

# ESSENTIAL DETAILS TO BE INCORPORATED IN SCHEMATIC SINGLE-LINE DIAGRAMS FOR ELECTRICAL INSTALLATION

## 1. General

- 1.1 Standard graphical symbols complying with CP 83 Pt 2: 2000 to be used
- 1.2 Single-line drawing shall be printed on A3 sized paper (minimum) and shall be displayed in the consumer's main intake switchroom or near the main intake switchboard. The soft copy of the single-line drawing for submission to EMA via the Internet shall be in:
  - jpg, pdf, gif or tif format for scanned images or
  - dwg, dgn or dxf format for Computer Aided Drawings. Title Block to have Name of Electrical Installation
- 1.3 Owner of Electrical Installation and his correspondence address
- 1.4 Location / Address description of Electrical Installation
- 1.5 Drawing Number and amendment reference, if any
- 1.6 Name, Licence Number, Signature of LEW and Date
- 1.7 Contact telephone number and / or pager number of LEW

## 2. Incoming Switchboard

- 2.1\* Type and rating to the relevant IEC / BS Standards (i.e. current carrying capacity, short circuit capacity, protective current Transformer details, busbar size, etc) of incoming switchgear
- 2.2 Approved setting for overcurrent and earth fault protection
- 2.3 Type and rating of all outgoing switchgears, including spare(s), if any
- 2.4 Position of metering equipment, where applicable
- 2.5\* Interlock facility for standby generators or other sources of supply
- 2.6 Earthing system arrangement with earthing conductor size indicated

## 3. Out-going circuits

- 3.1 Type, size, and where practicable, length of cables used
- 3.2\* State size of circuit protective conductor, if separate and not in the same composite cable

## 4. Sub-switchboards and distribution boards.

- 4.1 Name or label all sub-switchboards and distribution boards
- 4.2 State the estimated after diversity maximum demand
- 4.3\* Specify equipment for means of isolation, overcurrent and earth fault / leakage protection
- 4.4\* Specify type / rating / sensitivity of RCCB used for protection of final circuits
- 4.5 State number of and rating for the final circuits

### Legends:

LEW - Licensed Electrical Worker

RCCB - Residual Current Circuit-Breaker

\*Basic safety features

(Updated : 14/05/2004)

# ESSENTIAL DETAILS TO BE INCORPORATED IN SCHEMATIC SINGLE-LINE DIAGRAMS FOR SUPPLY INSTALLATION

## 1. General

- 1.1. Standard graphical symbols complying with CP 83 Pt 2: 2000 to be used
- 1.2. Single-line drawing shall be printed on A3 sized paper (minimum) and shall be displayed in the consumer's main intake switchroom or near the main intake switchboard. The soft copy of the single-line drawing for submission to EMA via the Internet shall be in:
  - jpg, pdf, gif or tif format for scanned images or
  - dwg, dgn or dxf format for Computer Aided Drawings.
  - Name of Supply Installation and site address
- 1.3. Licensee's name and address
- 1.4. Name, Licence Number, Signature of LEW and date
- 1.5. Drawing number and amendment reference (if applicable)
- 1.6. Contact telephone number and / or pager number of LEW
- 1.7. Generator capacity (not less than declared load capacity)

## 2. Earthing Arrangements

- 2.1. Size of protective conductor for earthing of neutral point / star point
- 2.2. Size of earthing conductor for installation
- 2.3. Connection of earthing points (minimum 2 points connected in ring)

## 3. Means of Isolation and Protection at Generator Output

- 3.1. Means of isolation provided at generator output
- 3.2. Short circuit protection for supply cable
- 3.3. Supply cable size and method of installation

## 4. Main Intake Switchboard (MSB) / Main DB

- 4.1. Type, current carrying capacity and short circuit of incoming circuit breaker
- 4.2. Overcurrent protection at incoming
- 4.3. Earth fault / earth leakage protection at incoming
- 4.4. Indicator lights or ammeter and voltmeter at MSB / main DB
- 4.5. Type and current rating of change-over switch (4-pole type), if any
- 4.6. Type, current carrying capacity and short circuit capacity of out-going circuit breakers
- 4.7. Out-going submains sizes and methods of installation

## 5. Final Circuits

- 5.1. Current rating of busbar / BI connector
- 5.2. Conductor size and method of installation indicated for all final circuits
- 5.3. Sizing of circuit breaker appropriate for equipment connected to final circuit
- 5.4. RCCBs of 30mA 0.1 s tripping sensitivity for all final circuits  $\leq 60A$
- 5.5. RCCBs of 100mA 0.1 s tripping sensitivity for all final circuits  $> 60A$
- 5.6. CB provided for phase conductor teed-off more than 3m from busbars

Legends:

LEW - Licensed Electrical Worker

RCCB - Residual Current Circuit-Breaker  
DB - Distribution Board  
(Updated : 14/05/2004)