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TDK·Lambda RSAN Series

Single phase 250Vac 3 to 60A EMC Filters with DIN rail option

https://product.tdk.com/en/search/emc/emc/power-line/tec_data/nf_rsan
https://www.emea.lambda.tdk.com/uk/products/r-series



Medical Industrial Test LED COMM Broadcast

The RSAN single-phase EMC filters are enclosed in a compact case and part numbers up to 30A can be either chassis or DIN rail mounted (up to 30A) with low leakage current options. They are rated for 250Vac with nine current ratings of 3 to 60A enabling the optimum attenuation to match the current rating. The series uses TDK's amorphous core material to provide both pulse and noise attenuation. Amorphous materials offer a higher resistance to saturation from high voltage pulses and greater long term reliability than semiconductor clamps. The connection terminals are integrated into the case with both the screws and terminal covers captive. This avoids dropped or lost hardware. The RSAN 3A to 30A models are UL certified for a short circuit current rating of up to 14kA and the 40, 50 and 60A models 35kA with the appropriate breaker.

Features	Benefits
• 3 to 60A Current Ratings	• Optimizes the Attenuation for the Current Rating
• DIN Rail Bracket Option	• Flexible Mounting
• Amorphous Core Technology	• Reduces High Voltage Pulse Core Saturation
• Captive Hardware	• No Lost Screws or Terminal Covers
• Safety Certified	• Global Use

Model Selector

Model	Rated Current (A)	SCCR (kA)(1)	HV Pulse Protection	Leakage Current 250V/60Hz (mA)	Maximum DC Resistance (mΩ)	Attenuation frequency range (MHz)		
						Common mode at 25dB	Common mode at 20dB	Differential mode at 25dB
RSAN-2003	3	14	Y	1.0	250	0.1 to 10	-	0.1 to 30
RSAN-2006	6	14	Y	1.0	110	0.1 to 10	-	0.1 to 30
RSAN-2010	10	14	Y	1.0	40	0.3 to 10	-	0.2 to 30
RSAN-2016	16	14	Y	1.0	20	0.8 to 10	-	0.3 to 30
RSAN-2020	20	14	Y	1.0	10	1 to 10	-	0.3 to 30
RSAN-2030	30	14	Y	1.0	6	2 to 10	-	0.4 to 30
RSAN-2040	40	35	Y	1.0	6	0.8 to 10	-	0.1 to 30
RSAN-2050	50	35	Y	1.0	4	-	1 to 10	0.1 to 30
RSAN-2060	60	35	Y	1.0	3	2 to 10	-	0.2 to 30

Model Selector

Model	Rated Current (A)	SCCR (kA)(1)	HV Pulse Protection	Leakage Current 250V/60Hz (mA)	Maximum DC Resistance (mΩ)	Attenuation frequency range (MHz)		
						Common mode at 20dB	Common mode at 10dB	Differential mode at 25dB
RSAN-2003L	6	14	Y	0.01	250	0.1 to 3	-	0.1 to 30
RSAN-2006L	6	14	Y	0.01	110	0.1 to 3	-	0.1 to 30
RSAN-2010L	10	14	Y	0.01	40	0.5 to 6	-	0.2 to 30
RSAN-2016L	16	14	Y	0.01	20	-	0.3 to 10	0.3 to 30
RSAN-2020L	20	14	Y	0.01	10	-	0.5 to 8	0.3 to 30
RSAN-2030L	30	14	Y	0.01	6	-	3 to 20	0.4 to 30

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RSAN	-	2	006	L	D
Series Name		Rated Voltage 2 = 250Vac	Rated Current 003 = 3A 060 = 60A	Low Leakage Current 3A to 30A models	DIN Rail Mount 3A to 30A models

Related Products

Type	Current Rating (A)	Series	Low Leakage	Faston on Terminals	Wire Leads	DIN Rail Mount	Fused	Discharge Resistor	Metal Case
Board mount line filter, HV Pulse	0.5 - 6	RSAG							
Board mount line filter	0.5 - 6	RSEG							
General purpose with faston terminals	6	RSEC							
General purpose	0.5 - 6	RSEL	Y	Y	Y				Y
HV pulse protection	0.5 - 6	RSAL	Y	Y	Y				
Power Entry Module with line filter	3, 6, 10	RPE	Y				Y	Y	
Power Entry Module with line filter, HV Pulse	3, 6, 10	RPA	Y					Y	
Compact size with screw terminals	6 - 30	RSEV				DIN-RSEV*			
Multipurpose	3 - 300	RSEN	Y (Up to 30A)			Y (Up to 30A)			
Multipurpose with HV pulse protection	3 - 60	RSAN	Y (Up to 30A)			Y (Up to 30A)			
High attenuation	3 - 300	RSHN	Y (Up to 30A)			Y (Up to 30A)			
High attenuation with pulse protection	3 - 300	RSMN	Y (Up to 30A)			Y (Up to 30A)			
Wide band, high attenuation	6 - 30	RSKN							

* Separate mounting bracket

Click here for TDK-Lambda three phase filters.

Specification

Model		
Input		
Rated Voltage	Vac/Vdc	250 (Safety certified for AC input only)
Input Frequency	Hz	47 - 63
Leakage Current	-	See model selector
Safety Certifications and Markings	-	UL1283, CSA C22.2 No.8 (cUL), EN60939-1, -2), conforms to RoHS Directive
Environmental		
Operating Temperature	°C	-25 to +85, derating above 55. See derating curve below
Storage Temperature	°C	-25 to +85
Humidity (non condensing)	%RH	Operating and storage 15 - 85
Cooling	-	Convection
Withstand Voltage	Vac	2,500 input to earth
Isolation Resistance (For 1 minute)	MΩ	>100 at 500Vdc
Vibration	-	10-55Hz Amplitude 1.5mm, Sweep for 1 min. X, Y and Z directions for 2 hours each
Other		
Weight (Typ)	g	RSAN2003: 170, RSAN2006-2030: 230, RSAN2040-2060: 870
Size (LxWxH)	mm	RSAN2003-2030: 87 x 52 x 35, RSAN2040-60: 170 x 90 x 54
Size (LxWxH)	Inches	RSAN2003-2030: 3.43 x 2.05 x 1.38, RSAN2040-60: 6.69 x 3.54 x 2.13
Connectors		RSAN2003-2030: M4 screw terminals, RSAN2040-60: M5 screw terminals
MIL-HDBK-217F NOTICE2	Hours	RSAN2003: 6,914,673, RSAN2060: 6,241,418
Warranty	Years	5

Notes

(1) With inverse time circuit breaker. See UL 508 report on website

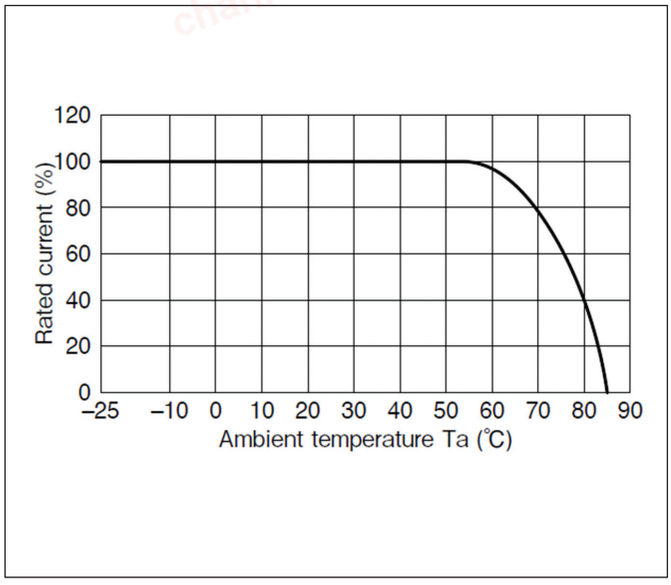
See website for detailed specifications, test methods and installation manual

RSAN technical files

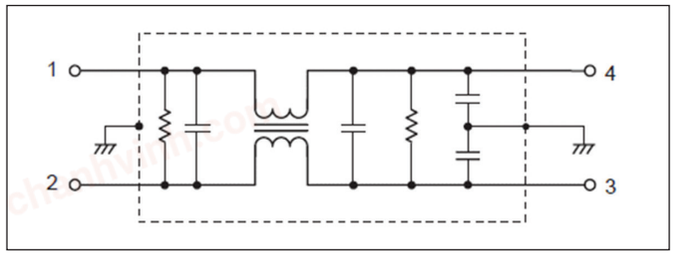
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Mechanical Specification

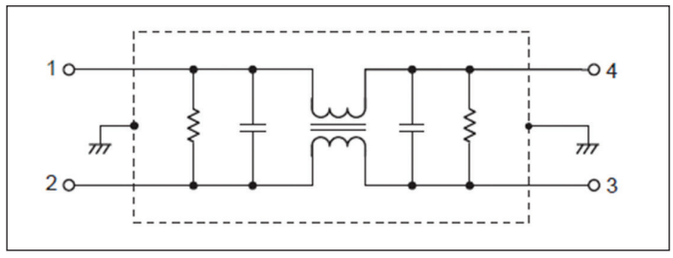
Derating Curve (All models)



Schematic standard leakage current



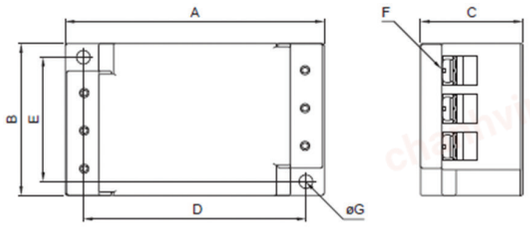
Schematic low leakage current (L option)



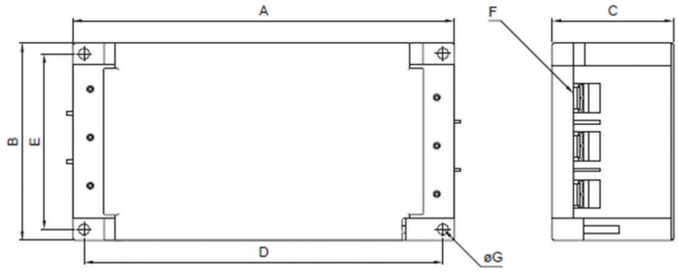
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RSAN Outline Drawing

RSAN-2003/2006/2010/2016/2020/2030



RSAN-2040/2050/2060

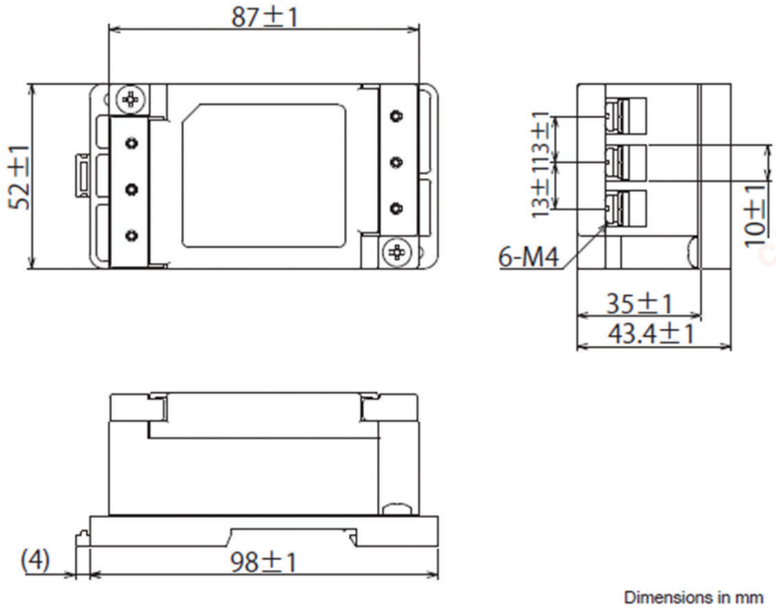


Dimensions in mm

Part No.	A	B	C	D	E	F	ϕG	Recommended clamping torque
RSAN-2003	87	52	35	75	43	M4	4.5	1.27N・m
RSAN-2006								
RSAN-2010								
RSAN-2016								
RSAN-2020								
RSAN-2030								
RSAN-2040	170	90	54	160	80	M5	4.5	2.5N・m
RSAN-2050								
RSAN-2060								

DIN-RSAN Outline Drawing

RSAN-2003D/2006D/2010D/2016D/2020D/2030D

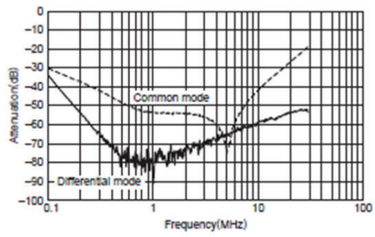


Dimensions in mm

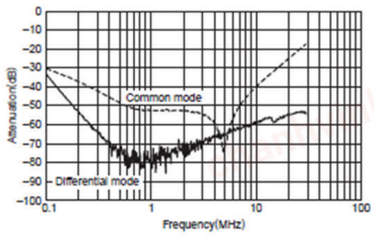
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RSAN2xxx Attenuation vs. Frequency

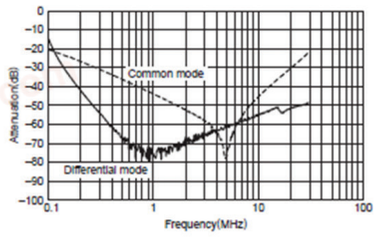
RSAN–2003



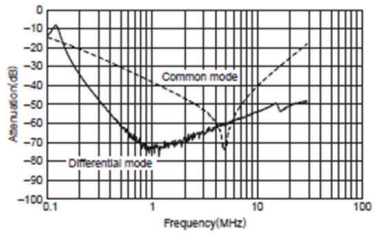
RSAN–2006



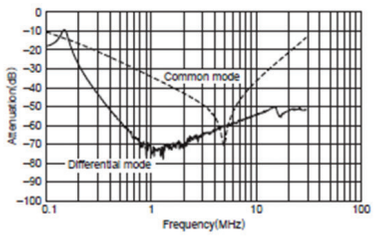
RSAN–2010



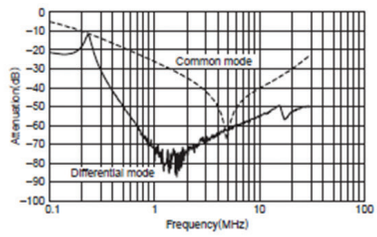
RSAN–2016



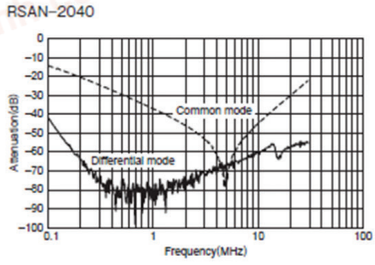
RSAN–2020



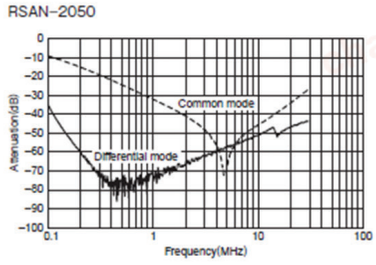
RSAN–2030



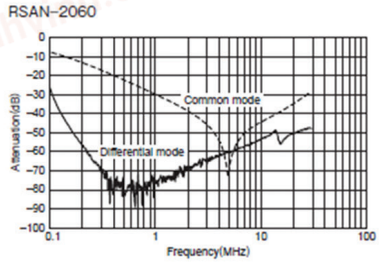
RSAN–2040



RSAN–2050

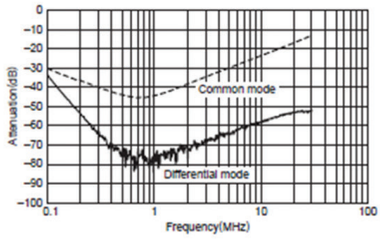


RSAN–2060

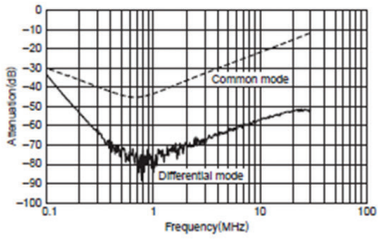


RSAN2xxxL Attenuation vs. Frequency

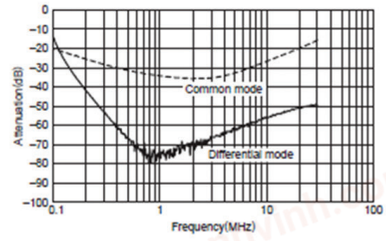
RSAN–2003L



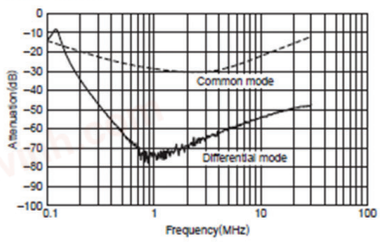
RSAN–2006L



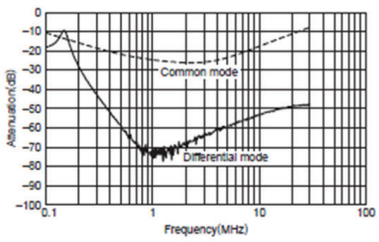
RSAN–2010L



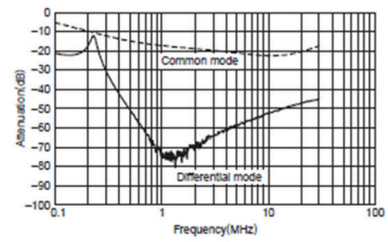
RSAN–2016L



RSAN–2020L



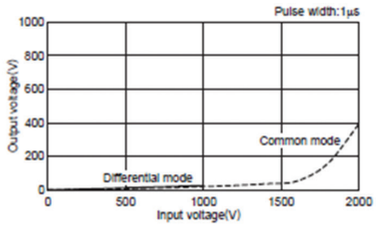
RSAN–2030L



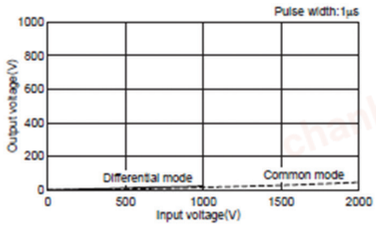
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RSAN2xxx Pulse Attenuation Characteristics

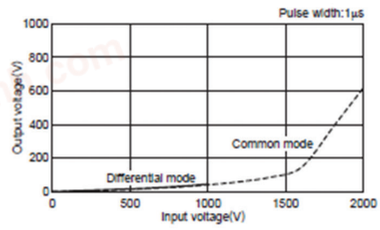
RSAN–2003/2003D



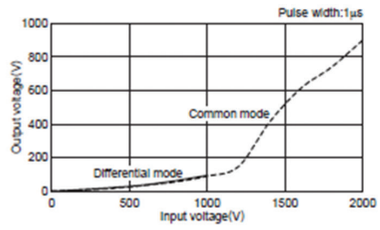
RSAN–2006/2006D



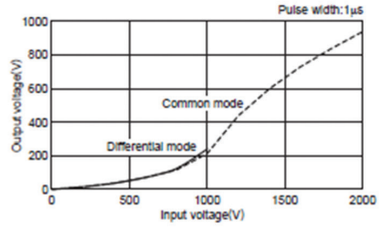
RSAN–2010/2010D



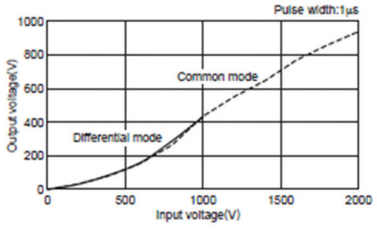
RSAN–2016/2016D



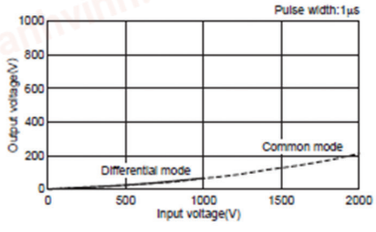
RSAN–2020/2020D



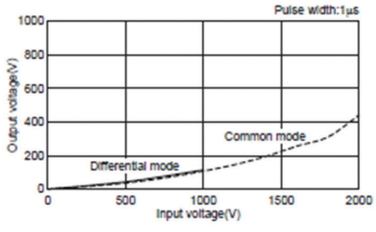
RSAN–2030/2030D



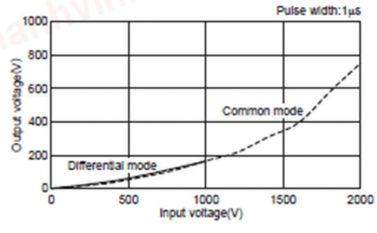
RSAN–2040



RSAN–2050

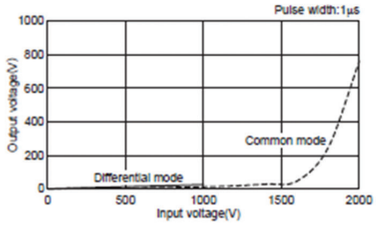


RSAN–2060

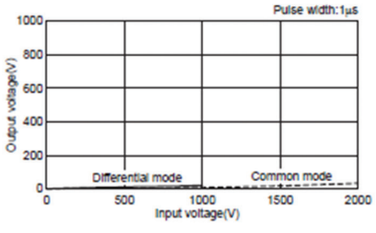


RSAN2xxxL Pulse Attenuation Characteristics

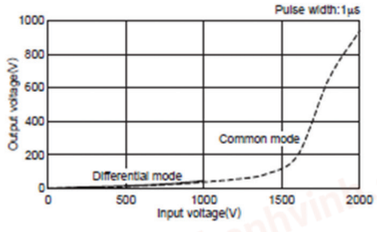
RSAN–2003L/LD



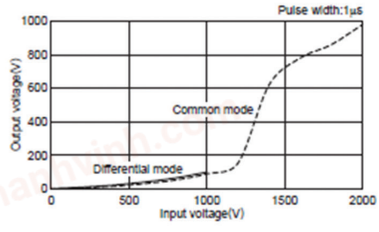
RSAN–2006L/LD



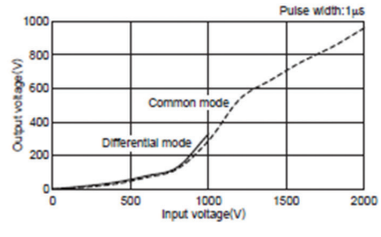
RSAN–2010L/LD



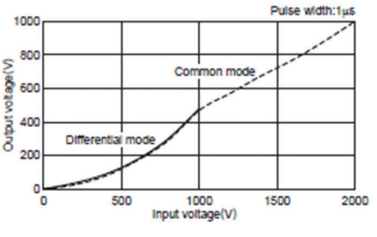
RSAN–2016L/LD



RSAN–2020L/LD



RSAN–2030L/LD



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