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SERIES: VFM-30-UW | DESCRIPTION: DC POWER LINE FILTER

FEATURES

- compact
- high efficiency 98%
- meet IEC/EN61000-4 standard
- compliant to railway standard EN50155
- CISPR22/EN55022 compliant
- DIP, Chassis and DIN Rail mounting version
- input voltage protection
- ultra wide input rating





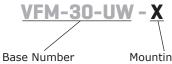
SPECIFICATIONS

parameter	conditions/description	min	typ	max	units
input voltage		40	110	160	Vdc
output power				30	W
no load input current	at 110 Vdc		·	1	mA
efficiency	at 110 Vdc, full load		98		%
isolation voltage	+Vin to GND, -Vin to GND, at 1 minute and 1,500 leakage current 5 mA max		1,500	Vac	
conducted emissions	CISPR22/EN55022, 150 kHz ~ 30 MHz class B				
radiated emissions	CISPR22/EN55022, 30 MHz ~ 1 GHz class B		·		
ESD	IEC/EN61000-4-2, air \pm 8 kV, contact \pm 6kV, class B				
radiated immunity	IEC/EN61000-4-3, 10 V/m, class A				
EFT/burst	IEC/EN61000-4-4, ±4 kV(5 kHz, 100 kHz), class B				
surge	IEC/EN61000-4-5, ±2 kV (1.2μs/50μs 2Ω)/±4 kV (1.2 μs/50 μs 12 Ω), class B				
conducted immunity	IEC/EN61000-4-6, 10 Vr.m.s, class A				
MTBF	as per MIL-HDBK-217F, 40°C	1,200,000		hours	
RoHS	yes				
operating temperature		-40		85	°C
storage temperature		-55		125	°C
storage humidity	non-condensing	5		95	%
vibration	IEC/EN61373, 10 cycles in each axis, test time in each axis: 3 minute, frequency: 5-150 Hz, amplitude: 7.5mm, acceleration: 10g				

Notes: 1. All specifications are measured at Ta=25°C, humidity < 75%, nominal input voltage, and rated load, unless otherwise specified.

PART NUMBER KEY

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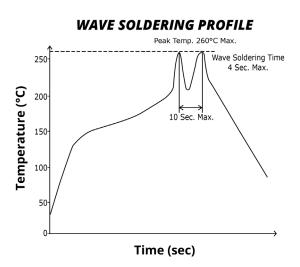
Mounting Style: D = board mount T = chassis mount DIN = DIN-rail mount

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SOLDERABILITY²

parameter	conditions/description	min	typ	max	units
hand soldering	for 3~5 seconds	350	360	370	°C
wave soldering	see wave soldering profile			260	°C

Note: 2. For board mount models only.



MECHANICAL

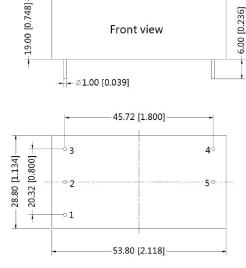
parameter	conditions/description	min	typ	max	units
	board mount: 53.80 x 28.80 x 19.00 [2.118 x 1.134 x 0.748 inch]				mm
dimensions	chassis mount: 76.00 x 31.50 x 27.80 [2.992 x 1.240 x 1.094 inch]			mm	
	DIN-Rail mount: 76.00 x 31.50 x 32.40 [2.992 x 1.240 x 1.276 inch]				mm
case material	black flame-retardant heat-proof epoxy resin (UL94V-0)				
weight	board mount		50		g
	chassis mount		70		g
	DIN-rail mount		90		g

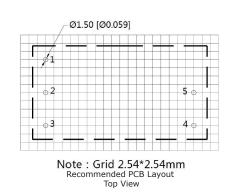
MECHANICAL DRAWING (BOARD MOUNT)

units: mm [inch] tolerance: $\pm 0.50[\pm 0.020]$ pin diameter tolerance: $\pm 0.10[\pm 0.004]$

PIN CONNECTIONS		
PIN	Function	
1	GND	
2	-Vin	
3	+Vin	
4	+Vout	
5	-Vout	

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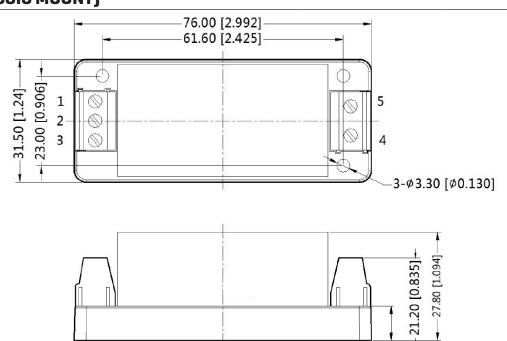


MECHANICAL DRAWING (CHASSIS MOUNT)

units: mm [inch] tolerance: ±0.50[±0.020]

wire range: 24~12 AWG tightening torgue: 0.4 N*m max

PIN CONNECTIONS		
PIN	Function	
1	GND	
2	-Vin	
3	+Vin	
4	+Vout	
5	-Vout	



8.80 [0.346]-

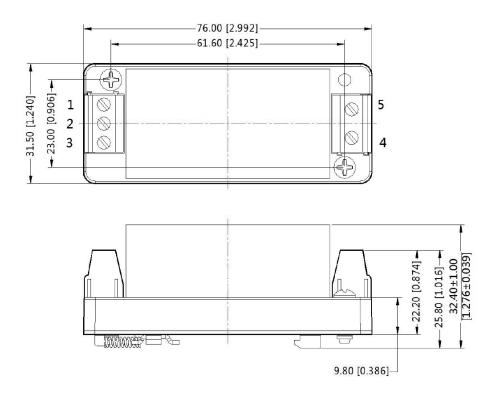
MECHANICAL DRAWING (DIN-RAIL MOUNT)

units: mm [inch] tolerance: ±0.50[±0.020]

installed on DIN rail TS35 wire range: 24~12 AWG tightening torgue: 0.4 N*m max

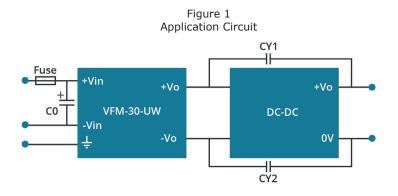
PIN CONNECTIONS		
PIN	Function	
1	GND	
2	-Vin	
3	+Vin	
4	+Vout	
5	-Vout	

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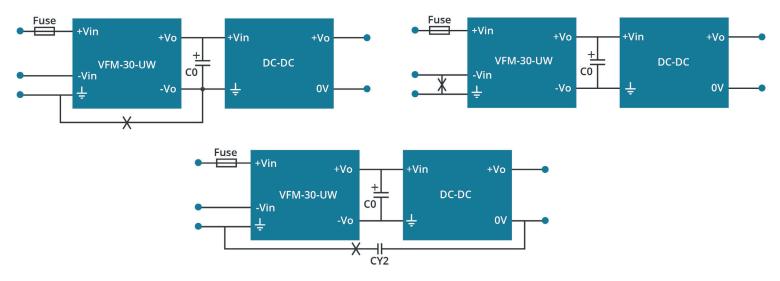
APPLICATION CIRCUIT

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Recommended External Circuit Components			
FUSE	choose according to power module datasheet		
C0	100 µF / 200 V, electrolytic		
CY1, CY2	1 nF / 2 kV		

Figure 2 Non-supported Application for Module



REVISION HISTORY

rev.	description	date
1.0	initial release	12/17/2018
1.01	packaging removed	05/14/2021
1.02	circuit figures updated	01/14/2022

The revision history provided is for informational purposes only and is believed to be accurate.



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CUI offers a two (2) year limited warranty. Complete warranty information is listed on our website.

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