Descriptions

EMC Filter



RoHS

Features

- Input voltage range: 18-75VDC
- Operating temperature range: -40℃ to +85℃
- High efficiency up to 97%
- The supporting DC/DC module power supply meets the surge level requirements of ± 2kV (2 Ω internal resistance)/± 4kV (12 Ω internal resistance) in IEC/EN61000-4-5 standard

Applications

- Industrial control
- Electric power
- home appliances
- Instrumentation
- Communication
- Civil applications

Selection Guide

Certification	Model	Input Voltage Range (VDC)	Nominal Current (A)(Max)
--	EFP1D01	18-75	1

Note: * Product model suffix "E2S" for wiring type package expansion, suffix "D4S" for rail type package expansion.

Specifications

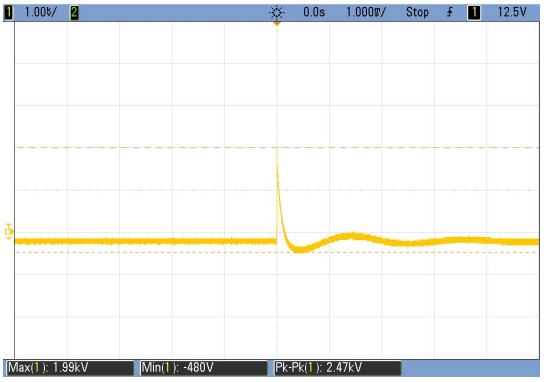
Product Specifications	Item	Operating Conditions	Min.	Typ.	Max.	Unit
General Specifications	Efficiency	24VDC @1A	--	97	--	%
	Operating Temperature		-40	--	85	℃
	Storage Temperature		-55	--	105	
	Case Temperature Rise	24VDC @1A	--	15	--	
	Test Voltage (Vin+～PE、Vin-～PE)	Tested for 1 minute and leakage current: 5 mA	--	1.5	--	kVAC
Mechanical Specifications	Case Material	Black epoxy resin; flame-retardant, heat-resistant (UL94 V-0)				
	Dimension	Horizontal package	37.00 x 23.00 x 15.00 mm			
		E2S chassis mounting	76.00 x 31.50 x 23.80 mm			
		D4S DIN-Rail mounting	76.00 x 31.50 x 28.40 mm			
	Weight	Horizontal package	20.0g (Typ.)			
		E2S chassis mounting	40.0g(Typ.)			
		D4S DIN-Rail mounting	60.0g (Typ.)			

Electromagnetic Compatibility (EMC)

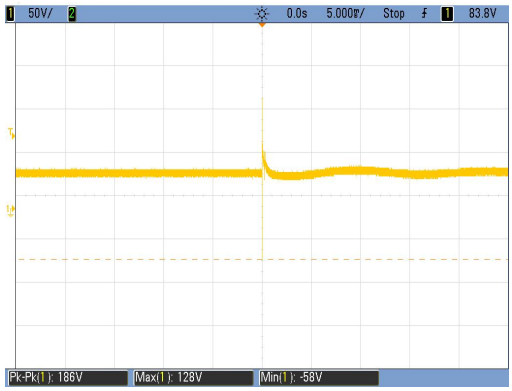
EMI	CE	CISPR32/EN55032	150kHz-30MHz CLASS B(With Module)	
	RE	CISPR32/EN55032	30MHz-1GHz CLASS B(With Module)	
EMS	ESD	IEC/EN61000-4-2, GB/T17626.2	Contact ±6kV/Air ±8kV	perf. Criteria B
	RS	IEC/EN61000-4-3, GB/T17626.3	10V/m(With Module)	perf. Criteria A
	CS	IEC/EN61000-4-6, GB/T17626.6	10Vr.m.s (With 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

EMC Characteristic Curve

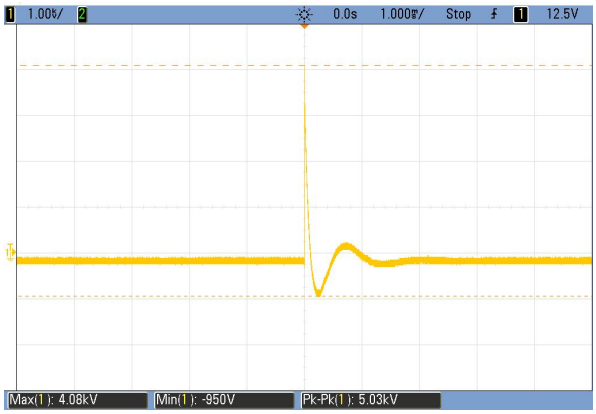
EFP1D01 Surge Test Result



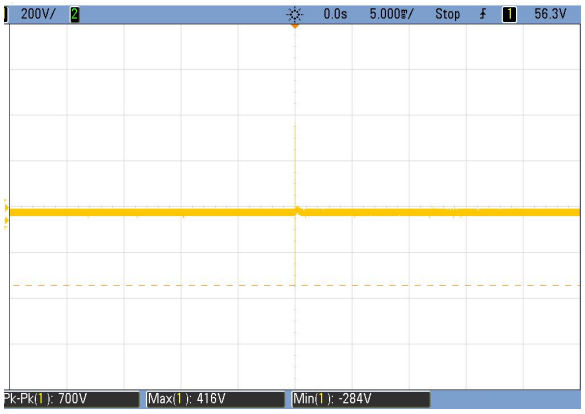
Input voltage waveform (Differential mode 1.99kV)



Output voltage waveform (0.12kV)



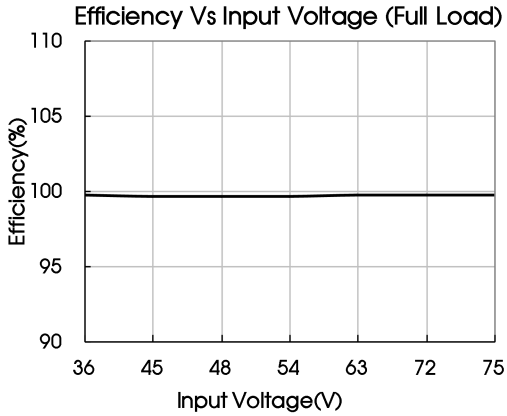
Input voltage waveform (Common mode 4.08kV)

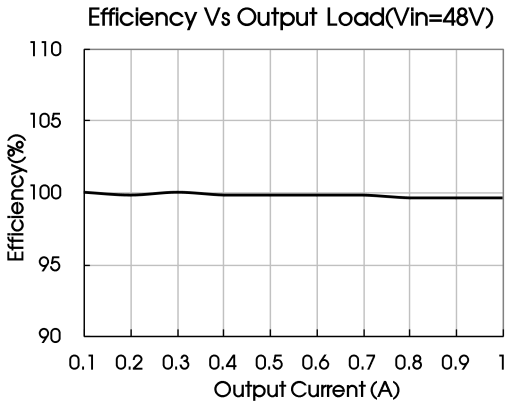


Output voltage waveform(0.41kV)

Note: The above test results are supporting DWMD10-B4805 measured at full load.

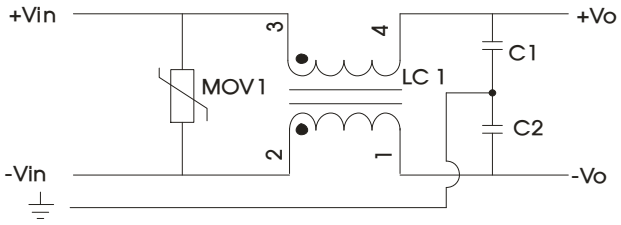
Typical Characteristic Curves



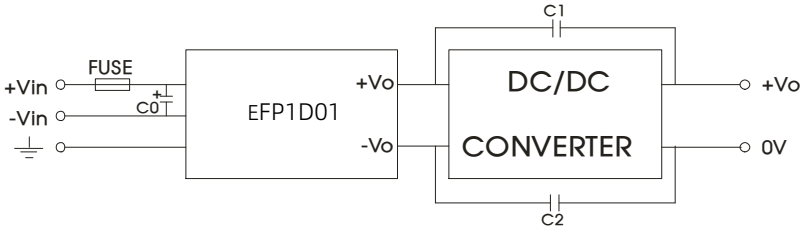


Design Reference

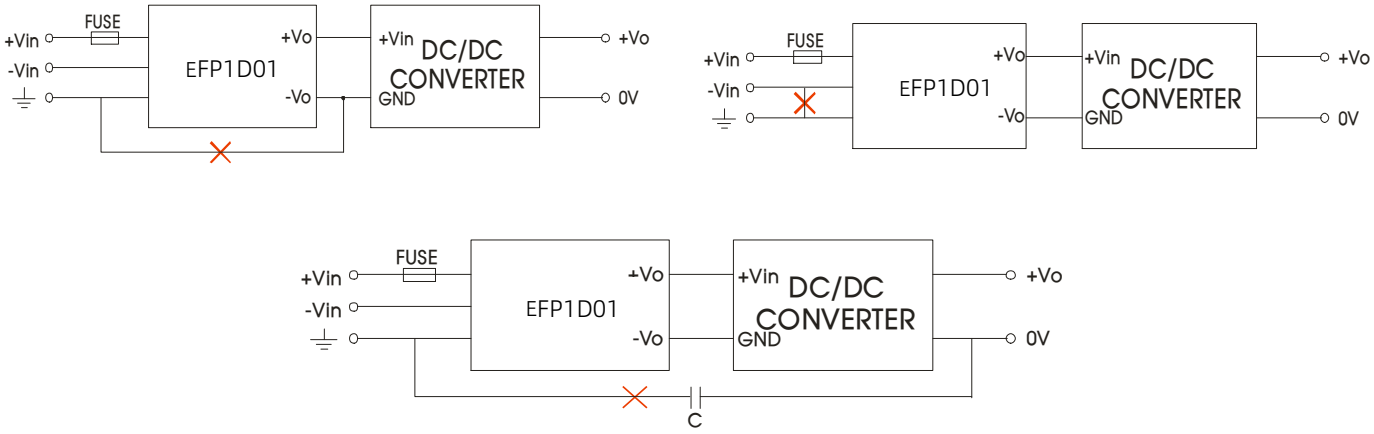
1. Inside schematic



2. Typical application

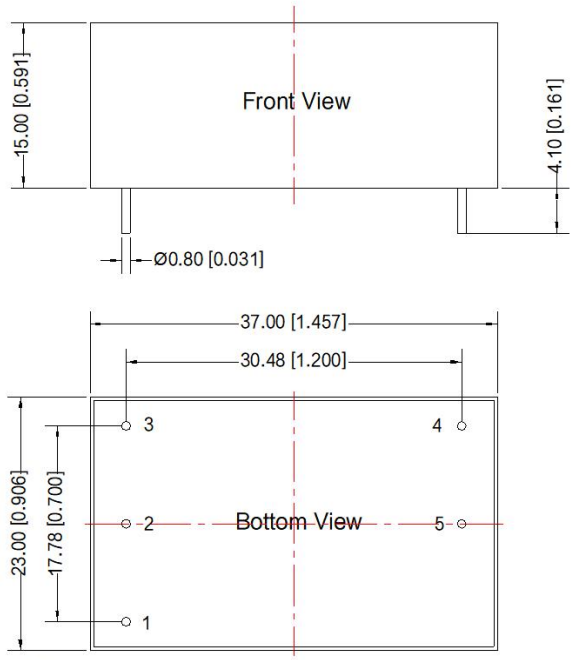


Model	Recommended external circuit parameters
C0	330uF/100V electrolytic capacitor
C1, C2	1000pF/400VAC capacitor
FUSE	The fuse value varies with different power modules and must be selected in accordance with the specified input current of the corresponding power converter, but not exceeding the filter specifications.

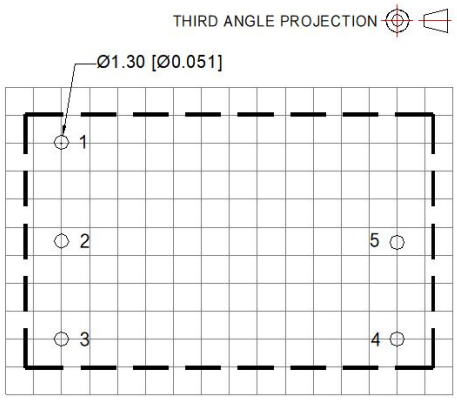


Note: Connections marked with X interfere with this filter modules performance and should therefore not be used

Standard Dimension



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

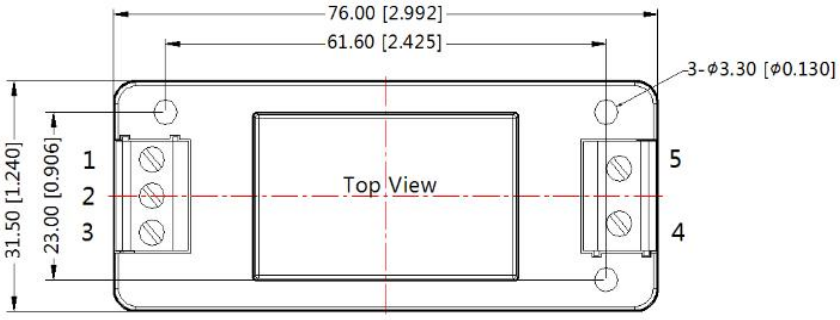


Note: Grid 2.54*2.54mm

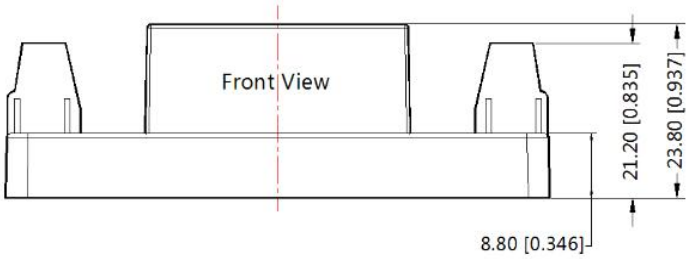
Pin-Out	
Pin	Mark
1	⏚
2	-Vin
3	+Vin
4	+Vo
5	-Vo

E2S Dimension

THIRD ANGLE PROJECTION



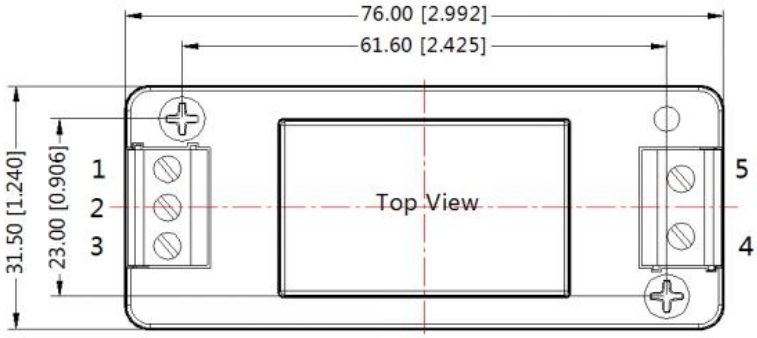
Pin-Out	
Pin	Function
1	⏚
2	-Vin
3	+Vin
4	+Vo
5	-Vo



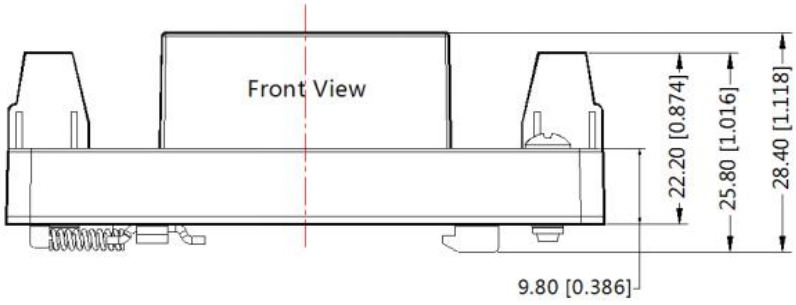
Note:
Unit :mm[inch]
Pin diameter tolerances :±0.10[±0.004]
General tolerances:±0.50[±0.020]

D4S Dimension

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]

Notes:

1. If the product is not operated within the required load range, the product performance cannot be guaranteed to comply with all parameters in the datasheet;
2. 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;
3. All index testing methods in this datasheet are based on our company corporate standards;
4. Products are related to laws and regulations: see "Features" and "EMC";
5. Our products shall be classified according to ISO14001 and related environmental laws and regulations, and shall be handled by qualified units.