

## 3-Way IS Cable Joiner Installation Procedure 101153 Revision 2

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### Revision History:

Original - 30/04/15

Rev. 1 - 13/12/15

900155 refers to 3-Way 1-pair 1.0mm<sup>2</sup> IS Cable Joiner

Rev. 2 - 20/07/18

900141 refers to 2-pair for 0.5mm<sup>2</sup> sensor cable and 0.5mm<sup>2</sup> trunk cables

900174 refers to 1-pair IS Cable Joiner for 0.5mm<sup>2</sup> sensor cable and 1.5-2.5mm<sup>2</sup> trunk cables

## Supporting Documentation

### 1. Datasheets

1.1. 101141R0 (CoolSplice Connector - ENG\_SS\_108-19419\_B FTEC174 rev. 1 - July 99.pdf).pdf

1.2. 101142R0 (CoolSplice Connector - ENG\_DS\_8-1773459-0\_COOLSPLICE\_CONNECTORS\_0412 April\_2012).pdf

### 2. Parts List

Qty	Part No.	Description
1	900132	3-Way 1-pair IS Cable Joiner for 0.5mm <sup>2</sup> sensor cable and 0.5mm <sup>2</sup> trunk cables
1	900141	3-Way 2-pair IS Cable Joiner for 0.5mm <sup>2</sup> sensor cable and 0.5mm <sup>2</sup> trunk cables
1	900155	3-Way 1-pair IS Cable Joiner for 0.5mm <sup>2</sup> sensor cable and 0.75-1.0mm <sup>2</sup> trunk cables
1	900174	3-Way 2-pair IS Cable Joiner for 0.5mm <sup>2</sup> sensor cable and 1.5-2.5mm <sup>2</sup> trunk cables

### 3. Description

The 900132/900155/900174 connector is intended for the parallel connection of up to three one pair cables containing only certified intrinsically safe circuits.

The 900141 connector is intended for the parallel connection of up to three two pair cables containing only certified intrinsically safe circuits.

They consist of a housing containing three Tyco Electronics CoolSplice™ IP65 connectors which have been pre-wired on one side with sealed parallel connections. They are insulation displacement connectors requiring only the use of narrow-jawed pliers to make the connection.

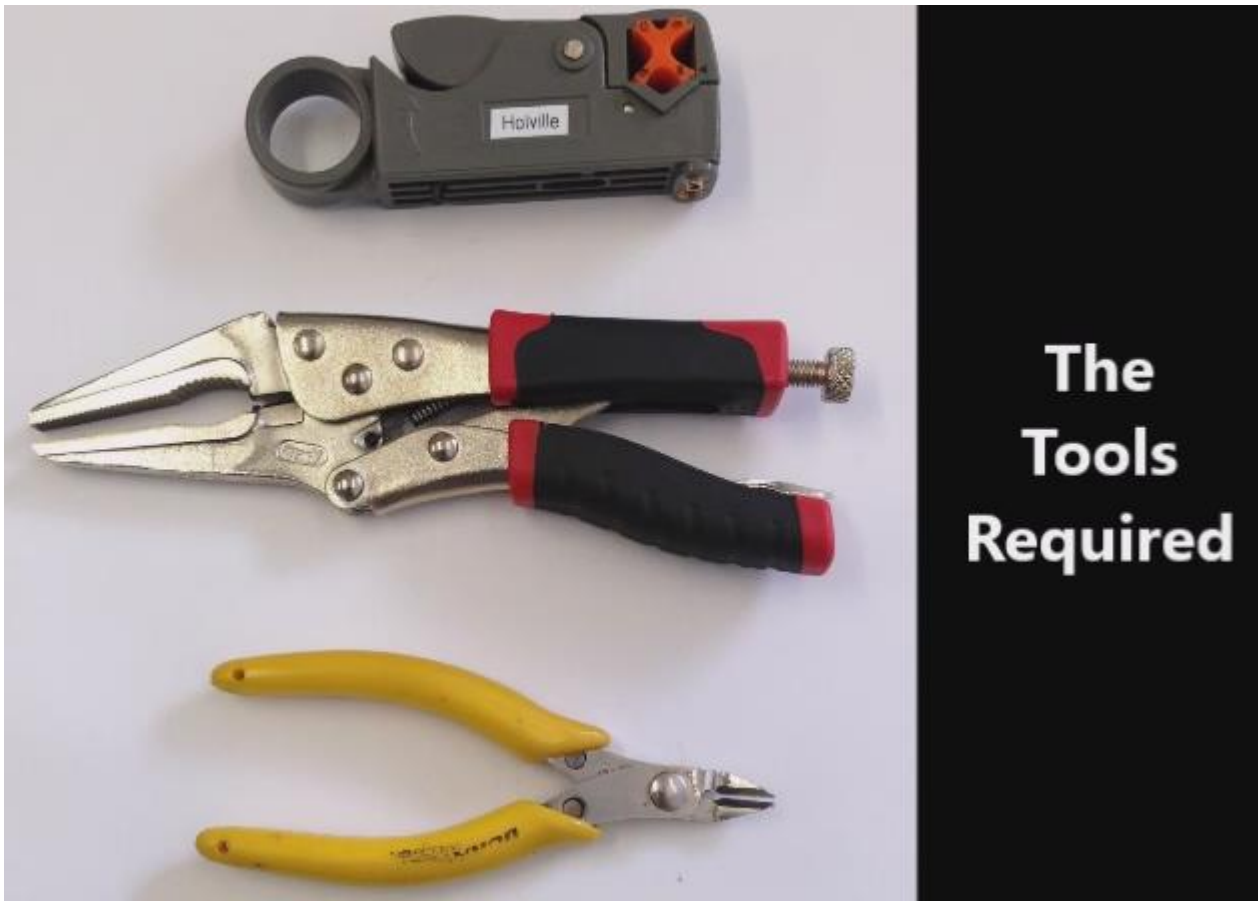
Provision is made for securing the connector by cable tie and marshalling the 3 cables through loops to provide stress relief. The aim is to provide a much quicker and cheaper method of connecting IS cables than junction boxes and terminals.



#### 4. Usage

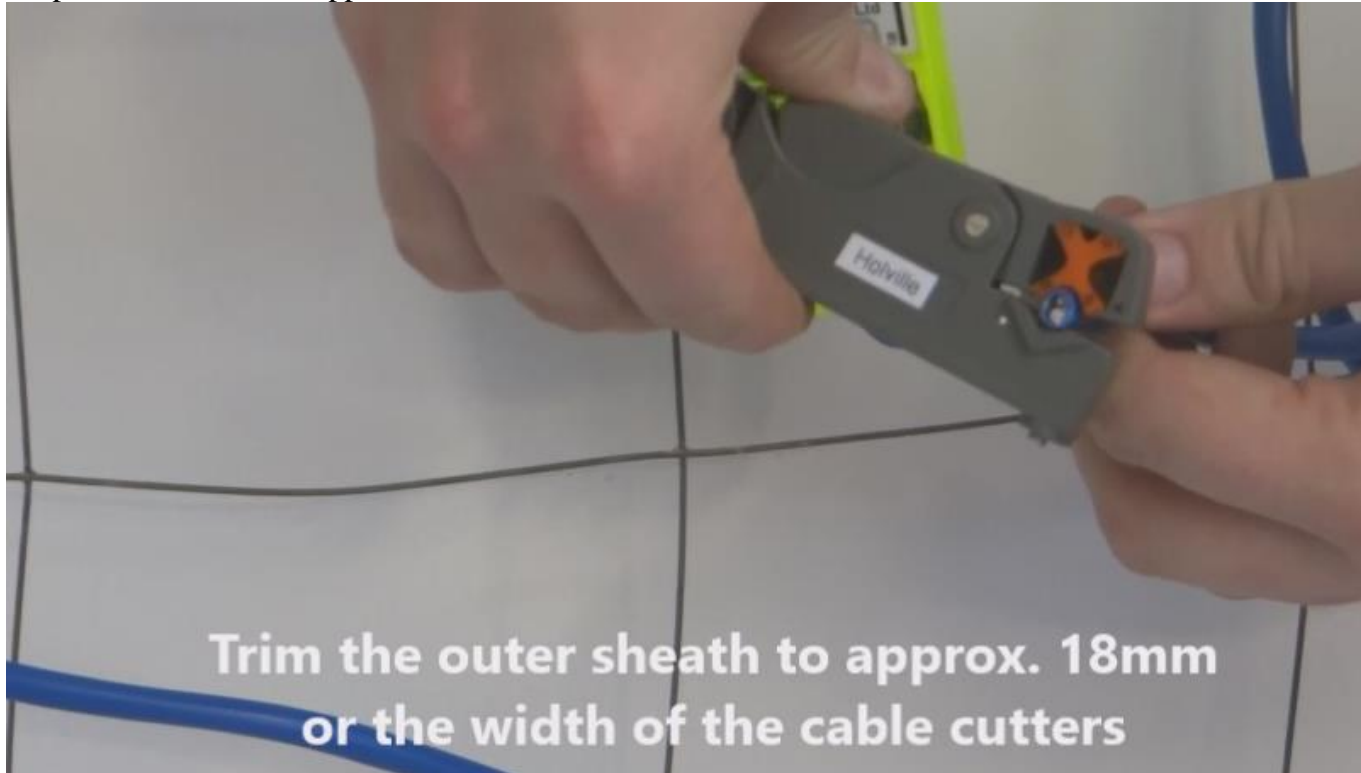
These connectors are typically used to make a branch connection to an intrinsically safe sensor or a branch connection in an intrinsically safe network.

#### 5. Installation Procedure



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5.1. Strip the sheath back to approx. 18mm

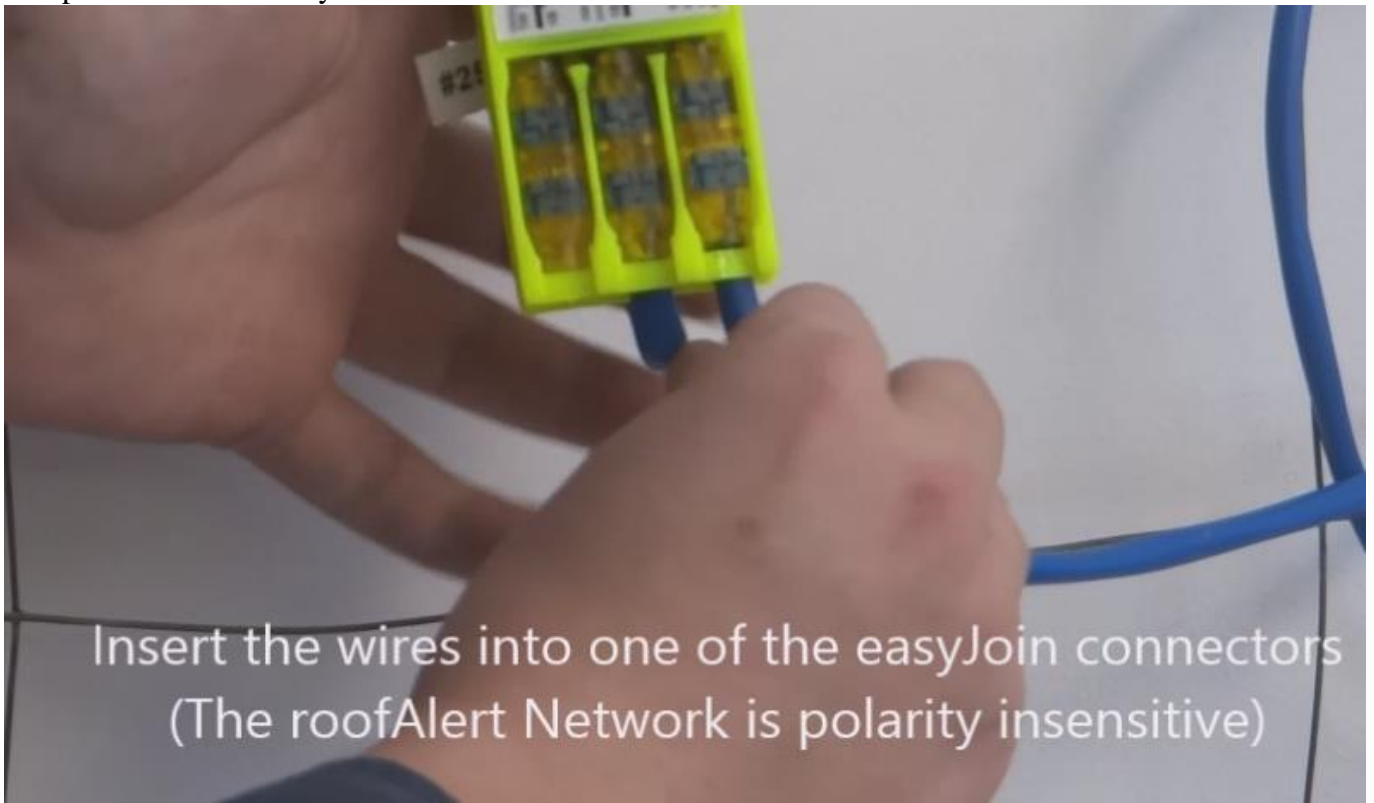


5.2. Remove any unused wires and/or screens

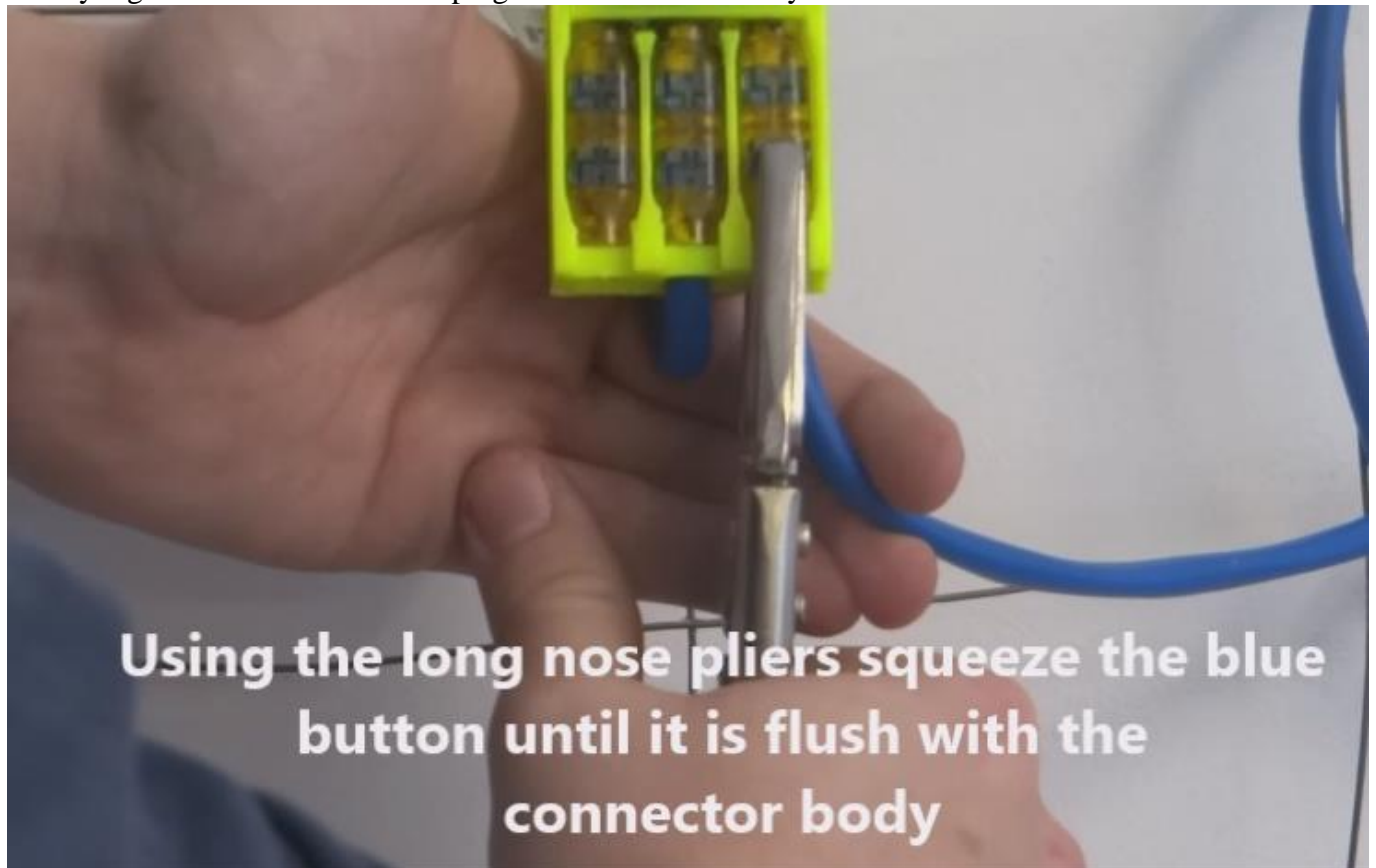


5.3. Carefully insert the wire pair so that they go half-way into the CoolSplice™ connector and protrude past the blue push button. The white wire goes into the left hole of the pair (when viewed from above) and the black into the right hand hole as indicated by the diagram on the label.

5.4. The wires can be seen through the back side of the transparent body to verify that they have been pushed in all the way to the centre of the connector.

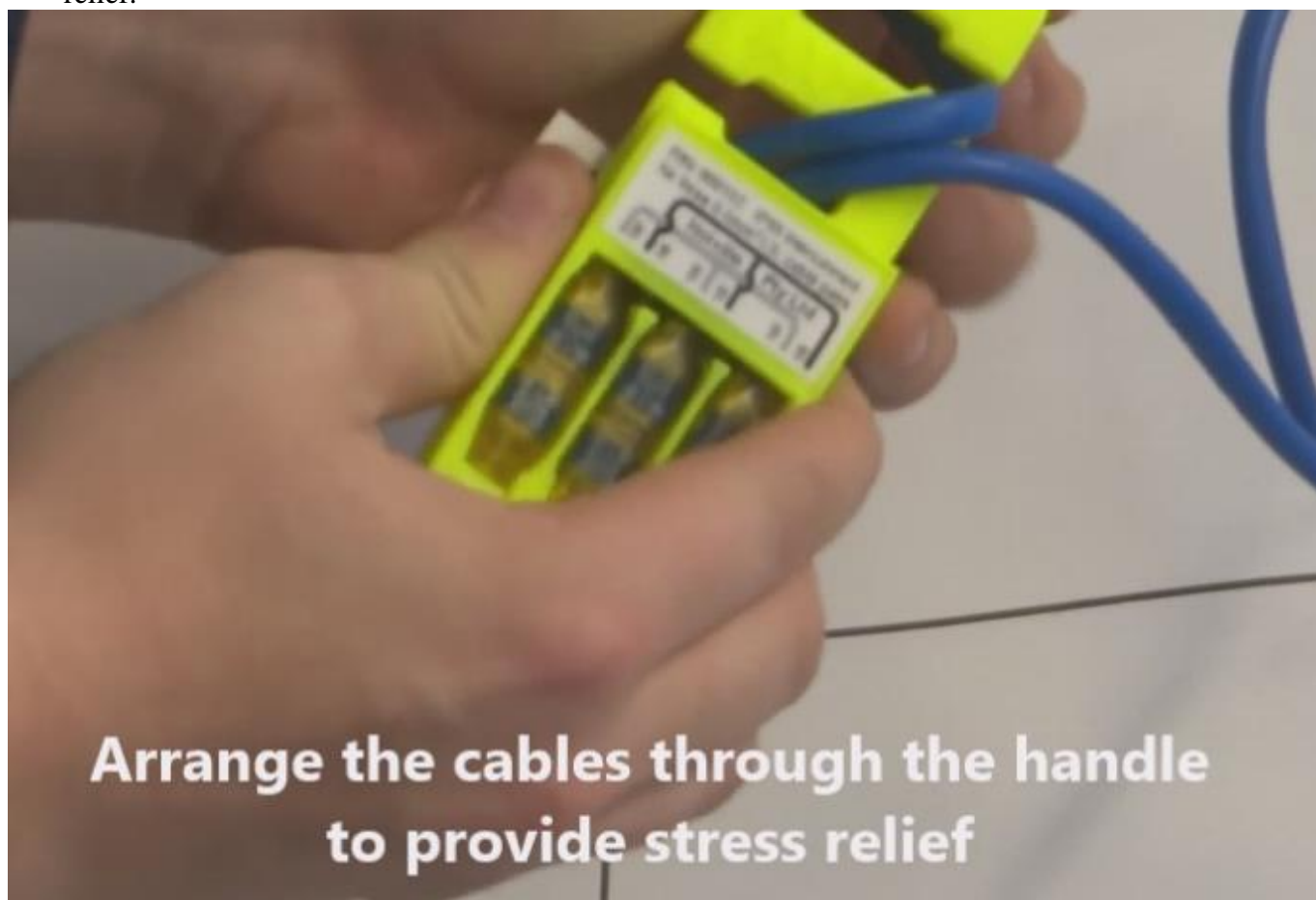


5.5. While holding the wires in position with one hand use some narrow jawed pliers (long needle nose or multigrips) to press the blue button down until it is flush with the transparent body. Gently tug on each wire after clamping to ensure it is securely connected.



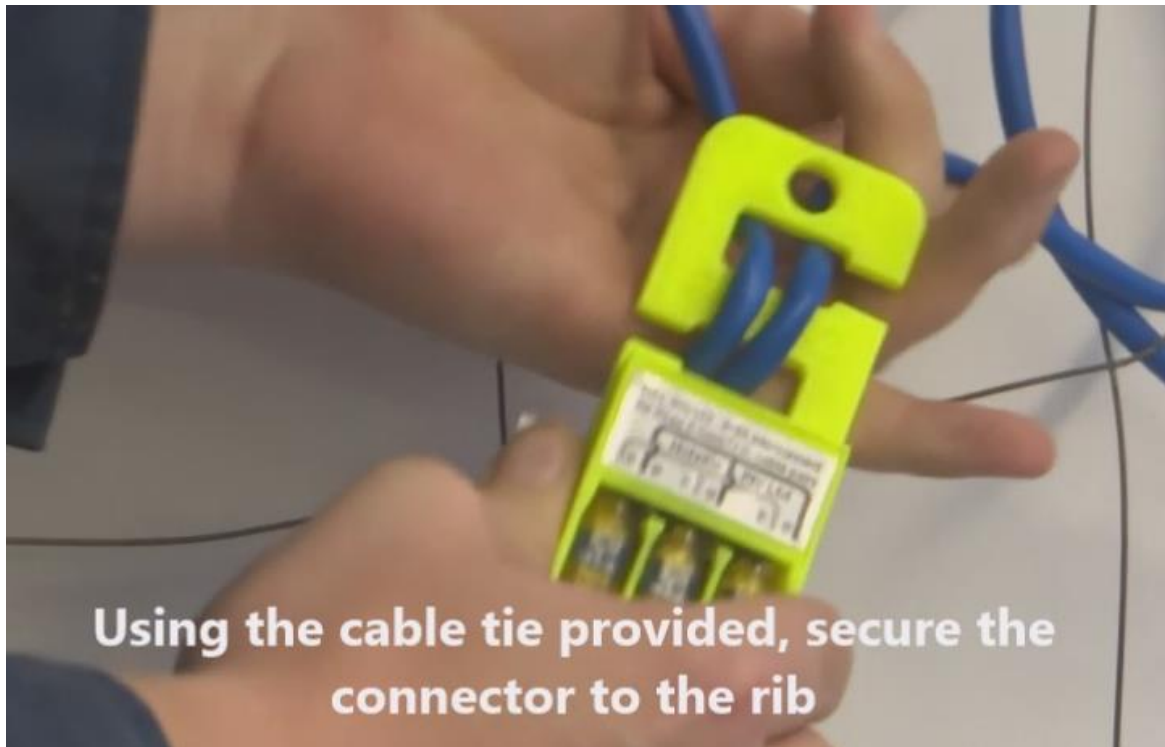
5.6. The roofAlert extensometer may be supplied with a connector already fitted to the extensometer. This will be wired to the middle connector. Incoming and outgoing wires can be fitted to each side of the extensometer middle connector.

5.7. Loop the cables through the slots at the top of the connector as shown below to provide stress relief:



5.8. To make a T - branch in a network the cables by convention the left hand and right hand CoolSplice™ connectors are the trunk line and the centre is the branch connection.

5.9. Secure the assembly in a suitable location using the cable tie.



5.10. Seal unused cable entries by pushing down the adjacent blue button. This enables IP65 integrity to be maintained. When the cable entry needs to be opened to extend the network, this can be accomplished by inserting a narrow (<3mm) flat bladed screwdriver into the wire entry hole and levering the button up. The base of the button pushes into an adhesive, self-amalgamating, self-levelling, re-enterable silicone insulating gel. This action seals the insulation displacement tines, whether or not wires are attached to the base of the button. If wires are present, they are pushed under the gel which reforms over the top of them.

