

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 Passenger Communications Paging System
- S4 275118-TC Emergency Communications and Evacuation Paging System
- S5 270000X Telecommunications Systems (Boiler Plate)
- S5 MAA Radio System
- S7 270000-TC Common Work
- S7 270101-TC COMCAST Standard
- S7 270526-TC Grounding and Bonding
- S7 270528-TC Hangers and Support
- S7 270553-TC Identification
- S7 270555-TC OT Facility Warning Standard
- S7 271116-TC Cabinets Racks Frame Enclosures
- S7 271119-TC Termination Blocks and Patch Panels
- S7 271313-TC Cable Splicing and Termination
- S7 271323-TC Optical Fiber Splicing and Terminations
- S7 271519-TC Horizontal Cabling
- S7 271525- TC Tenant and Airlines Extended DEMARC
- S7 271543-TC Faceplates and Connectors
- S7 271600-TC Telecommunications Station Equipment
- S7 271601-TC Courtesy Phone Backboard
- S8 E911 PS ALI Standard
- 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 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 Station Termination(s)
(Contact OT Engineer for Option to be used)**

- A. Option A. (Telco VOIP, Rack Mounted) **REQUIRES VARIANCE**
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. (Telco VOIP wall Mounted) OT Preferred method**
Wall mounted Termination Provide on an approved termination block, (see S9 Approved products) 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 module shall be suitable for on backboard 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

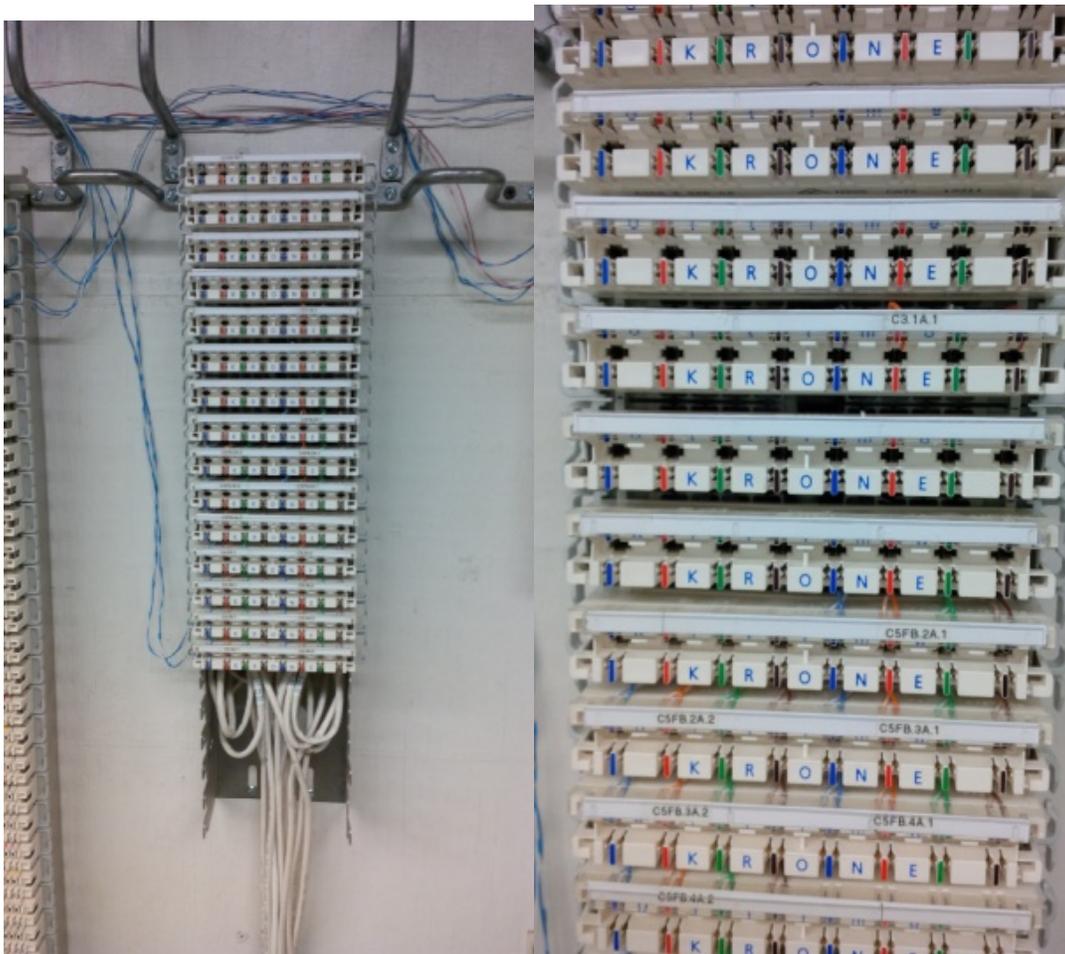
Part 7 - Voice Termination Comm. Closet

Voice Termination Closet to Station Jack

1. All station cables (Voice) shall be CAT 6 White
2. Cable shall feed from bottom up (unless otherwise pre-approved for top down)
3. Station cables will terminate in ADC/Krone Ultima8 8 pr. Termination block. See S9 Approved products section

NOTE: Box of 10 modules, complete kits including mounting bracket are available

4. All blocks will be properly labeled with ACD/Krone labels
5. Proper wire management shall be used



Station wiring on ADC/Krone 8 Pr Blocks

S7 270100-TC Systems Cabling-4

Voice Termination Closet to MDF (IDF or House Cable)

1. All voice cable shall terminate on ADC/Krone 10 Pr Termination blocks
2. At distant end, terminations shall be on same 10 Pr. Termination blocks

