current(A)		Surge performance
	Typ. (Range)	Max*	Typ.	Max	
FC-L03W	230 (0-305)	310	-	3.0	Line-Line ±2kV Line-Ground ±4kV
FC-L03W2	230 (0-305)	310	-	3.0	Line-Line ±4kV Line-Ground ±6kV
FC-L06W	230 (0-305)	310	-	6.0	Line-Line ±2kV Line-Ground ±4kV
FC-L06W2	230 (0-305)	310	-	6.0	Line-Line ±4kV Line-Ground ±6kV

Note: ① * Input voltage should not exceed this value, otherwise permanent irreparable damage may be caused;

② product model suffix plus "A2S" for metal plate wiring type package, suffix plus "A4S" for guide rail type package, such as: FC-L06WA4S;

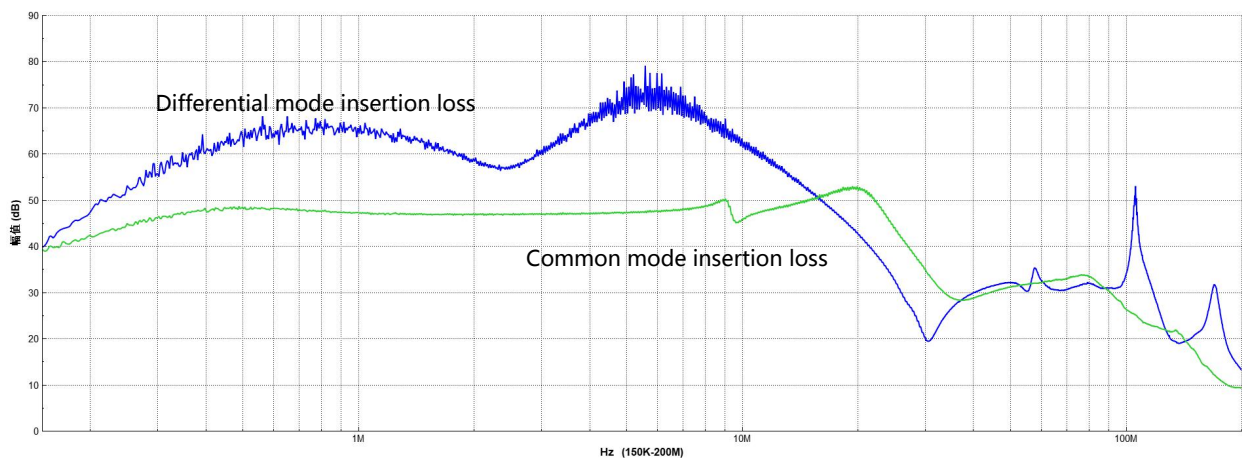
General Specifications

Item	Test Conditions	Min.	Typ.	Max.	unit
Operating Temperature		-40	--	85	°C
Storage Temperature		-40	--	105	
Storage Humidity		--	--	95	%RH
Withstand voltage	IN(L) ~ PE, IN(N) ~ PE, test time 1 minute, leakage current < 3.5mA	2000	--	--	VAC
MTBF	MIL-HDBK-217F@25°C	1000	--	--	K hours
Insertion loss (CM/DM)	150KHz~1MHz	25	30	-	dB
	1MHz~10MHz	30	35	-	dB
	10MHz~30MHz	18	20	-	dB

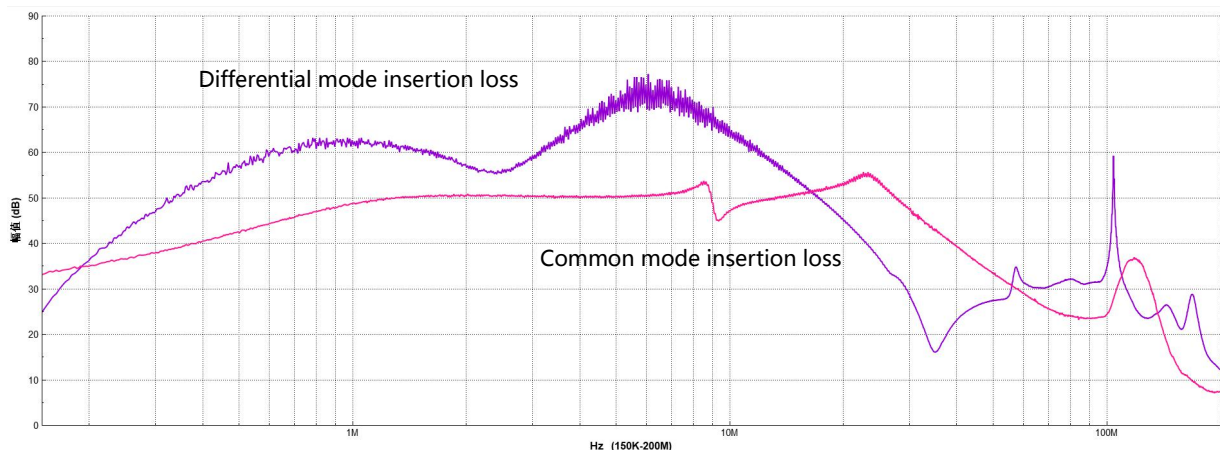
physical characteristics

Case Material	Black plastic; flame-retardant and heat-resistant (UL94 V-0)		
Dimensions	FC-L03WX FC-L06WX	Horizontal packaging	85.00*39.00*28.90mm
		A2S wiring type package	85.00*39.00*29.90mm
		A4S wiring type package	89.00*39.00*36.40mm
Weight	FC-L03W	Horizontal packaging	68g(Typ.)
		A2S wiring type package	94(Typ.)
		A4S wiring type package	105(Typ.)
	FC-L03W2	Horizontal packaging	74(Typ.)
		A2S wiring type package	100(Typ.)
		A4S wiring type package	111(Typ.)
	FC-L06W	Horizontal packaging	72(Typ.)
		A2S wiring type package	98(Typ.)
		A4S wiring type package	109(Typ.)
	FC-L06W2	Horizontal packaging	78(Typ.)
		A2S wiring type package	104(Typ.)
		A4S wiring type package	115(Typ.)

FC-L03Wx Insertion Loss Specifications



FC-L06Wx Insertion Loss Specifications



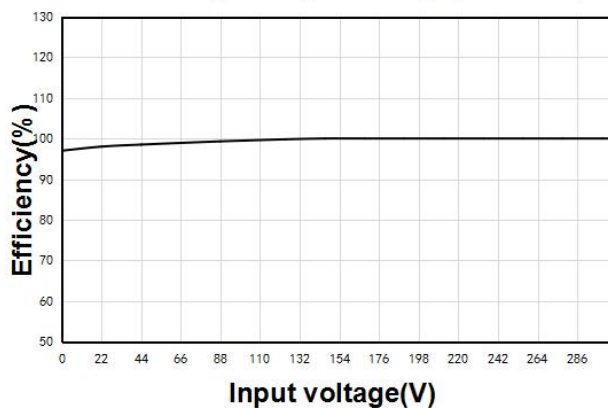
EMC characteristics

EMI	CE	CISPR32/EN55032	CLASS B	
	RE	CISPR32/EN55032	CLASS B	
EMS	ESD	IEC/EN61000-4-2	Contact ±8kV Air ±15kV	perf. Criteria A
	RS	IEC/EN61000-4-3	10V/m	perf. Criteria A
	EFT	IEC/EN61000-4-4	±4kV	perf. Criteria A
	CS	IEC61000-4-6	10V r.m.s	perf. Criteria A
	PMS	IEC61000-4-8	50/60Hz 30A/m	perf. Criteria A
	Surge	FC-L03W FC-L06W	IEC61000-4-5	Line-Line ±2kV Line-Ground ±4kV
	FC-L03W2 FC-L06W2	Line-Line ±4kV Line-Ground ±6kV		perf. Criteria B

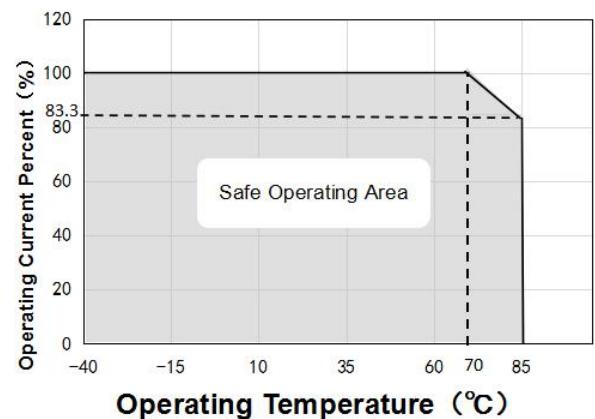
Note: the above performance indicators are the results of power supply test of supporting chassis.

Product Typical Curve

Efficiency VS Input voltage(Full load)

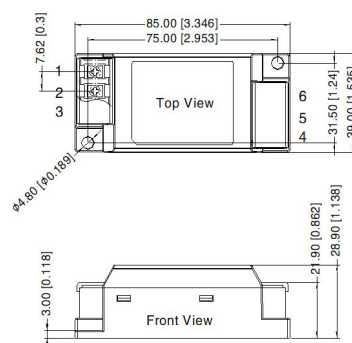


Operating Current Percent (%)



FC-L03WX & FC-L06WX Dimensions and Recommended Layout

THIRD ANGLE PROJECTION

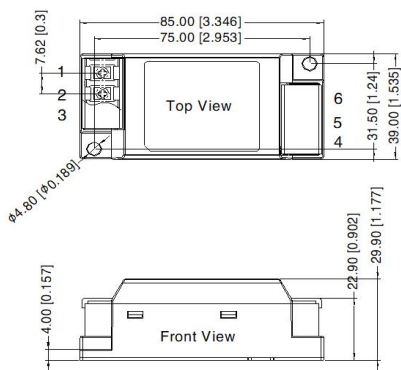




Pin-Out	
Pin	Mark
1	
2	IN(L)
3	IN(N)
4	OUT(N)
5	OUT(L)
6	

Note:
Unit: mm[inch]
Wire range: 24-14 AWG
Tightening torque: Max 0.5 N · m
General tolerances: ± 1.00[± 0.039]

FC-L03WXA2S & FC-L06WXA2S Dimensions and Recommended Layout


THIRD ANGLE PROJECTION 

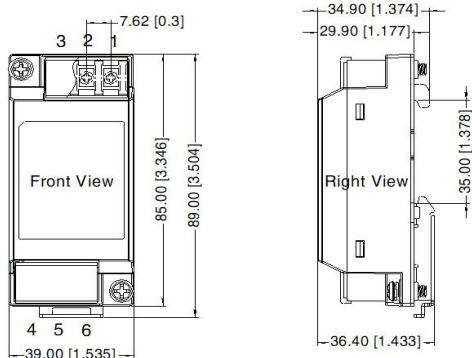




Pin-Out	
Pin	Mark
1	
2	IN(L)
3	IN(N)
4	OUT(N)
5	OUT(L)
6	

Note:
 Unit: mm[inch]
 Wire range: 24-14 AWG
 Tightening torque: Max 0.5 N · m
 General tolerances: ± 1.00[± 0.039]

FC-L03WXA4S & FC-L06WXA4S Dimensions and Recommended Layout

THIRD ANGLE PROJECTION 



Pin-Out	
Pin	Mark
1	
2	IN(L)
3	IN(N)
4	OUT(N)
5	OUT(L)
6	

Note:
 Unit: mm[inch]
 Wire range: 24-14 AWG
 Tightening torque: Max 0.5 N · m
 Mounting rail: TS35
 General tolerances: ± 1.00[± 0.039]

Note:

1. For additional information on Product Packaging please refer to www.mornsun-power.com. Packaging bag number: 58240047 (A4S wiring type package) , 58240046 (Other packages.)
2. Unless otherwise specified, data in this datasheet should be tested under the conditions of Ta=25°C, humidity<75%RH with nominal input voltage and rated load;
3. All index testing methods in this datasheet are based on our company corporate standards;
4. We can provide product customization service, please contact our technicians directly for specific information;
5. Products are related to laws and regulations: see "Features" and "EMC";
6. Our products shall be classified according to ISO14001 and related environmental laws and regulations, and shall be handled by qualified units.

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