# **Safe and Effective Solutions**

Hubbell Power Systems offers a broad range of innovative and dependable bonding and grounding products. Engineering expertise and leading-edge manufacturing facilities provide our customers with continuous design improvements for a worry-free equipment installation.

Our products meet all applicable standards and certifications and come with technical support for smooth, safe operation. Our quality assurance practice is peace of mind that comes with the HPS and Electric Motion Company brands.



# **Ground Rods**

### **COPPER BONDED**

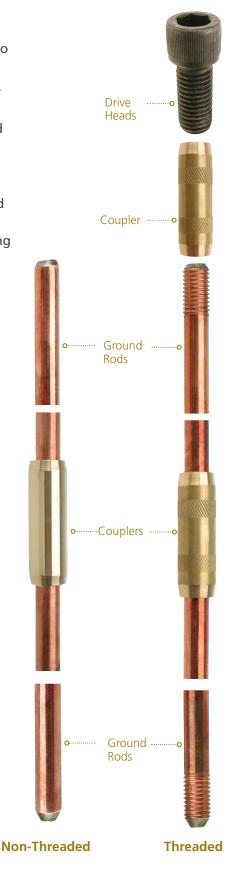
- Manufactured by molecularly bonding 99.95% pure electrolytic copper to high-strength steel core rod.
- Core rod is rated for 80,000 lb tensile strength for driving into hard soils.
- Satisfies the requirements of NEMA GR-1 specifications.
- Threaded and non-threaded Ground Rods are offered in both 10 mil and 13 mil (RUS specified) plating thickness.
- Each rod permanently marked with manufacturers designation and catalog number.
- Available accessories include couplers, drive heads, drive tips, ground rod clamps and conductive paste.
- A complete line of bronze ground rod clamps are available for connecting copper cable in parallel with the copper bonded Ground Rod.
- A heavy-duty clamp is available for high-pressure applications.

Cobb	cr bonded di	ound nous		uucu
Catalog Number	Plating <sup>(1) (2)</sup> Thickness mil	Rod Diameter Inches	Rod Length ft	Approx Ship Wt Each (lbs)
C615885	5	5/8	8	6.80
C611380	10	1/2	8	5.40
C611300	10	1/2	10	7.06
C615860	10	5/8	6	5.20
C615880	10	5/8	8	6.80
C615800	10	5/8	10	8.60
C613460	10	3⁄4	6	7.88
C613480	10	3⁄4	8	9.80
C613400	10	3⁄4	10	12.00
C615883	13	5/8	8	6.80
C615803	13	5/8	10	8.60
C613483	13	3⁄4	8	9.80

Copper Bonded Ground Rods – Non-Threaded

(1) 10 mil plating thickness meets the requirements of ANSI/NEMA GR-1.

(2) 13 mil plating thickness meets the requirements of and ANSI/NEMA GR-1.



HUBBELL

**BONDING &** 

# **Ground Rods**

### **COPPER BONDED**

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Catalog Number	Rod Diameter Inches	Approx Ship Wt Each (lbs)
CCC12	1/2	0.40
CCC58	5⁄8	0.56
CCC34	3⁄4	0.60

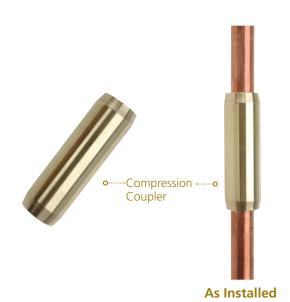
### Threaded Ground Rods

Catalog Number	Plating <sup>(1) (2)</sup> Thickness mil	Rod Diameter Inches	Rod Length ft	Approx Ship Wt Each (lbs)
C631380	10	1/2	8	5.50
C631300	10	1/2	10	6.50
C635840	10	5/8	4	3.20
C635880	10	5/8	8	6.80
C635800	10	5/8	10	8.60
C633480	10	3⁄4	8	9.80
C633400	10	3⁄4	10	12.00
C635883	13	5/8	8	7.05

- (1) 10 mil plating thickness meets the requirements of ANSI/UL 467-1984 and ANSI/NEMA GR-1.
- (2) 13 mil plating thickness meets the requirements of ANSI/UL 467-1984 and ANSI/NEMA GR-1.

### **Coupler for Threaded Ground Rods**

Catalog Number	Rod Diameter Inches	Approx Ship Wt Each (lbs)
CTC12	1/2	0.40
CTC58	5/8	0.56
CTC34	3/4	0.60



Threaded -----• Coupler

**As Installed** 

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### **COPPER BONDED**

GC1

Drive Head for Threaded Ground Rods									
Catalog Number	Approx Ship Wt Each (lbs)								
CTDH58	5/8	0.12							
CTDH34	3⁄4	0.40							

Ground Rod or Pipe Clamp – AL/Cu									
Catalog	Туре	Rod Diameter	Weight Each						
Number		Inches	lb (kg)						

<u>³∕8</u> – 1

.11 (.05)

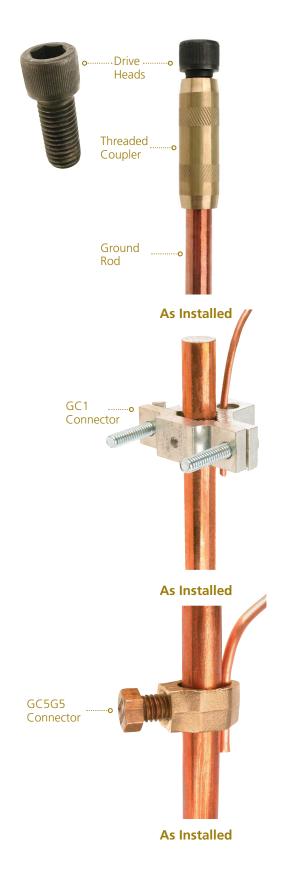
**NOTE:** Refer to Anderson & Fargo Connector Catalog for additional information.

Standard

Ground Rod Clamps – Bronze									
Catalog Number	Туре	Rod Diameter Inches	Weight Each lb (kg)						
GC4	Normal Duty	1/2	.09 (.04)						
GC5G5	Normal Duty	5/8	.11 (.05)						
GC6	Normal Duty	3⁄4	.13 (.06)						
GC10301	Heavy Duty	1/2	.24 (.11)						
GC10302	Heavy Duty	5/8	.38 (.17)						
GC10303	Heavy Duty	3⁄4	.51 (.23)						

**NOTE:** Refer to Anderson & Fargo Connector Catalog for additional information.

	Conductive Paste								
Catalog Number	Standard Package								
CP113	8 oz Bottle	12 pcs							



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# **Ground Rods**

### GALVANIZED

- Ground Rods are available with or without copper wire.
- Made of high-carbon, open-hearth steel for maximum strength to resist bending.
- Hot dip galvanized steel rod.

Catalog Number												
Non-Threaded	Bell Corp Number	Standard With Electro- Brazed Pigtail <sup>(2)</sup>	Drive Head Bolt-Type <sup>(3)(4)</sup>	Туре	Dia Inches	Length ft	Approx Ship Wt Each (lbs)					
8565	402658926	-	-	E	1/2	5	3.40					
8576		—	_		5/8	6	6.00					
8578 <sup>(1)</sup>		C2030107 <sup>(1)</sup>	C2030377 <sup>(1)</sup>		5/8	8	8.00/8.60/893					
8580		—	—		5/8	10	10.24					
8618 <sup>(1)</sup>		-	—		3⁄4	8	12.00					
8620		—	-		3⁄4	10	14.60					

(1) RUS listed.

- (2) The electro-brazed pigtail is No. 6 tinned copper on 5/8" and 3/4" rod.
- (3) Bolt-Type Drive Head Ground Rods have surfaces of head and integral clamp tinned.
- (4) Non-ferrous bolt with lockwasher accommodates No. 3 to No. 8 stranded wire.



Non-Threaded Type



Bolt-Type Drive Head

Standard Electro-Brazed Pigtail



# **Ground Rods**

### **GALVANIZED SECTIONAL**

- Made of high-carbon steel as standard.
- All rods have a  $\frac{5}{8}$ " cut thread on top and bottom.
- Hot dip galvanized.

		Dimensions Approx Shi							
Catalog Number	Description	Diameter Inches	Length	Approx Ship Wt Each (lbs)					
C2030052	Cone Point with 5/8" Thread	5/8	8'	8.60					
8611	Coupling for Above	5/8	2″	0.18					

# CLAMPS

- Heavy duty forged steel clamps provide secure, low resistance connections. One piece bodies.
- 1/2" square-head cup point set screw is hot dip galvanized.

Catalog Number	Rod Diameter Inches	Wire Diameter Minimum	Wire Diameter Maximum	Approx Ship Wt Each (lbs)						
C2030344	5/8	.128	.460	0.34						
C2030345	3⁄4	.128	.460	0.36						



# **ANCHOR BONDING**

Bonding clamps maintain a dependable mechanical and electrical pressure contact between guy strand and anchor rod, when the guy is part of the grounding system.

Catalog Number	Eye Type	Use with	Rod Size	Approx Ship Wt Each (lbs)
G5060	Thimbleye®	Anchor Rod Eyes (Expanding, Crossplate, Rock)	1⁄2″, 5⁄8″, 3⁄4″	0.22
G5061	Twineye®	Anchor Rod Eyes (Expanding, Crossplate, Rock)	5%", 3⁄4"	0.36
G5063	Tripleye®	Anchor Rod Eyes (Expanding, Crossplate, Rock); No-wrench Anchor Rod Eyes	3⁄4″, 1″	0.41
G5067	Thimbleye®	PISA Eyenuts (Power Installed Screw Anchor Rods)	1/2", 5/8"	0.22
G5068	Thimbleye®	PISA Eyenuts (Power Installed Screw Anchor Rods)	<sup>3</sup> ⁄4″, 1″	0.36
G5069	Twineye®	PISA Evenuts (Power Installed Screw Anchor Rods); Anchor Rod Eyes (Expanding, Crossplate, Rock)	5⁄8″, 3⁄4″, 1″	0.38
C2030148	<b>Tripleye</b> ®	PISA Eyenuts (Power Installed Screw Anchor Rods)	5⁄8″, 3⁄4″, 1″	0.41



No. C2030052





### **BONDING BRAID**

# **Plain Bonding Braid**

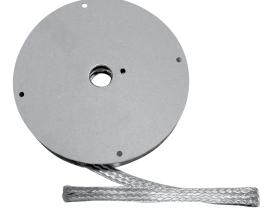
A roll of flexible, woven, tinned copper wire, equivalent to a #6 AWG.

#### APPLICATIONS

- Provides shield continuity across cable openings
- Ideal for use with heat shrinkable material

#### FEATURES

- Can be cut to any desired length
- Tinned to reduce the rate of corrosion
- Flexibility allows movement of cable without loosening of bond clamps
- EM-2075 has blue webbed covering pre-installed at factory before spooling





Ordering Information EM-2004 25-foot spool Standard packaging: 2.7 lb / sp, 10 sp/bx. EM-2005 100-foot spool Standard packaging: 9 lb / sp, 2 sp/bx. EM-2004-1-100 100-foot spool with black PVC covering





Ordering Information EM-2075 25-foot spool with blue web insulator Standard packaging: 3.4 lb / sp, 10 sp/bx. Add suffix -G for green web insulator.

# **Braid Ferrule**

When using plain braid, the tinned copper ferrule surrounds all of the strands at the termination point.

Ordering Information EM-C4000 Braid Ferrule









# **BONDING BRAID, CONTINUED**

# **Bonding Braid with Eyelets**

#6 AWG braided tinned copper wire with factoryinstalled eyelets, 3" spacing, hole diameter 1/4".

#### APPLICATIONS

- Rehab of pedestals and aerial closures
- Provides bond when using heat shrinkable material

#### FEATURES

- Coils can be cut to length (no waste)
- Low profile design on eyelet
- Braid flexibility allows cables to move
- EM-2030 has blue webbed covering pre-installed at factory before spooling

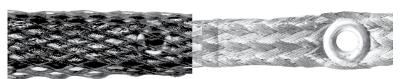






Ordering Information EM-2025 25-foot spool uninsulated Standard packaging: 2.8 lb / sp, 10 sp/bx.





Ordering Information EM-2030 25-foot spool with blue web insulator Standard packaging: 3.5 lb / sp, 10 sp/bx. Add suffix -G for green web insulator.



# **BONDING BRAID, CONTINUED**

# Ultrabond

#6 AWG braided copper wire with factory-installed eyelets with arms, solder-connected, 3" spacing, hole diameter 1/4".

#### APPLICATIONS

- Rehab of pedestals and aerial closures
- Provides bond when using heat shrinkable material

#### FEATURES

- Compact design
- Gas-tight crimp maximizes conductivity by reducing cold flow and corrosion





- Easily trimmed to the desired length with splicer's scissors; eliminates waste
- Flexibility allows movement of cable without loosening connections
- Factory-installed terminations provide maximum pull-out strength
- Prepunched mounting holes are safer, eliminating the need to use a sharp instrument



Ordering Information EM-2050 25-foot spool Standard packaging: 3.3 lb / sp, 10 sp/bx. EM-2052 50-foot spool Standard packaging: 6.2 lb / sp, 10 sp/bx. EM-2050-6 6" eyelet spacing, 25-foot spool

**RUS Listed** 



Ordering Information EM-2051 25-foot spool with blue web insulator Standard packaging: 3.5 lb / sp, 10 sp/bx. EM-2053 50-foot spool with blue web insulator Standard packaging: 7 lb / sp, 10 sp/bx.

# **Double-Hole Ultrabond**

#10 AWG braided copper wire with factory-installed eyelets with arms, solder-connected, 2-1/2" hole diameter #10.



#### Ordering Information EM-2070 25-foot spool

For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com

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### **BONDING BRAID, CONTINUED**

Ultrabond II with gas-tight crimped connections







#6 AWG braided tinned copper wire with factoryinstalled eyelets, 3" spacing, hole diameter 1/4".

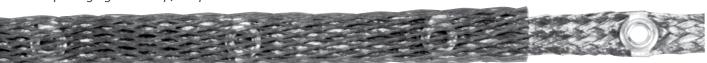
#### FEATURES

- One-piece eyelet with arms will not spin or rotate during installation
- Gas-tight crimp maximized conductivity by reducing cold flow and corrosion
- Easily trimmed to the desired length with splicer's scissors; eliminates waste
- Simple design provides for easy, foolproof installation, terminates like any standard connection
- Flexibility allows movement of cable without loosening connections
- Factory-installed terminations provide maximum pull-out strength; no need to carry special tools
- Pre-punched mounting holes are safer, eliminating the need to use a sharp instrument
- Solderless termination
- Unique patented design

APPLICATIONS

- Grounding and bonding in pedestals and aerial closures
- Provides bond when using heat-shrinkable material
- Provides bond when using closures not equipped with bonding harnesses

Ordering Information EM-2080 25-foot spool Standard packaging: 3.3 lb / sp, 10 sp/box.



Ordering Information EM-2081 25-foot spool with blue web insulator Standard packaging: 3.6 lb / sp, 10 sp/bx. Add suffix -G for green web insulator.

EM-2012-3SD Ultrabond II with 3/8" holes instead of 1/4" EM-2010-3AU-25 Same as above, except packaged in a dispenser box instead of on a spool

For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com

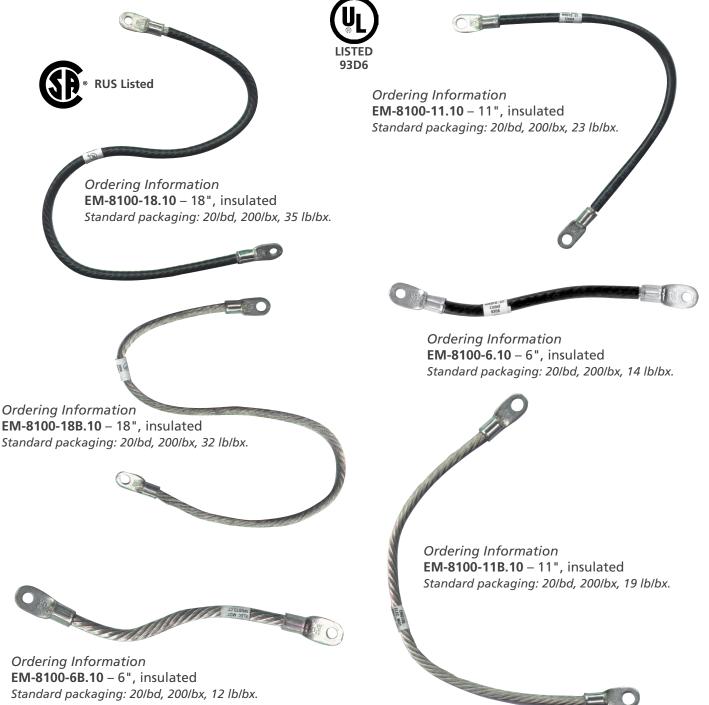


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# **GROUNDING HARNESSES**

# **#6 AWG Insulated and Bare Flexible Harnesses**

Standard lengths: 6", 11", and 18", all RUS listed. Ring terminals, standard hole size #10, insulated and bare versions. For bonding and grounding in pedestal new construction and retrofitting. Please see chart on pages G17 & G18 for other ordering options.



BONDING & GROUNDING



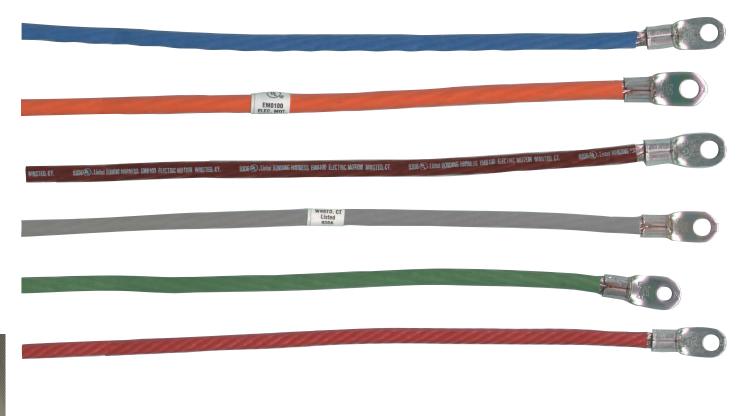
### **GROUNDING HARNESSES, CONTINUED**

# #6 AWG Flexible Harnesses with Colored Insulation for Multi-Directional Cable Identification

Ring terminals, standard mounting hole sizes #10 and 1/4".

Colors available: Blue (central office), Orange (north), Brown (south), Slate (west), Green (east), Red (house). For bonding and grounding in pedestal new construction and retrofitting.

Also available as a pedestal kit: five of a fixed length of harness, one each blue, orange, brown, slate, and green.



Ordering Information : EM-8100 -Length of harr

Length of harness<br/>in inchesRing terminal<br/>mounting hole size<br/>.25 or .10Color of insulationBL = blue, OR = orange, BR = brown,<br/>SL = slate, GR = green, R = red

If kit is desired (five colors—does not include red), add the suffix KIT at end instead of color code.

For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com



93D6

### MICROBOND

# Ground Straps on a Roll with clear, see-through insulation

Construction: Tinned copper rope-lay with pure copper termination clip. Equivalent to a #6 AWG. Standard terminations every 4 inches, with 1/4" diameter mounting holes.

#### FEATURES

- Comes with clear PVC insulation in order to locate mounting holes easily
- Clear insulation can come in any color. Various cables in a closure can be identified by colors of bonding harnesses
- Insulation is tight to harness, creates a neater look
- One-piece terminal clip for greater conductivity
- Gas-tight crimp minimizes corrosion
- Comes on a roll—can be cut to length with splicer's snips
- Simple design provides for easy, foolproof installation, terminates like any standard connection
- Flexibility allows movement of cable without loosening connections
- Factory-installed terminations provide maximum pull-out strength, no need to carry special tools
- Pre-punched mounting holes are safer, eliminating the need to use a sharp instrument
- Solderless termination
- Unique patented design



#### Ordering Information EM-06MB-25B-4.25, uninsulated Microbond) can be used for bonding Tyco FOSC<sup>®</sup> closures.

For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com



#### APPLICATIONS

- Continuous looping of ground wire from ground point to ground point with no breaks
- Grounding machinery needing flexible ground because of vibration
- Fence and gate electrical grounding to create various lengths at a site
- Provides bond when using heat shrinkable material
- Provides bond when using closure not equipped with bonding hardware



## **MICROBOND, CONTINUED**





# **#6 AWG BONDING HARNESS ORDERING GUIDE**

Please note: "XX" in itEM-numbers denotes assembly length.

#### **Untinned Standard**

**EM-3200 Series – Solid** Solid soft copper wire with a ring terminal on each end.

#### EM-3400 Series – 7-Strand

7-stranded wire with a ring terminal on each end. Standard "D" bond straps.

### **Tinned Standard**

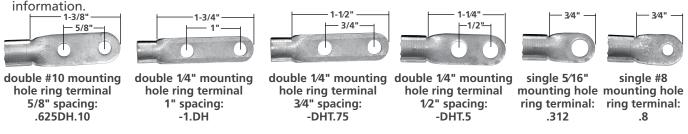
EM-3600 Series – 49-Strand, 7 x 7/22 Rope-Lay Cable Rope-Lay Cable 49 strands, rope-lay cable with a ring terminal on each end.

EM-8200 Series – 133-Strand, 7 x 19/27 Rope-Lay Cable 133 strands, rope-lay cable with a ring terminal on each end.

EM-8100 Series – 427-Strand, 7 x 61/32 Rope-Lay Cable 427 strands, rope-lay cable with a ring terminal on each end.

EM-7000 Series – 665-Strand, 7 x 95/34 Rope-Lay Cable 665 strands, rope-lay cable with a ring terminal on each end. UNINSULATED **INSULATED** UNINSULATED **INSULATED** UNINSULATED **INSULATED** UNINSULATED **INSULATED** UNINSULATED **INSULATED** UNINSULATED **INSULATED** 

The harnesses above are also available with any of the terminals below. Please call our sales office for ordering



For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com

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BONDING & GROUNDING

# **#6 AWG BONDING HARNESS ORDERING GUIDE, CONTINUED**

single 1/4" mounting hole	double 1/4" mounting hole ring terminal	single #10 mounting hole	single 3/8" mounting hole	
ring terminal both ends	both ends, 5/8" spacing	ring terminal both ends	ring terminal both ends	Insulation Color
EM-3200-XX	EM-3200-XX-DHDH	EM-3200 (18") EM-3224 (24")	EM-3200-XX.375	Standard insulation
EM-3205-XX	EM-3205-XX-DHDH	EM-3205-XX.10	EM-3205-XX.375	color is Black; please
EM-34XX EM-34XX-1	EM-34XX-DHDH EM-34XX-I-DHDH	EM-34XX-10 EM-34XX-1.10	EM-34XX.375 EM-34XX-1.375	use the part numbers in the "INSULATED" rows at left for black insulation.
EM-36XX EM-36XX-1	EM-36XX-DHDH EM-36XX-1-DHDH	EM-36XX.10 EM-36XX1.10	EM-36XX.375 EM-36XX-1.375	For other colors, please add the following suffixes:
EM-8200-XXB.25 EM-8200-XX.25	EM-8200-XXB-DHDH EM-8200-XX-DHDH	EM-8200-XXB.10 EM-8200-XX.10	EM-8200-XXB.375 EM-8200-XX.375	BL = Blue OR = Orange BR = Brown
EM-8100-XXB-25 EM-8100-XX.25	EM-8100-XXB-DHDH EM-8100-XX-DHDH	EM-8100-XXB.10 EM-8100-XX.10	EM-8100-XXB.375 EM-8100-XX.375	SL = Slate GR = Green GY = Green w/Yellow Stripe
EM-7000-XXB.25 EM-7000-XX	EM-7000-XXB-DHDH EM-7000-XX-DHDH	EM-7000-XXB.10 EM-7000-XX.10	EM-7000-XXB.375 EM-7000-XX.375	R = Red

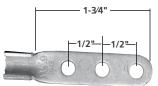


right angle, 3/8" spacing:

.DHRA



single #10 mounting hole hook terminal: .10H



triple #10 mounting hole ring terminal 1/2" spacing between holes: -TH

For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com

hook terminal:

.14H



ring terminal:

.10SR

ring terminal:

.25SR

### **#6 AWG BOND STRAPS**

Solid, soft bare copper wire with a 1/4" compression terminal on each end. Standard lengths: 6", 11", and 18". Please see chart on pages G17 and G18 for other ordering options.



Ordering Information EM-3200-18 – 18", Standard packaging: 20/bd, 200/bx, 33 lb/bx. EM-3200-11 – 11", Standard packaging: 20/bd, 200/bx, 19 lb/bx. EM-3200-6 – 6", Standard packaging: 20/bd, 200/bx, 12 lb/bx.

### **"D" BOND STRAPS**

Seven strands, uninsulated stranded wire with a ring terminal on each end. Standard "D" bond straps. Standard lengths: 6", 11", and 18". Please see chart on pages G17 and G18 for other ordering options.



Ordering Information EM-3418-18 – 18", Standard packaging: 20/bd, 200/bx, 30 lb/bx. EM-3411-11 – 11", Standard packaging: 20/bd, 200/bx, 19 lb/bx. EM-3406-6 – 6", Standard packaging: 20/bd, 200/bx, 12 lb/bx.

# JOINT PEDESTAL BOND STRAPS

Solid #6 AWG with black insulation, 1" strip at one end, 3/8" inside diameter ring terminal at the other. 29-3/8" long from end of conductor to barrel of crimp connector.



Ordering Information **EM-3205-29.375**, Standard packaging: 10/bg, 100/bx, 27 lb/bx.

### **#4 AWG FLEXIBLE HARNESSES**

#4 AWG rope-lay 7 x 85 x 32 bare tinned harnesses, with 1/4" ring terminals on each end. 16" long center to center.





#### Ordering Information EM-04-16.25

For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com





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### **COPPER GROUND WIRE**

Ordering Information

To create a part number, use the following guide. Standard products are indicated in bold type.

<b>Basic Product</b>	Add Plating	Add Insulation	Add Length in Feet	
<b>EM-0140</b> (solid #14 AWG)	T - tinned <b>B - bare</b>	N - none B - black SL - slate* G - green	ХХ	
EM-1200 (solid #12 AWG)	T - tinned <b>B - bare</b>	N - none B - black SL - slate G - green	ХХ	
EM-3226 (solid #10 AWG)	T - tinned <b>B - bare</b>	N - none B - black SL - slate G - green	ХХ	
EM-3227 (solid #8 AWG)	B - bare	N - none B - black SL - slate G - green	ХХ	
EM-3225 (solid #6 AWG)	T - tinned <b>B - bare</b>	N - none B - black SL - slate G - green	ХХ	
<b>EM-4500</b> (solid #6 AWG waterproof)	B - bare	B - black G - green	ХХ	
<b>EM-4560</b> (solid #6 AWG with .120 thick PVC insulation)	T - tinned <b>B - bare</b>	B - black G - green SL - slate	ХХ	
EM-3400 (#6 AWG 7-strand)	T - tinned <b>B - bare</b>	<b>B - black</b> <b>N - none</b> SL - slate <b>G - green</b>	ХХ	
EM-4000 (solid #4 AWG)	T - tinned <b>B - bare</b>	N – none B – black SL – slate G – green	ХХ	
EM-2223 (solid #2 AWG)	T - tinned <b>B - bare</b>	N – none B – black SL – slate G – green	ХХ	

Copper ground wire is available from Electric Motion in bare, tinned, insulated, and waterproof versions of various lengths. These are generally available in #12, #10, #8, #6, #4, or #2 AWG, hand coiled or on a spool.



### **Loose Piece Crimp Terminals**

#### Ordering Information EM-6-10-R #6 AWG Tin-Plated Copper Ring #10 mounting hole. Standard packaging: 100/sm bx, 1000/lg bx, 1.5 Ib/sm bx, 13 Ib/lg bx.

#### EM-6-25-R

#6 AWG Tin-Plated Copper Ring 1/4" mounting hole. Standard packaging: 100/sm bx, 1000/lg bx, 1.5 lb/sm bx, 13 lb/lg bx.



**EM-14-TF** #14 AWG TERMI-FOIL® *Standard packaging: 100/ bg, 1000/bx, 1.16 lb/bg.* 

**EM-10-TF** #10 and #12 AWG TERMI-FOIL® *Standard packaging: 100/bg, 1000/bx.* 

\*formerly GR - gray

For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com



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# WATERPROOF #6 AWG GROUND WIRE FOR SEALED PLANT



#### Features

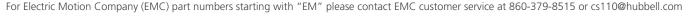
- #6 AWG solid conductor
- Polyethylene insulation
- Insulation is bonded to the conductor for sealed plant
- Passes eight foot water head test
- Bonded construction prevents jacket from "acting like a water pipe" to buried splices in long-term field use

#### Applications

- Ideal for fiber optic splice grounding because moisture adversely affects fiber strength and long-term reliability
- Maintains shield integrity when toning cables

# Ordering Information EM-4500-BB500

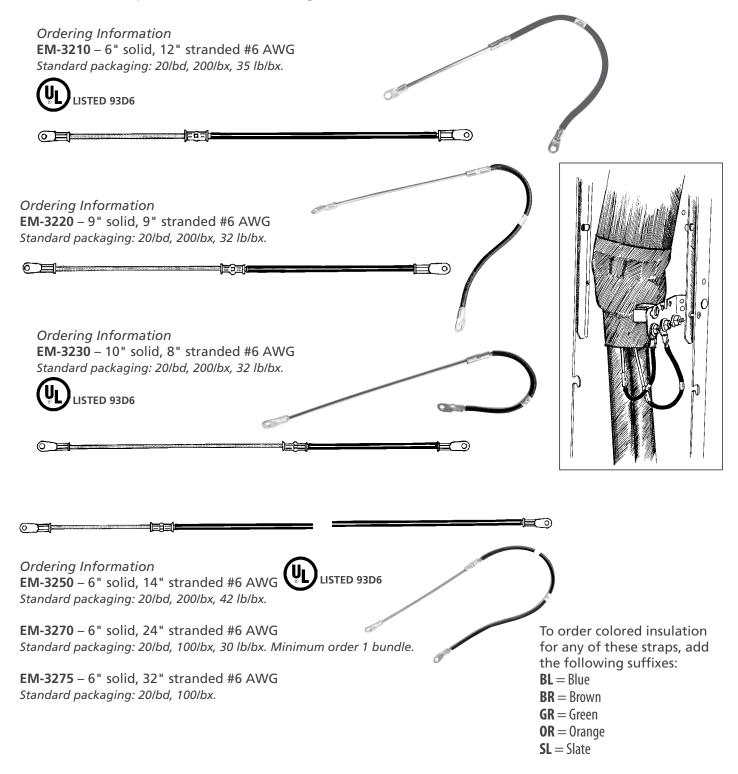
500' coil, black insulation. Standard packaging: 46 lb/coil. No minimum order.





### **#6 AWG FLEXIBLE/SOLID GROUND STRAPS**

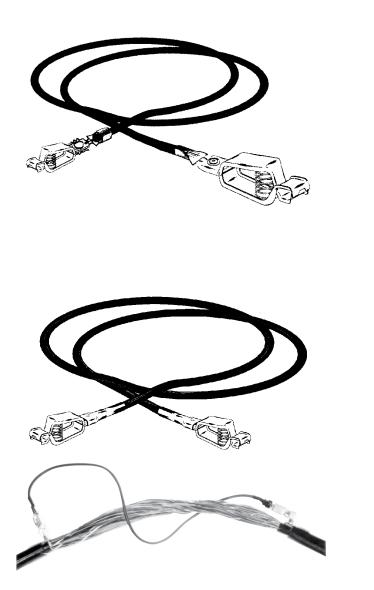
A combination solid #6 AWG and flexible #6 AWG ground strap with 1/4" ring terminal on each end. For bonding and grounding in sealed plant pedestals, closures, and PedCap RM<sup>™</sup> closures. Combining solid, bare wire with stranded provides a flexible and airtight connection.





### **TEMPORARY BOND STRAPS**

Available in 2-foot and 5-foot lengths, for temporary bonding across splices, to strand, and to streetlight fixtures. 5-foot bond provides shield continuity across cable openings during splicing operations. 2-foot bond can be used as a ground lead from one side of splice to the strand.



#### Features

- #14 AWG conductor
- #24A and #11A test clips

Ordering Information EM-4009 – 2-foot strap Standard packaging: 1/bg, 25/bx, 14 lb/bx.

EM-4008 – 5-foot strap Standard packaging: 1/bg, 25/bx, 15 lb/bx.

**EM-4008-04TPR** – #4 AWG conductor, 5-foot strap with black TPR insulation.

#### Features

- #12 AWG conductor
- #27 test clips
- Type S wire

Ordering Information EM-4011 – 2-foot strap Standard packaging: 10/bd, 100/bx, 17.45 lb/bx.

**EM-4010** – 5-foot strap Standard packaging: 100/bx, 28 lb/bx.



## **PERFORATED BONDING RIBBON**



A tinned copper strip perforated with alternating slots and holes. Equivalent to a #6 AWG conductor (26,244 circular mil area). Available as a standard in 25-foot coils.

#### Applications

- Provides bond when using heat-shrinkable material
- Bonding in cable vaults
- Replaces missing or defective bonds in the rehabilitation of pedestals and aerial closures

#### Features

- Easily trimmed to the desired length with splicer's scissors, eliminating waste
- Simple construction provides for easy foolproof installation
- Replaces missing or defective bonds in the rehabilitation of pedestals and aerial closures

#### Ordering Information

EM-4425 – 25-ft. coil Standard packaging: 10 coils/bx, 27 lb/bx. EM-4527 – 100-ft. roll Standard packaging: 3 rolls/bx, 12 lb/rl. EM-4425-ET – 25-ft. coil, tin-plated after processing Standard packaging: 10 coils/bx, 27 lb/bx. EM-4425I – 225-ft. coil with black PVC jacket

# BOND BAR/BOND BAR WITH TUBING

A roll of soft tin-plated electrical grade copper with alternate round and slotted holes.

#### Applications

For bonding across splices, shield continuity, and general grounding. Features

- Can be cut to length
- Available with black PVC insulator pre-installed at the factory
- Easily sealed against "B" sealing tape when exiting splice case
- Soft temper helps material form easily for neater installation

### Ordering Information

EM-4420 – 25-ft. coil, tin-plated, no insulator Standard packaging: 10 sp/bx, 20 lb/bx. EM-4420-100 – 100-ft. coil, tin-plated, no insulator Standard packaging: 5 sp/bx, 41 lb/bx. EM-4422 – 25-ft. spool, with PVC insulator Standard packaging: 10 sp/bx, 36 lb/bx.





ISTED 84D8



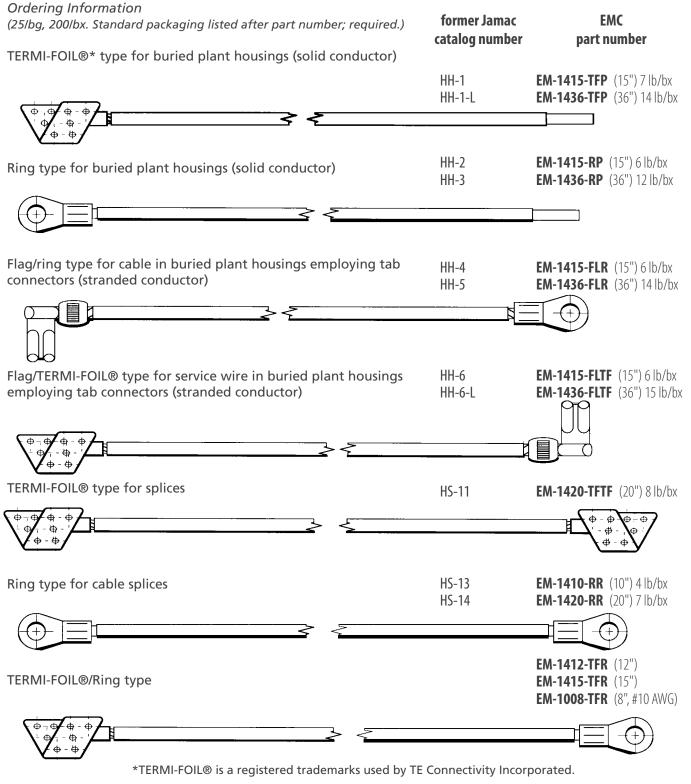






# WIRE AND CABLE BONDING/GROUNDING PRODUCTS

#14 AWG (unless otherwise noted) with green insulation. Other lengths, terminal combinations, and insulation colors are available; please call our sales office.



For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com



BONDING & GROUNDING

# WIRE AND CABLE BONDING/GROUNDING PRODUCTS (CONTINUED) former Jamac EMC catalog number part number TERMI-FOIL®\* type for ready-access terminals HT-21 EM-1426.5 2-TFFR 20" and 6-1/2" Ring type for ready-access terminals - 20" and 6-1/2" HT-22 EM-1426.5 2RFR 10 lb/bx TERMI-FOIL® type for buried wire at station protectors - 3-1/2" HP-31 EM-143.5-BTFFR 6 lb/bx TERMI-FOIL® type buried wire at station protectors employing HP-32 **EM-1403-TFFR** (3") 3 lb/bx tab connectors (stranded conductor) HP-33 **EM-1407-TFFR** (7") 4.2 lb/bx EM-1420-TFFR (20") **EM-1007-TFFR** (7", #10 AWG) **EM-1018-TFFR** (18", #10 AWG) \*TERMI-FOIL® is a registered trademarks used by TE Connectivity Incorporated. PEDESTAL BONDING CONNECTOR

Standard packaging: 10/bg, 100/bx, 7 lb/bx. Installing terminal to connector Standard packaging: 10/bg, 100/bx, 7 lb/bx. EM-1400 EM-1401

For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com



Ordering Information EM-1400 (formerly SL-1) Pedestal Bonding Connector

(90° angle bracket)

(45° angle bracket)

EM-1401 (formerly SL-2)

Pedestal Bonding Connector

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## **GROUNDING HARNESS CROSS REFERENCE**

	Harness Length	Siecor/CAC	Siecor	ЕМС	JAMAC
	16-1/2"	GH-1*	27-001-14	EM-GH-1*	
	20"	GH-2	27-002-14	EM-1420-TFTF	HS-11
-	21"/7"	GH-3	27-003-14	EM-1426.52-TFFR	
	4"/4"	GH-4	27-004-14	EM-143.5-BTFFR	HP-31
37	3"	GH-7*	27-007-14	EM-1403-TFFR	HP-32
,	6"	GH-8	27-009-14	EM-GH-8	
0	16"	GH-9	27-010-14	EM-GH-9	
0	20-1/2"	GH-10	27-012-14	EM-1420-RR	HS-14
0	10"	GH-11	27-013-14	EM-1410-RP	HS-13
0	36"	GH-12	27-019-14	EM-1436-RP	
	7"	GH-13	27-020-14	EM-1407-TFFR	HS-33
<u>و</u>	15"	GH-14	27-021-14	EM-1415-TFP	
	36"	GH-15	27-022-14	EM-1436-TFP	
<u>.</u>	13"			EM-1413-DSTF	
2	15"	GH-16	27-023-14	EM-1415-DSTF	
	36"	GH-17	27-024-14	EM-GH-17	
0	15"	GH-18	27-025-14	EM-1415-DSR	
Ð	36"	GH-19	27-026-14	EM-GH-19	
Ē	21"/21"	GH-20	27-027-14	14 EM-1442-RRFR	
<b>\$</b> 0	* Indicates solid co	onductors; all oth	ners stranded con	ductors.	



## **GROUNDING HARNESSES**

#### **EM-GH-1 Grounding Harness**

(former Siecor # 27-001-14)

The EM-GH-1 grounding harness is designed to connect and ground the shield of buried cable and service wire to screw-type grounding connectors employed in

selected types of buried plant housings. The harness consists of a tinned TERMI-FOIL® connector crimped to one end of a green PVC insulated #14 AWG solid tinned copper wire. Overall length is 16-1/2 inches.

Ordering Information EM-GH-1 Standard packaging: 25 units per bag, shipping weight 12 oz. approx.

#### **EM-GH-2 Grounding Harness**

(former Siecor # 27-002-14)

The EM-GH-2 grounding harness is designed to interconnect the shields of spliced cables in butt or inline type closures. The harness consists of a tinned TERMI-FOIL®

connector crimped to each end of a green PVC insulated #14 AWG stranded tinned copper wire. Overall length is 20 inches.

Ordering Information EM-GH-2 Standard packaging: 25 units per bag, shipping weight 17 oz. approx.

#### EM-GH-3 Grounding Harness

(former Siecor # 27-003-14)

The EM-GH-3 grounding harness is designed to interconnect and ground the shields of spliced cables and buried service wire to common grounding studs. The harness consists of two lengths of green PVC insulated #14 AWG stranded tinned copper wire

joined together with a tinned spade terminal. A tinned TERMI-FOIL® connector is crimped to the opposite end of each wire. Overall length of each wire is 7 and 21 inches respectively.

Ordering Information EM-GH-3 Standard packaging: 25 units per bag, shipping weight 22 oz. approx.

#### EM-GH-4 Grounding Harness

(former Siecor # 27-004-14)

The EM-GH-4 grounding harness is designed to interconnect and ground the shield of buried service wire, with station protector ground wire, to the grounding stud of a station protector. The harness consists of two lengths of green PVC insulated #14

AWG stranded tinned copper wire joined together with a tinned spade terminal. A tinned TERMI-FOIL® connector is crimped to the opposite end of one wire, and a tinned butt-splice (ferrule) connector is crimped to the opposite end of the other wire. Overall length of each wire is 4 inches.

Ordering Information EM-GH-4 Standard packaging: 25 units per bag, shipping weight 9 oz. approx.

#### EM-GH-7 Grounding Harness

(former Siecor # 27-007-14)

The EM-GH-7 grounding harness is designed to interconnect and ground the shield 3 of buried service wire to the grounding stud of a station protector. The harness consists of a tinned TERMI-FOIL® connector, crimped to one end of a green PVC insulated #14 AWG solid tinned copper wire, and a tinned spade terminal, crimped to the opposite end. Overall length is 3 inches.

Ordering Information EM-GH-7 Standard packaging: 25 units per bag, shipping weight 4 oz. approx.

\*TERMI-FOIL® is a registered trademark of TE Connectivity.

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# **GROUNDING HARNESSES (CONTINUED)**

#### **EM-GH-8 Grounding Harness**

(former Siecor # 27-009-14) The EM-GH-8 grounding harness is designed to interconnect the shields of double jacketed, double shielded cables in butt or inline type splice closures. The harness consists of four tinned TERMI-FOIL® connectors crimped to three interconnecting lengths of green PVC insulated #14 AWG stranded tinned copper wire. Overall length of each wire is 6 inches.

Ordering Information EM-GH-8 Standard packaging: 25 units per bag, shipping weight 18 oz. approx.

#### **EM-GH-9 Grounding Harness**

(former Siecor # 27-010-14)

The EM-GH-9 grounding harness is designed to interconnect the ground stud of a shield bonding connector, installed on buried cable, to screw-type grounding connectors employed in selected types of buried plant housings. The harness consists of a tinned ring terminal crimped to one end of a green PVC insulated #14 AWG stranded tinned copper wire. Overall length is 16 inches.

Ordering Information EM-GH-8 Standard packaging: 25 units per bag, shipping weight 11 oz. approx.

#### **EM-GH-10 Grounding Harness**

The EM-GH-10 grounding harness is designed to interconnect the ground studs ero of shield bonding connectors, installed on spliced cables, in butt or inline type splice closures. The harness consists of a tinned ring terminal crimped to each end of a green PVC insulated #14 AWG stranded tinned copper wire. Overall length is 20 inches.

Ordering Information EM-GH-10 Standard packaging: 25 units per bag, shipping weight 8 oz. approx.

#### EM-GH-11 Grounding Harness

(former Siecor # 27-013-14) The EM-GH-11 grounding harness is designed to interconnect the ground studs of shield bonding connectors, installed on spliced cables, in butt or inline type splice closures. The harness consists of a tinned ring terminal crimped to each end of a green PVC insulated #14 AWG stranded tinned copper wire. Overall length is 10 inches.

Ordering Information EM-GH-11 Standard packaging: 25 units per bag, shipping weight 8 oz. approx.

### **EM-GH-12 Grounding Harness**

The EM-GH-12 grounding harness is designed to interconnect the ground stud of  $\mathcal{Y}$  a shield bonding connector, installed on buried cable, to screw-type grounding connectors employed in selected types of buried plant housings. The harness consists of a tinned ring terminal crimped to one end of a green PVC insulated #14 AWG stranded tinned copper wire. Overall length is 36 inches.

Ordering Information EM-GH-12 Standard packaging: 25 units per bag, shipping weight 24 oz. approx.

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(former Siecor # 27-019-14)

(former Siecor # 27-012-14)





# **GROUNDING HARNESSES (CONTINUED)**

#### **EM-GH-13 Grounding Harness**

(former Siecor # 27-020-14)

The EM-GH-13 grounding harness is designed to connect and ground the shield of buried service wire to the grounding stud of a station protector. The harness I-FOIL® connector, crimped to one end of a green PVC insulated #14 AWG stranded tinned

consists of a tinned TERMI-FOIL® connector, crimped to one end of a green PVC insulated #14 AWG stranded tinned copper wire, and a tinned spade terminal, crimped to the opposite end. Overall length is 7 inches.

Ordering Information EM-GH-1 Standard packaging: 25 units per bag, shipping weight 18 oz. approx.

#### **EM-GH-14 Grounding Harness**

(former Siecor # 27-021-14)

The EM-GH-14 grounding harness is designed to connect and ground the shield of buried cable and service wire to screw-type grounding connectors employed in selected types of buried plant housings. The harness consists of a tinned TERMI-FOIL® connector crimped to one end of a green PVC insulated #14 AWG stranded tinned copper wire. Overall length is 15 inches.

Ordering Information EM-GH-2 Standard packaging: 25 units per bag, shipping weight 12 oz. approx.

### **EM-GH-15 Grounding Harness**

(former Siecor # 27-022-14)

The EM-GH-15 grounding harness is designed to connect and ground the shield of buried cable and service wire to screw-type grounding connectors employed in selected types of buried plant housings. The harness consists of a tinned TERMI-FOIL® connector crimped to one end of a green PVC insulated #14 AWG stranded tinned copper wire. Overall length is 36 inches.

Ordering Information EM-GH-3 Standard packaging: 25 units per bag, shipping weight 25 oz. approx.

### **EM-GH-16 Grounding Harness**

(former Siecor # 27-023-14)

The EM-GH-16 grounding harness is designed to connect and ground the shield of buried service wire to the spring action type grounding contacts employed in buried plant housings. The harness consists of a tinned TERMI-FOIL® connector, crimped to one end of a green PVC insulated #14 AWG stranded tinned copper wire, and a tinned spring action contact, crimped to the opposite end. Overall length is 15 inches.

Ordering Information EM-GH-4 Standard packaging: 25 units per bag, shipping weight 12 oz. approx.

#### **EM-GH-17 Grounding Harness**

(former Siecor # 27-024-14)

The EM-GH-17 grounding harness is designed to connect and ground the shield of buried service wire to the spring action type grounding contacts employed in buried plant housings. The harness consists of a tinned TERMI-FOIL® connector, crimped to one end of a green PVC insulated #14 AWG stranded tinned copper wire, and a tinned spring action contact, crimped to the opposite end. Overall length is 36 inches.

Ordering Information EM-GH-7 Standard packaging: 25 units per bag, shipping weight 26 oz. approx.

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BONDING 8 GROUNDIN

# **GROUNDING HARNESSES (CONTINUED)**

#### EM-GH-18 Grounding Harness

(former Siecor # 27-025-14)

The EM-GH-18 grounding harness is designed to interconnect the ground stud THE of a shield bonding connector, installed on buried cable, to the spring action type grounding contacts employed in buried plant housings. The harness consists of a tinned ring terminal, crimped to one end of a green PVC insulated #14 AWG stranded tinned copper wire, and a tinned spring action contact, crimped to the opposite end. Overall length is 15 inches.

Ordering Information EM-GH-18 Standard packaging: 25 units per bag, shipping weight 12 oz. approx.

### **EM-GH-19 Grounding Harness**

(former Siecor # 27-026-14)

TThe EM-GH-19 grounding harness is designed to interconnect the ground stud of a shield bonding connector, installed on buried cable, to the spring action type grounding contacts employed in buried plant housings. The harness consists of a tinned ring terminal, crimped to one end of a green PVC insulated #14 AWG stranded tinned copper wire, and a tinned spring action contact, crimped to the opposite end. Overall length is 36 inches.

Ordering Information EM-GH-19 Standard packaging: 25 units per bag, shipping weight 24 oz. approx.

### EM-GH-20 Grounding Harness

insulated #14

(former Siecor # 27-027-14) The EM-GH-20 grounding harness is designed to interconnect and ground the of spliced cables, employing shield bonding connectors with studs, to grounding studs. The harness consists of two lengths of green PVC AWG stranded tinned copper wire, joined together with a tinned spade terminal. A tinned ring terminal is crimped to the opposite end of each wire. Overall length of each wire is 21 inches.

Ordering Information EM-GH-20 Standard packaging: 25 units per bag, shipping weight 2 lb. approx.

### EM-GHT-1 Compression Tool

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(former Siecor # 27-001-15)

The EM-GHT-1 compression tool is designed to insure a high degree of reliability in making the ground harness to shield bond for harnesses employing TERMI-FOIL® type connectors. The EM-GHT-1 is equipped with a special ratchet which controls, and assures, correct pressure at the shield bond before the tool will release.

Ordering Information EM-GHT-1 Standard packaging: one tool per box, shipping weight 21 oz. approx.

\*TERMI-FOIL® is a registered trademark of TE Connectivity.

For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com

HUBBELL

## HAND-HELD CRIMP TOOL

#8–#2 AWG conductor range covers red, blue, grey, and brown compression lugs that are made from tubing. Ergonomic design features cushioned grips, easy-grip jaws, and rotating tool nest. Manufactured in the U.S.A.

#### FEATURES

- Positive ratcheting assembly with emergency release, prevents overcrimping or undercrimping.
- High mechanical advantage with molded cushion grips minimize user fatigue.
- Tool life is conservatively rated at 50,000 cycles.
- Crimps designed to meet or exceed UL tensile requirements.

### Ordering Information

EM-4290CT – Hand-Held Crimp Tool, #8-#2 AWG

Die Index Number	Gage D Min	Wire Size				
Red	.178	.200	8			
Blue	.220	.238	6			
Gry	.265	.275	4			
Brn	.325	.347	2			



# **CRIMP TOOL**

**BONDING 8** 

For crimping #8–1/0 AWG crimp lugs and splices. Rotating crimp dies are color coded for easy identification and selection. Long handles and compound lever action provide superb mechanical advantage and positive stop at the end of the crimp cycle.

Ordering Information EM-080CT Standard packaging: 1 / bx, 9 lb / bx



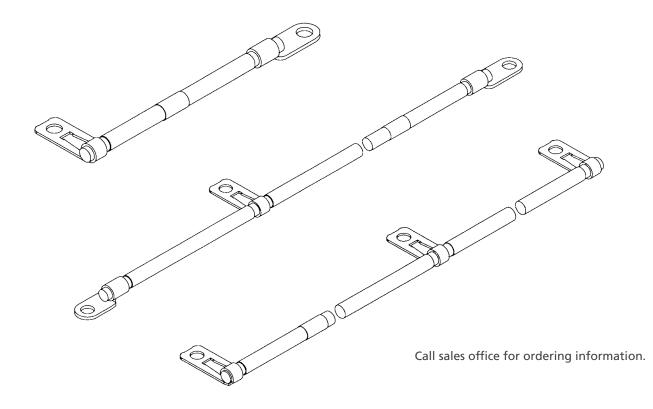






# **#6 AWG HARNESSES WITH FLAG TERMINALS**

Insulated rope-lay, various lengths available, various combinations of flag/ring terminals available.





For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com



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# Connectors



# **Connectors – Pedestal Ground Brackets**

### PEDESTAL GROUND BRACKETS

All stainless steel. Studs are pressed in and staked.

#### **APPLICATIONS**

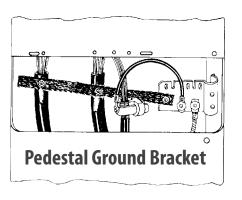
New installations and rehabilitation of pedestal grounds to accept new #6 AWG bonding harnesses or braid.

#### **FEATURES**

- Includes hardware to connect bonding harnesses or • ground braid
- Slots and holes can mount standard BSW • shield connectors.







Ordering Information EM-6300-01 – Studs protrude away from angle Standard packaging: 200/bx, 25 lb/bx

EM-6300-02 – Studs protrude toward angle Standard packaging: 200/bx, 25 lb/bx

Add suffix -TC for a tinned copper bracket. Add suffix -TB for a tinned brass bracket. Add suffix -L for longer studs. Add suffix -NBL to include nut, bolt, and lock washer (opposite page, EM-63NBL).

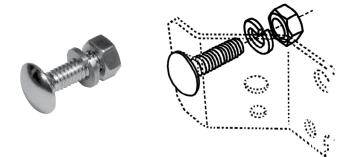




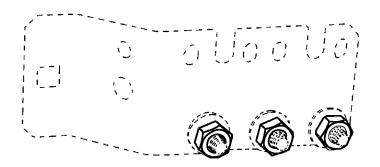
EM-6300-02L



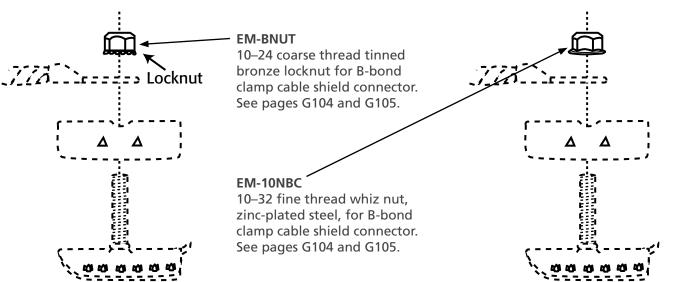
# **Connectors**



**EM-63NBL** – Stainless steel nut, carriage bolt, and lock washer used to attach pedestal ground brackets to pedestal. See page G36.



**EM-63NUT** – Stainless steel conical Keps nut. See page G36.





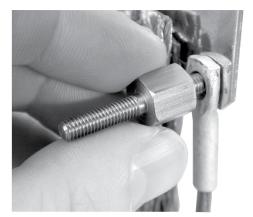
# **Connectors – Pedestal Ground Brackets**

### **PEDESTAL GROUND BRACKET STUD EXTENDER**

This can be used when the existing ground bracket studs are full. Simply remove the existing nut, thread on the stud extender (see picture, right). This gives 3/4" additional stud length. The nut that was removed is now used to capture the bonds on the stud extender.

Ordering Information EM-63MG-SS – Stainless steel EM-63MG-TB – Tinned brass EM-63MG-TSB – Tinned silicon bronze





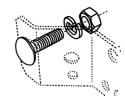
### "C" SERVICE WIRE CLAMP

Buried service wire connector for pedestal applications. Attaches to the ground brackets on opposite page.

Ordering Information EM-6250 Standard packaging: 10/bg, 100/bx, 7 lb/bx.

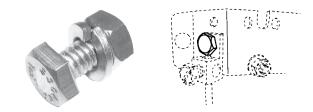
### HARDWARE





Stainless steel nut, carriage bolt, and lock washer used to attach pedestal ground brackets (opposite page) to pedestal.

#### Ordering Information EM-63NBL

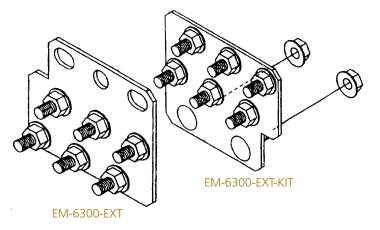


1/4-20 x 1/2 hex head cap screw with nut and lockwasher, for attaching cast ground lug to ground bracket.

Ordering Information EM-63SS – Stainless steel EM-63BR – Brass/bronze EM-63TBR – Tinned brass bronze



### PEDESTAL GROUND BRACKET EXTENDERS



Ordering Information

**EM-6300-EXT** – Stainless steel plate with 6 short studs staked into it; also 6 Keps nuts.

**EM-6300-EXT-KIT** – Stainless steel plate with 6 short studs staked into it, and 2 extra mounting studs; also 8 Keps nuts.

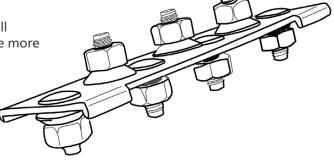
Add suffix **-TC** for a tinned copper bracket extender (studs and nuts still stainless steel).



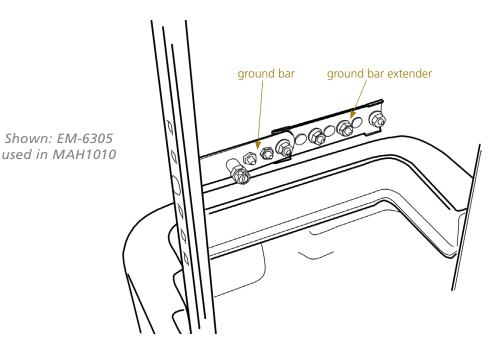
## **Connectors – Pedestal Ground Brackets**

## PEDESTAL GROUND BAR EXTENDER FOR CHANNELL MAH PEDESTALS

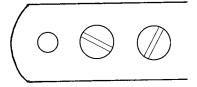
The Ground Bar Extender EM-6305 is to be used in Channell pedestals to increase the capacity of the pedestal to handle more buried service wires and cables.



The existing Channell ground bar has a single hole in the end. Mount one of the end studs in that hole, and the ground bar extension gives the installer three more studs for BSW floating bond shield connectors (SSI/PID # 700244330) on the BSW side. The opposite side will provide three additional studs to connect cable shield flexible bond straps SSI/PID # 001460997.



Ordering Information EM-6305 – Pedestal Ground Bar Extender (6 extra studs). EM-6308 – Pedestal Ground Bar Extender (14 extra studs).





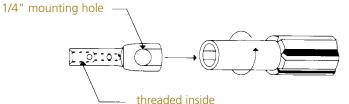
## **Connectors – Screw-on Terminals**

### **SCREW-ON TERMINALS**

Tin-plated copper connector with internal self-cutting threads, for terminating solid wires at connecting points. These small terminals are applied with a can wrench. They cut their own thread on solid #6 or #10 AWG copper ground wire.

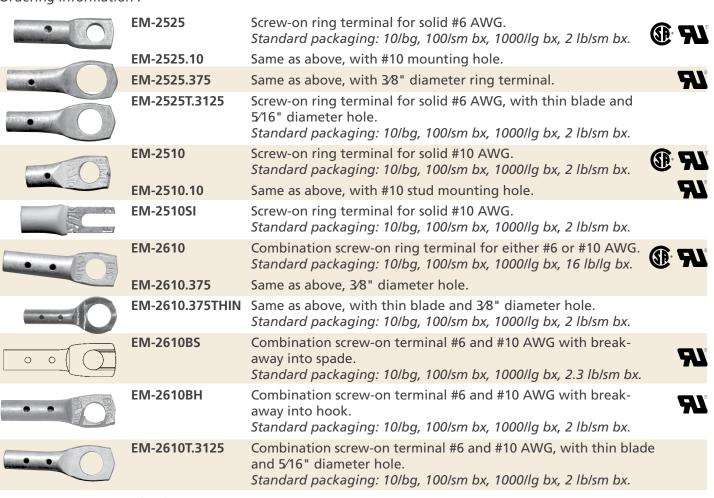
#### FEATURES

- Installs with a standard (3/8") terminal wrench
- Self-threading terminal cuts through any oxidation
- Threaded connection will not vibrate loose
- 1/4" hole fits #10 through 1/4" studs
- Tin plated for corrosion resistance
- Copper alloy construction



diameter

Ordering Information :



RECOGNIZED

Grounding and Bonding Lug

self-threading action

For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com



**30NDING 8** 

## **Connectors – Screw-on Terminals** LARGER SCREW-ON TERMINALS Grounding and These larger and double-hole terminals are applied with an adjustable Bonding Lug wrench. They cut their own thread on solid #2, #4, and #6 copper ground wire. nountina holes threaded inside diameter Ø ]( self-threading action Ordering Information : Screw-on ring terminal, single 5/16" hole, for solid #2 AWG. EM-2522SH Standard packaging: 10/bg, 50/sm bx, 500/lg bx, 21.8 lb/lg bx EM-2522DH.75.10 Screw-on ring terminal, double #10 holes, 3/4" spacings, for solid #2 AWG. Screw-on ring terminal, double 5/16" holes, 1" spacings, for EM-2522DH1.000 solid #2 AWG. Screw-on ring terminal, double 5/16" holes, 1-3/4" spacings, EM-2522DH1.750 for solid #2 AWG. Screw-on ring terminal, double 5/16" holes, 5/8" spacings, for EM-2522DH.625 solid #2 AWG. Standard packaging: 5/bg, 50/sm bx, 500/lg bx, 33 lb/lg bx EM-2522DH.75.312 Screw-on ring terminal, double 5/16" holes, 3/4" spacings, for solid #2 AWG. Standard packaging: 5/bg, 50/sm bx, 500/lg bx, 33 lb/lg bx



## **Connectors – Screw-on Terminals**

### LARGER SCREW-ON TERMINALS (CONTINUED)

|                             | EM-2522DH.875    | solid #2            | n ring terminal, double 5/16" holes, 7/8" spacings, for<br>AWG.<br>d packaging: 5/bg, 50/sm bx, 500/lg bx, 33 lb/lg bx                                       |
|-----------------------------|------------------|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                             | EM-2522DH.875.62 | #2 A                | w-on ring terminal, 5⁄16" hole and 5⁄16" slot, for solid<br>WG, fits studs spaced 5⁄8"–7⁄8".<br>Indard packaging: 5/bg, 50/sm bx, 500/lg bx, 44 lb/lg bx     |
|                             | EM-2522DH.625.4  |                     | w-on ring terminal, double 7/16" holes, 5⁄8" spacing,<br>olid #2 AWG.                                                                                        |
| $\overline{}$               | EM-2522DH1.000.4 |                     | w-on ring terminal, double 7⁄16" holes, 1" spacing,<br>solid #2 AWG.                                                                                         |
|                             | EM-2522DH.8756   |                     | Screw-on ring terminal, 7/16" hole and 7/16" slot, for<br>solid #2 AWG, fits studs spaced 5⁄8"–7⁄8".                                                         |
|                             | EM-2524SH        |                     | n ring terminal, single 1/4" hole, for solid #4 AWG.<br>d packaging: 10/bg, 50/sm bx, 500/lg bx, 22 lb/lg bx                                                 |
| <ul><li>○ ( ○ ○ ○</li></ul> | EM-2524DH1.750   | Screw-o<br>solid #4 | n ring terminal, double 1/4" holes, 13/4" spacings, for 🔊                                                                                                    |
| <ul><li>○ ( ○ ○ )</li></ul> | EM-2524DH.625    | Screw-o<br>solid #4 | n ring terminal, double 1/4" holes, 5/8" spacings, for was AWG.                                                                                              |
|                             | EM-2525DH.625    | solid #6            | n ring terminal, double 1/4" holes, 5/8" spacings, for<br>AWG (can also be applied with can wrench).<br>d packaging: 10/bg, 50/sm bx, 500/lg bx, 13 lb/lg bx |
|                             | EM-2526          |                     | n terminal, 5⁄8" spade, for solid #6 AWG.<br>d packaging: 10/bg, 50/sm bx, 500/lg box, 38.4 lb/lg bx                                                         |
| -                           | EM-2627R         |                     | n ring terminal, 3⁄8" mounting hole,<br>#6 AWG.                                                                                                              |

#### Please see next page for at-a-glance comparison of all screw-on terminals.

For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com



BONDING & Grounding

## ALL SCREW-ON TERMINALS (CONTINUED)

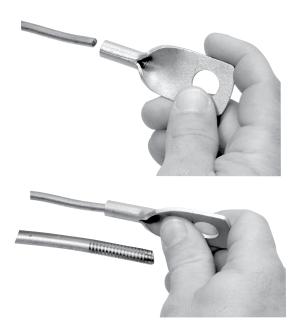
| PART NUMBER          | ACCOMMODATES | MOUNTING HOLE(S)           | SPACING   | LISTING     |
|----------------------|--------------|----------------------------|-----------|-------------|
| EM-2525              | #6 AWG       | 1/4"                       |           | <b>(P N</b> |
| EM-2525.10           | #6 AWG       | #10                        |           | <b>A</b>    |
| EM-2525.375          | #6 AWG       | 3/8"                       |           | <b>R</b>    |
| EM-2525T.3125        | #6 AWG       | 5⁄16", thin blade          |           |             |
| EM-2510              | #10 AWG      | 1⁄4"                       |           |             |
| EM-2510.10           | #10 AWG      | #10                        |           |             |
| EM-2510SI            | #10 AWG      | 1⁄4", insulated barrel     |           |             |
| EM-2610              | #6 & #10 AWG | 1⁄4"                       |           |             |
| EM-2610.375          | #6 & #10 AWG | 3⁄8"                       |           | -           |
| EM-2610BS            | #6 & #10 AWG | 1⁄4", breakaway into spade |           | <b>RI</b>   |
| EM-2610BH            | #6 & #10 AWG | 1⁄4", breakaway into hook  |           | <b>A</b>    |
| EM-2610T.3125        | #6 & #10 AWG | 5⁄16", thin blade          |           |             |
| EM-2522SH            | #2 AWG       | 5⁄16"                      |           | <b>A</b>    |
| EM-2522DH.75.10      | #2 AWG       | double #10                 | 3/4"      |             |
| EM-2522DH1.000       | #2 AWG       | double 5⁄16"               | 1"        |             |
| EM-2522DH.875625.437 | #2 AWG       | 7/16" hole, 7/16" slot     | 5⁄8"—7⁄8" |             |
| EM-2522DH1.750       | #2 AWG       | double 5⁄16"               | 1-3/4"    | <b>R</b>    |
| EM-2522DH.625        | #2 AWG       | double 5⁄16"               | 5⁄8"      | <b>R</b> Ľ  |
| EM-2522DH.75.312     | #2 AWG       | double 5⁄16"               | 3/4"      |             |
| EM-2522DH.875        | #2 AWG       | double 5⁄16"               | 7/8"      | <b>R</b>    |
| EM-2522DH.875.625    | #2 AWG       | 5⁄16" hole, 5⁄16" slot     | 5⁄8"—7⁄8" |             |
| EM-2522DH.625.437    | #2 AWG       | 7/16"                      | 5⁄8"      |             |
| EM-2522DH1.000.437   | #2 AWG       | 7/16"                      | 1"        |             |
| EM-2524SH            | #4 AWG       | 1⁄4"                       |           | RĽ          |
| EM-2524DH1.750       | #4 AWG       | double 1/4"                | 1-3⁄4"    | <b>FI</b>   |
| EM-2524DH.625        | #4 AWG       | double 1⁄4"                | 5⁄8"      | <b>R</b>    |
| EM-2525DH.625        | #6 AWG       | double 1/4"                | 5⁄8"      | <b>A</b>    |
| EM-2526              | #6 AWG       | 5⁄8" spade                 |           |             |
| EM-2627R             | #6 AWG       | 3/8"                       |           |             |



# **Connectors – Self-Tapping Terminals**

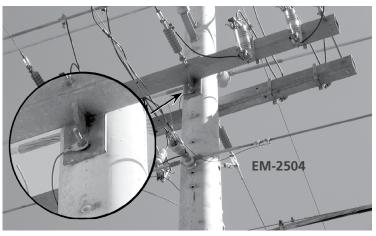
## LARGER-HOLED SELF-TAPPING TERMINALS



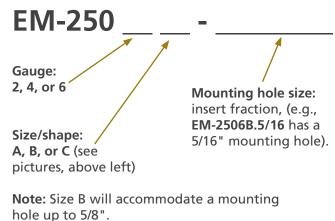


Screw-on terminals cut their own thread on solid copper ground wire.

# BONDING & Grounding



#### Ordering Information:



For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com

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### **GROUND WIRE CONNECTOR**

Inline connector with breakaway hex heads. Available for #6 or #10 AWG solid.

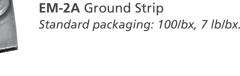
Ordering information EM-4544 Accommodates #6 AWG EM-4542 Accommodates #10 AWG EM-4542-1010 Accommodates three #10 AWG Standard packaging: 2/bg, 50/bx, 5 lb/bx.



### **GROUND STRIPS**

A plate equipped with two binding posts and washers. The plate has a "U"-shaped slot to receive the mounting screw and a depressed tab which serves to prevent turning after installation. The Ground Strip is intended for use in terminals equipped with G type or H type binding post chambers, or LA type or LB type fuse chambers.





Ordering Information



**EM-2B** Ground Strip with Bracket added Standard packaging: 100/bx, 9 lb/bx.



### SOLDERLESS GROUND LUGS

Ordering Information required.



3/16" inside diameter





EM-2513 - Fits #14-#4 AWG. Tin-plated copper housing and mounting tang. 1/4" mounting hole.

EM-2519-01 - Fits solid #10-#6 AWG. Copper housing and mounting tang. Standard packaging: 1000/bx, 25 lb/bx







EM-2519-03 - Fits #12-#6 AWG, 90° bend in mounting tang. Copper housing, tin-plated copper mounting tang.

**30NDING 8** 





EM-2519-04 - Fits #12-#6 AWG, 90° bend in mounting tang. Copper housing, tin-plated copper mounting tang.

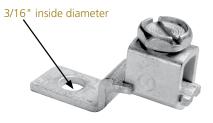
#### At a glance

| rica giance |              |                                   |                                |               |         |
|-------------|--------------|-----------------------------------|--------------------------------|---------------|---------|
| PART NUMBER | ACCOMMODATES | MOUNTING TANG<br>LENGTH/ANGLE/HT. | MOUNTING HOLE DIA./<br>SPACING | SCREW         | LISTING |
| EM-2513     | #14—4        | 1" / 90° bend / 1⁄4"              | 1⁄4"                           | 1⁄2" hex head | none    |
| EM-2519-01  | solid #10—6  | 1" / straight                     | 3⁄16"                          | 3⁄8" hex head | UL      |
| EM-2519-03  | #12—6        | 3⁄4" / 90° bend / 1⁄2"            | 3⁄16"                          | 3⁄8" hex head | none    |
| EM-2519-04  | #12-6        | 3⁄4" / 90° bend / 7⁄8"            | 3⁄16"                          | 3⁄8" hex head | none    |



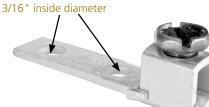
## **SOLDERLESS GROUND LUGS (CONTINUED)**

Ordering Information required.



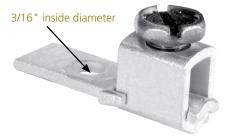


EM-2519-05 - Fits #12-#6 AWG, 90° bend in mounting tang. Tin-plated copper housing and mounting tang.





EM-2519DHT-01 - Fits #10-#6 AWG, double hole, 5/8" spacing. Tinplated copper housing 84D8 and mounting tang. Standard packaging: 1000/bx, 28 lb/bx





EM-2519HT - Fits #12-#6 AWG. Tin-plated copper housing and mounting tang. Standard packaging: 1000/bx, 28 lb/bx

3/16" inside diameter





EM-2519DHT-02 - Fits #10-#6 AWG, double hole, 1" spacing, offset bend in mounting tang. Tin-plated copper housing 84D8 and mounting tang. Standard packaging: 500/bx, 19 lb/bx



| At a glance   | ACCOMMODATES | MOUNTING TANG<br>LENGTH/ANGLE/HT. | MOUNTING HOLE DIA./<br>SPACING | SCREW         | LISTING |
|---------------|--------------|-----------------------------------|--------------------------------|---------------|---------|
| EM-2519-05    | #12-6        | 5⁄8" / 90° bend / 3⁄8"            | 3⁄16"                          | 3⁄8" hex head | none    |
| EM-2519DHT-01 | #10—6        | 1-3⁄16" / straight                | 3⁄16" / 5⁄8"                   | 3⁄8" hex head | UL      |
| EM-2519HT     | #12-6        | 1⁄2" / straight                   | 3⁄16"                          | 3⁄8" hex head | none    |
| EM-2519DHT-02 | #10—6        | 1-1⁄2" / 90° bend / 3⁄8"          | 3⁄16" / 1"                     | 3⁄8" hex head | UL      |

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### **SOLDERLESS GROUND LUGS (CONTINUED)**

Ordering Information required.





**EM-2518** – Fits solid #6 AWG at right angle. Copper housing and mounting tang. *Standard packaging: 100/bx, 6 lb/bx Add suffix* **-NBL** for nut, bolt, and lockwasher, to attach to a pedestal grounding bracket.





**EM-2519-06** – Fits solid #10–#6 AWG, offset bend in mounting tang. Tinplated copper housing and mounting tang.





**EM-2519-06HH** – Fits solid #12–#6 AWG, offset bend in mounting tang. Tin-plated copper housing and mounting tang.



EM-2512 – Extruded connector fits solid and stranded #6 AWG. Wire can be connected in either direction. EM-2512T – EM-2512, with tin-plated copper body and tin-plated screw.

#### At a glance . . .

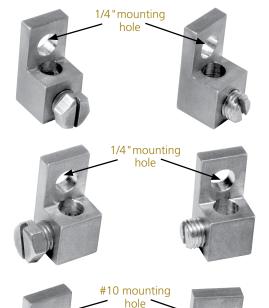
| <b>3</b>     |                   |                                   |                                |               |         |
|--------------|-------------------|-----------------------------------|--------------------------------|---------------|---------|
| PART NUMBER  | ACCOMMODATES      | MOUNTING TANG<br>LENGTH/ANGLE/HT. | MOUNTING HOLE DIA./<br>SPACING | SCREW         | LISTING |
| EM-2518      | solid #6          | 5⁄8" / 90° bend / 3⁄8"            | 3⁄16"                          | 9/32" slotted | none    |
| EM-2519-06   | #10—6             | 1/2" / 90° bend / 3⁄8"            | 3⁄16"                          | 9/32" slotted | UL      |
| EM-2519-06HH | #12—6             | 1/2" / 90° bend / 3⁄8"            | 3⁄16"                          | 3⁄8" hex head | none    |
| EM-2512      | solid/stranded #6 | 3⁄4" / straight                   | 1/4"                           | 3⁄8" hex head | none    |
| EM-2512T     | solid/stranded #6 | 3⁄4" / straight                   | 1/4"                           | 3⁄8" hex head | none    |

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## <u>Connectors – Ground Lugs</u>

### **L-SHAPED GROUND LUGS**



#10 mounting

hole

L-shaped ground lugs accommodate ground wires from #14–6 AWG. 3⁄8" hex head bolts fit standard C 216B tool. All lugs are available with either 1⁄4" or #10 size mounting hole.



#### Ordering information

**EM-6620** L-shaped ground lug with hex head bolt in front **EM-6621** L-shaped ground lug with headless set screw in front

1/4" mounting hole is standard on these two products. For #10 size hole, please add suffix **.10**.

**EM-6622** L-shaped ground lug with hex head bolt on left. **EM-6622HL** L-shaped ground lug with headless set screw on left

1/4" mounting hole is standard on these two products. For #10 size hole, please add suffix **.10**.

**EM-6624** L-shaped ground lug with hex head bolt on right **EM-6625** L-shaped ground lug with headless set screw on right

#10 size mounting hole is standard on these two products. For 1/4" hole, please add suffix .25.

**EM-6626** L-shaped ground lug with hex head bolt in front, and lip in back to prevent rotation on ground bar or bracket **EM-6627** L-shaped ground lug with headless set screw in front, and lip in back to prevent rotation on ground bar or bracket

#10 size mounting hole is standard on these two products. For 1/4" hole, please add suffix .25.

Add suffix **-NBL** for nut, bolt, and lockwasher, to attach any of the above ground lugs to a pedestal grounding bracket.

| At a glance |                            |                        |                    |                           |         |
|-------------|----------------------------|------------------------|--------------------|---------------------------|---------|
| PART NUMBER | <b>BOLT/SCREW LOCATION</b> | <b>BOLT/SCREW HEAD</b> | MOUNTING HOLE SIZE | DISTINGUISHING<br>FEATURE | LISTING |
| EM-6620     | front                      | hex head               | 1/4"               | none                      | UL      |
| EM-6621     | front                      | headless               | 1/4"               | none                      | UL      |
| EM-6622     | left                       | hex head               | 1/4"               | none                      | UL      |
| EM-6622HL   | left                       | headless               | 1/4"               | none                      | UL      |
| EM-6624     | right                      | hex head               | #10                | none                      | UL      |
| EM-6625     | right                      | headless               | #10                | none                      | UL      |
| EM-6626     | front                      | hex head               | #10                | anti-rotation lip         | UL      |
| EM-6627     | front                      | headless               | #10                | anti-rotation lip         | UL      |

For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com



### **GROUND LUG**

For attaching #6 AWG solid or stranded ground wires to cabinets, closures, terminals, etc. Headless set screw comes in from the side.

Ordering information - EM-3538

### **DOUBLE-HOLE GROUND LUGS**

Plated zinc die cast alloy for mechanical strength and electrical conductivity. Accommodate #6–#2 AWG ground wires, solid or stranded.

Ordering information EM-6630 Double-Hole Ground Lug EM-6631 Double-Hole Ground Bar Lug with parallel mounting tang.





Headless set screw

84D8

EM-6631



### **TRANSFORMER (TANK) GROUND LUGS**

#### APPLICATION

For bonding telco plant to the electrical transformer in joint use situations. Hex-shaped body installs with typical hand tools and captures #6 AWG solid copper conductor.

- Brass components for electrical conductivity and corrosion resistance
- Installed with typical hand tools
- #6 AWG solid copper compatibility
- Available in two sizes to fit most transformers

#### Ordering information

EM-TGL38 Transformer Ground Lug, 3/8" EM-TGL48 Transformer Ground Lug, 1/2" EM-TGL58 Transformer Ground Lug, 5/8" EM-TGL58.240 Transformer Ground Lug, 5/8" with .240 diameter hole to accommodate #4 AWG

Add suffix **-T** for tin plating.







### **PEDESTAL GROUND LUG**

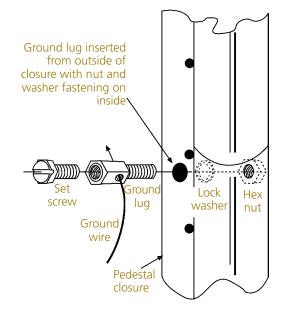


For bonding closures adjacent to power sources; connects #6 AWG solid or stranded ground wires.

Ordering information **EM-3535** Standard packaging: 1/bg, 100/bx, 6 lb/bx.



Other designs are available; call for information



### **PEDESTAL GROUND LUG**



The EM-5900SB can be used in a ground bar or bracket, or through the housing of a pedestal or cabinet. All copper alloy construction. Can also be tin plated, and and is also available with a lock washer and nut.

#### FEATURES

- 1/4-20 x 1/2 threaded shank
- Captures #6 AWG and smaller
- Silicon bronze construction for strength, electrical conductivity, and corrosion resistance

#### Ordering information

EM-5900SB Pedestal Ground Lug EM-5900SB-LN Pedestal Ground Lug with lock washer and nut EM-5900SBXL-LN Pedestal Ground Lug with 3/4" threaded shank, with lock washer and nut



Add suffix **-T** for tin plating.





## **Connectors – Ground Blocks**

### **GROUND BLOCKS**

Can be mounted in terminals, cabinets, and enclosures to provide a convenient means for connecting ground wires. All ground blocks are copper, unless otherwise noted. Add suffix -**MSK** to include mounting screws. Add suffix -**ISK** to include isolator mounting screws.



**EM-4200-7-0** 7-position ground block, copper, 1/2" x 1/2", set screws with Allen heads, 1/4" mounting holes. *Standard packaging: 250/bx, 30 lb/bx.* 



| EM-4201 | 3-position ground block, #8–32        |
|---------|---------------------------------------|
|         | mounting holes.                       |
|         | Standard packaging: 250/bx, 30 lb/bx. |



**EM-4201-5S** 5-position ground block with screws, .219" mounting holes. *Standard packaging: 250/bx.* 





## <u>Connectors – Ground Blocks</u>

### **GROUND BLOCKS (CONTINUED)**

Ordering information

EM-4201-12S 12-position ground block made from 3/8" x 1/2", 10 x 32 threads, with screws, .220" mounting holes. Standard packaging: 100/bx, 36 lb/bx.



EM-4202 Multiport ground block, with headless set screws, #10–32 mounting holes. Standard packaging: 100/bx, 22 lb/bx.

- **EM-4203** 4-position ground block made from 1/2" x .375" with 1/4 x 20 tapped holes all the way through, and headless set screws, #10–24 mounting holes. *Standard packaging: 200/bx.*
- EM-4204 4-position ground block made from 3/8" x 3/4", brass hex head screws, #10–24 mounting holes.







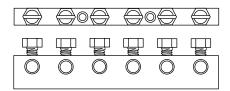


## **Connectors – Ground Blocks**

### **GROUND BLOCKS (CONTINUED)**

Ordering information

EM-4204-6BOH 6-position ground block made from 3/8" x 3/4", tin-plated brass hex cap screws, #10–32 mounting holes.



EM-4250-8H



8-position ground block with 1/4–20 hex cap screws, #10–24 mounting holes.

EM-4250-8HAS 8-position ground block, 360 brass, with 1/4–20 hex cap screws with slots, through holes, 1/4" mounting holes.

EM-4250-3SSO Ground block, three screws,



stainless steel oval point set screws, #8–32 mounting holes. Standard packaging: 250/bx, 27 lb/bx.

EM-4250-5BOH 5-position ground block with 1/4 - 20 x 7/16 slotted brass hex head screws, .219" mounting holes. Standard packaging: 50/bx, 12 lb/bx.





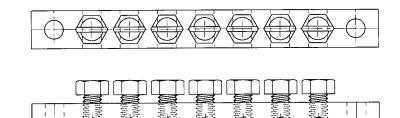
## <u>Connectors – Ground Blocks</u>

### **GROUND BLOCKS (CONTINUED)**

Ordering information

84D8

**EM-4251-7-BOH** 7-position ground block, 1/2" x 1/2" with 1/4" mounting holes, brass hex head screws with slots.



EM-4251-7-SS-O 7-position ground block, 1/2" x 1/2", oval point Allen 1/4-28 set screws, stainless steel, copper material, no tin, 1/4" mounting holes. Standard packaging: 250/bx, 46 lb/bx.



EM-4254-12 12-position aluminum ground block with 1/4 - 28 slotted stainless steel screws, oval point. #10 mounting holes.

**EM-4255-4BOM** 4-position ground block, 3/8" x 3/4" with brass hex head screws. #10–32 mounting holes.





Please see next page for at-a-glance comparison of all ground blocks.

Other designs are available; call for information, or see next page for specifying custom ground blocks. Add suffix -MSK to include mounting screws. Add suffix -ISK to include isolator mounting screws.

BONDING & GROUNDING



# **Connectors – Ground Blocks**

## **GROUND BLOCKS (CONTINUED)**

| At a glance    |           |                         |                                                      |                          |                                |         |
|----------------|-----------|-------------------------|------------------------------------------------------|--------------------------|--------------------------------|---------|
| PART NUMBER    | POSITIONS | DIMENSIONS              | MOUNTING<br>HOLES                                    | MOUNTING<br>HOLE SPACING | SCREWS                         | LISTING |
| EM-4200-7-0    | 7         | 1⁄2" x 1⁄2" x 3-3⁄4"    | .25"                                                 | 3-1/4"                   | Allen                          | none    |
| EM-4201        | 3         | 3⁄8" x 1⁄2" x 2-1⁄4"    | 38" x 1/2" x 2-1/4" #8-32 1-3/4" Headless set screws |                          | Headless set screws            | none    |
| EM-4201-5S     | 5         | 3⁄8" x 1⁄2" x 4"        | .219"                                                | 3-1/2"                   | Hex head                       | none    |
| EM-4201-12S    | 12        | 3⁄8" x 1⁄2" x 8"        | .220"                                                | 7-1/2"                   | Hex head                       | none    |
| EM-4202        | 3         | 9⁄16" x 9⁄16" x 2-7⁄8"  | #10—32                                               | 2-3⁄8", 1-15⁄16"         | Headless set screws            | none    |
| EM-4203        | 4         | 3⁄8" x 1⁄2" x 2-1⁄2"    | #10-24                                               | 1-3/16"                  | Headless set screws            | none    |
| EM-4204        | 4         | 3⁄8" x 3⁄4" x 3"        | #10—24                                               | 1-1/2"                   | Brass hex head                 | none    |
| EM-4204-6B0H   | 6         | 3⁄8" x 3⁄4" x 4-1⁄2"    | #10—32                                               | 1-1/2"                   | Tin-plated brass hex head      | none    |
| EM-4250-8H     | 8         | 3⁄8" x 1⁄2" x 6-3⁄4"    | #10-24                                               | 3-1/2"                   | Hex cap                        | none    |
| EM-4250-8HAS   | 8         | 3⁄8" x 3⁄4" x 6-5⁄8"    | 1/4"                                                 | 5-7/8"                   | Hex cap                        | none    |
| EM-4250-3SSO   | 3         | 3⁄8" x 1⁄2" x 2-1⁄4"    | #8-32                                                | 1-3/4"                   | Stainless steel oval point     | UL      |
| EM-4250-5BOH   | 5         | 3⁄8" x 1⁄2" x 4"        | .219"                                                | 3-1/2"                   | Brass hex head                 | none    |
| EM-4251-7-BOH  | 7         | 1⁄2" x 1⁄2" x 4-1⁄2"    | 1/4"                                                 | 4"                       | Brass hex head                 | none    |
| EM-4251-7-SS-0 | 7         | 1⁄2" x 1⁄2" x 3-3⁄4"    | 1/4"                                                 | 3-1/4"                   | Oval point, Allen              | UL      |
| EM-4254-12     | 12        | 5⁄16" x 7⁄16" x 4-7⁄16" | #10                                                  | 4"                       | Oval point, stainless, slotted | none    |
| EM-4255-4BOM   | 4         | 3⁄8" x 3⁄4" x 3"        | #10—32                                               | 1-1/2"                   | Brass hex head                 | none    |

### **CUSTOM GROUND BLOCKS**

EM-4250-XYZ

**30NDING &** 

- Z Ground block made from 3/8" x 1/2" material:
  - X = number of positions (1–24)
  - Y = material of set screw (B = brass, S = steel, SS = stainless)
  - Z = type of point on set screw (O = oval, C = cup)



EM-4252-XYZ

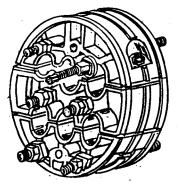
- Ground block made from 9/16" x 9/16" material, UL listed:X = number of positions (1–24)
  - Y = material of set screw (B = brass, S = steel, SS = stainless)
  - Z = type of point on set screw (O = oval, C = cup)



### **IN-LINE CONNECTOR (STUD - #6 AWG)**

The EM-0366WR In-Line Ground Connector allows the installer to make a low-resistance, externally removable ground wire connection to the outside of a PLP Coyote Splice™ closure.





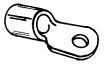


Ordering information

EM-0366WR In-Line Connector

**EM-0366WRL** Longer In-Line Connector (actual in-line connector is 1/2" longer than EM-0366WR)

### LOOSE PIECE CRIMP TERMINALS



Ordering information



#6 AWG Tin-Plated Copper Ring, #10 mounting hole. Standard packaging: 100/sm bx, 1000/lg bx,1.5 lb/sm bx, 13 lb/lg bx.



EM-6-25-R

#6 AWG Tin-Plated Copper Ring, 1/4" mounting hole. Standard packaging: 100/sm bx, 1000/lg bx,1.5 lb/sm bx, 13 lb/lg bx.



EM-14-TF #14 AWG TERMI-FOIL®. Standard packaging: 100/bg, 1000/bx, 1.16 lb/bg.

EM-10-F #10 and #12 AWG TERMI-FOIL®. Standard packaging: 100/bg, 1000/bx.



### TANG AND COLLAR LUGS, SINGLE AND DOUBLE MOUNTING HOLES – OFFSET TYPE DE & 2DE

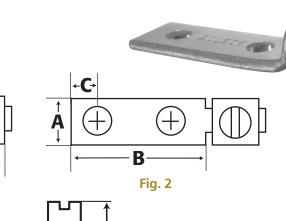
#### FEATURES

C,

↑ A ↓

Т

- Electrolytic copper tang and collar
- Unplated; for tin plating, add suffix **-P** to end of catalog number.





#### **Ordering Information**

Fig. 3

— **В** Fig. 1

|        |        |          |         |          |       |                  |       | MOUNTIN   | IG HOLES |                   |
|--------|--------|----------|---------|----------|-------|------------------|-------|-----------|----------|-------------------|
| FIGURE | A      | В        | C       | D        | т     | WIRE RANGE       | AMP   | HOLE SIZE | С ТО С   | CATALOG<br>NUMBER |
| 1      | 5⁄16"  | 31/32"   | 3⁄16"   | 3⁄4"     | 1⁄16" | 10—14 str.       | 25    | #6        | -        | *DE-703           |
| 1      | 3⁄8"   | 1-1/4"   | 7/32"   | 25⁄32"   | 1⁄16" | 6—14 str.        | 35-50 | #10       | -        | DE-704            |
| 1      | 1⁄2"   | 1-1/2"   | 9⁄32"   | 1-1/16"  | 5⁄64" | 2—8 str.         | 70—90 | 1⁄4       | -        | *DE-705           |
| 1      | 5/8"   | 1-7/8"   | 3/8"    | 1-11/32" | 1/8"  | 1/0-6 str.       | 125   | 1/4       | -        | DE-706            |
| 1      | 1"     | 2-3/4"   | 1/2"    | 1-3/4"   | 1/8"  | 1/8" 4/0-2 str.  |       | 5/16      | -        | *DE-707           |
| 1      | 1-1/2" | 4-1/4"   | 15/16"  | 2-45⁄64" | 3⁄16" | 500 MCM-1/0 str. | 400   | 3/8       | -        | *DE-708           |
| 1      | 2"     | 4-5/8"   | 1-3/16" | 3-7/8"   | 1/4"  | 1000-600 MCM     | 650   | 1/2       | -        | DE-709            |
| 2      | 5⁄16"  | 1-23/32" | 3⁄16"   | 3⁄4"     | 1⁄16" | 10—14 str.       | 25    | #6        | 3/4      | 2DE-703           |
| 2      | 3⁄8"   | 2-1/4"   | 7/32"   | 25/32"   | 1/16" | 6—14 str.        | 35-50 | #10       | 1        | 2DE-704           |
| 2      | 1⁄2"   | 2-7/16"  | 1/4"    | 1-1/16"  | 5/64" | 2—8 str.         | 70-90 | 1/4       | 1        | 2DE-705           |
| 2      | 5/8"   | 2-15⁄16" | 7/16"   | 1-11/32" | 1⁄8"  | 1/0—6 str.       | 125   | 1⁄4       | 1        | 2DE-706           |
| 2      | 1"     | 3-5⁄8"   | 1/2"    | 1-3⁄4"   | 1/8"  | 4/0-2 str.       | 225   | 5/16      | 1        | 2DE-707           |
| 2      | 1-1/2" | 6"       | 3/4"    | 2-45⁄64" | 3/16" | 500 MCM-1/0 str. | 400   | 1/2       | 1-3/4    | 2DE-708           |
| 2      | 2"     | 6-1/4"   | 3/4"    | 3-7/8"   | 1/4"  | 1000-600 MCM     | 650   | 1/2       | 1-3/4    | 2DE-709           |

For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com



HUBBELL

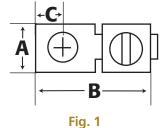
## TANG AND COLLAR LUGS, SINGLE AND DOUBLE MOUNTING HOLES – STRAIGHT TYPE DE & 2DE

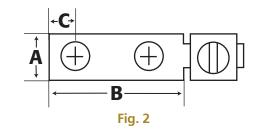
#### **FEATURES**

- Electrolytic copper tang and collar •
- Unplated; for tin plating, add suffix -P •
- to end of catalog number.
- Sizes 704 and 706 not UL listed •



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|        |        |          |         |          |       |                  |       | MOUNTIN   | IG HOLES |                   |
|--------|--------|----------|---------|----------|-------|------------------|-------|-----------|----------|-------------------|
| FIGURE | A      | В        | С       | D        | т     | WIRE RANGE       | AMP   | HOLE SIZE | С ТО С   | CATALOG<br>NUMBER |
| 1      | 5⁄16"  | 61/64"   | 3⁄16    | 3⁄4"     | 1⁄16" | 10—14 str.       | 25    | #8        | -        | *DES-703          |
| 1      | 3⁄8"   | 1-1/4"   | 7/32"   | 3/4"     | 1⁄16" | 6—14 str.        | 35-50 | #10       | -        | DES-704           |
| 1      | 1⁄2"   | 1-1/2"   | 9⁄32"   | 1-3/32"  | 5⁄64" | 2—8 str.         | 70-90 | 1/4       | -        | *DES-705          |
| 1      | 5/8"   | 1-7/8"   | 3/8"    | 1-25/32" | 1/8"  | 1/0-6 str.       | 125   | 1/4       | -        | DES-706           |
| 1      | 1"     | 2-3/8"   | 1/2"    | 1-27/32" | 1/8"  | 4/0—2 str.       | 225   | 5/16      | -        | *DES-707          |
| 1      | 1-1/2" | 3-7/8"   | 15/16"  | 2-9/16"  | 3⁄16" | 500 MCM-1/0 str. | 400   | 3⁄8       | -        | *DES-708          |
| 1      | 2"     | 5-1/8"   | 1-3/16" | 3-3/4"   | 1/4"  | 1000-600 MCM     | 650   | 1/2       | -        | *DES-709          |
| 2      | 5⁄16"  | 1-5/64"  | 3⁄16"   | 3⁄4"     | 1⁄16" | 10—14 str.       | 25    | #8        | 3/4      | 2DES-703          |
| 2      | 3⁄8"   | 2-1/4"   | 7/32"   | 3⁄4"     | 1/16" | 6—14 str.        | 35-50 | #10       | 1        | 2DES-704          |
| 2      | 1⁄2"   | 2-7/16"  | 1/4"    | 1-3/32"  | 5/64" | 2—8 str.         | 70-90 | 1/4       | 1        | 2DES-705          |
| 2      | 5/8"   | 2-15⁄16" | 7/16"   | 1-25⁄32" | 1⁄8"  | 1/0—6 str.       | 125   | 1/4       | 1        | 2DES-706          |
| 2      | 1"     | 3-5⁄8"   | 1/2"    | 1-27/32" | 1/8"  | 4/0—2 str.       | 225   | 5/16      | 1        | 2DES-707          |
| 2      | 1-1/2" | 5-5/8"   | 3/4"    | 2-9/16"  | 3/16" | 500 MCM-1/0 str. | 400   | 1/2       | 1-3/4    | 2DES-708          |
| 2      | 2"     | 6-7/8"   | 3/4"    | 3-3/4"   | 1/4"  | 1000-600 MCM     | 650   | 1/2       | 1-3/4    | 2DES-709          |

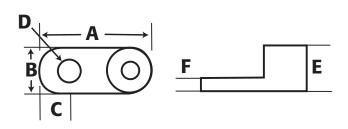


### SINGLE TERMINAL LUG FOR COPPER CONDUCTOR - TYPE TL FOR CABLE TO STUD OR SCREW

#### **FEATURES**

- Forged high-conductivity copper • mechanical lugs
- Suffix -P indicates tin plating. •







|               | CONDUCT  | OR RANGE |         |       |       |       |         |      |           |                |                    |                   |
|---------------|----------|----------|---------|-------|-------|-------|---------|------|-----------|----------------|--------------------|-------------------|
| AMP<br>RATING | MAXIMUM  | MINIMUM  | A       | В     | C     | D     | E       | F    | BOLT SIZE | SCREW<br>STYLE | STANDARD<br>CARTON | CATALOG<br>NUMBER |
| 35            | 8 str.   | 14 sol.  | 53/64   | 3/8   | 7/32  | 13/64 | 31/64   | 3/32 | #10       | slotted        | 100                | *TL-1             |
| 35            | 8 str.   | 14 sol.  | 53/64   | 3/8   | 7/32  | 13/64 | 31/64   | 3/32 | #10       | slotted        | 100                | *TL-1-P           |
| 70            | 4 str.   | 14 sol.  | 1-1/8   | 17/32 | 9/32  | 9/32  | 9/16    | 7/64 | 1/4       | slotted        | 100                | *TL-2             |
| 70            | 4 str.   | 14 sol.  | 1-1/8   | 17/32 | 9/32  | 9/32  | 9/16    | 7/64 | 1/4       | slotted        | 100                | *TL-2-P           |
| 125           | 1/0 str. | 6 sol.   | 1-31/64 | 23/32 | 3/8   | 21/64 | 49/64   | 7/64 | 5/16      | socket         | 100                | *TL-3             |
| 125           | 1/0 str. | 6 sol.   | 1-31/64 | 23/32 | 3/8   | 21/64 | 49/64   | 7/64 | 5/16      | socket         | 100                | *TL-3-P           |
| 125           | 1/0 str. | 6 sol.   | 1-31/64 | 23/32 | 3/8   | 21/64 | 61/64   | 7/64 | 5/16      | hex            | 50                 | *TL-4             |
| 125           | 1/0 str. | 6 sol.   | 1-31/64 | 23/32 | 3/8   | 21/64 | 61/64   | 7/64 | 5/16      | hex            | 50                 | *TL-4-P           |
| 250           | 250 MCM  | 2/0 str. | 1-63/64 | 61/64 | 31/64 | 25/64 | 1-1/16  | 1/8  | 3/8       | socket         | 25                 | *TL-5             |
| 250           | 250 MCM  | 2/0 str. | 1-63/64 | 61/64 | 31/64 | 25/64 | 1-1/16  | 1/8  | 3/8       | socket         | 25                 | *TL-5-P           |
| 250           | 250 MCM  | 2/0 str. | 1-63/64 | 61/64 | 31/64 | 25/64 | 1-15/16 | 1/8  | 3/8       | hex            | 12                 | *TL-6             |
| 250           | 250 MCM  | 2/0 str. | 1-63/64 | 61/64 | 31/64 | 25/64 | 1-15/16 | 1/8  | 3/8       | hex            | 12                 | *TL-6-P           |

**BONDING &** 

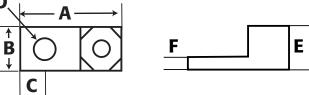


### **CAST TERMINAL LUGS – TYPE CTL FOR CABLE TO STUD OR SCREW**

#### FEATURES

D

- Forged high-conductivity copper mechanical lugs
- Suffix -P indicates tin plating.
- Add suffix **-H** for hex head screw.





| CONDUCT  | OR RANGE |         |        |       |       |        |      |           |                |                    |                   |  |  |
|----------|----------|---------|--------|-------|-------|--------|------|-----------|----------------|--------------------|-------------------|--|--|
| MAXIMUM  | MINIMUM  | A       | В      | C     | D     | E      | F    | BOLT SIZE | SCREW<br>STYLE | STANDARD<br>CARTON | CATALOG<br>NUMBER |  |  |
| 1 str.   | 4 str.   | 1-1/2   | 3/4    | 13/32 | 1/4   | 13/16  | 3/16 | 1/4       | socket         | 50                 | CTL-1             |  |  |
| 1 str.   | 4 str.   | 1-1/2   | 3/4    | 13/32 | 1/4   | 13/16  | 3/16 | 1/4       | socket         | 50                 | CTL-1-P           |  |  |
| 1/0 str. | 4 str.   | 1-15/32 | 3/4    | 13/32 | 11/32 | 13/16  | 3/16 | 5/16      | socket         | 50                 | CTL-1/0           |  |  |
| 1/0 str. | 4 str.   | 1-15/32 | 3/4    | 13/32 | 11/32 | 13/16  | 3/16 | 5/16      | socket         | 50                 | CTL-1/0-P         |  |  |
| 2/0 str. | 4 str.   | 1-3/4   | 3/4    | 3/8   | 13/32 | 7/8    | 3/16 | 3/8       | socket         | 25                 | CTL-2/0           |  |  |
| 2/0 str. | 4 str.   | 1-3/4   | 3/4    | 3/8   | 13/32 | 7/8    | 3/16 | 3/8       | socket         | 25                 | CTL-2/0-P         |  |  |
| 4/0 str. | 1 str.   | 1-13/16 | 1      | 7/16  | 13/32 | 1-1/32 | 7/32 | 3/8       | socket         | 12                 | CTL-4/0           |  |  |
| 4/0 str. | 1 str.   | 1-13/16 | 1      | 7/16  | 13/32 | 1-1/32 | 7/32 | 3/8       | socket         | 12                 | CTL-4/0-P         |  |  |
| 500 MCM  | 4/0 str. | 3-1/16  | 1-7/16 | 3/4   | 9/16  | 1-1/2  | 7/32 | 3/8       | socket         | 6                  | CTL-500           |  |  |
| 500 MCM  | 4/0 str. | 3-1/16  | 1-7/16 | 3/4   | 9/16  | 1-1/2  | 7/32 | 3/8       | socket         | 6                  | CTL-500-P         |  |  |

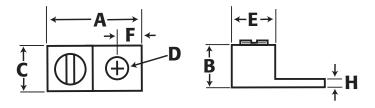
GROUNDING &



### **UNIVERSAL TERMINAL – FOR SINGLE ALUMINUM AND COPPER CONDUCTOR**

#### FEATURES

- Dual-rated, one-conductor lugs
- Constructed from high-strength,
- high-conductivity aluminum alloy
- Electro-tin plated for low-contact resistance





| dering Information |                   |       |       |       |       |       |       |       |                   |
|--------------------|-------------------|-------|-------|-------|-------|-------|-------|-------|-------------------|
| SCREW TYPE         | WIRE RANGE AL9CU  | А     | В     | с     | D     | E     | F     | н     | CATALOG<br>NUMBER |
| slotted            | 4-14              | 0.835 | 0.5   | 0.375 | 0.193 | 0.375 | 0.25  | 0.1   | 6T                |
| slotted            | 4—14              | 1.062 | 0.5   | 0.5   | 0.265 | 0.375 | 0.25  | 0.094 | 4T                |
| slotted            | 4—14              | 1.156 | 0.56  | 0.5   | 0.265 | 0.47  | 0.25  | 0.1   | 2T                |
| slotted            | 1/0—14            | 1.468 | 0.781 | 0.625 | 0.265 | 0.625 | 0.437 | 0.187 | OT                |
| slotted            | 1/0-14            | 1.171 | 0.671 | 0.625 | 0.265 | 0.578 | 0.25  | 0.13  | OT1               |
| hex socket         | 2/0-14            | 1.468 | 0.781 | 0.625 | 0.265 | 0.625 | 0.437 | 0.187 | 2/0T              |
| hex socket         | 2/0-14            | 1.625 | 0.75  | 0.656 | 0.265 | 0.625 | 0.437 | 0.25  | 2/0T1             |
| hex socket         | 3/0—6             | 1.875 | 0.89  | 0.7   | 0.265 | 0.88  | 0.5   | 0.145 | 3/0T              |
| hex socket         | 250 MCM-6         | 2     | 1.125 | 1     | 0.328 | 1     | 0.406 | 0.25  | 250T              |
| hex socket         | 300 MCM-6         | 2     | 1.125 | 1     | 0.281 | 1     | 0.5   | 0.25  | 300T              |
| hex socket         | 350 MCM-6         | 2.25  | 1.25  | 1.125 | 0.406 | 1.125 | 0.5   | 0.25  | 350T              |
| hex socket         | 500 MCM-4         | 2.812 | 1.562 | 1.5   | 0.406 | 1.218 | 0.875 | 0.312 | 500T              |
| hex socket         | 600 MCM-2         | 3.125 | 1.562 | 1.5   | 0.531 | 1.375 | 0.875 | 0.437 | 600T              |
| hex socket         | 750 MCM-4/0       | 3.375 | 1.937 | 1.625 | 0.531 | 1.625 | 0.875 | 0.5   | 750T              |
| hex socket         | 800 MCM- 300 MCM  | 3.375 | 1.937 | 1.575 | 0.656 | 1.625 | 0.875 | 0.5   | 800T              |
| hex socket         | 1000 MCM- 500 MCM | 3.375 | 1.937 | 1.75  | 0.656 | 1.625 | 0.875 | 0.5   | 1000T             |

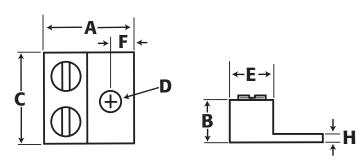
For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com

**BONDING &** 

### **UNIVERSAL TERMINAL – FOR DOUBLE ALUMINUM AND COPPER CONDUCTOR**

#### FEATURES

- Dual-rated, two-conductor lugs
- Constructed from high-strength,
- high-conductivity aluminum alloy
- Electro-tin plated for low-contact resistance





| Ordering Information |                      |       |       |       |       |       |       |       |                   |
|----------------------|----------------------|-------|-------|-------|-------|-------|-------|-------|-------------------|
| SCREW TYPE           | WIRE RANGE AL9CU     | A     | В     | с     | D     | E     | F     | н     | CATALOG<br>NUMBER |
| slotted              | Two 2—14             | 1.156 | 0.56  | 0.906 | 0.272 | 0.47  | 0.25  | 0.1   | 2-2T              |
| slotted              | Two 1/0–14           | 1.468 | 0.781 | 1.12  | 0.265 | 0.625 | 0.328 | 0.187 | 2-0T              |
| hex socket           | Two 2/0-14           | 1.468 | 0.781 | 1.12  | 0.265 | 0.625 | 0.328 | 0.187 | 2-2/0T            |
| hex socket           | Two 3/0—6            | 1.75  | 0.844 | 1.375 | 0.266 | 0.78  | 0.468 | 0.187 | 2-3/0T            |
| hex socket           | Two 250 MCM-6        | 2.562 | 1.187 | 1.625 | 0.391 | 1     | 0.875 | 0.25  | 2-250T            |
| hex socket           | Two 350 MCM—6        | 2.875 | 1.25  | 1.937 | 0.562 | 1.125 | 0.875 | 0.25  | 2-350T            |
| hex socket           | Two 500 MCM-4        | 2.812 | 1.562 | 2.266 | 0.562 | 1.218 | 0.875 | 0.312 | 2-500T            |
| hex socket           | Two 600 MCM-2        | 3.125 | 1.562 | 2.406 | 0.531 | 1.375 | 0.625 | 0.437 | 2-600T            |
| hex socket           | Two 750 MCM-4/0      | 3.375 | 1.937 | 2.875 | 0.531 | 1.625 | 0.875 | 0.5   | 2-750T            |
| hex socket           | Two 800 MCM—300 MCM  | 3.375 | 1.937 | 2.925 | 0.656 | 1.625 | 0.875 | 0.5   | 2-800T            |
| hex socket           | Two 1000 MCM-500 MCM | 3.375 | 1.937 | 3.187 | 0.656 | 1.625 | 0.875 | 0.5   | 2-1000T           |

BONDING & GROUNDING



### HAND-HELD CRIMP TOOL

#8-#2 AWG conductor range covers red, blue, grey, and brown compression lugs that are made from tubing. Ergonomic design features cushioned grips, easy-grip jaws, and rotating tool nest. Manufactured in the U.S.A.

#### FEATURES

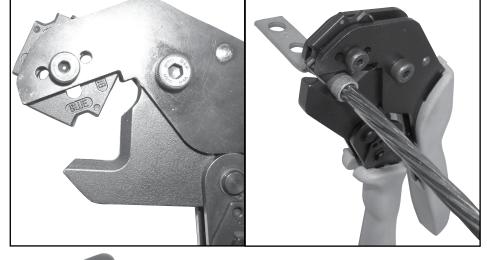
- Positive ratcheting assembly with emergency release, prevents overcrimping or undercrimping.
- High mechanical advantage with molded cushion grips minimize user fatigue.
- Tool life is conservatively rated at 50,000 cycles.
- Crimps designed to meet or exceed UL tensile requirements.

#### Ordering information

#### EM-4290CT

Hand-Held Crimp Tool, #8-#2 AWG

|                     | GAGE D |      |           |  |  |
|---------------------|--------|------|-----------|--|--|
| DIE INDEX<br>NUMBER | MIN.   | МАХ  | WIRE SIZE |  |  |
| Red                 | .178   | .200 | 8         |  |  |
| Blue                | .220   | .238 | 6         |  |  |
| Grey                | .265   | .275 | 4         |  |  |
| Brown               | .325   | .347 | 2         |  |  |



### **CRIMP TOOL**

**BONDING &** 

For crimping #8–1/0 AWG crimp lugs and splices. Rotating crimp dies are color coded for easy identification and selection. Long handles and compound lever action provide superb mechanical advantage and positive stop at the end of the crimp cycle.

Ordering information

**EM-080CT** Standard packaging: 1/bx, 9 lb/bx





# <u> Clamps – Bronze Vise Type Connectors</u>

### **BRONZE VISE TYPE CONNECTORS**

Silicon bronze clamps adjustable by single hex head screws, used to connect various size grounding conductors, as well as pole line apparatus to grounding conductors.

#### FEATURES

- Casting and bolt are both made of silicon bronze for greater strength, conductivity, and corrosion resistance.
- Install using the standard can wrench.

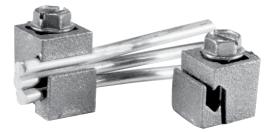
#### Ordering information

EM-2370 is manufactured to Bell Spec CA08980 (H1). It accommodates:

- Single or multiple #6 AWG wires solid or stranded
- #6 AWG to #10 or #12 AWG
- From single 2-pair BSW metallic shield, to three 2-pair BSW metallic shields

Standard packaging: 100/bx, 8 lb/bx.

EM-2370NS Same as above, with no slot.



**EM-2371** is similar to the EM-2370, only with the addition of "tongue and groove" type alignment channels to keep the two halves of the clamp in proper alignment with each other.

Ordering information

- EM-2371 Silicon Bronze Clamp Standard packaging: 5/bg, 100/bx, 10 lb/bx.
- EM-2371-2 Silicon Bronze Clamp with a vibrationresistant screw Standard packaging: 5/bg, 100/bx, 9 lb/bx.

Add suffix -T for a tin-plated clamp. Add suffix -BA for a torque shear head.

EM-2371 with torque shear head bolt







**BONDING &** 



Ordering information EM-2372 H2 Silicon Bronze Clamp. Standard packaging: 5/bg, 100/bx, 15/b/bx.

- EM-2372-2 H2 Silicon Bronze Clamp with a vibrationresistant screwEM-2372-BA02 H2 Silicon Bronze Clamp with a
- vibration-resistant screw and torque shear head

#### Add suffix **-T** for a tin-plated clamp.

Accommodates:

- #12–#4 AWG solid
- #1/0 B, C, or D stranded copper to #6, #8, #10, #12 AWG solid bare copper wire
- 6.6–10M support strand to #6, #8, #10, #12 AWG solid bare copper wire



For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com

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### **BRONZE VISE TYPE CONNECTORS (CONTINUED)**

**EM-2372CC** is similar to EM-2372 (see previous page), with the addition of:

- Tin plating for corrosion resistance and compatibility with aluminum;
- Additional wire termination point for capturing extra wires, to allow the connection of dissimilar wires, such as copper and aluminum.;
- Stainless steel bolt for mechanical strength and corrosion resistance.





At a glance

EM-2374 is used for attaching a solid or stranded #4 AWG through #8 AWG wire to a #4 AWG conductor run.
Standard packaging: 100/bx, 16 lb/bx.
Add suffix -SH for a shear-off bolt.
Add suffix -BR for a shear-off zinc cap.
Add suffix -BV for a shear-off zinc cap and anti-loosening device.
Add suffix -P for tin plating.

**EM-2375** is used for attaching a solid or stranded #2 AWG through #6 AWG wire to a #2 AWG conductor run. *Standard packaging: 100/bx, 3 lb/bx.* Add suffix **-SH** for a shear-off bolt. Add suffix **-BR** for a shear-off zinc cap.



| PART NUMBER  | ACCOMMODATES                                                                                                    | DISTINGUISHING FEATURES                                              | LISTING |
|--------------|-----------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|---------|
| EM-2370      | #6—#6, #10, #12; up to 3 2-pair BSW                                                                             | Mfd to Bell Spec CA08980 (H1)                                        |         |
| EM-2371      | (same)                                                                                                          | Tongue & groove channels                                             | UL      |
| EM-2371-2    | (same)                                                                                                          | Vibration-resistant screw                                            |         |
| EM-2372      | #12—#4 AWG solid; 1/0 B, C, or D stranded<br>to #6—#12 AWG solid; 6.6—10M support<br>strand to #6—#12 AWG solid | H2——Mfd. to Bell Spec CA08980                                        | UL      |
| EM-2372-2    | (same)                                                                                                          | Vibration-resistant screw                                            |         |
| EM-2372-BA02 | (same)                                                                                                          | Vibration-resistant screw, torque shear head                         |         |
| EM-2372CC    | (same in the jaws)<br>#6—#14 AWG solid or stranded<br>in the bolt head                                          | Tin plating; stainless steel bolt; additional wire termination point |         |
| EM-2374      | #4#8 AWG to #4 AWG conductor run                                                                                |                                                                      |         |
| EM-2374-SH   | (same)                                                                                                          | Shear-off bolt                                                       |         |
| EM-2374-BR   | (same)                                                                                                          | Shear-off zinc cap                                                   |         |
| EM-2374-BV   | (same)                                                                                                          | Shear-off zinc cap, anti-loosening                                   |         |
| EM-2375      | #2—#6 AWG to #4 AWG conductor run                                                                               |                                                                      |         |
| EM-2375-SH   | (same)                                                                                                          | Shear-off bolt                                                       |         |
| EM-2375-BR   | (same)                                                                                                          | Shear-off zinc cap                                                   |         |

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## **BRONZE VISE TYPE CONNECTORS (CONTINUED)**



Accommodates #6 AWG-#2 AWG str., .162"-.320" (4.12-8.14 mm)

Ordering information EM-2376-SH Add suffix -SS for a stainless steel bolt. Remove suffix -SH for a clamp without torque shear head.

Accommodates #2 AWG solid-#2/0 AWG str., .286"-.438" (7.28-11.15mm)

Ordering information EM-2377-SH Add suffix -SS for a stainless steel bolt. Remove suffix -SH for a clamp without torque shear head.





Accommodates #1/0 AWG .str-#4/0 AWG str .390"-.552" (9.93-14.05mm)

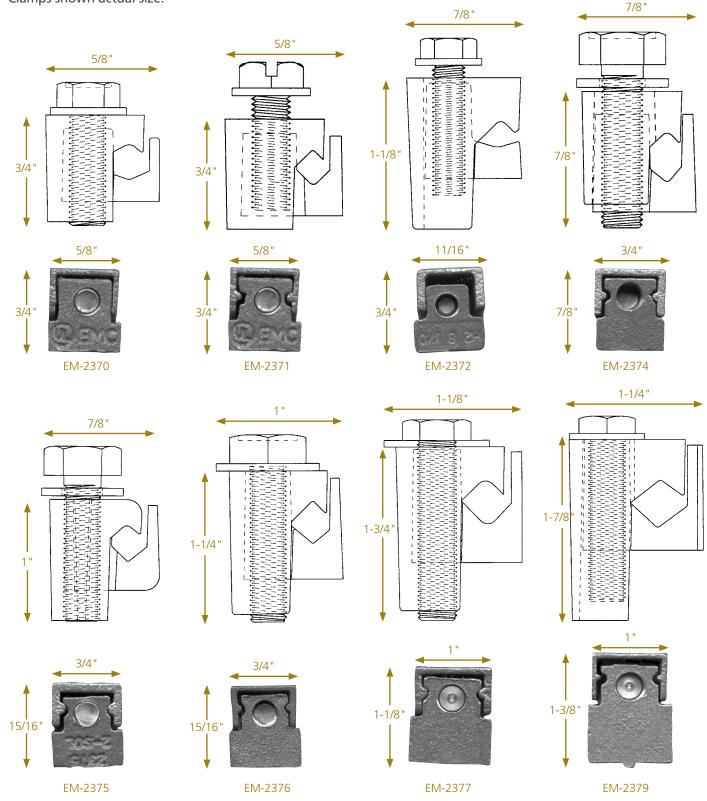
Ordering information EM-2379-SH Add suffix -SS for a stainless steel bolt. Remove suffix -SH for a clamp without torque shear head.

| At a glance , , , |                                                  |                         |         |  |  |
|-------------------|--------------------------------------------------|-------------------------|---------|--|--|
| PART NUMBER       | ACCOMMODATES                                     | DISTINGUISHING FEATURES | LISTING |  |  |
| EM-2376           | #6-#2 AWG str., .162"320" (4.12-8.14mm)          |                         |         |  |  |
| EM-2376-SH        | (same)                                           | Torque shear head       |         |  |  |
| EM-2376-SS        | (same)                                           | Stainless steel bolt    |         |  |  |
| EM-2377           | #2 solid-#2/0 AWG str., .286"438" (7.28-11.15mm) |                         |         |  |  |
| EM-2377-SH        | (same)                                           | Torque shear head       |         |  |  |
| EM-2377-SS        | (same)                                           | Stainless steel bolt    |         |  |  |
| EM-2379           | #1/0-#4/0 AWG str., 390"552" (9.93-14.05mm)      |                         |         |  |  |
| EM-2379-SH        | (same)                                           | Torque shear head       |         |  |  |
| EM-2379-SS        | (same)                                           | Stainless steel bolt    |         |  |  |



### Size at a glance ...

Clamps shown actual size.



For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com

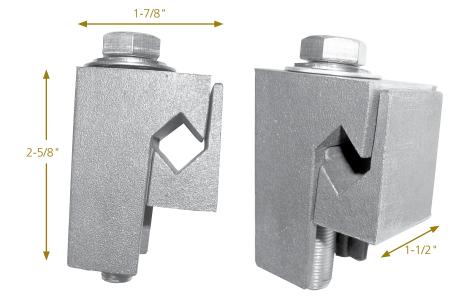
BONDING & GROUNDING

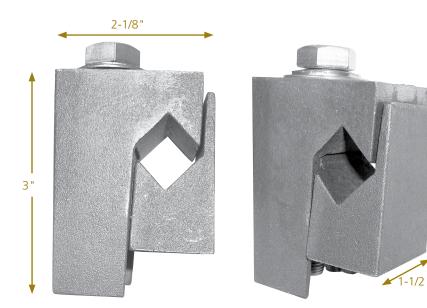
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## **BRONZE VISE TYPE CONNECTORS (CONTINUED)**

Accommodates two conductors, 1/0 str-350 kcmil, .325"-.710" (8.27-18.07mm). 1/2-20 bolt, 3/4" hex head. Stainless steel bolt and Belleville washer.

Ordering information **EM-2380** 





Accommodates two conductors, 4/0 str-500 kcmil, .522"-.813" (13.28-20.69mm). 1/2-20 bolt, 3/4" hex head. Stainless steel bolt and Belleville washer.

Ordering information EM-2381



### **BRONZE VISE TYPE CONNECTORS (CONTINUED)**

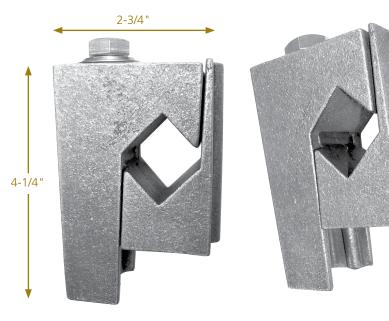
Accommodates two conductors, 250–750 kcmil, .550"–998" (14.00–25.40mm). 1/2–20 bolt, 3/4" hex head. Stainless steel bolt and Belleville washer.

Ordering information **EM-2382** 



1-3/4"





Accommodates two conductors, 400–1000 kcmil, .726"–1.152" (18.48–29.32mm) 1/2–20 bolt, 3/4" hex head. Stainless steel bolt and Belleville washer.

Ordering information EM-2383

| At a glance |                                    |  |  |  |
|-------------|------------------------------------|--|--|--|
| PART NUMBER | ACCOMMODATES                       |  |  |  |
| EM-2380     | 2 conductors, #1/0 solid—350 kcmil |  |  |  |
| EM-2381     | 2 conductors, #4/0 str—500 kcmil   |  |  |  |
| EM-2382     | 2 conductors, 250–750 kcmil        |  |  |  |
| EM-2383     | 2 conductors, 400–1000 kcmil       |  |  |  |



### **BRONZE VISE TYPE CONNECTORS (CONTINUED)**

Ordering information

#### EM-0174P

Connector for #1/0 str. and #6 AWG or plain bonding ribbon. Standard packaging: 100/bx, 14 lb/bx.

#### EM-0174PBV

With shear-off zinc cap and anti-loosening device.



#### EM-2360

Round body clamp for:

- Single or multiple #6 AWG wires solid or stranded
- #6 AWG to #10 or #12 AWG
- From single 2-pair BSW metallic shield, to three 2-pair BSW metallic shields

#### EM-0164

Connector for plain bonding ribbon to plain bonding ribbon, or ribbon to #6 AWG solid ground wire *Standard packaging: 5/bg, 100/bx, 12 lb/bx.* 

EM-0164P

Tin plated

#### EM-0164BV

With shear-off zinc cap and anti-loosening device

#### EM-GC-268

Bronze Grounding Connector, for conductor to 1/4"-5/8" ground rod. #6 solid AWG-#10 solid AWG

#### EM-GC-268-SS

Same as EM-GC-268 (above), with stainless steel bolt, non-breakaway head, and washer

#### At a glance . . .















### **C CONNECTOR**

Ordering information

#### EM-0167

Tin-plated bronze connector with teeth for piercing the messenger insulation of Figure 8 cable. For messenger diameters of .146"–.312" (3.71–7.94mm) and ground conductor range of .146"–.312". Available with stainless steel or bronze bolt. *Standard packaging: 100/bx, 23 lb/bx.* 

#### EM-0167BV

With shear-off zinc cap and anti-loosening device



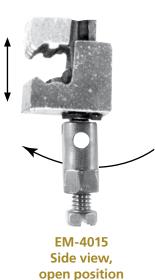


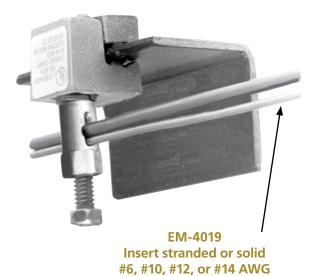




# <u>Clamps – Trailer I-Beam Clamps</u>

### **TRAILER I-BEAM CLAMPS**





A tin-plated bronze casting with teeth; brass hex thru-bolt with hole, brass set screw, and bronze lockwasher.

#### Applications

- Grounding to metal buildings, bridges
- Provides connection for bonding and grounding wires, ribbons, and braidto I-beams
- Also used as strand clamp (electrical)

#### Features

- Teeth penetrate through oxidation or undercoating for positive ground.
- Applied with the standard terminal wrench
- Tin plate reduces corrosion
- Silicon bronze for greater strength and conductivity
- Perforated bonding ribbon or braid with eyelets attaches under set screw.



# **<u>Clamps – Trailer I-Beam Clamps</u>**

## TRAILER I-BEAM CLAMPS (CONTINUED)

Ordering information :



EM-4014 – With ground wire hole and short slot, enabling connection of #6 and #10 AWG simultaneously, as well as #6-#14 AWG individually. Standard packaging: 10/bg, 100/bx, 23 lb/bx





EM-4015 – With plain round ground wire hole to accept #6-#14 AWG. Standard packaging: 10/bg, 100/bx, 23 lb/bx

EM-4015C – Larger diameter cross hole accommodates stranded #6 AWG ground wire, .228 diameter, and down to #14 AWG.

EM-4018 – With ground wire hole for #6-#14 AWG, and long slot to also connect plain bond ribbon. Standard packaging: 10/bg, 100/bx, 24 lb/bx









**BONDING 8** 

EM-4019 – Hole and slot combinations accept ribbon, two wires simultaneously, or #6-#14 AWG individually. Standard packaging: 10/bg, 100/bx, 24 lb/bx



At a glance . . . PART NUMBER ACCOMMODATES **DISTINGUISHING FEATURES** LISTING EM-4014 #6 and #10 AWG simultaneously hole and short slot UL, CSA #6-#14 AWG individually EM-4015 UL, CSA #6--#14 AWG EM-4015C #6 stranded—#14 AWG larger hole EM-4018 Ground wire and plain bond ribbon hole and long slot UL, CSA #6--#14 AWG EM-4019 Ground wire, bond ribbon, hole, long and short slots UL, CSA

and #6-#14 AWG individually

For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com

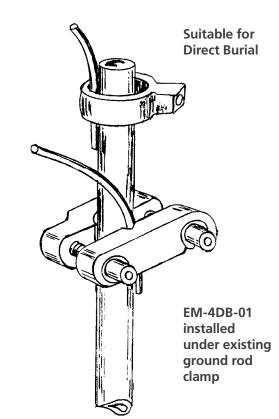
HUBBELL

# **GROUND ROD CLAMPS AND CLOSURE**

A cast silicon bronze clamp for use on 1/2"-5/8" ground rods.

#### Features

- Swivel design (EM-4DBs) or removable bolt designs allow installation anywhere on a ground rod, above or below an existing clamp.
- One size fits all variations of 1/2"-5/8" copper clad and galvanized ground rods.
- Foolproof installation—optional torque shear heads breakaway at a predetermined torque to prevent over- or undertorquing.
- No loosening of bolts—nylon lock mechanism maintains constant tension.
- Quick installation—"V"-shaped halves keep wire automatically centered on ground rod.
- Low resistance—wire comes in direct contact with ground rod, making best possible connection.
- No reversing necessary—design fits tightly on small size
- 1/2" rods, does not bottom out.
- Optional grease-filled closure helps prevent corrosion.
- Accommodates #12–#6 AWG solid ground wires.



| At a glance , , , |             |            |                                                               |            |  |  |
|-------------------|-------------|------------|---------------------------------------------------------------|------------|--|--|
| PART NUMBER       | GROUND ROD  | WIRE SIZE  | DISTINGUISHING FEATURE                                        | LISTING    |  |  |
| EM-4DB            | 5⁄8" & 1⁄2" | #12—6 sol. | Swivel unit                                                   | cULus, RUS |  |  |
| EM-4DB-01         | 5⁄8" & 1⁄2" | #12—6 sol. | Swivel unit, Torque shear heads, Anti-loosening               | cULus, RUS |  |  |
| EM-4DB-02         | 5⁄8" & 1⁄2" | #12—6 sol. | Swivel unit, 1/2" torque shear heads, Anti-loosening          | cULus, RUS |  |  |
| EM-4DB-02NB       | 5⁄8" & 1⁄2" | #12—6 sol. | Swivel unit, 1/2" hex heads                                   |            |  |  |
| EM-4DBBR          | 5⁄8" & 1⁄2" | #12—6 sol. | Swivel unit, Torque shear heads,<br>Anti-loosening, Removable | cULus, RUS |  |  |

BONDING &



# **GROUND ROD CLAMPS AND CLOSURE (CONTINUED)**

Ordering information :

#### EM-4DB

- 1/2"–5/8" ground rod clamp
- swivel unit
- regular 7/16" hex bolts
- non-breakaway
- no anti-loosening device
- accommodates #12–#6 AWG ground wires

accommodates #12-#6 AWG ground wires

Standard packaging: 10/bg, 100/bx, 40 lb/bx

1/2"-5/8" ground rod clamp

Standard packaging: 10/bg, 100/bx, 41 lb/bx

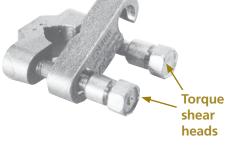
7/16" torque shear heads

anti-loosening device











EM-4DB-01

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swivel unit

- 1/2"-5/8" ground rod clamp
- swivel unit
- 1/2" torque shear heads
- anti-loosening device
- accommodates #12–#6 AWG ground wires
- add suffix -NB for no torque shear heads, no antiloosening device

Standard packaging: 10/bg, 100/bx, 42 lb/bx

## EM-4DBBR

- 1/2"–5/8" ground rod clamp
- swivel unit
- 7/16" torque shear heads (later removable)
- anti-loosening device
- accommodates #12–#6 AWG ground wires
- Standard packaging: 10/bg, 100/bx, 35 lb/bx











# **GROUND ROD CLAMP WITH CONNECTOR FOR LOCATING WIRE**

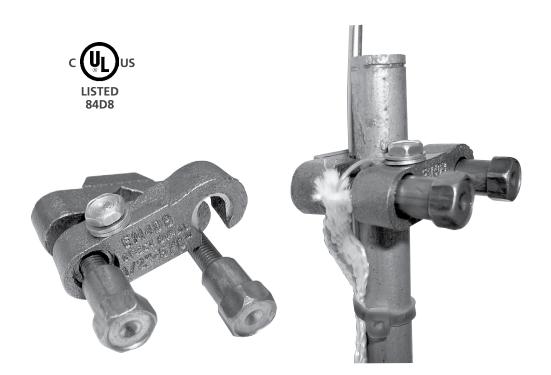
This clamp is perfect for FTTH. The swivel-open design allows placement under the existing power utility ground rod clamp, which is today's first choice. Made from silicon bronze castings, it is UL listed and direct buriable.

The separate connection for Mule Tape Locating Wire is convenient to disconnect and reconnect, for locating safely while maintaining a continuous ground.

#### EM-4DB-V22

- 1/2"-5/8" ground rod clamp
- swivel unit
- 7/16" torque shear heads (later removable)
- anti-loosening device
- accommodates #10–#6 AWG, plus #22 AWG ground wires

Standard packaging: 10/bg, 100/bx, 35 lb/bx



BONDING & GROUNDING



## **GROUND ROD CLAMPS**

Cast bronze, accommodate #12-1/0 AWG (unless otherwise noted).

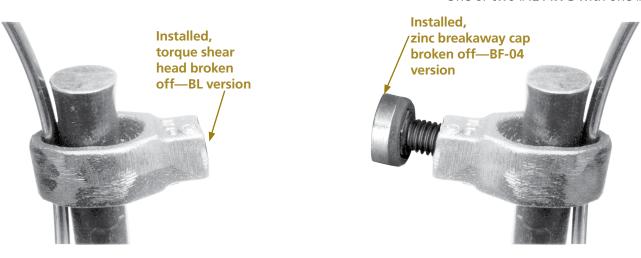
#### Features

- Two diameters allow for placement before or after the ground rod has been driven. (A peened-over ground rod is passed through the larger opening and secured in the smaller diameter.)
- Optional locking device prevents the bolt from loosening.
- Bronze material keeps corrosion to a minimum.
- Optional breakaway features provide for foolproof installation.

Clamps marked UL listed, and with a ground wire range of #12–1/0 solid or stranded, are listed as suitable for direct burial and the following ground wire combinations:

Single wire - #12 AWG-1/0 AWG Two like wires - #6, #10, #12 AWG Three like wires - #6, #10, #12 AWG

#### Unlike wire combinations: Two #2 AWG with one #6 AWG One or two #10 AWG with one #12 AWG One or two #12 AWG with one #10 AWG



| At a glance  |             |           |                                                          |            |  |
|--------------|-------------|-----------|----------------------------------------------------------|------------|--|
| PART NUMBER  | GROUND ROD  | WIRE SIZE | DISTINGUISHING FEATURES                                  | LISTINGS   |  |
| EM-1DB       | 1⁄2"        | #12-1/0   | None—Standard clamp                                      | cULus, RUS |  |
| EM-1DB-BL    | 1⁄2"        | #12—1/0   | Torque shear head, Nonremovable                          | cULus, RUS |  |
| EM-1DB-BF-04 | 1⁄2"        | #12—1/0   | Torque shear head, Removable                             | RUS        |  |
| EM-2DB-01    | 5⁄8"        | #12-1/0   | None—Standard clamp                                      | cULus, RUS |  |
| EM-2DB       | 5⁄8"        | #12—1/0   | Anti-loosening                                           | cULus, RUS |  |
| EM-2DB-BL-01 | 5⁄8"        | #12-1/0   | Anti-loosening, Torque shear head,<br>Nonremovable       | cULus, RUS |  |
| EM-2DB-BF-03 | 5⁄8"        | #12-1/0   | Anti-loosening, Breakaway cap, Removable                 | cULus      |  |
| EM-2DB-BF-04 | 5⁄8"        | #12—1/0   | Anti-loosening, Breakaway cap, Removable,<br>Longer bolt | cULus, RUS |  |
| EM-6DB       | 5/8" & 1/2" | #12—2     | Breakaway cap, Anti-loosening, Removable                 | cULus      |  |
| EM-6DBP      | 5/8" & 1/2" | #12—2     | None—Standard clamp                                      | cULus      |  |
| EM-58ZY      | 5⁄8"        | #6—10     | Plated zinc die-cast alloy                               | None       |  |

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# **GROUND ROD CLAMP (CONTINUED)**

Ordering information

#### EM-1DB

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- 1/2" ground rod clamp •
- no breakaway •
- no anti-loosening •
- accommodates #12-1/0 AWG

Standard packaging: 10/bg, 100/bx, 16 lb/bx.



RUS

Listed



# **GROUND ROD CLAMP (CONTINUED)**

Ordering information

## EM-2DB-BL-01

- 5/8" ground rod clamp
- torque shear head at proper installation torque (nonremovable)
- anti-loosening device
- accommodates #12–1/0 AWG

Standard packaging: 10/bg, 100/bx, 19 lb/bx.

#### EM-2DB-BF-04

- 5/8" ground rod clamp
- long bolt (1")
- zinc breakaway cap at proper installation torque (removable with adjustable wrench)
- anti-loosening device
- accommodates #12–1/0 AWG
- Standard packaging: 10/bg, 100/bx, 19 lb/bx.

#### EM-6DB

- 5/8" and 1/2" ground rod clamp
- 1" long bolt
- anti-loosening device
- zinc breakaway cap at proper installation torque (removable with adjustable wrench).
- accommodates #12–2 AWG solid or stranded.

## EM-6DBP

- 5⁄8" and 1⁄2" ground rod clamp
- 1" long bolt
- accommodates #12–2 AWG.



RUS

Listed

LISTED

84D8

RUS

Listed

LISTED

84D8

LISTED

84D8

# 5⁄8" GROUND ROD CLAMP

Plated zinc die cast alloy for mechanical strength and electrical conductivity. Accommodates #6-#10 AWG wire.

Ordering information **EM-58ZY** 

For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com



Torque

shear

head

Zinc

breakaway

cap

# TWO-BOLT GROUND ROD CLAMPS FOR GROUND RINGS

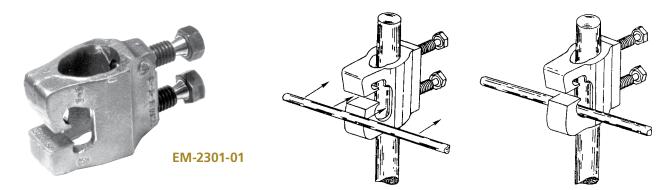
Heavy-duty cast silicon bronze body, headed silicon bronze clamping bolts, and nylon locking collars.

#### **Applications**

- Ground rings for equipment huts
- Any installation where added security of double bolts is necessary
- 5/8" ground rods

#### **Features**

- Can accept ground wires from #10-1/0 AWG
- Available with a front "J" slot to accept #1, #2, or #6 AWG in a continuous "ring" around an equipment • hut or building
- Available with pre-set torgue shear heads for a pre-determined installation torgue and to • prevent vandalism
- Nylon locking collar prevents inadvertent loosening of bolts
- Uncomplicated design, craftfriendly, low-cost product



Ordering information

EM-2301-01 – 5/8" ground rod clamp, two-bolt type with "J" slot, torque shear heads (150 inch/lbs.), nylon lock collars. Connects #1, #2, or #6 AWG in the "J" slot. Standard packaging: 5/bg, 25/bx, 14 lb/bx.

LISTED 84D8

EM-2301-01NB – Same as above, with no torque shear heads.



EM-2301.75 – Same as EM-2301-01, but accommodates 3/4" ground rod.

| At a glance  |            |           |                         |            |  |
|--------------|------------|-----------|-------------------------|------------|--|
| PART NUMBER  | GROUND ROD | WIRE SIZE | DISTINGUISHING FEATURES | LISTINGS   |  |
| EM-2301-01   | 5⁄8"       | #1, 2, 6  | Torque shear heads      | cULus, CSA |  |
| EM-2301-01NB | 5⁄8"       | #1, 2, 6  | None                    | CSA        |  |
| EM-2301.75   | 3⁄4"       | #12-1/0   | Torque shear heads      | CSA        |  |



## **TWO-BOLT GROUND ROD CLAMPS FOR GROUND RINGS (CONTINUED)**

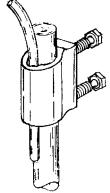


Ordering information

**EM-2303** –5/8" ground rod clamp, two-bolt type with solid body. Torque shear heads at proper installation torque. Connects #12–1/0 AWG solid or stranded parallel to rod. *Standard packaging: 5/bg, 25/bx, 12 lb/bx.* 

**EM-2303-NB** – Same as above, with no torque shear heads.

**EM-2303.75.02** – Connects #2/0 to 1/2" or 5/8" rod. Torque shear heads and anti-loosening device.



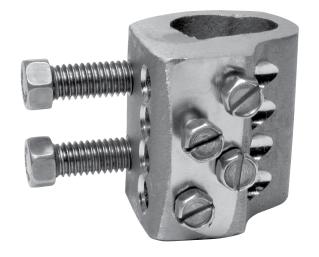
| At a glance   |              |           |                                        |          |  |
|---------------|--------------|-----------|----------------------------------------|----------|--|
| PART NUMBER   | GROUND ROD   | WIRE SIZE | DISTINGUISHING FEATURES                | LISTINGS |  |
| EM-2303       | 5⁄8"         | #12-1/0   | Torque shear heads                     | cULus    |  |
| EM-2303-NB    | 5⁄8"         | #12-1/0   | None                                   | None     |  |
| EM-2303.75.02 | 5⁄8" or 1⁄2" | #2/0      | Torque shear heads, anti-loosening     | None     |  |
| EM-2303-C     | 5⁄8"         | #12-1/0   | Torque shear heads, gel-filled closure | None     |  |
| EM-23-C       |              |           | Gel-filled closure only                | None     |  |

For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com



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## **HEAVY DUTY GROUND ROD CLAMP**





#### Description

A cast bronze two-bolt ground rod clamp for 5/8" or 3/4" diameter rods that will connect one or a multiple of ground wires. Accepts #2 AWG-#10 AWG.

#### Features

- Cast bronze for superior strength, electrical conductivity, and corrosion resistance.
- Ground wires are captured individually to simplify isolation and location.
- Enlarged opening allows for the "mushroomed" head of a ground rod to pass through without interference.

#### Applications

Remote sites, central offices, repeater housings, substations — anywhere a single or multiple of ground wires are used.

#### Ordering information

EM-2306SIET – HD bronze two-bolt clamp for 5/8"–3/4" ground rod.

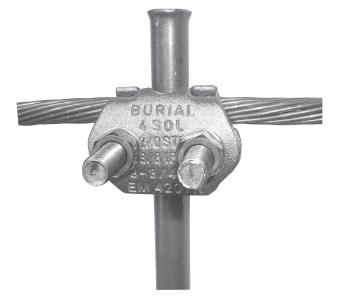




# **HEAVY DUTY GROUND ROD CLAMP (CONTINUED)**

#### Features

- For parallel or 90° copper cable connections
- Acceptable for direct burial
- Installs with one wrench
- Silicon bronze hardware
- Tube IPS 3/8
- 5/8"-3/4" ground rod size
- Cable size #4-2/0 str (.126-.414)
- Installation torque 240 in./lb.







Ordering information

EM-420TR



# **Ground Clamps**

## **UNIVERSAL GROUND CLAMPS**

A 12" or 7" copper strip with a brass bolt assembly.

#### Applications

Connecting ground wires to water pipes, ground rods, and power masts.

#### Features

- Fits around any size water pipe, ground rod, or power mast
- Works with all the materials commonly used in grounding electrodes, i.e. copper water pipes, galvanized pipes, copper clad ground rods, plain steel ground rods
- Connects all the ground wire sizes from #14 AWG to solid #6 Flat bottom on dome-shaped washer will not nick small gauge wire.
- Can be daisy-chained to be able to fit around very large diameter pipes
- Ground wires can be added or changed without removing ground clamp.
- Tin-plated version available to be used with aluminum power masts
- EM-5510 and EM-5517 versions have two extra flat washers so that small gauge (#10, #12, #14 AWG) wires
  can be connected between washers while #6 solid bond wire is captured in through hole. Therefore, one
  ground clamp can be used where two were necessary before.

Ordering information

EM-5500 – 12" long strap connects #6-#14 AWG, fits all grounding electrodes 3/8"-31/2" OD. Standard packaging: 10/bg, 100/bx, 15 lb/bx.

EM-5507 – 7" version connects #6–#14 AWG, fits all grounding electrodes 3/8"–2" OD. Standard packaging: 10/bg, 100/bx, 13 lb/bx. Add suffix -T for tin-plated version.

#### Ordering information

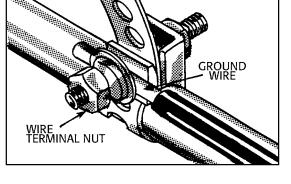
**EM-5510** – 12" version, connects #6–#14 AWG wires for grounding electrodes from 3/8" to 31/2" OD. Clamp has two extra flat washers to connect both station ground wires and bond wire simultaneously. *Standard packaging: 10/bg, 100/bx, 15 lb/bx.* 

EM-5517 – 7" version, same as above, for grounding electrodes from 3/8" to 2" OD. Standard packaging: 10/bg, 100/bx, 13 lb/bx.

Add suffix -T for tin-plated version.



| At a glance |                         |            |        |                         |          |  |
|-------------|-------------------------|------------|--------|-------------------------|----------|--|
| PART NUMBER | GROUNDING<br>ELECTRODES | WIRE SIZE  | LENGTH | DISTINGUISHING FEATURES | LISTINGS |  |
| EM-5500     | 3⁄8"-3-1⁄2" OD          | #6—#14 AWG | 12"    |                         | CSA, UL  |  |
| EM-5507     | 3⁄8"-2" OD              | #6—#14 AWG | 7"     |                         | CSA, UL  |  |
| EM-5510     | 3⁄8" to 3-1⁄2" OD       | #6—#14 AWG | 12"    | extra flat washers      | UL       |  |
| EM-5517     | 3⁄8" to 2" OD           | #6—#14 AWG | 7"     | extra flat washers      | UL       |  |





# **Ground Clamps**

# UNIVERSAL GROUND CLAMP WITH CLIP NUT



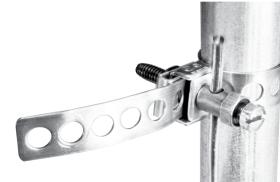
A perforated copper strap with a threaded clip and bronze bolt assembly. Offered in lengths of 7, 9, 12, or 14 inches.

#### Application

Connecting ground wires to water pipes, ground rods, and power masts.

#### Features

- Fits around any size water pipe, ground rod, or power mast.
- Works with all the materials commonly used for grounding electrodes, i.e., copper water pipes, galvanized pipes, copper clad ground rods, plain steel ground rods.
- Connects all the ground wire sizes from #14–#6 AWG solid or stranded.
- Can be daisy-chained to be able to fit around very large diameter pipes.
- Ground wires can be added or changed without removing ground clamp.
- Tin-plated version available to be used with aluminum power masts.
- Clamp is installed and wire is attached from the same side, making application easier in confined spaces.
- Available with a slotted ground wire hole to accommodate two wires simultaneously.
- Available as "suitable for direct burial."



Ordering information

**EM-5907** 7-inch strap, for grounding electrodes 3/8"–2" diameter. *Standard packaging: 10/bg, 100/bx, 13 lb/bx.* 

**EM-5907-2** 7-inch strap, for grounding electrodes 3/8" – 2" diameter, larger hole accommodates #2–14 AWG. **EM-5909 9**-inch strap, for grounding electrodes 3/8"–2-3/4" diameter.

Standard packaging: 10/bg, 100/bx, 15 lb/bx.

**EM-5912** 12-inch strap, for grounding electrodes 3/8"-31/2" diameter.

Standard packaging: 10/bg, 100/bx, 17 lb/bx. EM-5914 14-inch strap, for grounding electrodes 3/8"-4" diameter.

Standard packaging: 10/bg, 100/bx, 18 lb/bx. EM-5924 24-inch strap, for grounding electrodes 3/8"–6.5" diameter.

Add suffix -T for tin-plated version.

#### Suffix

-S added to any of the above part numbers denotes a slotted ground wire hole to accommodate two ground wires simultaneously (#6 AWG with a #10 AWG).



| At a giance, , , |                         |            |        |                         |          |  |
|------------------|-------------------------|------------|--------|-------------------------|----------|--|
| PART NUMBER      | GROUNDING<br>ELECTRODES | WIRE SIZE  | LENGTH | DISTINGUISHING FEATURES | LISTINGS |  |
| EM-5907          | 3⁄8"-2" 0D              | #6—#14 AWG | 7"     |                         | cULus    |  |
| EM-5907-2        | 3⁄8"-2" OD              | #2#14 AWG  | 7"     | larger ground wire hole | cULus    |  |
| EM-5909          | 3⁄8"-2-3⁄4" OD          | #6—#14 AWG | 9"     |                         | cULus    |  |
| EM-5912          | 3⁄8"-3-1⁄2" OD          | #6—#14 AWG | 12"    |                         | cULus    |  |
| EM-5914          | 3⁄8"-4" OD              | #6—#14 AWG | 14"    |                         | cULus    |  |
| EM-5924          | 3⁄8"-6.5" OD            | #6—#14 AWG | 24"    |                         | cULus    |  |

For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com



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# **Ground Clamps**

## **UNIVERSAL GROUND CLAMPS**

#### For ground wire sizes up to #2 stranded AWG

Perforated, tin-plated copper straps with threaded clip and bronze bolt assembly. They are available with a smooth strap, or with teeth to bite into the grounding electrode.

#### Application

Connecting ground wires to water pipes, ground rods, power masts, and conduits.

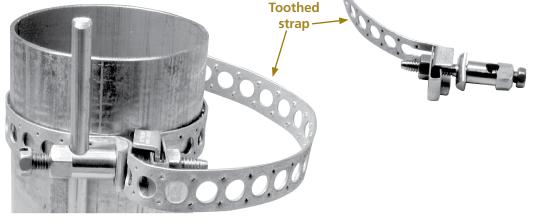
#### Features

- Fits around any size water pipe, ground rod, or power mast.
- Works with all the materials commonly used for grounding electrodes, i.e., copper water pipes, galvanized pipes, copper clad ground rods, plain steel ground rods, conduits on riser poles.
- Connects all the ground wire sizes from #6 solid AWG-#2 stranded AWG. For other conductor ranges, please call us at 860/379-8515.
- Ground wires can be added or changed without removing ground clamp.
- Clamp is installed and wire is attached from the same side, making application easier in confined spaces.
- Toothed version bites through corrosion and paint for better electrical contact.

## Ordering information

**EM-59XX.310** – Universal ground clamp with clip nut. "XX" in part number denotes strap length.

#### Add suffix -PT for toothed version.



For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com



# **Clamps**

## **CLAMP FOR PIPE AND TUBING**

Plated zinc die cast alloy for mechanical strength and electrical conductivity. 1/2"–1" diameter. #6 AWG–#2 AWG wires.

Ordering information

EM-2830Z



## **DREWES METER BOX CLAMP**

With toothed strap and clip nut, designed to attach to the hub of an electrical meter box.

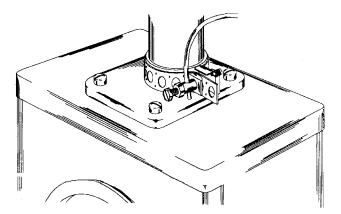
#### Features

- Will not damage the factory-painted surface of meter box
- Will not collapse the box because it mounts on the strongest part of the box, the hub
- Neat low profile, inconspicuous appearance
- Does not inhibit entry to meter box
- Accommodates any cylindrical hub mounting
- Perforations on strap bite through corrosion and paint for better electrical contact.
- Accommodates ground wires #14–#6 AWG
- Simple two-piece construction for easy installation
- A copper and brass material for high conductivity
- Tin plated for corrosion resistance

## Ordering information

EM-5907PT – 7" strap, #12–#16 AWG, 1/2"–2" OD Standard packaging: 10/bg, 100/bx, 14 lb/bx. EM-5912PT – 12" strap, #12–#6 AWG, 1/2"–31/2" OD Standard packaging: 10/bg, 100/bx, 17 lb/bx. EM-59XXPT – XX = length of strap (1"–120"), #12–#6 AWG, 1/2"–38" OD







# **Meter Box Clamps**

# METER BOX CLAMPS WITH BOTTOM-TIGHTENING GROOVE CONTACT POINT

## Description

Meter box bonding and grounding connector.

## Application

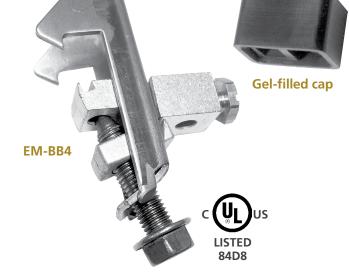
Bonding and grounding telco and CATV to power ground.

## Features

- Stainless steel to reduce corrosion
- Applies with a standard terminal wrench—no special tools
- Gel-filled cap prevents corrosion on the locating points.
- UL listed for public safety
- Easy, foolproof installation
- Mounts on the side—does not interfere with the cover or collapse the sides
- Small and inconspicuous
- Accommodates #6–#14 AWG solid or stranded ground wire







Ordering information

**EM-BB4-NP** – Meter Box Clamp, silicon bronze bolt, bottom-tightening groove contact point, alternate cap (not gelfilled) to cover the prongs

**EM-BB4** – Meter Box Clamp, silicon bronze bolt, bottomtightening groove contact point, gel-filled cap

> For more meter box clamps, see the IntersystEM-Bonding Terminal section, starting on page G94.



# **Meter Box Clamps**

# METER BOX CLAMPS WITH TOP-TIGHTENING GROOVE CONTACT POINT

## Description

Meter box bonding and grounding connector

## Application

Bonding and grounding telco and CATV to power ground.

## Features

- Stainless steel and copper alloy to reduce corrosion.
- Applies with a standard terminal wrench/nut runner—no special tools.
- Gel-filled cap helps prevent corrosion at the piercing points.
- Easy, foolproof installation.
- Mounts on the side—does not interfere with the cover or collapse the sides.
- Small and inconspicuous.
- Accommodates #6–#14 AWG solid or stranded ground wire.
- Makes electrical contact under the dripcap of the box, on bare, unpainted metal.
- Available with an extra-long body, to accommodate meter boxes with an extended lip on the top cover.





Ordering information

**EM-MB6** – Meter Box Clampwith top-tightening groove contact point and gel-filled cap

**EM-MB6-NP** – Meter Box Clamp with toptightening groove contact point and alternate cap (not gel-filled) to cover the prongs and bottom.

Add suffix -XL for extra-long body.

For more meter box clamps, see the IntersystEM-Bonding Terminal section, starting on page G94.

For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com





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# **Meter Box Clamps**

# METER BOX CLAMPS WITH TOP-TIGHTENING SPADE WEDGE CONTACT POINT

## Description

Meter box bonding and grounding connector

## Application

Bonding and grounding telco and CATV to power ground.

#### Features

- Stainless steel and copper alloy construction to reduce corrosion
- Applies with a standard terminal wrench/nut runner— no special tools
- Gel-filled cap helps prevent corrosion at the piercing points.
- Easy, foolproof installation
- Mounts on the side—does not interfere with the cover or collapse the sides.
- Small and inconspicuous
- Accommodates #6–#14 AWG solid or stranded ground wire
- Makes electrical contact under the dripcap of the box, on bare, unpainted metal
   EM-MB5-NP
- Available with an extralong body, to accommodate meter boxes with an extended lip on the top cover

EM-MB5-XL

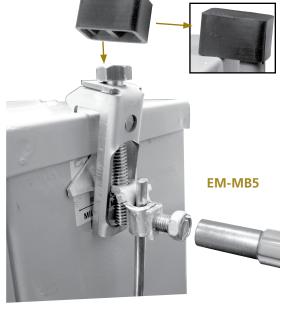








**Gel-filled cap** 



## Ordering information

**EM-MB5** – Meter Box Clamp with toptightening spade wedge contact point and gel-filled cap

**EM-MB5-NP** – Meter Box Clamp with top-tightening spade wedge contact point and alternate caps (not gel-filled) to cover the prongs and bottom **EM-MB5-H-F** – Meter Box Clamp with top-tightening narrow spade wedge contact point and flat top and bottom (no need for caps)

Add suffix -XL for extra-long body.

For more meter box clamps, see the IntersystEM-Bonding Terminal section, starting on page G94.





# **IntersystEM-Bonding**

# METER BOX GROUND CLAMP FOR INTERSYSTEM-BONDING WITH TOP-TIGHTENING SPADE WEDGE CONTACT POINT, THREE GROUND WIRE CONNECTION POINTS

## Description

Meter box bonding and grounding connector for intersystEM-bonding

## Application

Bonding and grounding telco and CATV to power ground.

#### Features

- Stainless steel and copper alloy construction to reduce corrosion
- Applies with a standard terminal wrench/nut runner—no special tools
- Gel-filled cap helps prevent corrosion at the piercing points
- Easy, foolproof installation
- Mounts on the side—does not interfere with the cover or collapse the sides.
- Accommodates #6–#14 AWG solid or stranded ground wire
- Makes electrical contact under the dripcap of the box, on bare, unpainted metal.
- Available with an extra-long body, to accommodate meter boxes with an extended lip on the top cover

## NEC® Section 250.94 Requirements

- An intersystEM-bonding termination for connecting intersystEM-bonding and grounding connectors required for other systems shall be provided external to enclosures at the service equipment and at the disconnecting means for any additional buildings or structures.
- The intersystEM-bonding termination device shall not interfere with opening a service or metering equipment enclosure.
- The intersystEM-bonding termination shall have the capacity for connection of not less than three intersystEM-bonding conductors.



## Ordering information

EM-MB5-3 – Meter Box Ground Clamp

Add suffix -NP for alternate caps (not gel-filled) to cover the prongs and bottom. Add suffix -XL for extra-long body. Add suffix -H for narrow wedge. Add suffix -F for flat points (top and bottom).



# INTERSYSTEM-BONDING TERMINAL SERVICE DISCONNECT BOX CONNECTOR







**NEC® Section 250.94 Requirements** 

- An intersystEM-bonding termination for connecting intersystEM-bonding and grounding connectors required for other systems shall be provided external to enclosures at the service equipment and at the disconnecting means for any additional buildings or structures.
- The intersystEM-bonding termination device shall not interfere with opening a service or metering equipment enclosure.
- The intersystEM-bonding termination shall have the capacity for connection of not less than three intersystEM-bonding conductors.

## Features

- Can be used on galvanized steel or powder-coated steel
- Becomes first choice for telephone, cable TV, or broadband
- The service disconnect box connector is to be applied only to either side of the box, including both top and bottom of the box, never to the front.
- Position the connector at a side of the service disconnect box. Insert the pointed part of the clamp (without the bolt) between the weld points and tap the wedge into place, using a small hammer.
- Insert the bolt into the clamp threads and turn clockwise. Tighten to 20 in-lb.
- 4. Secure ground wire in appropriate hole.
- 5. This device can be used with solid and stranded 6–14 AWG copper ground conductors.

## Ordering information

EM-SDS-SUB-3 – Service Disconnect Box Connector



# **IntersystEM-Bonding**

# SERVICE DISCONNECT BOX GROUND CONNECTOR FOR INTERSYSTEM-BONDING





#### Description

A ground connector that mounts to the front of the service disconnect cabinet. Provides connection holes for three ground wires.

#### Application

Provides convenient access to ground for telephone systems, cable TV, or broadband. One location, all systEM-grounds commonly connected.

#### Features

**30NDING 8** 

- Meets 2008 NEC (see left)
- Becomes first choice for grounding when installed
- Easily installed
- Remove one cover screw, replace with new screw and connector body.
- Accommodates #6–#14 AWG

#### Ordering information

EM-SDF-B-3 – Service disconnect box ground connector







For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com

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# **Underground Hardware**

# **CABLE RACK BOND CLAMPS**

A mechanically galvanized steel clamp assembly.

## Application

For use when bonding cable racks to a ground point common with other hardware to aid in corrosion prevention.

## Features

- For use with all standard cable racks
- Works with a variety of conductors, i.e., solid or stranded #6AWG, bonding ribbons, and round or flat braid
- Eliminates "sandwiching" the conductor between two flatwashers
- Can be used with one conductor, or to connect two conductors
- Easily installed by hanging the clamp in a hook hole, inserting the conductor(s) and tightening
- Mechanically zinc plated for corrosion resistance

## Ordering information :

**EM-3777** – for bonding ribbon or #6 AWG wire to cable racking *Standard packaging: 10/bg, 100/bx, 19 lb/bx* 

**EM-3778** – for #1 & #2 AWG wire Standard packaging: 100/bx, 25 lb/bx

**EM-3779** – for Unistrut P16F cable entrance facilities, #1 & #2 AWG wire *Standard packaging: 100/bx, 18 lb/bx* 

**EM-3779-1** – for Unistrut P21H cable entrance facilities, 2-1/4" and 1-3/4"; flat back plate, with extra tang to keep back plate from slipping out of place *Standard packaging: 100/bx, 18 lb/bx* 

For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com











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# **Underground Hardware**

## **CABLE RACK CLAMPS**

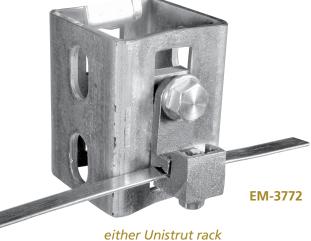
For T-slotted underground manhole racks and Unistrut P16F and P21H racks (both clamps fit all racks). For ground wires #6 through #1/0 AWG, 3/8" plain bonding ribbon, and perforated bonding ribbon.

#### Ordering information

**EM-3771** – Cable Rack Clamp with side-mounted 5/16" bolt for clamping conductor.

**EM-3772** – Cable Rack Clamp with bottommounted 5/16" bolt for clamping conductor. Add suffix –T for tin plating.



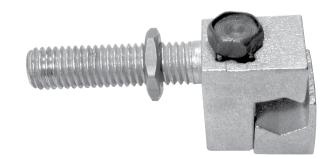


## **CABLE RACK BOND CLAMP**

For ground wires #3 AWG solid through #4/0 AWG stranded. Tinned.

Ordering information

EM-3773 – Cable Rack Bond Clamp



For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com



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# **B** Bonds

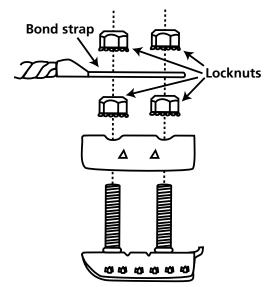
# **B BOND CLAMPS – DOUBLE STUD**

#### **Features**

- Tin-plated bronze and copper construction for • high conductivity
- 3/8" nuts fit standard terminal wrench.
- Piercings in bottom plate penetrate Mylar lining • on inner surface of shield.
- Can be used with or without punching • holes in sheath
- When cable shield is tabbed and punched, one • size works on all cables.
- Two studs prevent loosening of connections due • to counterclockwise movement of bond strap.
- Two studs offer lower resistance and higher • current carrying capacity. This enables use of a smaller size shield connector.
- Two studs offer higher pullout strength.

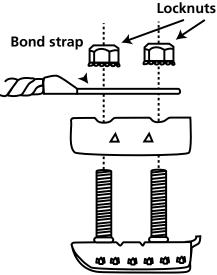






Ordering information

Double stud with double nut per stud EM-2BBM - up to .5" cable EM-2BB1 - .5"-.8" cable EM-2BB2 - .8"-1.6" cable EM-2BB3 - 1.6"-up For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com



Ordering information

Double stud with single nut per stud EM-1BBM – up to .5" cable EM-1BB1 – .5"–.8" cable EM-1BB2 – .8"–1.6" cable **EM-1BB3** – 1.6"–up

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# **B** Bonds

# **B BOND CLAMPS – SINGLE STUD**

#### Features

- Tin-plated bronze and copper construction for high conductivity
- 3/8" nuts fit standard terminal wrench.
- Piercings in bottom plate penetrate Mylar lining on inner surface of shield.
- Can be used with or without punching holes in sheath
- When cable shield is tabbed and punched, one size works on all cables.



**Bond strap** 



Clamps on these two pages are available with torque shear head nuts, which break off at proper installation torque. Add suffix **-TSH**.



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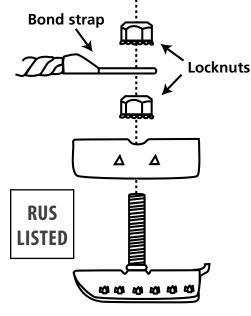


For optional flat plastic pair saver, add suffix **-P.** 

To order the flat plastic pair saver separately, use part number **EM-PSAVER.** 



For optional pair saver molded to bottom plate, add suffix **-MP**.



## Ordering information

Single stud with double nut per stud EM-20BM – up to .5" cable. Standard packaging: 1/bg, 10/pkg, 500/bx, 22 lb/bx EM-20B1 – .5"–.8" cable. Standard packaging: 1/bg, 10/pkg, 500/bx, 23 lb/bx EM-20B2 – .8"–1.6" cable. Standard packaging: 1/bg, 10/pkg, 500/bx, 28 lb/bx EM-20B3 – 1.6"–up. Standard packaging: 1/bg, 10/pkg, 500/bx, 27 lb/bx Ordering information

Single stud with single nut per stud EM-10BM – up to .5" cable. Standard packaging: 1/bg, 500/bx, 20 lb/bx EM-10B1 – .5"–.8" cable. Standard packaging: 1/bg, 500/bx, 22 lb/bx EM-10B2 – .8"–1.6" cable. Standard packaging: 1/bg, 500/bx, 26 lb/bx EM-10B3 1.6"–up. Standard packaging: 1/bg, 500/bx, 26 lb/bx

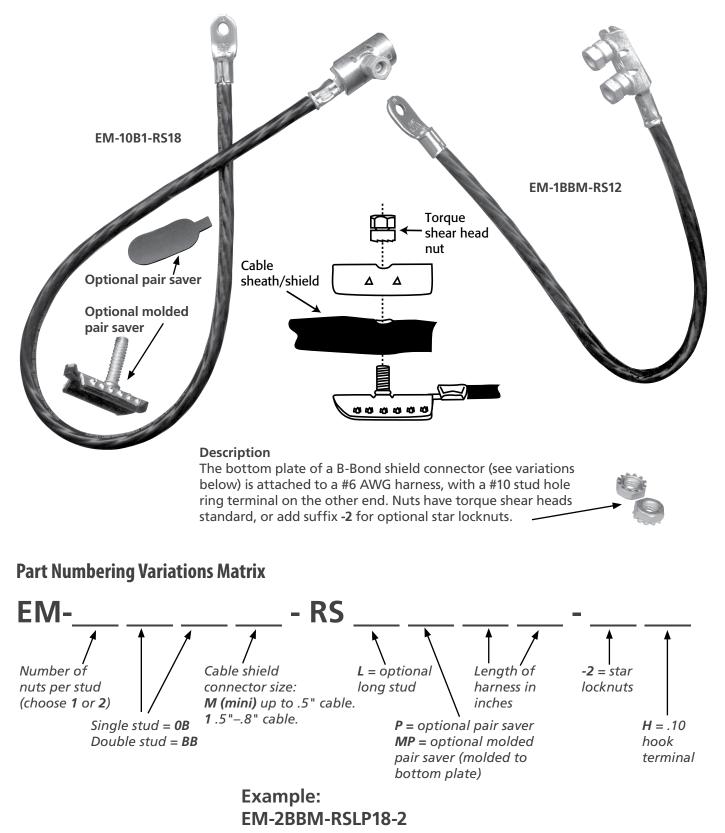
Locknut

Longer studs: For 1" studs, add suffix -XL1. For 1.1" studs, add suffix -XL1.1.



# **RS Shield Connectors**

# **RS B-BOND SHIELD CONNECTOR – WITH ATTACHED HARNESS FOR PEDESTALS**



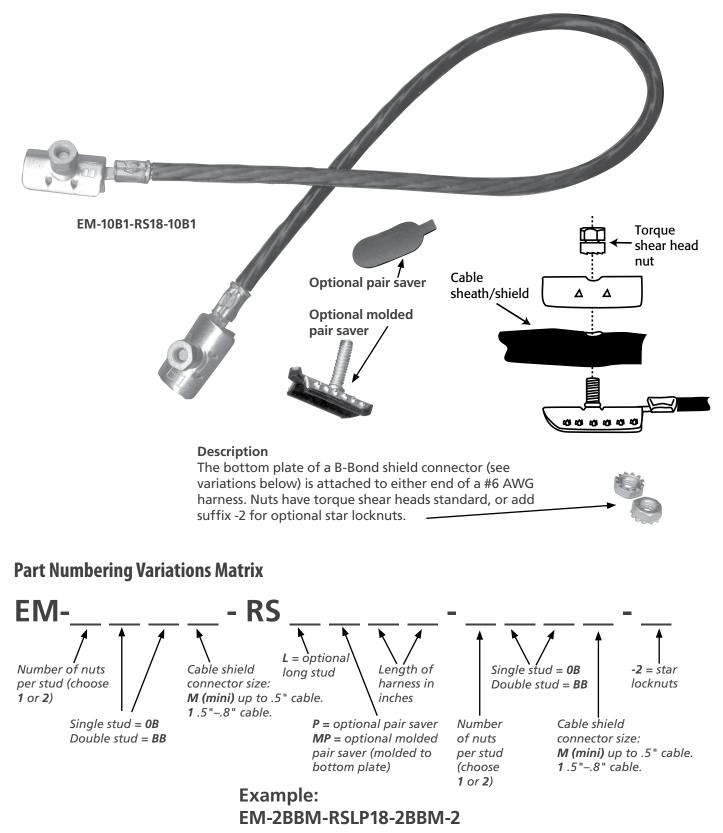
For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com



BONDING & GROUNDING

# **RS Shield Connectors**

# **DOUBLE RS B-BOND SHIELD CONNECTOR – WITH ATTACHED HARNESS FOR SPLICE CASES**



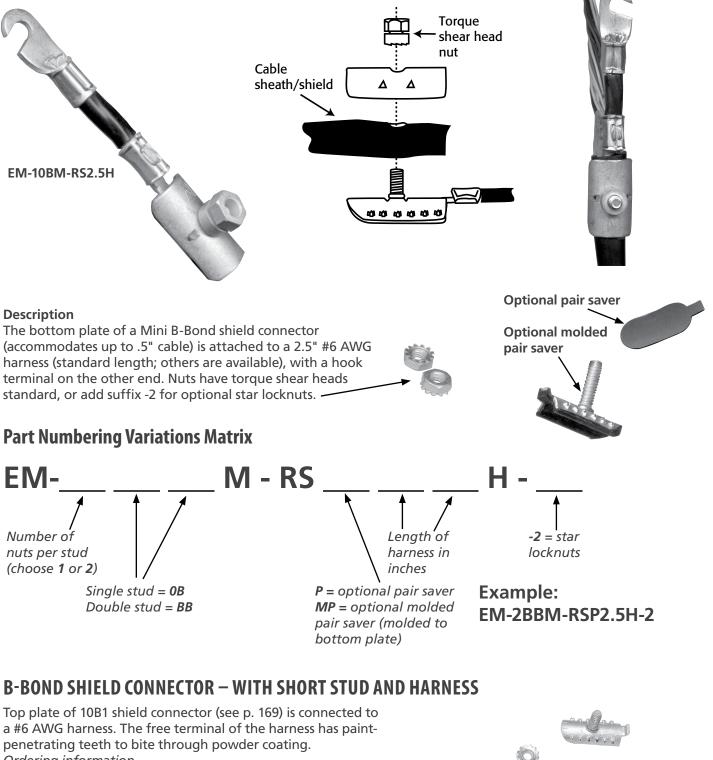
For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com



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# **RS Shield Connectors**

# **RS B-BOND SHIELD CONNECTOR – WITH ATTACHED HARNESS FOR NIDS**



Ordering information EM-10B1/8100-6 HUB 6" harness EM-10B1/8100-10 HUB 10" harness



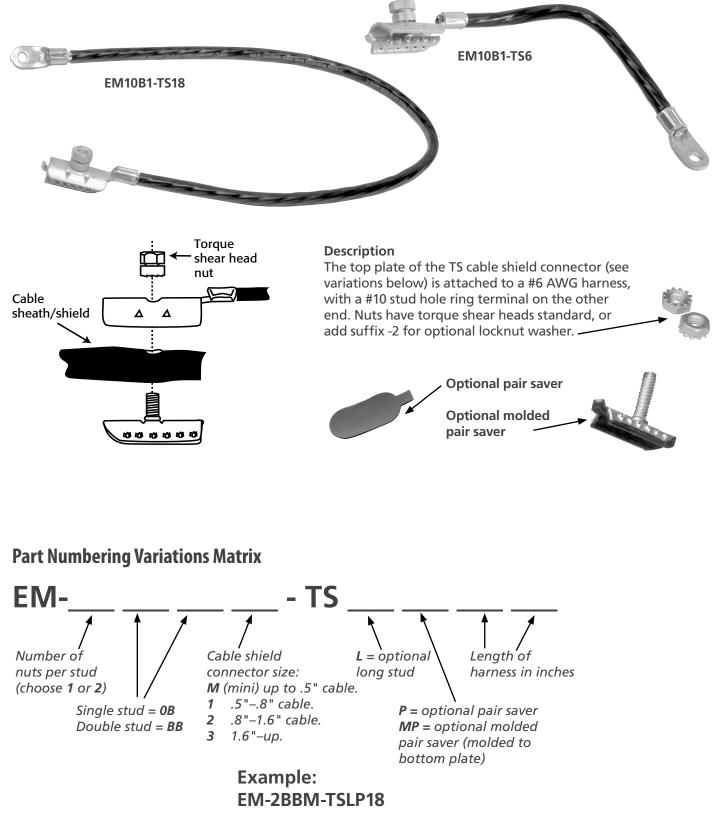
For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com

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# **TS Shield Connectors**

# **TS CABLE SHIELD CONNECTOR WITH ATTACHED HARNESS**



For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com

**30NDING &** 

# **U-SHAPED BURIED SERVICE WIRE SHIELD CONNECTORS – WITH OPTIONAL PAIR PROTECTION**

Electric Motion's shield connector, complete with pair protection, is designed to provide customers with a versatile, craft-friendly systEMfor terminating all types of industry standard shielded buried service wires.

#### Applications

- Permits easy and reliable termination of metallic shields at network interface devices (NIDs), station protector devices, pedestals, optical network unit and terminal locations.
- Facilitates termination of all corrugated or flat-shield buried service wire designs.

#### Features

- Multi-functional and customized for customer's specific application.
  - Preparation of the buried service wire and installation of each connector follows the same basic procedures.
  - Results in faster on-site connections.
     Provides anti-crush protection and excellent strain relief.
  - Connectors stay securely fastened long after connections are made.
  - Provides superior pullout strength during subsequent wiring or repair activity.

- Pairs are insulated from sharp edges of metallic shield; virtually eliminates metallic troubles at the shield/connector interface.
- Pair protectors are available to accommodate the various shield designs, multiple or single wire applications, and different wire sizes: 2, 3, 4, 5, 6, & 12 pairs, 19/22 AWG.
- Available in fork, hook, ring, and flag terminal end configurations.
- All metallic components are constructed of brass, tin-plated or die-cast zinc to provide lowresistance connections even in the harshest outside plant environments.
  - Strong, corrosion-resistant components
  - Re-useable
  - High quality



LISTED

93D6





# EM-3955 SERIES – CONNECTORS WITH FLOATING BONDING HARNESSES

#### Ordering information

**EM-3955-10S** U-shaped BSW connector with 6 inches of #10 AWG lead wire and 1-inch long yoke for one or two service wires. *Standard packaging: 10/bg, 100/bx, 11 lb/bx.* 

Also available: **EM-3955-10L** – Same as above, with 11/2-inch long yoke for multiple service wires.

#### EM-3955-6L

U-shaped BSW connector with 6 inches of #6 AWG lead wire and 11/2-inch long yoke for multiple service wires. *Standard packaging: 10/bg, 100/bx, 15 lb/bx.* 

Also available: **EM-3955-6S** – Same as above, with 1-inch long yoke for one or two service wires.



# **PEDESTAL BURIED SERVICE WIRE – SHIELD CONNECTORS WITH TEETH**

#### Ordering information

**EM-3955-10S (BT)** U-shaped BSW connector with 6 inches of #10 AWG lead wire, 1-inch long yoke for one or two service wires, and baby teeth both inside bottom of fork and inside back of pusher ring. *Standard packaging: 100/bx, 10 lb/bx.* 

## EM-3955-10SPB (BT)

Same as above, with pair protector and rectangular boot.

## EM-3955-SP (BT)

Just the yoke and pusher ring with baby teeth and pair protector, but without the lead or the boot.





# EM-3955 SERIES – PEDESTAL BURIED SERVICE WIRE SHIELD CONNECTOR #6 AWG WITH FLOATING BONDING HARNESS



Multiple service wires in one clamp

# Pedestal application

Connector assembly with 15" #6 AWG lead.

Connector assembly with 36" #6 AWG lead.

Standard packaging: 00/bx, 23 lb/bx.

Standard packaging: 100/bx, 39 lb/bx.

## Application

For bonding and grounding buried service wire shields in pedestals.

## Features

- Long version of connector allows the installer to stack multiples of buried service wires.
- Connector screw end is removable to allow easy adding of new buried service wires or easy toning.
- #6 AWG allows maximum current capacity.
- Flexible lead allows for bonds to float so connection will not loosen.
- UL and RUS listed for safety

# CONNECTOR WITH SCREW

# Ordering information EM-3955-L

Long U-shaped connector with screw for mounting to your own harness or mounting bracket. Can accommodate 1–3 BSWs. *Standard packaging: 10/bg, 100/bx, 9 lb/bx.* 



Ordering information

EM-3955-6L/8100-15

EM-3955-6L/8100-36

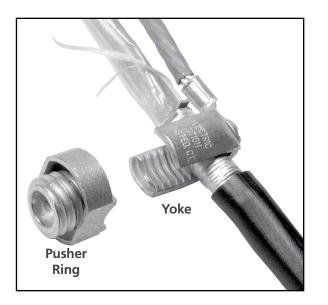


For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com

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# EM-3956 SERIES – SHORT U-SHAPED BURIED SERVICE WIRE CONNECTORS WITH FLOATING BONDING HARNESSES



Order from the connectors listed on the next few pages, or customize your own connectors:

- Wire gauge can be changed with the first number suffix: EM-3956-\_ S (#10, #6), e.g., EM-3956-10S.
- Yoke length can be changed with the first letter suffix: **EM-3956-10** (S = short, L = long), e.g., EM-3956-10S.
- Wire length can be changed by adding a number suffix: EM-3956-10S-\_\_ (inches), e.g., EM-3956-10S-18.
- Terminal type can be changed by adding a letter suffix: EM-3956-10S-18-\_ (R = ring, F = fork, H = hook), e.g., EM-3956-10S-18-F.





 $\mathbf{R} = \mathbf{ring}$ 



F = fork

H = hook

FL = flag



# **CONNECTOR WITH 6" LEAD, #10 AWG**

## Ordering information

EM-3956-10S

Short U-shaped BSW shield connector with 6 inches of #10 AWG flexible lead wire. hook terminal. Standard packaging: 10/bg, 100/bx, 7 lb/bx.

#### EM-3956-10SP

Above connector with pair protector.

# **OPTIONAL ACCESSORIES**

#### **Pair Protector**

Ordering information EM-3905 Standard packaging: 100/bg, 1000/bx, 6 lb/bx. Also available singly with any connector shown by adding the suffix -P to the part number.



**Vinyl Boot Insulator** 

Ordering information EM-3901-L Standard packaging: 25/bg, 100/ bx, 2 lb/bx. Also available singly with any connector shown by adding the suffix -B to the part number.

1-1/2"

7/8"

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# EM-3956 SERIES – SHORT U-SHAPED BURIED SERVICE WIRE CONNECTORS WITH FLOATING BONDING HARNESSES



# **CONNECTOR WITH 12" LEAD, #10 AWG**

Ordering information EM-3956-10S12R Short U-shaped BSW shield connector with 12 inches of #10 AWG flexible lead wire. ring terminal.

## **CONNECTOR WITH 18" LEAD, #10 AWG**

Ordering information EM-3956-10S18R Short U-shaped BSW shield connector with 18 inches of #10 AWG flexible lead wire, ring terminal.

# LISTED 93D6 LISTED 93D6 3/4" 3/4' LISTED

GROUNDING **BONDING** &

# **CONNECTOR WITH 6" LEAD, #6 AWG**

Ordering information EM-3956-6S Short U-shaped BSW shield connector with 6 inches of #6 AWG flexible lead wire, ring terminal.

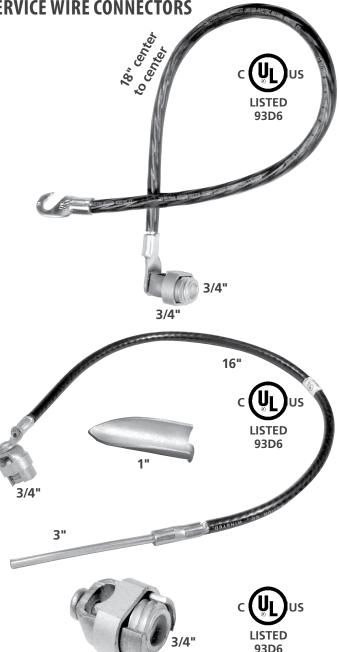




# EM-3956 SERIES – SHORT U-SHAPED BURIED SERVICE WIRE CONNECTORS WITH FLOATING BONDING HARNESSES

# **CONNECTOR WITH 18" LEAD, #6 AWG**

Ordering information EM-3956-6S18RH Short U-shaped BSW shield connector with 18 inches of #6 AWG flexible lead wire, hook terminal.



# **CONNECTOR WITH FLEXIBLE/SOLID HARNESS**

Ordering information EM-3956-163SP Short U-shaped BSW shield connector with 16 inches of #6 AWG flexible lead wire, 3 inches of solid #6 AWG, pair protector. Standard packaging: 1 kit/bg, 25 kits/bx, 14 lb/bx.

## **CONNECTOR WITH SCREW**

Ordering information EM-3956-S

Short U-shaped BSW connector with a screw for use with your own harness or mounting bracket. *Standard packaging: 25/bg, 100/bx, 5 lb/bx.* 

# **CONNECTOR WITH STUD AND NUT**

Ordering information EM-3956-SWZ Short U-shaped BSW connector with a screw and a whiz nut for use with your own bonding braid with eyelets



3/4

3/4"



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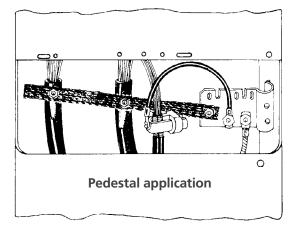
3/4"

3/4"

# EM-3956 SERIES – LONG U-SHAPED BURIED SERVICE WIRE CONNECTORS WITH FLOATING BONDING HARNESSES



## CONNECTOR WITH 6" LEAD, #6 AWG





Order the connector above, or customize your own connectors:

- Wire gauge can be changed with the first number suffix: EM-3956-\_ S (#10, #6), e.g., EM-3956-10S.
- Yoke length can be changed with the first letter suffix: **EM-3956-10** (S = short, L = long), *e.g., EM-3956-10S*.
- Wire length can be changed by adding a number suffix: EM-3956-10S-\_\_ (inches), e.g., EM-3956-10S-18.
- Terminal type can be changed by adding a letter suffix: EM-3956-10S-18-\_ (R = ring, F = fork, H = hook), e.g., EM-3956-10S-18-F.





# EM-3956 SERIES – SHORT U-SHAPED BURIED SERVICE WIRE SHIELD CONNECTORS WITH RIGID MOUNTING BARS

Tin-plated brass clamp designed to make a low-resistance connection between a service wire shield and ground point.

#### Features

- Fits compactly in most NIDs
- Can be used on 2 pair–6 pair buried service wire
- Open-ended design allows the installation of this clamp onto a wire already in service. Also, it can be taken apart to isolate the ground

Ordering information :

# **CONNECTOR WITH RIGID MOUNTING BAR**

Ordering information 1/2" EM-3956-R Short U-shaped BSW shield connector with tin-plated brass mounting bar a (for single BSW). đ Standard packaging: 1-1/2" Œ 25/bg, 100/bx, 6 lb/bx LISTED 3/ 93D6 3/4" EM-3956-R **CONNECTOR WITH OFFSET RIGID MOUNTING BAR** Ordering information 1/2" EM-3956-RO Short U-shaped BSW shield connector 1/2" with offset bar Standard packaging: 25/bq, 100/bx, 5 lb/bx 1-3/4" 3/4"

For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com

3/4



LISTED 93D6

**BONDING &** 

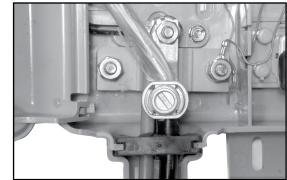
93D6

# EM-3956 SERIES – SHORT U-SHAPED BURIED SERVICE WIRE SHIELD CONNECTORS WITH RIGID MOUNTING BARS

### **CONNECTOR WITH 45° OFFSET RIGID MOUNTING BAR**

Ordering information EM-3956-RW Short U-shaped BSW connector with 45° unplated offset bar. Standard packaging: 10/bg, 100/bx, 6 lb/bx







LISTED 93D6

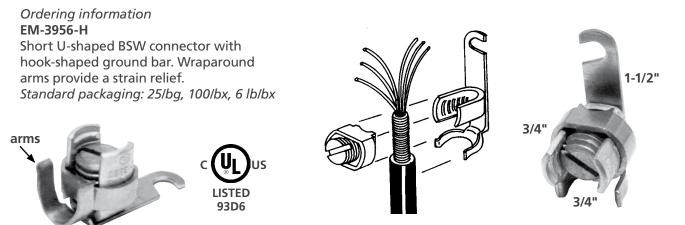
### **CONNECTOR WITH REVERSED 45° OFFSET RIGID MOUNTING BAR**

Ordering information EM-3956-RR Short U-shaped BSW connector with 45° unplated offset reversed bar. Standard packaging: 25/bg, 100/bx, 6 lb/bx.



LISTED 93D6

### **CONNECTOR WITH HOOK-SHAPED RIGID MOUNTING BAR**



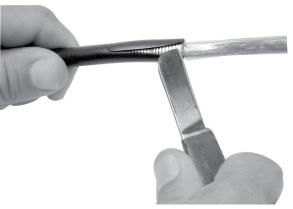
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1-3/4"

### EM-3956M SERIES – MEDIUM U-SHAPED BURIED SERVICE WIRE SHIELD CONNECTORS FOR USE WITH DOUBLE-TAB PAIR PROTECTOR FOR BUILT-IN STRAIN RELIEF



Remove the appropriate amount of sheath necessary for wire termination. Make a lengthwise slit in the jacket 1" from the end.



Insert pair protector between shield and pairs. This serves as a strain relief and protects the pairs from crushing.

## **CONNECTOR WITH 40° OFFSET RIGID MOUNTING BAR**

Ordering information EM-3956M-RW1.5P NIU Connector for 2-pair through 6-pair service wire.. Standard packaging: 50/bx, 5 lb/bx.





1-1/2"



### EM-3956M SERIES – MEDIUM U-SHAPED BURIED SERVICE WIRE SHIELD CONNECTORS FOR USE WITH DOUBLE-TAB PAIR PROTECTOR FOR BUILT-IN STRAIN RELIEF



### **CONNECTOR WITH 6" LEAD, #10 AWG**

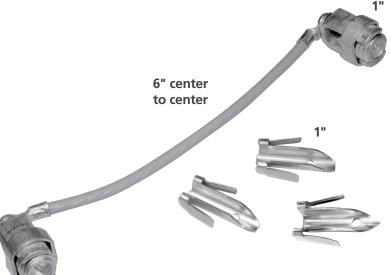
Ordering information EM-3956M-10SP Medium U-shaped BSW connector for single wire with flexible 6" lead, hook terminal.



### DOUBLE CONNECTOR WITH 6" LEAD, #10 AWG

#### Ordering information

**EM-3956-PM** Two U-shaped BSW shield connectors with medium yokes, connected by a 6" #10 AWG flexible lead, and packaged with two double-tab pair protectors, for use with Kold-n-Klose, for in-line splicing of buried service wires. Permits straight splice configuration without creating a second joint.





### EM-3956M SERIES – MEDIUM U-SHAPED BURIED SERVICE WIRE SHIELD CONNECTORS FOR USE WITH BONDED ALUMINUM SHIELD



#### **CONNECTOR WITH 6" LEAD, #10 AWG**

Ordering information EM-3956M-10SP-04 Medium U-shaped BSW connector with 6" of #10 AWG lead wire, for 2-pair through 6-pair BSW. Pair protector has perforations to penetrate protective coating on shield, for better continuity.

EM-3956M-10SP10-04 Same as above, with 10" lead.



### **CONNECTOR WITH 40° OFFSET MOUNTING BAR**

Ordering information EM-3956M-RW1.5-04

Medium U-shaped BSW connector with 40° offset, 11/2" long mounting bar, for 2-pair through 6-pair BSW. Pair protector has perforations to penetrate protective coating on shield, for better continuity.



1-1/2"



### PAIR PROTECTOR WITH PERFORATIONS

Ordering information **EM-3900-04** 

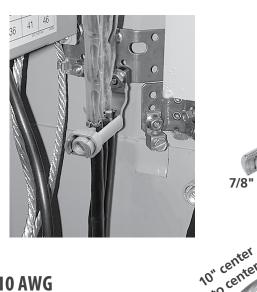




### EM-3954 SERIES – LONG U-SHAPED BURIED SERVICE WIRE SHIELD CONNECTORS FOR PEDESTALS FOR USE WITH DOUBLE-TAB PAIR PROTECTOR FOR BUILT-IN STRAIN RELIEF

#### **CONNECTOR WITH 45° OFFSET MOUNTING BAR**

Ordering information EM-3954-ROP Long U-shaped BSW connector with 45° offset bar. Accommodates 1 to 3 service wires, 2 pair through 6 pair. Standard packaging: 50/bx, 6 lb/bx.



7/8

to center

10<sup>° center</sup>

2"

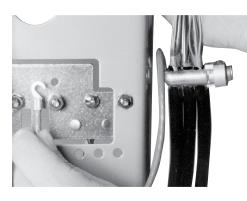


EM-3900-2

1-1/2"

### **CONNECTOR WITH 10" LEAD, #10 AWG**

Ordering information EM-3954-10SP/10 Long U-shaped BSW connector with #10 AWG ground lead, 10" long, hook terminal. Accommodates 1 to 3 service wires, 2 pair through 6 pair.



### **CONNECTOR WITH 10" LEAD, #6 AWG, DOUBLE RING TERMINAL**

Ordering information EM-3954-6L/8100-10-DHP Long U-shaped BSW connector with #6 AWG ground lead, 10" long, double-hole ring terminal. Accommodates 1 to 3 service wires, 2 pair through 6 pair.

For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com



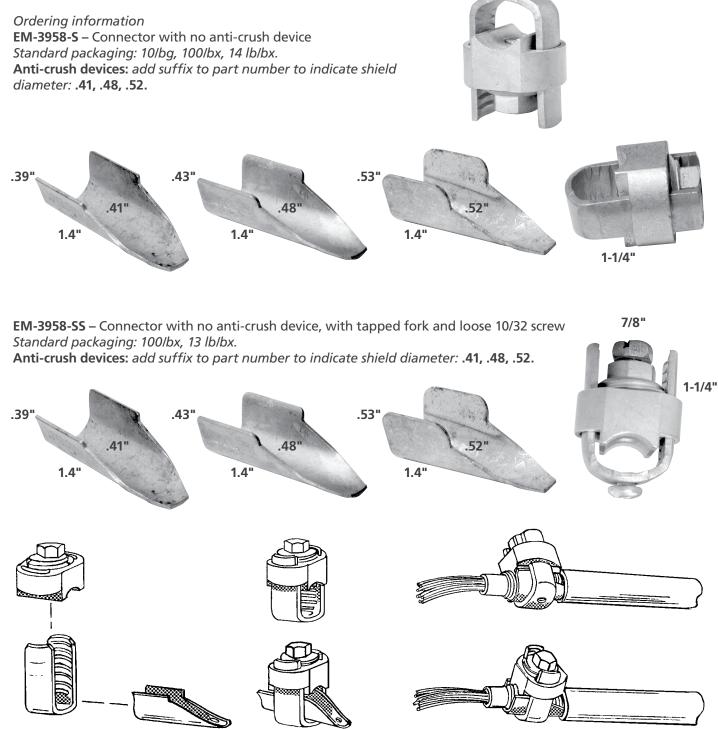
**BONDING** &

#### EM-3958 SERIES – LARGER DIAMETER U-SHAPED BURIED SERVICE WIRE SHIELD CONNECTORS

Shield connector for 12-pair buried service wire. Available with anti-crush devices for three different shield sizes: .41", .48", .52". Also available with flexible insulated harness, or with tapped fork and loose 10/32 screw.

7/8"

## **12-PAIR CONNECTOR**





### EM-3958 SERIES – LARGER DIAMETER U-SHAPED BURIED SERVICE WIRE SHIELD CONNECTORS

### **CONNECTOR WITH 30" LEAD, #6 AWG FOR PEDESTALS**

#### Ordering information

**EM-3958-S/30** – Large U-shaped BSW connector with no anti-crush device, with 30" flexible insulated harness, #6 AWG, with ring terminal, #10 size mounting hole. *Standard packaging: 100/bx, 44 lb/bx.* 



### **CONNECTOR WITH 20" LEAD AND ANTI-CRUSH DEVICES**

Ordering information

**EM-3958-S/20 P3** – Large U-shaped BSW connector with 20" flexible insulated harness, #6 AWG, with ring terminal, #10 size mounting hole, and all three of the anti-crush devices on p. 476 Use the one that fits; discard the other two. Standard packaging: 100/bx.



### **CONNECTOR WITH 10" LEAD FOR NIDS**

Designed for the large-diameter 6-pair 19 AWG buried service wire or 12-pair buried service wire. Also available with #12 or #6 AWG ground wire lead.

#### Features

- Opens like a book to allow ease of installation
- Can be disassembled quickly to isolate the ground

#### Applications

Can be used on network interface devices, protectors, and terminals.

#### Ordering information

**EM-3958-S1010** – Large U-shaped BSW Shield Connector with 10" of #10 AWG wire and a hook terminal. *Standard packaging: 100/bx, 16 lb/bx.* 

For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com



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### **BARP SERIES – SPARK GAP SHIELD TERMINATION**

#### Description

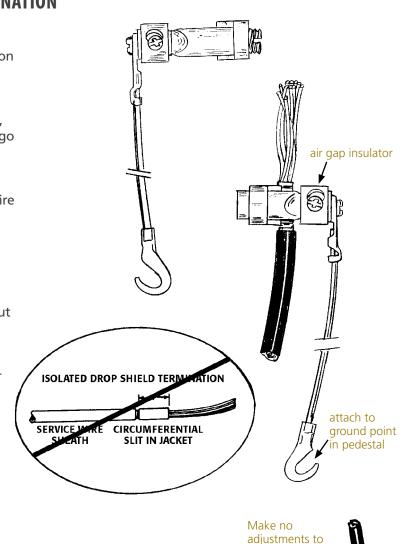
These clamps are designed for use in the distribution pedestal where an indirect or isolated type of connection is desired. This method of termination prevents the shield of the buried service wire from becoming a conductor of unwanted stray voltages, yet allowing higher voltages, such as lightning, to go safely to ground.

#### Applications

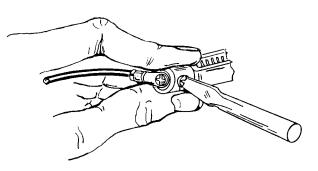
Works with 2 pair–6 pair shielded buried service wire if the jacket can be stripped from the shield.Works with all of the major pedestals.

#### Features

- The spark gap is built into the clamp itself, eliminating the craft-sensitive methods of termination, such as a circumferential knife cut in the jacket, or a buildup of electrical tape.
- Available with an insulator boot.
- Minimum spark-over voltage is 1–3 KV.
- Meets Bellcore criteria for lightning surge per spec #TR-NWT-001001.
- Spark gap electrodes can be easily bypassed, if desired, by tightening the side screw in the insulator. This bridges across the electrodes, making a direct connection to ground.



BONDING & GROUNDING



Loosen side screw, rotate plastic collar to the larger portion of the slot, and re-tighten.

See next page for ordering information.

\*Side screw in for direct connection (500-ft. runs or longer)

this screw for proper spark gap (less than 500-ft.

runs)

For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com

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### **BARP SERIES – SPARK GAP SHIELD TERMINATION**

#### **CONNECTOR WITH 10" LEAD, #10 AWG**

Ordering information EM-3955-BARP Spark Gap U-Shaped BSW Shield Connector with 10" #10 AWG flexible lead and hook terminal. Standard packaging: 10/bg, 100/bx, 14 lb/bx.



### LARGER DIAMETER CONNECTOR WITH 10" LEAD, #10 AWG

Ordering information EM-3958-S1010BARP Spark Gap U-Shaped BSW Shield Connector works with large diameter 6 pair/19 AWG shielded buried service wire. Standard packaging: 100/bx, 17 lb/bx.



For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com



**BONDING &** 

### **BARP SERIES – SPARK GAP SHIELD TERMINATION**

#### CONNECTOR WITH 15" OR 36" LEAD, #6 AWG

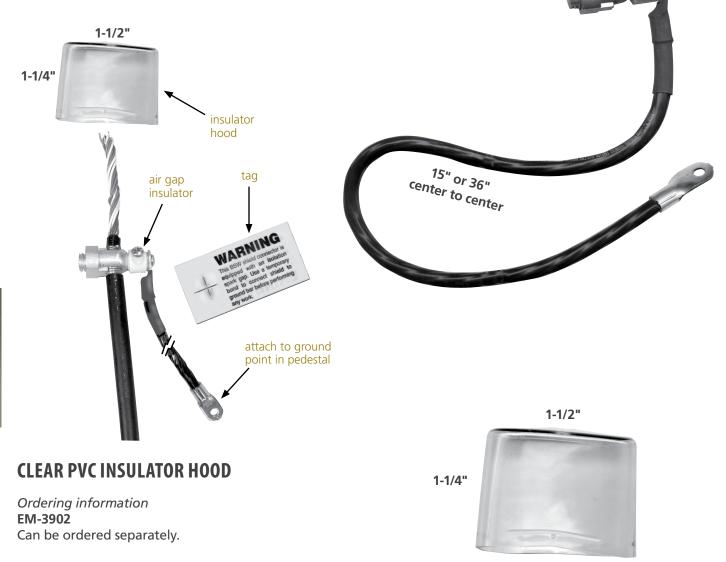
**RUS Listed** 

1-1/2"

Ordering information EM-3955-6S/8100-15 BARP Spark Gap U-Shaped BSW Shield Connector with 15" #6 AWG flexible lead, ring terminal, PVC insulator hood, and warning tag. Standard packaging: 100/bx, 27 lb/bx.

#### EM-3955-6S/8100-36 BARP

Spark Gap U-Shaped BSW Shield Connector with 36" #6 AWG flexible lead, ring terminal, PVC insulator hood, and warning tag. *Standard packaging: 100/bx.* 



For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com



**BONDING 8** 

### **OPTIONAL ACCESSORIES**

#### **PAIR PROTECTOR**

Ordering information EM-3905 Standard packaging: 100/bg, 1000/bx, 6 lb/bx. Also available singly with BSW shield connector by adding suffix -P to the part number.

#### **DOUBLE-TAB PAIR PROTECTOR WITH BLOSSOMS**

Ordering information **EM-3900-04** 

#### PAIR PROTECTOR WITH TWO TABS

Ordering information EM-3900-2 For use in single or multiple BSW applications, for built-in strain relief.

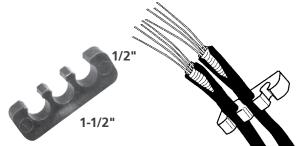
#### **BURIED SERVICE WIRE HOLDER**

Ordering information EM-3906 – BSW holder for 3-pair BSWs EM-3904 – BSW holder for 2-pair BSWs For positioning and holding BSW in long yoke BSW connectors.









#### **VINYL BOOT INSULATOR**

Ordering information EM-3901 – 1" long, 7/8" dia. EM-3901-M – 1" long, 1" dia. EM-3901-L – 1-1/2" long, 7/8" dia. Standard packaging: 25/bg, 100/bx, 2 lb/bx. Also available singly with corresponding BSW connector by adding suffix -B to the part number.





## **BSW Shield Connectors**

### **BURIED SERVICE WIRE FLOATING BOND**

The EM-FB series of buried service wire bonds are designed for a fast, easy, foolproof installation from the shield of a buried service wire to the ground point of a network interface device, protector, terminal, or pedestal.

#### Features

- The connector opens like a book so the installer doesn't have to thread the pairs through the connector.
- The conductor pairs emerge from the top of the connector, eliminating the danger of pinching the pairs between the two halves of the clamp.
- Works with 2-pair through 6-pair buried service wire.
- Wire lead allows the bond to "float" so that frost, vibration, ground shrinkage, and settling won't contribute to shield breakage.
- Connector wraps completely around the shield for greater surface area contact.
- Compact design fits in many of today's crowded enclosures.
- Available with #10, #12, or #14 AWG wire lead, in any length.
- Available with a hook, fork, ring, or flag terminal.

#### Ordering information

Standard part number: **EM-FB-1406F** – Connector with a #14 AWG wire, 6 inches long, fork terminal.

cULus Listed, 93D6: #10 AWG wire, any length, any terminal.

#### Variations:

- Wire gauge can be changed with the first two numbers: EM-FB-\_\_06F (#10, #12, #14 AWG)
- Wire length can be changed with the last two numbers: EM-FB-14\_\_F (2"- 36")
- Terminal can be changed with the last letter: EM-FB-1406\_ (F, H, R, FL)





H = hook

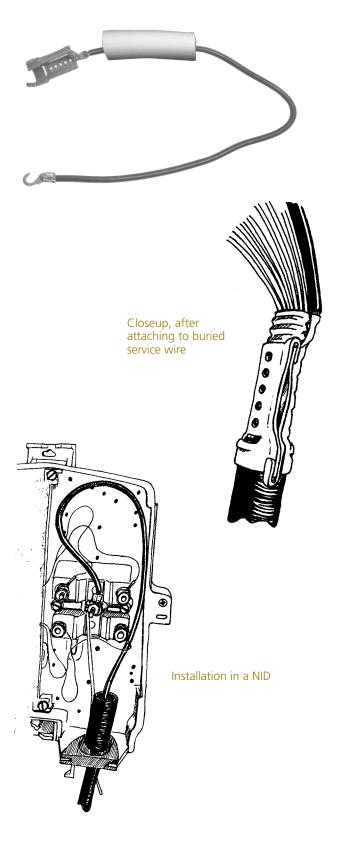




F = fork

 $\mathbf{R} = ring$ 

FL = flag





## **ROCKET 88 – BURIED SERVICE WIRE SHIELD CONNECTORS**

#### Description

A small radius shield connector.

#### Features

- Brass for strength and conductivity
- Tin plated for corrosion compatibility with aluminum, copper, and steel
- Shaped bottom plate facilitates insertion into small cables and buried service wires
- Teeth on top plate give high pull-out strength.
- Standard size stud accommodates all bonding and grounding harnesses.
- Meets Bellcore electrical specifications
- Circular, rounded bottom plate electrically isolates shield from cable pairs to prevent shorts and grounds.
- Designed to work with corrugated or flat/bonded shields
  Provides excellent pullout strength without punching a
- stud hole
- Universal design



#### Applications

- Bonding and grounding buried service wires (2–12 pairs)
- Bonding and grounding small cables up to 25 pair

#### Ordering information

**EM-R88** – Small radius shield connector: bottom plate with stud, top plate, two star washer nuts, used to bond and ground 2- to 4-pair buried service wires. See suffix -E for larger count buried service wire and cables.

Add suffix **-TSH** for torque shear nut. Add suffix **-B** for blossoms on bottom plate. Add suffix **-S** for short stud. Add suffix **-E** for expanded radius, to accommodate 5- to 12-pair cables.





EM-R88-TSH torgue shear nut





EM-R88-B blossoms



EM-R88-S short stud



### **ROCKET 88 – SHIELD CONNECTORS WITH ATTACHED LEADS**

#### **Cat 3-7 Shield Connectors**

#### Description

This all-inclusive shield connector can be used to terminate both buried and aerial service wires manufactured with a metallic shield, as well as inside wiring for equipment grounds. Comes with a factory-mounted #10 flexible lead that provides a simple way for the technician to bond and ground the shield of the service wire where the ground post or point is distanced from the wire terminal or protector block. Also works well in situations where access to the station equipment is tight or wire rework is expected.

#### Options

- #10 lead is available in any length specified.
- Lead can be provided as loose piece (separate from connector).
- Available with ring or hook terminals

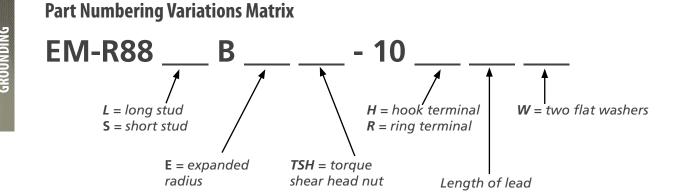


#### Features

- Designed to work with corrugated or flat/ bonded shields
- Provides excellent pullout strength without punching a stud hole
- Universal design

#### Ordering information

**EM-R88LB10H10** – Small radius shield connector for 2–4 pairs, with 10" #10 lead **EM-R88LBE10H10** – Expanded radius shield connector for 5–12 pairs, and cables up to 25 pairs, with 10" #10 lead **EM-R88LB10P24** – Cat. 5 25-pair shield connector with expanded radius and blossoms. #10 AWG stranded wire, green insulation, with plain end (no terminal), 24" long, with two flat washers, one whiz nut



#### Example: EM-R88LBE-10R12 =

Shield connector with long stud, expanded radius, 12" #10 lead with a ring terminal.

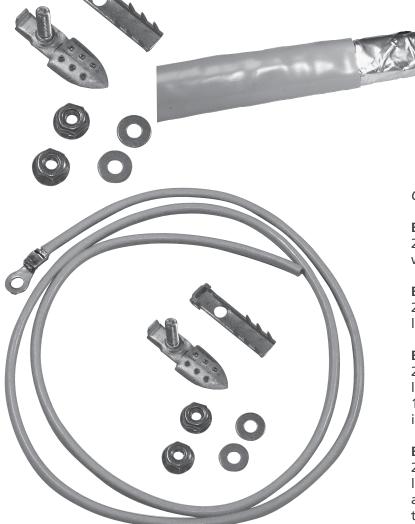
For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com

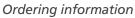


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## **Rocket 88 Cat 5 Cable Shield Connectors**

### **SHIELD CONNECTORS FOR CAT 5 CABLES**





#### EM-R88LB

2–6-pair Cat. 5 Cable Shield Connector with long stud and blossoms.

#### EM-R88LBE

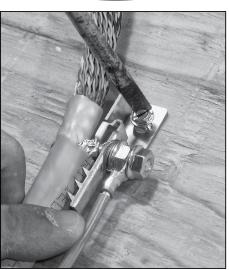
25-pair Cat. 5 Cable Shield Connector with long stud, blossoms, and expanded radius.

#### EM-R88LBE-CS1036P

25-pair Cat. 5 Cable Shield Connector with long stud, blossoms, expanded radius, and 103" #10 AWG stranded wire with green insulation, with a ring terminal on one end.

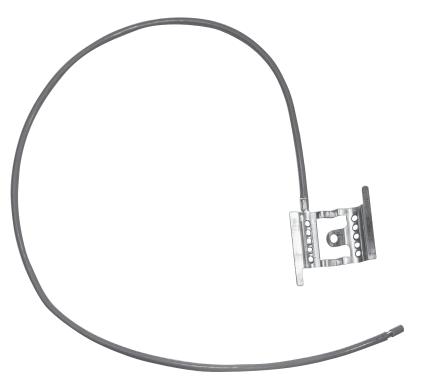
#### EM-R88LBE-10H10

25-pair Cat. 5 Cable Shield Connector with long stud, blossoms, expanded radius, and 10" lead, #10 AWG, with #10 hook terminal. No washers, one nut.





### **25-PAIR CAT 5 CABLE SHIELD CONNECTOR**





Extra-large shield connector for 25-pair Cat. 5 cable, with #10 AWG stranded wire with green insulation crimped to connector 36" long and plain end (no terminal).

#### Features

- Connector surrounds the shield almost 360°
- Crimps with standard 9" pliers
- Lead wire provides maximum float
- Blossoms on inside make contact through blue coating

Ordering information EM-FBXL25

### 25-PAIR CAT 5 CABLE SHIELD CONNECTOR

Extra-large shield connector for 500 coaxial cable, attached to 30"-long #6 AWG 7-strand wire with black insulation and plain end (no terminal).

Packaged with two-hole copper compression terminal lug and tie wrap.

Ordering information EM-FBXL-500-7S-30







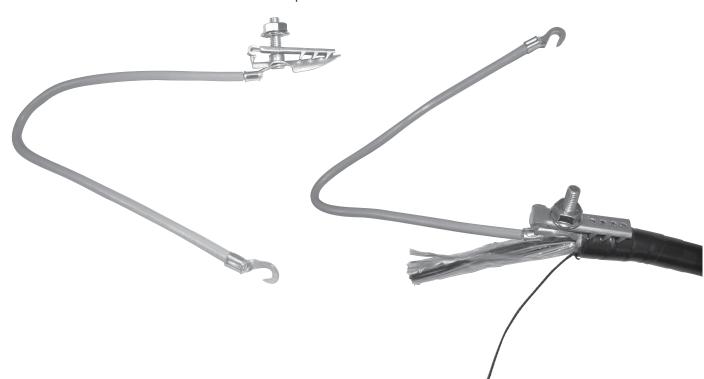
### SHIELD CONNECTOR FOR 12-PAIR STUB CABLE, #10 LEAD

#### Description

EM-R88 shield connector with a .350" radius and blossoms oncthe bottom plate. 10" lead, #10 AWG, with #10 hook terminal. No washers, one nut.



Ordering information EM-R88LB.350-10H10 – Shield connector for 12-pair stub cable



# BONDING &

### SHIELD CONNECTOR FOR 12-PAIR STUB CABLE

#### Description

EM-R88 shield connector with a .350" radius and blossoms on the bottom plate, same as above, with no lead. No washers, one nut.

Ordering information EM-R88LB.350 – Shield connector for 12-pair stub cable





### **ROCKET 88 SHIELD CONNECTORS WITH RIGID BARS**

### **Shield Connectors with Rigid Bars**

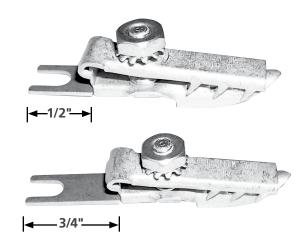


Rocket 88 shield connector with blossoms, with attached rigid, forked bar. Available in any length. Used to ground buried service wire and small diameter cables where a ground post or stud is provided. **EM-R88BE-R** and **EM-R88BE-RXT** may also be used to ground the shield of small cables up to 25 pairs. Custom fork length are available.

#### Ordering information

EM-R88B-R – With short fork, accommodates 2- to 4-pair buried service wire EM-R88BE-R – With short fork, for 5- to 12-pair BSW EM-R88B-RXT – With long fork, for 2- to 4-pair BSW EM-R88BE-RXT – With long fork, for 5- to 12-pair BSW

Add suffix **-TSH** for torque shear nut. Add suffix **-S** for short stud (shown at right).



| At a glance        |                    |                                                  |         |
|--------------------|--------------------|--------------------------------------------------|---------|
| PART NUMBER        | ACCOMMODATES       | DISTINGUISHING FEATURES                          | LISTING |
| EM-R88             | 2—4 pair BSW       |                                                  | CSA     |
| EM-R88-TSH         | (same)             | Torque shear head nut                            | CSA     |
| EM-R88-B           | (same)             | Blossoms on bottom plate                         | CSA     |
| EM-R88-S           | (same)             | Short stud                                       | CSA     |
| EM-R88-E           | 5—12 pair BSW      | Expanded radius                                  | CSA     |
| EM-R88LB10H10      | 2—4 pair BSW       | 10" #10 flexible harness                         | CSA     |
| EM-R88LBE10H10     | 5—12 pair BSW      | 10" #10 flexible harness, expanded radius        | CSA     |
| EM-R88B-R          | 2—4 pair BSW       | Blossoms, attached 1/2" fork                     | CSA     |
| EM-R88BE-R         | 5—12 pair BSW      | Blossoms, attached 1⁄2" fork, expanded radius    | CSA     |
| EM-R88B-RXT        | 2—4 pair BSW       | Blossoms, attached 3/4" fork                     | CSA     |
| EM-R88BE-RXT       | 5—12 pair BSW      | Blossoms, attached 3/4" fork, expanded radius    | CSA     |
| EM-R88BTAB         | 2—4 pair BSW       | Blossoms, removable fork                         | CSA     |
| EM-R88LB.350-10H10 | 12-pair stub cable | Blossoms, 10" #10 flexible harness, .350" radius | CSA     |
| EM-R88LB.350       | 12-pair stub cable | Blossoms, .350" radius                           | CSA     |

#### At a glance . .



## **ROCKET 88 SHIELD CONNECTORS WITH RIGID BARS**

### Shield Connectors with Removable Fork Tab

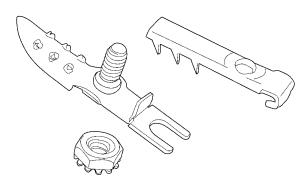
Rocket 88 shield connector with breakaway rigid, forked lead Lead (or tab) is 1/2" long. Used for bonding and grounding buried service wire and small diameter cables at pedestals, terminals, NIDs, station protectors, or buried splices. May also be used to ground the drain wire and/or metallic foil shield of new generation aerial service wires.

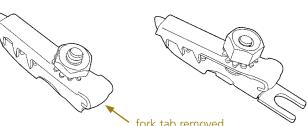
#### Applications

- Bonding and grounding buried service wires (2–12 pairs
- Bonding and grounding small cables up to 25 pair

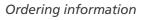
#### **Features**

- Universal design reduces the number of parts carried on service vehicle.
- Can be connected to a ground post (with fork) or to an • eyelet or ground bar with holes (with stud).
- Designed to ground either corrugated or flat • bonded shields.
- Fork length can be manufactured to suit specific applications.
- Simple to install, significantly reduces installation time.





fork tab removed



#### EM-R88-B -TAB -

Two- to four-pair shield connector with breakaway rigid lead. See suffix -E for larger count buried service wire and cables up to 25 pairs.

Add suffix -S f or short stud (shown at right).

Add suffix -E for expanded radius to accommodate 5–25 pairs.

Add suffix -TSH for torgue shear nut.

Add suffix -XT for long tab (3/4").





For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com

**BONDING** &

### **ROCKET 88 ACCESSORIES**

#### **Grounding Harness**

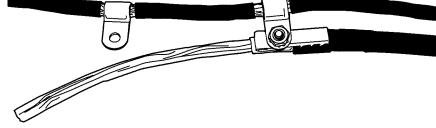
This versatile harness is perfect for grounding the shield of buried service wires within pedestals and terminals where wire management is important. Hook or ring terminal permits easy connection to standard ground bar or post. Permits the technician to freely install the R88 bond clamp and then make the connection to ground. Available in custom configurations, #6 or #10 stranded AWG, green or black insulation. Comes assembled with five high-quality flag terminals and one hook or ring terminal.

#### Ordering information

#### EM-R88H-XX

Add suffix –**G** for green insulation. Add suffix –**B** for black insulation Add suffix –**10** for #10 AWG Add suffix –**6** for #6 AWG





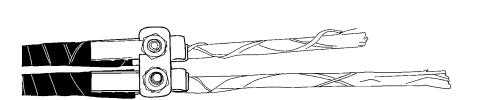
# NUDING &

#### **Bridge Connector**

Ideal for bonding the shields of buried service wire at splice locations. Small size works well with standard repair and closure systems. Equivalent to #6 AWG, tin plated.

### Ordering information

EM-R88-BC – Bridge Connector





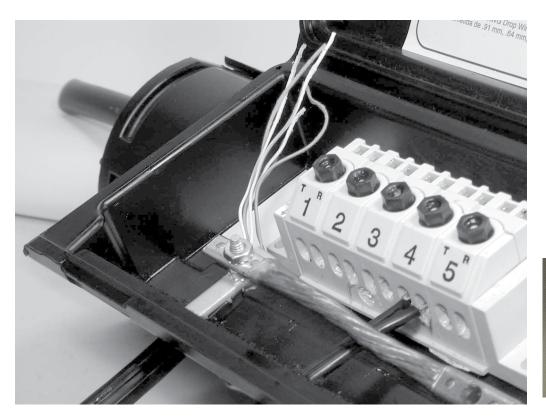
### SHIELDED AERIAL SERVICE WIRE BOND KIT



This kit consists of one shield connector for shielded aerial service wire, and one 32"-long piece of clear green Microbond.

#### Application

Bonding multiple shielded drop wires at aerial terminals.



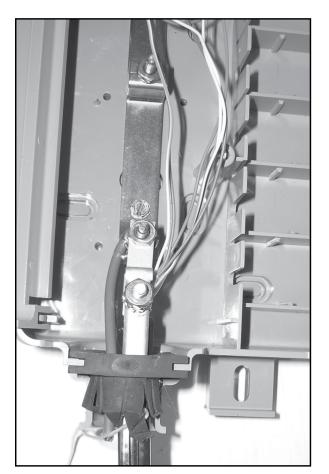
Ordering information EM-3923 KIT – Shielded Aerial Service Wire Bond Kit EM-3923 – Connector only: top plate, bottom plate, two nuts



### SHIELDED AERIAL SERVICE WIRE BOND KIT FOR NIDS

Shield connector with bottom and top plates and one star washer nut, and 6" #10 AWG harness with #10 ring terminal on one end, #10 hook terminal on the other.





#### Ordering information

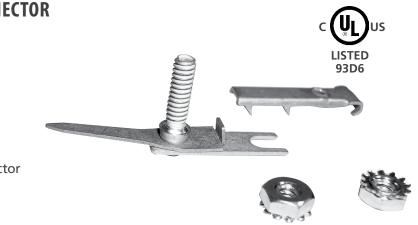
**EM-3925** – Shielded Service Wire Bond Kit for NIDs **EM-3925R** – Shielded Service Wire Bond Kit for NIDs, with #10 ring terminal on each end.



### SHIELDED AERIAL SERVICE WIRE CONNECTOR

Shield connector with long stud, short breakaway rigid lead fork, and two nuts.

Ordering information EM-3928 – Shielded Aerial Service Wire Connector

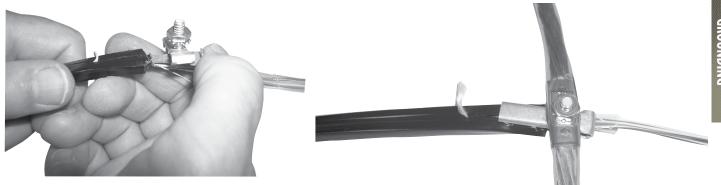


### SHIELDED AERIAL SERVICE WIRE BOND KIT FOR NIDS

Shielded aerial service wire kit includes 32" of Microbond with green insulation (see page G16), with one end stripped, and one EM-3928 shield connector with long stud, short breakaway rigid lead fork, and two nuts.







Ordering information EM-3928 KIT – Shielded Aerial Service Wire Ground Kit



### **SHIELD CONNECTOR FOR T1 CABLE**

Two shield connectors attached with a bridge connector, with 10" #10 AWG lead and 1/4" hook terminal.



Ordering information EM-3928GLWC – Shield Connector for T1 Cable

#### **BONDING COIN**

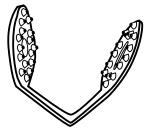
Ordering information

EM-0055

Bonding coin with protrusions on each side, and two flat washers. 1-5/16" center to center *Standard packaging: 100/bx, 2 lb/bx.* 

EM-0056

13/16" center to center



### **BONDING STUD COIN**

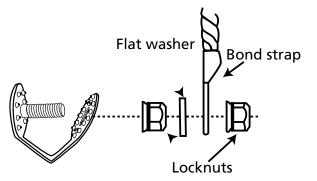
Ordering information

#### EM-0057

Bonding coin with protrusions on each side, attached bolt, one flat washer, and one nut with compression washer. *Standard packaging: 100/bx, 3 lb/bx.* 

#### EM-0058

Bonding coin with 8 protrusions on each side, attached bolt, one flat washer, and two nuts with compression washers. *Standard packaging: 1000* 



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This tool is designed to punch through the shield and sheath of a cable. The spring-loaded handles allow easy, convenient oper-ation. The reach is controlled by an adjustable gauge.

#### Ordering information

#### EM-HPT

**EM-HPT(S)** - To make it easy to punch holes in cable sheath/shield to accommodate either single- or double-stud B-bond, TS, or RS shield connectors, this version of the hole punch tool is marked at the three appropri-ate positions.



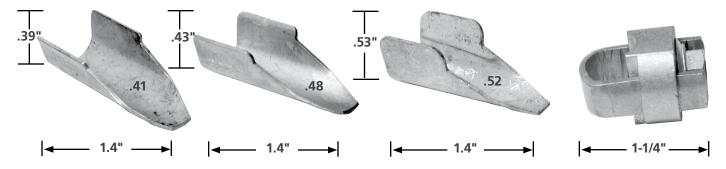


A fiber optic shield connector for both shielded fiber and shielded with strength members (LXE). Available with anti-crush devices for three different shield sizes: .41", .48", .52". Also available with flexible insulated harness, or with tapped fork and loose 10/32 screw.

Ordering information EM-3958-S – Connector with no anti-crush device Standard packaging: 10/bg, 100/bx, 14 lb/bx.

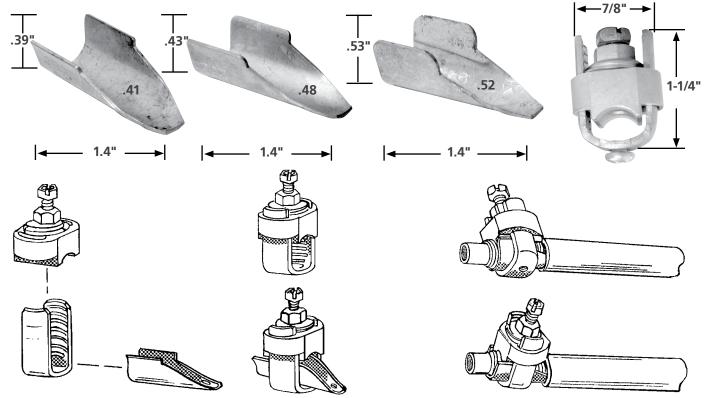
Anti-crush devices: add suffix to part number to indicate shield diameter: .41, .48, .52.





**EM-3958-SS** – Connector with no anti-crush device, with tapped fork and loose 10/32 screw *Standard packaging: 100/bx, 13 lb/bx.* 

Anti-crush devices: add suffix to part number to indicate shield diameter: .41, .48, .52.

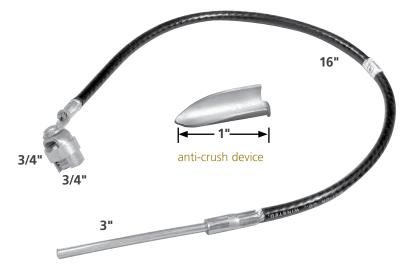




With combination flexible (16") and solid (3") harness, and anti-crush device.

Ordering information EM-3956-163SP

Standard packaging: 1 kit/bg, 25 kits/bx, 14 lb/bx.



### SHIELDED FIBER OPTIC DROP WIRE SHIELD CONNECTOR

Used for 6- or 12-fiber cable with a penetrating metallic shield (or armor). Inside of strength teeth penetrating both yoke and pusher ring have tiny member teeth penetrating teeth to make electrical groove contact through the coating of the shield. The legs of the connector strength yoke have grooves to fit the strength member members of a 12-fiber cable. groove Ordering information EM-3956-DD



6" insulated bonding harness (#10 AWG) with 3/8" ring terminal at one end, and fiber optic cable shield connector with blossoms at the other end.

Ordering information EM-6111 Standard packaging: 20/bd, 200/bx, 9 lb/bx.



Insulated bonding harness with 1/4" ring terminal at one end, and 3/4" x 3/4" fiber optic cable shield connector with 9 blossoms at the other end. Crimp termination and harness formed up at 45° angle from top surface of connector. Utilizes #6 AWG bonding harness.

Ordering information EM-6116-6 – 6" harness EM-6116-8 – 8" harness

Standard packaging: 500/bx, 46 lb/bx.

EM-6116-12 – 12" harness Standard packaging: 300/bx, 41 lb/bx.

EM-6116-15 - 15" harness



.58"

Cable shield connector, straight with a crimp sleeve and 26" of solid #6 tinned.

Ordering information EM-6116-26T

*Standard packaging: 20/bg, 100/bx, 3 lb/bx. No minimum order.* 



## **Miscellaneous**

### **CROSS CONNECT/FRAME & JUMPER WIRE**

A twisted pair of #22 or #24 AWG tinned, solid copper conductor with a semi-rigid PVC insulation. Used on distributing frames and cross-connecting racks, and for wiring various central office equipment. Standard lengths are 250, 400, 800, 1000 feet/spool. Standard color combinations are: red/white, violet/white, blue/white, green/white, orange/white, black/white, brown/ white. A twisted pair of #22 or #24 AWG tinned, solid copper conductor with a semi-rigid PVC insulation. Used on distributing frames and cross-connecting racks, and for wiring various central office equipment. Standard lengths are 250, 400, 800, 1000 feet/spool. Standard color combinations are: red/white, blue/white, blue/white, green/white, orange/white, black/white, black/white, blue/white, blue/white, green/white, orange/white, black/white, black/white, blue/white, blue/white, green/white, orange/white, black/white, black/white, black/white, black/white, blue/white, blue/white, green/white, orange/white, black/white, black/white, black/white, blue/white, blue/white, green/white, orange/white, black/white, black/white, blue/white, blue/white, green/white, orange/white, black/white, black/white, blue/white, blue/white, green/white, orange/white, black/white, black/white, blue/white, green/white, orange/white, black/white, black/white, blue/white, blue/white, green/white, orange/white, black/white, black/whi

400' spools fit inside the door of cross connect cabinets 400 feet

Ordering information

#22 AWG: EM-0222 RW-XXX (length) EM-0222 GW-XXX EM-0222 VW-XXX EM-0222 BKW-XXX EM-0222 BW-XXX EM-0222 BR-XXX

#24 AWG: EM-0224 GW-XXX EM-0224 OW-XXX EM-0224 RW-XXX





Shipping information standard packaging #22 AWG: 250' sp, 24 sp/bx 400' sp, 20 sp/bx 800' sp, 12 sp/bx. 1000' sp, 12 sp/bx

#24 AWG: 250' sp, 24 sp/bx 400' sp, 20 sp/bx 800' sp, 24 sp/bx 1000' sp, 12 sp/bx

**EM-0224 BR-800 CT5** – 1 pr #24 AWG blue/red, 800 ft spool, Cat. 5 twist.

### 5-CONDUCTOR TWISTED WIRE, #22 OR #24 AWG



Tinned conductor, PVC insulation. For T1 lines. Fifth conductor can be used for tracing. Colors: red/green/white/ black/blue or any other combination.

Ordering information: EM-0522 RGWBKBL-XXX (length) #22 AWG EM-0524 RGWBKBL-XXX (length) #24 AWG

For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com

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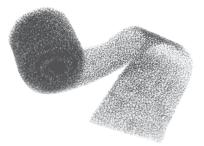
## **Miscellaneous**

#### **FOAM TAPE**

Open cell plastic tape for centering wire works in a closure.

Ordering information :

**EM-4800** – 2-1/2" x 1/4" x 72" *Standard packaging: 100 rl/bx, 8 lb/bx*  **EM-4804** – 4" x 1/4" x 72" *Standard packaging: 50 rl/bx, 7 lb/bx*  **EM-4808** – 18" x 1/4" x 72" *Standard packaging: 20 rl/bx, 12 lb/bx* 



#### **WARNING TAGS**

INTERNAL GROUND DO NOT REMOVE Ordering information

**EM-3040-TAG** Round "INTERNAL GROUND DO NOT REMOVE" tag. Plastic, UV resistant. *Standard packaging: 500/bx, 25/bg, 2 lb/bx.* 

**EM-5050-TAG** Rectangular "WARNING" tag. Plastic, UV-resistant. *Standard packaging: 2 lb/ 200 pcs.* 



For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com



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## **Miscellaneous**

#### **TONING WIRE CONNECTOR**

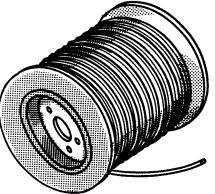
Ordering information EM-4543 Standard packaging: 2/bg, 50/bx, 5 lb/bx.



#### **TONING WIRE**

1/16" diameter, stainless steel cable, 7 x 7 construction, vinyl coated.

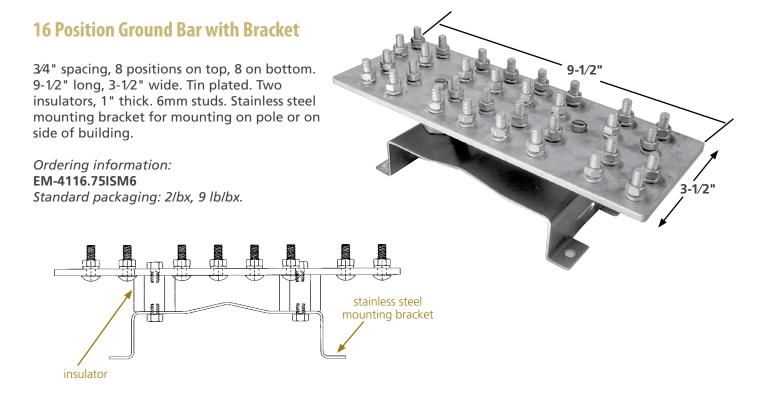
Ordering information : EM-4545 2.5 – 2,500-ft. spool, 29 lb EM-4545 5.0 – 5,000-ft. spool, 52 lb EM-4545-XXXX – XXXX = any requested length



BONDING & GROUNDING



#### **GROUND BARS**

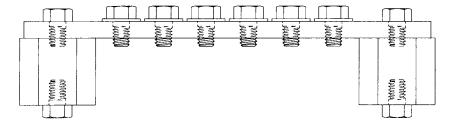


#### **6 Position Ground Bar**

6" long, 5/8" spacing, two 5/16" diameter mounting holes. Six sets of 1/4 x 20 tapped holes, 8 sets brass hex screws, 6 sets flat washers, and two 1" long plastic insulators.

Ordering information: **EM-4120** Standard packaging: 10/bx, 14 lb/bx.

Add suffix **-T** for tin plating.



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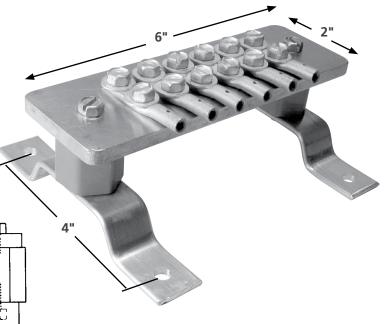


2"

#### 6 Position Ground Bar with Screw-on Terminals

6" long, 2" wide, 5/8" spacing, six mounting positions across. Mounting brackets attached, as well as six double-holed screw-on terminals.

Ordering information: EM-4120-1 Add suffix -T for tin plating.

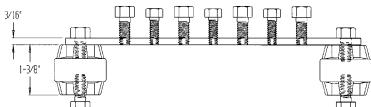


#### 7 Position Copper Ground Bar

10" long, 4" wide, 5/8" spacing, 7 mounting positions across, and two isolator mounting holes, 3/8" thru. Pattern from left: 3 holes 3/8 x 16; 2 holes 5/16 x 18; repeat. Stainless steel hex head screws, Glastic isolators.

Ordering information: **EM-4121** Standard packaging: 2/bx, 9 lb/bx.





For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com

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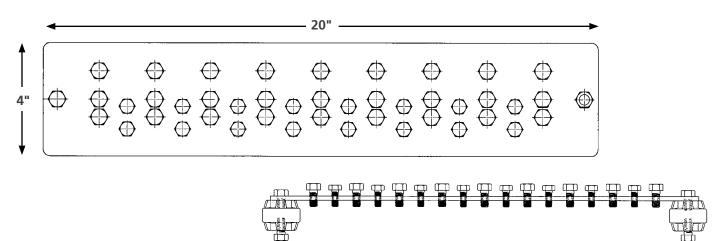


### **GROUND BARS, CONTINUED**

#### **17 Position Copper Ground Bar**

20" long, 4" wide, 5/8" spacing, 17 mounting positions across with hex head screws, and two insulators.

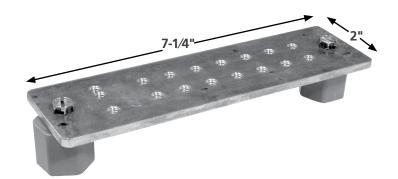
Ordering information: **EM-4122** Standard packaging: 28 lb/4 pcs.



#### 8 Position Ground Bar with Isolators

7-1/4" long, 2" wide, 5/8" spacing, two 5/16" diameter mounting holes.

Ordering information: **EM-4123** Standard packaging: 15/bx, 16 lb.bx.





For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com



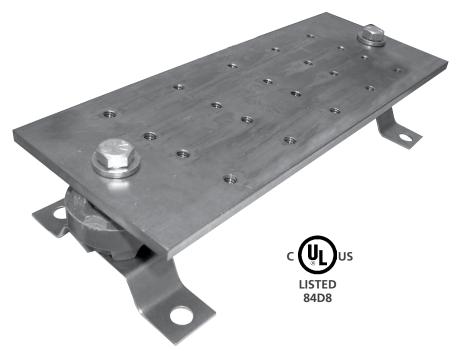
LISTED

84D8

US

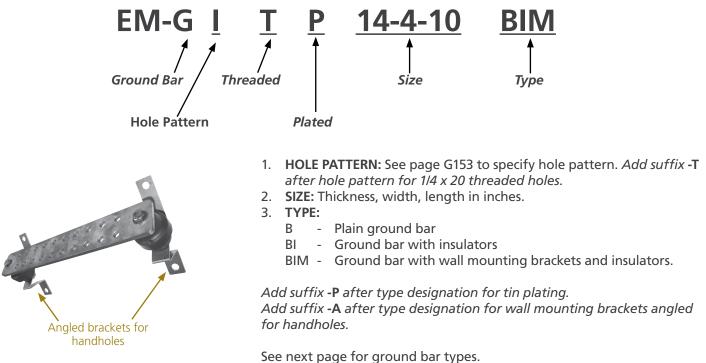
## <u> Miscellaneous – Ground Bars</u>

### **SPECIFYING GROUND BARS**



#### **Ground Bar Numbering System**

Follow the three steps below to specify the type and size of ground bar you need. The example pictured above is a ground bar with wall mounting brackets and insulators. The ground bar is 1/4" thick, 4" wide, and 10" long. It has a hole pattern "I" with tapped holes.



For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com

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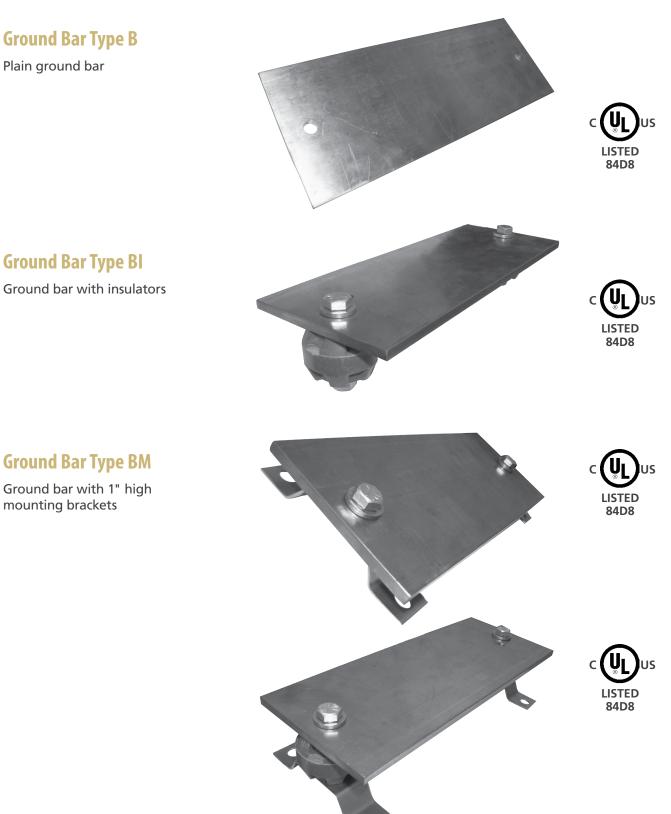
#### **GROUND BAR TYPES**

#### **Ground Bar Type B**

Plain ground bar

mounting brackets

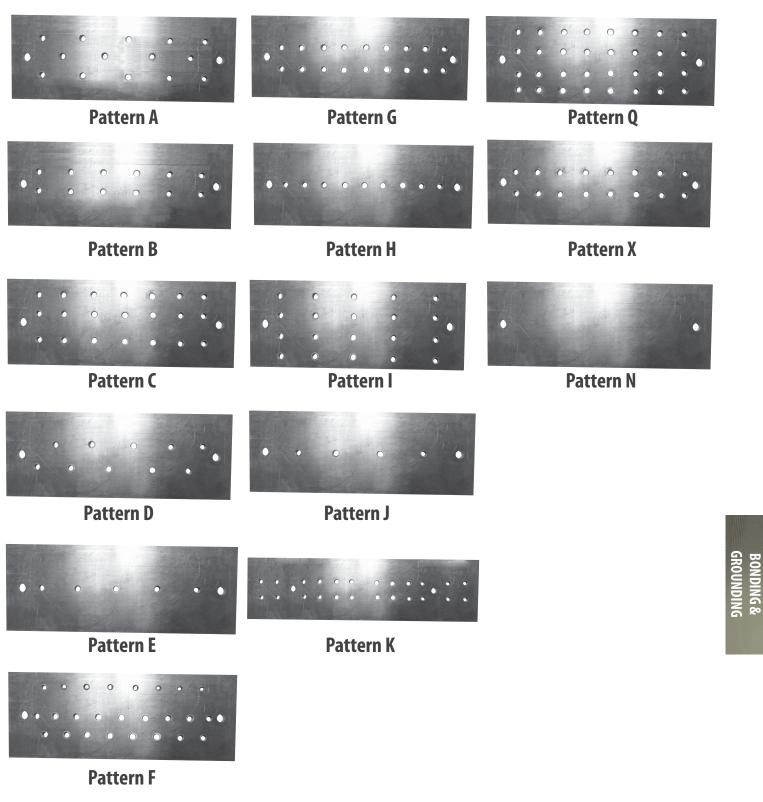
See previous page to build a part number.





### **GROUND BAR HOLE PATTERNS**

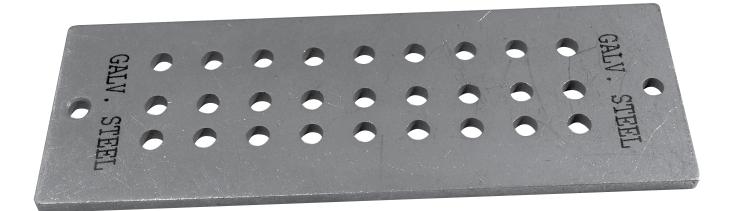
#### See page G151 to build a part number.





#### **GALVANIZED STEEL GROUND BARS**

### **BAR ONLY – Verizon Wireless Galvanized Steel Ground Bar Replacement**



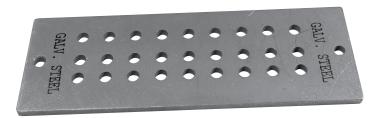
#### Ordering information:

| EM-SGC 49-VZW  | Galvanized ground bar, 1/4" x 4" x 9" with 7/16" mounting holes (bar only).  |
|----------------|------------------------------------------------------------------------------|
| EM-SGC 412-VZW | Galvanized ground bar, 1/4" x 4" x 12" with 7/16" mounting holes (bar only). |
| EM-SGC 418-VZW | Galvanized ground bar, 1/4" x 4" x 18" with 7/16" mounting holes (bar only). |
| EM-SGC 420-VZW | Galvanized ground bar, 1/4" x 4" x 20" with 7/16" mounting holes (bar only). |
| EM-SGC 424-VZW | Galvanized ground bar, 1/4" x 4" x 24" with 7/16" mounting holes (bar only). |



## GALVANIZED STEEL GROUND BARS CONTINUED

### BAR ONLY, WITH ANTI-THEFT HARDWARE Verizon Wireless Galvanized Steel Ground Bar Replacement

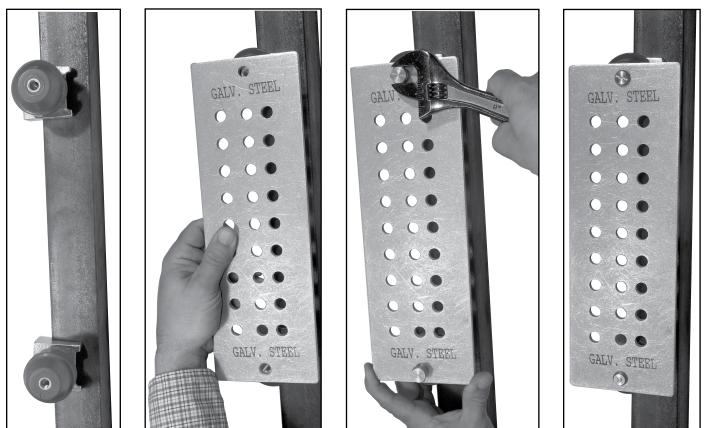




Two 3/8" torque shear head stainless steel bolts (nonremovable) with anti-loosening compound in threads

**NONREMOVABLE** 

#### Galvanized steel ground bar



Isolators and mounting hardware remaining after ground bar has been stolen.

Align replacement ground bar with isolators.

Insert torque shear head bolts. Tighten bolts until heads shear off.

BONDING & GROUNDING

For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com

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Heads broken off.

#### **GALVANIZED STEEL GROUND BARS (CONTINUED)**

### BAR ONLY, WITH ANTI-THEFT HARDWARE Verizon Wireless Galvanized Steel Ground Bar Replacement

Ordering information:

| EM-SGC 49-VZW-NR  | Galvanized ground bar, 1/4" <b>x 4" x 9"</b> with 7/16" mounting holes and two stainless steel torque shear head bolts. With anti-loosening compound. Nonremovable.  |
|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EM-SGC 412-VZW-NR | Galvanized ground bar, 1/4" x <b>4" x 12"</b> with 7/16" mounting holes and two stainless steel torque shear head bolts. With anti-loosening compound. Nonremovable. |
| EM-SGC 418-VZW-NR | Galvanized ground bar, 1/4" x <b>4" x 18"</b> with 7/16" mounting holes and two stainless steel torque shear head bolts. With anti-loosening compound. Nonremovable. |
| EM-SGC 420-VZW-NR | Galvanized ground bar, 1/4" <b>x 4" x 20"</b> with 7/16" mounting holes and two stainless steel torque shear head bolts. With anti-loosening compound. Nonremovable. |
| EM-SGC 424-VZW-NR | Galvanized ground bar, 1/4" <b>x 4" x 24"</b> with 7/16" mounting holes and two stainless steel torque shear head bolts. With anti-loosening compound. Nonremovable. |

For a 1/2" bolt, add suffix .5.

BONDING & Grounding

For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com



**NONREMOVABLE** 

## **GALVANIZED STEEL GROUND BARS (CONTINUED)**

WITH ISOLATORS AND WALL MOUNTING BRACKET Verizon Wireless Galvanized Steel Ground Bar



#### Ordering information:

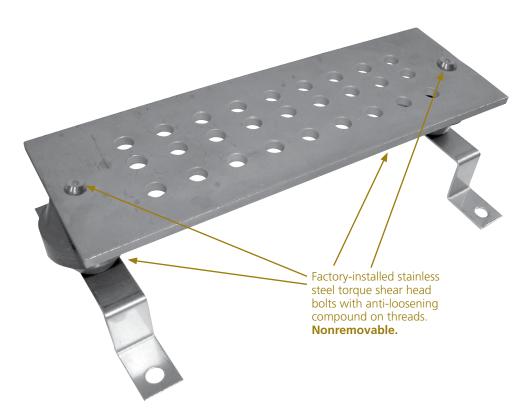
| Galvanized ground bar, 1/4" <b>x 4" x 9"</b> with 7/16" mounting holes, isolators, and wall mounting bracket.  |
|----------------------------------------------------------------------------------------------------------------|
| Galvanized ground bar, 1/4" <b>x 4" x 12"</b> with 7/16" mounting holes, isolators, and wall mounting bracket. |
| Galvanized ground bar, 1/4" <b>x 4" x 18"</b> with 7/16" mounting holes, isolators, and wall mounting bracket. |
| Galvanized ground bar, 1/4" <b>x 4" x 20"</b> with 7/16" mounting holes, isolators, and wall mounting bracket. |
| Galvanized ground bar, 1/4" <b>x 4" x 24"</b> with 7/16" mounting holes, isolators, and wall mounting bracket. |



#### **GALVANIZED STEEL GROUND BARS (CONTINUED)**

### WITH ISOLATORS AND WALL MOUNTING BRACKET Verizon Wireless Galvanized Steel Ground Bar

## **NONREMOVABLE**



Ordering information:

| EM-SG 9-VZW-BIM-NR  | Galvanized ground bar, 1/4" <b>x 4" x 9"</b> with 7/16" mounting holes, isolators, and wall mounting bracket. Nonremovable.  |
|---------------------|------------------------------------------------------------------------------------------------------------------------------|
| EM-SG 12-VZW-BIM-NR | Galvanized ground bar, 1/4" <b>x 4" x 12"</b> with 7/16" mounting holes, isolators, and wall mounting bracket. Nonremovable. |
| EM-SG 18-VZW-BIM-NR | Galvanized ground bar, 1/4" <b>x 4" x 18"</b> with 7/16" mounting holes, isolators, and wall mounting bracket. Nonremovable. |
| EM-SG 20-VZW-BIM-NR | Galvanized ground bar, 1/4" <b>x 4" x 20"</b> with 7/16" mounting holes, isolators, and wall mounting bracket. Nonremovable. |
| EM-SG 24-VZW-BIM-NR | Galvanized ground bar, 1/4" <b>x 4" x 24"</b> with 7/16" mounting holes, isolators, and wall mounting bracket. Nonremovable. |

For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com



**BONDING &** 

### **GALVANIZED STEEL GROUND BARS (CONTINUED)**

### WITH ISOLATORS AND I-BEAM SUPPORT CLAMP Verizon Wireless Galvanized Steel Ground Bar



Ordering information:

| EM-SGC 49-VZW-BIIB  | Galvanized ground bar, 1/4" <b>x 4" x 9"</b> with 7/16" mounting holes, isolators, and I-beam support clamp.     |
|---------------------|------------------------------------------------------------------------------------------------------------------|
| EM-SGC 412-VZW-BIIB | Galvanized ground bar, 1/4" <b>x 4" x 12"</b> with 7/16" mounting holes, isolators, and<br>I-beam support clamp. |
| EM-SGC 418-VZW-BIIB | Galvanized ground bar, 1/4" <b>x 4" x 18"</b> with 7/16" mounting holes, isolators, and<br>I-beam support clamp. |
| EM-SGC 420-VZW-BIIB | Galvanized ground bar, 1/4" <b>x 4" x 20"</b> with 7/16" mounting holes, isolators, and<br>I-beam support clamp. |
| EM-SGC 424-VZW-BIIB | Galvanized ground bar, 1/4" <b>x 4" x 24"</b> with 7/16" mounting holes, isolators, and<br>I-beam support clamp. |

BONDING & GROUNDING



#### **GALVANIZED STEEL GROUND BARS (CONTINUED)**

## **NONREMOVABLE**

### WITH ISOLATORS AND I-BEAM SUPPORT CLAMP Verizon Wireless Galvanized Steel Ground Bar

Stainless steel torque shear head bolts with antiloosening compound on threads. **Nonremovable.** 

Factory-installed stainless steel torque shear head bolts with anti-loosening compound on threads. **Nonremovable.** 



Re-align ground bar to proper position. Tighten bolts until the heads shear off.

Align ground bar on structure or tower where needed.

#### Please see next page for ordering information.

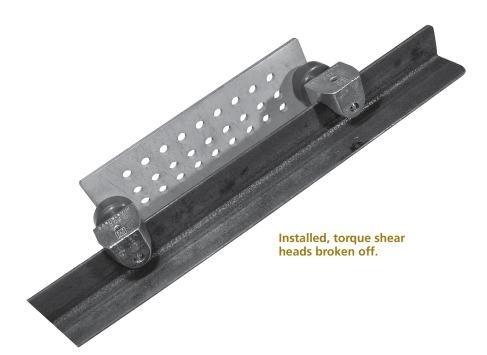
For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com

**BONDING 8** 

### **GALVANIZED STEEL GROUND BARS (CONTINUED)**

### WITH ISOLATORS AND i-BEAM SUPPORT BRACKET Verizon Wireless Galvanized Steel Ground Bar

## NONREMOVABLE



Ordering information:

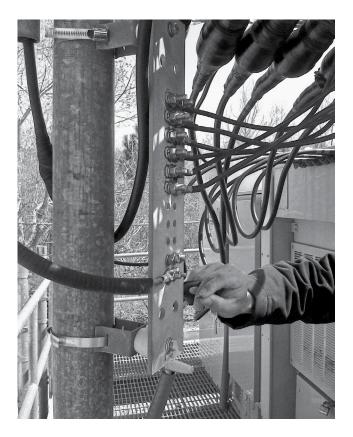
| EM-SG 9-VZ-BIIB-NR  | Galvanized ground bar (nonremovable), 1/4" <b>x 4" x 9"</b> with 7/16" mounting holes,<br>isolators, and I-beam support clamp.  |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------|
| EM-SG 12-VZ-BIIB-NR | Galvanized ground bar (nonremovable), 1/4" <b>x 4" x 12"</b> with 7/16" mounting holes,<br>isolators, and I-beam support clamp. |
| EM-SG 18-VZ-BIIB-NR | Galvanized ground bar (nonremovable), 1/4" <b>x 4" x 18"</b> with 7/16" mounting holes,<br>isolators, and I-beam support clamp. |
| EM-SG 20-VZ-BIIB-NR | Galvanized ground bar (nonremovable), 1/4" <b>x 4" x 20"</b> with 7/16" mounting holes, isolators, and I-beam support clamp.    |
| EM-SG 24-VZ-BIIB-NR | Galvanized ground bar (nonremovable), 1/4" <b>x 4" x 24"</b> with 7/16" mounting holes, isolators, and I-beam support clamp.    |

GROUNDING &



### **GALVANIZED STEEL GROUND BARS (CONTINUED)**

### WITH ISOLATORS AND POLE SUPPORT CLAMP Verizon Wireless Galvanized Steel Ground Bar



#### Ordering information:

BONDING & Grounding

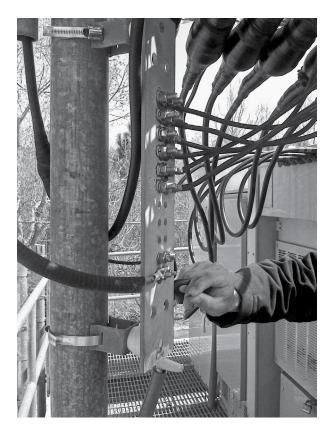
| EM-SGC 49-VZW-BIPS  | Galvanized ground bar, 1/4" <b>x 4" x 9"</b> with 7/16" mounting holes, isolators, and pole support clamp.  |
|---------------------|-------------------------------------------------------------------------------------------------------------|
| EM-SGC 412-VZW-BIPS | Galvanized ground bar, 1/4" <b>x 4" x 12"</b> with 7/16" mounting holes, isolators, and pole support clamp. |
| EM-SGC 418-VZW-BIPS | Galvanized ground bar, 1/4" <b>x 4" x 18"</b> with 7/16" mounting holes, isolators, and pole support clamp. |
| EM-SGC 420-VZW-BIPS | Galvanized ground bar, 1/4" <b>x 4" x 20"</b> with 7/16" mounting holes, isolators, and pole support clamp. |
| EM-SGC 424-VZW-BIPS | Galvanized ground bar, 1/4" <b>x 4" x 24"</b> with 7/16" mounting holes, isolators, and pole support clamp. |



### **GALVANIZED STEEL GROUND BARS (CONTINUED)**

## NONREMOVABLE

### WITH ISOLATORS AND POLE SUPPORT CLAMP Verizon Wireless Galvanized Steel Ground Bar



#### Ordering information:

- **EM-SG 9-VZ-BIIB-NR** Galvanized ground bar, 1/4" **x 4" x 9**" with 7/16" mounting holes, isolators, and pole support clamp. Nonremovable.
- **EM-SG 12-VZ-BIPS-NR** Galvanized ground bar, 1/4" **x 4" x 12"** with 7/16" mounting holes, isolators, and pole support clamp. Nonremovable.
- **EM-SG 18-VZ-BIPS-NR** Galvanized ground bar, 1/4" **x 4" x 18"** with 7/16" mounting holes, isolators, and pole support clamp. Nonremovable.
- **EM-SG 20-VZ-BIPS-NR** Galvanized ground bar, 1/4" **x 4" x 20"** with 7/16" mounting holes, isolators, and pole support clamp. Nonremovable.
- **EM-SG 24-VZ-BIPS-NR** Galvanized ground bar, 1/4" **x 4" x 24"** with 7/16" mounting holes, isolators, and pole support clamp. Nonremovable.



#### **GALVANIZED STEEL GROUND BAR ACCESSORIES**

NONREMOVABLE Replacement Bolt for Galvanized Steel Ground Bars with 1/2" mounting hole, 1/2" isolator mounting hole



Ordering information:

EM-12TSHB-SS

Stainless Steel Bolt, 1/2–13. Torque-shear head with anti-loosening compound on threads. Nonremovable

### NONREMOVABLE Replacement Bolt for Galvanized Steel Ground Bars with 1/2" mounting hole, 3/8" isolator mounting hole

Fits 3/8" isolator mounting hole



Ordering information:

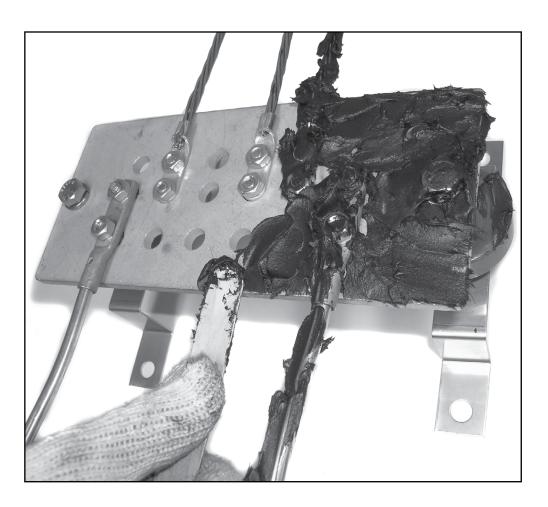
EM-38TSHB-SS.5

Stainless Steel Bolt, 3/8–16, with 1/2" shoulder. Torque-shear head with anti-loosening compound on threads. Nonremovable



### GALVANIZED STEEL GROUND BAR ACCESSORIES (CONTINUED)

### **Anti-Theft Compound**



A highly conductive compound, nasty to touch, and very difficult to clean off your clothing. To be used on master ground bars, copper conductors, or any copper that is exposed to theft.

Ordering information:

EM-5101Anti-theft compound, 1 quartEM-5102Anti-theft compound, 1 gallon



### DRY BOX SPLICE CONNECTOR HOUSING

#### Description

An impact-resistant plastic housing for containing service wire splice connectors.

#### **Features/ Applications**

- Lightweight
- Inexpensive
- Mounts easily to the side of a house, under the rafter eaves, in the basement

Ordering information ()

**EM-9215** – Gray plastic dry box *Standard packaging: 50/bx, 5 lb/bx.* 







### LO-OHM GROUNDING CEMENT

Lo-Ohm Grounding Cement is a fine powder packaged in 55-lb. bags which provides an environmentally safe, long-term solution to many grounding problems. Lo-Ohm Grounding Cement grounding electrodes are easily installed by spreading the dry powder in a strip over and around a conductor in a horizontal trench.When the



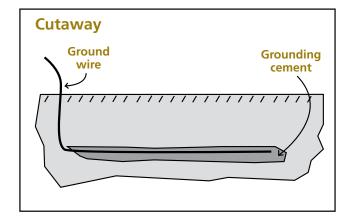
trench is refilled, Lo-Ohm Grounding Cement absorbs moisture from the surrounding soil and hardens to become part of the grounding electrode. The surface area of the electrode is thus dramatically increased, and resistance to ground is substantially reduced. In addition, surge impedance is also lowered significantly.

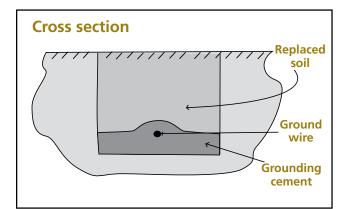
Lo-Ohm Grounding Cement was developed in the 1970s to aid in the grounding of electric power transmission lines in mountainous areas where construction is difficult and soil resistivities tend to be high. Since then, it has proven effective in a wide variety of other applications, including power

station grids, telecommunication switches, radio transmission towers, and cathodic protection systems. The consistent performance of Lo-Ohm Grounding Cement grounding systems has been confirmed through longterm monitoring of installed electrodes. Independent testing has shown that Lo-Ohm Grounding Cement is environmentally safe, and has proven that Lo-Ohm Grounding Cement-covered copper electrodes last ten times longer than bare copper ground wires.

#### Features

- Reduces resistance to ground
- Lowers surge impedance significantly
- Environmentally safe
- Provides ideal contact with the surrounding soil
- Reduces corrosion in grounding conductors
- Cost-efficient and maintenance-free





#### Applications

- Electric transmission and distribution towers
- Power plant grounding grids
- Substation ground systems
- Cathodic protective systems
- Central office switches
- Cellular systems
- Remote digital switches
- Radio transmission towers
- Central office DC power



#### EM-M5C – Standard packaging: 55 lb. bag.

For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com



emo

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## **SHIELD CONNECTOR FOR CAT 5 CABLES**

The EM-9556BW S(.218) C(.31) is a small cable shield connector that can be installed on a small cable that is already placed.

The take-apart design fits around cables proximately .3–.45 diameter, but each diameter or style of cable should be submitted to the factory. After basic installation (1), insulation displacement screws are run down (2) to contact the shield with no loss or attenuation.

Connector can be used for both bonding and grounding or locating. No need to open sheath and shield. Comes as a standard with 36"-long #10 AWG green lead.

Ordering information

EM-9556-BW S(.218) C(.31) – Small cable shield connector

1. Basic installation





Insulation displacement screws



### **DOUBLE-HOLE GROUND LUGS**

Accommodate #6-#2 AWG ground wires, solid or stranded.

#### Ordering information

**EM-6630** Double-Hole Ground Lug **EM-6631** Double-Hole Ground Bar Lug with parallel mounting tang





#### **CORROSION-RESISTANT HARDWARE**

EMC hardware is available for use in new construction, maintenance, and retrofitting in OSP and central office. It is available in copper alloy (brass or bronze), stainless steel, or galvanized steel.

1



| Hex Head Screws – Coarse Thread |            |            |           |                 |                 |                 |           |
|---------------------------------|------------|------------|-----------|-----------------|-----------------|-----------------|-----------|
| Length<br>Diameter-Thread       | 1/2        | 3⁄4        | 1         | 1-1⁄4           | 1-1/2           | 1-3⁄4           | 2         |
| 10 - 24                         | EM-10C12B  | EM-10C34B  | EM-10C1B  | EM-10C114B      | EM-10C112B      | EM-10C134B      | EM-10C2B  |
| 1⁄4 - 20                        | EM-14C12B  | EM-14C34B  | EM-14C1B  | EM-14C114B      | EM-14C112B      | EM-14C134B      | EM-14C2B  |
| 5⁄16 - 18                       | EM-516C12B | EM-516C34B | EM-516C1B | EM-<br>516C114B | EM-<br>516C112B | EM-<br>516C134B | EM-516C2B |
| 3⁄8 - 16                        | EM-38C12B  | EM-38C34B  | EM-38C1B  | EM-38C114B      | EM-38C112B      | EM-38C134B      | EM-38C2B  |
| 1⁄2 - 13                        | EM-12C12B  | EM-12C34B  | EM-12C1B  | EM-12C114B      | EM-12C112B      | EM-12C134B      | EM-12C2B  |

|--|

| Hex Head Screws – Fine Thread |            |            |           |                 |             |             |           |
|-------------------------------|------------|------------|-----------|-----------------|-------------|-------------|-----------|
| Length<br>Diameter-Thread     | 1/2        | 3⁄4        | 1         | 1-1⁄4           | 1-1/2       | 1-3⁄4       | 2         |
| 10 - 32                       | EM-10F12B  | EM-10F34B  | EM-10F1B  | EM-10F114B      | EM-10F112B  | EM-10F134B  | EM-10F2B  |
| 1/4 - 28                      | EM-14F12B  | EM-14F34B  | EM-14F1B  | EM-14F114B      | EM-14F112B  | EM-14F134B  | EM-14F2B  |
| 5⁄16 - 24                     | EM-516F12B | EM-516F34B | EM-516F1B | EM-<br>516F114B | EM-516F112B | EM-516F134B | EM-516F2B |
| 3⁄8 - 24                      | EM-38F12B  | EM-38F34B  | EM-38F1B  | EM-38F114B      | EM-38F112B  | EM-38F134B  | EM-38F2B  |
| 1⁄2 - 20                      | EM-12F12B  | EM-12F34B  | EM-12F1B  | EM-12F114B      | EM-12F112B  | EM-12F134B  | EM-12F2B  |

#### Ordering information

To order, find the part number of the hardware you need in the above charts, and add a material suffix as follows:

- SB = silicon bronze or brass
- SS = stainless steel
- **GS** = galvanized steel



### **CORROSION-RESISTANT HARDWARE (CONTINUED)**



| Nuts – Coarse Thread      |          |  |  |  |  |
|---------------------------|----------|--|--|--|--|
| Length<br>Diameter-Thread | P/N      |  |  |  |  |
| 10 - 24                   | EM-10CN  |  |  |  |  |
| 1/4 - 20                  | EM-14CN  |  |  |  |  |
| 5⁄16 - 18                 | EM-516CN |  |  |  |  |
| 3⁄8 - 16                  | EM-38CN  |  |  |  |  |
| 1⁄2 - 13                  | EM-12CN  |  |  |  |  |



| Nuts – Fine Thread        |          |  |  |  |
|---------------------------|----------|--|--|--|
| Length<br>Diameter-Thread | P/N      |  |  |  |
| 10 - 32                   | EM-10FN  |  |  |  |
| 1⁄4 - 28                  | EM-14FN  |  |  |  |
| 5⁄16 - 24                 | EM-516FN |  |  |  |
| 3⁄8 - 24                  | EM-38FN  |  |  |  |
| 1⁄2 - 20                  | EM-12FN  |  |  |  |

| Lock Washers |         | Flat Washers |          |  |
|--------------|---------|--------------|----------|--|
| Diameter     | P/N     |              | Diameter |  |
| 10           | EM-10L  |              | 10       |  |
| 1/4          | EM-14L  | The state    | 1/4      |  |
| 5⁄16         | EM-516L |              | 5⁄16     |  |
| 3⁄8          | EM-38L  |              | 3⁄8      |  |
| 1/2          | EM-12L  |              | 1/2      |  |

#### Ordering information

To order, find the part number of the hardware you need in the above charts, and add a material suffix as follows:

SB = silicon bronze or brassSS = stainless steelGS = galvanized steel

All the hardware on these two pages is also available packaged as kits: screw, nut, and washer. Please call 860-379-8515 or e-mail customerservice@electricmotioncompany.com for details.





## Pole Line Hardware

### **C CONNECTOR**



Tin-plated bronze connector with teeth for piercing the messenger insulation of Figure 8 cable. For messenger diameters of .146"–.312" and ground conductor range of .146"–.312".

*Ordering information* **EM-0167** *Standard packaging: 100/bx, 23 lb/bx.* 



#### **STRAND BOND CLAMP**

Patent pending

#### Features

- Galvanized steel construction for compatibility with strand.
- Stainless steel carriage bolt.
- Standard 1/2" nut captured.
- Bow design creates spring action tension on clamp.
- Single clamping action connects strand/ground wire.
- Wraparound design grips strand more securely

#### Applications

- Connecting #6 AWG solid to #6 AWG solid ground wire
- Connecting strand to strand (1/4" [6.6M]–7/16" [16M])
- Connecting #6 AWG to strand

Ordering information

EM-4811 Standard packaging: 10/bg, 100/bx, 21 lb/bx.

#### EM-4811SS

Strand bond clamp, all stainless steel body and hardware



# **Pole Line Hardware**

#### **KUL BONDING CLAMP**

#### Description

Used to Bond 1/4" to 7/16" Strand to #8 to 2/0 Copper Wire.

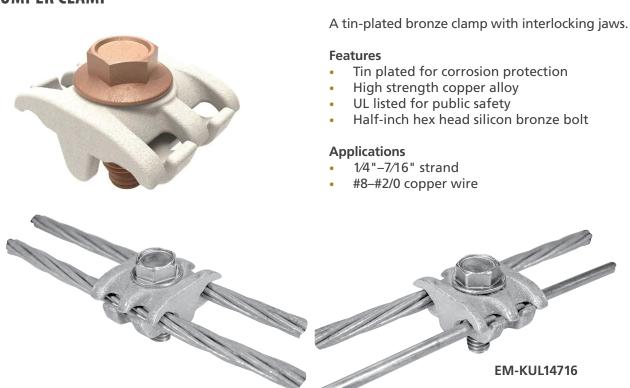
#### **Features/ Applications**

- Tin plated for corrosion protection
- High strength copper alloy
- Half-inch hex head silicon bronze bolt
- 1/4" 7/16" strand
- #8 #2/0 copper wire



EM-KUL14716

#### **JUMPER CLAMP**



EM-KUL14716BG

EM-KUL14716BG



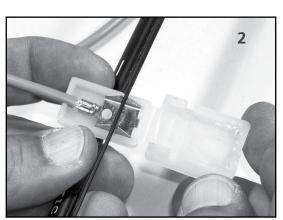
## Fiber to the Premise – FTTP

## FIBER-TO-THE-HOME DROP LOCATE WIRE GROUND HARNESS

#### Description

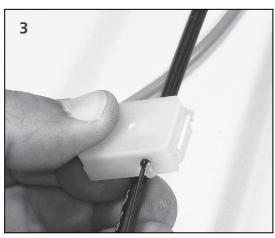
A gel-filled insulationdisplacement connector to ground #24 AWG locate wires in the handhole or the pedestal, or at the residence.

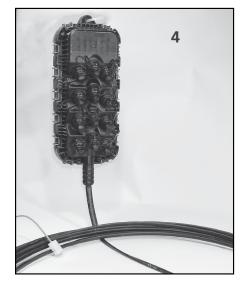




#### Handhole Installation

- **1.** Carefully make an 8" slit in the web of the fiber drop, generally in the first slack coil in the bottom of the handhole.
- 2. Remove the release paper from the gel on connector EM-9181. Slide the connector into the slit area under the locate wire.
- **3.** Position the locate wire at the entrance to the brass IDC terminal, then close the cover.
- **4.** Attach the green ground wire to one of the studs on the grounding location.





#### **Benefits**

- Allows locate wire to be grounded in the handhole and not bring lightning into the ONT or ONU.
- No stripping of locate wire
- Flexible lead allows "float"
- Waterproof for underground
- Low-cost
- Allows extending a broken locate wire

#### Ordering information :

**EM-9181-XX-X** – Toneable Fiber Flat Drop Cable Connector with attached grounding harness. Specify length of #14 AWG green harness (XX), and either .10 or .25 diameter mounting hole on ring terminal on free end (X). Connects to #24 AWG without stripping.



For Electric Motion Company (EMC) part numbers starting with "EM" please contact EMC customer service at 860-379-8515 or cs110@hubbell.com



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