Three phase 500Vac 6 to 150A EMC Filters with high attenuation

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

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



Industrial Test LED COMM Broadcast

The RTHB three-phase EMC filters are enclosed in compact cases with a narrow package size. They are rated for 500Vac with multiple current ratings of 6 to 150A enabling the optimum attenuation to match the current rating. The series uses TDK's ferrite core material to provide high noise attenuation. The connection terminals are integrated into the case with both the screws and terminal covers captive, avoiding dropped or lost hardware. The RTHB models are UL certified for a short circuit current rating of up to 5kA with the appropriate breaker.

Features	Benefits
• 6 to 150A Current Ratings	• Optimizes the Attenuation for the Current Rating
• Narrow Profile	• Space Saving for Cabinets
• Two Stage Filter	• Greater Attentuation
• Captive Hardware	• No Lost Screws or Terminal Covers
• Safety Certified	• Global Use

Model Selector

Model	Rated Current (A)	SCCR (kA)(1)	Leakage Current 500V/60Hz* (mA)	Maximum DC Resistance (mΩ)	Attenuation frequency range (MHz)		
					Common mode at 25dB	Differential mode at 25dB	Weight (g)
RTHB-5006	6	5	5.0	290	0.1 to 30	0.1 to 30	750
RTHB-5010	10	5	5.0	120	0.1 to 20	0.2 to 30	780
RTHB-5020	20	5	5.0	50	0.1 to 20	0.2 to 30	1100
RTHB-5030	30	5	5.0	26	0.2 to 20	0.2 to 30	1100
RTHB-5040	40	5	5.0	20	0.2 to 20	0.1 to 30	2240
RTHB-5050	50	5	5.0	14	0.2 to 20	0.2 to 30	2240
RTHB-5060	60	5	5.0	10	0.2 to 20	0.2 to 10	2240
RTHB-5080	80	5	5.0	10	0.1 to 10	0.2 to 30	7700
RTHB-5100	100	5	5.0	8	0.1 to 10	0.2 to 30	8200
RTHB-5150	150	5	5.0	6	0.1 to 10	0.2 to 30	12500

*2.5mA at 250V/60Hz

RTHB	-	5	006
Series Name		Rated Voltage 5 = 500Vac	Rated Current 006 = 6A 150 = 150A

Related Products

Type	Current Rating (A)	Series	DIN Rail Mount	For use with secondary side inverters
Multipurpose with a low profile	6 - 60	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 - 600	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	47 - 63
Leakage Current (500Vac, 60Hz)	mA	5. (2.5mA 250Vac, 60Hz)
Safety Certifications and Markings	-	UL1283 (up to 200A), 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 1.5mm, Sweep for 1 min. X, Y and Z directions for 2 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	RTHB-5006: 4,012,519, RTHB-5300: 2,736,577
Warranty	Years	5

*Notes

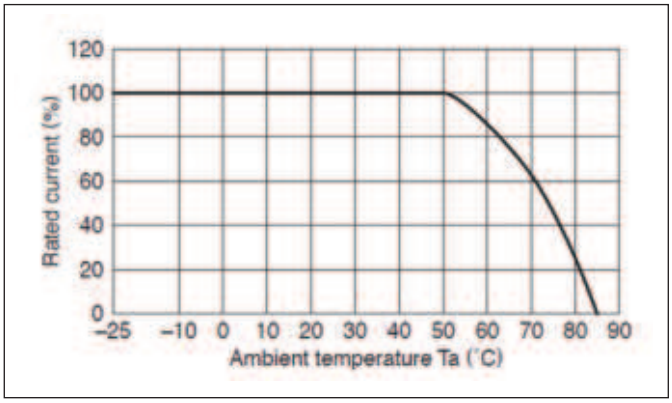
(1) With inverse time circuit breaker. See UL report on website

See website for detailed specifications, test methods and installation manual

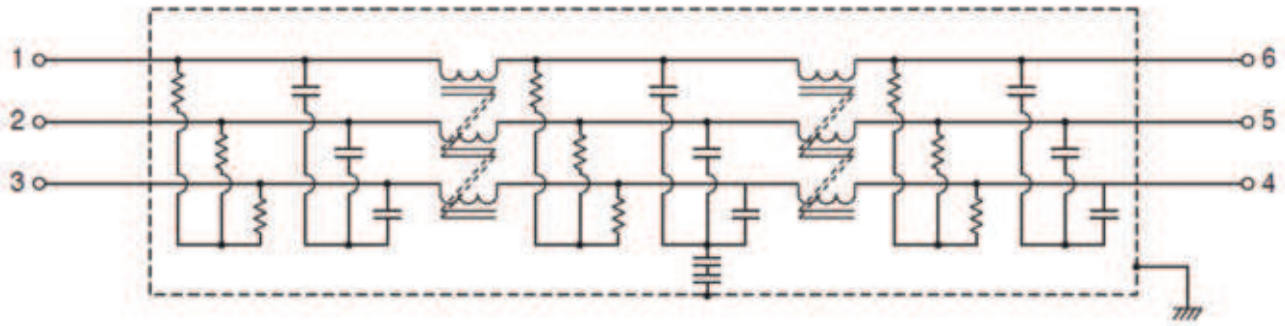
RTHB technical files

Mechanical Specification

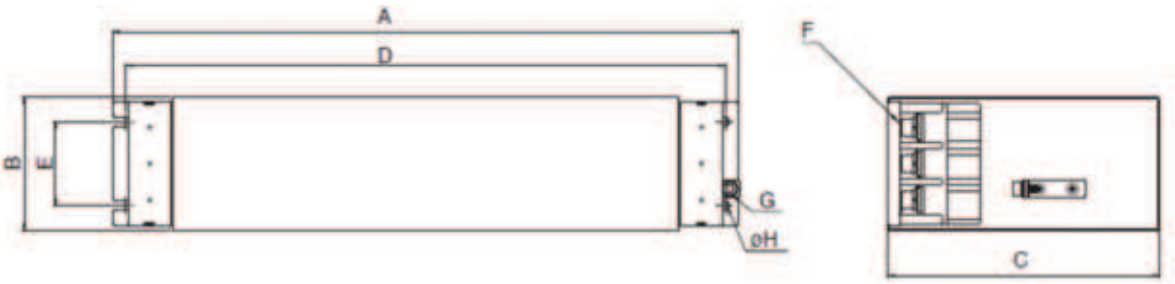
Derating Curve



Schematic



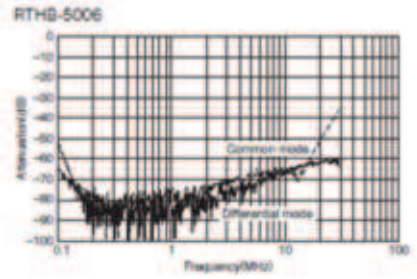
RTHB Outline Drawing

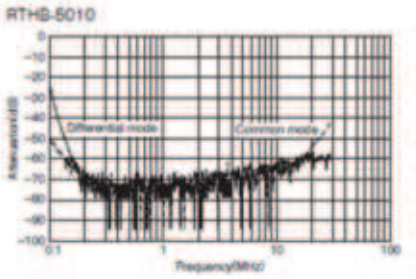


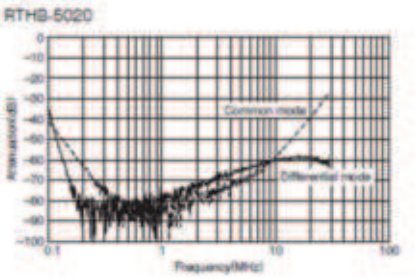
Dimensions in mm

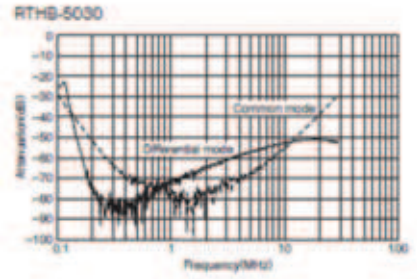
Part No.	A	B	C	D	E	F	G	ϕH	Recommended clamping torque
RTHB-5006	210	64	100	200	40	M4	M4	4.5	M4 : 1.27N・m M5 : 2.5N・m M6 : 4.8N・m M8 : 7.64N・m
RTHB-5010									
RTHB-5020	240	64	115	230	40	M4	M4	4.5	
RTHB-5030									
RTHB-5040	300	80	140	285	46	M5	M4	5.5	
RTHB-5050									
RTHB-5060									
RTHB-5080	472	100	205	452	63	M8	M6	6.5	
RTHB-5100									
RTHB-5150	534	100	234	514	63	M8	M6	6.5	

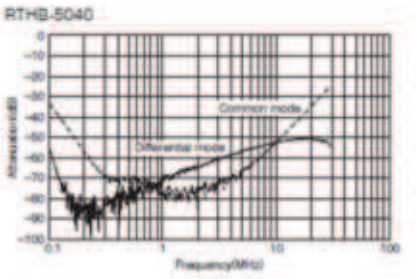
RTHB Attenuation vs. Frequency

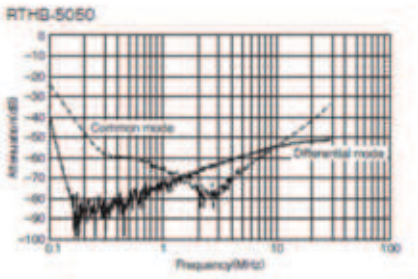


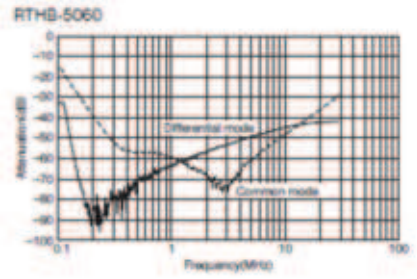


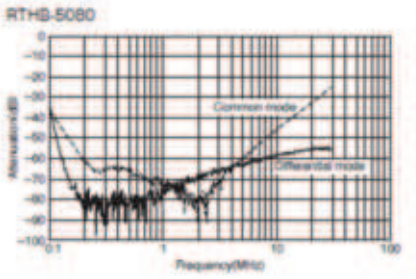


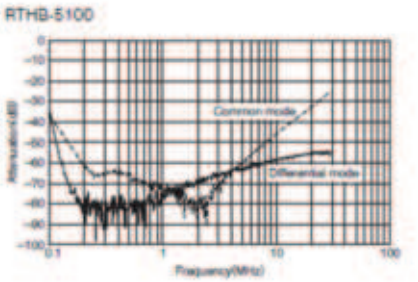


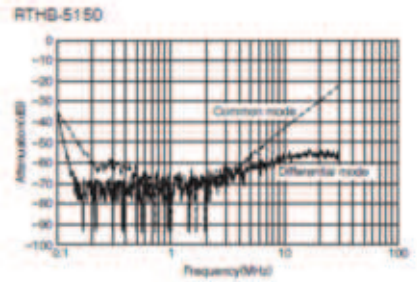












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