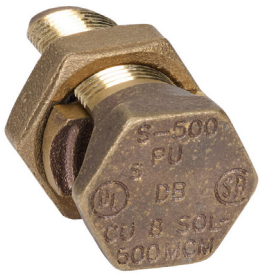
Penn-Union Type S Copper Alloy Split Bolt Connectors

Penn-Union Type S Copper Alloy Split Bolt Connectors are manufactured from high-strength copper alloy and are highly resistant to corrosion and the effects of thermal cycling. Designed for use with a wide range of copper solid, compact, compressed, concentric, copperweld conductors and rebar, these connectors are approved for electrical power, grounding/bonding, and direct burial applications.

Type S connectors are designed for use with two conductors in electrical power applications and for two conductors or conductor to rebar in grounding/bonding and direct burial applications in earth and concrete.

S-10-1



S-500-1

Features

- True hex design allows easy installation with standard tooling (torque wrench, standard socket, box, or open-end wrench)
- Under torque, this design provides high contact pressure between conductors or conductor to rebar
- Wide wire range
- Rated for copper conductors, 90 °C
- Reusable with proper installation practice
- Sizes up to 1/0 are RUS REA Accepted

Standards

UL 486A-486B, "Wire Connectors"
UL 467, "Grounding and Bonding Equipment"
CSA C22.2 No. 65, "Wire Connectors"
CSA C22.2 No. 41, "Grounding and Bonding Equipment"

UL LISTED

460C
WIRE CONNECTOR
CU

UL File E12822
CSA File 023769

Penn-Union Type S Copper Alloy Split Bolt Connectors Selection Guide

Part Number	Price	Quantity Per Pack	Conductor Size Range (CU Only)		Max. Conductor Copperweld		Rebar Size With 6 or 8 AWG[1]	Wire Diameter Range (in)	Body Hex Size (in)	Nut Hex Size (in)	Torque (in·lb)	Drawing
			Equal Run & Tap	Min. Tap With One Max Main	Stranded	Type A						
S-10-5[2]	$9.25	5	16 Str. to 10 Str.	16 Str.	-	-	-	0.057 - 0.116	11/32	1/2	80	PDF
S-10-1[2]	$2.25	1										PDF
S-8-5	$10.00	5	16 Str. to 8 Str.	16 Str.	-	-	-	0.057 - 0.145	3/8	1/2	80	PDF
S-8-1	$2.50	1										PDF
S-6-5	$11.50	5	10 Sol. to 6 Sol.	16 Sol.	-	-	-	0.102 - 0.162	1/2	5/8	165	PDF
S-6-1	$2.75	1										PDF
S-4-5	$14.00	5	8 Sol. to 4 Sol.	16 Sol.	3 No. 12	8A	-	0.128 - 0.204	9/16	11/16	165	PDF
S-4-1	$3.00	1										PDF
S-3-5	$20.00	5	6 Sol. to 2 Sol.	12 Sol.	3 No. 9	5A	-	0.162 - 0.258	11/16	13/16	275	PDF
S-3-1	$4.25	1										PDF
S-2-5	$17.50	5	10 Sol. to 2 Str.	14 Str.	3 No. 7	3A	-	0.162 - 0.292	11/16	13/16	275	PDF
S-2-1	$4.00	1										PDF
S-1/0-1	$5.00	1	4 Sol. to 1/0 Str.	14 Sol.	3 No. 6	2A	-	0.204 - 0.375	3/4	7/8	385	PDF
S-2/0-1	$6.50	1	2 Sol. to 2/0 Str.	14 Str.	3 No. 5	-	#3 (3/8in)	0.258 - 0.418	13/16	1	385	PDF
S-3/0-1	$12.00	1	2 Sol. to 3/0 Str.	12 Sol.	7 No. 7	-	-	0.258 - 0.470	7/8	1-1/8	500	PDF
S-4/0-250-1	$14.00	1	1/0 Sol. to 250 kcmil	10 Sol.	7 No. 5	-	#4 (1/2in)	0.325 - 0.575	1	1-3/8	650	PDF
S-350-1[2]	$19.50	1	4/0 Str. to 350 kcmil	8 Sol.	19 No. 7	-	#5 (5/8in)	0.528 - 0.682	1-1/2	1-5/8	650	PDF
S-500-1[2]	$31.50	1	250 to 500 kcmil	8 Sol.	19 No. 6	-	#6 (3/4in)	0.575 - 0.815	1-5/8	1-13/16	825	PDF

Notes:
1) Not CSA certified with rebar
2) Not CSA certified for grounding, bonding, and direct burial

Penn-Union CUAL-GEL and CUAL-AID Oxide Inhibitors

1/2PT10CUALGEL-1

Penn-Union CUAL-GEL and CUAL-AID Selection Guide			
Part Number	***Price***	***Recommended Use***	***Unit Packaging***
1/2PT10CUALGEL-1	$15.00	CUAL-GEL is for use with conductors, connectors and conduit	8 oz squeeze bottle
1/2PT10NO11C-1	$18.00	CUAL-AID #11C is for aluminum-to-aluminum, aluminum-to-copper, conduit threads, and bolted applications	8 oz squeeze bottle
1/2PT10NO12C-1	$27.00	CUAL-AID #12C is for use with compression lugs and splices for aluminum-to-aluminum and aluminum-to-copper in all compression applications. Not for use on threads or bolted applications.	8 oz squeeze bottle

CUAL-GEL

Penn-Union CUAL-GEL is a non-melting, non-petroleum-based compound specifically designed to prevent oxidation and corrosion of aluminum, copper, tin and steel. It offers advanced protection under a variety of environmental conditions.

Features

- Prevents oxidation and corrosion
- Multiple uses with conductors, connectors and conduit
- Has little or no effect on rubber and other insulating materials
- Easy clean-up with soap and water

CUAL-AID #11C

Penn-Union CUAL-AID #11C is a high quality, non-melting, non-petroleum base electrical joint compound with suspended zinc particles. It is for use with compression lugs and splices and is recommended for aluminum-to-aluminum, aluminum-to-copper, conduit threads, and bolted applications.

Features

- Prevents oxidation and corrosion
- Has little or no effect on rubber and other insulating materials

CUAL-AID #12C

Penn-Union CUAL-AID #12C is a high quality compression use compound consisting of a non-melting, non-petroleum base material with suspended zinc particles and abrasive grit. It is for use with compression lugs and splices.

Recommended for aluminum-to-aluminum, aluminum-to-copper in all compression applications. Not for use on threads or bolted applications.

Features

- Prevents oxidation and corrosion
- Has little or no effect on rubber and other insulating materials

Easy to Apply

Connectors: DO NOT wire-brush the grooves or contact surfaces of plated or grease coated connectors. For unplated, ungreased connectors, wire-brush contact surfaces until bright and clean. Immediately apply compound to the conductive surfaces. Install conductor and finish installation.

Cable: Apply compound and wire-brush into strands of aluminum cable. This removes oxide coating from the strands and prevents it from reforming. Install conductor and finish installation.

Bar: Wire-brush compound across the surface of the bar to remove oxide coating and finish installation. DO NOT wire-brush plated surfaces; simply apply compound and finish installation.

Properties of CUAL-AID and CUAL-GEL				
Property	***Definition***	***CUAL-GEL***	***CUAL-AID #11C (With zinc particles)***	***CUAL-AID #12C (With zinc and grit)***
Penetration (Unworked)	The value in accordance with ASTM D217 indicates the consistency of a compound. The higher the number, the softer the compound.	230-270	240-280	220-260
Dropping Point (Min)	The temperature at which the compound passes from semi-solid to liquid state under test conditions	500 °F [260 °C] Non-melting		
Pour Point (Max)	The lowest temperature at which the compound will flow. Pour point is the lubricant's ability to perform in cold conditions.	-10 °F [-23.3 °C]		
Service Temperature Range	After installation, the temperature at which the compound is expected to perform and protect.	-58 to +302 °F [-50 to +150 °C]		