

Welcome

to our “e-REW Express”. This issue of “e-REW Express” details some of the salient points when working on HK Electric Low Voltage Isolator.

We hope you will find the information useful and handy. If you have any suggestion, please send an email to us at mail@hkelectric.com or contact our Customer Installation Section at 2887 3455 so that we can further improve our service.

Safety Measures for Termination of Customer’s Single Core Cable to HK Electric Low Voltage Isolator

1. Background

In some circumstances, the registered electrical contractor/worker may require gaining access to HK Electric distribution substation to carry out electrical works including termination of customer’s single core cable to HK Electric Low Voltage (LV) Isolator. We will highlight the safety measures for termination of customer’s single core cable to HK Electric LV Isolator.

2. Safety Measures

1. During shutdown of the supply source for the customer requested electrical work on customer’s fixed electrical installation, the Registered Electrical Worker (REW) appointed by customer is not allowed to interfere with the isolation point(s) in the course of his electrical work.
2. The side view of a typical type isolator panel indicating the various chambers is shown in Figure 1. The customer cable could be connected to different chamber of the isolator panel depends on the site configuration. REW could work on the chamber identified by HK Electric Competent Person.
3. All cable chambers of the HK Electric’s LV isolator panel must be treated live even with isolator in open position unless the exposed conductors are positively identified and proved dead with approved voltage indicator.

4. Before a REW is allowed to carry out termination of customer's single core cable to HK Electric LV Isolator, HK Electric will issue the "LV Supply Disconnection Certificate" to confirm that the HK Electric supply to that cable chamber has been isolated for the REW's electrical work.
5. The REW is only allowed to carry out the cable termination work at the cable chamber of HK Electric LV isolator as specified in the "LV Supply Disconnection Certificate".
6. For details of requirements in connecting of customer's single-core cables to HK Electric substation, please refer section 4 of this article.

3. **Salient Points of Handling Procedures for "LV Supply Disconnection Certificate"**

- 1) After HK Electric Competent Person opened the disconnecter of LV isolator panel inside HK Electric substation, the disconnecter of LV isolator panel will be locked off by a pad lock and a Caution Notice as well as an LV Work Notice will be affixed to the disconnecter as shown in the Figure 2.
- 2) The corresponding customer installation supplied by the HK Electric supply source shall be proved dead by the HK Electric Competent Person, under the witness of REW, by using an approved voltage indicator.
- 3) REW would sign on the recipient's copy of the "LV Supply Disconnection Certificate" and would be given a key for locking off the isolation point which was issued by HK Electric Competent Person to ensure that the corresponding cable chamber of HK Electric LV isolator is safe to be worked on. A sample of "LV Supply Disconnection Certificate" is shown in Figure 3.
- 4) The recipient shall retain the recipient's copy of the "LV Supply Disconnection Certificate" and the key for locking off the isolation point in his safe custody in the course of customer's work until they have been returned to the HK Electric Competent Person for cancellation.
- 5) Upon completion of customer's work, the recipient shall sign Part 3 ("Clearance") on the recipient's and the HK Electric copy of the "LV Supply Disconnection Certificate". After

the cancellation of the “LV Supply Disconnection Certificate” and collection of the key, the HK Electric Competent Person may arrange for restoration of supply per standing procedures.

- 6) Notwithstanding the above mentioned procedures, the REW shall ensure that the works shall comply with all the safety and operational requirements as stipulated in the “Code of Practice for the Electricity (Wiring) Regulations”.

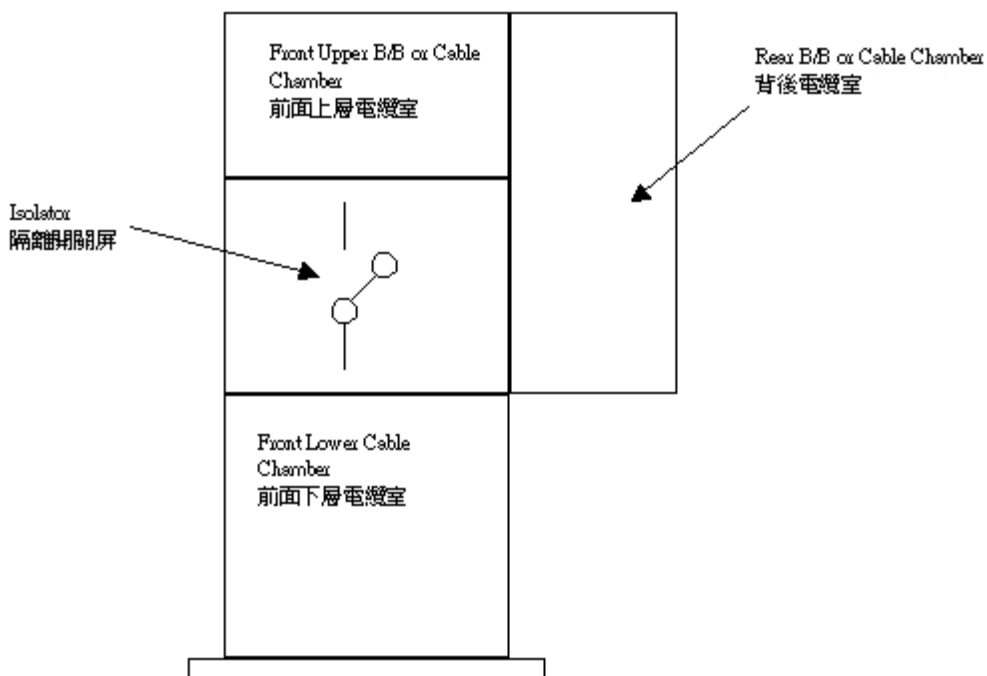


Figure 1: Side view of a typical type LV Isolator Panel



Figure 2: Locking and Caution Notices affixed to the disconnecter of LV isolator panel

THE HONGKONG ELECTRIC CO., LTD.
香港電燈有限公司
LV SUPPLY DISCONNECTION CERTIFICATE
低壓電源截斷證



No. 00001
 編號

Associated Shutdown No. D
 相關停電編號

1. Issue and Declaration 發出及聲明

To : _____ being a Registered Electrical Worker representative of the customer
 致 (Full name in block letter 姓名) 為代表客戶之註冊電業工程人員

I declare that the phase conductors of the following apparatus have been isolated from all sources of supply from The Hongkong Electric Co., Ltd. (HK Electric) but neutral conductor is not isolated.

本人茲聲明下列裝置的相導體已從所有香港電燈有限公司(港燈)的電源隔離，但中性導體沒有隔離。

This LV Supply Disconnection Certificate is issued by _____ (Full name in block letter 姓名)
 發出此低壓電源截斷證為

being the Competent Person of the HK Electric authorised to issue an LV Supply Disconnection Certificate on the Apparatus specified in above.

授權在上述裝置上簽發低壓電源截斷證的港燈合格人士。

Signed 簽署 _____ Time 時間 _____ Date 日期 _____

2. Receipt 接收

I hereby declare that I have received this LV Supply Disconnection Certificate and the key for controlling the above Isolation Point(s). 本人茲聲明本人已接收上述低壓電源截斷證及控制上述隔離點的鑰匙。

Signed 簽署 _____ being a Registered Electrical Worker (Grade A B C
 representative of the customer.
 為代表客戶之註冊電業工程人員(級別為A B C)。

Registration Number _____
 註冊號碼

Time 時間 _____ Date 日期 _____

3. Clearance 撤離

I hereby declare that the work for which this LV Supply Disconnection Certificate was issued has been completed and all persons under my charge have been withdrawn. All tools and temporary connections have been removed. The key for controlling the Isolation Point(s) is attached to this LV Supply Disconnection Certificate to allow for its cancellation.

本人茲聲明在此低壓電源截斷證簽發下而進行的工作已完成及已撤離轄下的所有人員。所有工具及臨時接駁點已拆除。控制上述隔離點的鑰匙隨此低壓電源截斷證附上，以便撤消此聲明。

Signed 簽署 _____ being a Registered Electrical Worker (Grade A B C
 representative of the customer.
 為代表客戶之註冊電業工程人員(級別為A B C)。

Time 時間 _____ Date 日期 _____

4. Cancellation 撤消

I hereby declare that I have checked in the key for controlling the Isolation Point(s) quoted in this LV Supply Disconnection Certificate and this LV Supply Disconnection Certificate is hereby cancelled.

本人聲明已收妥此低壓電源截斷證引述的控制隔離點的鑰匙並撤消此低壓電源截斷證。

Signed 簽署 _____ Time 時間 _____ Date 日期 _____
 being the Competent Person of the HK Electric authorised to cancel an LV Supply Disconnection Certificate.

授權撤消低壓電源截斷證的港燈合格人士。

Select the appropriate box and put a [] 選擇合適方格並加上[]

Rev. Aug. 2017

Recipient Copy
 接收人印本

Figure 3: Sample of “LV Supply Disconnection Certificate”

4. Notes for Arrangement for Single-core Cables Connected to HK Electric Substation

- 1) The single-core cables and accessories shall be supplied and installed by customer. The cables shall be non-metallic sheathed with an installed rating of not less than the rating of the main switch to which they are to be connected.
- 2) A maximum of 4 cables per phase/neutral may be used. The neutral conductor shall be of same installed rating as the phase conductor unless otherwise agreed by HK Electric.
- 3) The route length of the single-core cables must not exceed 20 metres. Customer is required to ensure that the routing complies fully with current FSD's regulations.
- 4) The installation shall comply with the HK Electric "Supply Rules", the latest edition of "Code of Practice for the Electricity (Wiring) Regulations" and relevant Government Ordinance.
- 5) Customer shall be responsible for providing and installing cable support facilities for his single-core cables inside HK Electric substation. Full details of the proposed method of installation must be submitted for HK Electric's approval prior to installation work.
- 6) Customer shall be responsible for designing and installing single-core cables in order to minimize the electromagnetic interference generated from single-core cables as far as practicable. The physical layout of single-core cables must be submitted for HK Electric's approval prior to installation work.
- 7) For the purpose of compliance with Code 11 and 12 in the latest edition of "Code of Practice for the Electricity (Wiring) Regulations", the customer shall use a single-core cable to be terminated in a lug with centre hole of diameter 11 mm for bonding his main earthing terminal to HK Electric's bonding terminal. Customer's bonding conductor shall not be less than 150 sq. mm copper equivalent.
- 8) Each single-core cable for phase / neutral connection shall be terminated in a lug as indicated in Figure 4 for connection to HK Electric equipment. The customer shall supply necessary bolts, nuts, washers, spring washers and appropriate jointing compound, e.g. the "Penetrox Jointing Compound" for connecting cable lugs to aluminum conductor. REW should seek HK Electric's approval on the termination method to ensure compatibility.
- 9) Durable and legible vinyl phase identification labels (such as cable ties, PVC sleeves, PVC ferrule tubes etc.) marked in L1, L2, L3 and N with character size not less than 25mm shall be provided at the cable ends terminated to HK Electric substation. PVC insulation tape of width not less than 25 mm conforming to BSEN 60454 with phase coding L1, L2, L3 and N could also be used.

10) Termination work of the cable lugs onto HK Electric equipment shall be done by customer's registered electrical worker and under the supervision of HK Electric engineer.

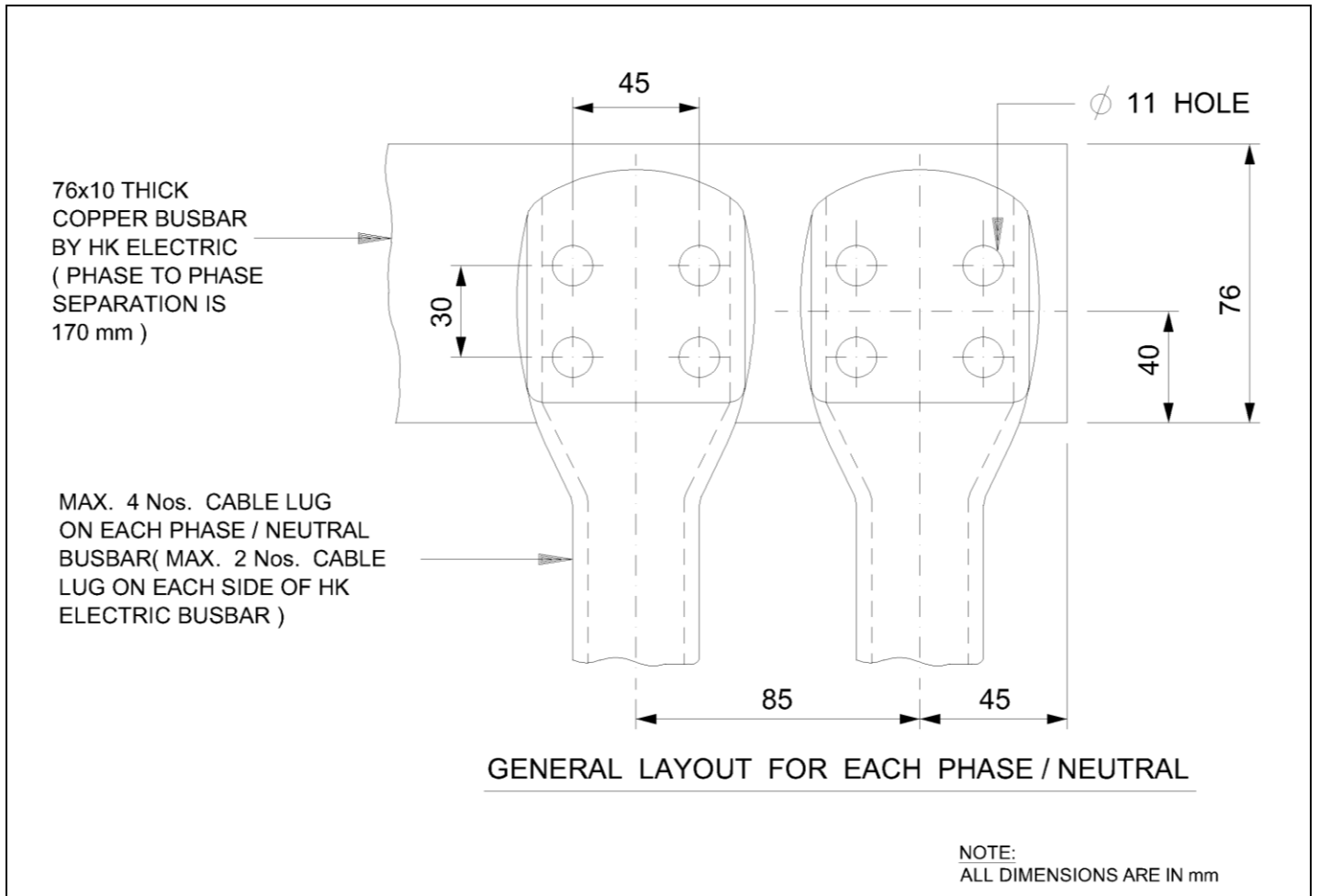


Figure 4: Arrangement for Single-core Cables Connected to HK Electric Substation