https://product.tdk.com/en/products/emc/emc/power-line/tec_data/tdk_nf_rsmn.html

https://www.emea.lambda.tdk.com/uk/products/r-series

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





Medical Industrial Test LED COMM Broadcast

The RSMN single-phase EMC filters are enclosed in a compact case and part numbers up to 30A can be either be chassis or DIN rail mounted 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 materials in a two-stage configuration to provide excellent pulse and noise attenuation. Amorphous cores 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, avoiding dropped or lost hardware. The RSMN 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 Mount Option	• Flexible Mounting
• 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
RSMN-2003	3	14	Y	1.0	350	0.1 to 30	-	0.1 to 30
RSMN-2006	6	14	Y	1.0	140	-	0.1 to 30	0.2 to 30
RSMN-2010	10	14	Y	1.0	60	0.2 to 30	-	0.2 to 30
RSMN-2016	16	14	Y	1.0	35	0.2 to 30	-	0.3 to 30
RSMN-2020	20	14	Y	1.0	22	0.3 to 30	-	0.4 to 30
RSMN-2030	30	14	Y	1.0	12	0.4 to 20	-	0.6 to 30
RSMN-2040	40	35	Y	1.0	10	0.3 to 30	-	0.1 to 30
RSMN-2050	50	35	Y	1.0	8	0.4 to 30	-	0.3 to 30
RSMN-2060	60	35	Y	1.0	6	0.5 to 30	-	0.3 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 25dB	Common mode at 10dB	Differential mode at 25dB
RSMN-2003L	3	14	Y	0.10	350	0.3 to 30	-	0.2 to 30
RSMN-2006L	6	14	Y	0.10	140	0.4 to 20	-	0.2 to 30
RSMN-2010L	10	14	Y	0.10	60	0.7 to 20	-	0.3 to 30
RSMN-2016L	16	14	Y	0.10	35	0.7 to 20	-	0.3 to 30
RSMN-2020L	20	14	Y	0.10	22	-	0.6 to 20	0.3 to 30
RSMN-2030L	30	14	Y	0.10	12	-	1 to 20	0.4 to 30

RSMN	-	2	003	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.

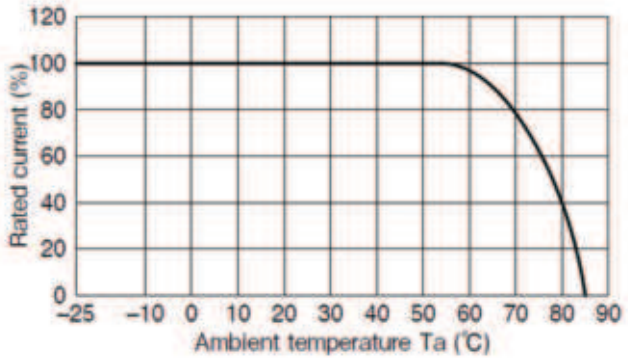
Specification

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, up to 30A), EN60939, conforms to RoHS Directive
Environmental		
Operating Temperature	°C	-25 to +85, derating above 55. See derating curves below
Storage Temperature	°C	-25 to +85
Humidity (non condensing)	%RH	Operating: and storage 15 - 85, storage: 5 - 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	RSMN2003: 190, RSMN2006-2010: 240, RSMN2016-2030: 350, RSMN2040: 1500, RSMN2050-2060: 1400
Size (LxWxH)	mm	See outline drawings
Size (LxWxH)	Inches	See outline drawings
Connectors		See outline drawings
MIL-HDBK-217F NOTICE2	Hours	RSMN2003: 5,410,084, RSMN2060: 3,833,768
Warranty	Years	5

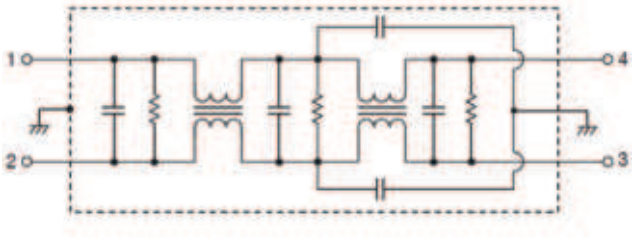
Notes
(1) With inverse time circuit breaker. See UL report on website
See website for detailed specifications, test methods and installation manual
RSMN technical files

Mechanical Specification

Derating Curve

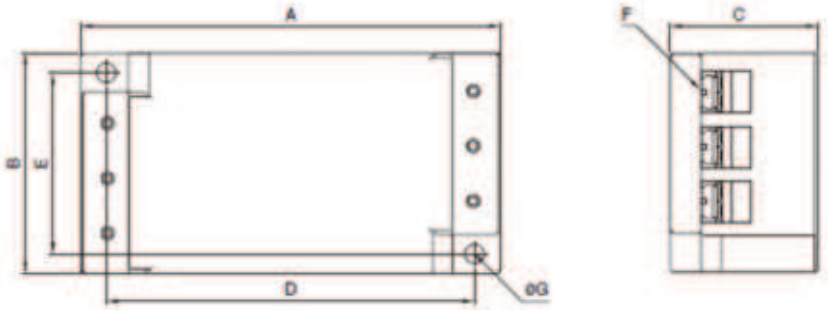


Schematic

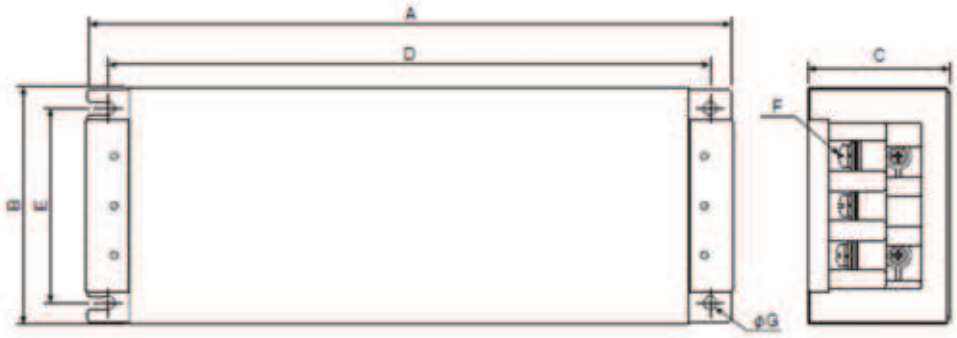


RSMN Outline Drawings

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



RSMN-2040/2050/2060

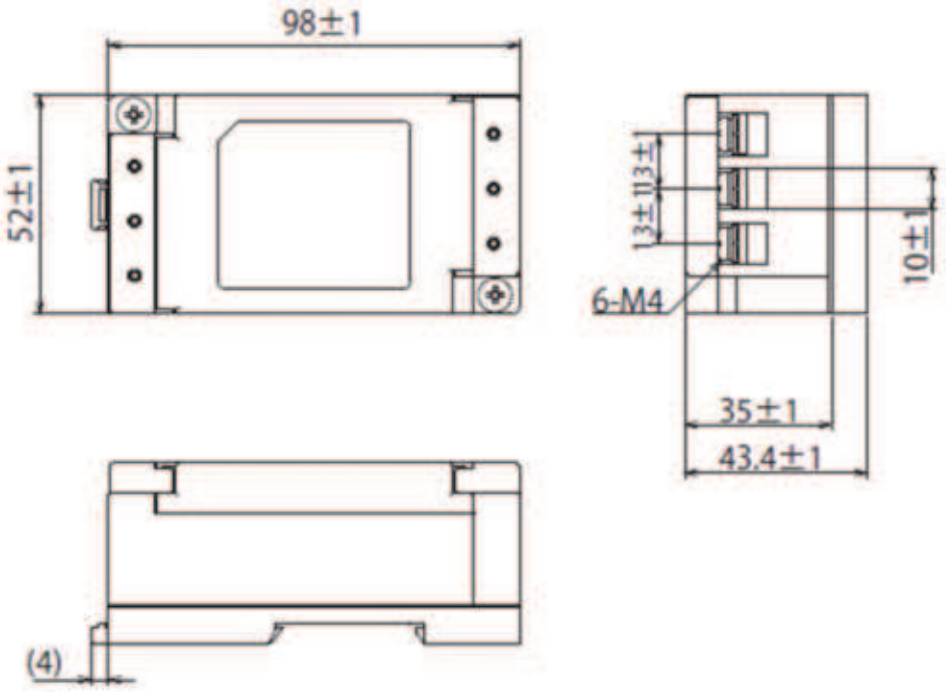


Dimensions in mm

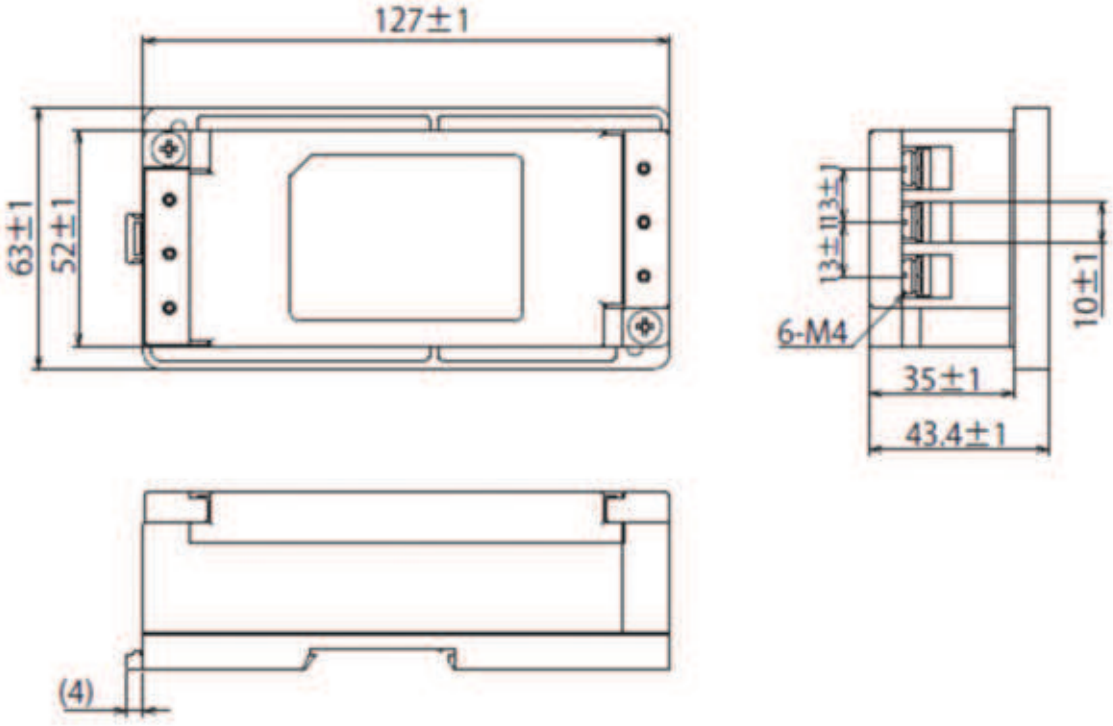
Part No.	A	B	C	D	E	F	φG	Recommended clamping torque
RSMN-2003	98	52	35	86	43	M4	4.5	1.27N・m
RSMN-2006								
RSMN-2010								
RSMN-2016	127	52	35	115	43	M4	4.5	
RSMN-2020								
RSMN-2030								
RSMN-2040	272	100	60	254	82	M5	5.5	2.5N・m
RSMN-2050								
RSMN-2060								

RSMN-2xxxD Outline Drawings

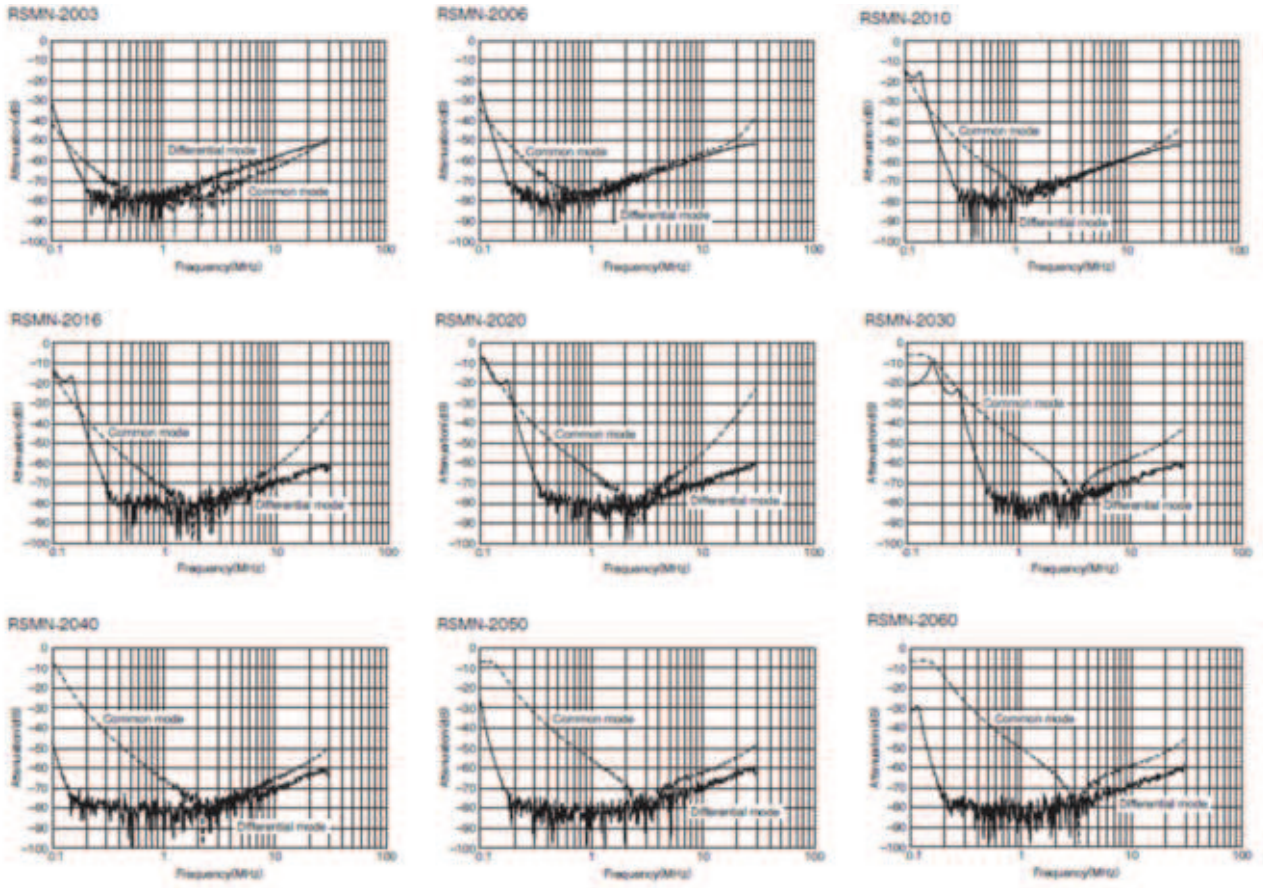
RSMN-2003D/2006D/2010D



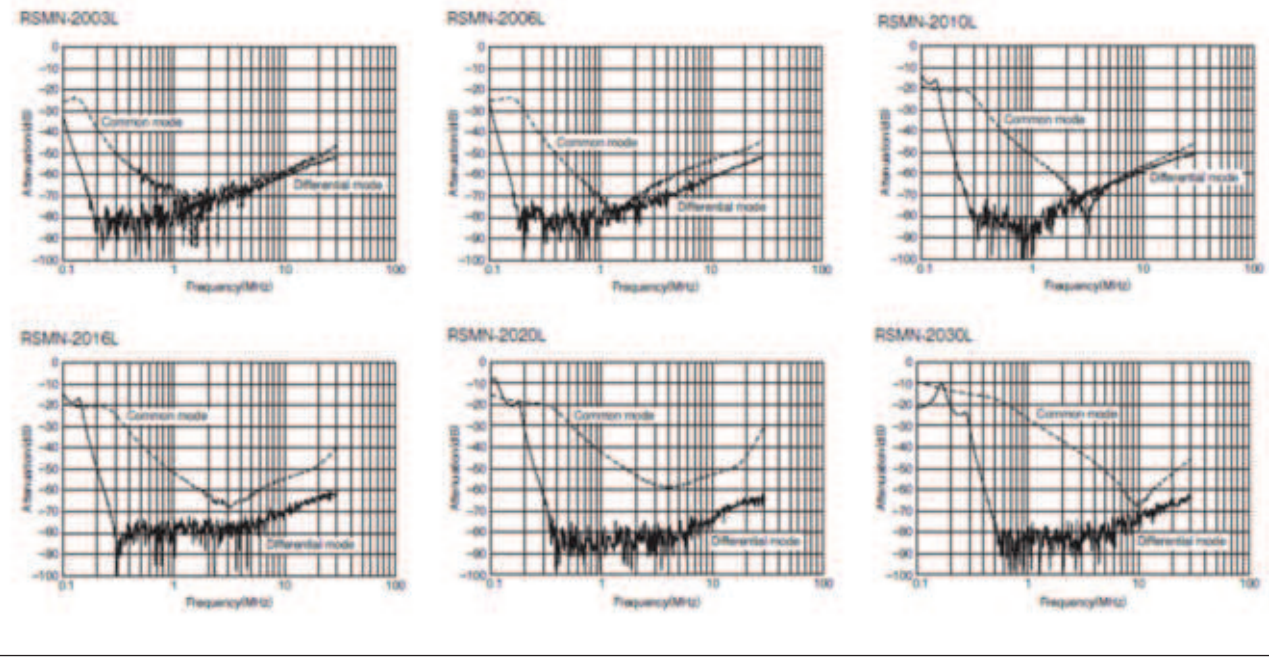
RSMN-2016D/2020D/2030D



RSMN Attenuation vs. Frequency

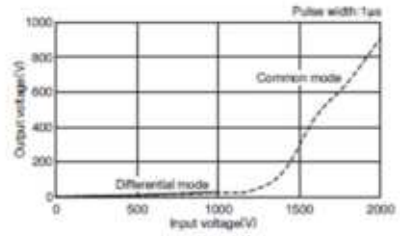


RSMN2xxxL Attenuation vs. Frequency

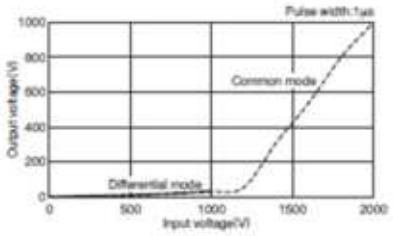


RSMN Pulse Attenuation Characteristics

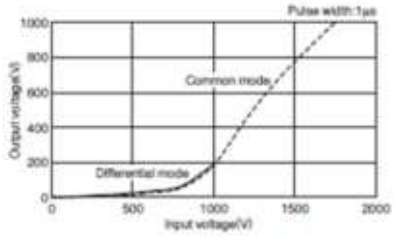
RSMN-2003/2003D



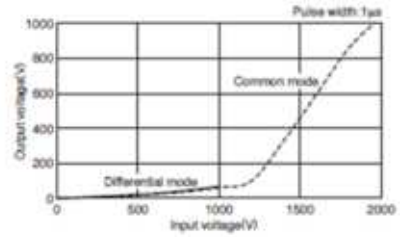
RSMN-2006/2006D



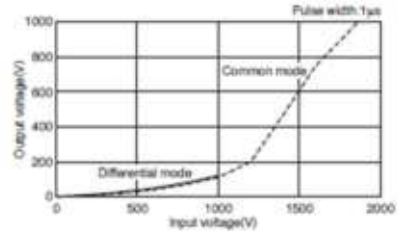
RSMN-2010/2010D



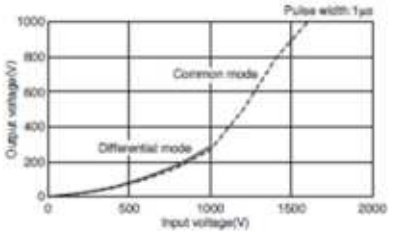
RSMN-2016/2016D



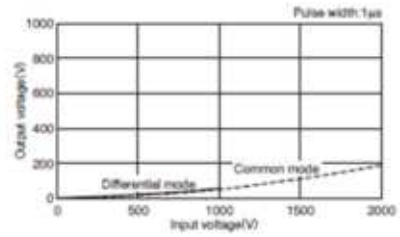
RSMN-2020/2020D



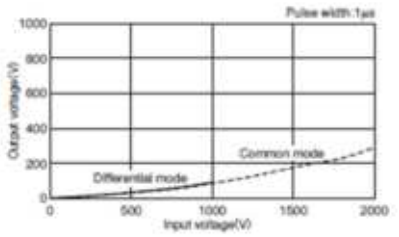
RSMN-2030/2030D



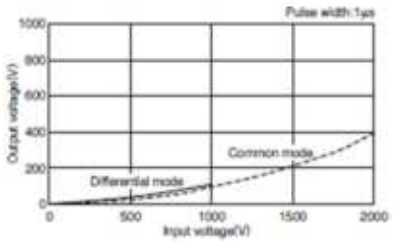
RSMN-2040



RSMN-2050



RSMN-2060



TDK-Lambda France SAS
Tel: +33 1 60 12 71 65
tlf.fr-powersolutions@tdk.com
www.emea.lambda.tdk.com/fr

Italy Sales Office
Tel: +39 02 61 29 38 63
tlf.it-powersolutions@tdk.com
www.emea.lambda.tdk.com/it

Netherlands
tlf.nl-powersolutions@tdk.com
www.emea.lambda.tdk.com/nl

TDK-Lambda Germany GmbH
Tel: +49 7841 666 0
tlg.powersolutions@tdk.com
www.emea.lambda.tdk.com/de

Austria Sales Office
Tel: +43 2256 655 84
tlg.at-powersolutions@tdk.com
www.emea.lambda.tdk.com/at

Switzerland Sales Office
Tel: +41 44 850 53 53
tlg.ch-powersolutions@tdk.com
www.emea.lambda.tdk.com/ch

Nordic Sales Office
Tel: +45 8853 8086
tlg.dk-powersolutions@tdk.com
www.emea.lambda.tdk.com/dk

TDK-Lambda UK Ltd.
Tel: +44 (0) 12 71 85 66 66
tlu.powersolutions@tdk.com
www.emea.lambda.tdk.com/uk

TDK-Lambda Ltd.
Tel: +9 723 902 4333
tli.powersolutions@tdk.com
www.emea.lambda.tdk.com/il-en

TDK-Lambda Americas
Tel: +1 800-LAMBDA-4 or 1-800-526-2324
tla.powersolutions@tdk.com
www.us.lambda.tdk.com

TDK Electronics do Brasil Ltda
Tel: +55 11 3289-9599
sales.br@tdk-electronics.tdk.com
www.tdk-electronics.tdk.com/en

TDK-Lambda Corporation
Tel: +81-3-6778-1113
www.jp.lambda.tdk.com

TDK-Lambda (China) Electronics Co. Ltd.
Tel: +86 21 6485-0777
tlc.powersolutions@tdk.com
www.lambda.tdk.com.cn

TDK-Lambda Singapore Pte Ltd.
Tel: +65 6251 7211
tls.marketing@tdk.com
www.sg.lambda.tdk.com

TDK India Private Limited, Power Supply Division
Tel: +91 80 4039-0660
mathew.philip@tdk.com
www.sg.lambda.tdk.com