Descriptions

EMC Filter



RoHS

Features

- Conforms to EMC standards IEC/EN61000-4 series and CISPR32/EN55032
- Meet the railway locomotive standard EN50155
- Input anti-reverse protection
- Up to 98% efficiency
- A variety of installation methods: PCB, wiring and rail, etc

Applications

- Industrial control
- Home appliances
- Instrumentation
- Railway
- Civil applications

Selection Guide

Certification	Model	Input Voltage Range (VDC)	Maximum Output Power (W)
--	EFP1DX3	40-160	30
Note: * Product model suffix "E2S" for wiring type package expansion, suffix "D4S" for rail type package expansion;			

Specifications

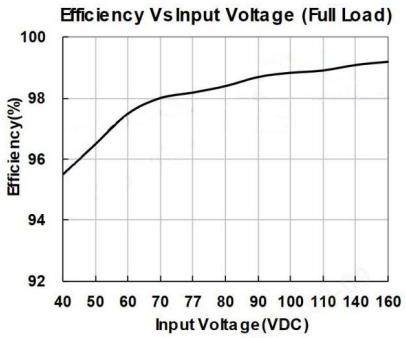
Product Specifications	Item	Operating Conditions	Min.	Typ.	Max.	Unit
Input Characteristics	Input Voltage	Full temperature range	40	110	160	VDC
	No-load Current	110VDC @ No load	--	--	1	mA
Output Characteristics	Efficiency	110VDC @30W	--	98	--	%
	Maximum Output Limiting Voltage *	The input voltage does not exceed 175V	--	165	--	VDC
General Specifications	Operating Temperature		-40	--	+85	℃
	Storage Temperature		-55	--	+125	
	Case Temperature Rise	110VDC @ full load, Ta=25℃	--	+25	--	
	Storage Humidity		5	--	95	%RH
	Test Voltage (Vin+～PE、Vin-～PE)	Tested for 1 minute and leakage < 5 mA	--	--	1500	KVAC
	MTBF	MIL-HDBK-217F@40℃	--	1200	--	K hours
	Vibration	IEC61373 Car body 1 Class B				
Mechanical Specifications	Case Material	Black epoxy resin; flame-retardant, heat-resistant (UL94 V-0)				
	Dimension	Horizontal package	53.80mm x 28.80mm x 19.00mm			
		E2S chassis mounting	76.00mm x 31.50mm x 27.80mm			
		D4S DIN-Rail mounting	76.00mm x 31.50mm x 32.40mm			
	Weight	Horizontal package	50.0g (Typ.)			
		E2S chassis mounting	70.0g(Typ.)			
		D4S DIN-Rail mounting	90.0g (Typ.)			

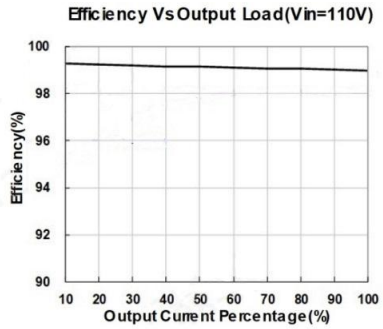
Note: * Continuous operation of the product will cause failure and damage at the maximum limited output voltage.

Electromagnetic Compatibility (EMC)

Emissions (EMI)	CE	CISPR32, EN55032	150KHz-30MHz Class B(With Module)	
	RE	CISPR32, EN55032	30MHz-1GHz Class B(With Module)	
Immunity (EMS)	ESD	IEC/EN61000-4-2, GB/T17626.2	Contact ±6KV/Air ±8KV	perf. Criteria B
	RS	IEC/EN61000-4-3, GB/T17626.3	10V/m(With Module)	perf. Criteria A
	CS	IEC/EN61000-4-6, GB/T17626.6	10Vr.m.s(With Module)	perf. Criteria A
	EFT	IEC/EN61000-4-4, GB/T17626.4	±4KV (5KHz,100KHz)	perf. Criteria B
	Surge	IEC/EN61000-4-5, GB/T17626.5	±2KV (1.2μs/50μs 2Ω) ±4KV (1.2μs/50μs 12Ω)	perf. Criteria B

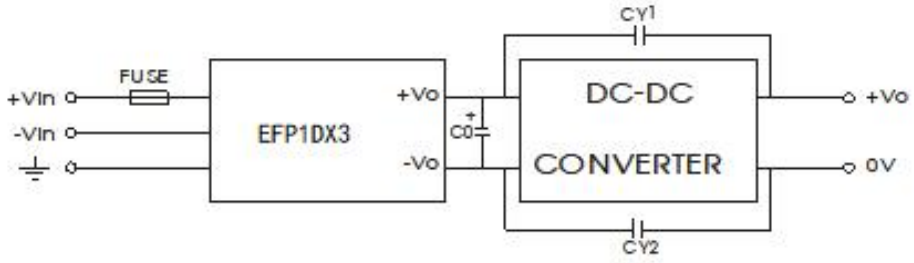
Typical Characteristic Curves



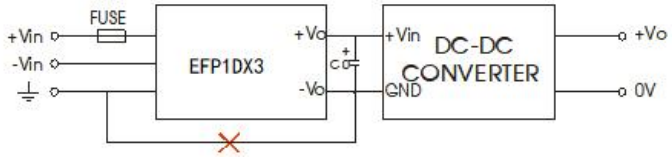


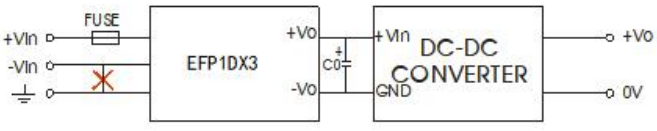
Design Reference

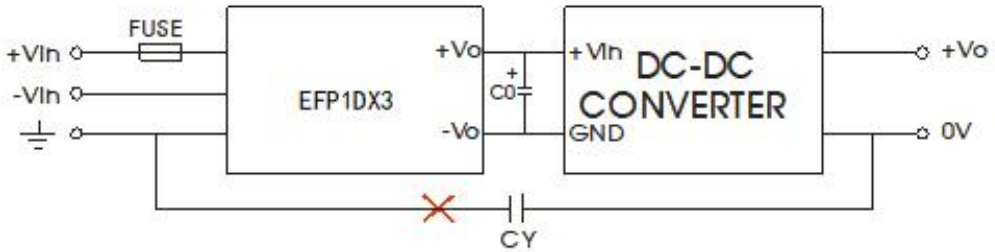
1.Typical application



Model	Recommended external component values
C0	100uF/200V electrolytic capacitor
CY1, CY2	1nF/2000V
FUSE	The fuse value varies with different power modules and must be selected in accordance with the specified input current of the corresponding power converter, but not exceeding the filter specifications.



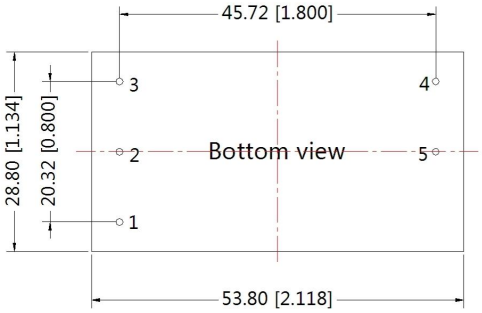




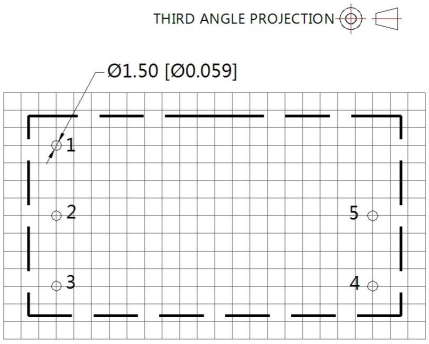
Note: Connections marked with X interfere with this filter modules performance and should therefore not be used

Dimensions and Recommended





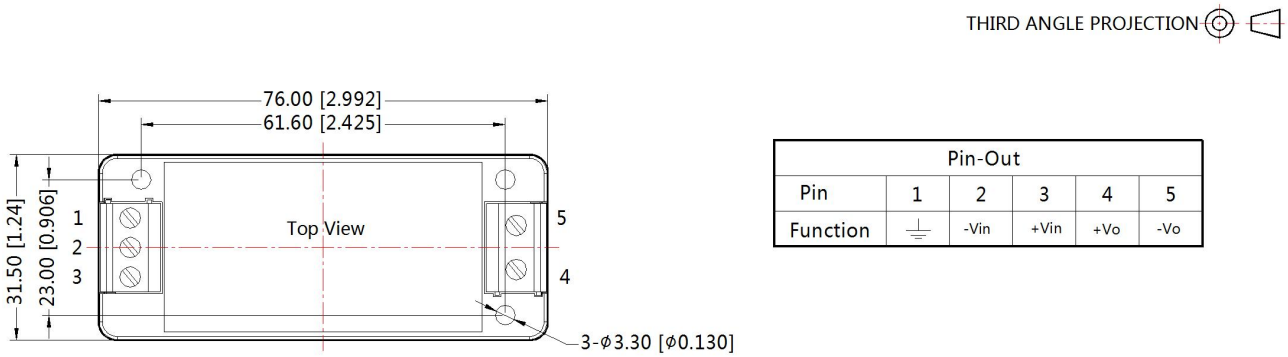
Note:
Unit :mm[inch]
Pin diameter tolerances :±0.10[±0.004]
General tolerances:±0.50[±0.020]



Note : Grid 2.54*2.54mm

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

E2S Dimension

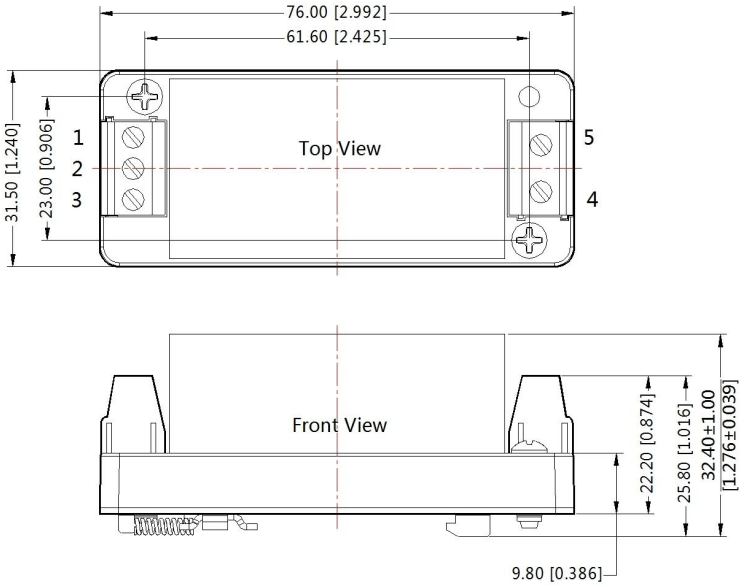


Pin-Out					
Pin	1	2	3	4	5
Function	⏚	-Vin	+Vin	+Vo	-Vo

Note:
Unit: mm[inch]
Wire range: 24-12 AWG
Tightening torque: Max 0.4 N·m
General tolerances: ±0.50[±0.020]

D4S Dimension

THIRD ANGLE PROJECTION



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

Note:
Unit: mm[inch]
Wire range: 24-12 AWG
Tightening torque: Max 0.4 N·m
Installed on DIN RAIL TS35
General tolerances: ±0.50[±0.020]

Note:
1. Unless otherwise specified, parameters in this datasheet were measured under the conditions of Ta=25℃, humidity<75% with nominal input voltage and rated output load;
2. All index testing methods in this datasheet are based on our company corporate standards;
3. Products are related to laws and regulations: see "Features" and "EMC";
4. Our products shall be classified according to ISO14001 and related environmental laws and regulations, and shall be handled by qualified units.