## Installation of the Ritherdon Passively Safe Cabinet

### 1. Installing the Foundation

*Figure 1 - Plinth is placed in a hole of adequate size and the feet are secured using gravel/dry mix concrete.*

*Figure 2 - After placement of ducting, the plinth is buried in concrete.*

1) Dig a hole to the minimum dimensions below:
    a. Depth = 300mm
    b. Width = 780mm
    c. Length = 1000mm (RB600PSC) **or** 1200mm (RB800PSC)

2) Install the supplied Plinth centrally within the hole with the top surface at ground level. The feet of the plinth can be held in place with gravel or dry-mix concrete.

3) Bring any required ducting for power and data cables through the plinth to ground level.

4) Fill the hole with concrete up to the ground level.

## 2. Installing the Cassette

**Note:** During the factory painting process, it is possible for small amounts of paint to enter the threaded holes in the four corners of the plinth. It is also possible for small amounts of dirt and debris to enter these threaded holes during the installation of the plinth on-site. It is important that any material is removed from these threaded holes before the shear-bolts are fitted, otherwise the resistance produced while screwing in the shear-bolts may damage them.

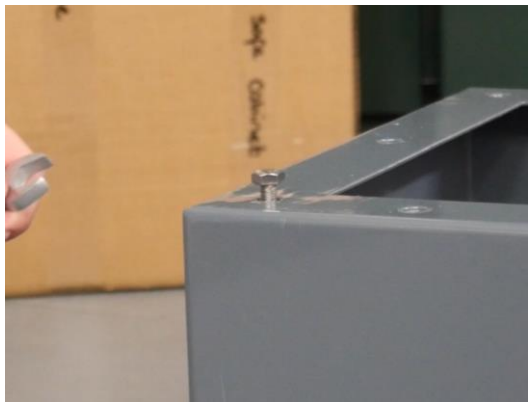

*Figure 3 - M8 Hex Head screw used to clean out the threads prior to fitting the shear-bolts.*

5) Screw and then unscrew a M8 screw into each of the four threaded holes to clean the threads.

6) Loosely screw the four shear-bolts into the threaded holes (screwdriver slots upwards).

7) Slide the cassette - with the dimples pointing upwards - over the shear-bolts, down onto the plinth. If the cassette does not slide all the way down to the bottom, use a rubber mallet to gently tap each side of the cassette until the cassette makes contact with the plinth on all sides. The threaded section of the top of each shear-bolt should protrude fully from the cassette.

8) Gently tighten the shear-bolts, taking care not to damage the shearing portion of the bolt.

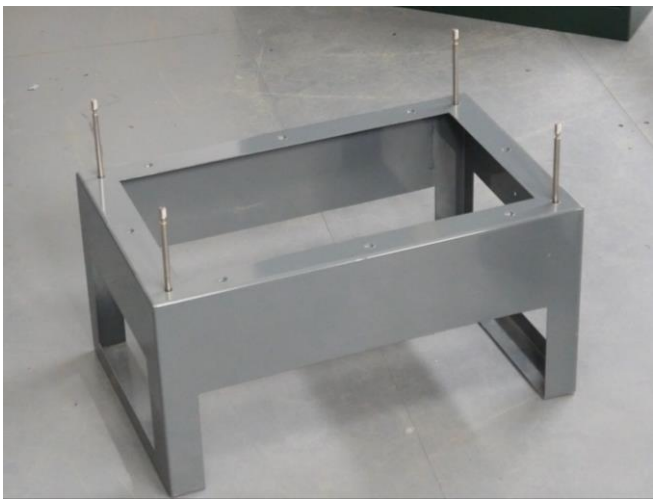

*Figure 4 - Plinth with shear-bolts screwed into each corner.*

*Figure 5 - The cassette is then placed on the plinth over the shear-bolts.*

## 3. Installing the PEIS

The Premier Electrical Isolation System (PEIS) is an optional unit that improves the safety of the passively safe system by isolating the power supply upon the activation of an impact sensor within. The PEIS is mounted on a mounting plate which is placed within the cassette and is fixed into place with the same screws that attach the cassette to the plinth.

9) Fix the cassette to the plinth using **two** of the M8 hex head screws and M8 washers provided in the positions circled in red in Figure 6 to the right.

   **NOTE:** If you do **not** wish to install the PEIS, fit the rest of the M8 screws and washers and skip to **Step 12**.

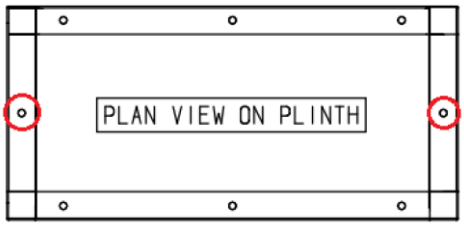


*Figure 6 - If the PEIS is required, fit the two M8 screws shown first.*

10) Place the PEIS into the cassette. The holes in the mounting plate must be lined up with the holes in the cassette. The PEIS mounting plate leaves a gap for cable passage on one side, with the PEIS on the other. The mounting plate can be fitted either way to best suit the requirements on-site.

11) Fit the remaining M8 screws and washers to attach the PEIS mounting plate to the cassette, and the cassette to the plinth.

*Figure 7 - Close-up of two of the hex head M8 screws that fix the mounting plate to the cassette.*

*Figure 8 - PEIS fully installed within the cassette.*

## 4. Installing the Cabinet

12) Carefully place the cabinet onto the cassette, taking care to line up the shear-bolts with the corresponding holes before setting the cabinet. Take care as knocking the shear-bolts with the cabinet may damage them.

13) Fix the cabinet down to the cassette with four M8 washers and four M8 nuts on the four shear-bolts.

14) Use a torque wrench to tighten the nuts to between **15 Nm and 20 Nm.** If the shear-bolts themselves start to turn, stop tightening immediately.

*Figure 9 - Cabinet placed on top of the cassette-plinth with the shear-bolt ends visible inside the cabinet.*

*Figure 10 - M8 washer and nut used to fix cabinet to cassette and plinth, tightened to 15-20Nm.*

## 5. Wiring the PEIS – Incoming Supply

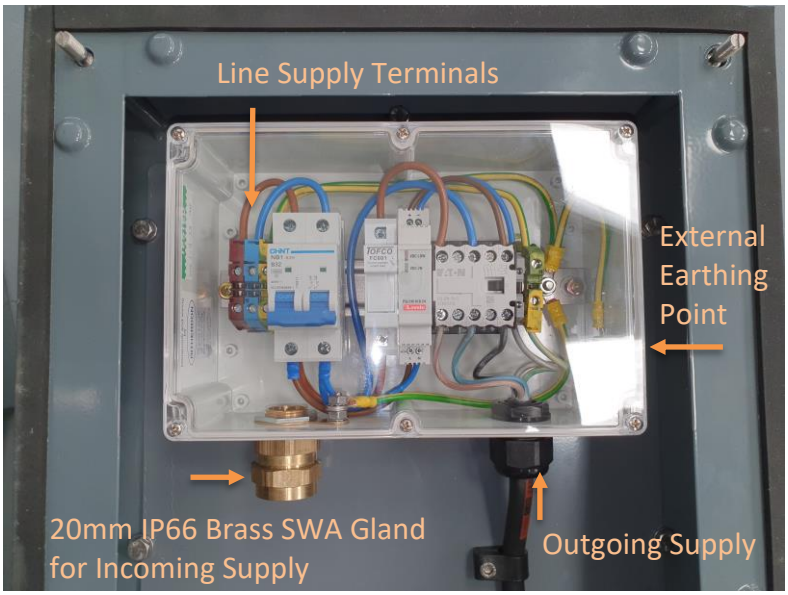


*Figure 11 - PEIS Unit within cassette.*

15) Remove the cover of the PEIS box by unscrewing the six screws within the cover.

16) Remove the gland shroud from the 20mm Brass SWA gland on the left underside of the PEIS box.

17) Fix the incoming SWA cable to the 20mm Brass SWA gland.

18) Terminate the live (brown), neutral (blue) and earth (green/yellow) wires in the corresponding Line Supply Terminals on the left side of the DIN rail shown in Figure 11.

## 6. Wiring the PEIS – Outgoing Supply

*Figure 12 - Male PolePlug showing live, neutral and earth wires, plus two wires to power the Impact Sensor with its plug (shown).*

*Figure 13 – On-site installation of a Passively Safe Cabinet with the impact sensor installed on the top half of the backboard.*

The outgoing supply is pre-wired with a female PolePlug originating from the PEIS. The male PolePlug is also supplied along with an impact sensor and plug. The cable end of the male PolePlug contains five conductors: brown (live), blue (neutral) and green/yellow (earth), black and grey (impact sensor). The impact sensor and plug are supplied as separate parts and require assembly.

19) Connect the female and male PolePlug connectors together.

20) Fasten one or more No. 6 cable cleats to the backboard and use them to secure the cable.

21) The brown (live), blue (neutral) and green/yellow (earth) cables can be connected to the equipment in the cabinet.

22) Assemble the impact sensor components and connect the **black** terminal of the PolePlug cable to the **green** terminal of the impact sensor, and the **grey** terminal of the cable to the **blue** terminal of the impact sensor. The terminals are shaped accordingly to avoid confusion.

23) Screw the impact sensor to the backboard in the top-half of the cabinet in accordance with the testing performed.

24) Once there is power to the cabinet, the PEIS can be tested by unscrewing the impact sensor and shaking it to simulate an impact. The PEIS will trip and cut the power to the equipment in the cabinet.

25) Press the button on the impact sensor to reset it and reset the trip in the PEIS box.

## 7. Checklist

Please make sure you have completed the below tasks during installation to make sure the cabinet installation conforms to the testing performed.

| Task | Completed |
|---|---|
| Plinth installed flush with ground level in hole of correct dimensions. | |
| Plinth fitted with the **shear-bolts provided** in the correct orientation - **screwdriver slots upwards**. | |
| PEIS mounting plate is installed **inside** the Cassette. | |
| Cabinet is fixed to the Cassette with the nuts/washers provided tightened to **between 15Nm and 20Nm** using a torque wrench. | |
| Incoming supply is terminated in the Line Supply Terminals on the left side of the DIN rail in the PEIS box. | |
| Outgoing supply is terminated correctly in the required equipment. | |
| The Impact Sensor is correctly wired - **black to green, grey to blue**. | |
| Impact Sensor is tested - shake to trip, reset by pressing the button and resetting the trip in the PEIS box. | |
| Impact Sensor is attached to the **top-half** of the backboard. | |