
CATALOG

Blackburn® Grounding systems



**Thomas & Betts is now ABB
Installation Products, but our long
legacy of quality products and
innovation remains the same. From
connectors that help wire buildings
on Earth to cable ties that help put
machines in space, we continue to
work every day to make, market,
design and sell products that
provide a smarter, safer and more
reliable flow of electricity, from
source to socket.**

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Overview

The E-Z-Ground™ system



01 This installation method results in a long-lasting, low-installed cost connection. You can install it and forget it. Before compression, typical cable connector cross section of cable and connector consists of about 75% metal and 25% air. After ABB method compression, the cross section shows 100% metal with virtually no air spaces.



02 Before compression



03 After compression



04 Mobile application vehicle

Blackburn® E-Z-Ground™ compression connectors represent a low cost, code-approved alternative to welded ground grid connections. E-Z-Ground connectors can be safely installed in half the time, with fewer components, and in all weather conditions. The range-taking capability of each E-Z-Ground series connector translates to fewer parts needed to complete the ground grid. E-Z-Ground compression connectors are installed using the “ABB Method,” which produces an easily inspectable die embossment on the connector indicating that the proper tool has been used and successful crimp has been made. E-Z-Ground carries the “ABB Method” mark of approval and represents the connection of choice for faster, simpler and safer ground grid system installations.

Meets all applicable specifications

ABB grid and ground rod connectors satisfy the requirements of NEC® Article 250 for connecting to the grounding electrode system. They also meet the requirements of UL® Std. 467, UL Std. 486, CSA Std. C22.2 No. 41 and CSA Std. C22.2 No. 65 being acceptable as grounding and bonding equipment suitable for direct burial. ABB grid and ground rod connectors also satisfy the recommended practice for the selection of grounding connector joints

described in the IEEE 837 standard for qualifying permanent connections used in substation grounding.

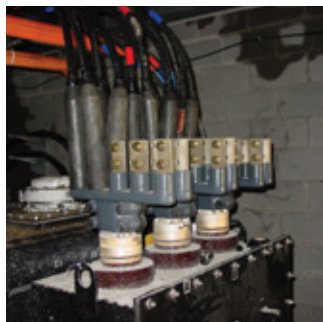
The connectors conform to the following IEEE Standard 837 requirements:

- 350 °C current cycling
- Freeze-thaw test
- Accelerated aging – Nitric acid/salt spray
- Mechanical, tensile and electromagnetic force (EMF) criteria

NEC and National Electrical Code are registered trademarks of the National Fire Protection Association, Inc.

Reliable installations through compression connections

The ABB method, utilizing compression tools with matching dies, forms the connector and conductor into a solid, homogeneous mass to provide an optimum electrical bond between connector and conductor. The dies are designed to produce a circumferential, hex-shaped compression rather than a simple indent. The circumferential compression creates a large area of high-pressure contact between cable and connector which, in turn, ensures high conductivity, low resistance and high pull-out values exceeding all industry requirements.



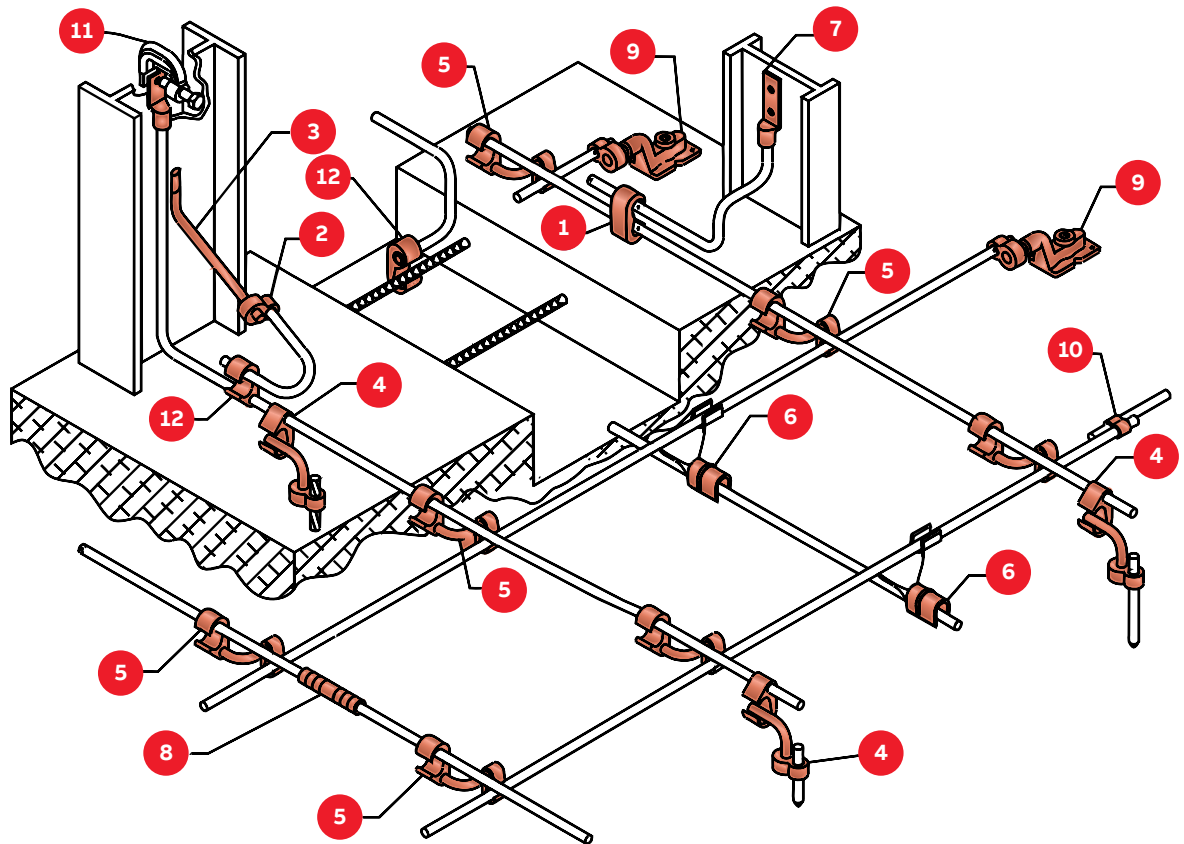
Overview

The E-Z-Ground™ system

- 1 C-taps
- 2 Figure 8 connector
- 3 Steel grounding stud TBG series
- 4 Figure 6–8 connectors
- 5 Figure 6–6 connectors
- 6 GG connectors
- 7 Lug
- 8 Splice/two-way connector
- 9 Grounding plate
- 10 Pigtail connectors
- 11 I-beam clamp
- 12 Figure 6 connector

ABB offers its complete line of grid-ground compression connectors. Our E-Z-Ground connectors are designed for direct burial and offer a safe, efficient alternative to exothermic welding products. Grid-ground installations do not require explosive charges and can be installed in various climate conditions. These range-taking products will reduce the number of connectors and dies needed for your installation.

ABB E-Z-Ground products meet all applicable standards (IEEE 837, UL® 467, CSA 22.2). Connectors are prefilled with oxide inhibitor and sealed.



E-Z-Ground™ grounding connectors

Compression ground rod tap connectors



Figure 6 compression ground rod tap connector

DB Meets IEEE 837 requirements

Diagrams	Cat. no.	Application		Cable to rebar application		Dimensions (in.)		Dies for TBM14M, 13100A or TBM151
		Main	Tap	A ground rod (in.)	B cable range	T	H	
	54855	1/0 str.-250 kcmil or 1/2"-3/8" rod	#4 sol.-#2 str.	#3 rebar 3/8 thru 1/2 #4 rebar	#4 sol.-#2 str.	3/4	1 15/16	15G86R
	54860	1/0 str.-250 kcmil or 1/2"-5/8" rod	1/0 str.-2/0 str.	#3 rebar 3/8 thru 1/2 #4 rebar	1/0 str.-2/0 str.	3/4	2 3/16	15G86R
	54865-CK	1/0 str.-250 kcmil or 1/2"-5/8" rod	3/0 str.-250 kcmil	#3 rebar 3/8 thru 1/2 #4 rebar	3/0 str.-250 kcmil	3/4	2 3/16	15G86R
	54875	#6 sol.-#2 str.	#6 sol.-#2 str.	-	-	3/4	2 9/16	15501A
	54885	250 kcmil-500 kcmil or 5/8"-3/4" rod	#4 sol.-#2 str.	#5 rebar 5/8 thru 3/4 #6 rebar	#4 sol.-#2 str.	3/4	1 15/16	15G126R
	54890	250 kcmil-500 kcmil or 5/8"-3/4" rod	1/0 str.-2/0 str.	#5 rebar 5/8 thru 3/4 #6 rebar	1/0 str.-2/0 str.	3/4	2 1/8	15G126R
	54895	250 kcmil-500 kcmil or 5/8"-3/4" rod	3/0 str.-250 kcmil	#5 rebar 5/8 thru 3/4 #6 rebar	3/0 str.-250 kcmil	3/4	2 3/16	15G126R
	54900	250 kcmil-500 kcmil or 5/8"-3/4" rod	350 kcmil-500 kcmil	#5 rebar 5/8 thru 3/4 #6 rebar	350 kcmil-500 kcmil	1 3/8	2 7/16	15G121R

* Tin-plated version available for galvanized ground rods. Add suffix -TP.



Figure 8 compression ground rod tap connector

DB Meets IEEE 837 requirements

Diagrams	Cat. no.	A ground rod (in.)	B cable range	Dimensions (in.)		Dies for TBM14M, 13100A or TBM151
				T	H	
	GR12-202	1/2	#2 AWG-2/0 AWG	7/8	1 15/16	15G121R
	GR58-202	5/8	#2 AWG-2/0 AWG	7/8	1 31/32	15G121R
	GR34-202	3/4	#2 AWG-2/0 AWG	7/8	2 3/16	15G121R
	GR1-202	1	#2 AWG-2/0 AWG	7/8	2 9/16	15G121R
	GR12-40250	1/2	3/0 AWG-250 kcmil	7/8	1 15/16	15G121R
	GR58-40250	5/8	3/0 AWG-250 kcmil	7/8	2 1/8	15G121R
	GR34-40250	3/4	3/0 AWG-250 kcmil	7/8	2 3/16	15G121R
	GR1-40250	1	3/0 AWG-250 kcmil	7/8	2 7/16	15G121R
	GR58-300500	5/8	300-500 kcmil	7/8	2 1/8	15G121R
	GR34-300500	3/4	300-500 kcmil	7/8	2 7/16	15G121R
GR1-300500	1	300-500 kcmil	7/8	2 11/16	15G121R	

For tooling and die selector chart, see the Color-Keyed compression connectors catalog.

E-Z-Ground™ grounding connectors

Compression ground rod to grid connectors & compression ground grid connectors



Figure 6 to 8 compression ground rod to grid connectors

Diagrams	Cat. no.	A ground rod (in.)	B cable range	Dimensions (in.)			Dies for TBM14M, 13100A or TBM15I	
				D	L	T-T	Element A	Element B
	54855LR12*	1/2	#2 AWG-250 kcmil	5/16	2 1/2		15G86R	15G121R
	54885LR12*	1/2	250 kcmil-500 kcmil	5/16	2 1/2		15G126R	15G121R
	54865LR58*	5/8	#2 AWG-250 kcmil	5/16	2 1/2		15G86R	15G121R
	54895LR58*	5/8	250 kcmil-500 kcmil	5/16	2 1/2		15G126R	15G121R
	54875LR34*	3/4	#2 AWG-250 kcmil	1/2	2 5/8		15G86R	15G121R
	54900LR34*	3/4	250 kcmil-500 kcmil	1/2	2 5/8		15G121R	15G121R
	54910LR100	1	#2 AWG-250 kcmil	1/2	2 5/8		15G86R	15G121R
54920LR100	1	250 kcmil-500 kcmil	1/2	2 5/8		15G126R	15G121R	

* Tin-plated version available for galvanized ground rods. Add suffix -TP.



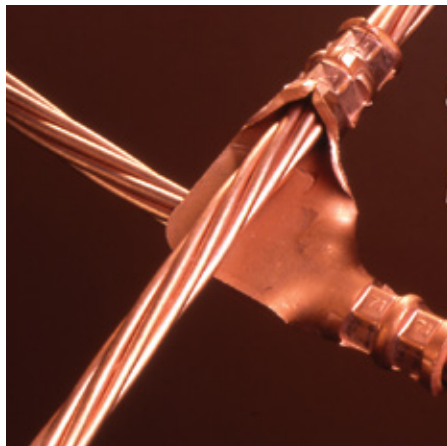
Figure 6 to 6 compression ground grid connectors

Diagrams	Cat. no.	Cable to cable		Element C to ground rod (in.)	Element C to rebar	Dimensions (in.)			Die selection for TBM14M, 13100A or TBM15I	
		Element A	Element B			D	T	T-T	A	B
	54855L	#6 sol.-#2 str.	#6 sol.-#2 str.	-	-	7/8	3/4	3/4	15501A	15501A
	54865L	#1 str.-250 kcmil	#6 sol.-#2 str.	1/2-5/8	3/8-1/2 #3-#4 rebar	7/8	3/4	3/4	15G86R	15501A
	54875L	#2 str.-250 kcmil	#2 str.-250 kcmil	1/2-5/8	3/8-1/2 #3-#4 rebar	7/8	3/4	3/4	15G86R	15G86R
	54885L	250 kcmil-500 kcmil	#6 sol.-#2 str.	5/8-1/2	5/8-3/4 #5-#6 rebar	7/8	3/4	3/4	15G126R	15501A
	54895L	250 kcmil-500 kcmil	#2 str.-250 kcmil	5/8-1/2	5/8-3/4 #5-#6 rebar	7/8	3/4	3/4	15G126R	15G86R
	54900L	250 kcmil-500 kcmil	250 kcmil-500 kcmil	5/8-1/2	5/8-3/4 #5-#6 rebar	7/8	1 1/8	1 1/8	15G121R15	G121R

For tooling and die selector chart, see the Color-Keyed compression connectors catalog.

E-Z-Ground™ grounding connectors

Cable-to-cable or cable-to-rod connectors



One-piece construction for cable-to-cable, cable-to-rod, “T” and “X” connections.

- Suitable for direct burial or in concrete
- Replaces exothermic welds
- Made from high-conductivity wrought copper
- Conforms to IEEE 837 standard
- UL® 467

Cable-to-cable or cable-to-rod connectors

DB

Cat. no.	Cable to cable range				Ground rod (in.)	Rod to cable		
	Main	Die code	Branch	Die code		Die code	Cable	Die code
GG21-21	#2 or #1	45	#2 or #1	45	–	–	–	–
GG10-10	1/0	54	1/0	54	–	–	–	–
GG2030-21	2/0 or 3/0	60	#2	45	–	–	–	–
GG2030-10	2/0 or 3/0	60	1/0	54	–	–	–	–
GG2030-2030	2/0 or 3/0	60	2/0 or 3/0	50	–	–	–	–
GG40250-21	4/0 or 250	71	#2	45	1/2	71	#2 or #1	45
			#1	50	5/8	80H	#2 or #1	50
GG40250-10	4/0 or 250	71	1/0	54	1/2	71	1/0	65
					5/8	80H		
GG40250-2030	4/0 or 250	71	2/0 or 3/0	60	1/2	71	2/0 or 3/0	60
					5/8	80H	2/0 or 3/0	60
GG40250-40250	4/0 or 250	71	4/0 or 250	71	1/2	71	4/0 or 250	71
					5/8	80H	4/0 or 250	71
GG350-350	350 kcmil	80H	350 kcmil	80H	–	–	–	–
GG500-40250	500 kcmil	87	4/0 or 250 kcmil	71	5/8	80H	500	87
					3/4	87H	500	87
GG500-500	500 kcmil	87	500 kcmil	87	3/4	87	500	87
GG500-350	500 kcmil	87H	350 kcmil	80	5/8	87H	350	80H
					3/4			
GG500-2030	500 kcmil	87H	2/0 or 3/0	60	5/8	87H	2/0 or 3/0	60
					3/4			

E-Z-Ground™ grounding connectors

Type GRD – Cable-to-cable connector



For copper cable-to-cable ground-grid connections.

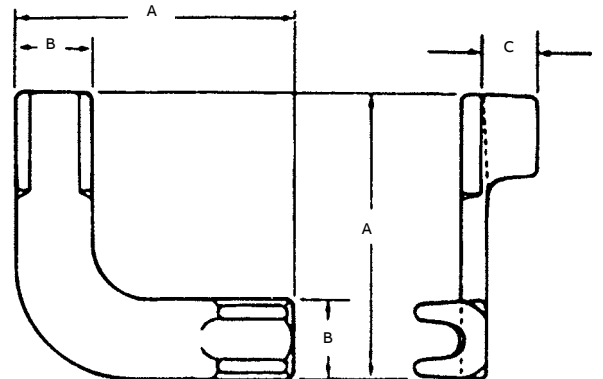
- Cast of high-conductivity bronze alloy
- Suitable for direct burial

Type GRD – Cable-to-cable connector



Cat. no.	Conductor size								Ground rod (in.)	Installation information			Dimensions (in.)		
	Main				Tap					Hyd. tool	Die crimps	No.	A	B	C
	Max.	Min.	Max. (mm ²)	Min. (mm ²)	Max. (AWG)	Min. (AWG)	Max. (mm ²)	Min. (mm ²)							
GRD2	#1	#2	42.4	33.6	#1	#2	42.4	33.6	–	TBM14M	B09CH	1	2½	1½	1½
GRD20	2/0	1/0	67.4	53	2/0	1/0	67.4	53	–	TBM14M	B10CH	1	3	1¾	7/8
GRD420	250 kcmil	4/0	126.6	107	2/0	1/0	67.4	53	5/8	TBM14M	B12CH	2	3½	1½	1¾
GRD40	250 kcmil	4/0	126.6	107	250 kcmil	4/0	126.6	107	5/8	TBM14M	B12CH	2	3½	1½	1¾

Diagram



E-Z-Ground™ grounding connectors

Two cables-to-ground rod connector – Heavy-duty cast copper



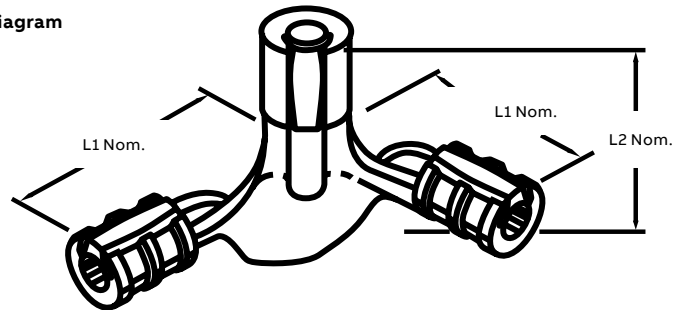
For connecting perpendicular runs of stranded copper cable to ground rod.

Two cables-to-ground rod connector – Heavy-duty cast copper**

DB

Cat. no.	Cable size		Ground rod dia. (in.)	TBM151 die for cable code	Overall dimensions (in.)		TBM151 die for ground rod code
	Main	Tap			L1	L2	
53065-58GR	250 or 4/0	250 or 4/0	5/8 & 1/2	87H	4 ¹⁵ / ₁₆	3 ¹ / ₄	87H
53065-34GR	250 or 4/0	250 or 4/0	3/4	87H	4 ¹⁵ / ₁₆	3 ³ / ₄	106H

Diagram



Installs with hydraulic tools with hex crimp dies.

** Does not meet IEEE 837.

Copperweld® conductors & rebar – For use with cast copper connections

Cable size	Reinforcing rod size	Copperweld conductor size
#2, #1 AWG	–	(3) #8 or (3) #6
1/0, 2/0 AWG	#3	3/8 – (7) #8 or 7/16 – (7) #7
4/0 AWG, 250 kcmil	#4	7/16 – (19) #9 or (7) #5
300–350 kcmil	#5	2 ¹ / ₃₂ – (19) #8 or 5/8 – (7) #4
500 kcmil	#6	1 ³ / ₁₆ – (19) #6

Copperweld is a registered trademark of Copperweld Corporation.

UL* listed for use with cast copper connectors.

For tooling and die selector chart, see the Color-Keyed compression connectors catalog.

E-Z-Ground™ grounding connectors

Grounding grid connectors – Heavy-duty cast copper



53055



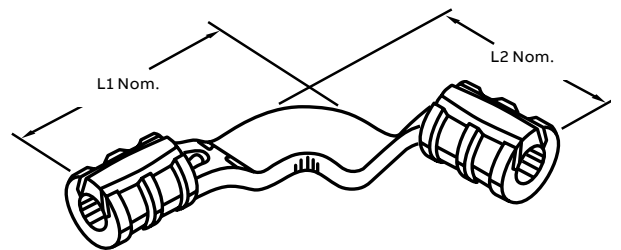
53065

Grounding grid connectors – Heavy-duty cast copper**

DB

Cat. no.	Rod to cable range		Cable to cable range		Rod to cable installing die code for TBM14M, 13100A or TBM15I		Overall dimensions (in.)	
	Rod size (in.)	Cable range	Main	Branch	Rod barrel	Cable barrel	L1	L2
53055	–	–	1/0–2/0 AWG	1/0–2/0 AWG	–	66	3 ⁷ / ₈	3 ⁷ / ₈
53059†	1/2–5/8	#2–#1 AWG	4/0 AWG–250 kcmil	#2–#1 AWG	87H	54H	4 ⁵ / ₃₂	4 ⁹ / ₁₆
53060†	1/2–5/8	1/0–2/0 AWG	4/0 AWG–250 kcmil	1/0–2/0 AWG	87H	87H	4 ⁷ / ₁₆	4 ⁵ / ₁₆
53065†	1/2–5/8	4/0 AWG–250 kcmil	4/0 AWG–250 kcmil	4/0 AWG–250 kcmil	87H	87H	4 ¹ / ₁₆	4 ⁵ / ₁₆
53069†	3/4	1/0–2/0 AWG	300–350 kcmil	1/0–2/0 AWG	106H	66	4 ¹⁹ / ₃₂	4 ¹⁹ / ₃₂
53071†	3/4	4/0 AWG–250 kcmil	300–350 kcmil	4/0 AWG–250 kcmil	106H	106H	5 ¹ / ₄	4 ²⁵ / ₃₂
53073†	3/4	1/0–2/0 AWG	500 kcmil	1/0–2/0 AWG	125H*	66	4 ¹³ / ₁₆	4 ⁷ / ₈
53075†	1	4/0 AWG–250 kcmil	500 kcmil	4/0 AWG–250 kcmil	125H*	87H	6 ⁹ / ₁₆	5
53080†	1	500 kcmil	500 kcmil	500 kcmil	125H*	125H*	5 ³ / ₁₆	5 ³ / ₁₆

Diagram



Cat. No. 15500 adapter is required for all 15500 Series dies, not for 15600 Series.

† Ground rods 4/0–250 wire barrels suitable for 3/4" and 5/8" rod.

500 kcmil wire barrels suitable for 1" rods.

300–500 kcmil wire barrels suitable for 3/4" rods.

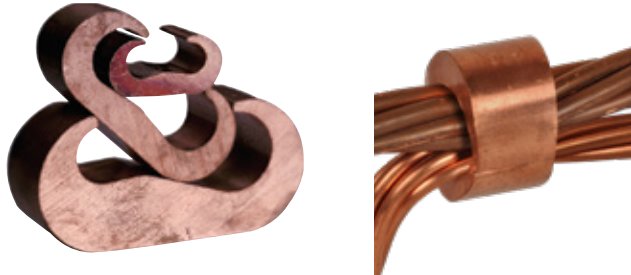
Hydraulic tools only.

** Does not meet IEEE 837.

* 125H die for 15-ton tool only.

E-Z-Ground™ grounding connectors

C-taps & copper C-crimps



C-taps

DB Meets IEEE 837 requirements

Diagrams	Cat. no.	Main (AWG)	Tap (AWG)	Dimensions (in.)		Dies for TBM14M 13100A or TBM151 *	Crimps
				H	L		
	CTP22	#6 sol.-#2 str.	#6 sol.-#2 str.**	1.16	0.75	HBKC	1
	CTP202	#1 str.-2/0 str.	#6 sol.-#2 str.**	1.41	0.75	15501A	1
	CTP2020	#1 str.-2/0 str.	#1 str.-2/0 str.	1.54	0.75	15501A	1
	CTP25020	3/0 str.-250 kcmil	#6 sol.-2/0**	1.97	0.75	15G86R	1
	CTP250250	3/0 str.-250 kcmil	3/0 str.-250 kcmil	2.06	0.88	15G86R	1
	CTP50020	300-500 kcmil	#6 sol.-2/0**	2.42	0.88	15G121R	2
	CTP500250	300-500 kcmil	3/0 str.-250 kcmil	2.67	0.88	15G121R	2
	CTP500500	300-500 kcmil	300-500 kcmil	2.91	1.10	15G121R	3

Material: High-Conductivity Copper. * Cat. No. 15500 adapter required if using TBM151 and 155XX series dies. ** #6 AWG branch must be doubled.



Copper C-crimps ††

DB

Diagrams	Cat. no.	Run (AWG)	Tap (AWG)	Die index	Installing die TBM14M 13100A, TBM151	Dimensions (in.)	
						H	L
	BC48	#6 sol.-#4 str.	#8 sol.-#8 str.	BG or 5/8	B58Cs	4 ¹ / ₆₄	9 ¹ / ₁₆
	BC46-BB	#6 sol.-#4 str.	#6 sol.-#6 str.	BG or 5/8	B58Cs	4 ¹ / ₆₄	3/4
	BC44	#6 sol.-#4 str.	#4 sol.-#4 str.	BG or 5/8	B58Cs	4 ¹ / ₆₄	5 ¹ / ₆₄
	BC24	#2 sol.-#2 str.	#8 sol.-#4 str.	C	HBKC	3/4	6 ³ / ₆₄
	BC22	#2 sol.-#2 str.	#2 sol.-#2 str.	C	HBKC	3/4	1 ³ / ₆₄
	BC202	1/0 sol.-2/0 str.	#8 sol.-#2 str.	E or O	HO	1 ⁵ / ₁₆	1 ⁵ / ₁₆
	BC2020-BB	1/0 sol.-2/0 str.	1/0 str.-2/0 str.	E or O	HO	1 ⁵ / ₁₆	1 ¹¹ / ₃₂
	BC402	3/0 str.-4/0 str.	#6 sol.-#2 str.	F or D3	HD	1 ¹ / ₁₆	1 ⁵ / ₈
	BC4020	3/0 str.-4/0 str.	1/0 sol.-2/0 str.	F or D3	HD	1 ¹ / ₁₆	1 ⁵ / ₁₆
	BC4040	3/0 str.-4/0 str.	3/0 sol.-4/0 str.	F or D3	HD	1 ¹ / ₁₆	1 ⁵ / ₁₆

†† Does not meet IEEE 837. Material: High-Conductivity Copper. UL® 467 listed.

E-Z-Ground™ grounding connectors

Copper C-type compression taps & pigtail connectors



CC 4040

Perform line tap-offs, dead-ending and grounding on a range of conductors.

- Can be held in the dies or jaws of an installation tool, then hooked directly over the line for time-saving installations

- Manufactured from pure electrical-grade copper for a highly conductive, low resistance, reliable connection
- Die references marked on connector for easy identification
- RUS accepted

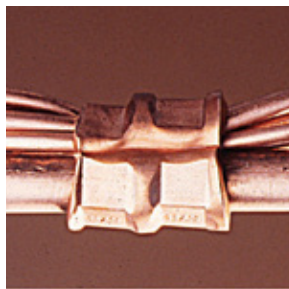
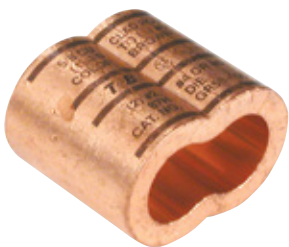
Copper C-type compression taps

Cat. no.	Wire range (AWG)		Installing dies	Length (in.)
	A groove	B groove		
CC 48	#6 sol.–#4 str.	#8 sol.–#8 str.	TU, BG, $\frac{5}{8}$	$\frac{5}{8}$
CC 46	#6 sol.–#4 str.	#6 sol.–#6 str.		
CC 44	#6 sol.–#4 str.	#4 sol.–#4 str.		
CC 24*	#2 sol.–#2 str.	#8 sol.–#4 str.	TM or C	$\frac{3}{4}$
CC 22	#2 sol.–#2 str.	#2 sol.–#2 str.		
CC 202	1/0 sol.–2/0 str.	#8 sol.–#2 str.	E or O	$\frac{7}{8}$
CC 2020	1/0 sol.–2/0 str.	1/0 sol.–2/0 str.		
CC 402	3/0 sol.–4/0 str.	#6 sol.–#2 str.	F or D3	1 $\frac{1}{16}$
CC 4020	3/0 sol.–4/0 str.	1/0 sol.–2/0 str.		
CC 4040	3/0 str.–4/0 str.	3/0 str.–4/0 str.		

* When using #1 str. in the A Groove, the B Groove will accommodate #6 or #8 Str. or #8 Sol.
Note: For tin-plating option, add "TN" suffix to the catalog number.

Copperweld-copper conductor

- 8A – Use C-tap accommodating #6 str. copper
- 6A – Use C-tap accommodating #4 str. copper
- 4A – Use C-tap accommodating #2 str. copper
- 2A – Use C-tap accommodating 1/0–2/0 copper



01

Hex compression intimately bonds cable directly to ground rod.

- Figure-8 connectors
- Conforms to IEEE 837 standard
- UL® 467 Listed

01 When connecting cable to ground rod for direct burial or in concrete, the connector shall be wrought copper with minimum conductivity of 99% I.A.C.S., such as ABB series GR12-306. Hex compression with die code embossing shall be used.

Pigtail connectors

Cat. no.	Cable range (AWG)	Ground rod (in.)	Die code for TBM14M, 13100A or TBM151
GR12-306	One cable: 3/0 to #6 AWG	$\frac{1}{2}$	87H
	Two cables: #2 to #6 AWG		
GR58-406	One cable: 4/0 to #6 AWG	$\frac{5}{8}$	87H
	Two cables: #2 to #6 AWG		
GR34-4010	One cable: 4/0 to 1/0 AWG	$\frac{3}{4}$	99H

For tooling and die selector chart, see the Color-Keyed compression connectors catalog.

DB   Meets IEEE 837 requirements

E-Z-Ground™ grounding connectors

Ground plates



Ground plates

DB Meets IEEE 837 requirements

Cat. no.	Fig.	Cable range	H (in.)	Dies
GP2250-2	1	#2 AWG-250 kcmil	3 ⁵ / ₈	15G86R
GP2250-4	2	#2 AWG-250 kcmil	4 ⁷ / ₃₂	15G86R
GP250500-2	1	250-500 kcmil	3 ⁵ / ₈	15G126R
GP250500-4	2	250-500 kcmil	4 ⁷ / ₃₂	15G126R

Diagrams

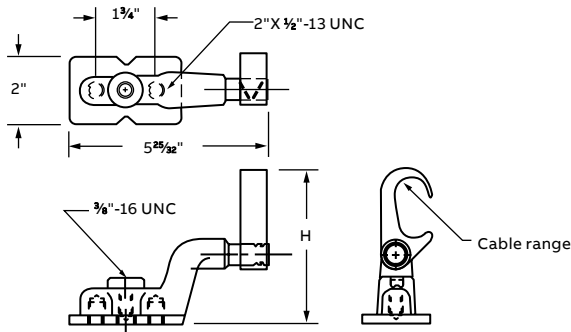


Fig. 1

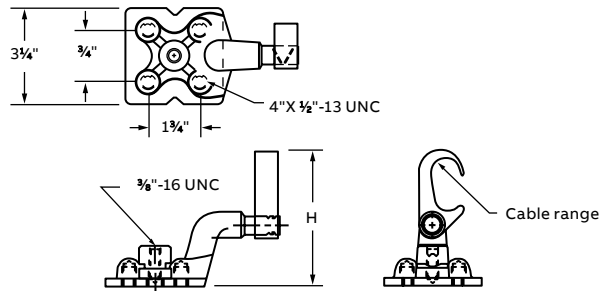


Fig. 2

E-Z-Ground™ grounding connectors

Type TBGS – Structural grounding studs



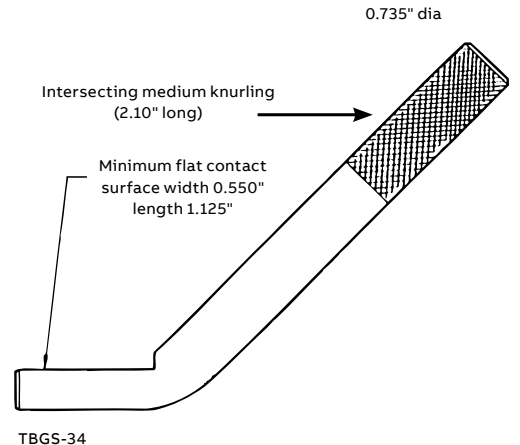
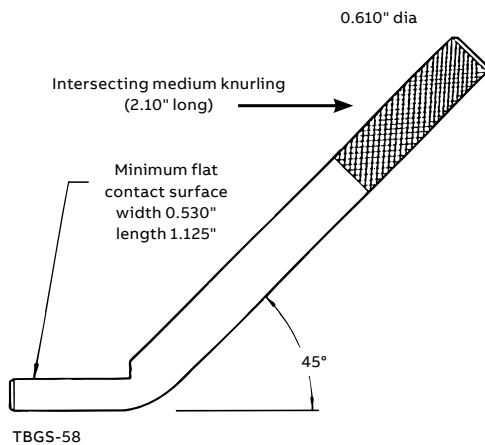
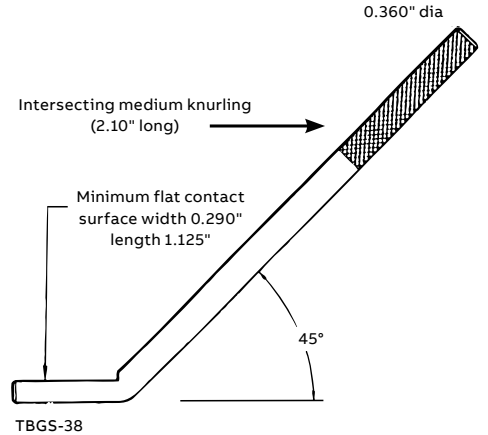
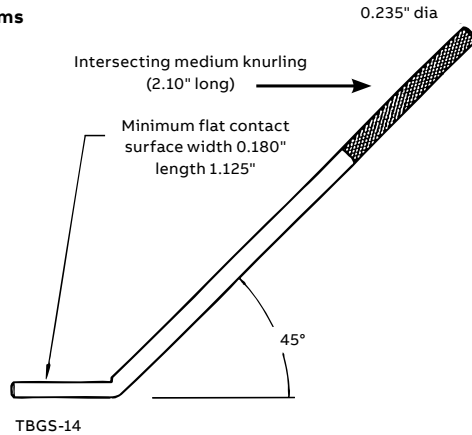
Knurling ensures excellent mechanical pull-out and electrical continuity.

- Easily welded to steel structures with minimal construction welding equipment
- Connect to grounding conductors with appropriate ABB grounding connectors
- Knurled portion of stud resists pull-out and provides electrical continuity to ensure the integrity of the grounding circuit
- Constructed of high-strength steel and coated with corrosion-resistant copper cyanide

Type TBGS – Structural grounding studs

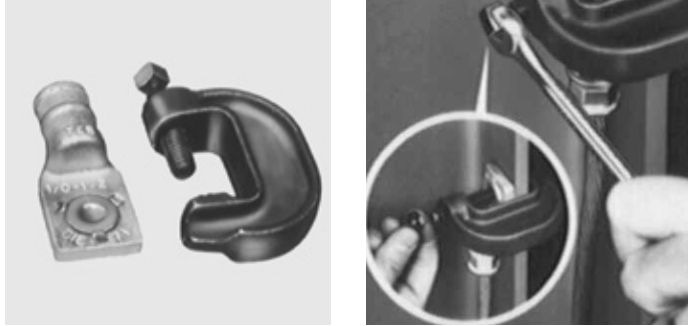
Cat. no.	Rod size (in.)
TBGS-14	1/4
TBGS-38	3/8
TBGS-58	5/8
TBGS-34	3/4

Diagrams



E-Z-Ground™ grounding connectors

I-beam ground clamp & cast copper two-way connector – Heavy-duty



Connect ground cable to I-beam or any 1" maximum structural steel member – without welding or drilling.

- Breakaway bolt head shears at predetermined torque to ensure tight connection
- Heavy-duty compression lug provides excellent current-carrying capabilities
- Surface of steel must be cleaned in accordance with installation instruction sheet provided with product
- Connector made of high-conductivity cast copper bright dip
- Clamp made of drop-forged high-grade steel, zinc plated

I-beam ground clamp



Cat. no.	Wire range	TBM151 installing tool, die code
IBG2-10	#2 thru 1/0 AWG	71
IBG20-40	2/0 thru 4/0 AWG	87
IBG350-500	350 thru 500 kcmil	115

Use hydraulic tooling with hex crimp dies.



Satisfies requirements of NEC® 250.64(C)(1) for connecting to grounding electrode system.

- Made from high-conductivity cast copper
- Electro-tin-plated finish

Cast copper two-way connector – Heavy-duty



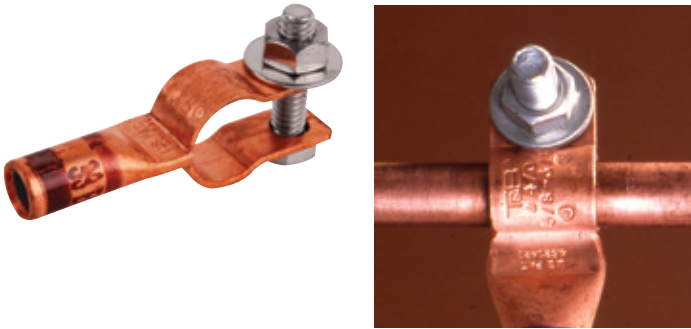
Cat. no.	Die size	Die code
53504	#8 AWG	29
53505	#6 AWG	29
53506	#4 AWG	29
53507	#2 AWG	45
53508	#1 AWG	45
53509	1/0 AWG	45
53510	2/0 AWG	66
53511	3/0 AWG	66
53512	4/0 AWG	66
53513	250 kcmil	76
53515	350 kcmil	99
53518	500 kcmil	99
53523	750 kcmil	112

Use hydraulic tools with hex dies.

NEC and National Electrical Code are registered trademarks of the National Fire Protection Association, Inc.

E-Z-Ground™ grounding connectors

Ground clamps



Provides a permanent, reliable connection.

- Crimps to cable
- Clamps to ground rod and rebar
- Uses standard Blackburn® featuring the Color-Keyed® System hand and hydraulic tools
- Color coded for easy installation die selection
- Made from high-conductivity wrought copper
- Furnished with stainless steel hardware, ¼" washers, bolts and nuts
- UL® 467 – Approved for direct burial

Ground clamp



Cat. no.	Wire size (AWG)	Ground rod diameter (in.)	Rebar # (in.)	Bolt size (in.)	Die code
CC2C-45R	#2-#3	½ or ⅝	⅔	¼	33 Brown
CC1C-45R	#1	½ or ⅝	⅔	¼	37 Green
CC10C-56R	1/0	⅝ or ¾	⅝	⅜	42 Pink
CC20C-56R	2/0	⅝ or ¾	⅝	⅜	45 Black
CC40C-56R	4/0	⅝ or ¾	⅝	⅜	54 Purple



Terminate or connect continuous runs of copper cable to flat surfaces.

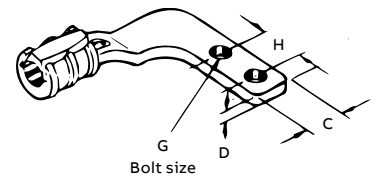
- Captivated “keeper bar” design extends cable range and helps hold cable prior to crimping, facilitating installation
- Saddles marked with conductor size and die code
- Conductor can be assembled to saddle with standard dies and hydraulic tools
- Made from high-conductivity cast copper

Flat-surface ground clamp



Cat. no.	Wire range	Bolt hole (in.)	Die code no.*	Unit qty.	Std. pkg.	Wt. per 100	Hex die		Dimensions (in.)				
							Cat. no.	Die code no.	L1	L2	D	C	H
53055FL	1/0-2/0 AWG	⅜	66	2	10	75	15534*	66	4⅜/32	3 ²¹ /32	9/32	1⅜	1
53065FL	4/0 AWG-250 kcmil	⅜	87H	2	10	112	15506**	87H	4½	4⅜/32	5/16	1⅜	1

Diagram



* TM14M, 13100A, TBM15I with hex crimp dies.
 ** TBM15I with hex crimp dies only.

E-Z-Ground™ grounding connectors

Grid-to-fence ground clamp & bus bar connector



- Bond copper conductors to steel or aluminum fence post or top rail of round fence posts.**
- Provides quick, dependable installation at low installed cost

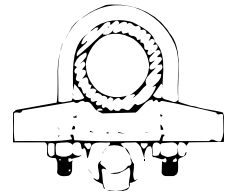
- Uses no incendiary materials
- Body made from cast copper alloy with steel U-bolt

Grid-to-fence ground clamp

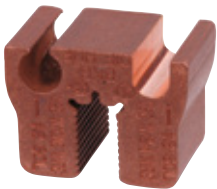


Cat. no.	Ground cable range (AWG)	Die code	Steel & aluminum line post range (in.)
FG2040R2	2/0-3/0-4/0 str.	76	2
FG2040R25	2/0-3/0-4/0 str.	76	2½
FG2040R3	2/0-3/0-4/0 str.	76	3
FG210R2	#2-#1-1/0 sol. or str.	66	2
FG210R25	#2-#1-1/0 sol. or str.	66	2½
FG210R3	#2-#1-1/0 sol. or str.	66	3

Diagram



Install with hydraulic tooling with hex crimp dies.



Cuts installation time in half – With results superior to conventional connectors.

- Unique design
- Fast and easy installation
- Superior low-resistance, high-conductivity connections
- Produces a permanent connection with any combination of copper from #6 to #2 solid or stranded conductor, to ¼" copper bus bar

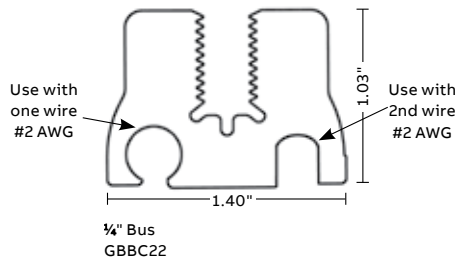
- Installs with conventional compression tools
- Made from pure wrought copper and prefilled with oxide inhibitor
- UL® listed and CSA certified
- Insulated with die HDF

Bus bar connector

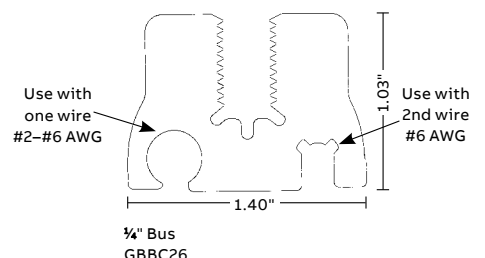


Cat. no.	Bus bar thickness (in.)	Conductor range (AWG)	Std. pkg. qty.
GBBC22	¼	#2-#2	1
GBBC26	¼	#6-#2	1

Diagrams Use this side of the connector when using only one wire.



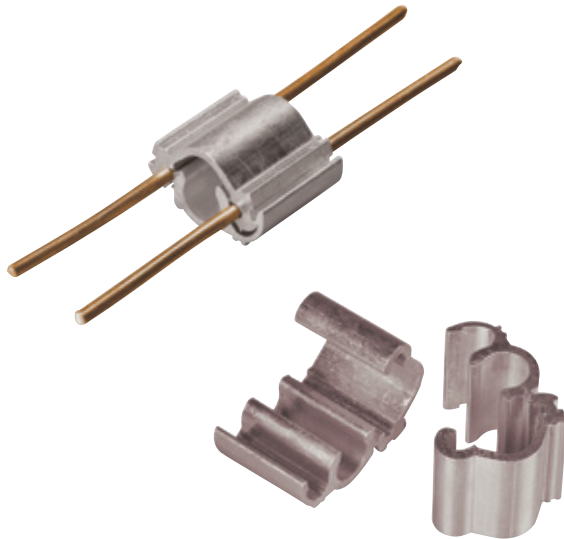
Use this side of the connector only when using two wires.



E-Z-Ground bus bar connectors install in less than two minutes with one easy crimp! The connector attaches directly to the bus, saving the labor-intensive process of drilling and tapping. The unique jaw interface of the E-Z-Ground bus bar connector grips the copper bus, resulting in a low-resistance, high-conductivity connection. The E-Z-Ground bus bar connector can be used in OEM applications or telecom applications – Cellular, PCS and others. It provides a continuous ground to the copper bus bar, making it ideal for hut and tower applications. The design enables installation in virtually any position, horizontal or vertical, and is suitable for inside and outside plant use. Installation can be completed using any ABB compression tool that accepts U-shaped die sets and is rated 12-ton or higher.

E-Z-Ground™ grounding connectors

SnapTap™ connector



A “snap” to assemble – No special tools required.

- Designed for bonding and grounding applications using copper, steel strand and ground rod
- Easily installed with channel locks or pliers
- Made from high-strength aluminum alloy with tin plating
- Offers excellent electrical and mechanical characteristics
- UL® 467 tested – Exceeds performance requirements

With the SnapTap connector, you can achieve an electrically superior, pressure-fit connection in seconds without expensive tooling. The connector is also easy to disassemble, requiring only a flat-head screwdriver to release the connected body. A one-piece design keeps parts together, minimizing loss of components prior to assembly. Simply separate the pieces and snap them in place for installation. An audible “snap” indicates that the connection is complete and properly installed.

SnapTap connector

Cat. no.	Connector description		Inner pack	Packaging		Standard order quantity
	Main	Branch		Outer pack		
JP62	#2 AWG sol. copper	#6 AWG sol. copper	20	200	200	
JP66	#6 AWG sol. copper	#6 AWG sol. copper	20	200	200	
JP146	1/4" steel strand	#6 AWG sol. copper	20	200	200	
JP5166	5/16" steel strand	#6 AWG sol. copper	20	200	200	
JP386	3/8" steel strand	#6 AWG sol. copper	20	200	200	
JP126	1/2" steel strand	#6 AWG sol. copper	20	200	200	
JP126G	1/2" ground rod	#6 AWG sol. copper	20	200	200	
JP2614	1/4" steel strand	(2) #6 AWG sol. copper	20	200	200	
JP26516	5/16" steel strand	(2) #6 AWG sol. copper	20	200	200	
JP2638	3/8" steel strand	(2) #6 AWG sol. copper	20	200	200	
JP2612G*	1/2" ground rod	(2) #6 AWG sol. copper	20	200	200	

Note: All toolless connectors are UL listed. Only items with (*) are CSA listed.

Continued on next page

E-Z-Ground™ grounding connectors

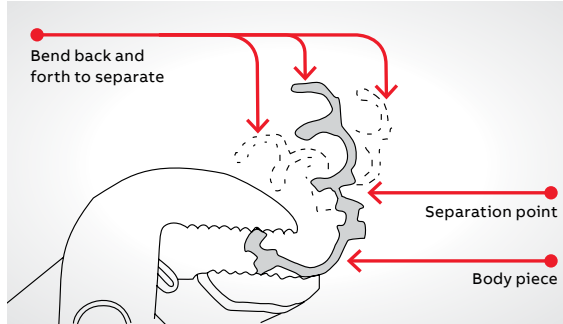
SnapTap™ connector (continued)

01 Fig. 1

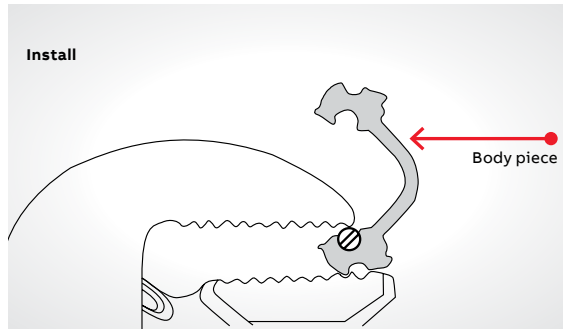
02 Fig. 2

03 Fig. 3

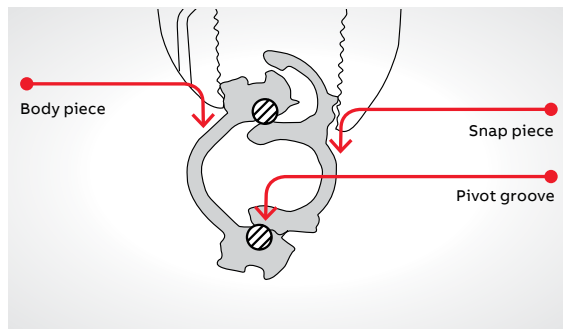
04 Fig. 4



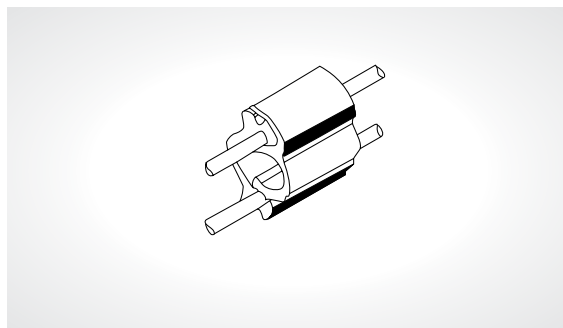
01



02



03



04

General usage instructions

Separate

No special tools required. Use ordinary parallel jaw pliers to separate the connector into two parts. Hold one side of connector with pliers and bend opposite side back and forth until parts separate (see Fig. 1).

Caution: Be careful not to pinch fingers or thumb when separating parts. Keep fingers out of bend path when bending part against plier jaws.

Installation

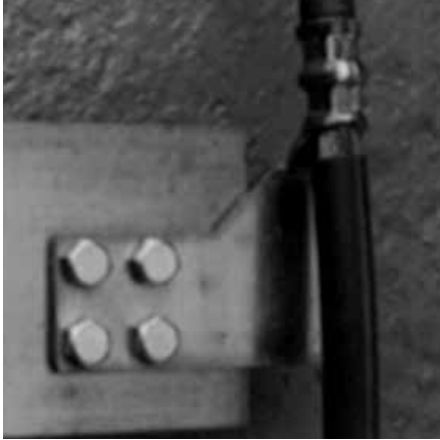
1. Strip the insulation from each de-energized conductor. Be careful not to nick the conductor. Clean the conductor ends with a wire brush or emery cloth if necessary.
2. Place each conductor into the grooves in body piece. Press conductors with pliers to align and seat into grooves (see Fig. 2).
3. Hold the conductors and body piece until it stops. Use parallel jaw pliers and grip the snap and body pieces as shown (see Fig. 3). Apply pressure until connector “snaps” into place. Visually inspect snap to verify full insertion. The connection is now complete (see Fig. 4).

Removal

The connector can be disassembled using a flat-head screwdriver to pry the snap piece from body piece.

Cast copper connectors for grounding

Riser cable flag connectors for 600 V applications



A low-cost method of connecting directly to bus bar, eliminating an interface connection.

- Made from high-conductivity wrought copper, plain finish
- All bolt holes are $\frac{3}{8}$ " on 1" centers



Riser cable flag connectors for 600 V applications

Cat. no.	Fig. no.	Cable size	Color key	Die code	No. of crimps	Material thk. (in.)	Dimensions (in.)		
							A	B	C
GFL2-1	1	#2-#1 AWG 150/24 175/24	Pink	42	1	$\frac{3}{32}$	$3\frac{5}{8}$	4	$2\frac{5}{16}$
GFL10-20	1	1/0 AWG	Black	45	1	$\frac{3}{32}$	$3\frac{5}{8}$	4	$2\frac{5}{16}$
		2/0 AWG	Orange	50					
		225/24	Black	45					
		275/24	Black	45					
GFL40-250	1	4/0-250 kcmil	Red	71	2	$\frac{5}{32}$	$4\frac{1}{4}$	$4\frac{1}{4}$	$2\frac{7}{16}$
		325/24							
		450/24							
		550/24							
GFL350	1	350 kcmil	N/A	80	2	$\frac{5}{32}$	$4\frac{1}{4}$	$4\frac{1}{2}$	$2\frac{3}{8}$
		650/24							
		775/24							
GFL5001	1	500 kcmil 925/24	Brown	94	2	$\frac{5}{32}$	$5\frac{1}{4}$	$4\frac{7}{8}$	$2\frac{3}{8}$
GFL750 ^{1,2}	2	750 kcmil	Black	106	4	$\frac{5}{32}$	$8\frac{5}{8}$	$4\frac{3}{4}$	$2\frac{5}{8}$
		1100/24							
		1325/24							
		1600/24							

Diagrams

Installing tools: ABB cat. no. TBM15I, TBM15BSCR, 13100A, TBM14M and TBM14BSCR hydraulic tools only.

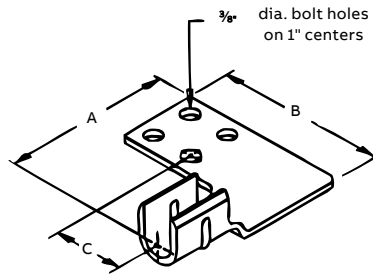


Fig. 1

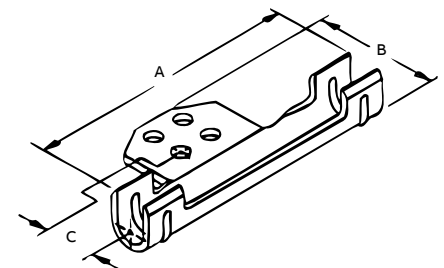
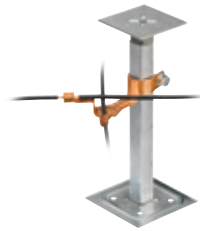


Fig. 2

¹TBM15I only. ²Both "U" barrels must be crimped to a single, continuous length of conductor. It is not to be used as a splice. For tooling and die selector chart, see the Color-Keyed compression connectors catalog.

Raised floor systems

Signal reference grid connector & clamp



Compresses #8 AWG through 4/0 AWG cable.

- Clamps onto pedestal posts up to 1" diameter square and 1¼" round
- Can be used as an "X" or "T" configuration cable to post
- High-conductivity wrought-copper construction

Signal reference grid connector



Cat. no.	Conductor (AWG)	Die cat. no.	Installing tools and die codes TBM14M and TBM15I		Color code
			Die code		
SRG8-4	#8	15527	29		Gray
	#6 to #4	15528	33		Brown
SRG2-1	#2 & #1	15508	42		Pink
SRG10-20	1/0 & 2/0	15530	50		Orange
SRG30-40	3/0 & 4/0	15511	54		Purple



Secures signal reference grid wire to raised-floor support posts.

- Range-taking design accepts #8 to #4 AWG grid wire and fits 1" round and ¾" square trade size support posts
- Lay-in feature means no kinks or bends
- Quick, easy installation
- Only one screw to tighten
- Enables grid wire to make direct, low-resistance contact Stamped-steel construction, zinc plated

Signal reference grid clamp



Cat. no.	Description	Wire range (AWG)
3900	¾" Square to 1" round	#8-#4
3900BP (bulk pack)	¾" Square to 1" round	#8-#4

UL* file no. E-3060.
Approved for grounding and bonding per UL 467.

Raised floor systems and ground rod accessories

Ground electrode boxes, Type C – Sectional ground rod couplings & Type DS – Driving studs



Ground electrode boxes

Cat. no.	Description	lb.	Wt./100		Standard package
			kg		
51628	Pregalvanized steel	1180	536.3		5
51629	Hot-dip galvanized	1200	545.4		5

14-gauge steel. 10" diameter, 12" depth.



Streamlined design reduces driving friction.

- Threaded couplings of high-strength, corrosion-resistant alloy
- Tapped for use on all standard threaded sectional rods

Type C – Sectional ground rod couplings



Cat. no.	Size (in. – nominal diameter)	Thread size (in.)
50C	1/2	1/2-13 UNS
50LC**	1/2	9/16-12 UNS
60C**	5/8	5/8-11 UNS
70C*	3/4	3/4-10 UNS
80C*	1	1-8 UNS

* UL[®] listed 467 (425H).

† CSA lists rods 1/2" and larger, 10' and longer.

‡ RUS listed.



Use with all standard threaded couplings.

- Made of high-strength steel
- Compatible with all standard threaded couplings

Type DS – Driving studs



Cat. no.	Size (in. – nominal diameter)	Thread size (in.)
50DS	1/2	1/2-13 UNS
50LDS**	1/2	9/16-12 UNS
60DS**	5/8	5/8-11 UNS
70DS*	3/4	3/4-10 UNS
80DS*	1	1-8 UNS

* UL[®] listed 467 (425H).

† CSA lists rods 1/2" and larger, 10' and longer.

‡ REA listed.

Ground rod accessories and ground plates

Threadless couplings and driving cap & galvanized ground plates



For joining non-threaded, copper-bonded steel ground rods.

- Couplings manufactured of high-strength, corrosion-resistant copper alloy
- High-strength hardened steel driving cap prevents “mushrooming” of ground rod while driving to ensure proper fit of coupling

Threadless couplings and driving cap

Cat. no.	Description	Length	Dimensions (in.)
			Diameter
50LCNT*	½" threadless coupling	3.0	0.78
60CNT2*	⅝" threadless coupling	2.5	0.69
70CNT*	¾" threadless coupling	3.0	0.97
60DSNT	⅝" threadless driving cap	4.0	0.88

* UL® Listed.



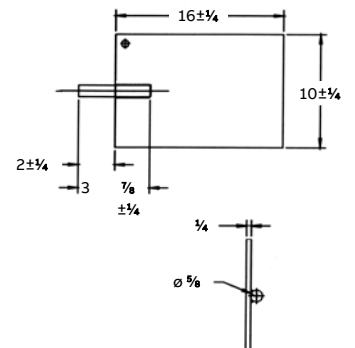
As efficient as two 10-ft. x ⅝" ground rods.

- ¼" thick, hot-dipped galvanized
- Must be buried at least 600 mm (24") below finish grade level, according to CEC Rule 10-702

Galvanized ground plates

Cat. no.	Description	Conductor range
1016TB	Galvanized ground plates	#8 sol. to 1/0 str. AWG
1016BTB	Galvanized ground plates with JAB58H connector	#8 sol. to 1/0 str. AWG

Diagram



Ground plates

Type GP – Copper pole bottom ground plates for multigrounded neutral construction
& Type PB – Copper pole ground plates



More efficient than butt-wrapping poles.

- Made of electrolytic sheet copper
- Built-in high-pressure connector for ground lead, or supplied with #6 AWG copper pigtail pre-attached
- Plates are grooved for trapping moisture

Type GP – Copper pole bottom ground plates for multigrounded neutral construction

Cat. no.	Min. (AWG)	Max. (AWG)	Min. (mm ²)	Pigtail wire range		Diameter of plate	
					Max. (mm ²)	(in.)	(mm)
GP100	#14 str.	#4 sol.	6.3		25.6	7½	191
GP110	#14 str.	#4 sol.	6.3		25.6	10	254
GP114	#14 str.	#4 sol.	6.3		25.6	14	356
GP1003	#6 AWG solid Cu pigtail with 18" conductor		–		–	7½	191
GP1008	#6 AWG solid Cu pigtail with 8-ft. conductor		–		–	7½	191
GP1108	#6 AWG solid Cu pigtail with 8-ft. conductor		–		–	10	254



Installed cost considerably less than butt-wrapped poles.

- Installed on butt end of utility poles to provide an economical, low-resistance neutral ground
- Plate portion fabricated of 0.025" pure copper
- PBGW connector is eye-bolt type, cast of corrosion-resistant aluminum bronze alloy, with silicon bronze nut and lockwasher
- PBH connector features riveted all-copper terminal lug for connecting to grounding conductor

Type PB – Copper pole ground plates

Cat. no.	Wire range (AWG)		Finished size (in.)	Surface area (sq. in.)
	Max.	Min.		
PBGW	2/0 str.	#10 sol.	7 x 7⅞	56
PBH‡	#4 str.	#14 sol.	7 x 7⅞	56

‡ RUs listed.

Ground rod clamps

Type JWR – Wide-range ground rod clamp & Type JAB – Ground rod clamps



Type JWR – Wide-range ground rod clamp

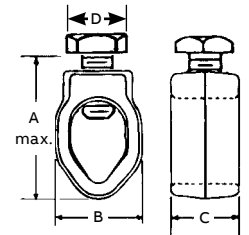
UL® listed for both copper-clad and galvanized ground rods.

- UL listed for direct burial in earth/concrete
- Constructed from bronze alloy and high-performance stainless steel bolt
- Provides wide range of connection sizes
- More than 300 lbs. torque capacity



Cat. no.	Nominal rod dia.		Wire range				Dimensions (in.)			
	(in.)	(mm)	Max. (AWG)	Min. (AWG)	Max. (mm ²)	Min. (mm ²)	A (max.) bolt	B	C	D
JWR	3/8*	9.5	1/0 str.	#10 sol.	53.4	5.2	1.535	1.050	0.812	0.652
	1/2	12.7	1/0 str.	#10 sol.	53.4	5.2	1.535	1.050	0.812	0.652
	5/8	15.8	1/0 str.	#10 sol.	53.4	5.2	1.535	1.050	0.812	0.652
	3/4	19.0	1/0 str.	#8 sol.	53.4	8.3	1.535	1.050	0.812	0.652

Diagrams



* 3/8" rod not recognized/listed by UL.



Type JAB – Ground rod clamps

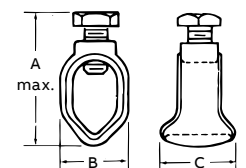
Long bearing surface of clamp on ground wire secures ground connection.

- Cast of high-strength corrosion-resistant copper alloy
- Both hex head bolts and socket set screws available
- UL® Listed for direct burial



Cat. no.	Socket set screw	Hex head bolt	Nominal rod dia.		Wire range				Dimensions (in.)					
			(in.)	(mm)	Max. (AWG)	Min. (AWG)	Max. (mm ²)	Min. (mm ²)	A (max.) socket screw	A (max.) hex bolt	Screw thread size UNC-2A	B	C	D
JAB12*	JAB12H	JAB12H	1/2	12.7	#2 str.	#10 sol.	33.6	5.2	1 ¹⁹ / ₃₂	2 ³ / ₃₂	7/16-14	2 ⁷ / ₃₂	7/8	1 ¹⁹ / ₃₂
JAB58	JAB58H	JAB58H	5/8	15.8	1/0 str.	#8 sol.	53.4	8.3	1 ²⁷ / ₃₂	2 ¹³ / ₆₄	7/16-14	2 ⁹ / ₃₂	1	1 ¹¹ / ₁₆
JAB34	JAB34H	JAB34H	3/4	19.0	1/0 str.	#8 sol.	53.4	8.3	2	2 ¹¹ / ₃₂	7/16-14	1 ¹ / ₁₆	1	5 ¹ / ₆₄
-	JAB34C	JAB34C	3/4 + 5/8	15.8 to 19.0	4/0 str.	#8 sol.	95.0	8.3	-	2 ¹¹ / ₃₂	7/16-14	1 ¹ / ₈	1 ¹ / ₃₂	1 ¹³ / ₁₆
JAB1	JAB1H	JAB1H	1	25.0	4/0 str.	#8 sol.	107.1	8.3	2 ¹ / ₄	3	7/16-14	1 ¹¹ / ₃₂	1 ¹ / ₁₆	1

Diagrams



Type JABH

* Not CSA listed. Add suffix P to cat. no. for tin-plated clamp.

Ground rod clamps

Type G – Budget-line ground clamps & Types GG and GGH – Heavy-duty ground rod clamps



Type G – budget-line ground clamps

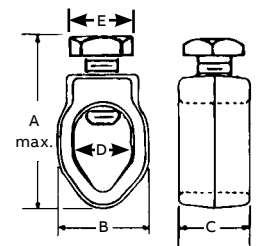
A dependable ground connection offered at a substantial savings.

- Cast of high-strength corrosion-resistant copper alloy
- Furnished with hex head bolts
- Simplified, compact design makes lasting, trouble-free connection
- UL® Listed for direct burial



Cat. no.	Nominal rod dia.		Wire range				Dimensions (in.)					
	(in.)	(mm)	Max. (AWG)	Min. (AWG)	Max. (mm ²)	Min. (mm ²)	A (max.) bolt	Screw thread size UNC-2A	B	C	D	E
G3*	3/8	9.5	#4 str.	#10 sol.	21.1	5.2	1 3/8	7/16-18	1 1/16	1/2	27/64	3/8
G4	1/2	12.7	#2 str.	#10 sol.	33.6	5.2	–	3/8-16	27/32	3/8	37/64	1/2
G5†	5/8	15.8	#2 str.	#10 sol.	33.6	5.2	–	3/8-16	29/32	3/8	43/64	1/2
G6	3/4	19.0	#2 str.	#10 sol.	33.6	5.2	–	3/8-16	1 1/16	3/8	13/16	1/2

Diagrams



* Not UL listed. † RUS accepted. Add suffix P to cat. no. for tin-plated clamp.



Types GG and GGH – Heavy-duty ground rod clamps

Axial groove keeps wire and rod in perfect alignment.

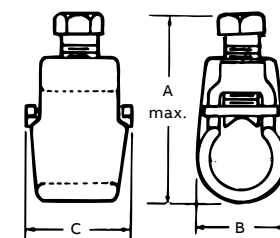
- Cast of high-strength corrosion-resistant copper alloy
- Both hex head bolts and socket set screws available
- Floating pressure bar distributes pressure evenly over large area of ground wire



Cat. no.*	Socket set screw	Hex head bolt	Nominal rod dia.		Wire range				Dimensions (in.)				
			(in.)	(mm)	Max. (AWG)	Min. (AWG)	Max. (mm ²)	Min. (mm ²)	A (max.) socket screw	A (max.) hex bolt	Screw thread size UNC-2A	B	C
GG12		GG12H	1/2	12.7	#2 str.	#8 sol.	33.6	8.3	1 13/64	1 13/16	7/16-14	27/32	1 5/16
GG58		GG58H	5/8	15.8	#2 str.	#8 sol.	53.6	8.3	1 51/64	2 7/32	7/16-14	61/64	1 5/16
–		GG34H	3/4	19.0	4/0 str.	#8 sol.	120.6	8.3	–	3	1/2-14	1 3/8	1 3/4

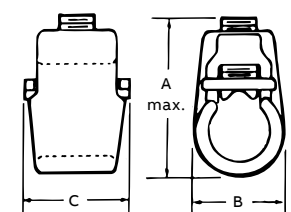
Diagrams

Width across flats = 1/2"



Type GGH

Socket size = .219



Type GG

* Add suffix P to cat. no. for tin-plated clamp.
GG34H has no pressure bar or axial groove.

Ground rod clamps

Type DGC – Drive-on ground clamps & cable tray grounding connector



Drive-on design provides easy, tool-free installation, high-reliability compression-fit connection and room for one or two ground leads.

- High-strength copper alloy provides increased tensile strength and long-term corrosion resistance for direct-burial applications
- UL® 486A and UL 467 Listed
- RUS listed

Type DGC – Drive-on ground clamps



Cat. no.	Ground rod size	Ground wire size (AWG)
DGC58-44 [†]	5/8 (0.555–0.565)	(1) or (2) #4 sol.
DGC58-66 [†]	5/8 (0.555–0.565)	(1) or (2) #6 sol.
DGC58-46*	5/8 (0.555–0.565)	(1) #4 sol., (1) #6 sol.

[†] RUS listed
* Not UL listed



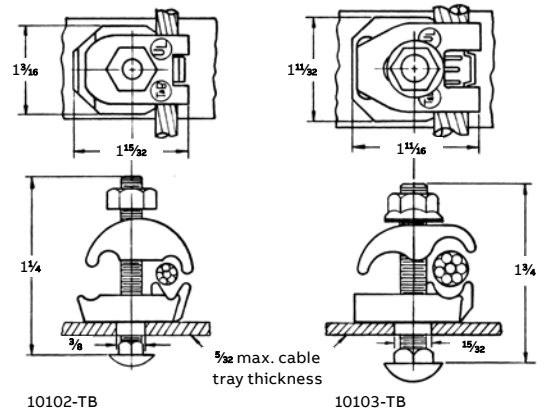
- Malleable iron construction
- For use on cable tray up to 5/32" thick

Cable tray grounding connector



Cat. no.	Ground wire range (AWG)	Carriage bolt size (in.)
10102-TB	#8 solid to #2 stranded	5/16–18
10103-TB	#4 stranded to 4/0 stranded	3/8–16

Diagrams



Structure grounding

Type GTC – Tower ground clamps & CTG250 wide-range tower ground clamp



Bolt features square shank to prevent turning and enable clamp to be tightened with a single wrench.

- Castings of high-strength, corrosion-resistant copper alloy
- GTC23 and GTC24 are two-piece clamps for connecting ground lead cable to flat metal surface – ideal for grounding substations on tower footings

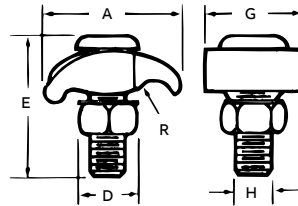
- GTC13 and GTC14 are economical one-piece clamps, which perform the same function as two-piece clamps, except under-pad support is omitted and conductor connects directly to tower
- Add suffix L to catalog number for ½" channel thickness

Type GTC – Tower ground clamps

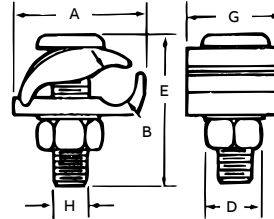


Cat. no.	Conductor range				Channel thickness (in.)	Dimension (in.)						
	Max. (AWG)	Min. (AWG)	Max. (mm ²)	Min. (mm ²)		A	B	D	E	G	H	R
GTC13	2/0 str.	#4 sol.	67.4	21.1	¼	1 ¹⁵ / ₃₂	–	9/ ₁₆	1 ²¹ / ₃₂	1 ¹³ / ₃₂	3/ ₈	7/ ₃₂
GTC14	250 kcmil	2/0 str.	126.6	67.4	¼	1 ¹⁵ / ₁₆	–	¾	1 ¹⁵ / ₁₆	1 ¹³ / ₃₂	½	5/ ₁₆
GTC23	2/0 str.	#4 sol.	67.4	21.1	¼	1 ⁴¹ / ₆₄	7/ ₁₆	9/ ₁₆	1 ²¹ / ₃₂	1 ³ / ₃₂	3/ ₈	–
GTC24	250 kcmil	2/0 str.	126.6	21.1	¼	1 ⁶¹ / ₆₄	5/ ₈	¾	1 ¹⁵ / ₁₆	1 ³ / ₈	½	–

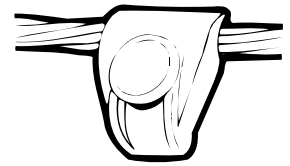
Diagrams



Type GTC 13 and 14



Type GTC 23 and 24



For use with aluminum or copper conductors.

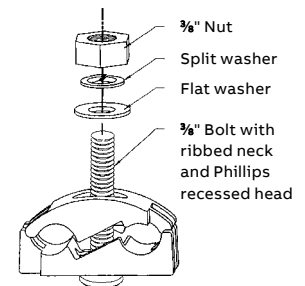
- May be used in aluminum or galvanized-steel cable tray
- Ribbed neck on the bolt prevents rotation during tightening if 0.440" dia. hole is used

CTG250 Wide-range tower ground clamp



Cat. no.	Wide range (2 sides)	Height (in.)	Width (in.)	Depth (in.)	Nut (flats)
CTG250	#2 AWG sol. (0.258 dia.)–250 kcmil (0.575 dia.)	1.95	2.00	1.13	0.560

Diagram



Tin-plate body.
Galvanized hardware.

Structure grounding

Aluminum lay-in lug connector & copper lay-in lug connector



Dual-rated for both copper and aluminum conductor.

- Manufactured from 6061-T6 aluminum alloy for maximum strength and conductivity
- Open-faced design enables installer to quickly lay-in grounding conductor as jumper to multiple conduits with no break in ground conductor

Aluminum lay-in lug connector



Cat. no.	Fig. no.	Cond. range		Stud size		Dimensions					
		(AWG)	(mm ²)	in.	(mm)	in.	(mm)	in.	(mm)	in.	(mm)
LL414	1	#4-14	16-1.5	0.22	5.59	0.78	19.81	0.38	9.65	1.07	27.18
LL1014	1	1/0-14	50-1.5	0.27	6.86	1.17	29.72	0.60	15.24	1.50	38.10
LL306	2	3/0-6	70-16	0.33	8.38	1.56	39.62	0.80	20.32	2.00	50.80
LL2506	2	250-6	120-16	0.33	8.38	1.79	45.47	0.80	20.32	2.20	55.88

Diagrams

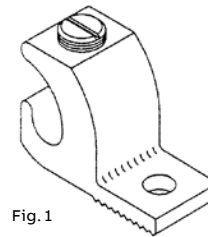
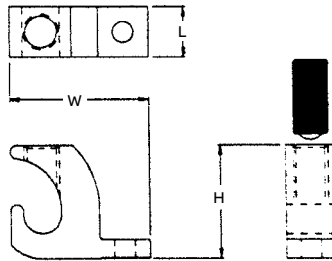


Fig. 1

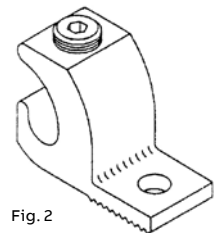


Fig. 2

90 °C rating (486B listed)



UL® Listed for direct burial.

- Ideal for swimming pool grounding applications
- Carries “DB” marking for direct burial
- Open-faced design enables installer to quickly lay-in grounding conductor as jumper to multiple conduits with no break in ground conductor

Copper lay-in lug connector



Cat. no.	Cond. range		Stud size		Dimensions					
	(AWG)	(mm ²)	in.	(mm)	in.	(mm)	in.	(mm)	in.	(mm)
CULL414	#4-14	16-1.5	0.22	5.59	0.78	19.81	0.38	9.65	1.07	27.18
CULL414-TP*	#4-14	16-1.5	0.22	5.59	0.78	19.81	0.38	9.65	1.07	27.18

90 °C rating (486B listed)

* Tin plated

Structure grounding

Service post connectors



Designed for grounding one or two cables to steel structure or transformer.

- For copper-to-copper connections
- Can also be used to tap one or two cables from bus bar
- Bolts machined from high-conductivity bronze alloy
- Nuts cold-formed from high-strength, corrosion-resistant copper alloy
- Pressure bars copper through 4/0 AWG and copper alloy for 350 kcmil and above

- Bolts and nuts of traditional Blackburn hex design for easy installation
- Available in sizes to accommodate AWG copper conductor ranges of #12–500 kcmil stranded and #12–#2 solid
- Both single- and double-conductor and short- and long-stud versions available
- UL® 486A and UL 467 listed

Single- and double-conductor service post connectors, short stud



Cat. no.		Conductor range AWG (mm ²)				Diameter range (in.)	Stud size	Dimensions (in.)					
		Stranded		Solid				A	AA	B	C	D	E
SP-DS	SP-SS	Max.	Min.	Max.	Min.								
SP0DS	SP0SS	8 (6)	12 (4)	8 (10)	12 (4)	.146–.081 –	1/4–20 x 1/2	1 ¹ / ₁₆	1 ³ / ₁₆	1/2	5 ⁵ / ₆₄	1 ⁵ / ₃₂	1/2
SP1DS	SP1SS	7 (10)	10 (6)	6 (10)	10 (6)	.164–.102 –	1/4–20 x 1/2	1 ³ / ₁₆	3 ¹ / ₃₂	1/2	5 ⁵ / ₆₄	1 ⁵ / ₃₂	2 ¹ / ₃₂
SP2DS	SP2SS	5 (16)	10 (6)	4 –	10 –	.206–.102 –	5/16–18 x 5/8	1 ⁵ / ₁₆	1 ¹ / ₈	5/8	5 ³ / ₆₄	1 ⁷ / ₃₂	2 ³ / ₃₂
SP3DS	SP3SS	3 (25)	10 (6)	2 –	10 –	.26–.102 –	3/8–16 x 5/8	1/2	1 ¹ / ₄	5/8	6 ¹ / ₆₄	5/8	2 ⁵ / ₃₂
SP4DS	SP4SS	1 (35)	8 (10)	2 –	8 –	.332–.129 –	3/8–16 x 5/8	1 ¹ / ₁₆	1 ³ / ₈	5/8	6 ¹ / ₆₄	1 ¹ / ₁₆	7/8
SP5DS	SP5SS	1/0 (50)	2 (35)	1/0 –	2 –	.373–.258 –	1/2–13 x 3/4	1 ¹ / ₄	1 ¹⁹ / ₃₂	3/4	1 ⁵ / ₆₄	3/4	1 ⁵ / ₁₆
SP6DS	SP6SS	2/0 (50)	2 (35)	2/0 –	2 –	.419–.258 –	1/2–13 x 3/4	1 ¹³ / ₃₂	1 ¹³ / ₁₆	3/4	1 ⁵ / ₆₄	7/8	1 ¹ / ₁₆
SP8DS	SP8SS	4/0 (95)	2 (35)	4/0 –	1 –	.528–.289 –	5/8–11 x 1	1 ⁹ / ₁₆	2 ¹ / ₁₆	1	1 ¹⁹ / ₆₄	1	1 ⁵ / ₁₆
SP9DS	SP9SS	350 (150)	1/0 (50)	– –	– –	.681–.373 –	5/8–11 x 1	2	2 ³ / ₄	1 ¹ / ₄	1 ¹⁹ / ₆₄	1 ⁵ / ₁₆	1 ¹¹ / ₁₆
SP10DS	SP10SS	500 (240)	3/0 (95)	– –	– –	.814–.47 –	3/4–10 x 1 ¹ / ₄	2 ¹ / ₄	3 ³ / ₈	1 ³ / ₄	1 ³¹ / ₆₄	1 ¹ / ₂	1 ⁷ / ₈

Continued on the next page

Structure grounding

Service post connectors (continued)

Single- and double-conductor service post connectors, long stud



Cat no.		Conductor range AWG (mm ²)				Diameter range (in.)	Stud size	Dimensions (in.)					
		Stranded		Solid				A	AA	B	C	D	E
SP-SL	SP-DL	Max.	Min.	Max.	Min.								
SP0SL	SP0DL	8 (6)	12 (4)	8 (10)	12 (4)	.146-.081 -	¼-20 x 1	1 ¹ / ₁₆	1 ³ / ₁₆	1	5 ⁵ / ₆₄	1 ⁵ / ₃₂	½
SP1SL	SP1DL	7 (10)	10 (6)	6 (10)	10 (6)	.164-.102 -	¼-20 x 1	1 ³ / ₁₆	3 ¹ / ₃₂	1	5 ⁵ / ₆₄	1 ⁵ / ₃₂	2 ¹ / ₃₂
SP2SL	SP2DL	5 (16)	10 (6)	4 -	10 -	.206-.102 -	5 ¹ / ₁₆ -18 x 1	1 ⁵ / ₁₆	1 ¹ / ₈	1	5 ³ / ₆₄	1 ⁷ / ₃₂	2 ³ / ₃₂
SP3SL	SP3DL	3 (25)	10 (6)	2 -	10 -	.26-.102 -	¾-16 x 1 ¹ / ₈	1	1 ¹ / ₄	1 ¹ / ₈	6 ¹ / ₆₄	5 ¹ / ₈	2 ⁵ / ₃₂
SP4SL	SP4DL	1 (35)	8 (10)	2 -	8 -	.332-.129 -	¾-16 x 1 ¹ / ₈	1 ¹ / ₁₆	1 ³ / ₈	1 ¹ / ₈	6 ¹ / ₆₄	1 ¹ / ₁₆	7 ¹ / ₈
SP5SL	SP5DL	1/0 (50)	2 (35)	1/0 -	2 -	.373-.258 -	½-13 x 1 ¹ / ₄	1 ¹ / ₄	1 ¹⁹ / ₃₂	1 ¹ / ₄	1 ⁵ / ₆₄	¾	1 ⁵ / ₁₆
SP6SL	SP6DL	2/0 (50)	2 (35)	2/0 -	2 -	.419-.258 -	½-13 x 1 ¹ / ₄	1 ¹³ / ₃₂	1 ¹³ / ₁₆	1 ¹ / ₄	1 ⁵ / ₆₄	7 ¹ / ₈	1 ¹ / ₁₆
SP8SL	SP8DL	4/0 (95)	2 (35)	4/0 -	1 -	.528-.289 -	5 ¹ / ₈ -11 x 1 ¹ / ₂	1 ⁹ / ₁₆	2 ¹ / ₁₆	1 ¹ / ₂	1 ¹⁹ / ₆₄	1	1 ⁵ / ₁₆
SP9SL	SP9DL	350 (150)	1/0 (50)	- -	- -	.681-.373 -	5 ¹ / ₈ -11 x 1 ¹ / ₂	2	2 ³ / ₄	1 ¹ / ₂	1 ¹⁹ / ₆₄	1 ⁵ / ₁₆	1 ¹¹ / ₁₆
SP10SL	SP10DL	500 (240)	3/0 (95)	- -	- -	.814-.47 -	¾-10 x 1 ³ / ₄	2 ¹ / ₄	3 ¹ / ₈	1 ¹ / ₂	1 ³¹ / ₆₄	1 ¹ / ₂	1 ⁷ / ₈

Ground clamps

Type GUV – U-Bolt ground clamps



Excellent for connecting multiple electrodes with a single cable, such as in substation grounding.

- For connecting copper or copper-clad steel grounding conductor to ground rod or pipe

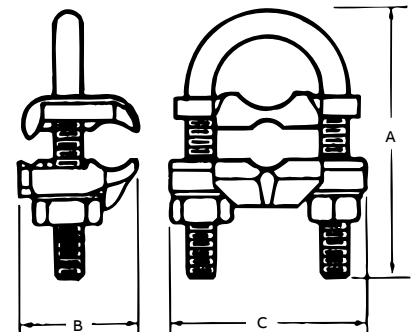
- Specially designed spacer provides proper alignment between cable and electrode and affords more positive contact area
- All components cast or forged from copper alloy
- UL® 467 Listed for direct burial

Type GUV – U-Bolt ground clamps



Cat. no.*	Cu conductor range (AWG)		Nominal rod size (in)		IPS pipe size		Dimensions (in.)		
	Max.	Min.	Max.	Min.	Max.	Min.	A	B	C
GUV584	4	8	3/4	5/8	3/8	–	2 ¹³ / ₁₆	1 ¹ / ₁₆	2 ¹ / ₄
GUV5821	2/0	4	3/4	5/8	3/8	–	2 ¹³ / ₁₆	1 ¹ / ₁₆	2 ¹ / ₄
GUV5825	250	2/0	3/4	5/8	3/8	–	2 ¹³ / ₁₆	1 ¹ / ₁₆	2 ¹ / ₄
GUV784	4	8	1	7/8	3/4	1/2	2 ³ / ₄	1 ¹ / ₁₆	2 ⁵ / ₈
GUV7821	2/0	4	1	7/8	3/4	1/2	2 ³ / ₄	1 ¹ / ₁₆	2 ⁵ / ₈
GUV7825	250	2/0	1	7/8	3/4	1/2	2 ³ / ₄	1 ¹ / ₁₆	2 ⁵ / ₈
GUV1184	4	8	1 ¹ / ₄	1 ¹ / ₈	1	–	3 ⁵ / ₁₆	1 ¹ / ₁₆	2 ³ / ₄
GUV11821	2/0	4	1 ¹ / ₄	1 ¹ / ₈	1	–	3 ⁵ / ₁₆	1 ¹ / ₁₆	2 ³ / ₄
GUV1384	4	8	1 ¹ / ₂	1 ³ / ₈	1 ¹ / ₄	–	3 ⁷ / ₁₆	1 ¹ / ₁₆	2 ¹⁵ / ₁₆
GUV13821	2/0	4	1 ¹ / ₂	1 ³ / ₈	1 ¹ / ₄	–	3 ⁷ / ₁₆	1 ¹ / ₁₆	2 ¹⁵ / ₁₆
GUV13825	250	2/0	1 ¹ / ₂	1 ³ / ₈	1 ¹ / ₄	–	3 ⁷ / ₁₆	1 ¹ / ₁₆	2 ¹⁵ / ₁₆
GUV1584	4	8	1 ⁷ / ₈	1 ⁵ / ₈	1 ¹ / ₂	–	3 ¹⁵ / ₁₆	1 ¹ / ₁₆	3 ³ / ₁₆
GUV15821	2/0	4	1 ⁷ / ₈	1 ⁵ / ₈	1 ¹ / ₂	–	3 ¹⁵ / ₁₆	1 ¹ / ₁₆	3 ³ / ₁₆
GUV15825	250	2/0	1 ⁷ / ₈	1 ⁵ / ₈	1 ¹ / ₂	–	3 ¹⁵ / ₁₆	1 ¹ / ₁₆	3 ³ / ₁₆
GUV204	4	8	2 ³ / ₈	2	2	–	4 ⁷ / ₁₆	1 ¹ / ₁₆	3 ¹¹ / ₁₆
GUV2021	2/0	4	2 ³ / ₈	2	2	–	4 ⁷ / ₁₆	1 ¹ / ₁₆	3 ¹¹ / ₁₆
GUV2025	250	2/0	2 ³ / ₈	2	2	–	4 ⁷ / ₁₆	1 ¹ / ₁₆	3 ¹¹ / ₁₆
GUV21221	2/0	4	2 ⁷ / ₈	2 ¹ / ₂	2 ¹ / ₂	–	4 ¹⁵ / ₁₆	1 ¹ / ₁₆	4 ³ / ₁₆
GUV21225	250	2/0	2 ⁷ / ₈	2 ¹ / ₂	2 ¹ / ₂	–	4 ¹⁵ / ₁₆	1 ¹ / ₁₆	4 ³ / ₁₆
GUV3021	2/0	4	3 ¹ / ₂	3	3	–	5 ⁵ / ₁₆	1 ¹ / ₁₆	4 ¹³ / ₁₆
GUV3025	250	2/0	3 ¹ / ₂	3	3	–	5 ⁵ / ₁₆	1 ¹ / ₁₆	4 ¹³ / ₁₆
GUV31221	2/0	4	4	3 ¹ / ₂	3 ¹ / ₂	–	6 ¹ / ₁₆	1 ¹ / ₁₆	5 ¹ / ₂
GUV4021	2/0	4	4 ¹ / ₂	4	4	–	6 ⁵ / ₁₆	1 ¹ / ₁₆	5 ¹¹ / ₁₆
GUV4025	250	2/0	4 ¹ / ₂	4	4	–	6 ⁵ / ₁₆	1 ¹ / ₁₆	5 ¹¹ / ₁₆

Diagrams



* For tin plating, add suffix P to cat. no. Contact factory for price and availability.
UL does not list tin-plated bronze grounding devices.

Ground clamps

Water pipe ground clamps & aluminum water pipe clamp



Water pipe ground clamps



Cat. no.	Ground wire size (AWG)	Water pipe size (in.)
2-TB	#6, #4, #2	½, ¾, 1 or rebar 4-10
3-TB		1¼, 1½ or 2
4		2½, 3 or 3½
5-TB		4, 4½ or 5
6		6

Malleable iron. #6 – #2 AWG ground wire.



Cat. no.	Ground wire size (AWG)	Water pipe size (in.)
3902	#4-4/0	½-1
3903		1¼-2
3904		2½-3½
3905-TB		4-5
3906-TB		6
3907		8
3908		10
3909-TB		12

Cat. no.	Ground wire size (AWG)	Water pipe size (in.)
3902BU*	#4-4/0	½-1
3903BU*		1¼-2
3904BU*		2½-3½
3905BU*		4-5
3906BU*		6
3907BU*		8
3908BU*		10
3909BU*		12

* UL* listed for direct burial



Aluminum water pipe clamp

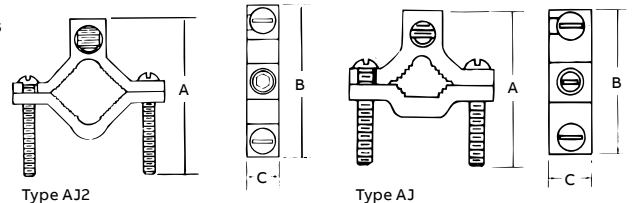


Cat. no.	Water pipe size (in.)	Conductor range		Dimensions (in.)			Steel clamp screw	Aluminum wire screw
		Max.	Min.	A	B	C		
AJ	½-1	1/0 str. AWG	#14 sol. AWG	2½	2¼	¾	¼-20	¼-20 slot
AJ-2	1½-2	250 kcmil	#6 AWG	3¾	3¾	¾	¼-18	¼-20 socket
AJ-2124	2½-4	250 kcmil	#6 AWG	5¾	6¾	¾	¾-16	¼-20 socket

For connecting grounding conductor to either steel or copper pipe, rod or tubing.

- For use with copper or aluminum conductor
- Tin plated for corrosion resistance

Diagrams



UL listed for both copper and aluminum conductors to steel pipe and copper water tubing

Ground clamps

Die-cast clamps & cast bronze clamps with copper strap



Die-cast clamps



Cat. no.	Water pipe size (in.)	Conductor range (AWG)		
		Max.	Min.	
BJ-1	½-1	#2 str.	#10 sol.	
BJA*	½-1	#6	#8	

* Not UL listed



Cast bronze clamps with copper strap

Economically priced clamps.

- Made of die-cast zinc alloy with zinc-plated screws
- Model BJA for use with armored cable

Flexible copper strap makes alignment easy.

- For grounding rigid conduit systems
- Same features as “JP” clamp plus flexible copper strap
- Strap helps protect conduit system from water system vibrations
- Furnished with zinc-plated screws

Cat. no.	Conduit size (in.)	Water pipe size (in.)	Conductor range (AWG)	
			Max.	Min.
JPS-12	½	½-1	#6 sol.	#10 sol.
JPS-34	¾	½-1	2/0 str.	#10 sol.
JPS-1	1	½-1	3/0 str.	#10 sol.

Add suffix C to cat. no. to specify plating.

Ground clamps

Cast bronze ground clamps & Type J – Cast bronze ground clamps



Connects copper ground wire to water pipe or copper tubing.

- High-strength, high-conductivity copper alloy (over 80% copper)
- UL® 467 listed for direct burial

Cast bronze ground clamps



Cat. no.	Water pipe size (in.)	Conductor range (AWG)
JD	½-1	#2 str.-#10 str.
J2D	1¼-2	#2 str.-#10 str.



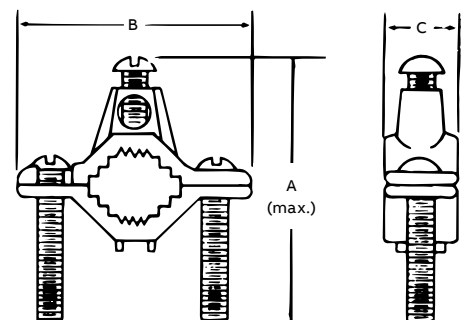
For connecting grounding conductor to water pipe or copper tube.

- Cast of high-strength, highly conductive copper alloy
- Screws plated for corrosion resistance
- UL Listed

Type J – Cast bronze ground clamps

Cat. no.	Water pipe size (in.)	Conductor range (AWG)		Dimensions (in.)		
		Max.	Min.	A (max.)	B	C
J	½-1	#2 str.	#10 sol.	2¾	2 ¹¹ / ₃₂	2 ³ / ₃₂
J2BB	1¼-2	#2 str.	#10 sol.	3¾	3½	1 ³ / ₁₆
J2124	2½-4	#4 str.	#10 sol.	6	6 ⁵ / ₁₆	1
J6	4¼-6	#4 str.	#10 sol.	7¾	8 ³ / ₈	1

Diagrams



Ground clamps

Budget price cast bronze clamp & Type JDLI – Direct-burial ground clamp

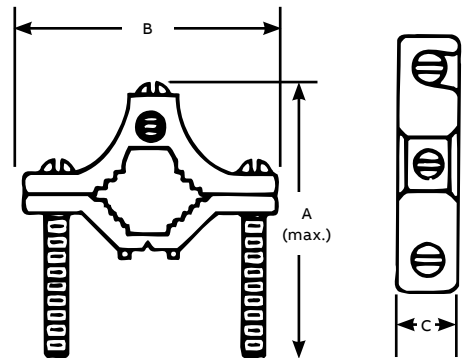


Similar to aluminum water pipe clamp but lighter in construction.

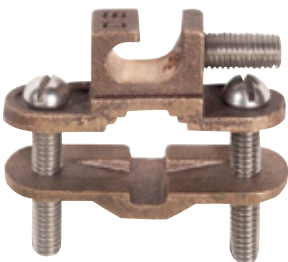
Budget price cast bronze clamp

Cat. no.	Water pipe size (in.)	Conductor range (AWG)		Dimensions (in.)		
		Max.	Min.	A	B	C
JJR	½-1	#4 str.	#10 sol.	2 ¹⁵ / ₃₂	2 ⁵ / ₃₂	1 ⁷ / ₃₂

Diagrams



Add suffix C to cat. no. to specify plating.



Lay-in feature reduces installation time for difficult bends or continuous loops of ground wire.

- UL® listed for direct burial in earth/concrete
- UL listed for connection to ground rod, pipe or rebar up to 1"
- Constructed from bronze alloy and high performance stainless steel bolts
- Designed for easy installation of difficult bends or continuous loops

Type JDLI – Direct-burial ground clamp



Cat. no.	Pipe size (in.)	Rebar size (in.)	Ground rod size (in.)	Conductor range (AWG)	Mech. conn./splice (UL listed)
JDLI	½-1	¾-1	¼-1	#10 sol.-#2 str.	(2) #8 sol.

Ground clamps

Cast bronze clamp & cast bronze clamps for conduit



Cast bronze clamp

For connecting armored cable to water pipe.

- Clamping portion similar to standard “J” clamp
- Special pressure bar grips armor or outer cable insulation to reduce chance of grounding conductor being pulled out
- Furnished with zinc-plated screws



Diagrams	Cat. no.	Water pipe size (in.)	Conductor range (AWG)		Dimensions (in.)					
			Max.	Min.	A	B	C	D	E	G
	JA	1/2-1	#6 sol.	#10 sol.	2 3/4	2 11/32	2 5/32	2 5/32	1 5/32	1 3/8
	JA-2	1 1/4-2	#6 sol.	#10 sol.	3 3/4	3 1/2	1 3/16	2 5/32	1 5/32	1 3/8
	JA-2124	2 1/2-4	#6 sol.	#10 sol.	6	6 5/16	1	2 5/32	1 5/32	1 3/8

Add suffix C to cat. no. to specify plating.



Cast bronze clamps for conduit

For grounding rigid conduit systems.

- Continuity from rigid conduit system to ground provided by cast bronze threaded conduit hub
- Hub swings 360° for easy alignment
- Heavy brass washer protects clamped grounding conductor
- Furnished with zinc-plated screws
- Cast bronze pipe clamping portion identical to that used in “JA” clamp

Diagrams	Cat. no.	Conduit size	Water pipe size (in.)	Conductor range (AWG)		Dimensions (in.)					
				Max.	Min.	A	B	C	D	E	G
	JP-12	1/2	1/2-1	#6 sol.	#10 sol.	2 3/4	2 11/32	2 3/32	1 9/64	1	2 1/2
	JP-212	1/2	1 1/4-2	#6 sol.	#10 sol.	3 3/4	3 1/2	1 3/16	1 9/64	1	2 1/2
	JP-212412	1/2	2 1/2-4	#6 sol.	#10 sol.	6	6 5/16	1	1 9/64	1	2 1/2
	JP-34	3/4	1/2-1	#2/0 str.	#10 sol.	2 3/4	2 11/32	2 3/32	2 5/16	1 1/4	2 3/16
	JP-234	3/4	1 1/4-2	#2/0 str.	#10 sol.	3 3/4	3 1/2	1 3/16	2 5/16	1 1/4	2 3/16
	JP-212434	3/4	2 1/2-4	#2/0 str.	#10 sol.	6	6 5/16	1	2 5/16	1 1/4	2 3/16
	JP-1	1	1/2-1	#3/0 str.	#10 sol.	2 3/4	2 11/32	2 3/32	2 5/16	1 1/2	2 3/8
	JP-21	1	1 1/4-2	#3/0 str.	#10 sol.	3 3/4	3 1/2	1 3/16	2 5/16	1 1/2	2 3/8
	JP-21241	1	2 1/2-4	#3/0 str.	#10 sol.	6	6 5/16	1	2 5/16	1 1/2	2 3/8

Add suffix C to cat. no. to specify plating.

Ground clamps

Type JPT – Cast bronze clamps for conduit, conduit hubs & Type CH – Bronze conduit hubs



Hub swings 360° for ease of alignment.

- Pipe clamping portion identical to “JA” clamp
- Pressure-bar type conduit hub adjusts to fit ½" or ¾" EMT or ½" rigid conduit
- Brass washer provides positive contact with grounding conductor
- Furnished with zinc-plated screws

Type JPT – Cast bronze clamps for conduit

Cat. no.	Conduit size (in.)	Pipe size (in.)	Conductor range (AWG)	
			Max.	Min.
JPT	½ or ¾ EMT	½ to 1	#6 sol.	#10 sol.
JPT2	½ Rigid	1¼ to 2		
JPT4		2½ to 4		



Conduit hubs

Cat. no.	Ground wire size (AWG)	Conduit size (in.)
3930	#8 to #2	½ Conduit
3940	#8 to #2	¾ Conduit
3950	#8 to 3/0	1 Conduit
3951	#8 to 4/0	1¼ Conduit

Material: malleable iron



Provides positive connection between rigid conduit and water system.

- Used in conjunction with “J” clamp
- Rugged cast-bronze threaded hub

Type CH – Bronze conduit hubs

Cat. no.	Conduit size (in.)	Conductor range (AWG)	
		Max.	Min.
CH12	½	#6 sol.	#10 sol.
CH34	¾	2/0 str.	#10 sol.
CH1BB	1	3/0 str.	#10 sol.

Ground clamps

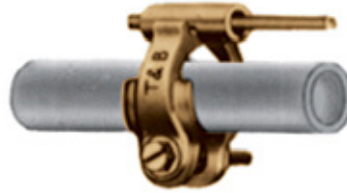
Ground clamp



3826



3849



3840-TB

Ground clamp



Cat. no.	Material	Water pipe, copper tubing size (in.)	Ground rod size (in.)
3826 [†]	M.I.	½, ¾	½-1
3846 [†]	Bronze	½, ¾	½-1
3849•	Brass	½-1 O.D.	-
3840-TB*	M.I.	½, ¾ or 1	-

[†] For unarmored copper wire #6, #4.

• For copper and aluminum conductors; for 14 thru 2 cu. unarmored copper wire – Corrosive and outdoor use. UL* approved for direct burial.

* #8 thru #4 AWG. Not CSA certified.

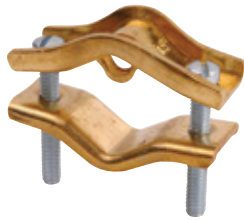
Ground clamps

Ground clamps for K&L grade copper tubing only & cable tray ground clamp

—
01 For armored and unarmored wire – 3844

—
02 Disconnect static ground clamp and lug, straight-type (cable not supplied), UL not applicable – 31215

—
03 For radio, motor frame and equipment grounding – 961



—
01



—
02



—
03



—
Ground clamps for K&L grade copper tubing only



Cat. no.	Ground wire range (AWG)	Water pipe & ground rod size/desc. (in.)
3844*	#8–#4	1/2–1
3888†	#8–#4	1/2–1 also rebar 4–10
961	#8	3/8–1
962**	#8	3/8–2
963**	#8	3/8–3
Cat. no.	Description/cable size (AWG)	
31215	Strain-relief grounding lug, #6–#2	
31216	Grounding clamp, 1" hook-type, #6–#2	
31253	Grounding clamp, 1-1/2" hook-type, #6–#2	
31217	Ground clamp, 1" straight-type, #6–#2	
31224	Grounding clamp, 1-1/2" straight-type, #6–#2	
31230	Wing screw only	

* With steel screws.

** With bronze screws, not CSA certified – Or UL® listed.

† UL® approved for direct burial. Silicon bronze screws.



Material: Malleable iron
Standard Finish: Zinc plated

—
Cable tray ground clamp



Cat. no.	Description
10105*	For single conductors #4 sol. to 2/0 str. AWG
10109**	For single conductors 2/0 sol. to 4/0 str. AWG

* UL listed #4 to 2/0 AWG copper.

** UL listed 2/0 to 4/0 AWG copper/aluminum.

CSA file no. 2884.

Ground clamps

Tray clamps & beam grounding clamp



For aluminum and steel cable trays with regular or reinforced flanges.

- Serrations and biting teeth on clamping saddle provide a high-quality bond between conduit and clamp
- Can be clamped to any position in a 90° arc

- Hardened steel screws bite into tray and provide positive bond
- Malleable iron hub and steel U-bolt accept conduit from any angle

Tray clamps



Cat. no.	Clamp type	Conduit size (in.)
6209	Swivel	½-¾
6210	Straight	½-¾
6211	Swivel	1-1¼
6212	Straight	1-1¼
6214	Swivel	1½-2
6216	Swivel	2½-3
6218	Swivel	3½-4



Efficiently grounds trailer frames, cable trays, CATV and telephone pedestals.

- Connects #6 to #14 solid copper conductor to metal frames where continuity of grounding can be assured
- ¼" silicon bronze hex-head bolt installs with cam-wrench, socket or crescent wrench
- Tin-plated square-head bolt enables installation with pliers when tighter ground connection is needed
- Ground wire hole access from four directions minimizes need to bend ground wire

- Designed so ground wire may be installed on clamp prior to mounting clamp on metal frame, reducing installation time
- Beam and ground wire connection can be tightened separately with disconnecting integrity of ground circuit
- High-strength copper alloy (91% nom.) provides greater conductivity, durability and corrosion resistance without the need for plating
- High-strength anchoring bolt penetrates paint or metal oxide

Beam grounding clamp



Cat. no.	Description	Conductor size (AWG)
TGC	Square-head tin-plated steel bolt	#6 to #14 sol.

Listed to UL* 467

Appendix

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3903	34	53518	16	BC24	12	GBBC22	18
3903BU	34	53523	16	BC402	12	GBBC26	18
3904	34	54855	6	BC4020	12	GFL10-20	21
3904BU	34	54855L	7	BC4040	12	GFL2-1	21
3905BU	34	54855LR12	7	BC44	12	GFL350	21
3905-TB	34	54860	6	BC46-BB	12	GFL40-250	21
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3908BU	34	54875LR34	7	CC 22	13	GG2030-2030	8
3909BU	34	54885	6	CC 24	13	GG2030-21	8
3909-TB	34	54885L	7	CC 402	13	GG21-21	8
3930	39	54885LR12	7	CC 4020	13	GG350-350	8
3940	39	54890	6	CC 4040	13	GG40250-10	8
3950	39	54895	6	CC 44	13	GG40250-2030	8
3951	39	54895L	7	CC 46	13	GG40250-21	8
3-TB	34	54895LR58	7	CC 48	13	GG40250-40250	8
4	34	54900	6	CC10C-56R	17	GG500-2030	8
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Notes

Additional information

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