molex

INSTALLATION INSTRUCTIONS

BEFORE INSTALLING OR ADJUSTING THIS PRODUCT, PLEASE READ THESE INSTRUCTIONS CAREFULLY. PLEASE KEEP THIS GUIDE FOR FUTURE REFERENCE

ZONE ENCLOSURE -IN-CEILING

Cable entry/exit knock out positions

Ceiling rod fixing bracket

Cable entry/exit knock out positions

Outer Door

Door locks

Lockable, hinged wiring platform

Outer Door

Wiring platform with slow-release hydraulic dampers
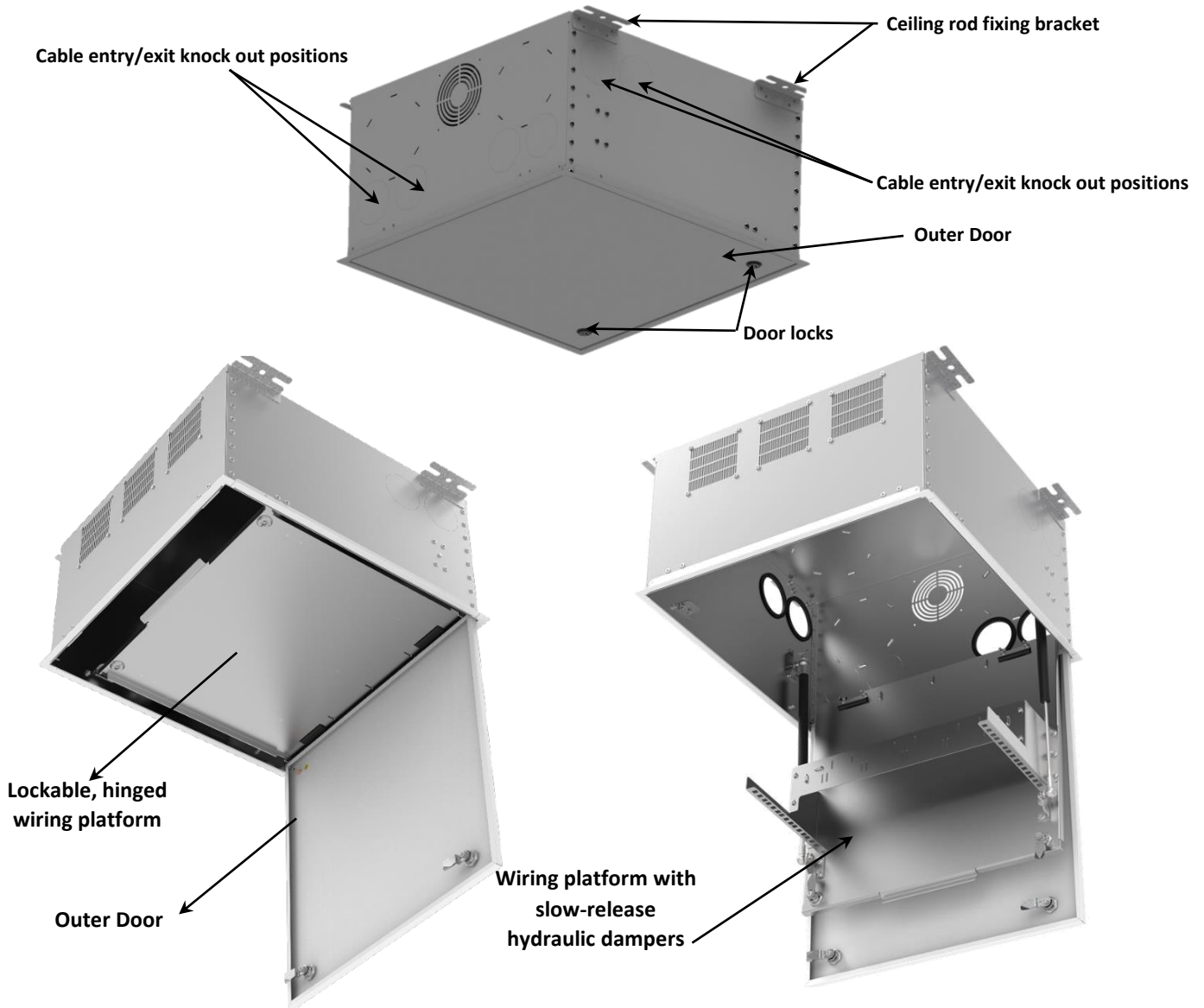
1.0   Scope

This document describes the installation instructions for the In-Ceiling Zone Enclosure.

2.0   Product Description

The In-Ceiling Zone Enclosure provides a protected point of configuration for copper and/or fiber cable and connectivity installed with or without active equipment in a dropped/suspended ceiling grid environment, for the support of a zone cabling architecture. The product provides support for 19 '' wide networking equipment with a working height of 5U.

Warning: It is important that trained installers should install this product. Improper installation of this product could result in damage to the enclosure, the network equipment housed inside or personal injury. Molex is not responsible for damage to the enclosure, the network equipment or personal injury resulting from improper installation or misuse.

Consult Molex Connected Enterprise Solutions Technical Support for installation guidance.

ENGINEERING RECORD NO : 664370	SAP NO : 187000558	Doc No: 187000558	Doc part: AS	REV- A
	http://www.molexces.com			

MPN/FMT-042 (2019/DEC/23 REV-03).
THIS INFORMATION IS CORRECT AS AT THE TIME OF PUBLICATION, SPECIFICATION ARE SUBJECT TO CHANGE.   SHEET No. **1** of **10**

3.0   In-Ceiling Zone Enclosure Components
   i.   Enclosure Box
   ii.   Key
   iii. Grommets x 4
   iv.   Ceiling Rod Drilling Template

4.0   Tools/Parts Required

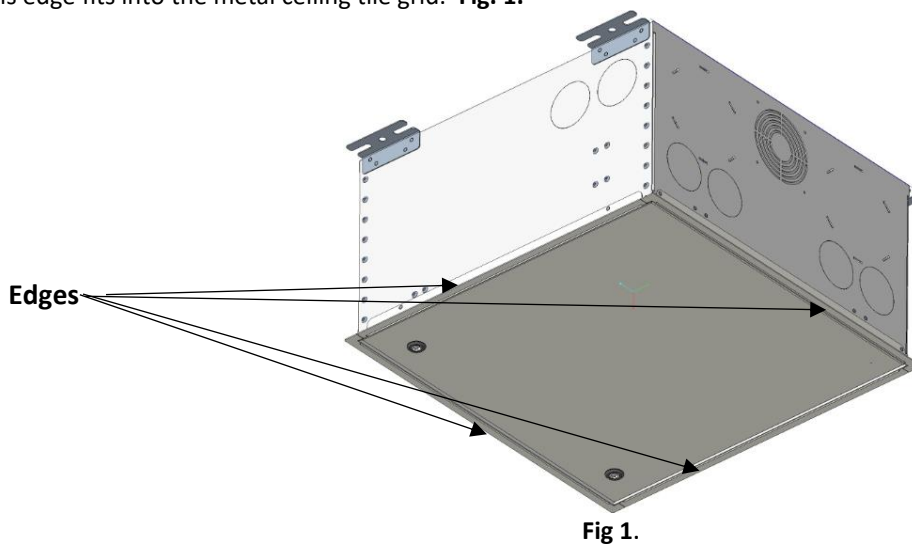|		
Hammer	**Philips Screwdriver**	**Adjustable wrench**
Adhesive	**4 x M10 threaded rods and 8 x M10 nus and washers or 4 x 3/8" threaded rods and 8 x 3/8" nuts and washers.**	**Fan Unit (required for active installations) Refer to In-Ceiling Zone Enclosure Datasheet for part number.**

Door and Platform Lock

The door lock clearly indicates lock/unlock positions. Red triangle indicates locked position and green triangle indicates unlocked position.

IMPORTANT NOTE: Ensure that the door is locked after installation and maintenance for installation safety and security of equipment.

lock position ⟵   ⟶ **Unlock position**
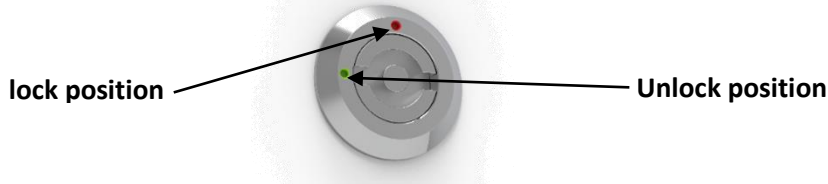
5.0   Installation Preparation

   I.   Before installing the enclosure in the suspended ceiling void, plan the cable entry route from the Telecommunications Room (TR) and the patch cord exit routes to the Telecommunications Outlet (TO).
   II.   Ensure that the enclosure is positioned close to cable tray/baskets to ensure cable entering and exiting the enclosure is correctly supported.
   III. Carefully remove the enclosure from the packaging, taking care not to scratch the paint finish on the door or damage the edging strip as this edge fits into the metal ceiling tile grid. **Fig. 1.**

Edges

Fig 1.

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Warning: Do not over-extend the outer door of the In-Ceiling Zone Enclosure when opening as this will damage the outer door. The outer door should not be opened more than **90˚**

IV.   The enclosure includes 8 cable entry/exit knockout positions. Before fitting the enclosure in the ceiling, determine the positions needed for the cable routing and using a hammer, remove only the necessary circular knockouts needed.
Note: Each knock-out is designed to accommodate 24 x C6A unterminated copper cable bundle. refer **Fig. 2 and Fig. 3.**
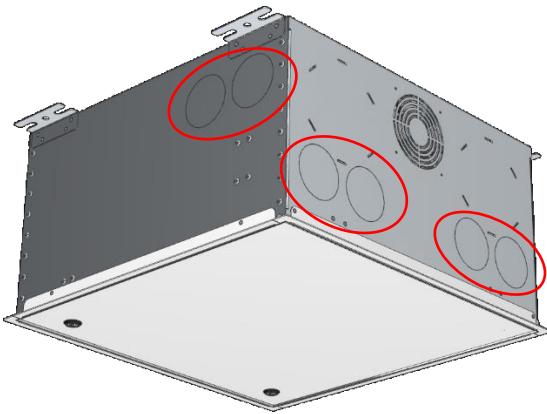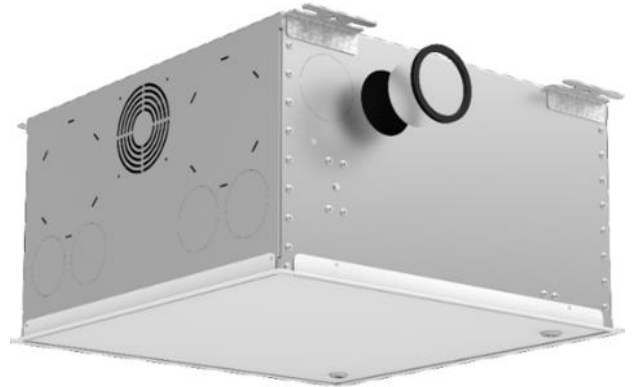

Fig.2

Fig 3

V.   Fill the groove of the rubber grommet with adhesive and fit the grommet to the cable entry hole to protect the cable. This ensures a tight permanent fit of the grommet, preventing misplacement due to cable movement when the platform is opened and closed. Refer **Fig.4a and Fig 4b.**
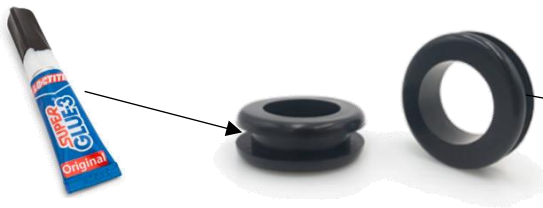

Fig.4.a

Fig.4.b

VI.   Remove sufficient ceiling tiles to fit the enclosure and for installation access.
VII.   The enclosure is designed to fit into a standard 2ft x 2ft (USA) or 600 x 600mm suspended/drop ceiling grid.
VIII.   A ceiling rod drilling template is supplied with the enclosure.
IX.   Secure 4 x M10 or 4 x 3/8" threaded rods to the building structure. The threaded rod must be attached to the brackets at each corner of the enclosure with a nut and washer above and below the support bracket.
X.   Level the enclosure, so that the weight is not supported by the ceiling grid system. **Fig 5**.
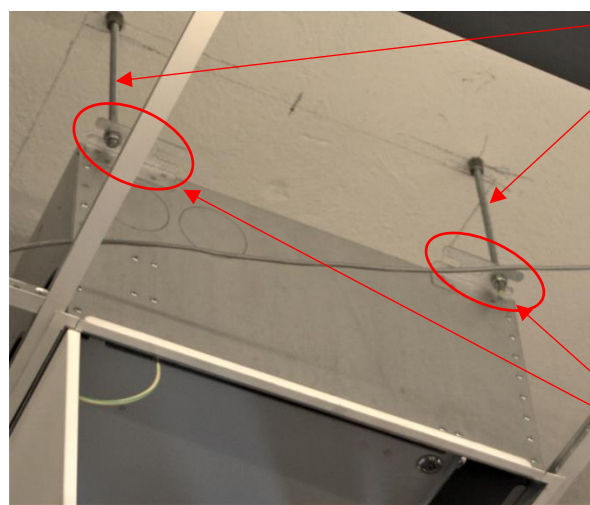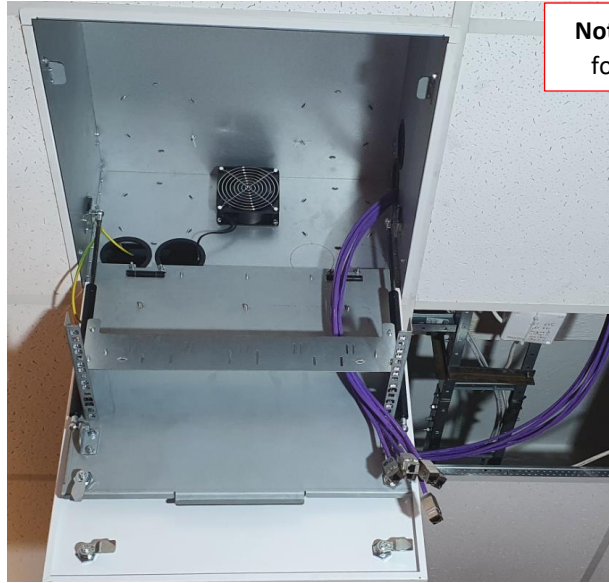

Secured Threaded rods

Rod fixing brackets

Fig.5

6.0 Copper Installation - Passive

I. Terminate the Molex Jacks following the installation instructions included with the jack.

II. Bring the terminated cable bundle into the enclosure as shown in **Fig. 6.**

Note: A fan unit is optional for passive installations.

Fig. 6

III. Snap the Jacks into the unloaded patch panel and secure the cables to the rear cable management tray with cable ties as shown in **Fig. 7a.** Secure the cable bundles with Velcro tie wraps ensuring the correct cable bend radius is maintained. Allow at least 1U gap between each 1U patch panel to allow for patch cord cable management **Fig. 7b**.
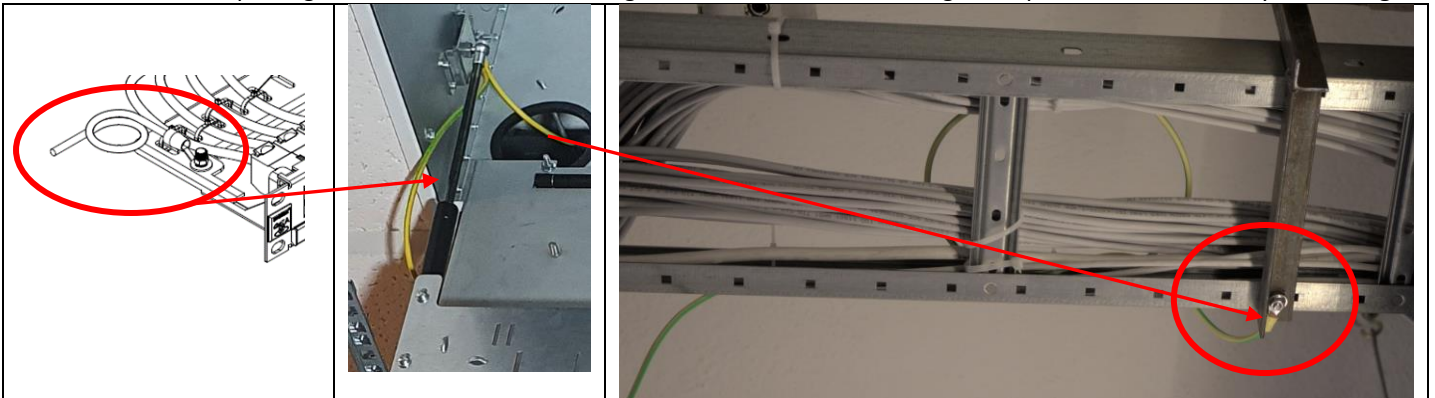

Fig. 7a

Fig. 7b

IV. For C6A or C7 shielded terminations ensure that the panel is connected to the earthing wire of the enclosure. Connect the panel ground wire to the enclosure ground wire. Connect to the ground point on the cable tray/basket **Fig. 8**

Fig. 8

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V. Ensure that there is sufficient cable slack in the enclosure to allow the hinged wiring platform to open and close without putting any strain on the terminations. **Fig. 9**

VI. Once the required cable slack is determined, secure the cables to the cable tray/basket. **Fig. 10**


Fig. 9

Fig 10

VII. Connect the work area patch cords to the patch panel ports and bundle the cables with Velcro tie wraps. Ensure that there is sufficient patch cord cable slack to avoid any strain on the patch plugs and to allow the hinged wiring platform to open and close without straining the outgoing patch cord connections. **Fig 11a**. Route the patch cord bundles between the two patch panels, and secure on the cable management plate. **Fig. 11b**
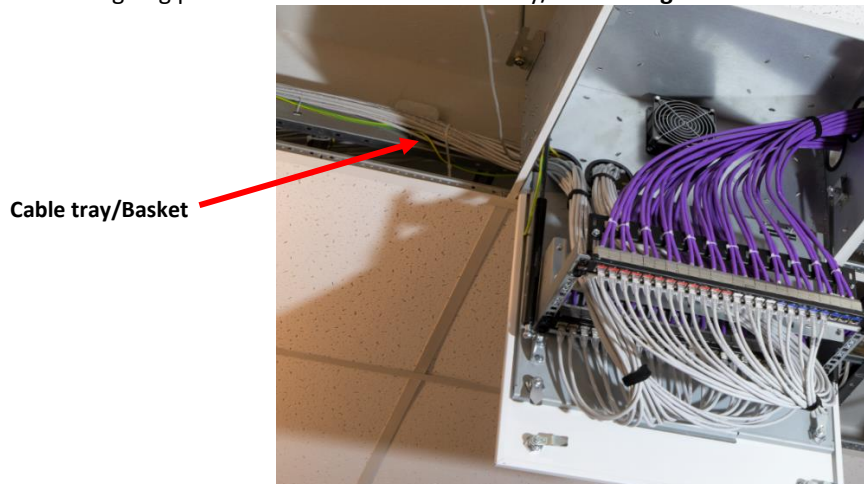

Fig. 11a
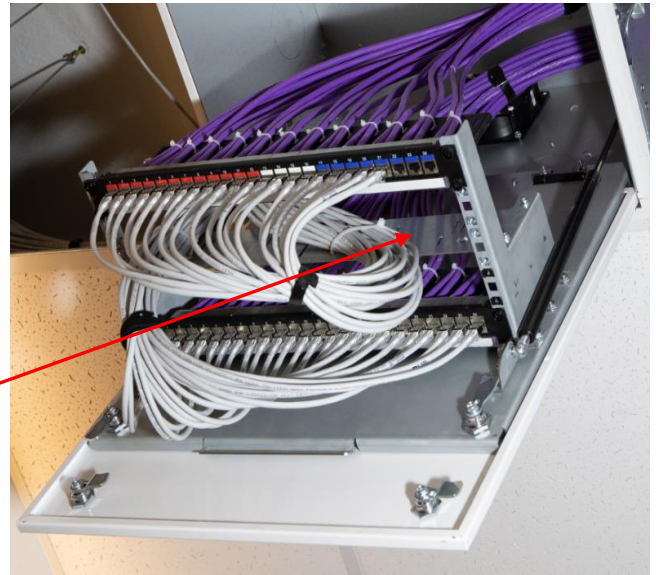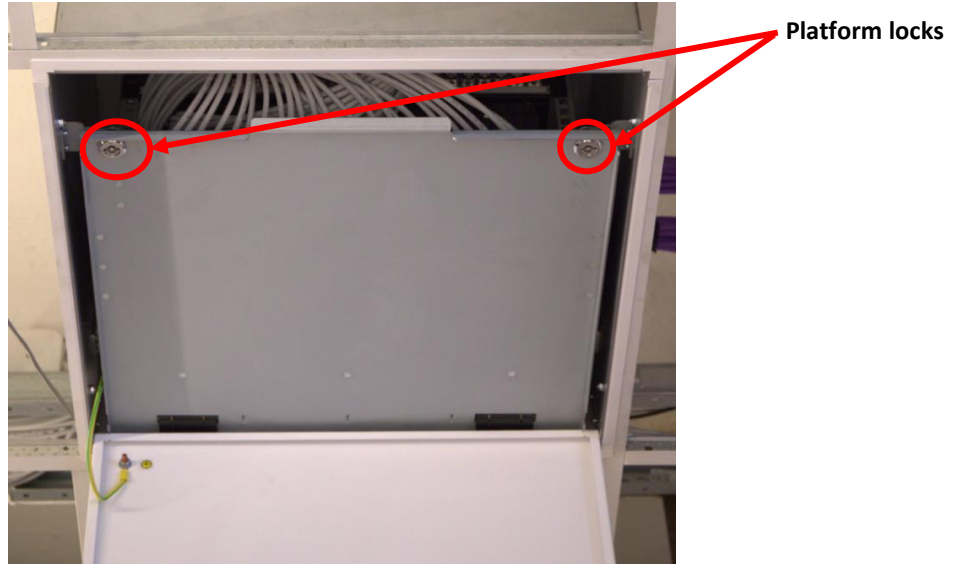

Cable management plate
Fig. 11b

VIII. Secure the outgoing patch cord cable to the cable tray/basket. **Fig. 12**

Cable tray/Basket
Fig. 12

IX. Push the hinged wiring platform up to the closed position. For safety and security, ensure the **platform is locked before closing the outer door.** refer **Fig. 13**

Platform locks

Fig.13

X. Close the outer door and lock. Replace the adjacent ceiling tiles. **Fig. 14**

Fig.14

7.0   Copper Installation – Active
i.   **Note**: The maximum depth allowance for a switch is 24cm (9"). Measure the depth of the switch intended for installation before fitting into the enclosure.
ii.   Install enclosure fan unit. **Fig 15**
iii.   Route the fan power cable through the cable exit hole and connect to the nearest power supply.

Fan Unit

Fig. 15

iv. Fit the switch into to the base of the wiring platform (lowest rack mount position). Ensure that that the power supply at the rear of the switch can be correctly connected when the platform is closed and opened. Route the power cable through the cable exit holes and connect to the nearest power supply.

v. Follow the copper cable installation process for a passive installation from **6.i to 6.vi**.

vi. Position the patch panels on the top two rack positions. **Fig. 16**

vii. Install a cable management panel above the switch. Populate the switch and patch panels with the required number of patch cords, utilizing the patch cord cable manager for patch cord slack management. **Fig 17.**

| **Fig. 16** | **Fig. 17** |

viii. Push the wiring platform up to the closed position. For safety and security, ensure the <u>platform is locked before closing the outer door</u> as shown **Fig. 13**

ix. Close the outer door and lock. Replace the adjacent ceiling tiles. **Fig 14.**

8.0   Fiber Optic Spliced Cable Installation with Multi-Function Fiber Enclosure (p/n RFR-00311-BK)

i. Install the fan unit into the enclosure **7.ii**. Route the power cable through the cable exit hole and connect to the nearest power supply.

ii. **Note:** The maximum depth allowance for a switch in the Zone Enclosure is 24cm (9"). Measure the depth of the switch intended for installation before fitting into the Enclosure.

iii. Fit the switch on to the base of the wiring platform (lowest rack mount position). Ensure that that the power supply at the rear of the switch can be correctly connected when the wiring platform is opened and closed. Route the power cable through the cable exit hole and connect to the nearest power supply.

iv. For Installation of the Multi-Function Fiber Enclosure part no RFR-00311-BK and associated adapter plates, follow the installation instruction procedure for standard spliced fiber installations provided with the   RFR-00311-BK fiber enclosure. Splice the fiber cable and pigtails into the enclosure before installing it into in the In-Ceiling Zone Enclosure.

v. Provide sufficient fiber cable slack in the Zone Enclosure to allow the hinged wiring platform to open and close without putting any strain on the fiber cable. Maintain the correct fiber bend radius and secure the fiber cable to the roof of the In-Ceiling enclosure utilizing the cable tie features included. **Fig 19**.

vi. Install a cable management panel under the patch panels and above the switch position. **Fig.19**

vii. Populate the switch and panels with the required number of patch cords, utilizing the patch cord cable manager for patch cord slack management. **Fig 19 and Fig. 20**
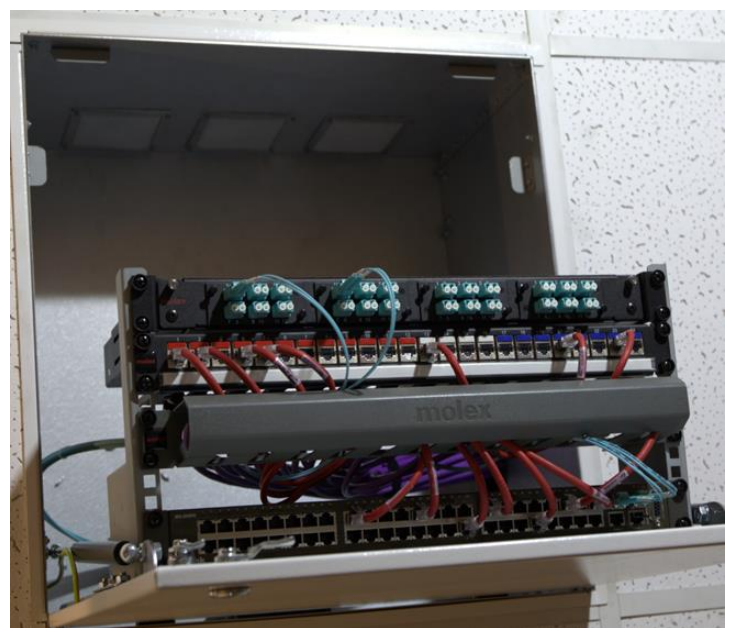
Fig. 19

Fig.20

9.0   Fiber Optic MTP™/MPO Mod Link Cassette Installation with Multi-Function Fiber Enclosure (p/n RFR-00311-BK)

i.   Follow the procedure to fit the fan and switch as shown in **7.ii**

ii.   For Installation of Multi-Function Fiber Enclosure part no. RFR-00311-BK and associated Multi-Media adapter plate follow the installation instruction procedure provided with the RFR-00311-BK fiber enclosure. Alternatively fit the ModLink Cassettes into the enclosure before installing the Multi-Function Enclosure into in the In-Ceiling Zone Enclosure.

iii.   Allow sufficient ModLink MTP/MPO fiber cable slack in the Multi-Function Fiber Enclosure to allow the drawer to open for access to cassettes and to allow the Zone Enclosure hinged wiring platform to open and close without putting any strain on the fiber cable. Maintain the correct ModLink cable bend radius and secure the cable to the roof of the In-Ceiling Enclosure utilizing the cable tie features included. **Fig. 21 and Fig. 22**

iv.   Install a cable management panel under the patch panels and above the switch position. **Fig.22**

v.   Populate the switch and panels with the required number of patch cords, utilizing the patch cord cable manager for patch cord slack management.


Fig 21.

Fig.22

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10.0   Fiber Optic Spliced Cable Installation and MTP/MPO ModLink Cassettes with Specification Grade Fiber Enclosure (p/n RFR-00201)

   I.   Install the fan unit into the enclosure **7.ii**. Route the power cable through the cable exit hole and connect to the nearest power supply.

  II.   **Note:** The maximum depth allowance for a switch in the Zone Enclosure is 24cm (9"). Measure the depth of the switch intended for installation before fitting into the Enclosure.

 III.   Fit the switch on to the base of the wiring platform (lowest rack mount position). Ensure that that the power supply at the rear of the switch can be correctly connected when the wiring platform is opened and closed. Route the power cable through the cable exit hole and connect to the nearest power supply.

  IV.   For Installation of the Specification Grade Fiber Enclosure part no RFR-00201 and associated adapter plates, follow the installation instruction procedure for standard spliced fiber installations provided with the   RFR-00201 fiber enclosure. Splice the fiber cable and pigtails into the enclosure before installing it into in the In-Ceiling Zone Enclosure.

   V.   For MTP/MPO ModLink Cassettes installations. Fit the cassettes and cables into the enclosure before installing it into the In-Ceiling Zone Enclosure.

  VI.   **Note:** The RFR-00201 fiber enclosure <u>must be mounted</u> at the 2U position, to prevent interference with the fan unit when the wiring platform is closed. **Fig. 23**
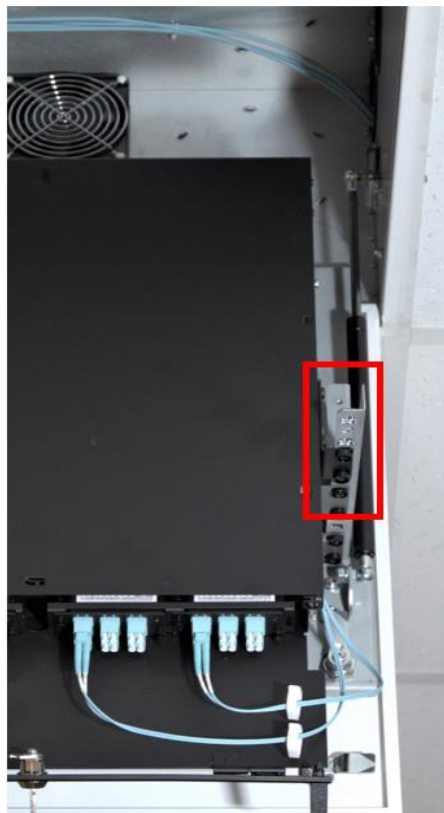
Fig.23

 viii.   Populate the switch and panels with the required number of patch cords, utilizing the patch cord cable manager for patch cord slack management.
         NOTE: If copper patch cords are installed in the same installation, ensure that these cords are long enough to route around the Specification Grade Fiber Enclosure to allow access to the drawer of the fiber enclosure. **Fig. 24**

  ix.   <mark>Warning:</mark> For safety and prevention of installer injury, the drawer of the Specification Grade Fiber Enclosure (RFR-00201) <u>must be locked</u> with the key provided <u>before pulling the wiring platform down (open)</u>. The plastic clips provided on each side of the enclosure cover are <u>not designed to hold the weight</u> of the enclosure drawer in a vertical position.
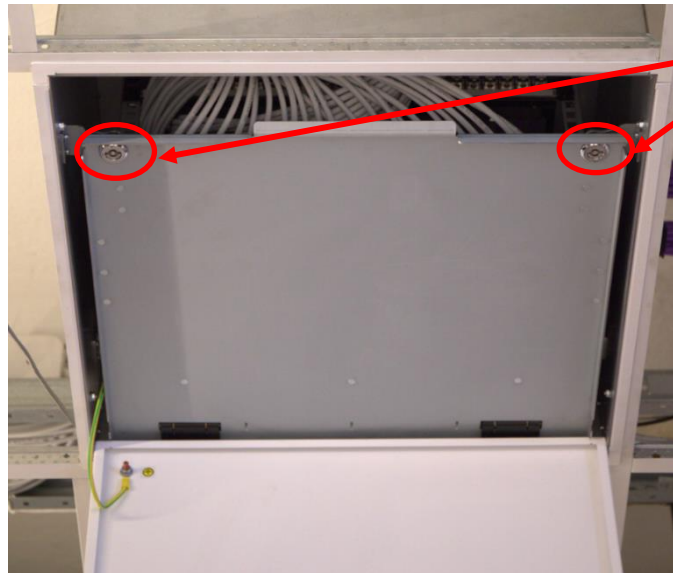
Route copper patch cords around the fiber enclosure
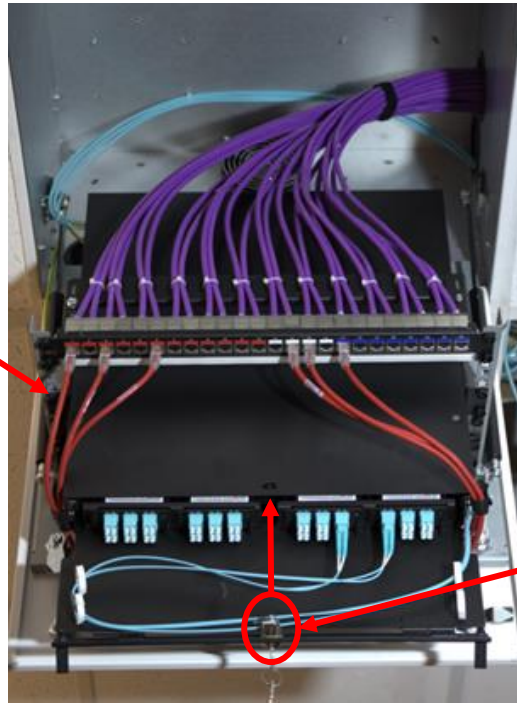
Ensure the fiber enclosure is locked before opening the wiring platform

Fig.24

x. Close the hinged wiring platform. For safety and security, ensure the <u>platform is locked before closing the outer door.</u>

Platform locks

Fig. 25

xi. Close the outer door and lock. Replace adjacent ceiling tiles.   Fig. 26

Fig.26