

DATASHEET

ABB wall-mounted TPHE 125 kA series

Surge protective devices



Product features

- UL Listed 1449 5th Edition, Type 1, Type 2
- cUL Listed, CSA C22.2
- UL 96A, for use in lightning protection systems
- Thermally protected MOV design eliminates the need for additional upstream over-current protection
- Standard features include a surge counter, audible alarm, indicating lights and dry contacts
- 10-year limited warranty

Available configurations

Model number	Voltage	Configuration
TPHE120S12WMN	240/120	1-phase, 3-wire + ground
TPHE120Y12WMN	208Y/120	3-phase, 4-wire + ground
TPHE220Y12WMN	380Y/220	3-phase, 4-wire + ground
TPHE240D12WMN	240 Delta	3-phase, 3-wire + ground
TPHE240H12WMN	240/120 High-Leg Delta	3-phase, 4-wire + ground
TPHE240Y12WMN	415Y/240	3-phase, 4-wire + ground
TPHE277Y12WMN	480Y/277	3-phase, 4-wire + ground
TPHE347Y12WMN	600Y/347	3-phase, 4-wire + ground
TPHE480D12WMN	480 Delta	3-phase, 3-wire + ground

Product specifications and performance data

Product specifications

Electrical	
Maximum surge current rating	250 kA per phase, 125 kA per mode
Nominal discharge current rating	20 kA
Operating frequency	50–60 Hz
Surge life (IEEE C62.41–C3 10 kA)	>20,000 impulses
Connection method	#6 to 2/0 AWG conductors, parallel connected
Modes of protection	All modes (L-N, L-G, N-G, L-L)
Fault rating (SCCR)	200 kA
Standard monitoring	Status indicator lights (one per phase) and red service light Audible alarm with silencer and test switch Contacts for remote monitoring (2 amp, 125 V AC)–(1 amp, 30 V DC) 6-digit LCD re-settable surge event counter

Mechanical

Weight	Varies and depends on enclosure type; please see available options below
Installation location	Service entrance equipment, primary distribution equipment
Mounting method	Surface mount, 4-point mounting brackets
Operating environment	-40 °F to 149 °F (-40 °C to 65 °C)
Altitude	0–12,000 ft. (3.66 km)
Product design	Individually fused thermally protected MOV technology

Regulatory

UL 1449 5th Edition	VZCA: E320456 Type 1 / Type 2
cUL, CSA C22.2	VZCA7: E320456 Type 2 / Type 2
UL 1283	FOKY: E320456 Type 2
UL 96A	Yes
IEEE C62.62, C62.72, C62.41	Yes
Listed by	UL

EMI/RFI filter attenuation

Max. attenuation frequency	-50 dB minimum at 100 kHz
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Warranty

10-year limited warranty

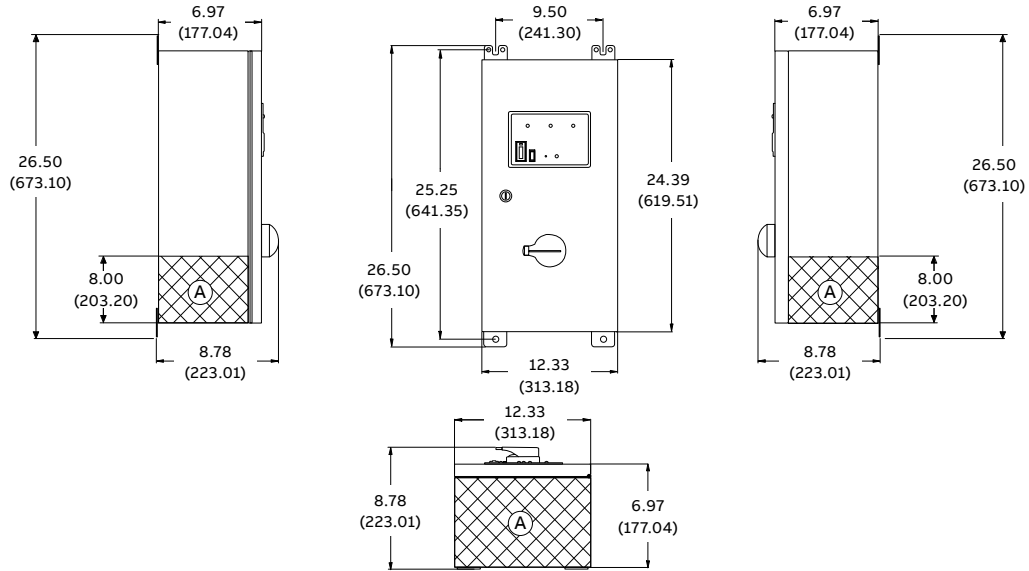
Options	Suffix	UL type	Weight
Painted steel, NEMA 4 surface mount	4S	Type 2	44 lbs. (20.0 kg)
Stainless steel, NEMA 4X surface mount	4X	Type 2	50 lbs. (22.7 kg)
Painted steel, NEMA 1 surface mount, integral disconnect	1	Type 2	63 lbs. (28.5 kg)
Fiberglass, NEMA 4X surface mount, integral disconnect	4	Type 2	56 lbs. (25.4 kg)
Painted steel, NEMA 4 surface mount	4ST1	Type 1	44 lbs. (20.0 kg)
Stainless steel, NEMA 4X surface mount	4XT1	Type 1	50 lbs. (22.7 kg)
Painted steel, NEMA 1 surface mount, integral disconnect	1T1	Type 1	63 lbs. (28.5 kg)
Fiberglass, NEMA 4X surface mount, integral disconnect	4T1	Type 1	56 lbs. (25.4 kg)

Performance data

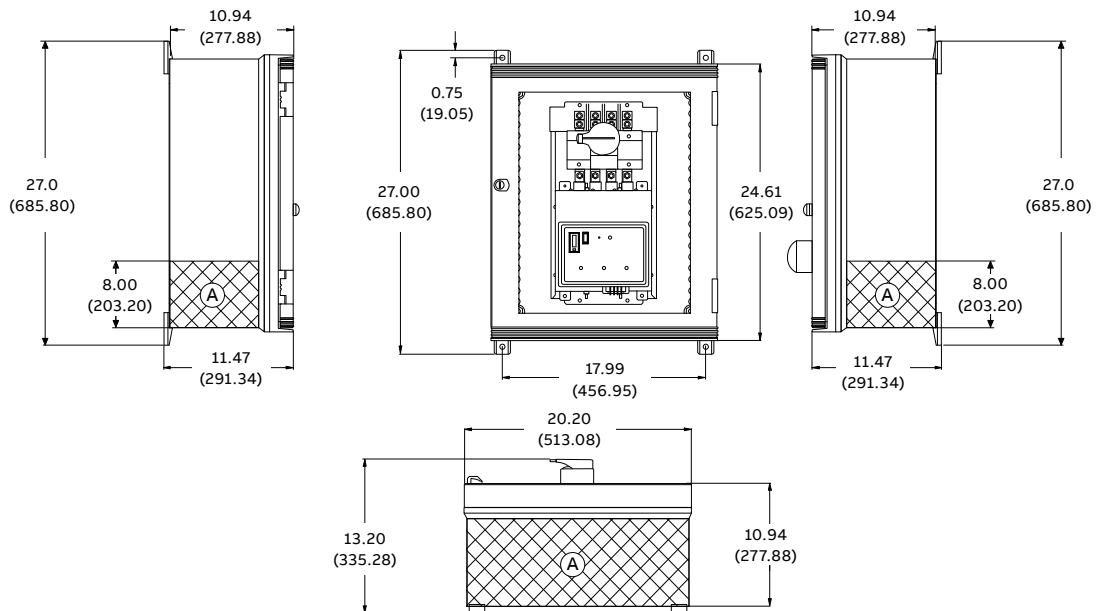
Model number	Protection mode	MCOV	VPR	IEEE Cat. B3	IEEE Cat. B3/	IEEE Cat. C3	
				100 kHz/500 A	C1 6 kV/3 kA	20 kV/10 kA	
TPHE120S	L-L	300	1200	752	844	1007	
	L-N	150	900	470	600	793	
	L-G	150	800	463	485	670	
	N-G	150	700	452	476	680	
	TPHE120Y	L-L	300	1200	752	844	1007
		L-N	150	900	470	600	793
L-G		150	800	463	485	670	
	N-G	150	700	452	476	680	
	TPHE220Y	L-L	640	2000	1393	1597	1827
		L-N	320	1500	763	1053	1170
L-G		320	1200	836	893	1073	
	N-G	320	1200	828	880	1180	
	TPHE240D	L-L	540	1800	1240	1453	1640
		L-N	–	–	–	–	–
L-G		270	1200	750	763	890	
	N-G	–	–	–	–	–	
	TPHE240H	L-L	300	2000	752	844	1007
		L-N	150	1000	470	600	793
L-G		150	800	463	485	670	
	N-G	150	700	452	476	680	
	H-L	420	2500	1393	1597	1827	
	H-N	270	1200	763	1053	1170	
	H-G	270	1200	836	893	1073	
	TPHE240Y	L-L	640	2000	1393	1597	1827
		L-N	320	1500	763	1053	1170
L-G		320	1200	836	893	1073	
	N-G	320	1200	828	880	1180	
	TPHE277Y	L-L	640	2000	1340	1597	1827
		L-N	320	1500	727	1053	1170
L-G		320	1200	800	893	1073	
	N-G	320	1200	792	880	1180	
	TPHE347Y	L-L	840	2500	1723	2020	2220
		L-N	420	1500	883	1187	1467
L-G		420	1500	1000	1113	1240	
	N-G	420	1500	1000	1120	1240	
	TPHE480D	L-L	1110	3000	1800	2647	2933
		L-N	–	–	–	–	–
L-G		550	1800	1223	1407	1607	
	N-G	–	–	–	–	–	

Dimensional specifications

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WMN1/WMN1T1
suffix



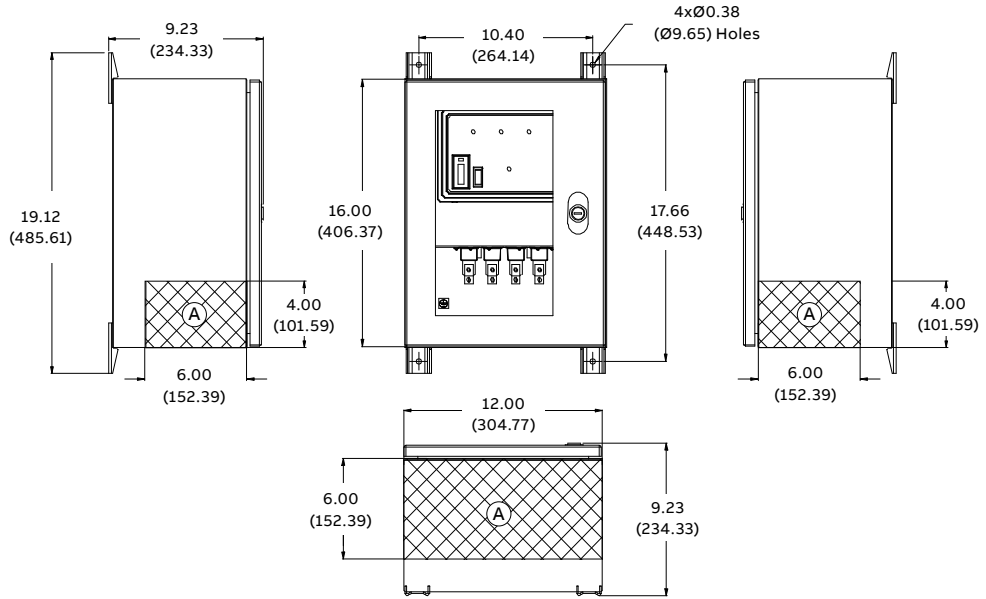
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WMN4/WMN4T1
suffix



Note:
All dimensions are for reference only
and are shown in inches (millimeters).
"A" = Recommended conduit entry areas.

Dimensional specifications

WMN4S/WMN4ST1,
WMN4X/WMN4XT1



Note:
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and are shown in inches (millimeters).
"A" = Recommended conduit entry areas.

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