



PRODUCT SPECIFICATION

COMMONING CONNECTOR

1.0 SCOPE

This specification covers the Commoning Connector designed to provide an economical method for power distribution.

2.0 PRODUCT DESCRIPTION

The connector is manufactured in 5, 10, 15 and 20 circuit configurations. All sizes are stackable for multiple rows. The housing accepts wire ranges from #22 thru #14 AWG, and insulation diameters of .060 thru .140 inches. Polarizing key is available to separate circuitry within the housing, if desired.

3.0 RECOGNIZED AGENCY APPROVALS

3.1 Underwriters' Laboratories: File #E29179.

3.2 Canadian Standards Association: File #LR 19980.

4.0 MECHANICAL SPECIFICATIONS

4.1 Materials, dimensions

4.1.1 Material – 1461 - * Housing – Thermoplastic polyester, U. L. Flammability 94V-0. Refer to Sales Drawing SD-1461 - *.

4.1.2 Material – 1457 - * Terminal – Alloy #C26000 Brass .010 thick with pretinned finish. Also refer to SD-1457 - *.

1457-1 Terminal accepts: 18 to 22 Ga. with insulation dia .061 to .102.

1457-2 Terminal accepts: 14 to 16 Ga. with insulation dia .140 max.

4.1.3 Circuit identification: Cold stamped – characters 1 thru connector size. For special circuit number combination, see drawing SD-1461 - *.

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4.2 TERMINAL INSERTION/WITHDRAWAL FORCES (POUNDS) IN THE HOUSING.

Note: Insertion Tool P/N HT-1461 is required for assembly of terminals crimped to 20 and 22 ga. wire.

4.2.1 Initial engagement force with (1) one adjacent terminal is 15 lbs. max. (6.75 kg.).

4.2.2 Initial engagement force with (2) two adjacent terminals is 15 lbs. max (6.75 kg.).

4.2.3 Initial withdrawal force with one adjacent terminal is 4 lbs. min. (1.81 kg.).

4.2.4 Initial withdrawal force with (2) adjacent terminals is 4 lbs. min. (1.81 kg.).

4.2.5 After (5) five cycles – minimum withdrawal force is 4 lbs. min. (1.81 kg.).

4.3 TEMPERATURE

4.3.1 Operating Temperature: -40°C to +105°C

4.3.2 Non-operating Temperature: -30°C to +60°C

5.0 ELECTRICAL SPECIFICATIONS

5.1 Terminal Resistance (below listed values include resistance along 2 inches of #18 AGW wire).

5.1.1 Initial resistance thru 2 adjacent terminals is 2 milliohms.

5.1.2 Initial resistance thru 3 interconnected terminals is 3 milliohms.

5.1.3 Initial resistance thru 15 interconnected terminals is 15 milliohms.

5.1.4 After Humidity Cycling per Mil. Std. 202E. Method 106C or 96 hours @ 120 C oven aging, terminal resistance change shall not exceed 2.0 times the initial values.

5.2 Withstanding Voltage

5.2.1 Measurements are between two terminals with one vacant circuit separating them (Polarizing key #K-1461 was not used). The Hypot voltage is gradually increased until breakdown occurs.

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5.2.2 Breakdown Voltage – maximum 3500 volts RMS.

5.3 Rated voltage, currents

- Maximum voltage: 250 VAC
- Rated current: Recommended 12 amps for 30 C temperature rise over ambient. For higher values, contact Molex Engineering Department for your specific application.

6.0 REFERENCE

The above was obtained from Test Report Number 881.

7.0 ENVIRONMENTAL TESTS

7.1 **Vibration** – Mil – Std. 202D, Method 201A — Simple harmonic motion .03 inch (.08 max. tol. (excursion). Frequency — uniformly varied between 10 and 55 Hz and returned to 10 Hz in 1 minute. Motion applied for a period of 2 hours in each of 3 mutually perpendicular directions for a total of six hours.

The socket contacts are to be wired in series and monitored for openings which exceed 10(1) Microseconds with 100 ma. flowing thru the contacts.

7.2 **Shock** – Mil – Std. 202D, Method 213A — Three shocks in each direction shall be applied along the three mutually perpendicular axis of the test specimen. The shock pulse shall be half sine wave having a peak of 50 G's and a duration of 11 milliseconds.

The socket contacts are to be wired in series and monitored for openings which exceed 10 microseconds with 100 ma. flowing thru the contacts.

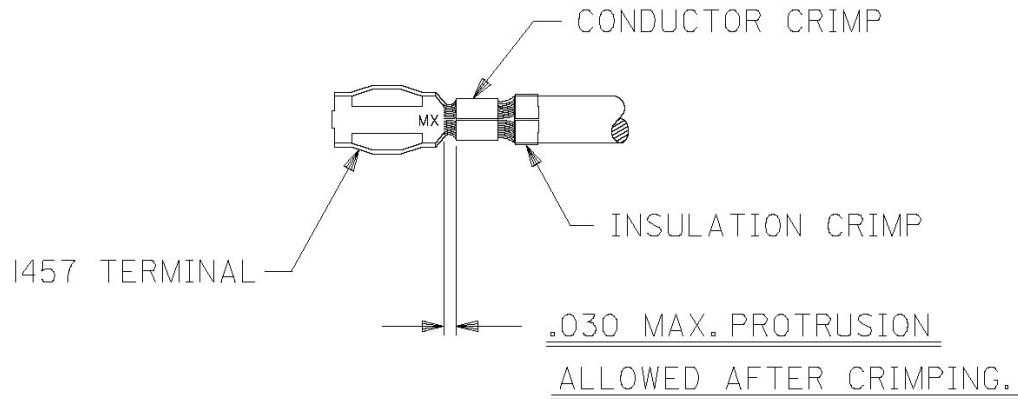
7.3 **Humidity** – Mil Std. 202E, Method 103B — 40 C. 95% R.H., 96 hours.

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8.0 CRIMPING REQUIREMENTS: (VERY IMPORTANT)

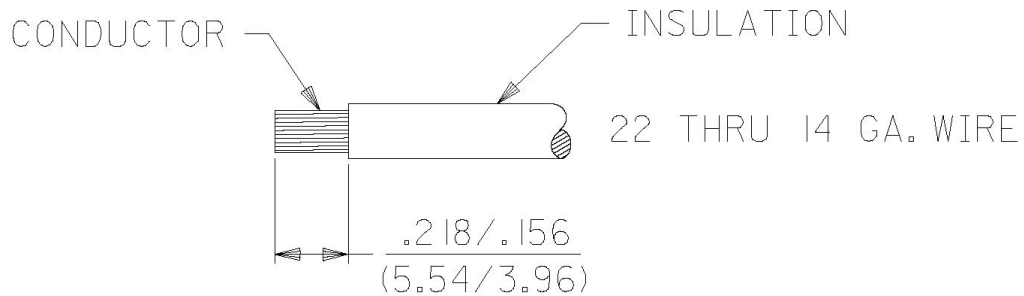


8.1 Crimp Tools

8.1.1 Crimp Die #CD4610

8.1.2 Hand Crimp Tool HTR-1031-C

9.0 WIRE STRIPPING



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