AMA02S SERIES

AC-DC

2W

DIMENSIONS:

1.33 x 0.87 x 0.67"
(33.7 x 22.2 x 17mm)

COMPACT SIZE

SINGLE OUTPUT 3.3 TO 24V

<0.3W NO-LOAD POWER

90 - 305 VAC

-40 TO 80°C OPERATION

3 YEAR WARRANTY

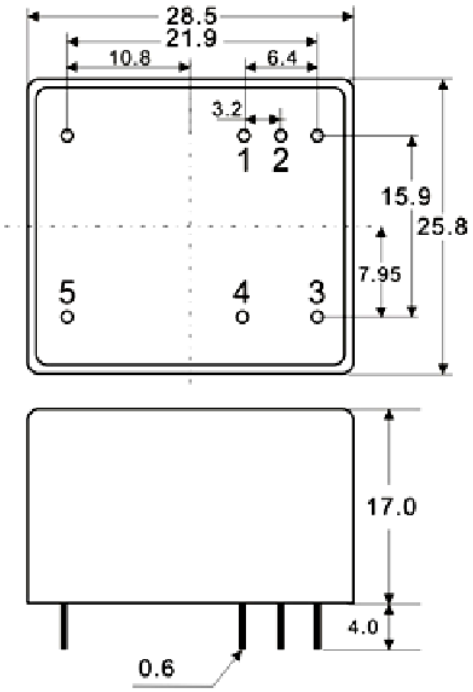
Part numbers

AMA	02	12S
Series	Power	Output voltage
		03S = 3.3VDC 05S = 5VDC 09S = 9VDC 12S = 12VDC 15S = 15VDC 24S = 24VDC

Key specifications

Input range	Safety certification	Efficiency	Environmental performance
90-305VAC	Conforms to EN/IEC62368-1 Ed 3.1	66 - 75%	Operational: -40 to 80°C

Mechanical



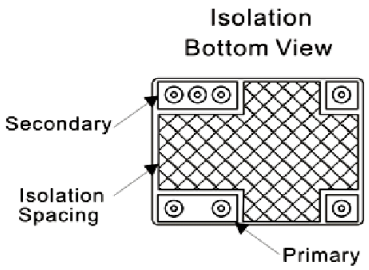
Pin	Function
1	+ DC OUT
2	- DC OUT
3	AC IN (N)
4	AC IN (L)
5	NC

Notes

1. All dimensions shown in mm
2. Pin diameter tolerance 0.5 ±0.05 (0.02 ±0.002)
3. General tolerance ±0.5 (±0.002)

Weight

19.9g



AMA02S SERIES

Models & Ratings

Model Number(1)	Output Power	Output Voltage	Output current	Efficiency	Capacitive load
AMA0203S	2W	3.3V	600mA	66%	7000uF
AMA0205S	2W	5V	400mA	70%	4000uF
AMA0209S	2W	9V	222mA	73%	1200uF
AMA0212S	2W	12V	167mA	73%	500uF
AMA0215S	2W	15V	133mA	74%	350uF
AMA0224S	2W	24V	83mA	75%	110uF

1. Add TMOV14RP300E or equivalent across L/N in order to pass EN61000-4-5

Input

Parameter	Min	Typical	Max	Unit	Notes/Conditions
Input voltage	90		305	VAC	See page 5 for derating curve. 120-430VDC
Input frequency	47		63	Hz	
Power factor					EN61000-3-2 class A
Input current			75	mA rms	115VAC
Inrush current		30/50		A	115/230VAC. Cold start at 25°C
No load input power			0.3	W	
Leakage current			0.25	mA	240VAC
Input protection					3.15A slow blow fuse required

Output

Parameter	Min	Typical	Max	Unit	Notes/Conditions
Output voltage	3.3		24	VDC	See Models & Ratings table
Set point accuracy			±6	%	
Line regulation			±5	%	Low line to high line
Load regulation			±6	%	10 to 100% load
Minimum load	0			%	
Transient response			4	%	25% load change. Recovery to within 1% in less than 500uS
Ripple and noise		300		mV	All models measured with 0.1uF capacitor & 47uF electrolytic. 20 MHz bandwidth
Hold up time	15			mS	

Protections

Parameter	Min	Typical	Max	Unit	Notes/Conditions
Overload	172		336	%	
Short circuit					Trip and restart. Automatic recovery

Safety

Parameter	Min	Typical	Max	Unit	Notes/Conditions
Safety standards	Conforms to EN/IEC62368-1 Ed 3.1				
Isolation: Input to output	3000			VAC	

EMC: Immunity

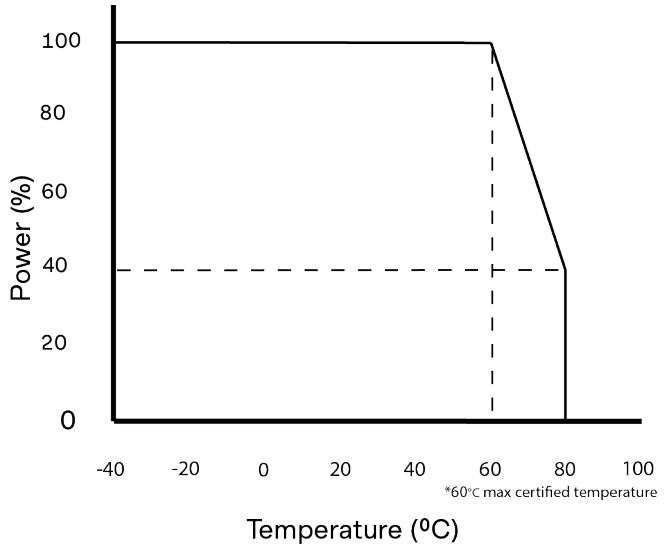
	Standard	Test level	Criteria	Notes/Conditions
ESD	EN61000-4-2	2/3	A	±4kV contact, ±8kV air
Radiated	EN61000-4-3	2	A	3V/m
EFT	EN61000-4-4	2	A	1kV L/N
Surges	EN61000-4-5	Installation class 3	A	2kV L/N Add TMOV14RP300E or equivilent across L/N
Conducted	EN61000-4-6	2	A	3Vrms
Magnetic fields	EN61000-4-8	1	A	1A/m

EMC: Emissions

	Standard	Test level	Criteria	Notes/Conditions
Conducted	EN55022	B		
Radiated	EN55022	B		
Harmonic current	EN61000-3-2	Class A		
Voltage flicker	EN61000-3-3			

Environmental

Parameter	Min	Typical	Max	Unit	Notes/Conditions
Operating temperature	-40		80	°C	See derating curve. 60°C max certified temp
Storage temperature	-40		85	°C	
Cooling					Convection cooled
Temperature coefficient			±0.02	%/°C	
Storage Humidity			95	% RH	
MBTF		>450		MHrs	As per MIL-HDBK-217F, 25°C GB



11th February 2026