SECTION 27 10 01

RESIDENTIAL STRUCTURED CABLING AND DEVICES

**Specifier Notes: This product guide specification is written according to the Construction Specifications Institute (CSI) 3-Part Format, including MasterFormat, SectionFormat, and PageFormat, as described in The CSI Construction Specifications Practice Guide.**

**This section must be carefully reviewed and edited by the Architect or Engineer to meet the requirements of the project and local building code. Coordinate this section with other specification sections and the Drawings. Delete all “Specifier Notes” after editing this section.**

**Section numbers and titles are from MasterFormat 2011 Update.**

PART 1 - GENERAL

1. GENERAL REQUIREMENTS
	1. Applicable requirements of Division 27 - Communications shall be considered a part of this section and shall have the same force as if printed herein full.
	2. This document describes the products and execution requirements relating to residential structured cabling and termination centers.
	3. Product specifications, general design considerations, and installation guidelines are provided in this document. The successful vendor shall meet or exceed all requirements described in this document and on the drawings.
2. SUBMITTALS
	1. Provide product data from manufacturer’s specifications.
3. WORK INCLUDED
	1. The work included under this specification consists of furnishing all labor, equipment, materials, supplies and performing all operations necessary to complete the installation. The Contractor will provide and install all of the required material whether specifically addressed in the Specification or not.

PART 2 - PRODUCTS

1. APPROVED PRODUCTS
	1. Approved Manufacturer(s)
		1. Leviton Network Solutions, 2222 222nd Street SE, Bothell, Washington 98021. Phone 425-486-2222. Fax 425-485-3373. www.leviton.com
		2. No Exceptions
2. IN WALL STRUCTURED MEDIA CENTERS
	1. Metal Structured Media Center Centers
		1. Centers shall be one-piece (excluding cover) boxes, made of 20-gauge, white powder-coated steel.
		2. They shall be flush mountable, with four wood screws (provided) on standard 16-inch center wall studs prior to drywall, or surface mountable after drywall installation.
		3. Each center shall have a cutout to accommodate a single-gang J-Box power module, AC power module, or a Mini or Universal DC power supply.
		4. The centers shall include multiple knockouts on the top and bottom to support conduit up to two inches in diameter and facilitate cable routing and entry.
		5. The center shall be cULus Listed and comply with ANSI/TIA-568-D, ANSI/TIA-570-C, and ANSI/TIA-607 standards.
		6. Centers shall be available in 14”, 21” 28” and 42” heights.
		7. Mounting slots on the center shall be included to adjust for different drywall depths (1/2 inch, 5/8 inch, and 3/4 inch).
		8. Self-healing foam grommets to protect cable bundles and prevent dust from entering the center shall be included with product.
		9. Centers shall be compatible with patch panels, voice, data, video, and audio quick-connect distribution modules from the same manufacturer.
		10. Centers shall meet the following standards:
			1. ANSI/UL 1863 – Communication Circuit Accessories
			2. ANSI/UL 985 – Household Fire-Warning System Units
			3. ANSI/UL 1023 – Household Burglar-Alarm System Units
			4. CAN/CSA C22.2 No. 182.4-M90 (R2010) – Plugs, Receptacles, and Connectors for Communication Systems
			5. ANSI/TIA-568-D
			6. ANSI/TIA-570-C
			7. ANSI/TIA-607-C
		11. Centers covers, and doors shall be available in the following configurations:
			1. Flush-Mount Solid Metal Cover
			2. Economy Solid Hinged Door
			3. Vented Hinged Door

Basis of Design

Manufacturer: Leviton Mfg. Structured Media Centers

Part #’s 47605-##\*

 ##- Size 14”, 21” 28” or 42”

 \* Optional door and packaging configurations, consult catalog

* 1. RF Transparent Structured Media Center
		1. The enclosure shall be molded from UL-rated ABS flame-retardant polymer
		2. The enclosure shall be suitable for new construction or retrofit installations and shall allow for flush mounting on standard 16" on-center studs with four wood screws (not provided)
		3. The enclosure shall be suitable for surface mounting on a variety of surfaces capable of supporting the enclosure and contents
		4. The enclosure shall include multiple removable knockouts on the top and bottom to support conduit fittings and to facilitate cable routing and entry
		5. The enclosure shall accept all Leviton Structured Media panels, modules, brackets, and mounting plates
		6. The enclosure shall allow for installation of two single-gang j-boxes or a full-size Leviton power module
		7. Optional vented covers and vented hinged doors shall be available to promote airflow into the enclosure
		8. The enclosure design shall hinged doors to open 180 degrees from the left or right
		9. Hinged doors shall provide for toolless installation
		10. Hinged Door shall provide ratcheting self-adjustment for varying wall covering thicknesses and imperfections
		11. Optional door locks shall be available
		12. An optional trim ring shall be available to cover drywall cut irregularities and to retrofit a plastic vented hinged door to an existing metal enclosure, allowing for greater RF transparency
		13. All sizes of enclosures and doors shall be available in kitted, individual or bulk packaging
		14. Enclosure shall meet the flowing standards:
			1. UL Standard 2416 – audio/video, information, and communication technology equipment cabinet, center, and rack systems
			2. RoHS
			3. ANSI/TIA-568-D
			4. ANSI/TIA-570-C
			5. ANSI/TIA-607-C

Basis of Design

Manufacturer: Leviton Mfg. Wireless Structured Media Center

Part #’s 49605-##\*

 ##- Size 14”, 28” or 42”

 \* Optional door and packaging configurations, consult catalog

1. MOUNTING BRACKETS AND ACCESORIES
	1. Plastic Saddle Tie Kit
		1. Saddle Tie shall be made of nylon plastic
		2. Saddle Tie Kit include 5 saddle ties and 5 feet of SoftCinch VELCRO®
		3. The Saddle Tie shall be of a one-piece design without plastic plunger pins
		4. Saddle Tie shall mount within any Leviton Structured Media Center
		5. Saddle tie shall provide a lacing point to support 1/2-inch VELCRO® Brand strips
		6. Saddle Tie shall support vertical or horizontal routing of VELCRO®.

Basis of Design

Manufacturer: Leviton Mfg. Plastic Saddle Tie Kit with VELCRO Brand® Cable Management

Part # 49605-AST

* 1. Universal Shelf Bracket
		1. Plastic Universal Shelf Bracket shall be molded of polycarbonate plastic, rated UL 94 V-2
		2. The shelf bracket shall be of a one-piece design without plastic plunger pins
		3. The shelf bracket design shall include multiple tie-down points to maximize device placement options
		4. The bracket shall mount into any Leviton 14", 21", 28", or 42" Structured Media™ Center
		5. The bracket shall provide clearance for cables to pass behind the bracket vertically
		6. Two brackets shall fit side-by-side within an enclosure
		7. Two saddle ties and 30 inches of VELCRO Brand hook and loop shall be included with each bracket.

Basis of Design

Manufacturer: Leviton Mfg. Universal Shelf Bracket

Part # 49605-AUB

* 1. Multi-Bay Attachment Tube (Wireless Enclosures)
		1. Multi-Bay Attachment Tube shall be molded from white flame-retard and ABS, rated UL 94 V-0
		2. Tube shall install into two-inch knockouts of Leviton Wireless Structured Media Centers, allowing two such enclosures to be joined
		3. Tube shall allow for easy passthrough of communications cabling.

Basis of Design

Manufacturer: Leviton Mfg. Multi-Bay Attachment Tube

Part # 49605-TUB

* 1. Cable Routing Ring
		1. Cable Routing Ring shall be made of black ABS plastic
		2. Cable Routing Ring shall mount into all Leviton Structured Media Centers, using two black push pins
		3. Cable Routing Ring shall allow for cable routing and slack storage

Basis of Design

Manufacturer: Leviton Mfg. Multi-Bay Attachment Tube

Part # 49605-AFR

* 1. Grommet Accessory Pack
		1. Grommets shall be made of black rubber
		2. Grommets shall fit one-inch and two-inch knockouts on Leviton Structured Media Centers
		3. Grommets shall include molded-in guided score lines for small or large openings to be cut

Basis of Design

Manufacturer: Leviton Mfg. Grommet Accessory Pack

Part #’s 49605-GRM

* 1. Unpopulated plastic mounting brackets
		1. Unpopulated plastic mounting brackets shall accept mounting of a variety phone, data, or video Expansion Boards within the structured media center.
		2. Full-width expansion bracket can be populated with up to five phone, data, or video expansion boards to meet custom application needs.
		3. Compact plastic mounting bracket can be populated with up to three phone, data, or video expansion boards to meet custom application needs.
		4. Single expansion bracket can be populated with one phone or data expansion board to meet custom application needs.
		5. All plastic brackets shall include the following features.
		6. Be made of sturdy white ABS plastic
		7. Come with push lock pins.
		8. Snap-in to any structured media center.
		9. Allow for cable management via routing under bracke.t

Basis of Design

Manufacturer: Leviton Mfg. Plastic Mounting Brackets for Structured Media Centers

Part #’s 47612-\*BK

 S- Single unit bracket, E- 5 unit Bracket

* 1. Data Plastic Bracket Only
		1. Data Plastic Brackets can be used to mount 3rd party switches, routers, and modems within structured media centers.
		2. Bracket shall be a universal design that accommodates installation of a variety of manufacturers’ products.
		3. Bracket universal screw holes accept a variety of screw configurations.
		4. Bracket shall include slots for easy fastening of routers, switches, etc., to the bracket.

Basis of Design

Manufacturer: Mfg. Plastic Mounting Brackets for Structured Media Centers

Part #’s 47612-DBK

* 1. Multimedia Adapter Bracket
		1. The bracket shall support two 6-pack mounting plates and snaps easily into any size structured media centers with push-pins.
		2. Pre-loaded mounting plates shall be available for BNC and F-connectors.
		3. Unloaded 6-pack adapter plates shall be available to support custom configurations.
		4. Unloaded 6-pack adapter plates shall accept any combination of the following adapters or connectors: BNC, F-Connector, ST, FC, SC and MT-RJ Fiber Optics, Banana Jacks, Speaker Binding Posts, RCA, S-Video, Voice Grade and Category 5e, 6 or 6A. Brackets mount vertically or horizontally.

Basis of Design

Manufacturer: Leviton Mfg. Quickport Adapter Bracket for Structured Media Centers

Part #’s 47612-MMA

* 1. 12-Port Modular Adapter Mounting Bracket
		1. 12-Port bracket shall accept all snap-in modular connector adapters and shall provide adequate labeling options.
		2. The bracket shall mount inside all structured media centers.
		3. The bracket shall be made of a UL94-compliant polycarbonate material and meet ANSI/TIA-568.2-D standard.
		4. The bracket shall accept any combination of the following modular adapters or connectors: BNC, F-Connector, ST, FC, SC and MT-RJ Fiber Optics, Banana Jacks, Speaker Binding Posts, RCA, S-Video, Voice Grade and Category 5e, 6 or 6A.

Basis of Design

Manufacturer: Leviton 12 Port Quickport Bracket for Structured Media Centers

Part #’s 47600-QPB

1. CATEGORY 5E AND CATEGORY 6 PATCHING MODULES
	1. Twist and Mount Patching Modules
		1. The Twist & Mount Patch Panels shall meet all applicable standards including the following:

cULus Listed

ANSI/TIA-568.2-D

ANSI/TIA-1096-A

* + 1. Units shall include a black plastic mounting bracket and patching modules which allow 12 or 24 ports of patching capability to Cat 5e or Cat 6 cabling.
		2. Panels shall have universal T568A and T568B wiring cards for terminations.
		3. The bracket shall be made of fire-retardant ABS plastic, with a UL flammability rating of 94V-0 and shall have four category rating labels.
		4. The panel shall be offered in six configurations according to 12-port or 24-port applications.
		5. The 12-port configurations shall consist of 12 ports of Cat 5e, 12 ports of Cat 6, or a combination of 6 ports each of Cat 5e and Cat 6.
		6. The 24-port configurations shall consist of 24 ports of Cat 5e, 24 ports of Cat 6, or a combination of 12 ports each of Cat 5e and Cat 6.
		7. Panels shall fit into any size structured media center.
		8. Panels shall be RoHS compliant.

Basis of Design

Manufacturer: Leviton Twist and Mount Patch Category 5e/6 Panels for Structured Media Centers

Part #’s 476TM-xxx

 xxx- See catalog for configuration options

* 1. Stand Alone Patching Modules with Single Unit Brackets
		1. The Category 5e/6 Voice and Data Expansion Board shall meet all applicable standards including:
			1. cULus Listed
			2. ANSI/TIA-568.2-D
			3. ANSI-1096-A compliant
		2. The board shall include six Category 5e/6 ports on a printed circuit board on a white, ABS plastic, stand-alone bracket.

Basis of Design

Manufacturer: Leviton Category 5e/6 Patching Modules for Structured Media Centers

Part #’s Six port Cat 5e Module 47605-C5B

 Six Port cat 6 Module 47611-C6B

* 1. Expansion Patching Circuit Boards
		1. The Category 5e/6 Voice and Data Expansion Board shall meet all applicable standards including:
			1. cULus Listed
			2. ANSI/TIA-568.2-D
			3. ANSI 1096-A compliant.
		2. The board shall include six Category 5e/6 ports on a printed circuit board.
		3. Printed circuit board shall mount in any single position of unpopulated plastic Mounting Brackets.

Basis of Design

Manufacturer: Leviton Category 5e/6 expansion circuit boards for Structured Media Centers

Part #’s Six port Cat 5e Board 47603-0C5

 Six Port Cat 6 Board 47611-0C6

1. Telephone Distribution Panels
	1. Twist and Mount Telephone Input Distribution Panel (TIDP)
		1. Panel shall meet all applicable standards including:
			1. cULus Listed
			2. ANSI/TIA-568A/B
			3. ANSI-1096-A compliant.
		2. The unit shall include a black plastic mounting bracket and the following jacks on a printed circuit board design:
			1. (1) 8-position 110-style IDC for incoming line from the demarcation point.
			2. (12) RJ-45 jacks for 4-line telephone distribution
			3. (1) security jack with tethered cut-through plug
			4. (1) ADO jack
			5. (1) test jack
			6. (4) RJ-11 jacks to patch triple play modems with one or more satin phone cords.
		3. The panel shall feature universal T568A/B wiring for 110 IDC terminations.
		4. The bracket shall be made of fire-retardant ABS plastic with a UL flammability rating of 94V-0 and shall have embossed port labels.
		5. The panels shall fit into any size structured media center.

Basis of Design

Manufacturer: Leviton Twist and Mount Patch Telephone Input Distribution Panels for Structured Media Centers

Part #’s 476TL-12

* 1. Stand Alone Telephone Modules with Single Unit Brackets
		1. 1x9 Bridged Telephone Module.
			1. 1x9 Bridged Telephone board- Bridges 4 lines to 9 locations via 4 Pair 110 IDC input and output terminations.
			2. The 1x9 Bridged Telephone Board shall meet or exceed all applicable standards as UL recognized components.
			3. The board shall be of printed circuit board construction and the bracket of white, ABS plastic.
		2. 1x6 Bridged Telephone Module.
			1. The 1x6 Telephone Security Module shall meet or exceed all applicable standards.
			2. The board shall be of printed circuit board construction and the bracket of white, ABS plastic.
			3. It shall connect up to four separate telephone lines to seven outlet locations and include an RJ-45 style security interface.

Basis of Design

Manufacturer: Leviton Standalone Telephone Modules for Structured Media Centers

Part #’s 476TL-12

* 1. Expansion Telephone Distribution Expansion Boards
		1. Telephone distribution boards shall fit unpopulated mounting brackets

Telephone distribution boards be available in the following configurations:

1x9 Bridged Telephone board- Bridges 4 lines to 9 locations via 4 Pair 110 IDC input and output terminations.

1x6 Bridged Telephone board- Bridges 4 lines to 9 locations vis 4 Pair 100 IDC input and output terminations, included RJ45 expansion port.

1x4 Bridged Telephone board- Bridges 4 lines to 4 locations via 4 Pair 100 IDC input and output terminations.

1x10 6-Line Bridged Telephone Security Expansion Board provides 6 lines to up to 10 locations via IDC connectors with a RJ45 jack and a punch down security interface to accommodate alarm systems.

Telephone Patching Boards- The boards shall feature a 110-Type IDC connector that brings 4 line telephone service in from the demarcation point and distributes the lines to seven RJ-45 ports that allow for patching to Cat 5e or Cat6 patching modules. The modules shall be available in 1x6, 1x12 and 1x18 port module.

Printed circuit board shall mount in any single position of unpopulated plastic Mounting Brackets.

Basis of Design

Manufacturer: Leviton Expansion Telephone Modules for Structured Media Centers

Part #’s Consult manufacturer’s catalog/website

* 1. BROADBAND CATV DISTRIBUTION MODULES
		1. Amplified CATV distribution modules
			1. Amplified CATV Modules shall be designed to distribute incoming RF signals (Cable TV, HDTV, Antenna or other modulated sources) to 1, 8 or 16 locations throughout a home or office via coaxial cable.
			2. The modules shall incorporate bi-directional signaling to support advanced interactive communications via a cable modem or cable box as well as standard CATV, antenna and modulated input from such sources as VCRs, DVDs and security camera/CCTVs.
			3. The Premium CATV Modules shall handle advanced technologies offered by cable operators, including delivery of HDTV.
			4. Amplified Modules shall have an operating frequency range of 52-1000 MHz Forward path and 0-45 MHz Reverse Path.
			5. Modules shall install into structured media centers (SMC) in a vertical or horizontal direction.
			6. Modules shall tilt for greater ease of installation.
			7. Modules shall incorporate gold plated brass, machine-threaded, F-connector ports meeting the following SCTE requirements.

F-ports must provide up to 15 psi weather sealing.

F-ports must feature 360-degree seizing insert retaining center conductor up to a pullout tension of 200 grams on .032" diameter coax center conductors.

* + - 1. Premium CATV Modules must include forward path high-quality unity gain amplifier design with an unamplified return path.
			2. 12vdc power adapter shall be included in kit.
			3. Module shall be constructed of a durable aluminum die-cast housing with white powder coating.
			4. Module electrical performance shall meet the following specifications:
				1. 1x1- (Forward Path Gain 15dB, Flatness ±.75db, Return Loss – Input 22.0dB, Return Loss – Output 22.0dB, Port Isolation 25dB
				2. 1x8- (Forward Path Gain 4dB, Flatness ±1.0dB, Return Loss – Input 22.0dB, Return Loss – Output 20.0dB, Port isolation 25dB)
				3. 1x16- (Forward Path Gain 0dB, Flatness ±1.5dB, Return Loss – Input 22.0dB, Return Loss – Output 20.0dB, Port isolation 20dB)

Basis of Design

Manufacturer: Leviton Premium Amplified CATV.HDTV Modules for Structured Media Centers

Part #’s 47693-01P 1x1 Premium Video Module, 1GHZ

 47693-08P 1x8 Premium Video Module, 1GHZ

 47693-16P 1x16 Premium Video Module, 1GHZ

* + 1. Passive Full Range Splitter Modules
			1. The Coaxial Cable Distribution Module shall be cULus listed.
			2. The module shall split television signals to 4, 6, or 8 televisions.
			3. It shall be of die-cast housing and printed circuit board construction.
			4. Full range module shall have an operating frequency range of 950 MHz through 2050 MHz.
			5. Modules shall install into the structured media centers in a vertical or horizontal direction.
			6. F-ports must feature 360-degree seizing insert retaining center conductor up to a pullout tension of 200 grams on .032" diameter coax center conductors.
			7. The manufacturer shall provide a two-year limited product warranty.
			8. Module electrical performance shall meet the following specifications:
				1. 1x4 @2000Mhz (Insertion Loss – 10.5dB, Return Loss – 10.9, Isolation – 24.5dB)
				2. 1x6 @2000Mhz – (Insertion Loss – 14.0dB, Return Loss – 18.8 dB, Isolation – 37.6dB)
				3. 1x8 @2000Mhz- - (Insertion Loss – 15.7dB, Return Loss – 16.3dB, Isolation – 32.0dB)

Basis of Design

Manufacturer: Leviton Passive Video Splitter Modules for Structured Media Centers

Part #’s 47690-6C2 1x6 Splitter w/bracket 2GHZ

 47690-0G6 1x6 Splitter w/o bracket 2GHZ

 47690-8C2 1x8 Splitter w/bracket 2GHZ

 47690-0G8 1x8 Splitter w/o bracket 2GHZ

* 1. FULL SIZE PRE-CONFIGURED PANELS
		1. Basic Telephone and Video Panel
			1. The Basic Telephone and Video Panel shall meet all applicable standards, including cULus Listed and ANSI/TIA-568.2-D (Cat 5e) and ANSI/TIA-1096-A.
			2. The panel shall include a full size plastic mounting bracket, 1x9 Bridged Telephone Board, and a 6-way 2 GHz Video Splitter.
			3. It shall fit into any size structured media center, or be used as a stand-alone unit.

Basis of Design

Manufacturer: Leviton Basic Telephone and Video Panel for Structured Media Centers

Part #’s 47606-BTV

* + 1. Basic Home Networking Plus Panel
			1. The Basic Home Networking Plus Panel shall meet all applicable standards, including cULus Listed and ANSI/TIA-568.2-D (Cat 5e) and ANSI/TIA-1096-A.
			2. The panel shall include a full size plastic mounting bracket, 1x9 Bridged Telephone Board, 6 port Cat5e Patching Module and a 6-way 2 GHz Video Splitter.
			3. It shall fit into the structured media center, or be used as a stand-alone unit.

Basis of Design

Manufacturer: Leviton Basic Home Networking Plus Panel for Structured Media Centers

Part #’s 47606-BNP

* + 1. Advanced Home Telephone and Video Panel
			1. The Advanced Home Telephone and Video Panel Basic shall meet all applicable standards, including cULus Listed and ANSI/TIA-568.2-D (Cat 5e) and ANSI/TIA-1096-A.
			2. Advanced Home Telephone and Video Panel combines a Telephone Line Distribution Module, Category 5e Voice and Data Board, and a 6-way 2 GHz Video Splitter in a dedicated plastic bracket for multi-line systems with video distribution.
			3. The Telephone Line Distribution Module Provides two to four lines of telephone service to up to 19 connections. Distribute “Line 1” service to up to 12 different connections; distribute four-line service to up to eight different connections. The Telephone Line Distribution Board, panel shall feature a RJ-45 port providing isolated circuitry for a security system.

Basis of Design

Manufacturer: Leviton Advanced Home Telephone and Video Panel for Structured Media Centers

Part #’s 47606-AHT

* + 1. 12/28/24-Port Structured Media Panels
			1. The 12/18/24-Port structured media panel shall meet all applicable standards, including cULus Listed and ANSI/TIA-568.2-D (Cat 5e) and ANSI/TIA-1096-A.
			2. The panel shall include a plastic mounting bracket, a Telephone Line Distribution Board, and two, three or four Category 5e Voice and Data Patch Panel Boards.
			3. The Telephone Line Distribution Module Provides two to four lines of telephone service to up to 19 connections. Distribute “Line 1” service to up to 12 different connections; distribute four-line service to up to eight different connections. The Telephone Line Distribution Board, panel shall feature a RJ-45 port providing isolated circuitry for a security system.
			4. It shall fit into the structured media center or be used as a stand-alone unit.
			5. The panel shall feature a RJ-45 port on the Telephone Line Distribution Board, providing isolated circuitry for a security system.

Basis of Design

Manufacturer: Leviton 12/18/24 Port Structured Media Panel for Structured Media Centers

Part #’s 47603-12P 12 Port Panel

 47603-18P 18 Port Panel

 47603-24P 24 Port Panel

* 1. POWER AND SURGE PROTECTION MODULES
		1. Single duplex surge protective AC power outlet module kit
			1. AC power outlet module kit shall include a Hospital Grade TVSS (Transient Voltage Surge Suppression) surge-protected line voltage duplex outlet including multi-stage defense L-N, L-G, N-G providing 2 L5-15 120V 15Amp outlets of protected power.
			2. Kit shall include a J-Box for mounting outlet in base of structured media center.
			3. Safety Clips shall be included to protect outlets against dust, dirt and debris.
			4. Module shall Feature EMI/RFI filtering.
			5. Module shall meet the following standards:
				1. NEMA: WD-6
				2. ANSI: C-73
				3. UL498HG: File E13399
				4. UL1449 Std. 2nd Edition: File E146315
				5. CSA C22.2 No. 42: File 152105
				6. NOM: 057
			6. Surge Protection shall meet the following specifications:
				1. MCOV: 150V rms
				2. Joules at 10/1000 micro-sec: 720
				3. Max Surge Current L-N: 24kA
				4. Noise Rejection: -30dB at 500kHz-30MHz
				5. UL1449 Impulse 6kV/500A L-G: 400V
				6. Diagnostics: Indicator Light & Audible Alarm
			7. Module shall also be available without surge protection.

Basis of Design

Manufacturer: Leviton Single Duplex Surge Protection AC Power Module for Structured Media Centers

Part #’s 47605-ACS Surge J Box Kit, single duplex

* + 1. Double duplex surge protective AC power outlet module kit
			1. AC power outlet module kit shall include two Hospital Grade TVSS (Transient Voltage Surge Suppression) surge-protected line voltage duplex outlets including multi-stage defense L-N, L-G, N-G providing 4 L5-15 120V 15Amp outlets of protected power.
			2. Kit shall include a double J-Box for mounting outlets in base of structured media center.
			3. Safety Clips shall be included to protect outlets against dust, dirt and debris.
			4. Module shall Feature EMI/RFI filtering.
			5. Module shall meet the following standards:
				1. NEMA: WD-6
				2. ANSI: C-73
				3. UL498HG: File E13399
				4. UL1449 Std. 2nd Edition: File E146315
				5. CSA C22.2 No. 42: File 152105
				6. NOM: 057
			6. Surge Protection shall meet the following specifications:
				1. MCOV: 150V rms
				2. Joules at 10/1000 micro-sec: 720
				3. Max Surge Current L-N: 24kA
				4. Noise Rejection: -30dB at 500kHz-30MHz
				5. UL1449 Impulse 6kV/500A L-G: 400V
				6. Diagnostics: Indicator Light & Audible Alarm
			7. Module shall also be available without surge protection.

Basis of Design

Manufacturer: Leviton Double Duplex Surge Protection AC Power Module for Structured Media Centers

Part #’s 47605-0DP Surge J Box Kit, double duplex

* + 1. Versatile AC/DC Power Supply Module
			1. The versatile power supply shall mount in the structured media center bottom cutout and project less than 1.25 inches (31.75mm) into the interior.
			2. The versatile power supply shall deliver two 120V 15 amp AC outlets and six 2.1 mm 12v DC power jacks for powering network devices housed within the SMC center.
			3. AC power connections are via included wire nuts on pig-tails for hot, neutral, and ground.
			4. The AC power connection is within a cover requiring a tool for removal. AC power connections are in a part of the Versatile power supply suspended below the center.
			5. A green LED shall indicate AC power has been applied to the unit.
			6. The unit shall have two NEMA-15P connectors providing 120 VAC (47/63 Hz) at a total maximum of 15 A.
			7. The unit shall have six 12V DC 2.1 mm power jacks facing to the front of the center with center conductor at +12V DC.
			8. The integral DC power supply shall provide a total maximum power of 40 watts (3.34 Amps) and include continuous DC short circuit protection.
			9. The AC input voltage to the DC power supply shall be fused so as not to exceed two Amps. DC load regulation shall not exceed ± 2 % and ripple and noise shall not exceed ± 1 % pk – pk.
			10. Operating temperature shall be from 0º to 50º C in relative humidity from 5% to 95% (non-condensing).
			11. The unit shall include six two conductor DC power cords, 72 inches (1.83m) in length, with 2.1mm power connectors molded to both ends.

Basis of Design

Manufacturer: Leviton Versatile AC/DC Power Module for Structured Media Centers

Part #’s 47605-PSC Versatile Power Module

* 1. HIGH FLEX MINI PATCH CORDS
		1. Hi-Flex Category 6 small diameter flexible patch cords
			1. Patch cords shall meet the requirements of ANSI/TIA-568.2-D.
			2. Patch cords shall provide 1 Gigabit application performance for cross connecting in systems comprising of equipment, cable, and appropriate connectors.
			3. The patch cords shall be 28-gauge, unshielded, twisted pair, stranded conductor construction with a standard 8-position modular plug on both ends. Plug contacts shall be plated with minimum of 50 μm of gold.
			4. Patch cords shall have an outer diameter of 0.15” and have a minimum bend radius of .60”.
			5. Patch cords shall be available in white, yellow, grey, and blue.
			6. Patch cords shall be available in 6", 1', 2', 3', 4', 5', 7', 10', 15', 20', and 50' lengths.
			7. Patch cords shall be 15W and 30W Power over Ethernet (PoE and PoE+) compatible.
			8. Patch cords shall meet ANSI/TIA-1096-A (formerly FCC Part 68) and be RoHS compliant.

Basis of Design

Manufacturer: Leviton eXtreme High-Flex HD6 Patch Cords for Structured Media Centers

Part #’s 6H460--xx\*

 xx-Length (6”, 01’, 02’, 03’, 04’, 05’, 07’, 10’, 15’, 20’)

 \*- Color (White-W, Blue-L, Yellow-Y, Red-R, Green-G, Grey-S, Black-E))

* 1. FIBER TO THE HOME POINT OF ENTRY BOX
		1. The Fiber-to-the-Home Point of Entry Box shall provide a location to terminate fiber from a service provider and shall serve as a staging point prior to service activation.
		2. The FTTH Entry Box shall allow for the termination of duplex SM GPON fiber drop cable with SC/APC connectors and interface feedthrough coupler and fiber slack storage within the SMC.
		3. The FTTH Entry Box shall allow mounting inside a structured media center with included adhesive magnet or directly to the wall with included dry-wall anchors and screws.
		4. The FTTH Entry Box shall include:
			1. One (1) mini box base
			2. One (1) mini box lid
			3. One (1) Green SC/APC Adapter with two (2) dust caps
			4. Two (2) zip ties
			5. Two (2) dry-wall anchors
			6. Two (2) screws
			7. Two (2) splice sleeves
			8. One (1) adhesive magnet for Structured Media center mounting

Basis of Design

Manufacturer: Leviton FTTH Point of Entry Box for Structured Media Centers

Part #’s FTH00-00W

PART 3 - EXECUTION

1. STRUCTURED MEDIA CENTER INSTALLATION
	1. PLANNING
		1. Structured Media Centers (SMC) are designed to be flush mounted between standard 16˝ wall studs, but they may also be surface mounted.
		2. Allow sufficient space above and below the unit for power module and/or cable routing.
		3. Allow sufficient space in front of and to side of panel to allow for cover/door removal and opening and to allow for servicing interior cabling and components.
		4. Reserve adequate space for the optional lock mechanism. Do not place modules with a depth greater than 2˝ in the area behind lock mechanism.
		5. When installed in fire rated walls SMC membrane penetration shall be restored to original fire rating with application of appropriate firestop material or by remedial carpentry work to ensure local fire codes are met.
		6. Panel shall be sized to allow adequate space to house all planned components and allow for cable management.
	2. INSTALLATION
		1. Follow manufacturer’s instructions and local building and fire codes.
		2. Remove knock-outs before mounting the center into the wall.
		3. To install power modules, remove the appropriate cut-out in the bottom of the center, then install it per that module’s installation guide. If a power module is to be installed, sufficient space must be allowed beneath the unit for required electrical wiring. Electrical wiring shall be done by licensed electrical contractor.
		4. Secure panel to wall or between studs as indicated in manufacturer’s instructions.
		5. Metallic panels shall be grounded according to manufacturer’s recommendations or local codes as applicable.
2. STRUCTURED MEDIA CENTER MODULES, EXPANSION BOARDS AND SPLITTERS
	1. Follow manufacturer’s instructions supplied with each module.
	2. Align mounting pins with holes in rear of Structure Media Center. Make sure pins are in the OUT position prior to inserting in mounting holes, push pins in when module in correct position.
	3. Connect or terminate wires per manufacturer’s instructions and industry best practices.
3. COPPER PATCH PANEL TERMINATION
	1. Cables shall be dressed and terminated in accordance with the recommendations made in ANSI/TIA-568-C.0 and/or ANSI/TIA-568-C.1, manufacturer's recommendations and best industry practice.
	2. Cables shall be separated into groups and routed within the SMC in a clean and orderly fashion.
	3. Cables shall be properly supported vertically in the rack or cabinet and supported at the rear of the patch panel using a cable management bar or a rear horizontal cable management to retain terminations.
	4. Pair untwist at the termination shall not exceed 13 mm (0.5 inch) for Cat5e and Cat6 cabling, 6.35mm (.25 inch) for Cat6A.
	5. Bend radius of the cable in the termination area shall not exceed 4 times the outside diameter of the cable.
	6. Each cable shall be clearly labeled on the cable jacket behind the patch panel at a location that can be viewed without removing the bundle support ties. Cables labeled within the bundle, where the label is obscured from view shall not be acceptable.
4. OPTICAL FIBRE PANELS/ENCLOSURES
	1. Cables shall be dressed and terminated in accordance with the recommendations made in ANSI/TIA-568-C.0 and/or ANSI/TIA-568-C.1, manufacturer's recommendations and best industry practices.
	2. Each cable shall be individually attached to the respective splice center by mechanical means. The cables strength member shall be securely attached the cable strain relief bracket in the enclosure.
	3. Bend radius of the optic fibre cable in the panel/enclosure shall not exceed 10 times the outside diameter of the cable.
	4. Each fibre bundle shall be stripped upon entering the splice tray and the individual fibers routed in the splice tray.
	5. Each cable shall be clearly labeled at the entrance to the splice center. Cables labeled within the bundle shall not be acceptable.
	6. A maximum of 12 strands of fibre shall be spliced in each tray.
	7. All spare strands shall be installed into spare splice trays.
	8. Fibre slack shall be neatly coiled within the fibre splice tray or enclosure. No slack loops shall be allowed external to the fibre panel.
	9. Installer will visually clean and inspect fiber connector endface prior to insertion into coupler plate.
	10. Installer will attach dust caps immediately after endface inspection and after testing.
5. LABELING AND ADMINISTRATION
	* 1. All labeling is to be in accordance with ANSI/TIA-606-C, adopted labelling schema, and manufacturer’s instructions.
		2. Label horizontal cables using machine-printed label at each end of cable at approximately 12 inches (50mm) from termination point.
		3. Handwritten Labels: Not acceptable.

END OF SECTION