

Wire and Grounding

THHN



Nylon Jacket PVC Insulation Bare Copper Conductor

THHN - THWN 90 Degree Celsius Building Wire

Applications

- General purpose building wire for services, feeders and branch circuits
- Conduit and raceways
- 1/0 and larger for cable tray use

Features

- Slick nylon jacket for easy pulling
- VW-1 rated through 1 AWG
- 1/0 AWG and larger rated for CT use
- 1/0 AWG and larger rated Sunlight Resistant
- Gasoline and Oil Resistant
- Resistant to abrasion, acids, alkalines, ozone, and water

Color	Code	Color	Code	Color	Code	Color	Code
Red	RD	Orange	OR	Blue	BE	Grey	GY
White	WT	Black	BK	Yellow	YW	Purple	PU
Green	GN	Pink	PK	Brown	BN	Beige	BG

To decipher the item number substitute the color code for ##.

Size AWG	No. of Strands	Strand class	Insulation Thickness (MILS)	Jacket Thickness (MILS)	NOM. O.D. (Inches)	Shipping WT. LBS/MFT	Item No.
14	Solid	-	15	4	.102	17	WIR14SOLTHHN##
12	Solid	-	15	4	.1118	25	WIR12SOLTHHN##
10	Solid	-	20	4	.150	39	WIR10SOLTHHN##
14	19	B	15	4	.110	18	WIR1419STRTHHN##
12	19	B	15	4	.128	27	WIR1219STRTHHN##
10	19	B	20	4	.161	40	WIR1019STRTHHN##
8	19	B	30	5	.212	69	WIR0819STRTHHN##
6	19	B	30	5	.250	109	WIR0619STRTHHN##
4	19	B	40	6	.318	166	WIR0419STRTHHN##
3	19	B	40	6	.345	202	WIR0319STRTHHN##
2	19	B	40	6	.375	254	WIR0219STRTHHN##
1	19	B	50	7	.430	316	WIR0119STRTHHN##

Special order color and sizes also available

Wire and Grounding

THW Copper Wire

Application

- General purpose building wire for use in conduits and ducts.
- Approved for use in circuits not exceeding 600 volts, with a maximum operating temperature of 75°C in wet or dry locations.
- Resistant to solvents, greases, oils, alkalis, acids, and provides exceptional flame resistance.



Color	Code	Color	Code	Color	Code	Color	Code
Red	RD	Orange	OR	Blue	BE	Grey	GY
White	WT	Black	BK	Yellow	YW	Purple	PU
Green	GN	Pink	PK	Brown	BN	Beige	BG

To decipher the item number substitute the color code for ##.

Cond. Size AWG/MCM	No. of Strands	Insulation Thickness (MILS)	Approx. O.D. (Inches)	Shipping WT. LBS/MFT	Item No.
14	Solid	45	0.161	23	WIR14SOLTHW##
12	Solid	45	0.178	31	WIR12SOLTHW##
10	Solid	45	0.199	45	WIR10SOLTHW##
14	7	45	0.258	24	WIR1407STRTHW##
12	7	45	0.167	33	WIR1207STRTHW##
10	7	45	0.186	46	WIR1007STRTHW##
8	7	60	0.210	79	WIR0807STRTHW##
6	7	60	0.276	117	WIR0607STRTHW##
4	7	60	0.314	172	WIR0407STRTHW##
3	7	60	0.363	215	WIR0307STRTHW##
2	7	60	0.392	259	WIR0207STRTHW##
1	19	80	0.432	333	WIR0119STRTHW##
1/0	19	80	0.494	392	WIR1019STRTHW##
2/0	19	80	0.537	484	WIR2019STRTHW##
3/0	19	80	0.582	620	WIR3019STRTHW##
4/0	19	80	0.634	768	WIR4019STRTHW##
250	37	95	0.692	888	WIR25037STRTHW##
300	37	95	0.768	1091	WIR30037STRTHW##
350	37	95	0.832	1255	WIR35037STRTHW##

Bare Copper



Solid Conductor



Standard Conductor

Bare Copper

Applications

- Equipment and circuit grounding

Cond. Size AWG/MCM	No. of Strands	ASTM Stranding Class	Nom. O.D. (Inches)	Copper WT. LBS/MFT	Item No.
14	Solid	-	0.064	12.4	WIR14SOLBARE
12	Solid	-	0.081	19.8	WIR12SOLBARE
10	Solid	-	0.102	31.4	WIR10SOLBARE
8	Solid	-	0.129	50.0	WIR08SOLBARE
8	7	B	0.146	51.0	WIR0807STRBARE
6	Solid	-	0.162	79.4	WIR06SOLBARE
6	7	B	0.184	81.1	WIR0607STRBARE
4	Solid	-	0.204	126.3	WIR04SOLBARE
4	7	A, B	0.232	128.9	WIR0407STRBARE
2	Solid	-	0.258	200.9	WIR02SOLBARE
2	7	A, B	0.292	204.9	WIR0207STRBARE
1	7	A	0.328	258.4	WIR0107STRBARE
1/0	7	AA, A	0.368	326.0	WIR1007STRBARE
1/0	19	B	0.373	326.0	WIR1019STRBARE
2/0	7	AA, A	0.414	411.0	WIR2007STRBARE
2/0	19	B	0.419	411.0	WIR2019STRBARE
3/0	7	AA, A	0.464	518.1	WIR3007STRBARE
3/0	19	B	0.470	518.1	WIR3019STRBARE
4/0	7	AA, A	0.522	653.3	WIR4007STRBARE
4/0	19	B	0.528	653.3	WIR4019STRBARE
250	37	B	0.575	771.9	WIR25037STRBARE
350	37	B	0.681	1081.0	WIR35037STRBARE
500	37	A, B	0.813	1544.0	WIR50037STRBARE
700	61	A, B	0.998	2316.0	WIR70061STRBARE

Special order sizes available upon request

Ground Rods

Nominal Diameter x Length	Type	Weight Per 100	Item No.
5/8" x 8'	Copper	696	HDW058GR
5/8" x 8'	Galvanized	900	HDW058GRGL
5/8" x 8'	Stainless Steel	832	HDW058GRSS
5/8" x 10'	Copper	870	HDW05810GR
5/8" x 10'	Stainless Steel	1040	HDW05810GRSS
3/4" x 8'	Copper	1024	HDW0348GR
3/4" x 8'	Galvanized	1200	HDW0348GRG
3/4" x 8'	Sectional	1024	HDW0348GRS
3/4" x 8'	Stainless Steel	1200	HDW0348GRSS
3/4" x 10'	Copper	1280	HDW034GR
3/4" x 10'	Sectional	1280	HDW034GRS
3/4" x 10'	Stainless Steel	1500	HDW034GRSS

Other hardware and special order items also available upon request

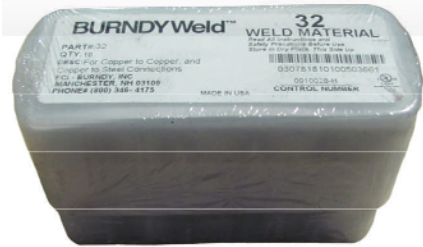


Exothermic Grounding

Weld Metal

Weld Metal is for welding copper to copper or copper to another metal. It is packed in moisture-resistant plastic cartridges that have tight fitting caps. These cartridges, along with the necessary steel discs, are then packed in boxes that are hermetically-sealed.

This ensures that the powder stays dry and in good condition for fast ignition.



Cartridge Size	Cartridges Per Box	Item No.	Steel Discs Only	Package Quantity	Item No.
15	20	BUR15	3/4"	20	BURB37032001
25	20	BUR25	3/4"	20	BURB37032001
32	10	BUR32	3/4"	20	BURB37032001
45	20	BUR45	3/4"	20	BURB37032001
65	20	BUR65	3/4"	20	BURB37032001
90	10	BUR90	1"	10	BURB37032002
115	10	BUR115	1"	10	BURB37032002
150	10	BUR150	1 1/2"	10	BURB37032003
200	10	BUR200	1 1/2"	10	BURB37032003
250	10	BUR250	1 1/2"	10	BURB37032003
500	10	BUR500	1 1/2"	10	BURB37032003

* These cartridges are sold in box quantities only.

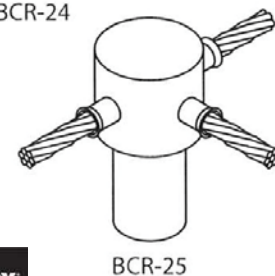
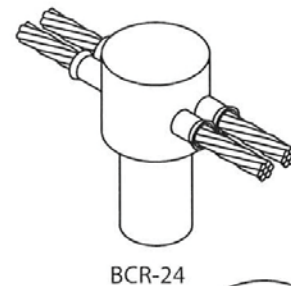
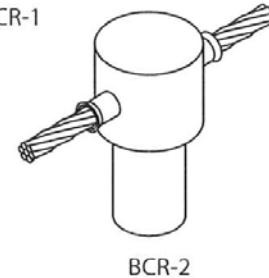
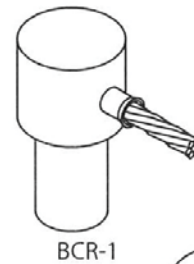
Wire and Grounding

Exothermic Grounding

Type	Ground Rod Size	Cable Size		Item No.
		Solid	Stranded	
BCR-1	1/2"	#6, #8	#8	BURBS2009
BCR-1	1/2"	#3, #4	#4, #6	BURBS2010
BCR-1	1/2"	#1, #2	#2, #3	BURBS2011
BCR-1	5/8"	#6, #8	#8	BURBS2012
BCR-1	5/8"	#3, #4	#4, #6	BURBS2013
BCR-1	5/8"	#1, #2	#2, #3	BURBS2014
BCR-1	5/8"	2/0, 1/0	1/0, #1	BURBS2015
BCR-1	5/8"	N/A	2/0	BURBS2016
BCR-1	3/4"	#6, #8	#8	BURBS2017
BCR-1	3/4"	#3, #8	#4, #6	BURBS2018
BCR-1	3/4"	#1, #2	#2, #3	BURBS2019
BCR-1	3/4"	2/1, 1/0	1/0, #1	BURBS2020
BCR-1	3/4"	N/A	2/0	BURBS2021
BCR-2	1/2"	#6, 8	#8	BURBS2024
BCR-2	1/2"	#3, #4	#4, #6	BURBS2025
BCR-2	1/2"	#1, #2	#2, #3	BURBS2026
BCR-2	5/8"	#6, #8	#8	BURBS2027
BCR-2	5/8"	#3, #4	#4, #6	BURBS2028
BCR-2	5/8"	#1, #2	#2, #3	BURBS2029
BCR-2	5/8"	2/0, 1/0	1/0, #1	BURBS2030
BCR-2	3/4"	#6, #8	#8	BURBS2031
BCR-2	3/4"	#3, #4	#4, #6	BURBS2032
BCR-2	3/4"	#1, #2	#2, #3	BURBS2033
BCR-2	3/4"	2/0, 1/0	1/0, #1	BURBS2034
BCR-24	5/8"	#6, #8	#8	BURBS2105
BCR-24	5/8"	#3, #4	#4, #6	BURBS2106
BCR-24	5/8"	#1, #2	#2, #3	BURBS2107
BCR-24	3/4"	#6, #8	#8	BURBS2108
BCR-24	3/4"	#3, #4	#4, #6	BURBS2109
BCR-24	3/4"	#1, #2	#2, #3	BURBS2110
BCR-25	5/8"	#6, #8	#8	BURBS2006
BCR-25	5/8"	#3, #4	#4, #6	BURBS2007
BCR-25	5/8"	#1, #2	#2, #3	BURBS2008
BCR-25	3/4"	#6, #8	#8	BURBS2068
BCR-25	3/4"	#3, #4	#4, #6	BURBS2069
BCR-25	3/4"	#1, #2	#2, #3	BURBS2070

Single Shot Molds

Single Shot Molds are used for making cable connections onto the top of a ground rod. These molds can be used once and come with everything except the Flint Igniter.

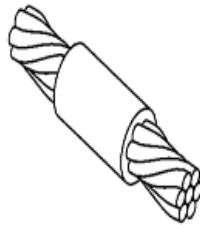


Exothermic Grounding

Molds

Horizontal End to End

- Used for horizontal end to end cable connections.
- They are for solid or concentric stranded copper conductors.



Cable	Weld Metal	Item No.
#2	32	BURB5625
4/0	90	BURB208

Horizontal Cable Tap to Horizontal Cable Run

Cable		Weld Metal	Item No.
Run	Tap		
2/0	2/0	90	BURB232
3/0	3/0	115	BURB236
4/0	4/0	150	BURB241
4/0	2/0	90	BURB243



- Used for horizontal cable tap to horizontal cable run.
- They are used for solid or concentric stranded copper conductors.

*Other sizes available upon request.



Molds

Horizontal to Horizontal Cable Cross

- Used to join two horizontal cables to right angles.
- One cable is cut and the other is one piece.
- They are for solid or concentric stranded copper conductors.



Cable		Weld Metal	Item No.
Run	Tap		
4/0	4/0	200	BURB443

Horizontal to Horizontal Cable Cross

Cable		Weld Metal	Item No.
Run	Tap		
4/0	4/0	250	BURB2707



- Used to join uncut horizontal cables at right angles to each other.
- They are for solid or concentric stranded copper conductors.



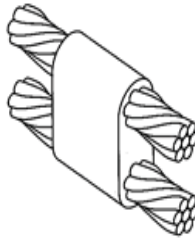
*Other sizes available upon request.

Exothermic Grounding

Molds

Horizontal Parallel through Cables

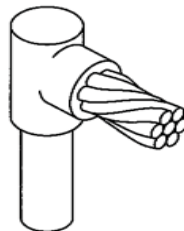
- Used to join two horizontal parallel through run cables.
- The cables lay parallel on top of each other in the mold.
- They are for solid or concentric stranded copper conductors.



Cable		Weld Metal	Item No.
Run	Tap		
2/0	2/0	115	BURB1322

Horizontal Cable Terminal to Ground Rod

Cable		Weld Metal	Item No.
Ground Rod	Tap		
5/8"	4/0	90	BURB508
3/4"	2/0	90	BURB516
3/4"	4/0	90	BURB518



- Used to terminate horizontal copper cable at the top of a vertical ground rod.
- They are for solid or concentric stranded copper conductors.

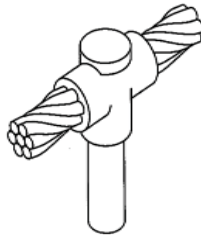
*Other sizes available upon request.



Molds

Horizontal Cable to Ground Rod

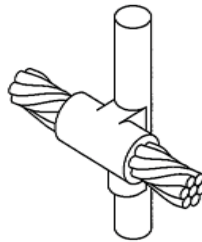
- Used to join two horizontal through copper cable to the top of a vertical ground rod.
- They are for solid or concentric stranded copper conductors.



Cable		Weld Metal	Item No.
Ground Rod	Tap		
5/8"	2/0	115	BURB548
5/8"	4/0	115	BURB550
3/4"	2/0	115	BURB559
3/4"	4/0	115	BURB561

Horizontal Thru Cable to Ground Rod

Cable		Weld Metal	Item No.
Ground Rod	Tap		
5/8"	4/0	150	BURB1588
3/4"	4/0	150	BURB1596



- Used to join horizontal through run cable to the side of a vertical ground rod.
- They are for solid or concentric stranded copper conductors.



*Other sizes available upon request.

Exothermic Grounding

Molds

Horizontal Cable to Horizontal Steel Surface

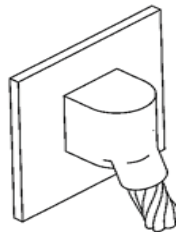
- Used to terminate a horizontal copper cable to any horizontal steel surface.
- The cable does not touch the surface.
- They are for solid or concentric stranded copper conductors.



Cable Size	Weld Metal	Item No.
4/0	115	BURB647

Angular Cable Drop to Vertical Steel Surface

Cable Size	Weld Metal	Item No.
2/0	90	BURB591
4/0	115	BURB593



- Used to join the end of a copper cable at a 45 degree angle to a vertical steel surface.
- They are for solid or concentric stranded copper conductors.

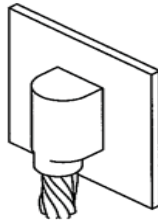
*Other sizes available upon request.



Molds

Vertical Cable Drop to Vertical Steel Surface

- Used to join vertical drop down to a vertical steel surface.
- The cable is off the surface.
- They are for solid or concentric stranded copper conductors.



Cable Size	Weld Metal	Item No.
2/0	115	BURB2540
4/0	150	BURB8718

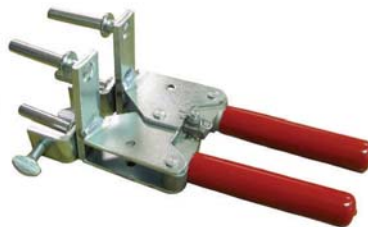


*Other sizes available upon request.

Handle Clamps

Handle clamps are used for holding several different sizes and types of molds.

Part # :
BURB106
BURB107



Chain Clamps

Chain clamps are used to hold a mold in position on a horizontal pipe up to 4" in diameter.

Part # BURB10632

Exothermic Grounding Cleaners

Cable Cleaning Brush

Cable cleaning brushes are used for cleaning heavily oxidized cables. The brushes are in a V-shape to allow use on a wide range of cable sizes.



Part # BURB38013500

Mold Cleaners

Mold cleaners are used to clean the slag from molds that are not split through the crucible.

Part # :
BURB40031901 (for molds #15 - #65)
BURB40031903 (for molds #90 - #500)

Other

Tools

- Mold cleaning brush - Part # BURB38392200
- Wire brush - Part # BURB38030500
- Card cloth brush - Part # BURB38030600

Shim Stock

The shim stock wraps around the cable until the diameter is about equal to the cable opening. It prevents leakage of weld metal.

Part # BURB38032900

Flint Igniter

The flint igniter is used to ignite the starting powder. It allows the installer to keep a safe distance when lighting the powder.

Part # :
BURB38030900 - Flint Igniter
BURB38030901 - Flint Replacement



Wire and Grounding

Threaded Ground Bushings

- Threaded with aluminum lay-in lug
- UL temperature rating of 150° Celsius
- Insulating liner material is UL V-O Rated
- Tough plastic liner
- Will not chip, crack, swell, or shrink
- Low surface friction
- Resistant to corrosion, chemicals, and extreme temperatures



Conduit Size	Grounding Min.	Wire Size Max.	Max. Diameter w/out Lug	Maximum Height	Turning Radius With Lug	Item No.
1/2"	14	4	1 ^{3/16}	7/16	1 ^{3/16}	GL050GB
3/4"	14	4	1 ^{7/16}	1/2	1 ^{5/16}	GL075GB
1"	14	4	1 ^{3/4}	9/16	1 ^{7/16}	GL100GB
1 1/4"	14	4	2 ^{1/8}	5/8	1 ^{5/8}	GL125GB
1 1/2"	14	2	2 ^{5/16}	11/16	1 ^{3/4}	GL150GB
2"	14	2	2 ^{13/16}	3/4	2	GL200GB
2 1/2"	14	2/0	3 ^{3/8}	7/8	2 ^{1/2}	GL250GB
3"	14	2/0	4 ^{1/16}	1 ^{5/16}	2 ^{13/16}	GL300GB
3 1/2"	14	2/0	4 ^{1/2}	1	3 ^{1/16}	GL350GB
4"	14	2/0	5 ^{3/16}	1 ^{1/16}	3 ^{3/8}	GL400GB
5"	14	2/0	6 ^{1/16}	1 ^{1/4}	3 ^{7/8}	GL500GB
6"	14	2/0	7 ^{1/4}	1 ^{5/16}	4 ^{7/16}	GL600GB

Wire and Grounding

Threadless Ground Bushings

- Set-screw with aluminum lay-in lug
- UL temperature rating of 150° Celsius
- Insulating liner material is UL V-O Rated
- Tough plastic liner
- Will not chip, crack, swell, or shrink
- Low surface friction
- Resistant to corrosion, chemicals, and extreme temperatures
- Can be locked in any desired



Conduit Size	Grounding Min.	Wire Size Max.	Max. Diameter w/out Lug	Maximum Height	Turning Radius With Lug	Item No.
1"	14	4	1 ^{3/4}	9/16	1 ^{7/16}	GL100GBT
1 1/2"	14	4	2 ^{5/16}	11/16	1 ^{3/4}	GL150GBT
2"	14	4	2 ^{13/16}	3/4	2	GL200GBT
2 1/2"	14	2/0	3 ^{3/8}	7/8	2 ^{1/2}	GL250GBT
3"	14	2/0	4 ^{1/16}	1 ^{5/16}	2 ^{13/16}	GL300GBT
4"	14	2/0	5 ^{3/16}	1 ^{1/16}	3 ^{3/8}	GL400GBT