Next Generation Power Distribution in the Commercial Environment

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What do you think I’m here to show you today?
Adaptive Cabling Distribution System

The bridge between Architects & IT

Construction Specifications Institute - established new category December 2009
Adaptive Cabling Distribution = ACD™
Whole Building Power and Telecommunications Strategy

ACD™
Cost & Savings Impacts for Stakeholders & Trades

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Reduce Design Costs</th>
<th>Cut Construction Time</th>
<th>Ease Change</th>
<th>Clean Lines</th>
<th>Accuracy</th>
<th>Sustainable</th>
<th>UL Listed</th>
<th>Meet &amp; D USA</th>
<th>Seamless Interface</th>
<th>Fair Compensation</th>
<th>Minimal Impact</th>
<th>Reduce Construction</th>
<th>Modular Power</th>
<th>Trusted Advisor</th>
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A whole-building solution.

Commercial Offices
Training Facilities
Conference Centers
Libraries
Courthouses
Universities
Call Centers
911/Emergency Ops Facilities

Surveillance/Security Centers
Schools
Computer Laboratories
Stock Markets
Event Venues
TV/Radio/Recording Studios
Server Buildings
Museums

Financial Centers
Banks
Warehouses
Casinos
Retail Malls
Displays/Exhibits
Manufacturing Plants
and Many More!
- an alternate to traditional methods of cable distribution:
  (only competes with post & panel floors 10% – 15% of the time)

  - behind walls
  - core drills
  - trenches in the slab
  - suspended ceilings
  - power poles
  - systems furniture
• NO glues, screws or fasteners
• Adjustable border components
• Access channels in seconds without tools

• Save electrical and low voltage installation $$$
• Rate = 1000 square feet per installer per day
• In-house personnel perform moves, adds and changes
One channel plate weighs 1.5 lbs / 0.68 kg

One panel of a traditional system weighs on average 42 lbs / 19.05 kg
1:20 components are considered flat by IBC – International Building Code

FA-4433 RAMP 1:20

FA-7455 RAMP 1:20

Replace Power/Voice/Data Box in 1 Minute
Go green.

Gridd contributes in up to 5 LEED Categories

All Steel • Recycled Content, Recyclable, Refurbishable, Made in USA, Non Plenum-Rated Cable permitted.

NECA 2018
TECHNICAL WORKSHOP

MR Credit 1: Building Reuse
Brings technology without structural deterioration (slab and core) • Extends useful life of existing buildings

MR Credit 2: Construction waste management
Reduces Renovation Impacts – negligible construction waste
Diverts material from landfill disposal • Non plenum-rated cable permitted – removes toxins

MR Credit 3: Materials reuse
All Steel – 100% Recyclable • Can be removed and reused without deterioration

MR Credit 4: Recycled content
Post-Consumer + Post-Industrial recycled

MR Credit 5: Regional materials
Made in Massachusetts, USA – 500 mile regional credit • Raw Material – Country of Origin – United States

Building Green
APPROVED
Component Set Overview

- Feed Module
- Interlink
- Power and Data Enclosure
- General Purpose Floor Box
- Desk Mount
Feed Module
3 Phase Standard

Fig. FM 1.1
1. 50 Amp 3ф 120/208V with (3) Conductor 6 AWG, (1) Conductor 4 AWG Neutral, (1) Ground 8 AWG (MC Cable)
2. Feed Module Cable assemblies are terminated at the power source by E.C., E.C. to furnish MC Connector

Feed Module
3 Phase Energy Control

FM 2.1
1. 50 Amp 3ф 120/208V with (3) Conductor 6 AWG, (1) Conductor 4 AWG Neutral, (1) Ground 8 AWG (MC Cable)
2. Feed Module Cable assemblies are terminated at the power source by E.C., E.C. to furnish MC Connector

NECA 2018 TECHNICAL WORKSHOP
Feed Module

Dual Circuit

Fig. FM 3.1
1. 50 Amp Dual Circuit 120/208V with (4) Conductor 6 AWG with Ground 8 AWG (MC Cable)

2. Feed Module Cable assemblies are terminated at the power source by E.C., E.C. to furnish MC Connector

Tracks and Interlinks

Fig. T 1.1
Gridd Power Track
8 Ft, (8) Receptacles or 4 Ft, (4) Receptacles

Fig. II. 1.1
Gridd Power Interlink connects tracks together
Power and Data Enclosure: Typical

Tap-off head connects to track receptacles

Power and Data Enclosure: Single Circuit

Power Side

Low Voltage Side

Fig. T 2.1
Tap off head connects to track receptacles

Fig. FB 1.1
Typical Power Distribution Enclosure

Fig. FB 1.2
Typical Wiring Diagram

Power Distribution Enclosure with:
(4) 20 Amp Receptacles;
(1) Single Pole Breaker

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Power and Data Enclosure:
Dual Circuit

Fig. FB 2.1
Power Distribution Enclosure with:
(4) 20 Amp Receptacles;
(1) Double Pole Breaker

Fig. FB 2.2
Low Voltage Side

Fig. FB 2.3
Dual Circuit Wiring Diagram

Low Voltage Device Plate Options

Fig. LVDP 1.1
NIPR/SIPR

Fig. LVDP 1.2
Blank Data Plate

Fig. LVDP 1.3
(2) Decora Cutouts

Fig. LVDP 1.4
(4) CommScope Connectors

Fig. LVDP 1.5
(6) CommScope Connectors

Fig. LVDP 1.6
(4) MAAP Adapter Plates
(4) RJ45 with Separating Divider

Fig. LVDP 1.7
(10) RJ45 Cutouts

Fig. LVDP 1.8
(6) RJ45 Cutouts

Fig. LVDP 1.9
(4) RJ45 Cutouts

Fig. LVDP 1.10
(2) Panduit Modules-GFCI Frames
(4) RJ45 Type Connectors

Fig. LVDP 1.11
(2) Decora Cutouts
(1) RJ45 Cutout

Fig. LVDP 1.1-1.11
Device plate on only one side of floor box

*LVDP Plates can be made custom
General Purpose Floor Box

Fig. FB 4.1
Power Distribution Enclosure with:
(2) 20 Amp Receptacles;
(1) Single Pole Breaker

Fig. FB 4.2

Fig. FB 4.3
Wiring Diagram

Furniture Interface

Fig. FI 1.1
Furniture Interface Module with:
(4) 15 Amp Breakers or
(3) 20 Amp Breakers

Fig. FI 1.2
Furniture Interface Top Mount

Fig. FI 1.3
Furniture Interface Side Mount

Fig. FI 1.4
Furniture Interface Floor Mount

Fig. FI 2.1
Furniture Interface Floor Box with:
(4) 15 Amp Breakers or
(3) 20 Amp Breakers

Fig. FI 2.2
Furniture Interface Floor Box

Fig. FI 2.3
Wiring Diagram
**Desk Mounts**

**Assembled with Preconfigured Whip**

*Fig. DM 1.1*
Desk Mount with:
1. 20 Amp Receptacle;
2. Single Pole Breaker

*Fig. DM 2.1*
Desk Mount with:
1. 20 Amp Receptacles;
2. Single Pole Breaker

*Fig. DM 3.1*
Desk Mount with:
1. USB Ports;
2. Single Pole Breaker;
3. Spin Lock Connector

*Fig. DM 5.1*
Desk Mount with:
1. Single Pole Breaker;
2. Single Pole Breaker

*Spin Lock Whip Connection*

*Fig. DM 4.1*
Desk Mount with:
1. 20 Amp Receptacles;
2. Single Pole Breaker;
3. Spin Lock Connector

*Fig. DM 5.1*
Desk Mount with:
1. L520R 20 Amp Twistlock Receptacle;
2. Single Pole Breaker

*Fig. SL 1.1*
Whip with Spin Lock for connection to track

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**Branch Circuit Supply Whip**

- Connect to 20-Amp single pole circuit breaker
- Available in 10 AWG or 12 AWG depending upon length of circuit
- Spin lock connector pre-installed at end of whip

*Fig. SL 1.1*
Gridd Power Branch Circuit Supply Whip

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*Desk Mounts can be assembled with either whip or spin lock configuration*
Spin Lock Junction

Fig. SL 2.1
20-Amp Spin Lock Branch Circuit Junction Box

Branch Circuit Spin Lock Interlink

Fig. SL 3.1
Gridd Power Branch Circuit Spin Lock Interlink
Floor Boxes

Fig. FB 1.1
Power Distribution Enclosure with:
(4) 20 Amp Receptacles;
(4) In-Wall RJ45 Shielded Connectors;
(1) Spin Lock Connector

Fig. FB 1.2
Fig. FB 1.3

*Refer to LVDP 1.1 for Low Voltage Options

Low Voltage Device Plate Options

Fig. LVDP 1.1
(4) RJ45 Cutouts

Fig. LVDP 1.2
(6) RJ45 Cutouts

Fig. LVDP 1.3
(8) RJ45 Cutouts

Fig. LVDP 1.4
(30) RJ45 Cutouts

Fig. LVDP 1.5
(4) RJ45 Cutouts;
(2) MAAP Adapter Plates

Fig. LVDP 1.6
(4) CommScope Connector Cutouts
(2) MAAP Adapter Plates

Fig. LVDP 1.7
(4) CommScope Connector Cutouts

Fig. LVDP 1.8
(6) CommScope Connector Cutouts

Fig. LVDP 1.9
(4) XLR Cutouts
(2) RJ45 Cutouts

Fig. LVDP 1.10
(4) XLR Cutouts

Fig. LVDP 1.11
Blank Device Plate

Fig. LVDP 1.12
Blank Device Plate

*LVDP Plates can be made custom

Device plate on only one side of floor box
Sample Installation Plan

Plan Day 1 becomes System Management Plan Day 2

Sample Staging Plan
Recording As-Built drawings are critical!
Gridd Cost Offsets

- Construction Schedule: Gridd installs rapidly (up to 10,000 sf. per day)
- Can save 50% of electrical labor
- Can save 50% of low voltage labor
- No core drills, trenches, wall and ceiling wiring
- Reduce or eliminate wire management in systems furniture
- Use non-plenum rated cable
- Moves, adds and changes performed by in-house personnel

Cost Offsets is not fastened to the structure, it depreciates as FFE (also leasable)

Accelerated Depreciation

- Gridd 7 Yrs at $14,200 Per Year
- Conventional Construction / Post & Panel 39 Yrs at $2,500 Per Year
FreeAxez does not see itself as a vendor, but strives to become a consultant and trusted advisor for our clients.

There are 3 key teaching moments associated with our most successful projects:

- **Pre-Bid conference with electrical & low voltage subs – estimating groups.**
- **Trainer on-site Day 1 (installation QC), hands on with electrical and low voltage installers.**
- **Day 2 - 90 Day Best Practices session on-site with end-users groups.**
Wiring Outlets with Grommets

Junction Box
Cable Management Boot in wall between studs
High Density Plate
High Density Base Unit

Spin-Lock
Thank you for your time!

Questions?

For more Information:
Visit us in Booth #422