

## **TDX**

## Transient Discriminating Panel Protectors





#### **Features**

- Transient Discriminating (TD) Technology provides increased service life
- Modular design allows individual modes to be field replaceable, built-in disconnect and fusing eliminates need for external fusing
- Built-in safety features include TD Technology, thermal protection and short circuit current cartridge fusing
- Compact NEMA-4
   enclosure design can
   be flush mounted or
   installed in a small
   space
- Status indication flag per mode, voltage presence LED's, audible alarm and voltage-free contacts providing remote status monitoring
- 200kA 8/20µs maximum surge rating provides protection suitable for service entrance, main-distribution panels and highly exposed applications
- Available in various operating voltages to suit most common power distribution systems
- CE, Listed to UL® 1449
   Edition 3

## **TDXM Modular Series**

# TDX200 Transient Discriminating Panel Protection

The TDX200 Series of Transient Voltage Surge Suppressors is designed for critical protection applications. The 200kA 8/20µs of surge protection exceeds the IEEE®C62.41.2 Scenario II single shot surge rating requirements for exposed service entrance locations – Exposure 3.

The NEMA-4 weather-tight housing allows the TDX to be installed on indoor or outdoor service panels. The preconfigured connecting leads simplify installation. The unique narrow construction allows the SPD to fit between adjacent panel boards and connect via a 90-degree elbow. A flush mounting kit is also available for installing the SPD in drywall applications.

Listed as a Type 1 SPD to UL1449 3rd Edition, the TDX200 Series can be installed within a Type 1 or 2 location in accordance with the NEC2008





Typical installation



TDX200M Enclosure



**TDX Replaceable Modules** 



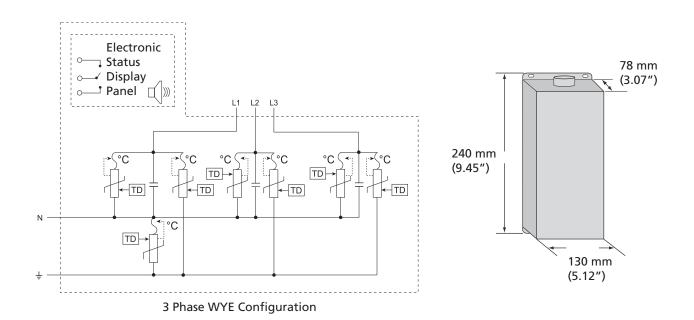
TDX Replaceable Module backplane fully removed





Model	TDX200M	TDX200M	TDX200M	TDX200M	TDX200M	TDX200M	TDX200M	TDX200M		
	120/208	120/240	120/240D	240D	277/480	277/480TT*	347/600	480D		
Nominal Voltage, U <sub>n</sub>	120/208 V	120/240 V		240 V	277/480 V		347/600 V	480 V		
Distribution System	3Ph 4W+G	1Ph 3W+G	3Ph Δ 4W+G	3Ph Δ 3W+G	3Ph 4W+G 3Ph 3W+G	3Ph 4W+G		3Ph Δ 3W+G		
Max Cont. Operating Voltage, Uc	170/295 VAC	170/340 VAC	'	275 VAC	310/536 VAC		560/970 VAC	560 VAC		
Stand-off Voltage	240/415 VAC	240/480 VAC	240/415 VAC	415 VAC	480/813 VAC	480/831 VAC	790/1370 VAC	790 VAC		
Frequency	50/60 Hz									
Short Circuit Current Rating, Isc	200 kAIC									
Technology	Over-current Replaceable Cartridge Fusing									
Į.		y with thermal	disconnect							
Max Discharge Current, Imax	200 kA 8/20 μ									
Impulse Current, I <sub>imp</sub>	20 kA 10/350 μs					20 kA 10/350 μs 50 kA 10/350 μs N-PE	20 kA 10/350 µ	S		
Nominal Discharge Current, In	100 kA 8/20 μ	S		80 kA 8/20 µs						
Protection Modes	L-G, L-N, N-G			L-G, L-L	L-G, L-N, N-G	L-N, N-G	L-G, L-N, N-G	L-G, L-L		
Voltage Protection Level, Up	L-N			L-N			L-N			
	600 V @ 3 kA			1.0 kV @ 3 kA			1.8 kV @ 3 kA			
	1.2 kV @ 20 k/	A		1.8 kV @ 20 k	4		2.6 kV @ 20 kA	ı		
Filtering		-40 dB @ 100 kHz								
Status	Audible Alarn									
	LED status ind	lication per pha	ase, mechanical flag	per mode, all mod	es monitored					
	Remote conta	icts, change-ove	er, 400 V~/3 A, max	( 1.5 mm <sup>2</sup> (#14 AW)	G) terminals					
Dimensions H x D x W: mm (in)	240 x 78 x 130	) (9.45 x 3.07 x 5	5.12)							
Weight: lbs (kg)	4.4 (2.00)									
Enclosure	Aluminum, IP									
Connection	Line: 600 mm	of 5.26 mm <sup>2</sup> (2	4" of # 10 AWG) fly	ing leads						
	Neutral/Ground: 900 mm of 5.26 mm <sup>2</sup> (36" of # 10 AWG) flying leads									
Mounting	3/4" straight r	3/4" straight nipple; Optional flush mounting plate for drywall								
Temperature	-40°C to 80°C (-40°F to 176°F)									
Humidity	0 % to 90 %									
Approvals	C-Tick, CE, IEC® 61643-1, UL® 1449 Ed. 3 Listed Type 1/2									
Surge Rated to Meet	ANSI®/IEEE® C62.41-1991 Cat A, Cat B, Cat C									
	ANSI®/IEEE® C62.41.2 Scenario II, Exposure 3, 100 kA 8/20 µs, 10 kA 10/350 µs									
	IEC 61643-1 Class I, Class II									
	UL® 1449 Ed. 3	3 In 20 kA mode	e							
Available Options	Flush Mount I	Kit (Order TDXI	/1200FP)							
	Replacement Fuse Cartridge (Order TDXFUSE)									
	Side Mount Kit (Order TDXSM)									
			insert "S" in Order (	ode example TDX	1005277/480					
D 1	TDS150M150			TDS150M240	TDS150M277	TDS150M277 (L-N)	TDS150M560	TDS150M560		
Replacement Module										

<sup>\*</sup>Please use TDX200M277/480T for orders in North America



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### **Features**

- Transient
   Discriminating (TD)
   Technology provides increased service life
- Modular design allows individual modes to be field replaceable, built-in disconnect and fusing eliminates need for external fusing
- Built-in safety features include TD Technology, thermal protection and short circuit current cartridge fusing
- Compact NEMA-4
   enclosure design can
   be flush mounted or
   installed in a small
   space
- Status indication flag per mode, voltage presence LEDs, audible alarm and voltage-free contacts providing remote status monitoring
- 100kA 8/20µs maximum surge rating provides protection suitable for smaller maindistribution panels and an extended operational life
- Available in various operating voltages to suit most common power distribution systems
- CE, Listed to UL® 1449
   Edition 3

## **TDXM Modular Series**

# TDX100 Transient Discriminating Panel Protection

The TDX100 Series of Transient Voltage Surge Suppressors is designed for critical protection applications. The 100kA 8/20µs of surge protection meets the IEEE®C62.41.2 Scenario II single shot surge rating requirements for exposed service entrance locations – Exposure 3.

The NEMA-4 weather tight housing allows the TDX to be installed on indoor or outdoor service panels. The preconfigured connecting leads simplify installation. The unique narrow construction allows the SPD to fit between adjacent panel boards and connect via a 90-degree elbow. A flush mounting kit is also available for installing the SPD in drywall applications.

Listed as a Type 1 SPD to UL1449 3rd Edition, the TDX100 Series can be installed within a Type 1 or 2 location in accordance with the NEC2008





**Typical Installation** 



**Output contacts** 



TDX Replaceable Cartridge overcurrent fuse protection



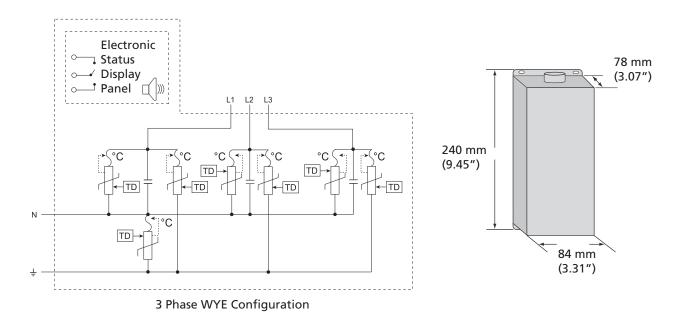
**TDX Replaceable Modules** 





Model	TDX100M	TDX100M	TDX100M	TDX100M	TDX100M	TDX100M	TDX100M	TDX100M			
	120/208	120/240	120/240D	240D	277/480	277/480TT*	347/600	480D			
Nominal Voltage, U <sub>n</sub>	120/208 V	120/240 V		240 V	277/480 V		347/600 V	480 V			
Distribution System	3Ph 4W+G	1Ph 3W+G	3Ph Δ 4W+G	3Ph ∆ 3W+G	3Ph 4W+G	3Ph 4W+G		3Ph ∆ 3W+G			
					3Ph 3W+G						
Max Cont. Operating Voltage, Uc	170/295 VAC	170/340 VAC		275 VAC	310/536 VAC		560/970 VAC	560 VAC			
Stand-off Voltage	240/415 VAC	240/480 VAC	240/415 VAC	415 VAC	480/813 VAC	480/831 VAC	790/1370 VAC	790 VAC			
Frequency		50/60 Hz									
Short Circuit Current Rating, Isc	200 kAIC										
Technology	Over-current Replaceable Cartridge Fusing										
	TD Technology	with thermal d	isconnect								
Max Discharge Current, I <sub>max</sub>	100 kA 8/20 μs					-					
Impulse Current, I <sub>imp</sub>	12 kA 10/350 µs	;				12 kA 10/350 μs	μs   12 kA 10/350 μs				
						25 kA 10/350 μs N-PE					
Nominal Discharge Current, In	50 kA 8/20 µs			40 kA 8/20 µs							
Protection Modes	L-G, L-N, N-G			L-G, L-L	L-G, L-N, N-G	L-N, N-G	L-G, L-N, N-G	L-G, L-L			
Voltage Protection Level, Up	L-N			L-N			L-N				
	600 V @ 3 kA			1.0 kV @ 3 kA		1.8 kV @ 3 kA					
	1.2 kV @ 20 kA			1.8 kV @ 20 kA	4		2.6 kV @ 20 kA				
Filtering	-40 dB @ 100 kH	-40 dB @ 100 kHz									
Status	Audible Alarm										
	LED status indic	ation per phase	e, mechanical flag pe	r mode, all modes	monitored						
	Remote contact	ts, change-over,	400 V~ / 3 A, max 1.5	5 mm² (#14 AWG)	terminals						
Dimensions H x D x W: mm (in)	240 x 78 x 84 (9	.45 x 3.07 x 3.3	1)								
Weight: lbs (kg)	3.1 (1.41)										
Enclosure	Aluminum, IP 6	5 (NEMA-4)									
Connection	Line: 600 mm o	Line: 600 mm of 5.26 mm <sup>2</sup> (24" of # 10 AWG) flying leads									
	Neutral/Ground	Neutral/Ground: 900 mm of 5.26 mm² (36" of # 10 AWG) flying leads									
Mounting	3/4" straight nij	3/4" straight nipple; Optional flush mounting plate for drywall									
Temperature	-40°C to 80°C (-40°F to 176°F)										
Humidity	0 % to 90 %										
Approvals	C-Tick, CE, IEC® 61643-1, UL® 1449 Ed. 3 Listed Type 1/2										
Surge Rated to Meet	ANSI®/IEEE® C62.41-1991 Cat A, Cat B, Cat C										
	ANSI®/IEEE® C62.41.2 Scenario II, Exposure 3, 100 kA 8/20 μs, 10 kA 10/350 μs IEC 61643-1 Class I. Class II										
	UL® 1449 Ed. 3 I	In 20 kA mode									
Available Options	Flush Mount Ki	t (Order TDXM	100FP)								
Trainable opinions											
	Replacement Fuse Cartridge (Order TDXFUSE) Side Mount Kit (Order TDXSM)										
	Surge Counter and Filtering insert "S" in Order Code, example TDX100S277/480										
Replacement Module	TDS150M150	TDS150M150	TDS150M150	TDS150M240	TDS150M277	TDS150M277 (L-N)	TDS150M560	TDS150M560			
neplacement module	155150101150	123130141130			1551501412//	, ,	123130101300	123130101300			
replacement infodule	טכוואוטכונטו	טכו ואוטכו כט ו	TDS150M240 (Lx-L3		ואוטנונטו	SGD125M (N-G)	00כואוטכו כקו	טסכואוטכו כייו			

<sup>\*</sup>Please use TDX100M277/480T for orders in North America



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#### **Features**

- Transient
   Discriminating (TD)
   Technology provides increased service life
- Built-in safety features include TD Technology, thermal protection and short circuit current fusing
- Compact NEMA-4
   enclosure design can
   be flush mounted or
   installed in a small
   space
- LED status indication and voltage-free contacts provide remote status monitoring
- 100kA 8/20µs maximum surge rating provides protection suitable for smaller maindistribution panels and an extended operational life
- Available in various operating voltages to suit most common power distribution systems
- CE, Listed to UL® 1449
   Edition 3

# **TDXC Compact Series**

# TDX100C Transient Discriminating Panel Protection

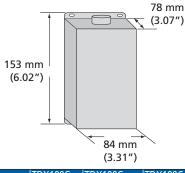
The TDX100 Series of Transient Voltage Surge Suppressors is designed for critical protection applications. The 100kA 8/20µs of surge protection meets the IEEE®C62.41.2 Scenario II single shot surge rating requirements for exposed service entrance locations – Exposure 3.

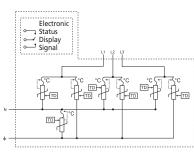
The NEMA-4 weather tight housing allows the TDX to be installed on indoor or outdoor service panels. The preconfigured connecting leads simplify installation. The unique narrow construction allows the SPD to fit between adjacent panel boards and connect via a 90-degree elbow. A flush mounting kit is also available for installing the SPD in drywall applications.

Listed as a Type 1 SPD to UL1449 3rd Edition, the TDX100 Series can be installed within a Type 1 or 2 location in accordance with the NEC2008









Typical	Instal	lation
Typical	IIIStai	iation

12	X100C	TDX100C	TDX100C	TDX100C	TDX100C	TDX100C			
12	0	120/208	120/240	240	277/480	347/600			
Nominal Voltage, U <sub>n</sub> 12	0 V	120/208 V	120/240 V	240 V	277/480 V	347/600 V			
Distribution System 1P	h 2W+G	3Ph 4W+G	1Ph 3W+G	1Ph 2W+G	3Ph 4W+G	3Ph 4W+G			
					3Ph 3W+G				
Max Cont. Operating Voltage, Uc 17	0 VAC	170/295 VAC	170/340 VAC	340 VAC	310/536 VAC	480/830 VAC			
		240/415 VAC	240/480 VAC	480 VAC	480/813 VAC	600/1040 VAC			
	50/60 Hz								
	200 kAIC								
Technology Ov	er-current	Fusing							
TD	) Technolo	gy with therm	al disconnect						
Max Discharge Current, I <sub>max</sub> 10	100 kA 8/20 μs								
	12 kA 10/350 μs								
	40 kA 8/20 μs								
	All modes protected via L-N, L-G, & N-G								
	L-N L-N				L-N				
60	600 V @ 3 kA			1.0 kV @ 3 k	1.8 kV @ 3 kA				
					2.6 kV @ 20 kA				
	LED status indication per phase, all modes monitored								
Re	Remote contacts, change-over, 125 V~/3 A, max 1.5 mm <sup>2</sup> (#14 AWG) terminals								
	1.76 (0.80)								
Enclosure Alu	Aluminum, IP 65 (NEMA-4)								
Connection Lin	Line: 600 mm of 5.26 mm <sup>2</sup> (24" of # 10 AWG) flying leads								
Ne	Neutral/Ground: 900 mm of 5.26 mm <sup>2</sup> (36" of # 10 AWG) flying leads								
	3/4" straight nipple; Optional flush mounting plate for drywall								
	-40°C to 80°C (-40°F to 176°F)								
	0 % to 90 %								
	C-Tick, CE, IEC® 61643-1, UL® 1449 Ed. 3 Listed Type 1/2								
Surge Rated to Meet AN	NSI®/IEEE® (	C62.41-1991 C	at A, Cat B, Ca	t C					
			ario II, Exposur	e 2, 50 kA 8/2	20 µs				
IEC	C 61643-1 (	Class I, Class II							
UL	.® 1449 Ed.	3 In 20 kA mo	ode						
Available Options Flu	Flush Mount Kit (Order TDXM100FP)								
	Side Mount Kit (Order TDXSM)								

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#### **Features**

- Transient
   Discriminating (TD)
   Technology provides increased service life
- Built-in safety f eatures include TD Technology, thermal protection and short circuit current fusing
- Compact NEMA-4
   enclosure design can
   be flush mounted or
   installed in a small
   space
- LED status indication and voltage-free contacts provide remote status monitoring
- 50kA 8/20µs maximum surge rating provides protection suitable for sub-distribution panels and a long operational life
- Available in various operating voltages to suit most common power distribution systems
- CE, Listed to UL<sup>®</sup> 1449
   Edition 3

## **TDXC Compact Series**

# TDX50C Transient Discriminating Panel Protection

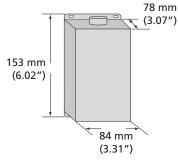
The TDX50 Series of Transient Voltage Surge Suppressors for equipment, panel and motor protection applications is specifically designed to provide long life, even under the most adverse over-voltage conditions.

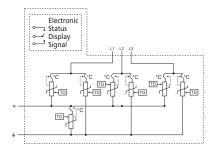
The NEMA-4 weather tight housing allows the TDX to be installed on indoor or outdoor service panels. The preconfigured connecting leads simplify installation. The unique narrow construction allows the SPD to fit between adjacent panel boards. A flush mounting kit is also available for installing the SPD in drywall applications.

Listed as a Type 1 SPD to UL1449 3rd Edition, the TDX50 Series can be installed within a Type 1 or 2 location in accordance with the NEC2008









Model	TDX50C	TDX50C	TDX50C	TDX50C	TDX50C	TDX50C	TDX50C	
	120	120/208	120/240	120/240D	240	277/480	347/600	
Nominal Voltage, U <sub>n</sub>	120 V	120/208 V	120/240 V	120/240 V	240 V	277/480 V	347/600 V	
Distribution System	1Ph 2W+G	3Ph 4W+G	1Ph 3W+G	3Ph ∆ 4W+G	1Ph 2W+G	3Ph 4W+G	3Ph 4W+G	
						3Ph 3W+G		
Max Cont. Operating Voltage, Uc	170 VAC 170/295 VAC 170/340 VAC				340 VAC	310/536 VAC	480/830 VAC	
Stand-off Voltage	240 VAC	240/415 VAC	240/480 VAC	240/415 VAC	480 VAC	480/813 VAC	600/1040 VAC	
Frequency	50/60 Hz							
Short Circuit Current Rating, Isc	200 kAIC							
Technology	Over-curren							
		ogy with therm	al disconnect					
Max Discharge Current, I <sub>max</sub>	50 kA 8/20 μs							
Nominal Discharge Current, In	20 kA 8/20 μs							
Protection Modes	All modes protected via L-N, L-G, & N-G							
Voltage Protection Level, Up	L-N		L-N		L-N			
	600 V @ 3 k	600 V @ 3 kA				kA	1.8 kV @ 3 kA	
	1.2 kV @ 20 kA 2.0						2.6 kV @ 20 kA	
Status	LED status i	ndication per p	hase, all mode	es monitored				
		tacts, change-o		3 A, max 1.5 mi	m² (#14 AW0	G) terminals		
Dimensions H x D x W: mm (in)		4 (6.02 x 3.07 x	3.31)					
Weight: lbs (kg)	1.54 (0.70)							
Enclosure	Aluminum, IP 65 (NEMA-4)							
Connection	Line: 600 mm of 5.26 mm <sup>2</sup> (24" of # 10 AWG) flying leads							
	Neutral/Ground: 900 mm of 5.26 mm <sup>2</sup> (36" of # 10 AWG) flying leads							
Mounting	3/4" straight nipple; Optional flush mounting plate for drywall							
Temperature	-40°C to 80°C (-40°F to 176°F)							
Humidity	0 % to 90 %							
Approvals	C-Tick, CE, IEC® 61643-1, UL® 1449 Ed. 3 Listed Type 1/2							
Surge Rated to Meet	ANSI®/IEEE® C62.41-1991 Cat A, Cat B, Cat C							
		C62.41.2 Scena	ario II, Exposur	e 2, 50 kA 8/20	μs			
	EC 61643-1	Class II						
	UL® 1449 Ed. 3 In 10 kA mode							
Available Options	Flush Moun	t Kit (Order TD	XM100FP)					
'		Kit (Order TD)						

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