

ANSI STANDARD TRANSFORMER SECONDARY COPPER STUDS

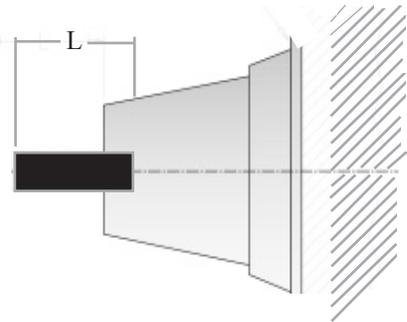
Maximum full load current ratings for 5/8" diameter studs are 417 Amps, and 833 Amps for a 1" diameter stud. The maximum occurs in the three-phase Y transformer with 120V windings.

Single Phase

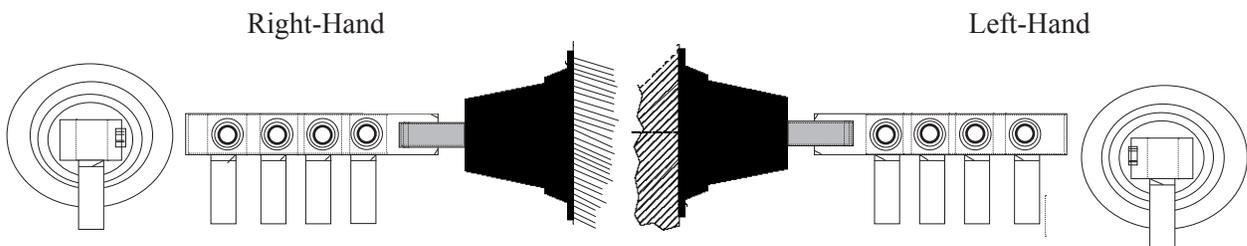
KVA	Thread Size	Min. Length
25-75	0.625-11UNC-2A	1.25"
100-167	1.000-14UNF-2A	1.75"

Three Phase

KVA	Voltage	Thread Size	Min. Length
75-150	240, 208y/120	0.625-11UNC-2A	1.25"
75-300	480, 480y/277	.062511UNC-2A	1.25"
225-300	240, 208y/120	1.000-14UNF-2A	1.75"
500	480, 480y/277	1.000-14UNF-2A	1.75"
500	240, 208y/120	1.250-12UNF-2A	2.62"



Product Variations



HOW TO SPECIFY PRODUCT VARIATIONS

The following codes are those most commonly employed as a suffix to listed CMC catalog numbers.

- A - 5/8" mounting will be supplied on parts which are normally supplied with 1.0" mounting (EX: NSM500-6A).
- B - 1.0" mounting will be supplied on parts which are normally supplied with 5/8" mounting (EX: NSM 250-6B).
- D - Connectors will be supplied with disc pad screws (EX: NA 350-6D).
- R - Right-hand mounting for transformer stud connectors (EX: ZQU500-6R).
- SL- Connectors will be supplied with a 1/0-14 street light hole (EX: NSSM350-6SL).
- T - Connectors will be supplied tin-plated (SPECIAL ORDER).
- U - Connectors will be supplied with anodized radial-tipped screws (EX: NA350-6U).
- I - The connector will be supplied with inhibitor in all ports (EX: NA350-6I).

Additional suffixes used on previously branded ESP products:

- A - Anodized screws (EX: UPM4-350A).
 - C - Clear covered PVC (EX: UPM6-500C).
 - TP - Tin Plated (EX: UTL6-750TP).
 - TS - Torpedo Sleeves will be on all terminal outlets (EX: HFS4TS).
 - XB- The connector will be supplied with inhibitor in all ports (EX: UPM4-350XB).
- Note: When ordering more than one variation for an item, the suffix codes should be arranged in alphabetical order.*

PRACTICES AND RECOMMENDATIONS

STRENGTH

The **CMC Utility Products** line of mechanical connectors is fabricated from only one alloy: 6061 aluminum with a T6 temper. This choice was predicated on the balance that could be achieved relative to strength and conductivity. Both factors are extremely important in connector design. This aluminum extrusion has almost a two-to-one advantage in yield strength over both the sand casting alloy 356 and the die-casting alloy AXS 679; Its conductivity is a most favorable 43% IACS. The high strength enables conductors to be designed with low stress so that creep is not significant for temperatures up to 100° C. Sufficient clamping force is maintained on the conductor to break and prevent reforming of the aluminum oxide which combined with the high conductivity alloy results in a connector operating at a temperature below that of the wire.

SCREWS

The radial-tipped screws and the screws with pressure pads used in **CMC Utility Products** connectors are fabricated from various aluminum alloys. The screws are specially coated to prevent galling. This allows torque values up to 550 in/lbs on larger cables.

PLATING

Since **CMC** connectors are normally used outdoors and subject to wet or contaminated environments, tin plating is not recommended. Instead, our aluminum connectors (mechanical) are given a special pickling treatment to remove the surface oxide. This chemically clean, low resistance contact surface is then maintained by a wax coating.

PREPARATION OF CONDUCTOR

- a. The insulation should be stripped with a whittling motion to prevent the cable from being nicked.
- b. The cable should then be cleaned with a wire brush to remove the oxides from the surface of the conductor.
- c. In all cases, an oxide inhibitor should be applied to the conductor immediately after cleaning and prior to installation.
- d. For mechanical connectors, the set-screw should be tightened. After a few seconds, the set-screw should be retightened using a torque wrench to the recommended torque value to insure a good connection. For compression connectors, the lug should be crimped around the connector using the proper tool and die.

ALLEN WRENCH USAGE

Set-screws and connectors require a 5/16" Allen wrench. **CMC Utility Products** recommends the use of insulated wrenches with an overall length of at least 9" for all installations.

A nine (9) inch wrench, or longer, will be needed to achieve the recommended torque values by the average installer. A torque wrench should be used ensure the proper torque is achieved.

Connector Size	Recommended Torque
#12-6 STR	120-150 in lb (10-13 ft lb)
#4-3/0 STR	180-240 in lb (15-20 ft lb)
4/0-350 STR	275-450 in lb (23-38 ft lb)
400-1000 STR	475-550 in lb (40-46 ft lb)

CONNECTOR MATERIAL SPECIFICATION

MATERIALS

The aluminum alloys employed for connector bodies is 6061-T6. This alloy compares favorably with 356-T6 as follows:

in English units: Btu-inches/ft² Hour °F

PROTECTION OF CONTACT SURFACES

CMC Utility Products chemically cleans both the connector and set-screw, which removes oils, coolant and aluminum oxide. The clean parts are clear plated with a high temperature wax to maintain low-resistance contact surfaces.

FIELD INSTRUCTION DATA

Connectors are packaged with sufficient instructions to allow the linemen to make a proper installation. The data is given with the presumption that workmen have knowledge of the importance of proper cleaning of conductor contact surfaces prior to making connections.

Property (Minimum)	Aluminum 6061-T6	Alloy 6262-T9	Designation 356-T6
Electrical Conductivity @ 68 degrees F (%IACS)	43	44	39
Tensile Strength - Ultimate in pounds	38000	52000	33500
Yield Strength - in pounds	35000	48000	2000
Elongation - % in 2 inches	8	5	4.5
* Thermal Conductivity @ 77 degrees F	1160	1190	1044
Nominal Corrosion Resistance Rating	Good	Good	Good

LIMITED WARRANTY

Connector Manufacturing Company - **CMC Utility Products** warrants all products found in this catalog supplied to the distributor or customer against defects in material or workmanship for a period of two years from date of shipment.

In no event shall **CMC Utility Products** be liable for consequential, indirect or special damages, nor (except as may otherwise specifically be agreed to in writing by an authorized person(s) within **CMC Utility Products** or through an authorized representative of **CMC Utility Products**) shall be liable for transportation, labor, or other charges for adjustments, repairs, replacement parts, installation of other work which may be done upon or in connection with the application of such products by the distributor, his customer, or utilized by an end user.

NOTICE

The warranties contained herein are made expressly in lieu of any and all other warranties, expressed, or implied.