

SECTION 27 16 00

COMMUNICATIONS CONNECTING CORDS, DEVICES, & ADAPTERS

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section and the other sections of Division 27.
- B. This section is inclusive to all Division 27 sections.
- C. Division 7 Sections for fire-stopping materials and installation at penetrations through walls, ceilings, and other fire-rated elements.

1.02 DRAWINGS

- A. The drawings show the general arrangement and extent of the work only. Determine the exact location and arrangement of all parts as the work progresses.
- B. In all details, the work shall be subject to the Owner's direction and approval. All work shall conform to its surroundings in best possible manner.

1.03 SCOPE OF WORK

- A. General
 - 1. This project includes the supply of patch cords, adaptors and devices.
 - 2. All UTP terminations must follow 568A wiring schematic.
 - 3. Contractor shall install patch cords between switches and patch panels per owner direction.

1.04 SUBMITTALS

- A. The contractor shall provide product submittals for all system components as defined in Part 2 of this specification section. These components shall include all communications connection cords, devices and associated components. The selected contractor will allow sufficient time in project scheduling for client and review by the Architect's Technology Consultant

PART 2 PRODUCTS

2.01 CORDS, DEVICES, AND ADAPTORS

- A. This portion of the communications system includes termination of copper and fiber cables using modules and adaptors, faceplates, and patch cords.

2.02 WORK AREA

- A. This section outlines specifications for the work area equipment cords, and telecommunications outlets at the users work area. The connection between the information outlet and the device (computer/telephone) is achieved by means of this subsystem.

2.03 PATCH CORDS

- A. Work Area patch cords shall meet or exceed the following criteria:
1. Category 6A, modular equipment cords shall:
 2. Be round, and consist of eight insulated 24 AWG, stranded copper conductors, arranged in four color-coded twisted-pairs within a flame-retardant jacket.
 3. Be equipped with modular 8-position (RJ45 style) plugs on both ends, wired straight through with standards compliant wiring.
 4. Be backwards compatible with lower performing categories.
 5. Use modular plugs which exceed FCC CFR 47-part 68 subpart F and IEC 60603-7 specifications and have 50 micro inches minimum of gold plating over nickel contacts.
 6. Be resistant to corrosion from humidity, extreme temperatures, and airborne contaminants.
 7. Be available in any custom length and standard lengths of 0.9, 1.5, 2.1, 3.1, 4.6, 6.1, 7.6 meters (3, 5, 7, 10, 14, 20, and 25 feet).
 8. Be made by an ISO 9001 and 14001 Certified Manufacturer.
 9. Electrical Specifications:
 10. Have a DC resistance per lead: $9.38 \Omega / 100 \text{ m}$ maximum.
 11. Have input impedance without averaging: $100 \Omega + 15\%$ from 1 to 100 MHz, $+ 22\%$ from 100 to 200 MHz and $+ 32\%$ from 200 to 250 MHz.
 12. Be 100% transmission tested with laboratory grade network analyzers for proper performance up to 250 MHz. Vendor shall guarantee cords are compatible with Category 6 Permanent Link.
 13. Be UL VERIFIED (or equivalent) for TIA Category 6A electrical performance.
 14. Be UL LISTED 1863 and CUL C22.2 approved.
 15. One plug end shall be of the Paralign type, and the other shall be low profile type to address bend radius requirements to plug into IP phones sets.
 16. Be Ortronics Clarity VoIP patch cords Part # OR-VC615-09
 17. Supply one (1) per outlet of each faceplate plus 10%
- B. Telecommunication Room patch cords shall meet or exceed the following criteria:
1. Category 6A, modular equipment cords shall:
 2. Be round, and consist of eight insulated 24 AWG, stranded copper conductors, arranged in four color-coded twisted-pairs within a flame-retardant jacket.
 3. Be equipped with modular 8-position (RJ45 style) plugs on both ends, wired straight through with standards compliant wiring.
 4. Be backwards compatible with lower performing categories.
 5. Use modular plugs which exceed FCC CFR 47-part 68 subpart F and IEC 60603-7 specifications and have 50 micro inches minimum of gold plating over nickel contacts.
 6. Be resistant to corrosion from humidity, extreme temperatures, and airborne contaminants.
 7. Be available in any custom length and standard lengths of 0.9, 1.5, 2.1, 3.1, 4.6, 6.1, 7.6 meters (3, 5, 7, 10, 14, 20, and 25 feet).
 8. Be made by an ISO 9001 and 14001 Certified Manufacturer.
 9. Electrical Specifications:

10. Have a DC resistance per lead: $9.38 \Omega / 100 \text{ m}$ maximum.
11. Be 100% transmission tested with laboratory grade network analyzers for proper performance up to 500 MHz. Vendor shall guarantee cords are compatible with Category 6 Permanent Link.
12. Be UL VERIFIED (or equivalent) for TIA Category 6A electrical performance.
13. Be UL LISTED 1863 and CUL C22.2 approved.
14. Both plug end shall be of the Paralign type, and have a protective mechanism to prevent connector from catching or obstructions
15. Quantities shall be based on the total number of switch ports provided by the owner both active and inactive.
16. Supply Ortronics Clarity VoIP patch cords Part # OR-VC615-09
17. Supply 25% of the cords IN LENGTHS OF 3', 5', 7', & 10' EACH
18. Colors shall be blue for primary and secondary data, violet for special purpose networking, & orange for building systems networking.

PART 3 EXECUTION (Not Used)

END OF SECTION