204: Installation of wiring systems and enclosures  
**Worksheet 4-010: FP200 alarm circuit**

**NB**: Students must not attempt this exercise before the correct use of all tools and materials has been demonstrated.

**Technical data**

* You are to make sure that your work area is clear and safe for work to proceed.
* The following tests need to be carried on completed terminations:

1. visual inspection
2. insulation resistance
3. polarity.

* You are to make sure that all your work conforms to the requirements of the Health and Safety at Work Act.
* All practical electrical installation exercises must comply with BS7671 (IET Wiring Regulations).
* The work area must be restored to a satisfactory condition on completion.

**Material required** (quantities to be determined by the student)

|  |  |
| --- | --- |
|  | Metal clad consumer unit 3‑way 60A |
|  | Fuse carrier and bridge 5A |
|  | Fuse way blanking plate |
|  | 20mm black enamel conduit coupling |
|  | 20mm steel lock ring |
|  | 20mm brass short reach male bush |
|  | 20mm black enamel circular conduit ‘T’ box |
|  | 20mm black enamel circular conduit ‘Through’ box |
|  | M4 x 20mm brass pan head set pins |
|  | Woodscrews, steel, black japan R/H 1.0” x no.8 |
|  | Insulated strip connectors 5A |
|  | Red sleeving |
|  | FP200 2 core 1.0mm2 cable |
|  | FP200 2 core cable gland x 20mm |
|  | Single 1 hole fixing clips for FP200 2 core |
|  | Alarm call point and mounting box |
|  | Alarm indicator (conduit box mounting) |

**Procedure**

1. Enter the start time on the assessment sheet.
2. Study the layout diagram and notes below, and neatly draw the circuit diagram.
3. Consult this diagram and the notes below and from them prepare the material requisition for the required materials.
4. **Have the requisition checked before proceeding.**
5. Obtain the material from the stores.
6. Carry out the installation taking note of any additional information given in the demonstration.
7. This installation must meet the requirements of BS7671 regarding **bonding**. You should now obtain from the stores the necessary clips and cable to bond to the simulated main incoming services adjacent to your work area.
8. Complete the required tests and note the results.
9. **Notify the Lecturer that the work is ready for assessment.**
10. Enter the finish time on the assessment sheet.

**Note**: Left-hand call point to operate left-hand indicator and right-hand call point to operate right-hand indicator.

|  |
| --- |
| Task 04-010 FP200 Alarm Circuit.png |

Assessments are based on **observed** safety procedures, and the **quality** and **accuracy** of the completed exercise.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | **YES** | **NO** |
| **1.** | Material requisition correct first time | | **□** | **□** |
| **2.** | Method statement completed | | **□** | **□** |
| **3.** | Wore appropriate PPE | | **□** | **□** |
| **4.** | Acquired the correct materials and equipment | | **□** | **□** |
| **5.** | Continuity of cpc test results satisfactory and recorded correctly | | **□** | **□** |
| **6.** | Insulation resistance test result value (min. 0.5MΩ) recorded correctly | | **□** | **□** |
| **7.** | Polarity test results satisfactory and recorded correctly | | **□** | **□** |
| **8.** | Accessories fixed in correct positions | | **□** | **□** |
| **9.** | Accessory covers all fixed securely | | **□** | **□** |
| **10.** | Cable sheath taken into all accessories | | **□** | **□** |
| **11.** | Clip position/spacings acceptable | | **□** | **□** |
| **12.** | Bends formed correctly (minimum radii and uniform) | | **□** | **□** |
| **13.** | Circuit functions correctly | | **□** | **□** |
| **14.** | Consumer unit correct size protective device | | **□** | **□** |
| **15.** | Consumer unit correctly connected | | **□** | **□** |
| **16.** | Conductors correctly coded at terminations | | **□** | **□** |
| **17.** | Suitable amount of spare cable left in accessories | | **□** | **□** |
| **18.** | Conductor insulation undamaged at terminations | | **□** | **□** |
| **19.** | Conductors doubled as appropriate and secure | | **□** | **□** |
| **20.** | Sheath/insulation stripped to correct position | | **□** | **□** |
| **21.** | Conductors undamaged at terminations | | **□** | **□** |
| **22.** | FP200 termination made correctly | | **□** | **□** |
| **23.** | Overall appearance to a commercially acceptable standard | | **□** | **□** |
| **24.** | Work area conformed to requirements of HASAWA | | **□** | **□** |
| **25.** | Correct safety procedures observed at all times | | **□** | **□** |
| Assessed by: ………....………….. | | |  | |
| Start Date & Time: ………………........………….. | | Finish Date & Time: ……...…...........…………… | | |
| Target Time: 4 hours | | Time Taken: …………………….........…………… | | |