



**CONNECT AND PROTECT**

# Telecommunication Grounding and Bonding Selection Guide

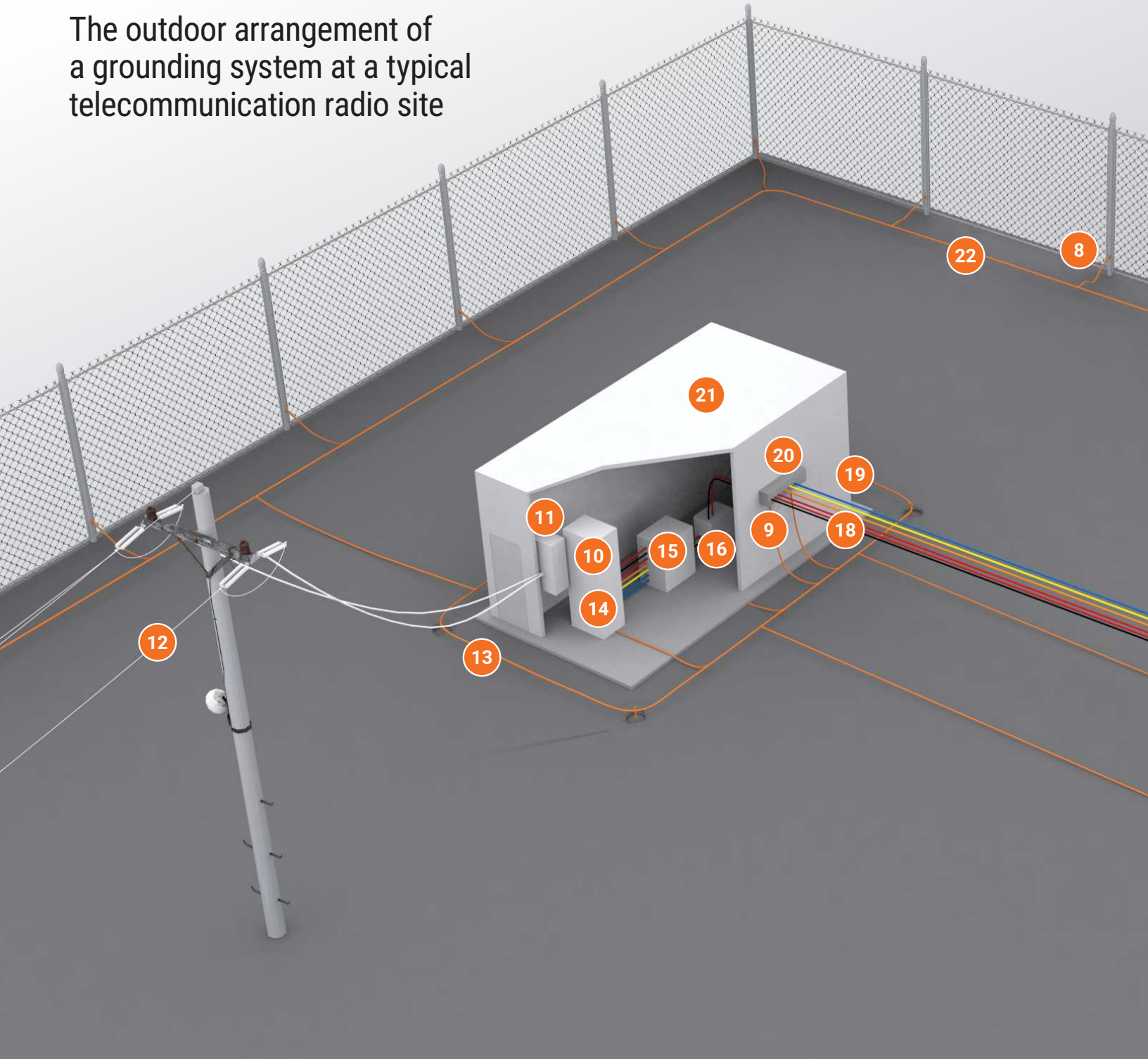
North America



**ERICO**

# Outdoor Grounding and Protection Arrangement

The outdoor arrangement of a grounding system at a typical telecommunication radio site



1. Copper tape



1. Copper bonded steel conductor, CBSC



1. Theft deterrent composite cable, TDCC



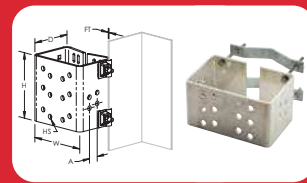
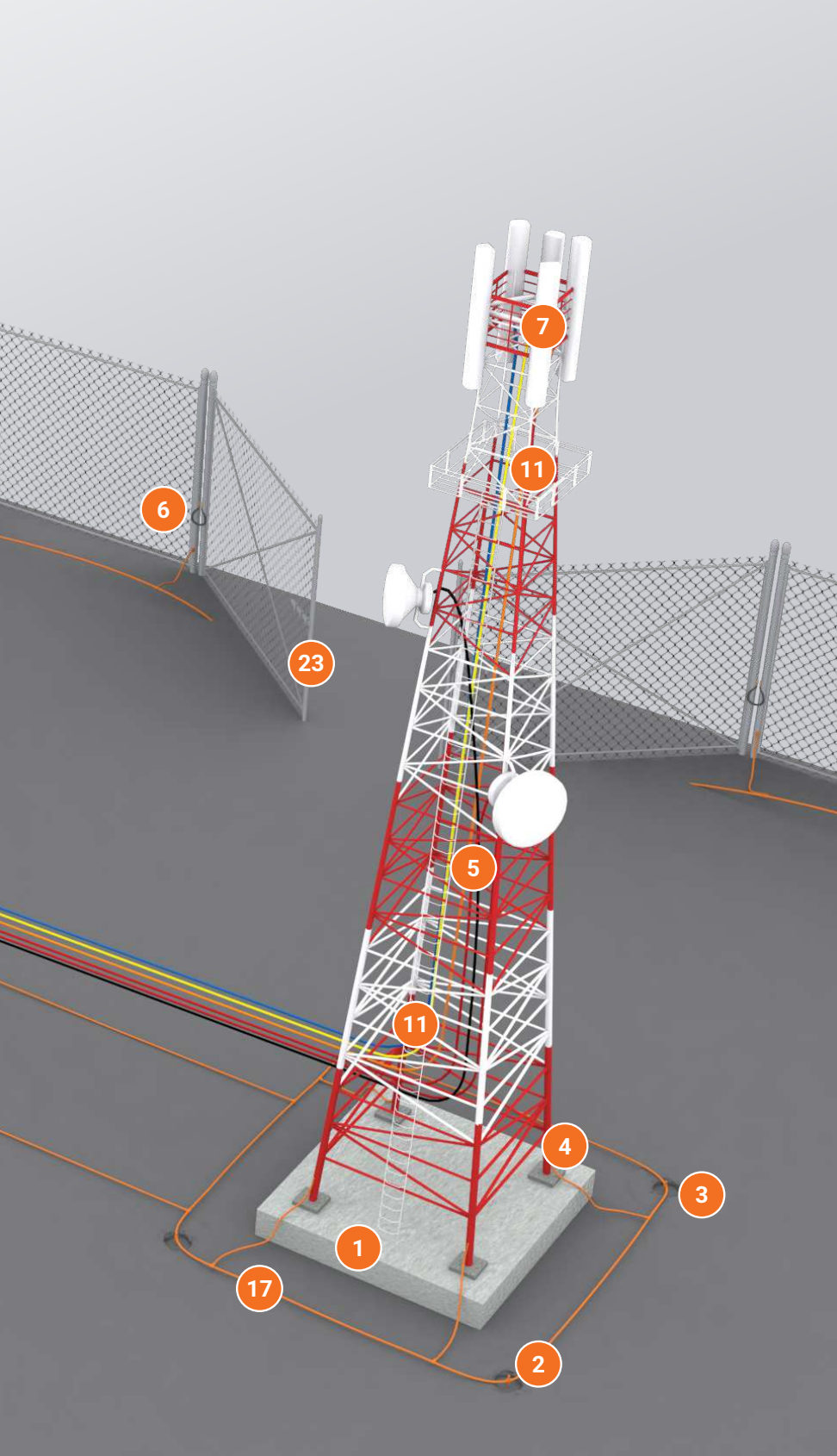
2. Ground Enhancement Material, GEM25A



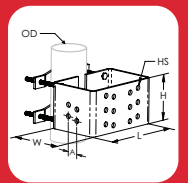
3. Ground rod



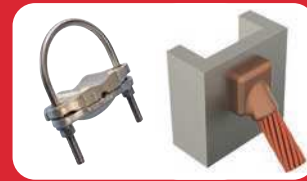
3. Cadweld connections



7. Tower mount bond, ETMAGSDBT



7. Tower mount bond, ETMAGSDBT



8. Fence bonding



9. DC surge protection



10. Surge reduction filter, SRF range



10. DIN mounted surge protection, DT/EDT range



10. AC surge protection, TDX range



11. Equipotential equipment ground bar

12. AC power line

13. Telecom ground electrode

14. AC main switch board & Surge protection

15. Rectifier

16. DC surge protection remote radio feed

17. Tower ground electrode

18. DC, alarm, other copper cables

19. Fiber, Coaxial & Waveguide feeders

20. Point of entry grounding

21. Telecom shelter or cabinet

22. Fence grounding

23. Gate grounding



3. Mechanical connector, REC16120



3. Mechanical connector, GU16070



3. nVent ERICO Hammerlock



3. Mechanical connector, SP58



4. Cadweld tower bond

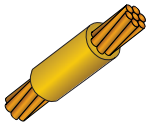
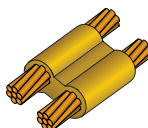
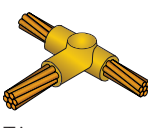
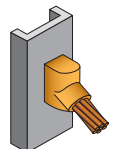
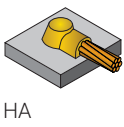

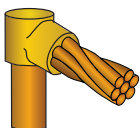


5. Tower mount ground bar

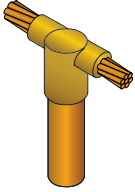
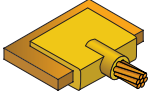











6. Gate bonding

# Telecommunication Grounding and Bonding Selection Guide

Cadweld Connections	Application	Mold Part No.	Description	Welding Material Part No.
 SS	"SS" Style; Spliced horizontal connection; straight; end to end	SST1T	#2 solid cable to #2 solid cable; horizontal straight splice (clamp included)	32PLUSF20 or #32
		SST1V	#2 stranded cable to #2 stranded cable; horizontal straight splice (clamp included)	32PLUSF20 or #32
		SSC2G	2/0 stranded cable to 2/0 stranded cable; horizontal straight splice	65PLUSF20 or #65
		SSC2Q	4/0 stranded cable to 4/0 stranded cable; horizontal straight splice	90PLUSF20 or #90
 PT	"PT" Style; Parallel through connection of horizontal cables	PTC1T1T	#2 solid cable to #2 solid cable; horizontal parallel splice	65PLUSF20 or #65
		PTC1V1V	#2 stranded cable to #2 stranded cable; horizontal parallel splice	65PLUSF20 or #65
		PTC2G2G	2/0 stranded cable to 2/0 stranded cable; horizontal parallel splice	115PLUSF20 or #115
		PTC2Q2Q	4/0 stranded cable to 4/0 stranded cable; horizontal parallel splice	200PLUSF20 or #200
 TA	"TA" Style; Tee connections of horizontal cables	TAC1T1T	#2 solid cable to #2 solid cable; horizontal tee splice	45PLUSF20 or #45
		TAC1V1V	#2 stranded cable to #2 stranded cable; horizontal tee splice	45PLUSF20 or #45
		TAC2G2G	2/0 stranded cable to 2/0 stranded cable; horizontal tee splice	90PLUSF20 or #90
		TAC2Q2Q	4/0 stranded cable to 4/0 stranded cable; horizontal tee splice	150PLUSF20 or #150
 VS	"VS" Style: Cable connection down at 45° angle to vertical steel surface	VSC1TV3C	#2 solid cable to vertical steel pipes of 1.5" to 4" diameters; cable at 45° to surface	45PLUSF20 or #45
		VSC1TV5C	#2 solid cable to vertical steel pipes of 4" to 6" diameters; cable at 45° to surface	45PLUSF20 or #45
		VSC1VW3C	#2 stranded cable to vertical steel pipes of 1.5" to 4" diameters; cable at 45° to surface	45PLUSF20 or #45
		VSC1VW5C	#2 stranded cable to vertical steel pipes of 4" to 6" diameters; cable at 45° to surface	45PLUSF20 or #45
		VSC2GV3C	2/0 stranded cable to vertical steel pipes of 2" to 4" diameters; cable at 45° to surface	90PLUSF20 or #90
		VSC2GV5C	2/0 stranded cable to vertical steel pipes of 4" to 6" diameters; cable at 45° to surface	90PLUSF20 or #90
		B160V	Chain support for "VS" style molds	
 HA   HS – Cable off surface	"HA" & "HS" Style; cable connections to flat horizontal steel surface	HAA1T	#2 solid cable to flat horizontal steel surface (clamp included)	45PLUSF20 or #45
		HAA1V	#2 stranded cable to flat horizontal steel surface (clamp included)	45PLUSF20 or #45
		HSC2G	2/0 stranded cable to flat horizontal steel surface	90PLUSF20 or #90
		HSC2Q	4/0 stranded cable to flat horizontal steel surface	115PLUSF20 or #115
 GR	"GR" Style; cable connection to top of ground rod	GRC161T	#2 solid cable to top of nominal 5/8" copper-bonded ground rod	65PLUSF20 or #65
		GRC161V	#2 stranded cable to top of nominal 5/8" copper-bonded ground rod	65PLUSF20 or #65
		GRC162G	2/0 stranded cable to top of nominal 5/8" copper-bonded ground rod	90PLUSF20 or #90
		GRC162Q	4/0 stranded cable to top of nominal 5/8" copper-bonded ground rod	90PLUSF20 or #90
		GRC181T	#2 solid cable to top of nominal 3/4" copper-bonded ground rod	90PLUSF20 or #90
		GRC181V	#2 stranded cable to top of nominal 3/4" copper-bonded ground rod	90PLUSF20 or #90
		GRC182G	2/0 stranded cable to top of nominal 3/4" copper-bonded ground rod	90PLUSF20 or #90
GRC182Q	4/0 stranded cable to top of nominal 3/4" copper-bonded ground rod	90PLUSF20 or #90		

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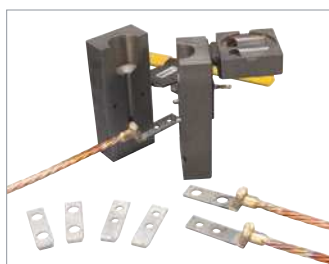
Cadweld Connections	Application	Mold Part No.	Description	Welding Material Part No.
 GT	"GT" Style; through cable connection to top of ground rod	GTC161T	#2 solid through cable to top of nominal 5/8" copper-bonded ground rod	65PLUSF20 or #65
		GTC161V	#2 stranded through cable to top of nominal 5/8" copper-bonded ground rod	65PLUSF20 or #65
		GTC162G	2/0 stranded through cable to top of nominal 5/8" copper-bonded ground rod	90PLUSF20 or #90
		GTC162Q	4/0 stranded through cable to top of nominal 5/8" copper-bonded ground rod	90PLUSF20 or #90
		GTC181T	#2 solid through cable to top of nominal 3/4" copper-bonded ground rod	90PLUSF20 or #90
		GTC181V	#2 stranded through cable to top of nominal 3/4" copper-bonded ground rod	90PLUSF20 or #90
		GTC182G	2/0 stranded through cable to top of nominal 3/4" copper-bonded ground rod	90PLUSF20 or #90
		GTC182Q	4/0 stranded through cable to top of nominal 3/4" copper-bonded ground rod	90PLUSF20 or #90
 LJ	"LJ" Style; cable connection to edge of horizontal busbar	LJCEG1T	#2 solid cable to edge of 1/4" thick by 1-1/2" and wider copper bar	65PLUSF20 or #65
		LJCEG1V	#2 stranded cable to edge of 1/4" thick by 1-1/2" and wider copper bar	65PLUSF20 or #65
		LJGEG2G	2/0 stranded cable to edge of 1/4" thick by 1-1/2" and wider copper bar	90PLUSF20 or #90
		LJCEG2Q	4/0 stranded cable to edge of 1/4" thick by 1-1/2" and wider copper bar	90PLUSF20 or #90

Accessories	Part No.	Description
	L160	Handle Clamp
	PLUSCU2L6	Control unit for igniting Cadweld Plus
	T320	Flint ignitor
	T313	Wire cleaning brush
	T394	Mold cleaning brush
	PLUSCU2BD	DEWALT® 20 V Battery Adapter For nVent ERICO Cadweld Plus Impulse Control Unit
	PLUSCU2BM	Milwaukee® 18 V Battery Adapter For nVent ERICO Cadweld Plus Impulse Control Unit
	T306	Ceramic Blanket
	T403	Mold Sealer

# Telecommunication Grounding and Bonding Selection Guide

## TRADITIONAL ONE SHOTS AND PLUS ONE SHOTS

Traditional Cadweld Part Number	Cadweld Plus Part Number	Mold Family	Ground Rod Diameter, Nominal	Ground Rod Diameter, Actual	Connection, Solid	Connection, Stranded
GR1141G	GR1141GPLUS	GR (ONE SHOT)	1/2"	0.440" – 0.507"	#8, #6	#8
GR1141L	GR1141LPLUS	GR (ONE SHOT)	1/2"	0.440" – 0.507"	#4, #3	#6, #4
GR1141V	GR1141VPLUS	GR (ONE SHOT)	1/2"	0.440" – 0.507"	#2, #1	#3, #2
GR1161G	GR1161GPLUS	GR (ONE SHOT)	5/8"	0.555" – 0.635"	#8, #6	#8
GR1161L	GR1161LPLUS	GR (ONE SHOT)	5/8"	0.555" – 0.635"	#4, #3	#6, #4
GR1161V	GR1161VPLUS	GR (ONE SHOT)	5/8"	0.555" – 0.635"	#2, #1	#3, #2
GR1181G	GR1181GPLUS	GR (ONE SHOT)	3/4"	0.673" – 0.765"	#8, #6	#8
GR1181L	GR1181LPLUS	GR (ONE SHOT)	3/4"	0.673" – 0.765"	#4, #3	#6, #4
GR1181V	GR1181VPLUS	GR (ONE SHOT)	3/4"	0.673" – 0.765"	#2, #1	#3, #2
GT1141G	GT1141GPLUS	GT (ONE SHOT)	1/2"	0.440" – 0.507"	#8, #6	#8
GT1141L	GT1141LPLUS	GT (ONE SHOT)	1/2"	0.440" – 0.507"	#4, #3	#6, #4
GT1141V	GT1141VPLUS	GT (ONE SHOT)	1/2"	0.440" – 0.507"	#2, #1	#3, #2
GT1161G	GT1161GPLUS	GT (ONE SHOT)	5/8"	0.555" – 0.635"	#8, #6	#8
GT1161L	GT1161LPLUS	GT (ONE SHOT)	5/8"	0.555" – 0.635"	#4, #3	#6, #4
GT1161V	GT1161VPLUS	GT (ONE SHOT)	5/8"	0.555" – 0.635"	#2, #1	#3, #2
GT1181G	GT1181GPLUS	GT (ONE SHOT)	3/4"	0.673" – 0.765"	#8, #6	#8
GT1181L	GT1181LPLUS	GT (ONE SHOT)	3/4"	0.673" – 0.765"	#4, #3	#6, #4
GT1181V	GT1181VPLUS	GT (ONE SHOT)	3/4"	0.673" – 0.765"	#2, #1	#3, #2
NT1141G	NT1141GPLUS	NT (ONE SHOT)	1/2"	0.440" – 0.507"	#8, #6	#8
NT1141L	NT1141LPLUS	NT (ONE SHOT)	1/2"	0.440" – 0.507"	#4, #3	#6, #4
NT1141V	NT1141VPLUS	NT (ONE SHOT)	1/2"	0.440" – 0.507"	#2, #1	#3, #2
NT1161G	NT1161GPLUS	NT (ONE SHOT)	5/8"	0.555" – 0.635"	#8, #6	#8
NT1161L	NT1161LPLUS	NT (ONE SHOT)	5/8"	0.555" – 0.635"	#4, #3	#6, #4
NT1161V	NT1161VPLUS	NT (ONE SHOT)	5/8"	0.555" – 0.635"	#2, #1	#3, #2
NT1181G	NT1181GPLUS	NT (ONE SHOT)	3/4"	0.673" – 0.765"	#8, #6	#8
NT1181L	NT1181LPLUS	NT (ONE SHOT)	3/4"	0.673" – 0.765"	#4, #3	#6, #4
NT1181V	NT1181VPLUS	NT (ONE SHOT)	3/4"	0.673" – 0.765"	#2, #1	#3, #2
NX1141G	NX1141GPLUS	NX (ONE SHOT)	1/2"	0.440" – 0.507"	#8, #6	#8
NX1141L	NX1141LPLUS	NX (ONE SHOT)	1/2"	0.440" – 0.507"	#4, #3	#6, #4
NX1161G	NX1161GPLUS	NX (ONE SHOT)	5/8"	0.555" – 0.635"	#8, #6	#8
NX1161L	NX1161LPLUS	NX (ONE SHOT)	5/8"	0.555" – 0.635"	#4, #3	#6, #4
NX1161V	NX1161VPLUS	NX (ONE SHOT)	5/8"	0.555" – 0.635"	#2, #1	#3, #2
NX1181G	NX1181GPLUS	NX (ONE SHOT)	3/4"	0.673" – 0.765"	#8, #6	#8
NX1181L	NX1181LPLUS	NX (ONE SHOT)	3/4"	0.673" – 0.765"	#4, #3	#6, #4
NX1181V	NX1181VPLUS	NX (ONE SHOT)	3/4"	0.673" – 0.765"	#2, #1	#3, #2



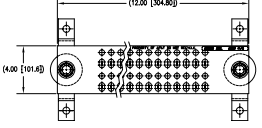
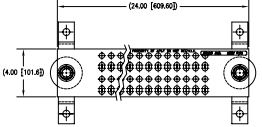
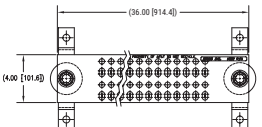
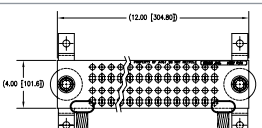
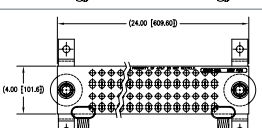
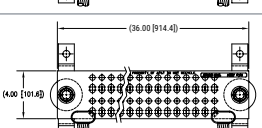
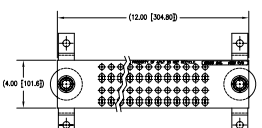
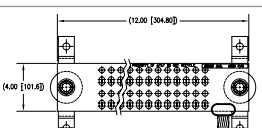
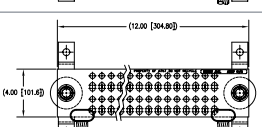
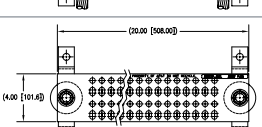
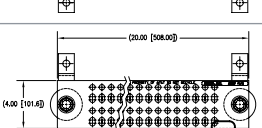
### ORDERING INFORMATION

nVent ERICO Cadweld Telecom Mold Part No. is GLPCC001TC and includes B399B Mini EZ change handle clamp and T320 flint ignitor. Cadweld weld metal size #25 works for all 7 lug sizes.

# Telecommunication Grounding and Bonding Selection Guide

Grounding Accessories	Application	Part No.	Description
	Ground rods and couplers are used for vertical driving or drilled applications	613852	Copper-bonded ground rod 3/8" x 5', 3 mils of copper
		6138529	Copper-bonded ground rod 3/8" x 5', 3 mils of copper, 18" #10 AWG pigtail
		611350	Copper-bonded ground rod 1/2" x 5', 10 mils of copper
		611360	Copper-bonded ground rod 1/2" x 6', 10 mils of copper
		611380	Copper-bonded ground rod 1/2" x 8', 10 mils of copper
		615880	Copper-bonded ground rod 5/8" x 8', 10 mils of copper
		615800	Copper-bonded ground rod 5/8" x 10', 10 mils of copper
		615883	Copper-bonded ground rod 5/8" x 8', 13 mils of copper
		613400	Copper-bonded ground rod 3/4" x 10', 10 mils of copper
			
CC58	Compression coupler for 5/8" ground rod		
	Ground rod clamps	CP58	Silican bronze ground rod clamp, 1/2" – 5/8" ground rods, #10 solid – #2 stranded wire
		CP34	Silican Bronze Ground Rod Clamp, 1/2" – 3/4" ground rods, #10 Solid – #1/0 Stranded Wire
		SP58	Stainless Steel Ground Rod Clamp, 1/2" – 5/8" ground rods, #10 solid – #2 stranded wire
	Hammerlock Ground Clamp	EHL12C1K	Hammerlock, CU, 1/2 IN FULL, #4 SOL
		EHL58C1K	Hammerlock, CU, NOM 5/8, #4 SOL
		EHL58C1K1K	Hammerlock, CU, NOM 5/8, 2-#4 SOL
		EHL58C1V	Hammerlock, CU, NOM 5/8, #2 STR
		EHL58C1V1V	Hammerlock, 2 HOLE, CU, NOM 5/8, #2 STR, #2 SOL
 <p>Pattern "SS"</p>	Bare and tinned copper ground bars with insulators and bracket	<b>Bare Copper Ground Bar Assembly</b>	
		EGBA1426SS	Ground Bar Assembly 1/4" x 2" x 6" SS Hole Pattern
		EGBA14210SS	Ground Bar Assembly 1/4" x 2" x 10" SS Hole Pattern
		EGBA14212SS	Ground Bar Assembly 1/4" x 2" x 12" SS Hole Pattern
		EGBA14214SS	Ground Bar Assembly 1/4" x 2" x 14" SS Hole Pattern
		EGBA1446QQ	Ground Bar Assembly 1/4" x 4" x 6" QQ Hole Pattern
		EGBA14412QQ	Ground Bar Assembly 1/4" x 4" x 12" QQ Hole Pattern
		EGBA14414QQ	Ground Bar Assembly 1/4" x 4" x 14" QQ Hole Pattern
		EGBA14420QQ	Ground Bar Assembly 1/4" x 4" x 20" QQ Hole Pattern
		EGBA14424QQ	Ground Bar Assembly 1/4" x 4" x 24" QQ Hole Pattern
		<b>Tinned Copper Ground Bar Assembly</b>	
		EGBA1426SST	Ground Bar Assembly 1/4" x 2" x 6" SS Hole Pattern, Tinned Copper
			Ground Bar Assembly 1/4" x 2" x 12" SS Hole Pattern, Tinned Copper
			Ground Bar Assembly 1/4" x 2" x 14" SS Hole Pattern, Tinned Copper
	Ground Bar Assembly 1/4" x 2" x 19" SS Hole Pattern, Tinned Copper		
EGBA1446QQT	Ground Bar Assembly 1/4" x 4" x 6" QQ Hole Pattern, Tinned Copper		
	Ground Bar Assembly 1/4" x 4" x 12" QQ Hole Pattern, Tinned Copper		
	Ground Bar Assembly 1/4" x 4" x 14" QQ Hole Pattern, Tinned Copper		
	Ground Bar Assembly 1/4" x 4" x 20" QQ Hole Pattern, Tinned Copper		
	Ground Bar Assembly 1/4" x 4" x 24" QQ Hole Pattern, Tinned Copper		
 <p>Pattern "QQ"</p>			

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Grounding Accessories	Application	Part No.	Description
<b>Verizon Theft Deterrent Ground Bars</b>			
	This ground bars are for use in Verizon wireless network. These are theft deterrent and the pre-Cadwelded pigtails offer means of connection to ground electrode and ensure a solid connection to ground bar	EGGBC14412QQ	Galvanized Steel Busbar, 1/4x4x12 no pigtails
		EGGBC14424QQ	Galvanized Steel Busbar, 1/4x4x24 no pigtails
		EGGBC14436QQ	Galvanized Steel Busbar, 1/4x4x36 no pigtails
		EGGBC14412QQS2	Galvanized Steel 1/4 x 4 x 12, two pigtails of theft deterrent composite cable CC5A05CB
		EGGBC14424QQS2	Galvanized Steel 1/4 x 4 x 24, two pigtails of theft deterrent composite cable CC5A05CB
		EGGBC14436QQS2	Galvanized Steel 1/4 x 4 x 36, two pigtails of theft deterrent composite cable CC5A05CB
<b>AT&amp;T Theft Deterrent Ground Bars</b>			
	This ground bars are for use in Verizon wireless network. These are theft deterrent and the pre-Cadwelded pigtails offer means of connection to ground electrode and ensure a solid connection to ground bar	EGGGBA14412QQQA	Galvanized Steel Busbar, 1/4x4x12 no pigtails
		EGGGBA14412QQ1A	Galvanized Steel Busbar, 1/4x4x12 one pigtails
		EGGGBA14412QQ2A	Galvanized Steel Busbar, 1/4x4x12 two pigtails
		EGGGBA14420QQQA	Galvanized Steel Busbar, 1/4x4x20 no pigtail
		EGGGBA14420QQ1A	Galvanized Steel Busbar, 1/4x4x20 one pigtail










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Grounding Accessories	Application	Part No.	Description
	<p>This ground bars are for use in Verizon wireless network. These are theft deterrent and the pre-Cadwelded pigtailed offer means of connection to ground electrode and ensure a solid connection to ground bar</p>	EGGBA14420QQ2A	Galvanized Steel Busbar, 1/4x4x20 two pigtail
		EGGBA14424QQ0A	Galvanized Steel Busbar, 1/4x4x24 no pigtail
		EGGBA14424QQ1A	Galvanized Steel Busbar, 1/4x4x24 one pigtail
		EGGBA14424QQ2A	Galvanized Steel Busbar, 1/4x4x24 two pigtail
<p>Cadweld Connection Type VB</p>	<p>Jumpers are used to bond fence posts and gates</p>	FJ1T24	#2 Solid wire, 24"
		FJ2G24	2/0 Stranded wire, 24"

Tinned Bronze Fence Clamps	Application	Part No.	Pipe Size (in)	Conductor Size (AWG)	Conductor Size (mm <sup>2</sup> )	Pipe Size (mm)	
 	<p>Fence clamps are used to connect ground wire to fence posts</p>	<b>Single Hole</b>					
		FC073	1-1/2	4 Solid – 2/0 Stranded	16 – 70 Stranded	40	
		FC074	1-1/2	2/0 Solid – 250 MCM Stranded	50 – 120 Stranded	40	
		FC075	2	4 Solid – 2/0 Stranded	16 – 70 Stranded	50	
		FC076	2	2/0 Solid – 250 MCM Stranded	50 – 120 Stranded	50	
		FC078	2-1/2	2/0 Solid – 250 MCM Stranded	16 – 120 Stranded	65	
		FC079	3	4 Solid – 2/0 Stranded	16 – 70 Stranded	80	
		FC080	3	2/0 Solid – 250 MCM Stranded	50 – 120 Stranded	80	
		FC082	3-1/2	4 Solid – 2/0 Stranded	16 – 120 Stranded	90	
		<b>Dual Hole</b>					
		FC076 DH	2	2 x 2/0 Solid – 250 MCM Stranded	50 – 120 Stranded	50	
		FC078 DH	2-1/2	2 x 2/0 Solid – 250 MCM Stranded	16 – 120 Stranded	65	
		FC082 DH	3-1/2	2 x 4 Solid – 2/0 Stranded	16 – 120 Stranded	90	

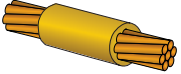
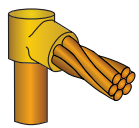
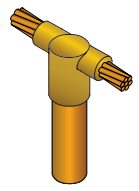
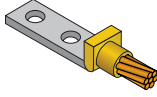
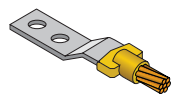
# Telecommunication Grounding and Bonding Selection Guide



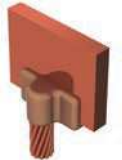
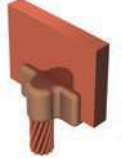

Ground Bus Assemblies	Application	Part No.	Description
	nVent ERICO theft deterrent ground assembly (TDSGA) is an alternative to copper ground bars	TDSGAU14	Bar Assembly, Ground Bus, Universal Mount
		TDSGAPA14	Bar Assembly, Ground Bus, Through Pole/Post Mount
		TDSGAWB17	Bar Assembly, Ground Bus, Wall Bracket Mount
		TDSGABC14	Bar Assembly, Ground Bus, Beam Clamp Mount
		TDSGAPC14	Bar Assembly, Ground Bus, Pole/Post Clamp Mount

Theft Deterrent Composite Cable	Application	Global Part No. (Reel)	Stranding	Resistance	Outside Diameter	Fusing Capacity Equivalency	Standard Packaging Quantity	Weight*
 CC5A05CB	Cu-Bond composite cable is a bare concentric stranded conductor that consists of peripheral tinned copper plated steel which protects and conceals the internal copper stranding. This conductor is ideal for exposed electrical grounding applications where copper theft may occur. The conductor is difficult to cut with hand tools and the outer stranding is magnetic, which further deters thieves looking for copper. Cu-Bond is a bare concentric stranded conductor that consists of peripheral tinned copper plated steel which protects and conceals the internal copper stranding.	CC5A05CB	(3) tinned copper, (16) tinned copper bonded steel	0.457 Ω/1,000 ft; 1.591 Ω/km??	0.320" (0.813 cm)	33.2 (Steel) / 6.8 (Copper)	250 ft (76.2 m)	61 lbs (28 kg)
 CCSA20CB		CCSA20CB	(133) tinned copper, (21) Copper bonded	0.098 Ω/1,000 ft; 0.320 Ω/km??	0.524" (1.33 cm)	43.6 (Steel) / 19.9 (Copper)	200 ft (61.0 m)	113 lbs (51 kg)


\*Weight does not include reel.

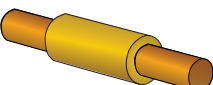
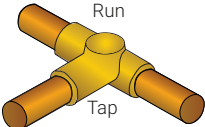
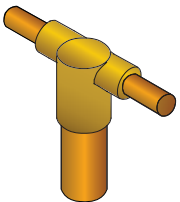
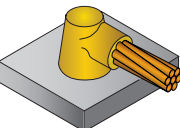
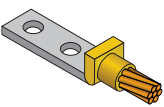
# Telecommunication Grounding and Bonding Selection Guide

Cadweld Connection	Cu Bond Composite Conductor Size	Weld	Cadweld Mold	Ground Rod or Lug	Welding Material
	CC5A05CB	"SS" Style	SSCS1		32PLUSF20 or #32
	CC5A20CB		SSCS5		90PLUSF20 or #90
	CC5A05CB	"GR" Style	GRC16S1	Nominal 5/8" copper-bonded	65PLUSF20 or #65
	CC5A20CB		GRC16S5	Nominal 5/8" copper-bonded	90PLUSF20 or #90
	CC5A05CB	"GT" Style	GTC16S1	Nominal 5/8" copper-bonded	90PLUSF20 or #90
	CC5A20CB		GTC16S5	Nominal 5/8" copper-bonded	115PLUSF20 or #115
	CC5A05CB	"GL" Style	GLCCES1	B121CE or B122CE	32PLUSF20 or #32
	CC5A20CB		GLCCES5	B121CE or B122CE	45PLUSF20 or #45
	CC5A05CB	"LA" Style	LACS1CE	B101CEOL or B102CEOL	45PLUSF20 or #45
	CC5A20CB		LACS5CE	B101CEOL or B102CEOL	65PLUSF20 or #65q


Cadweld Connection	Cu Bond Composite Conductor Size	Weld	Cadweld Mold	Ground Rod or Lug	Welding Material
	CC5A05CB	"TA" Style	TAC1VS1	#2AWG Tinned Solid copper wire	TBA
	CC5A05CB	"PT" Style	PTC1VS1	#2AWG Tinned Solid Copper Wire	TBA
	CC5A05CB	"LN" Style	LNEEKS1	To Busbar	PLUS65F20 or #60
	CC5A05CB	"VB" Style	VBCS1	To Tower Leg	PLUS65F20 or #60
	CC5A05CB	"VS" Style	VBCS1V2C VBCS1V3C	To Ice Bridge Post 1" To Ice Bridge Post 2" and 3"	PLUS65F20 or #60


# Telecommunication Grounding and Bonding Selection Guide

Copper Bonded Steel Conductor – Cu Bond Solid	Application	Part No.	Conductor Cross Section in mm <sup>2</sup>	Conductor Cross Section in in <sup>2</sup>	Diameter mm	Standard Packaging
	<p>The nVent ERICO Cu-Bond Round Conductor (Copper Bonded Steel Conductor, CBSC) is comprised of an electro-plated coating of copper deposited over a layer of nickel surrounding a steel core. This process helps ensure a long-lasting molecular bond between the copper layer and the steel. The conductor core consists of a low-carbon steel grade for improved flexibility in the field. The copper surface of the conductor provides high conductivity and corrosion-resistance properties.</p>	CBSC8	50.27	0.08	8	100m Coil
		CBSC10	78.52	0.12	10	100m Coil
		CBSC8SM4	50.27	0.08	8	10 Lengths of 4m in a tube
		CBSC10SM4	78.52	0.12	10	10 Lengths of 4m in a tube

Cadweld Connection	Cu Bond Solid Size	Weld	Cadweld Mold	Ground Rod or Lug	Welding Material
	CBSC8	"SS" Style	SSCT1		65PLUSF20 or #65
	CBSC10		SSCT2		90PLUSF20 or #90
	CBSC8	"TA" Style	TACT1		90PLUSF20 or #90
	CBSC10		TACT2		115PLUSF20 or #115
	CBSC8	"GT" Style	GTC16T1	Nominal 5/8" copper-bonded	115PLUSF20 or #115
	CBSC10		GTC16T2	Nominal 5/8" copper-bonded	150PLUSF20 or #150
	CBSC8		GTC18T1	Nominal 3/4" copper-bonded	115PLUSF20 or #115
	CBSC10		GTC18t2	Nominal 3/4" copper-bonded	150PLUSF20 or #150
	CBSC8	"HS" Style	HSCT2		90PLUSF20 or #90
	CBSC10		HSCT2		115PLUSF20 or #115
	CBSC10	"GL" Style	GLCCET1	B121CE or B122CE	TBA
			GLCCES2	B121CE or B122CE	TBA


# Telecommunication Grounding and Bonding Selection Guide

Tower Grounding Standoff	Application	Part No.	Description
	<p>Most equipment on telecommunication towers are grounded by connecting a copper conductor to a ground bar mounted on the tower. The lead length of the conductor is often extensive, which adds resistance to the grounding system. Additionally, traditional ground bars are obtrusive and challenging to get close to other critical tower equipment.</p> <p>nVent ERICO's Tower Mounted Ground Bar (ETMAGSDBT) is a compact ground bar with a unique bracket design that is easily installed to the tower head frame creating a direct, low-impedance electrical ground connection to the tower. Due to its compact size and unique direct-mounting feature, the Tower Mounted Ground Bar can be installed close to remote radio units, small cells, amplifiers, antennas and other equipment, effectively creating the grounding point closer to a denser area of the radio head frame.</p> <p>The Tower Mounted Ground Bar can be installed on structural members and mounted directly onto the head frame. Using multiple Tower Mounted Ground Bars on a tower can reduce the amount of grounding wire required and increase the effectiveness of the grounding system.</p>	ETMAGSDBT	Bar, Ground, Standoff, Top Mount

Tower Flange Clamp	Application	Part No.	Description
	<p>The nVent ERICO Telecom Flange Clamp is designed to provide a grounding connection point to:</p> <ol style="list-style-type: none"> <li>1) curved flanges that may exist on steel monopole telecommunication towers and</li> <li>2) straight flanges that exist on towers constructed from angle steel.</li> </ol> <p>The clamp is an integral part of the tower grounding system used to ground &amp; bond antennas, Tower Mounted Ground Bars, and telecommunication equipment to the tower.</p> <p><b>Features</b></p> <ul style="list-style-type: none"> <li>• Accommodates (2) 2-hole lugs</li> <li>• Tinned copper cast and stainless steel hardware to mitigate corrosion</li> <li>• Works on flat and curved flanges</li> <li>• cULus® Listed</li> <li>• Works with Telecom Flange Clamp as a standalone clamp</li> <li>• Lightweight</li> <li>• Quick and easy installation</li> <li>• No special tools required</li> </ul>	TFC2L	Assembly, Clamp, Flange, 2 Lug Compatible



# Telecommunication Grounding and Bonding Selection Guide

## PIPE GROUNDING CLAMPS

Cast Grounding Clamp	Application	Part No.	Material	Nominal Pipe Diameter Range (in)
	For use with all full size cables. 570 and 580 Series recommended also for rebar bonding.	LPA570	Aluminum	.50 - 1.50
		LPC570	Copper	.50 - 1.50
		LPC570L	Tinned Copper	.50 - 1.50
		LPA571	Aluminum	2.00 - 2.70
		LPC571	Copper	2.00 - 2.70
		LPC571L	Tinned Copper	2.00 - 2.70
		LPA580	Aluminum	.75 - 1.32
		LPC580	Copper	.75 - 1.32
		LPC580L	Tinned Copper	.75 - 1.32

## nVENT ERICO GEM GROUND ENHANCEMENT MATERIAL

Ground Enhancement Material (GEM) is a superior conductive material that solves your toughest grounding problems. It is the ideal material to use in areas of poor conductivity, such as rocky ground, mountain tops and sandy soil. GEM dramatically reduces earth resistance and impedance measurements. Furthermore, GEM may reduce the size of the grounding system where conventional methods are unsatisfactory. Once installed, GEM is maintenance-free, not requiring periodic charging or the presence of water to maintain its conductivity.

Gem Ground Enhancement Material	Part Number	Packaging	Complies With
	GEM25A	Bag with handles	IEC® 62561-7
	GEM25ABKT	Plastic bucket with locking lid	IEC® 62561-7

# Telecommunication Grounding and Bonding Selection Guide

## NVENT ERICO GEM GROUND ENHANCEMENT MATERIAL

### Features:

- Maintains constant resistance for the life of the system once in its set form
- Performs in all soil conditions even during dry spells
- Does not require periodic charging treatments or placement
- Does not require the continuous presence of water to maintain its conductivity
- Fully sets within 3 days, fully cures within 28 days
- Does not dissolve, decompose, or leach out with time
- Non-corrosive
- Reduces vandalism and theft since conductors are hard to remove from concrete
- Easy-to-handle 25 lb (11.3kg) bags or buckets
- Requires only one person to install



## SURGE PROTECTION

TDX Panel Protectors	Application	Part No.	Description
	<p>nVent ERICO's line of Transient Discriminating Panel Protectors are designed for critical protection applications. This line is specifically designed for equipment, panel and motor protection applications and to provide long life, even under the most adverse over-voltage conditions.</p> <p><b>Features</b></p> <ul style="list-style-type: none"> <li>• Built-in safety features include TD Technology, thermal protection and short circuit current cartridge fusing</li> <li>• Compact NEMA®-4 enclosure design can be flush mounted or installed in a small space</li> <li>• Available in various operating voltages to suit most common power distribution systems</li> <li>• CE, UL® 1449 Edition 4 Listed</li> </ul>	TDX100M120/208	PROTECTOR, SURGE, TDX200M, 3P, 120/208V, 4W+G, 200KA/PHA
		TDX100M120/240	PROTECTOR, SURGE, TDX100M, 2P, 120/240V, 3W+G, 100KA/PHA
		TDX100M277/480	PROTECTOR, SURGE, 277/480V 4W+G, 100KA/P, TT
		TDX200M120/208	PROTECTOR, SURGE, TDX200M, 3P, 120/208V, 4W+G, 200KA/PHA
		TDX200M120/240	PROTECTOR, SURGE, TDX200M, 2P, 120/240V, 3W+G, 200KA/PHA
		TDX200M277/480	PROTECTOR, SURGE, 277/480V 4W+G, 50KA/PH
		TDX50C120/208	PROTECTOR, SURGE, TDX50C, 3P, 120/208V, 4W+G, 50KA/PHASE
		TDX50C120/240	PROTECTOR, SURGE, TDX50C, 2P, 120/240V, 3W+G, 50KA/PHASE
		TDX50C277/480	PROTECTOR, SURGE, 277/480V 4W+G, 50KA/PH

Our powerful portfolio of brands:

**CADDY ERICO HOFFMAN RAYCHEM SCHROFF TRACER**



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