Three phase 500Vac 6 to 300A EMC Filters with high attenuation

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



Industrial Test LED COMM Broadcast

The RTHC three-phase EMC filters are enclosed in compact cubic case formats. They are rated for 500Vac with multiple current ratings of 6 to 300A enabling the optimum attenuation to match the current rating. The series uses TDK's ferrite core material to in a two stage configuration to provide excellent noise attenuation. The connection terminals are integrated into the case with both the screws and terminal covers captive, avoiding dropped or lost hardware.

Features	Benefits
• 6 to 300A Current Ratings	• Optimizes the Attenuation for the Wide Range Current Rating
• Cubic Profile	• Space Saving
• High Noise Attenuation	• Reduces EMI and Voltage Surge Levels
• Captive Hardware	• No Lost Screws or Terminal Covers
• Safety Certified	• Global Use

Model Selector

Model	Rated Current (A)	SCCR (kA)	Leakage Current 500V/60Hz (mA)	Maximum DC Resistance (mΩ)	Attenuation frequency range (MHz)		Weight (g)
					Common mode at 25dB	Differential mode at 25dB	
RTHC-5006	6	5	5.0	290	0.1 to 10	0.2 to 30	800
RTHC-5010	10	5	5.0	120	0.1 to 10	0.2 to 30	820
RTHC-5020	20	5	5.0	50	0.1 to 10	0.2 to 30	1200
RTHC-5030	30	5	5.0	26	0.2 to 10	0.2 to 30	1200
RTHC-5040	40	5	5.0	20	0.2 to 10	0.2 to 30	2260
RTHC-5050	50	5	5.0	14	0.2 to 10	0.2 to 30	2260
RTHC-5060	60	5	5.0	10	0.2 to 10	0.2 to 30	2260
RTHC-5080	80	5	5.0	10	0.1 to 10	0.2 to 30	7400
RTHC-5100	100	5	5.0	8	0.1 to 10	0.2 to 30	7800
RTHC-5150	150	10	5.0	6	0.1 to 10	0.2 to 30	12000
RTHC-5200	200	10	5.0	4	0.3 to 10	0.2 to 30	16300
RTHC-5250	250	10	5.0	3	0.3 to 10	0.2 to 30	15600
RTHC-5300	300	10	5.0	2	0.5 to 6	0.2 to 30	14800

RTHC	-	5	006
Series Name		Rated Voltage 5 = 500Vac	Rated Current 006 = 6A 060 = 60A

Related Products

Type	Current Rating (A)	Series	DIN Rail Mount	For use with secondary side inverters
Multipurpose with a low profile	6 - 300	RTEN	Y (Up to 30A)	
High attenuation, narrow package, 2 stage	6 - 150	RTHB		
High attenuation, low profile, 2 stage	6 - 60	RTMN		
High attenuation, low leakage (250V)	6 - 300	RTHN		
Multipurpose with HV pulse protection	6 - 60	RTAN	Y (Up to 30A)	
Compact package size, 1 stage	6 - 300	RTCN	-	Y

Click here for TDK-Lambda single phase filters

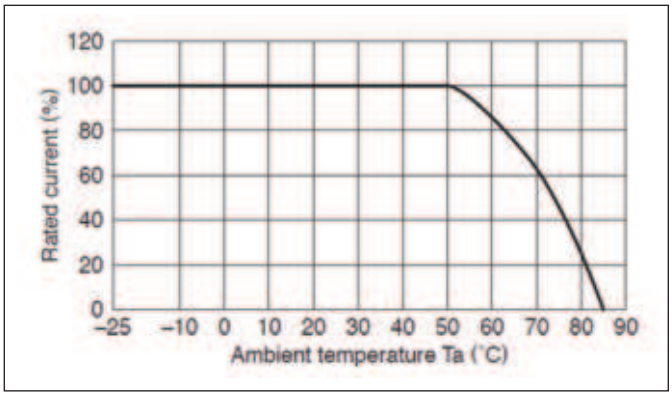
Specification

Model		
Input		
Rated Voltage (max)	Vac/Vdc	500 (Safety certified for AC input only)
Input Frequency	Hz	50/60
Leakage Current (500Vac, 60Hz)	mA	5
Safety Certifications and Markings	-	UL1283 (Up to 150A), EN60939-1/-2 (ENEC14), conforms to RoHS Directive
Environmental		
Operating Temperature	°C	-25 to +85, derating above 50. See derating curve below
Storage Temperature	°C	-25 to +85
Humidity (non condensing)	%RH	Operating: 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 0.7mm, Sweep for 1 min. X, Y and Z directions for 0.5 hours each
Other		
Weight (Typ)	-	See model selector
Size (LxWxH)	mm	See outline drawings
Size (LxWxH)	Inches	See outline drawings
Connectors	-	See outline drawings
MIL-HDBK-217F NOTICE2	Hours	RTHC-5006: 1,998,242, RTHC-5300: 1,906,069
Warranty	Years	5

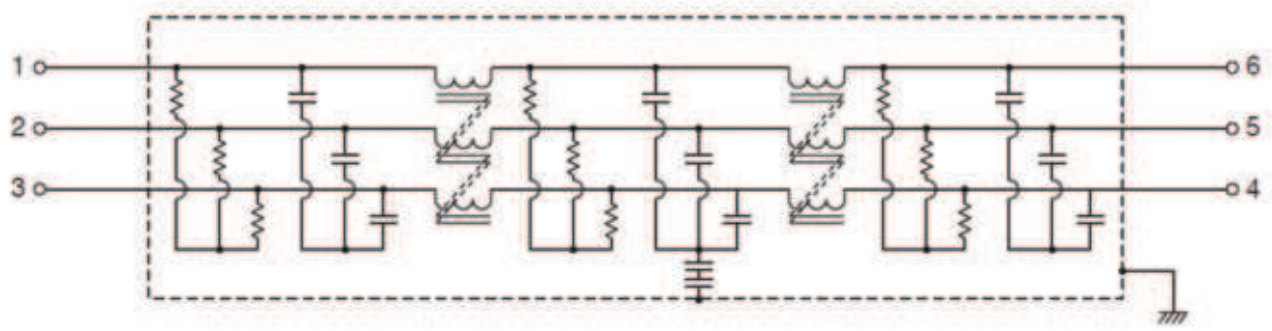
*Notes
See website for detailed specifications, test methods and installation manual RTHC technical files.

Mechanical Specification

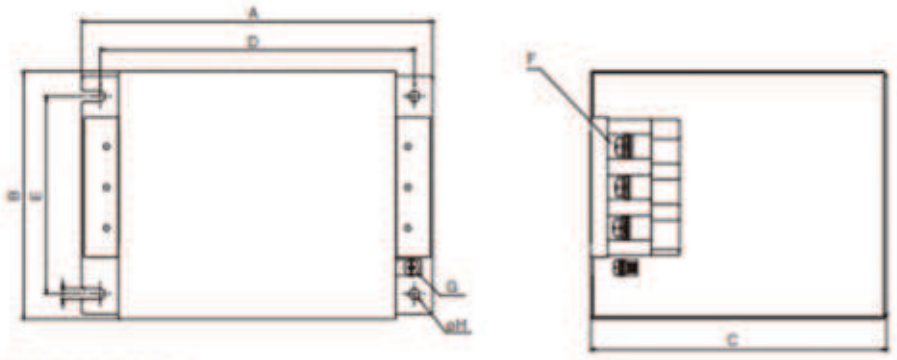
Derating Curve



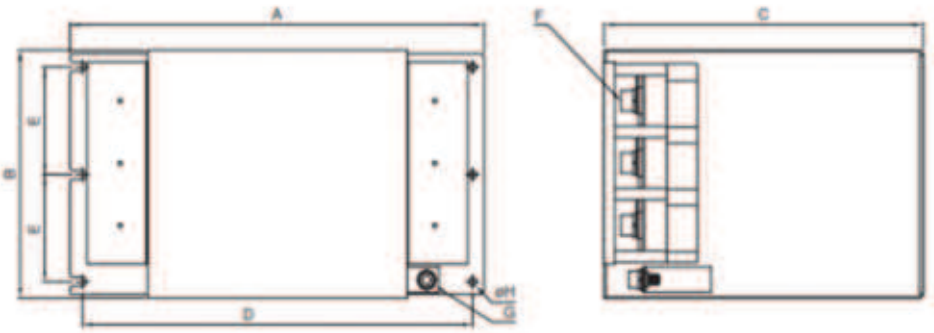
Schematic



RTHC Outline Drawings



RTHC-5200/5250/2300

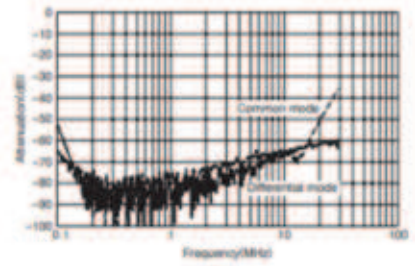


Dimensions in mm

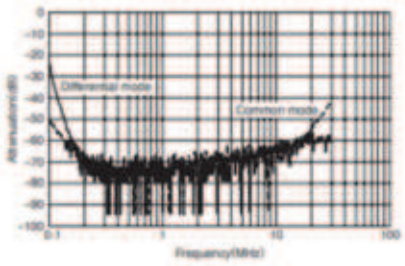
Part No.	A	B	C	D	E	F	G	øH	Recommended clamping torque
RTHC-5006 RTHC-5010	145	95	120	130	78	M4	M4	4.5	M4 : 1.27N・m M5 : 2.5N・m M6 : 4.8N・m M8 : 7.64N・m M10 : 11.8N・m
RTHC-5020 RTHC-5030	160	105	135	145	85	M4	M4	4.5	
RTHC-5040 RTHC-5050 RTHC-5060	190	128	160	170	102	M5	M4	5.5	
RTHC-5080 RTHC-5100	240	161	210	220	135	M8	M6	6.5	
RTHC-5150	255	190	232	235	164	M8	M6	6.5	
RTHC-5200 RTHC-5250 RTHC-5300	340	195	262	320	84.5	M10	M8	6.5	

RTHC Attenuation vs. Frequency

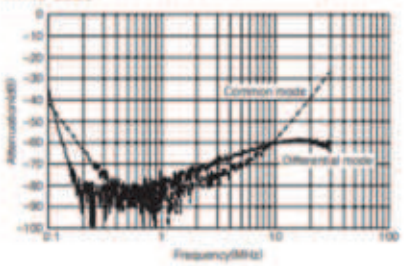
RTHC-5006



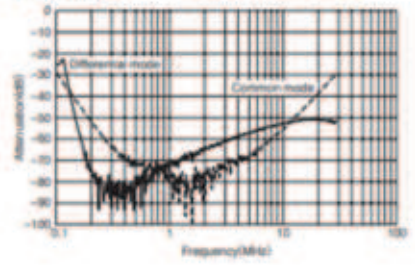
RTHC-5010



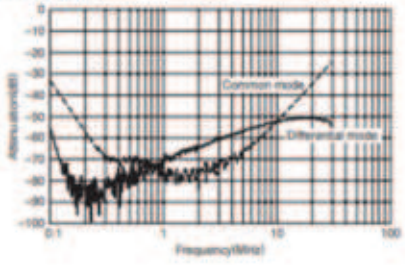
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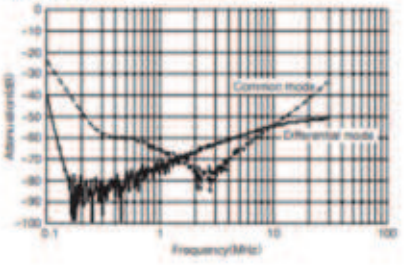
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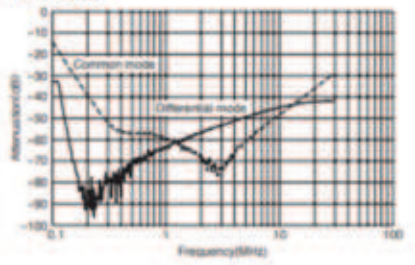
RTHC-5040



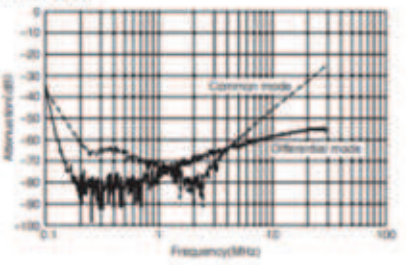
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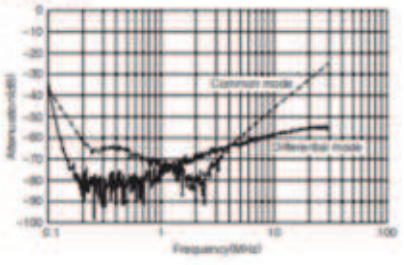
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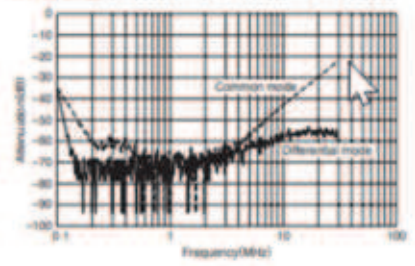
RTHC-5080



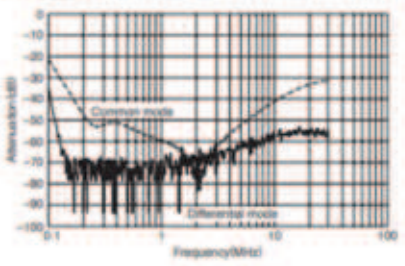
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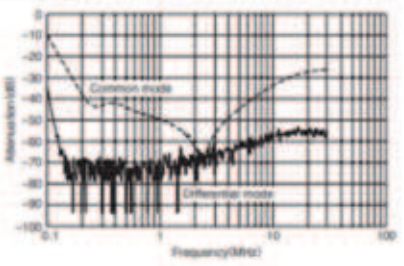
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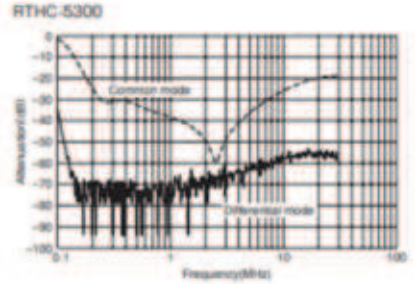
RTHC-5200



RTHC-5250



RTHC-5300



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