

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 & CM up to 60dB
- Compliance with safety standards IEC62368
- Operating altitude up to 5000m
- 3 years warranty

FC - L10Wx series is for chassis power source connection type and guide rail type installation of EMC auxiliary device, suitable for applications that are sensitive to noise, such as analog circuits. Adding FC - L10Wx to the front end of AC/DC chassis power supply can make the power supply products meet the EMC requirements of IEC/EN61000-4 series and CISPR32/EN55032 standards. When used with Mornsun AC/DC chassis power supply, the maximum input voltage of the power supply should not be greater than the maximum working voltage of this product, and the maximum input current should be less than the maximum working current of this product.

Selection Guide

Model*	Operating Voltage(VAC)		Operating Current(A)		Surge Performance
	Typ. (Range)	Max*	Typ.	Max	
FC-L10W	115/230 (0-305)	310	-	10.0	Line-Line ±2kV Line-PE ±4kV
FC-L10W2	115/230 (0-305)	310	-	10.0	Line-Line ±4kV Line-PE ±6kV

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

②*Product model suffix plus "A4S" for guide rail type package, such as: FC-L10WA4S;

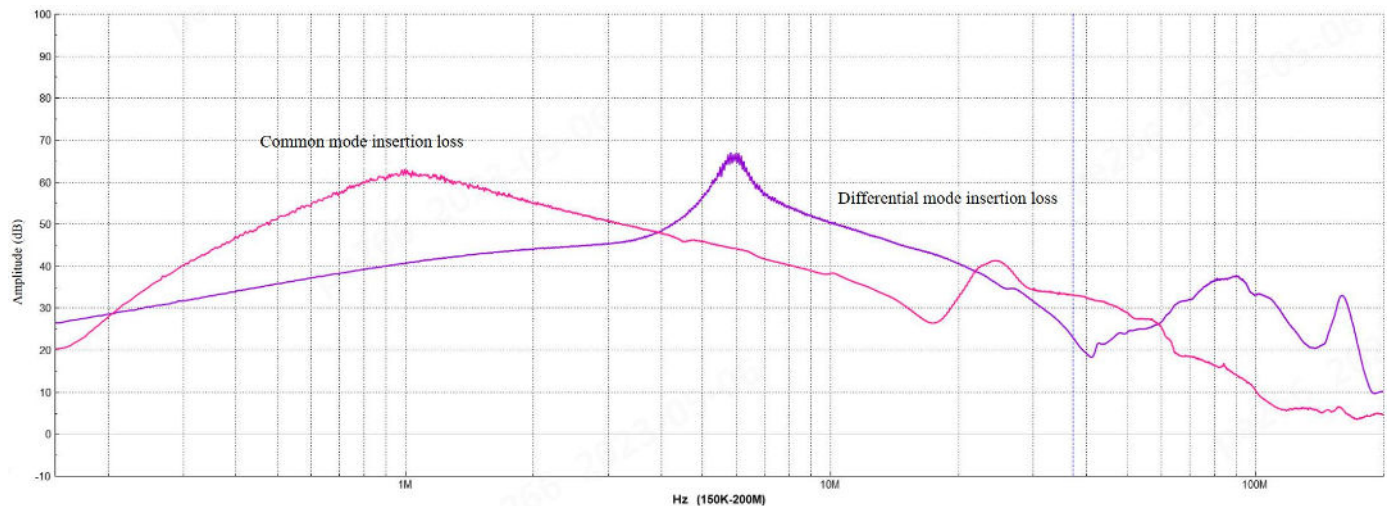
General Specifications

Item	Test Conditions	Min.	Typ.	Max.	Unit	
Operating Temperature		-40	--	+85	°C	
Storage Temperature		-40	--	+105		
Storage Humidity		--	--	95	%RH	
Isolation Voltage	FC-L10W	IN(L) - \perp , IN(N) - \perp , test time 1 minute, leakage current < 5mA	3000	--	--	VAC
	FC-L10W2		2000			
Insertion Loss (CM/DM)	150kHz~1MHz	20	35	-	dB	
	1MHz~10MHz	35	50	-	dB	
	10MHz~30MHz	25	30	-	dB	
Altitude	80-110kPa	5000m				
MTBF		MIL-HDBK-217F@25°C≥300,000 h				

Physical Characteristics

Case Material	Black plastic; Flame-retardant and heat-resistant (UL94 V-0)		
Dimension	FC-L10Wx	Horizontal packaging	104.00mm x 53.00mm x 42.00 mm
		A4S wiring type package	108.00mm x 53.00mm x 49.50 mm
Weight	FC-L10W	Horizontal packaging	156g(Typ.)
	FC-L10WA4S	A4S wiring type package	208g(Typ.)
	FC-L10W2	Horizontal packaging	163g(Typ.)
	FC-L10W2A4S	A4S wiring type package	215g(Typ.)
Cooling Method	Free air convection		

FC-L10Wx Insertion Loss Specifications

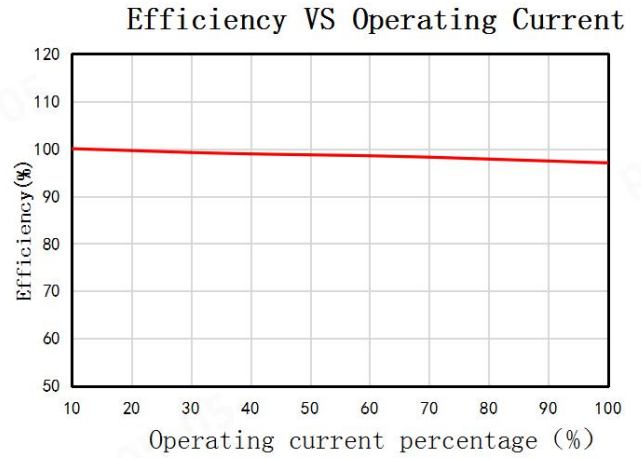
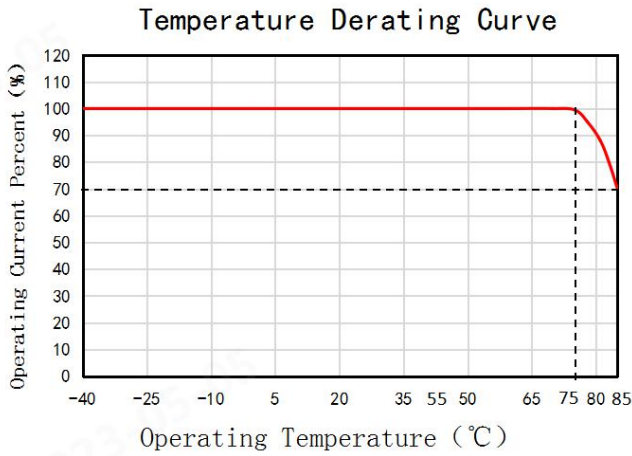


EMC Characteristics

EMI	CE	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	5KHz 5/50ns ±4kV	perf. Criteria A	
	Surge	FC-L10W (A4S)	IEC61000-4-5	Line-Line ±2kV Line-PE ±4kV	perf. Criteria B
		FC-L10W2 (A4S)		Line-Line ±4kV Line-PE ±6kV	perf. Criteria A
	CS	IEC61000-4-6	10V r.m.s	perf. Criteria A	
PFMF	IEC61000-4-8	50/60Hz 30A/m	perf. Criteria A		

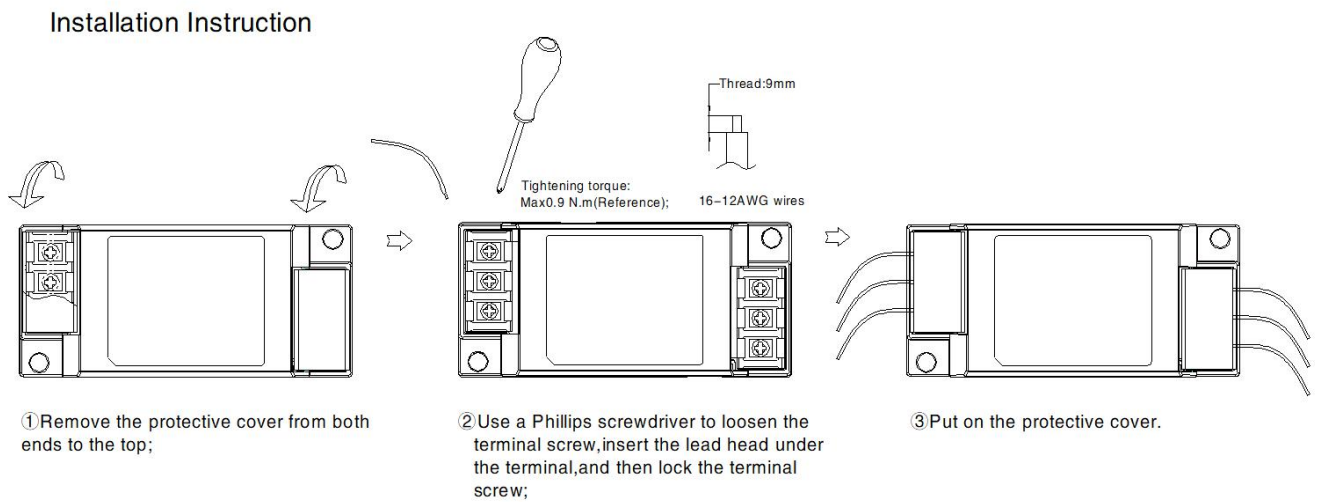
Note: Matching FC-L10Wx to the front end of the LM600-12BXX、LM600-20BXX series power supply can make the power module meet above EMC characteristics.

FC-L10Wx Product Typical Curve



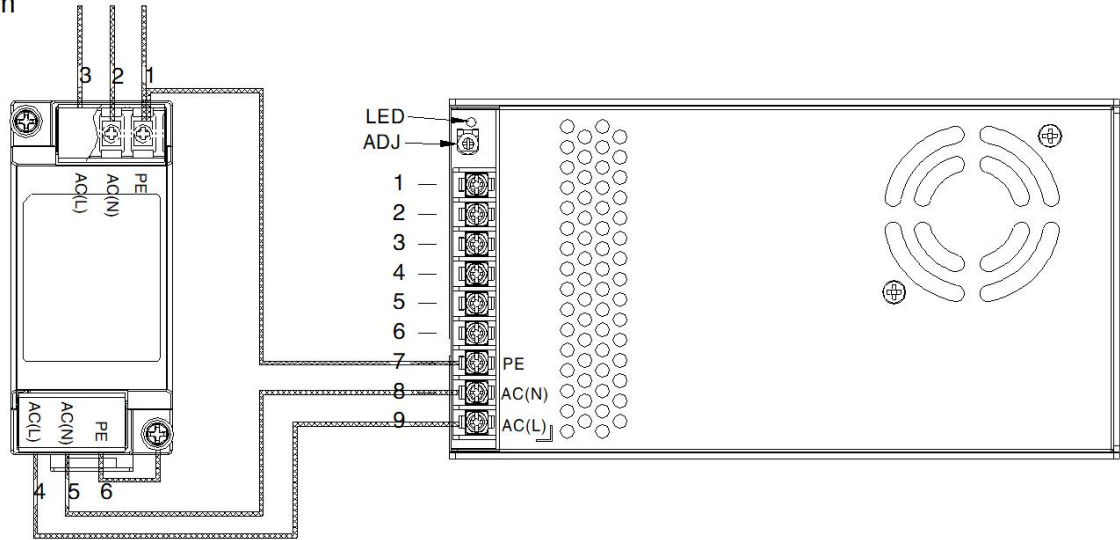
Note: This product is suitable for applications using natural air cooling; for applications in closed environment please consult factory or one of our FAE.

FC-L10Wx Installation Instruction



FC-L10WxA4S Wiring Schematic Diagram

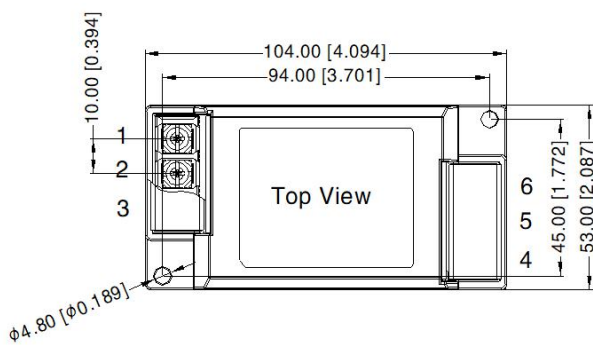
Wiring diagram



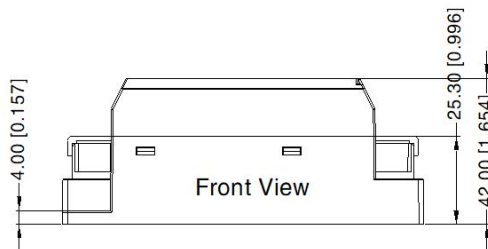
Note: * The U-shaped ground lug M4 is recommended for PE wire head connection

FC-L10Wx Dimensions and Recommended Layout

THIRD ANGLE PROJECTION



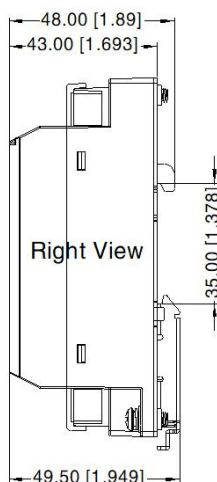
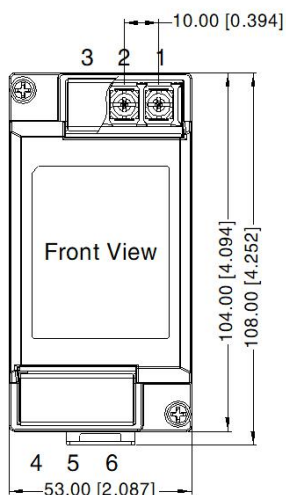
Pin-Out	
Pin	Mark
1	
2	IN(N)
3	IN(L)
4	OUT(L)
5	OUT(N)
6	





Note:
 Unit: mm[inch]
 Wire range: 16-12AWG
 Tightening torque: Max 0.9 N.m
 General tolerances: ± 1.00 [± 0.039]

FC-L10WxA4S Dimensions and Recommended Layout

THIRD ANGLE PROJECTION 



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

Note:
 Unit: mm[inch]
 Wire range: 16-12AWG
 Tightening torque: Max 0.9 N.m
 Mounting rail: TS35
 General tolerances: $\pm 1.00 [\pm 0.039]$

- Note:
1. For additional information on Product Packaging please refer to www.mornsun-power.com. Packaging bag number: 58240086;
 2. Unless otherwise specified, data in this datasheet should be tested under the conditions of $T_a=25^{\circ}\text{C}$, 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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