

270100-TC

Systems Cabling for Telecommunications Systems

Part 1 - General

Related Documents

The following related sections of the OT standards shall also be applicable to this section.

OT Engineer shall approve all product cut sheets prior to purchasing and installation by contractor. Reference S9 Approved Products.

S1 Approved Product Request
S1 Change Request
S1 Request for Variance
S1 Resource Allocation Permit
S2 Introduction
S3 SOP and Policy
S4 275116-TC CORE PA and Emergency Tenant Paging System
S4 Emergency Tenant Paging
S5 OT Facility Warning Standard
S7 271119-TC Termination Blocks and Patch Panels
S7 271519-TC Horizontal Cabling
S7 270000-TC Common Work
S7 270101-TC COMCAST Standard
S7 270528-TC Hangers and Support
S7 270553-TC Identification
S7 271116-TC Cabinets Racks Frame Enclosures
S7 271313-TC Cable Splicing and Termination
S7 271523-TC Optical Fiber Splicing and Terminations
S7 271543-TC Faceplates and Connectors
S7 271600-TC Telecommunications Station Equipment
S9 Approved Products

Part 2 - Telephone System Backbone Cabling

- A. Provide, General Cable or listed cables. Each cable shall have unshielded twisted pair 24 AWG solid copper conductors and meet or exceed the electrical specifications for Category 3 cables detailed in the ANSI-EIA/TIA 568B
- B. Commercial Building Telecommunications Wiring Standard for premises wiring. The cable shall riser rated.

Part 3 - Telephone System External Cabling

- A. External Cable. Provide General Cable or listed cable suitable for direct-burial or conduit applications. The cable shall have 24

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AWG solid annealed copper conductors. The sheath shall consist of a 0.008" corrugated aluminum shield, with a 0.006" corrugated steel shield and a black polyethylene jacket. The jacket shall be sequentially printed with a footage marker at regular intervals. A flooding compound shall be applied over the core and to all surfaces of the aluminum and steel shields to resist moisture entry and to inhibit corrosion. Terminate both ends of this cable on approved blocks, 10 pair disconnection modules with hinged label cover blocks bracket fixed to the Telephone Termination Backboard or rack. Match cable CAT rating with cable.

- B. Label each approved Termination Block with all building, room and pair counts.

**Part 4 - Telephone System Termination Frames
(Contact OT Engineer for Option to be used)**

- A. Option A.
Rack-mounted Termination Patch Panel. Provide a RJ-45 Patch Panel with individual RJ-45 connectors to terminate the telephone backbone cable pairs. All pairs will be terminated on each RJ-45 connector using 568B termination scheme. Each patch panel shall be suitable for rack mounting in an approved rack. Provide Data-Patch Category 6 Patch Panels which utilize ***an insulation-displacement connector (IDC)***, approved style terminations on the back.

- B. Option B.
Rack-mounted or wall mounted Termination Provide on an approved block, 8 pair disconnection modules with hinged label cover blocks bracket fixed to the Telephone Termination Backboard or rack. Match cable CAT rating with cable.
Connectors to terminate the telephone backbone cable pairs. All pairs will be terminated on each using 568B termination scheme. Each patch module shall be suitable for rack mounting in an approved rack or on wall using approved methods.

Part 5 - Feeder Telephone Cabling

- A. Provide telephone feeder cables running from the Main Distribution Frame to wall-mounted Intermediate Distribution Frames (IDFs) in each of the Communications Rooms. Refer to drawing for cable quantities and routing information.
- B. Terminate the Main Distribution Frame end of each feeder cable on approved termination blocks fitted to Termination Backboard in the MDF. Terminate all pairs of each feeder cable.
- C. Terminate the Intermediate Distribution Frame end of each feeder cable on approved termination block fitted to the wall of each Communications Room. Terminate all pairs of each feeder cable.
- D. Label each approved Termination Block with all building, room and pair counts.

Part 6 - A. Telephone System External and Backbone Cabling Testing

- A. Test each Telephone System Backbone and External Cable and its associated patch frame connectors. Carry out the following tests on every pair of every telephone system feeder and external cable:
 - 1. Conductor Continuity
 - 2. Conductor Separation
 - 3. Conductor Polarity