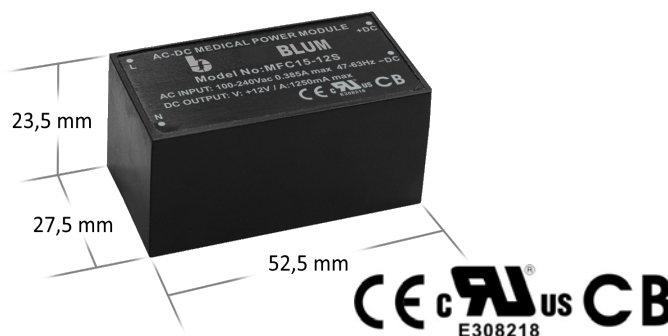


MFC15 SERIES

15 Watts

KEY FEATURES

- Switching Power Module for PCB Mountable
- Fully Encapsulated Plastic Case
- Universal Input Range 90-264VAC
- Regulated Output
- Low Ripple and Noise
- <0.1W No Load Input Power
- Isolation Class II
- Small Size
- CE, CB, UL, cUL Approvals
- 3-Year Product Warranty



ELECTRICAL SPECIFICATIONS

All specifications valid at normal input voltage, full load and +25°C after warm-up time unless otherwise stated.

Model No.		MFC15-5S	MFC15-9S	MFC15-12S	MFC15-15S	MFC15-24S
Max Output Wattage (W)		15W				
Input	Voltage	90-264 VAC or 120-370 VDC, " N " to DC " + " ; " L " to DC " - "				
	Frequency (Hz)	47-440 Hz				
	Current (Full load)	385 mA max. (115 VAC) / 250 mA max. (230 VAC)				
	Inrush current (<2ms, Cold Start)	20 A max. (115 VAC) / 40 A max. (230 VAC)				
	Leakage Current	< 0.1mA / 264 VAC (Touch Current)				
	External fuse (recommend)	3.15 A slow blow type				
Output	Voltage (V.DC.)	5V	9V	12V	15V	24V
	Voltage Accuracy	±2%				
	Current (mA) max	3000	1666	1250	1000	625
	Maximum Capacitive Load (at 230 VAC)	7000uF	5000uF	1500uF	1000uF	470uF
	Line Regulation (LL-HL) (typ.)	±0.5%				
	Load Regulation (5-100%) (typ.)	±1%				
	Ripple (Full load) (Note 1)	75mV max (Vp-p)		1% of Vout		
	Noise (Full load) (Note 1)	120mV max (Vp-p)		1% of Vout		
	Efficiency (at 230 VAC)	79%	80%	84%	84%	85%
Protection	Hold-up Time(typ)	15 ms (115VAC) / 56ms (230VAC)				
	Over Power Protection	Hiccup technique, auto-recovery				
	Over Voltage Protection	Zener diode clamp				
Isolation	Short Circuit Protection	Hiccup mode (automatic recovery)				
	Input-Output (V.AC)	4000V				
Environment	Operating Temperature	-40°C...+80°C (with derating)				
	Storage Temperature	-40°C...+90°C				
	Max Case Operating Temperature	Under 115 VAC 83°C , others 90°C				
	Temperature Coefficient	±0.05%/°C				
	Altitude During Operation	5000m				
	Humidity	up to 95% RH				
	MTBF	>350,000 h @ 25°C (MIL-HDBK-217F)				
	Atmospheric Pressure	540 hPa to 1060 hPa				
Physical	Dimensions (L x W x H)	2.07 x 1.08 x 0.93 Inches (52.5 x 27.5 x 23.5 mm) Tolerance ±0.5 mm				
	Case Material	Plastic resin (flammability to UL 94V-0)				
	Weight	60 g				
	Cooling Method	Free air convection				



ELECTRICAL SPECIFICATIONS

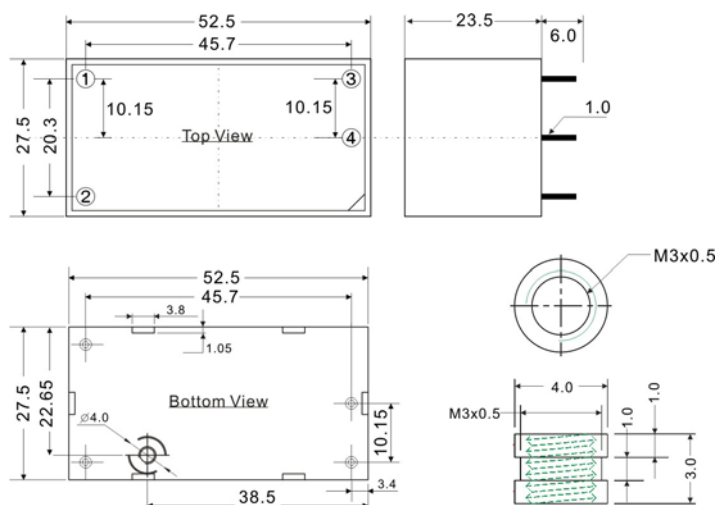
All specifications valid at normal input voltage, full load and +25°C after warm-up time unless otherwise stated.

Model No.		MFC15-5S	MFC15-9S	MFC15-12S	MFC15-15S	MFC15-24S
Safety	Approval	cUL / UL Standard: UL 60950-1, CAN/CSA C22.2 No. 60950-1-07 ANSI/AAMI ES60601-1 (2005 + C1:09 + A2:10), CAN/CSA-C22.2 No. 60601-1 (2008), 2 x MOPP CB Standard: IEC 60950-1:2005 (2nd Edition) + Am 1:2009 + Am 2:2013 IEC 60601-1:2005 (3rd Edition) + CORR. 1 (2006) + CORR. 2 (2007) + AM1 (2012) or IEC 60601-1 (2012 reprint), 2 x MOPP				
EMC	Conducted and radiated EMI	EN55011 class B (Radiation Class A for MFC15 A2 Series)				
	EMS	EN60601-1-2 4th edition				

NOTE

1. Ripple & Noise are measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor.
2. Safety approvals cover frequency 47-63 Hz.
3. That "natural convection" is about 20LFM but is not equal to still air (0 LFM).
4. It's recommended to add Varistor 14S471K at L / N input side in parallel.

MECHANICAL DIMENSIONS

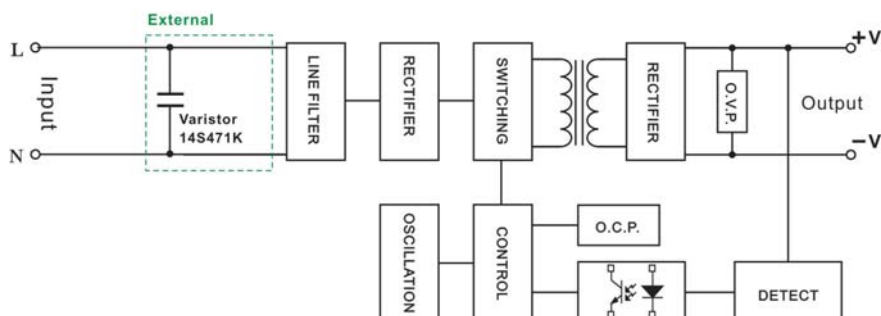


PIN#	Single
1	AC IN (L)
2	AC IN (N)
3	+DC OUT
4	-DC OUT

Maximum Torque 1 2 { 1.2 1 } (k g f . c m { N . m })

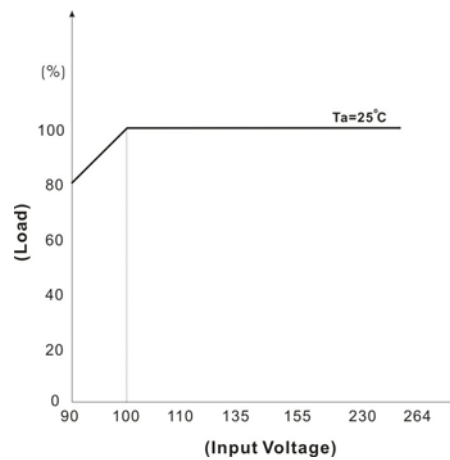
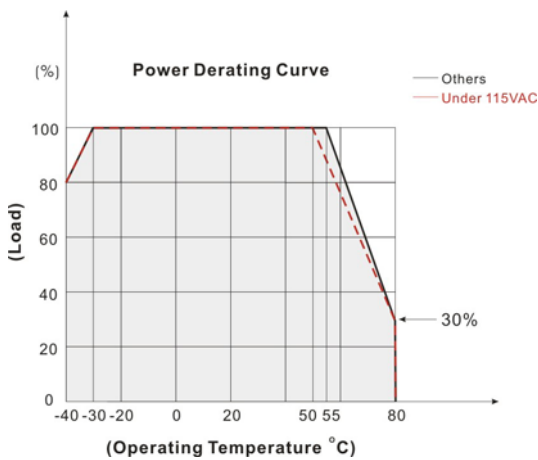
BLOCK DIAGRAM

Single Output





DERATING



SCREW TERMINAL

MFC15-A2



PIN#	Single
1	NO CONNECT
2	AC IN (L)
3	AC IN (N)
4	NO CONNECT
5	+DC OUT
6	-DC OUT
7	NO CONNECT
8	NO CONNECT

