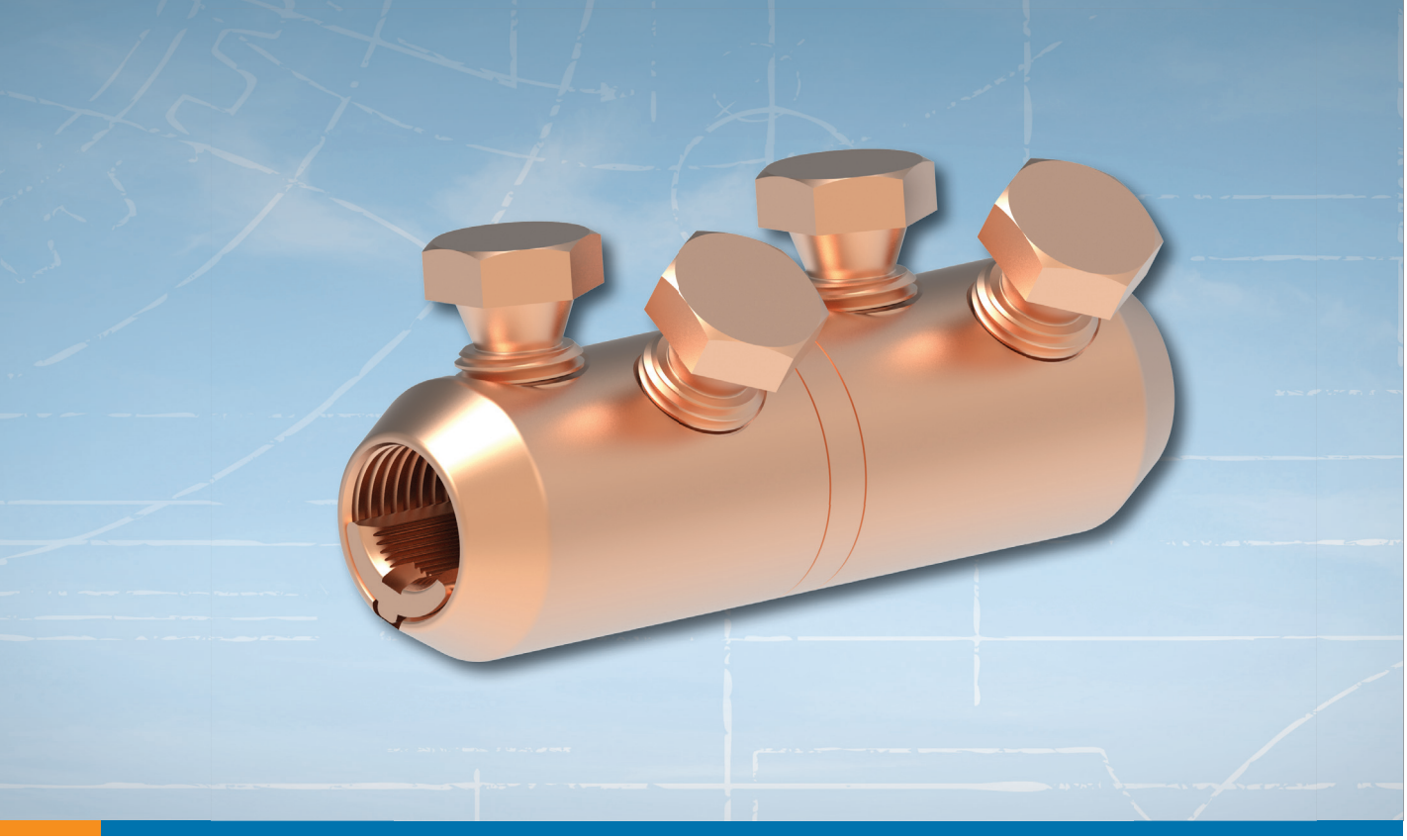

COPPER SHEARBOLT CONNECTOR (CSBS)

#2 AWG COMPACT TO 1000 KCMIL CONCENTRIC

KEY FEATURES

- Heavy-duty design made of high strength, copper alloy
- Compact and smooth body design
- Provides long service life under normal operating conditions with reserve capacity for emergency loading conditions
- Compatible with TE's Raychem heat-shrink and cold-applied splices providing an engineered system with years of trouble-free performance

TE's Raychem Copper Shearbolt Connectors (CSBS) are mechanical connectors that can accommodate a wide range of copper cable from #2 AWG compact stranded to 1000 kcmil concentric stranded. The primary application of our copper shear bolt connectors is underground splices up to 35 kV.

The tool required to install our CSBS is a standard ratchet wrench with a hexagonal socket. The design incorporates shear head bolts, which ensures that the correct torque is applied to each bolt. Also, this method of installation reduces worker strain compared to a manual compression tool requiring significant force to operate.

A holding tool is recommended to avoid the core bending of conductors and can be ordered from TE (#IT-1000-019). TE's cordless impact wrench (#T25446-000) can also be used to install the connector. This convenient and quick tool has been tested and qualified to install shearbolt connectors.

The connector is supplied with two copper inserts assembled into the connector body to center small conductor sizes. For larger sizes, inserts are not required and are easily removed with a standard screwdriver. Please see the installation table on the back for details.

Customers can count on consistent, high quality products, driven by TE's proven innovation and backed by our extraordinary customer support.

Copper Shearbolt Connector (CSBS)

Copper Shearbolt connector installed on EPR insulated 4/0 kcmil 15 kV cable

FEATURE	ADVANTAGE	BENEFIT
Hexagonal shear head bolts	Installs with simple ratchet-type socket wrench	One connector for multiple cable sizes reduces inventory and prevents accidental use of the wrong connector
Torque-controlled shear head bolts	Sheared head gives positive indication of correct installation	Low contact resistance gives superior electrical performance
Solid center stop	Ensures proper conductor position and enables transitions between different conductor types (ex. PILC and XLPE)	Eliminates oil leakage
Centering inserts for small diameter conductors	Properly positions small conductors for proper connection	Minimizes voltage stresses at transition from connector body to cable insulation
Knurled inner bore	Unique profile breaks through conductor oxides and grips conductor strands	Generates low contact resistance and increases pullout rating
Installs easily in confined areas	No special tools or dies required	Provides consistent installation torque without special tools producing a more reliable connection

PRODUCT SELECTION GUIDE: DIMENSIONS IN INCHES (mm)

Description	Part Number	Conductor Range	Conductor OD Range	Connector Length	Connector OD
CSBS-2-250	CU6629-000	#2 AWG compact to 250 kcmil concentric	0.268 - 0.575 (6.8 - 14.6)	3.2 (81)	1.05 (26.7)
CSBS-2/0C-500C	E20628-000	2/0 AWG compact to 500 kcmil compact	0.376 - 0.736 (9.6 - 18.7)	4.0 (102)	1.20 (30.5)
CSBS-2/0-500-CPR	CU1218-000	2/0 AWG compact to 500 kcmil compressed	0.376 - 0.790 (9.5 - 20.1)	4.0 (102)	1.30 (33.0)
CSBS-300C-750C	310084-000	300 kcmil compact to 750 kcmil compact	0.570 - 0.945 (14.5 - 24.0)	5.0 (127)	1.45 (36.8)
CSBS-300-750	ED2175-000	300 kcmil compact to 750 kcmil concentric	0.570 - 0.998 (14.5 - 25.3)	5.0 (127)	1.50 (38.1)
CSBS-500-1000	ED2183-000	500 kcmil compact to 1000 kcmil concentric	0.736 - 1.152 (18.7 - 29.3)	7.0 (178)	1.75 (44.5)

Copper sheabolt Ctorque wrench is not required. The tool required is either a standard ratchet or an impact wrench, both with a hexagonal socket. Please see installation information in chart below.

INSTALLATION INFORMATION

Description	Instruction Sheet	Test Reports	Socket Size	Application Guide
CSBS 2-250	408-10327	502-47407	1/2"	Remove inserts for cable sizes equal to or greater than 4/0 AWG compressed
CSBS-2/0C-500C	408-10327	502-47265	11/16"	Remove inserts for cable sizes equal to or greater than 300 kcmil compact
CSBS-2/0-500-CPR	408-10327	502-47265	11/16"	Remove inserts for cable sizes equal to or greater than 350 kcmil compressed
CSBS-300C-750	408-10327	502-47257, 502-47260	3/4"	Remove inserts for cable sizes equal to or greater than 500 kcmil compact
CSBS-300-750	408-10327	502-47260	3/4"	Remove inserts for cable sizes equal to or greater than 600 kcmil compressed
CSBS-500-1000	408-10327	502-47386	3/4"	Remove inserts for cable sizes greater than 750 kcmil concentric

Please contact your TE Connectivity representative for conductor sizes or types not listed in this data sheet. Please request Data Sheet # 3-1773453-0 for our Cordless Impact Wrench.

An oxide- inhibiting joint compound is factory-applied in the barrel of the connector to provide low initial contact resistance, seal out air and moisture, prevent oxidation/ corrosion, and maintain a reliable connection for the life of the installation. The connectors have been electrically tested to the class A requirements of ANSI C119.4 and mechanically rated at a pull out force of 1670 lbs for #2 AWG to 250 kcmil, 2300 lbs for the 2/0 AWG to 500 kcmil version, 3000 lbs for the 300 kcmil to 750 kcmil version, and 3800 lbs for the 500 kcmil to 1000 kcmil version. Engineering Test Reports are available upon request.

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