



Terminal, Lug, Ring & Battery Insulators

Solving Problems & Creating Value

Terminal Insulators

When you think terminal insulators, think VTE Inc.

At VTE, Inc., terminal insulators are the foundation of our business. When the company was founded, our vision was clear: manufacturing moulded terminal insulators, of high quality, at a reasonable price. We have been designing, developing and manufacturing terminal insulators for over 30 years.

Through the years, we have extended our reach into all areas of marine, industrial and commercial markets. We've worked with clients to develop new and exciting products to fill the needs of these clients and the needs of entire markets. But these growth areas haven't changed our outlook: create a great product, at a great price.

VTE has been able to keep current with industry standards, making our products the smart choice for developers of standardized products.



Industry Standards

Industry standards state that each ungrounded terminal or stud that is continuously energized must have a boot, nipple, cap, cover, or shield that prevents accidental short-circuiting at the terminals or studs. VTE terminal insulators are a safe and cost-effective way to adhere to these standards.

Our PVCs meet various UL standards and are RoHS2 and REACH Compliant.




Product Materials

VTE manufactures its products in various materials to comply with different industry standards and to meet different pricing objectives. Not all insulators are available in all materials. Please contact Trysome for material options.

Material Type	Description	U.L. 94 Flame Class	Brightness °C	Service Temp. °C	Tensile Strength PSI	Elongation %
V	Vinyl (Standard)	V-2	-36	105	1300	400
F	Vinyl (FR-Material)	V-0	N/A	90	1632	383
T	Thermoplastic Rubber	HB	-60	90	1020	450

Colour

VTE manufactures product in (4) colours. Not all insulators are available in all colours. Please contact Trysome for colour options.

Standard Colours:



200 Series Lug & Ring Terminal Caps

VTE 200 Series terminal insulators are designed to protect ring and lug terminals. They are available in sizes from 12 mm up to 34 mm. They are manufactured from PVC, which has a 105°C temperature rating.

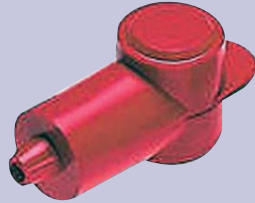
TOD = Terminal Outside Diameter

212 Series



TOD: 12 mm
Cable: 18-2 ga

214 Series



TOD: 14 mm
Cable: 18-2 ga

216 Series



TOD: 16 mm
Cable: 18-2 ga

218 Series



TOD: 18 mm
Cable: 18-2 ga

220 Series



TOD: 20 mm
Cable: 18-2/0 ga

222 Series



TOD: 22 mm
Cable: 18-2/0 ga

224 Series



TOD: 24 mm
Cable: 18-2/0 ga

226 Series



TOD: 26 mm
Cable: 18-2/0 ga

228 Series



TOD: 28 mm
Cable: 18-2/0 ga

230 Series



TOD: 30 mm
Cable: 18-2/0 ga

232 Series



TOD: 32 mm
Cable: 18-4/0 ga

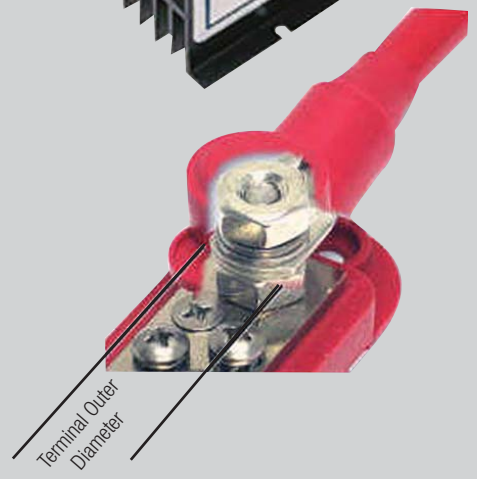
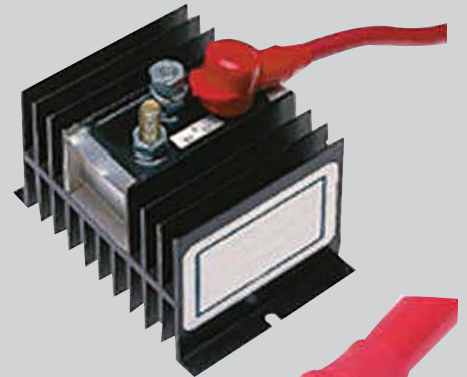
234 Series



TOD: 34 mm
Cable: 18-4/0 ga

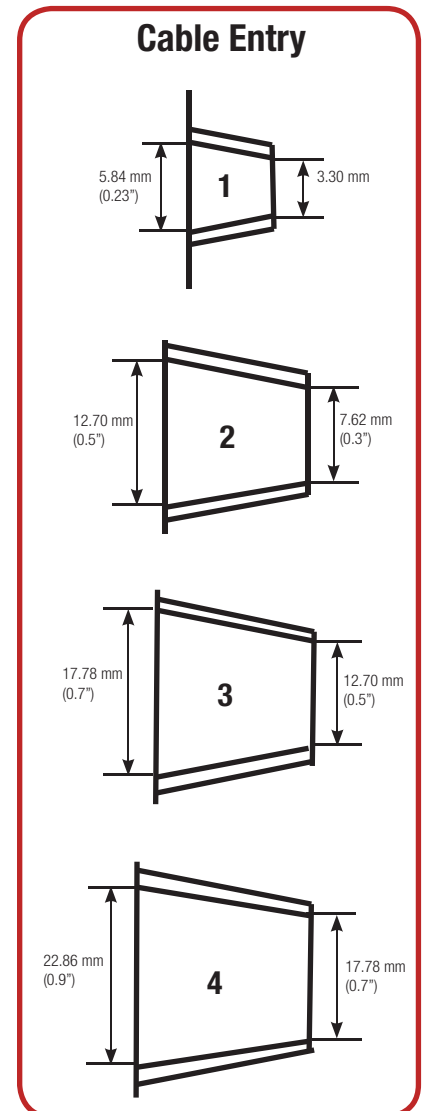
The 200 Series terminal insulators work with stud and eyelet terminals. This series can have an extended length for longer terminals, and can be manufactured in (14) colours.

The 200 Series is commonly used on inverters, starters, windlasses, chargers, and other high energy connections.

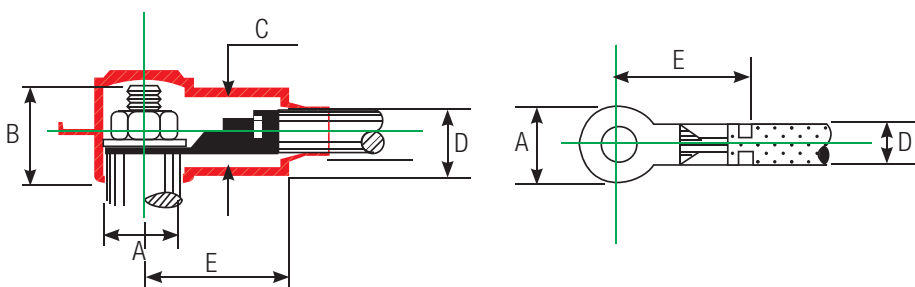


Dimensions

Base Part Number	A Terminal O.D. (in/mm)	B Post Height (in/mm)	C Ins. Grip Diameter (in/mm)	D Cable Entry Options (See Chart)	E Terminal Length (in/mm)	Nominal Material Thickness (in/mm)
212N	.48/12	.70/17.8	.5/12.7	1, 2	1.0/25.4	.06/1.5
212E	.48/12	.70/17.8	5/12.7	1, 2	1.25/31.8	.06/1.5
214N	.55/14	.75/19.1	5/12.7	1, 2	1.0/25.4	.06/1.5
214E	.55/14	.75/19.1	5/12.7	1, 2	1.25/31.8	.06/1.5
216N	.65/16	.80/20.3	5/12.7	1, 2	1.0/25.4	.06/1.5
216E	.65/16	.80/20.3	5/12.7	1, 2	1.25/31.8	.06/1.5
218N	.73/18	.87/22.1	5/12.7	1, 2	1.0/25.4	.06/1.5
218E	.73/18	.87/22.1	5/12.7	1, 2	1.25/31.8	.06/1.5
220N	.81/20	.95/24.1	.7/17.8	1, 2, 3	1.32/33.5	.07/1.8
220E	.81/20	.95/24.1	.7/17.8	1, 2, 3	1.75/44.5	.07/1.8
222N	.87/22	1.05/26.7	.7/17.8	1, 2, 3	1.32/33.5	.07/1.8
222E	.87/22	1.05/26.7	.7/17.8	1, 2, 3	1.75/44.5	.07/1.8
224N	.95/24	1.13/28.7	.7/17.8	1, 2, 3	1.62/41.2	.08/2.0
224E	.95/24	1.13/28.7	.7/17.8	1, 2, 3	2.06/52.3	.08/2.0
226N	1.03/26	1.25/31.8	.7/17.8	1, 2, 3	1.62/41.2	.08/2.0
226E	1.03/26	1.25/31.8	.7/17.8	1, 2, 3	2.06/52.3	.08/2.0
228N	1.11/28	1.32/33.5	.75/19.1	1, 2, 3	1.75/44.5	.09/2.3
228E	1.11/28	1.32/33.5	.75/19.1	1, 2, 3	2.25/57.2	.09/2.3
230N	1.20/30	1.40/35.6	.75/19.1	1, 2, 3	1.75/44.5	.09/2.3
230E	1.20/30	1.40/35.6	.75/19.1	1, 2, 3	2.25/57.2	.09/2.3
232N	1.28/32	1.50/38.1	.9/22.9	1,2,3,4	1.75/44.5	.10/2.5
232E	1.28/32	1.50/38.1	.9/22.9	1,2,3,4	2.38/60.5	.10/ 2.5
234N	1.37/34	1.60/40.6	.9/22.9	1,2,3,4	2.0/50.8	.10/2.5
234E	1.37/34	1.60/40.6	.9/22.9	1,2,3,4	2.63/ 66.8	.10/ 2.5



Finding the correct insulator



1. Determine your terminal's outside diameter (A above)
2. Determine your terminal's post height (B above)
3. Determine your terminal's cable entry (D above)

Match your terminal's measurements against the table above to find the correct insulator for your application.

Call Trysome for more information on finding the correct insulator for your needs.

Sample 8 Digit Part Number

232 N 4 V 02

Mould Number: 212 - 234

Cable Entry (See Above)

Colour: 02 - Red, 14 - Black

Length: N - Normal, E - Extended

Material: V - Vinyl












Cable Gauges

18 - 10	0.8 mm ² (3.24 mm [0.13"]) to 5mm ² (5.42 mm [0.215"])
8 - 2	8 mm ² (6.98 mm [0.28"]) to 32 mm ² (11.93 mm [0.51"])
2 - 2/0	32 mm ² (11.93 mm [0.51"]) to 62 mm ² (16.00 mm [0.66"])
3/0 - 4/0	81 mm ² (18.3 mm [0.75"]) to 103 mm ² (19.8 mm [0.81"])



Lug & Ring Terminal Insulators

A more comprehensive line of insulators, offering a wider variety of lug and ring protection. Our lug and ring insulators can be used with starters, generators, alternators, solenoids, and other devices.

258 Series		Part No.	Cable Entry Size
		<ul style="list-style-type: none"> Protect large terminal connections from shorts Terminal Outside Dia.: 2.3"/58.7 mm Post Height: 2.0"/50.8 mm Inside Grip Diameter: .65"/16.6 mm Can accept multiple cables, up to 1/0 ga each 	258N9 Oval up to 4/0
216T Series		Part No.	Cable Entry Size
		<ul style="list-style-type: none"> Snap-on insulator. can be removed without cable Terminal Outside Dia: .64"/16.3 mm Post Height: .74"/18.8 mm 	216T8 .27"/6.9 mm
400 Series		Part No.	Cable Entry Size
		<ul style="list-style-type: none"> Terminal Outside Dia.: .6"/15.2 mm Post Height: .88"/22.4 mm Inside Grip Dia.: .44"/11.2 mm Terminal Length: 1.19" / 30.3 mm 	400N7 .31"/7.9 mm 400N9 .44"/11.2 mm 400E4 .18"/4.6 mm
405/6 Series		Part No.	Cable Entry Size
		<ul style="list-style-type: none"> Terminal Outside Dia.: 1.0"/25.4 mm Post Height: .98"/24.8 mm Inside Grip Diameter: .50"/12.7 mm 	405N1 .13"/3.3 mm 405N2 .30"/7.6 mm 405N9 .50"/12.7mm 406N3 .16"/4.1mm 406N9 .75"/19 mm
470 Series		Part No.	Cable Entry Size
		<ul style="list-style-type: none"> Terminal Outside Dia.: .85"/21.6 mm Post Height: 1.06/26.9 mm Inside Grip Diameter: .63"/15.9 mm Terminal Length: 1.81"/46.0 mm 	470N9 .63/15.9 mm
485 Series		Part No.	Cable Entry Size
		<ul style="list-style-type: none"> Terminal Outside: Dia: .52"/12.9 mm Post Height: .45/11.4 mm Inside Grip Diameter: .25"/ 6.4 mm Cable Entry: .25"/6.4 mm 	485N9 .25"/6.4 mm
487/8 Series		Part No.	Cable Entry Size
		<ul style="list-style-type: none"> Terminal Outside Dia: 1.26"/32 mm Post Height: .98"/24.9 mm Inside Grip Diameter: 1.0"/25.4 mm Available in 5 cable entries 	487N6 .5"/12.7 mm 487N7 .6"/15.2 mm 487N8 .65"/16.5 mm 487N9 .75"/19 mm 488N9 .87"/22.1 mm

Terminal, Lug, Ring & Battery Insulators

490 Series



- Used for angled connections
- Terminal Outside Dia.: .75"/19.1mm
- Post Height: 1.07"/27.2 mm
- Inside Grip Dia.: .50"/12.7 mm

Part No.	Cable Entry Size
490N9	.5"/12.7 mm

510 Series



- Terminal Outside Dia.: .5"/12.7 mm
- Post Height: .8" / 20.3 mm
- Inside Grip Diameter: 6.4 - 11.6 mm
- Additional lead times may apply

Part No.	Cable Entry Size
510N9	.25"/6.4 mm

600 Series



- Terminal Outside Dia.: 1.57"/40 mm
- Post Height: 1.62"/ 41.1 mm
- Inside Grip Dia.: .65"/16.6 mm
- Available in 7 cable entries

Part No.	Cable Entry Size
600N1	(1) .31"/7.9 mm
600N2	(2) .31"/7.9 mm
600N3	(1) .5"/12.7 mm
600N4	(2) .5"/12.7 mm
600N5	(1) .62"/15.8 mm
600N6	(2) .62"/15.8 mm
600N7	Oval up to 4/0 ga

690 Series



- Protect medium-duty right angle terminals
- Accept 8 ga - 4/0 ga cables

Part No.	Cable Entry Size	Terminal Footprint
691N9	.16"/3.9mm	.78 x 1.13"/19.7 x 28.7 mm
692N9	.24"/6.2mm	.77 x 1.08"/19.6 x 27.4 mm
693N9	.27"/6.9mm	.82 x 1.14"/20.8 x 28.8 mm
694N9	.29"/7.4mm	.84 x 1.19"/21.3 x 30.2 mm
695N9	.32"/8.2mm	.92 X 1.26"/23.4 X 32 mm
696N9	.35"/8.9mm	1.02 x 1.22"/25.9 x 31 mm

800 Series



- Terminal Outside Dia.: .73"/18.5 mm
- Post Height: 1.03" / 26.2 mm
- Inside Grip Dia.: .42"/10.7 mm
- Additional lead times may apply

Part No.	Cable Entry Size
800N4	.17"/4.3 mm
800N5	.21"/5.3 mm
800N8	.31"/7.9 mm
800N9	.50"/12.7 mm

801 Series



- Terminal Outside Dia.: .75"/19.1 mm
- Post Height: 1.03"/26.2 mm
- Inside Grip Dia.: .37"/9.4 mm
- Cable Entry: .31"/7.9 mm

Part No.	Cable Entry Size
801N8	.31"/7.9 mm

960 Series

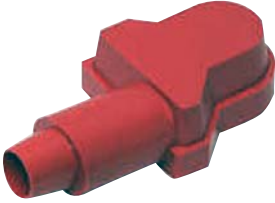













- Protect heavy-duty right angle terminals
- Accept 8 ga - 4/0 ga cables

Part No.	Cable Entry Size	Terminal Footprint
962N9	.21"/5.3 mm	.77 x 1.18"/19.4 x 30.0 mm
963N9	.24"/6.0 mm	.75 x 1.35"/19.1 x 34.2 mm
964N9	.33"/8.5 mm	.81 x 1.36"/20.6 x 34.6 mm
965N9	.36"/9.2 mm	.90 x 1.49"/22.9 x 37.8 mm
966N9	.35"/9.0 mm	.97 x 1.50"/24.5 x 38.2 mm
967N9	.44"/11.1 mm	1.08 x 1.51"/27.5 x 38.2 mm
968N9	.44"/11.1 mm	1.16 x 1.60"/29.5 x 40.5 mm

Battery Terminal Insulators

VTE manufactures a complete line of battery terminal insulators. These insulators are designed for use in marine, commercial, industrial and automotive fields. VTE's battery terminal insulators are available in various materials and colours.

409 Series			Part No.	Cable Entry Size
		<ul style="list-style-type: none"> Protect stamped or wrapped battery terminals Available in 2 cable entries Post Height: .83"/21.0 mm Cable Entry: 8 ga - 1/0 ga 	409N2	.29"/7.2 mm
			409N3	.50"/12.7 mm
415 Series			Part No.	Cable Entry Size
		<ul style="list-style-type: none"> Protect tapered style battery posts Post Height: .74"/18.8 mm Cable Entry: 1/0 ga - 2/0 ga Available in 4 entry sizes 	415N6	.37"/9.4 mm
			415N7	.44"/11.2 mm
			415N8	.50"/12.7 mm
			415N9	.625"/15.9 mm
416 Series			Part No.	Cable Entry Size
		<ul style="list-style-type: none"> Protect tapered style battery posts Post Height: .76"/19.3 mm Inside Grip: .63"/16.0 mm 	416N9	.63"/16 mm
417 Series			Part No.	Cable Entry Size
		<ul style="list-style-type: none"> Snap-on Insulator, can be removed without cable Post Height: .91"/23.1 mm Inside Grip Diameter: .50"/12.7 mm Cable Entry: 1 - 1/0 ga 	417N9	.50"/12.7 mm
430 Series			Part No.	Cable Entry Size
		<ul style="list-style-type: none"> Protect tapered style battery posts Post Height: .83"/21.1 mm Inside Grip Diameter: .56"/14.2 mm Cable Entry: 2/0, 3/0 ga 	430N7	.56"/14.2 mm
			430N8	.68"/17.3 mm
455 Series			Part No.	Cable Entry Size
		<ul style="list-style-type: none"> Insulator for dual post batteries Insulator snaps onto cable and can be fastened with zip-tie Can accept multiple cables of different sizes 	455N4	.4"/10 mm
			455N6	.5"/12.7 mm
			455N8	.75"/19.1 mm

Terminal, Lug, Ring & Battery Insulators

458 Series			Part No.	Cable Entry Size
		<ul style="list-style-type: none"> • Insulator for dual post battery • Attached cover can insulate post when not in use • Often used with 226 Series Cap 	458N0	N/A
				
500 Series			Part No.	Cable Entry Size
		<ul style="list-style-type: none"> • Protect angle battery terminals • Left, right, and dual cable entry • Available in two sizes 	500L7	.5"/12.7 mm
			500L9	.69"/17.5 mm
			500R7	.5"/12.7 mm
			500R9	.69"/17.5 mm
			500D7	.5"/12.7 mm
			500D9	.69"/17.5 mm
553 Series			Part No.	Cable Entry Size
		<ul style="list-style-type: none"> • Protect side-post battery connection • Available in two sizes 	553X6	.59" x 15 mm
			553X9	.90" x 22.9 mm
460 Series			Part No.	Cable Entry Size
		<ul style="list-style-type: none"> • Protect marine battery, Exide 32 • Tabbed finger grip, for easy removal • Available for positive and negative • Allows for secondary battery connection 	460N9	N/A
				
462 Series			Part No.	Cable Entry Size
		<ul style="list-style-type: none"> • Protect dual-post battery terminals • Often used in marine industry • Attached cap covers post when not in use 	462N0	N/A
				
466 Series			Part No.	Cable Entry Size
		<ul style="list-style-type: none"> • Protect heavy-duty battery terminal • Inside Grip Dia: .42" 10.7mm • Cable Entry: 	466L1, R1	13"/3.3 mm
			466L2, R2	.30"/7.6 mm
			466L3, R3	.50"/112.7 mm
			466N9	Oval up to 4/0 ga
		Left Entry Right Entry Oval Entry		
468 Series			Part No.	Cable Entry Size
		<ul style="list-style-type: none"> • Protect heavy-duty battery terminal • Accepts right, left, and dual cable • Snaps onto terminal & cable • Accepts up to 4/0 ga cables 	468L9	.82"/20.8 mm
			468R9	.82"/20.8 mm
			468D9	.82"/20.8 mm

730 Series



- Protect marine wing-nut terminals
- Top insulator swivels to accommodate different cable direction
- Several cable entries
- Top insulator offers single, dual, and multiple cable entry

Red	Black	Cable Entry Size
731N1V02	730N1V14	(1) .31"/7.9 mm
731N2V02	730N2V14	(2) .31"/7.9 mm
731N3V02	730N3V14	(1) .5"/12.7 mm
731N4V02	730N4V14	(2) .5"/12.7 mm
731N5V02	730N5V14	(1) .62"/15.8 mm
731N6V02	730N6V14	(2) .62"/15.8 mm
731N7V02	730N7V14	Oval up to 4/0 ga

843 Series



- Protect tapered battery post
- Left, right, & dual cable entry
- Post Height: .79"/20.1 mm

Part No.	Cable Entry Size
843L8	.44"/11.2 mm
843L9	.50"/12.7 mm
843R8	.44"/11.2 mm
843R9	.50"/12.7 mm
843D8	.44"/11.2 mm
843D9	.50"/12.7 mm

900 Series



- Protect tapered battery post
- Left, right, & dual cable entry
- Cable entry ring can utilize ziptie, securing insulator
- Cable entry: Up to 3/0 ga (4/0 ga when cut and ziptied)

Part No.	Cable Entry Size
900L9	.63" / 16.0mm
900R9	.63" / 16.0mm
900D9	.63" / 16.0mm

975 Series



- Heavy-duty cable series
- Cable entry accepts double cable
- Wide cable entry for large cable
- Cable Entry: Up to 4/0 ga

Part No.	Cable Entry Size
975D8	.8"/20.3 mm

976 Series



- Heavy-duty cable series
- Triple cable entry permits 3 cables
- Wide cable entry for large cable
- Cable entries can be blocked
- Cable Entry: Up to 4/0 ga

Part No.	Cable Entry Size
976N8	.8"/20.3 mm

This may not be a stock item. Please speak to our sales representative about lead times. Lead times, price and availability can only be determined on receipt of an official quote from our supplier. This can sometimes take up to 3 days.

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