e-REW Express

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HK Electric 港燈

Welcome to our "e-REW Express". Rising mains are essential electricity infrastructure for distribution of electricity in a building. In this issue of 'e-REW Express', we will highlight the general requirements of rising mains installation and we hope you will find the information useful and handy.

For continuous improvement, your feedback on our "e-REW Express" is most welcome. Simply contact us via email mail@hkelectric.com or Customer Installation Section hotline at 2887 3455.

Requirements of Rising Mains Installation

1. The rising mains installation shall comply with the Electricity Ordinance (Cap. 406) and its subsidiary Regulations and the requirements of the latest Code of Practice for the Electricity (Wiring) Regulations.

2. Any building of more than four floors including the ground floor and designed for occupation of more than one customer shall be provided with 3-phase 4-wire electrical rising mains with 3-phase and neutral tee off at each floor unless otherwise agreed by the electricity supplier.

3. Each rising mains installation shall be protected against overcurrent and earth leakage and shall be equipped with suitable means of isolation.

4. Where supply for rising mains installation is taken directly from HK Electric transformer or underground cable, the main switch or circuit breaker shall be rated at a short-circuit breaking capacity of 40kA symmetrical at low voltage.

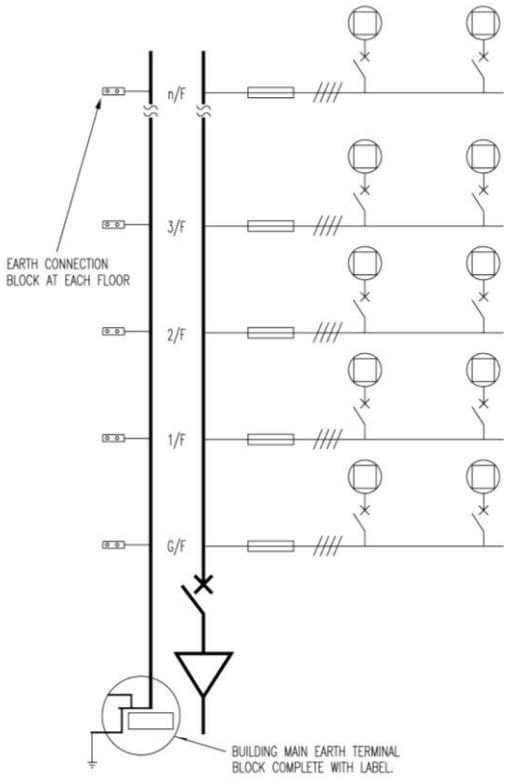

Figure 1

5. In premises intended for multiple occupations, separate riser earthing conductors shall be provided to earth all the units. The minimum cross-sectional area of riser earthing conductor shall be 70 sq.mm for copper and 150 sq.mm for aluminum. An earth connection block should be provided at each floor (as shown in Figure 1).

6. The size of rising mains shall match with the current rating of the corresponding riser switch at the origin of the circuit and shall be reasonably designed to cater for the demand. Where the riser switch is located outside the building served, a local riser switch shall be provided (as shown in Figure 2).

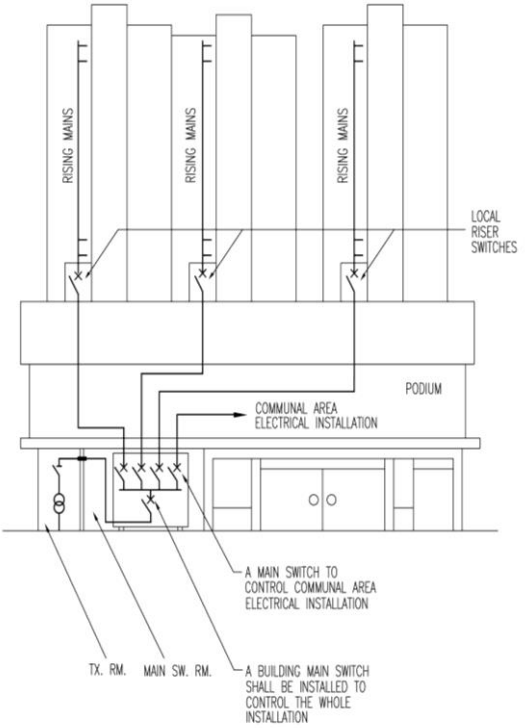

Figure 2

7. An instantaneous type RCD shall not be used as a multi-customer riser switch (as shown in Figure 3).

8. Earth fault relay associated with protection C.T.s could be used to achieve automatic disconnection within 5 seconds during an earth fault (as shown in Figure 4).

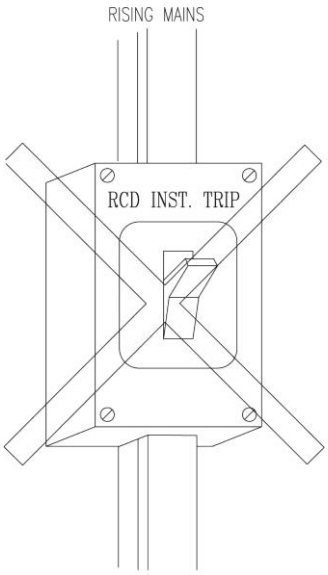

Figure 3

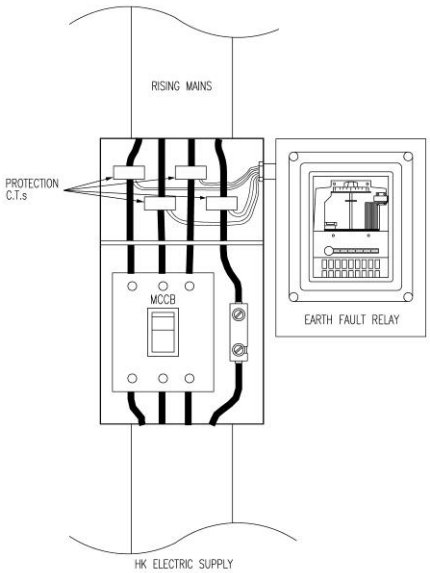

Figure 4

9. The size of the neutral conductor of a 3-phase 4-wire rising mains shall not be less than that of the phase conductor unless otherwise agreed.

10. A customer main switch or circuit breaker shall be provided for every customer's installation. It shall be installed and connected immediately before HK Electric's meter.

11. For a 3-phase 4-wire supply, a linked switch or linked circuit breaker may be arranged to disconnect the phase conductors only. In such case, a link shall be inserted in the neutral conductor and securely fixed by bolts or screws.

12. For a single-phase supply, the main switch shall be of double-pole type interrupting live and neutral conductors.

13. For metering requirements, please refer to Chapter 5 of our 'Guide to Connection of Supply – 5th Edition'.

We are pleased to provide our advisory service to Registered Electrical Contractor/Worker (REC/REW) regarding the rising mains installation requirements. They are advised to provide us with the schematic diagram, proposed layout plan of main switch room and meter room/duct for our consideration.