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SECTIONS

1.0 INTRODUCTION

1.1 Purpose and document structure

The purpose of this regulation is to identify requirements for the Locators' power system and installation. Prior to any and all installation works of the power system, the locators shall receive approval of MJTD and relevant authority.

1.2 Scope

This regulation shall apply to all Locators or any other persons involved in the design, construction, installation, maintenance and operation of electrical scope within Thilawa Special Economic Zone (TSEZ).

This Regulation is a requirement to all new electrical installations, extensions, alterations and repairs to existing electrical scope that are covered under this regulation ***(including article 2.18)***

2.0 PROCEDURE OF DESIGN APPROVAL APPLICATION FOR POWER SYSTEM (DAAPS)

2.1 Technical Standards and Materials

Only good quality materials shall have to be used in electrical installation.

All materials and equipment shall comply with IEC (International Electrotechnical Commission) standard and MNBC (Myanmar National Building Code) as the reference in this regulation. Other international regulations may be used, however with the prior approval of the MJTD and subject to TSMC intervention.

The locator ensure that any specifications or requirements are consistent with this regulation, unless otherwise approved by MJTD.

2.2 Submission of the DAAPS Documents

The electrical installation design must be approved by MJTD before commencement of construction, installation and purchasing of the equipment to be used. The applicant Locator should submit "DAAPS" 4 months in advance.

*The requirement of detailed submittal is shown in ANNEX A.

MJTD shall not accept the insufficient documents. Detailed design must be submitted with appropriate documents show in ANNEX B.

Special Requirements:

For all proposed new MV (Medium Voltage) installations and materials, and any other developed installation design proposal shall be certified by a registered electrical engineer to be submitted to MJTD. Every design document needs the signature approval of the relevant local authority regulating the electrical industry in Myanmar
Only authorized Registered License holder can handle Medium Voltage (33kV) level and above.

2.3 Review of Documents (DAAPS)

MJTD's engineers shall review the documents within **10 business days.**

2.4 Approval of Documents from MJTD

MJTD will return **2 sets** of documents (DAAPS) for locators with ***"Approved"*** stamp and signature of Officer and General Manager of MJTD.

2.5 Approval of Documents from TSMC

Locator shall submit **"Electrical Installation Plan"** document including with **approved DAAPS** to **TSMC** and/or other relevant authority in accordance with the existing government regulations.

2.6 Locator's Commencement of Installation

The locator shall undertake to obtain all permits, authorizations and necessary works for installation of electrical power system, operation and maintenance.

The locators shall commence installation works of power system upon receipt of approval from both MJTD and TSMC.

2.7 Protective Control During Installation Work

The locator shall ensure that no obstruction, destruction is caused to any common utility and property in TSEZ and locator shall take the sole responsibility for all the works and employees and agents of its contractor(s) in TSEZ.

The Locator shall follow the Power Connection mentioned in the internal Regulation (I.R) as indicated in EXHIBIT-6 (Power Connection).This nevertheless requires responsibility of the Locator for the Maintenance in the future after connection. These Protective Controls defined in the I.R section 10.2.2 includes the termination of RMU (Ring Main Unit) and DS (Disconnecting Switch) connection which by way as part of Locator's Responsibility as have to ratified.

The locators shall identify MJTD to any third party against all proceedings, claims, cost and expenses which MJTD may incur or may be held liable as a result of the locators' installation works and/or any act, neglect or default of the locators, its employees, contractors, agents or their respective employees.

Any works, and or materials not complying with ***Article 2.7*** of this regulation shall be suspended or remedied by the locator upon the sole and exclusive decision of MJTD, at the responsibility and cost of the locator.

2.8 Point of Connection/ Power Line Connection Works

The locator shall submit to MJTD **"Approval Application for Power Line Connection"** letter at least twenty (**20**) working days in advance with ***"Utilities Connection Application Format"***

MJTD shall review the application and feedback to locator in five (**5**) working days.

MJTD will issue ***"Power Line Connection Approval"*** letter to locator upon approval.

2.9 Timeline of Power Line Connection Works /Termination

MJTD will disconnect the power supply to locator upon approval of (Approval Application for Power Shutdown) in order to connect to existing system. As a general rule, power shutdown time will be in daytime of **Sunday (09:00 to 17:00) only.**

2.10 Inspection by MJTD.

The locator shall invite MJTD for electrical system pre-inspection by email five **(5)** working days in advance. MJTD shall inspect at site after electrical system installation is finished as appropriate including the minimum requirement as:

a. Connection point of U.G (Underground) and/ or O.H. (Overhead) cable
b. Power Meter
c. CT & VT specification (Metering and protection).
d. Cable termination.
e. Protection Relay Settings.
f. Other inspection that MJTD may require

2.11 Inspection by TSMC and Witnessed by MJTD.

The locators shall request inspection to TSMC (Industry Section / EI (Electrical Inspection)) after complete installation for electrical system.

Any electrical installations must be inspected, tested and validated by TSMC (Industry Section/ EI (Electrical Inspection)) in accordance with the requirements of the relevant standards of equipment used in the electrical installation prior to energizing.

2.12 Power Energizing Request.

The locator shall submit "Energizing Request" Letter and "EC Certificate" from TSMC to MJTD.

MJTD shall go to site and double check for the relay settings.

MJTD shall review all requested document and information from locator within three **(3)** working days.

MJTD shall review the documents which consists of:

a. Final Certification of testing commissioning from TSMC.
b. Payment for all YESC Charges.
c. Payment for MJTD Power Connection Charges.

2.13 Power Energizing Approval

MJTD will issue ***"Acceptance Letter of Power Energizing Request"*** to locator upon approval.

MJTD will supply electricity to locator. A metering equipment shall be sealed by MJTD/YESC (TSMC), to prevent the metering losses. Any switching activity inside Locators' Sub-Station, (especially Earth Switch) the Locators shall notify/inform MJTD.

2.14 Power Charges and Billing

MJTD/YESC will bill the electricity charges to locator for electrical energy consumed in the month as recorded in the power meter at locators' premises and or over a different period reasonably notified to the locator by MJTD. The locator shall pay the amount specified on each bill by due date specified on that bill.

In case the power meter at Locators' premises have defect, damage, fault, and or no display in the meter, etc..... MJTD may estimate the energy consumption based on the last 3 months consumption average or the average of the daily consumption after the reading of the cut off period.

2.15 Defect of Power Meter

Locator shall inform immediately to MJTD if power meter is not healthy. The MJTD will replace the power meter. If meter burnt due to the Locator's internal fault, cost of meter will be paid by the locator.

A. Meter damaged or burnt – ten (**10**) working days for meter replacement.
B. Protection Fuse has been broken/cut – Locator shall replace within ten (**10**) working days.
C. Meter connection wiring has been broken/cut – Locator shall repair within ten (**10**) working days.

2.16 Emergency Operation

MJTD have full authority to disconnect the power supply without informing to locator such as for emergency, incidents and safety reasons.

When Locator have an accidental fault and it impacted to power distribution system by power outage or fluctuation, then locator must report to MJTD with documented information as below;

A. Date & time of the accident.

B. Duration of the accident.

C. Reason of the accident (short circuit, equipment burnt/explosion, etc...)

D. Description of the accident location.

E. Restoration time.

F. Testing report as attachment.

G. Solution/Remedies and prevention plan in future.

2.17 Maintenance Schedule of Locator

Annually, the locator shall perform maintenance and testing to their electrical facility to maintain good condition and to prevent incident/accident on the system that may affect property and human lives. The locator shall notify MJTD the schedule of maintenance twenty (**20**) working days in advance.

2.18 Extension, Alteration and Repair of Electrical Facility

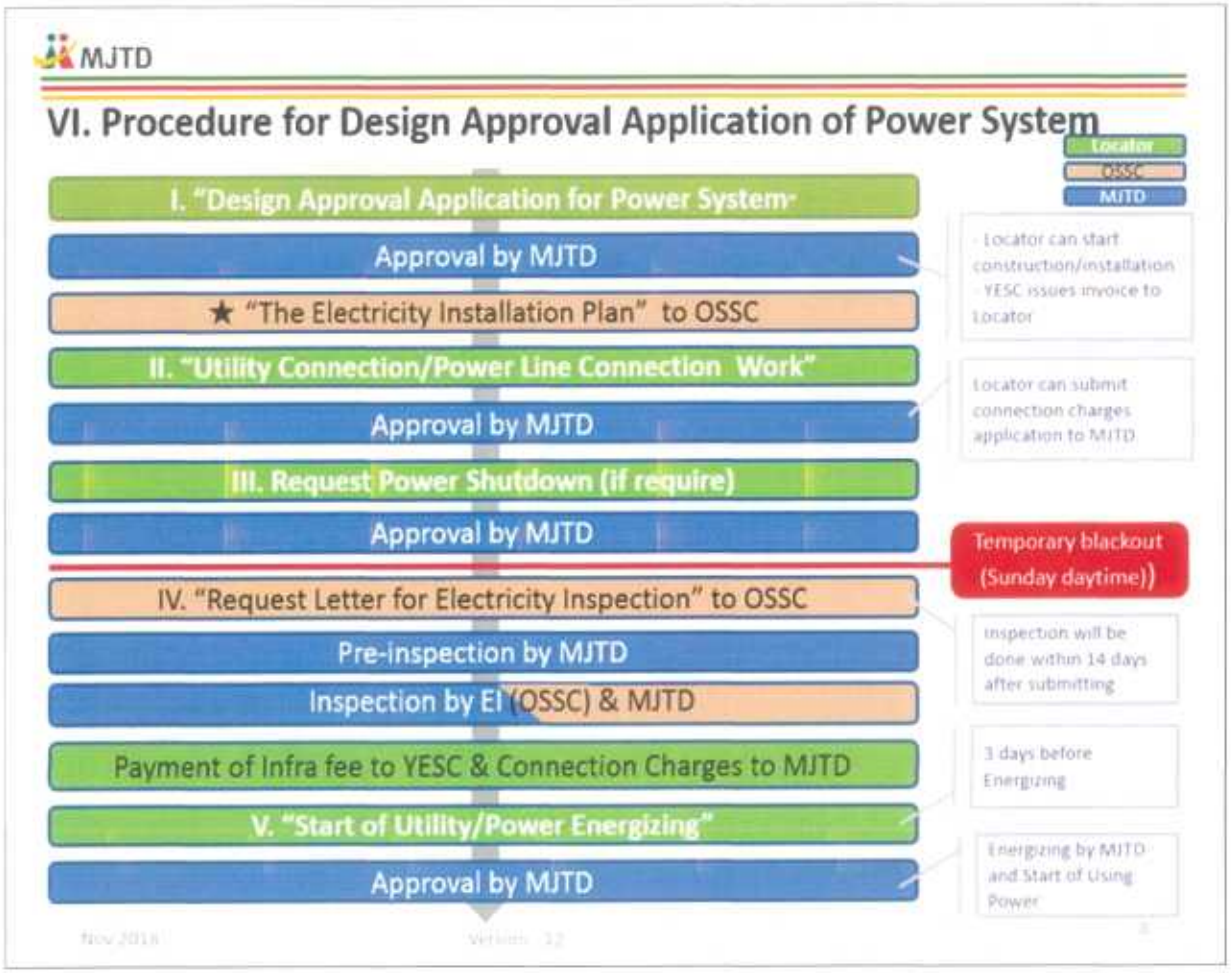
No any extension or alteration to an electrical installation shall be made without prior notification to MJTD or without testing, inspection and approval from MJTD. All extensions and alterations to an existing electrical installation must comply with the requirements of these regulations.

Locator requiring an additional extension or alteration to an existing connection must make an application to MJTD and TSMC, using the appropriate forms and procedures published by MJTD and TSMC.

When locator needs the power shutdown for the purpose of maintenance and improvement of locators' infrastructure, locator shall submit the schedule (Power Shutdown Application) to MJTD at least one (1) month in advance or otherwise approved by MJTD.

Any extension, alteration and repair must be inspected and tested by MJTD and TSMC in accordance with the requirements relevant to the standards of equipment used in the electrical installation prior to and upon energizing.

Details of DAAPS procedure as below,



2.19 Change to The Power System Regulation Rules

These **Power System Regulation** may be updated by MJTD from time to time. MJTD must provide the information to the Locators at least **30 days** before those changes take effect. The Locator must comply with any updated **Power System Regulation** that had been notified to the Locators by MJTD in accordance with article 2.19.

3.0 TECHNICAL REQUIREMENTS

3.1 General Requirements

Locator shall use reliable protection system by using Gas Circuit Breaker (GCB) or Vacuum Circuit Breaker (VCB) with microprocessor-based relay (Auxiliary power supply type and time multiplier also can be set to zero value or instantaneous setting at short circuit protection).

Locator shall construct the power station at the nearest source of MJTD's provided connection point. Locator shall construct an outdoor type power station or indoor type power station with no joint whether underground or overhead cable is used.

Metering panel or Outdoor MOF (Metering Outfit) shall be installed downstream of incoming circuit breaker with protection relay.

Any electrical fault from Locators' side shall not affect to MJTD's power distribution system. Locator shall install 33kV lighting arrester and low voltage surge protection device at locators' internal system.

Locator shall install the Voltage Fluctuation Protection equipment (Active Voltage Conditioner) at very sensitive Machine control circuit

3.2 Protection Device Coordination

a. All protection relay to be submitted to MJTD by the locator shall have the supplier/vendor coordination curve drawing. All protection relay setting values must be approved by MJTD.

3.3 Declaration of Relay Operating Time During Short Circuit and Earth Fault

a. Graphical Time-Current Plots: Prepare graphs to demonstrate that recommended settings produce selective coordination. Include the following information.

- Supply voltage and installed transformer rated capacity
- Transformer damage curves.
- Transformer inrush current points.
- Maximum fault current cut off point on each protection relay.

3.4 Over Current and Earth Fault Relay

Protection relay shall include:

a. High-set and low-set overcurrent protection.

b. High-set and low-set earth-fault protection.

c. Fault recorder, event recorder.

d. The relay shall include breaker failure protection.

e. Display and touch panel for setting.

f. Auxiliary power supply (DC or AC)

3.5 Differential Relay

- Differential protection relay shall be used if the transformer capacity is 5,000 kVA and above.
- Differential protection relay and Over Current/Earth Fault relay shall be separated.
- Differential protection relay shall have compensation function.

3.6 Transformer Capacity and Mechanical Protection Function

Locator installing transformer capacity of equal to and greater than 1000KVA shall provide Transformer-mechanical protection facility/device and trip facility and shall be used in 33kV Circuit Breaker Protection circuit. Locator shall use transformer with copper winding only. Transformer with aluminium winding is not allowed. Alarm facility shall be installed in Annunciator panel such as Buchholz relay, Pressure relief device, Winding temperature, Oil temperature & other protections. If transformer capacity is 1,000 kVA and above it shall follow in accordance with TSMC guidelines.

3.7 Current Transformer for Protection

Current Transformer for protection system shall be minimum 5P10 or shall match with the class that was installed.

3.8 Trip Circuit Healthy Indicator

Trip circuit healthy test indicator shall be installed in every 33-kV circuit breaker panel.

3.9 On site 33kV – Current Transformer & 33kV Voltage Transformer Injection Testing

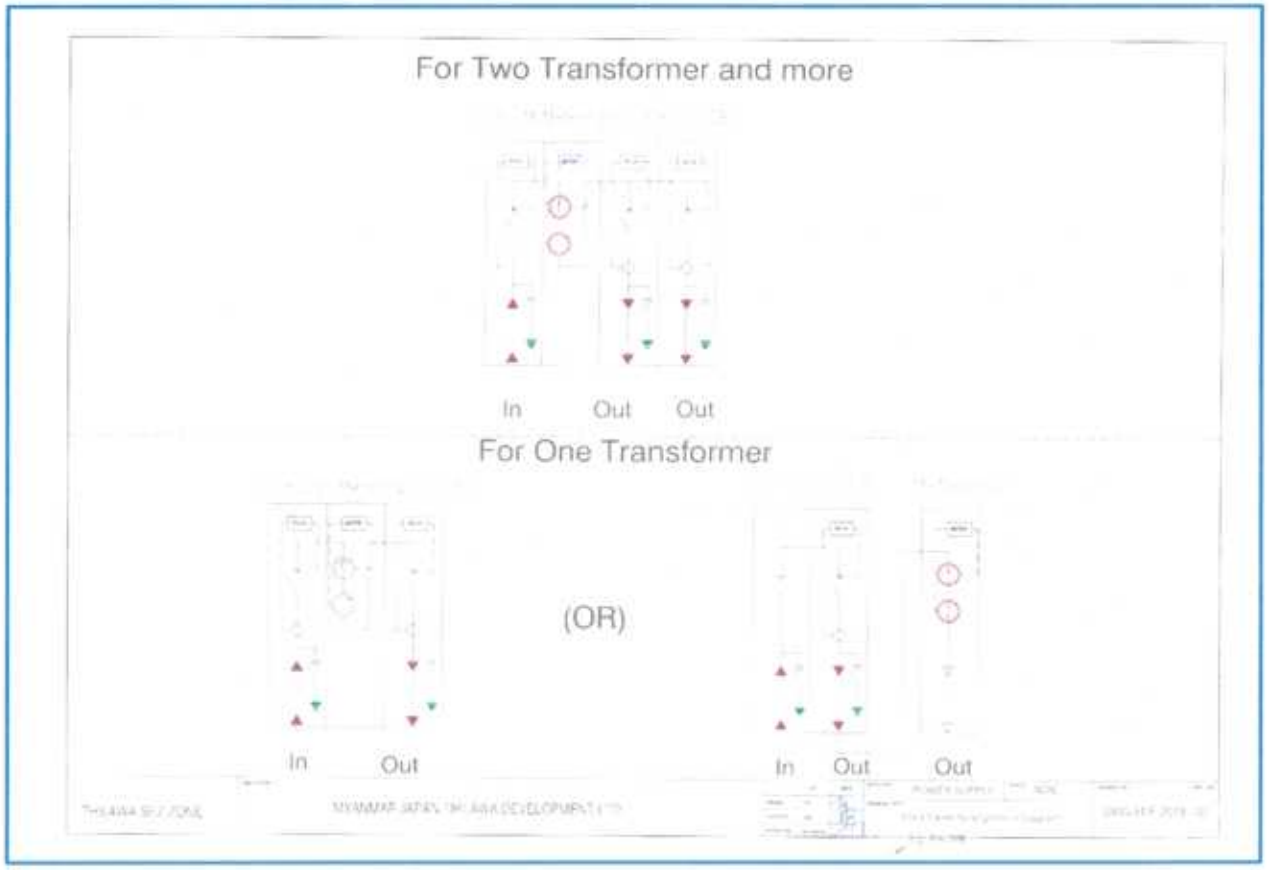
Locator must test and submit to MJTD the result of the protection relay's current transformer ratio and metering panel's current transformer and voltage transformer ratio. Accuracy testing shall be done at onsite witnessed by MJTD.

3.10 33kV Switchgear Panel

Short circuit breaking capacity shall be minimum 20 kA or higher rating.

4.0 METERING SYSTEM

4.1 33kV Panel Arrangement Diagram.



MJTD/YESC shall provide the power meter and modem for each locator. MJTD/YESC shall seal locator's metering panel. No locator is allowed to cut or break, nor breach the MJTD/YESC seal. Metering panel shall be installed the downstream of circuit breaker. Meter and Modem Brand may be changed as per YESC permission.

If MJTD finds that locator broke or cut the MJTD/YESC seal, the locator shall be penalized.

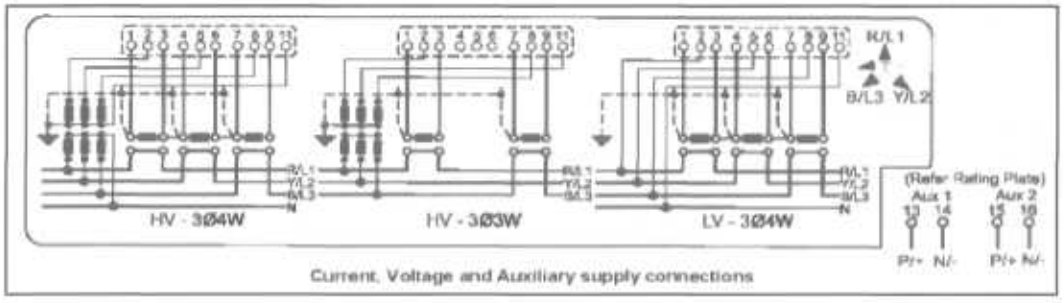
Locator shall provide and install the CT (Current Transformer) and PT (Potential Transformer). Wiring shall follow as per MJTD Specification.

Locator shall protect the power meter and promptly notify MJTD of the loss or damage of meter as necessary. CT and PT secondary wire shall use minimum 2.5 mm² wire.

Any other electrical equipment which are not related with metering circuit, such as CT and PT for protection, are not allowed to be installed inside metering panel. Metering panel shall be a separated compartment from any other facility to be able to be sealed separately from other facility.

4.2 Typical Metering Circuit

The following diagram shows the wiring diagram of Tariff Meter.
Locators shall connect wiring circuit of metering system as per below;



Current, Voltage and Auxiliary supply connections

4.3 Inspection of Metering Circuit

MJTD/YESC (TSMC) will inspect the metering panel after the power meter installation and before power energizing.

a. MJTD will inspect metering system including CT and PT, secondary wiring, the power meter and general condition of metering system as below.
   (i) There is KWH unit difference between MJTD power meter and Locators' meter which are installed on that loop. In such condition, Locators shall cooperate with MJTD.
   (ii). If there is technical error in Locators' meter, Locators shall rectify/ replace as per Article 2.16.
b. If MJTD found that locator was using power with incorrect metering system intentionally (such as by breaking MJTD(YESC) seal without notice to MJTD and wrong wiring

method), MJTD will penalize the locator. The compensated amount will be calculated by the difference between MJTD main meter and total of Locators' meter on the loop line multiplied by 10.

[10 x (MJTD main meter unit – total of Locators' meter unit on that loop line)]

MJTD has the right to inspect the locator electrical system. The locator has to submit the accuracy of CT, PT and kWh meter. Whenever locators' power receiving system incurred (incoming, metering and outgoing panel) a short circuit or earth fault happened, in such condition, locator shall cooperate with MJTD.

4.4 Metering CT and Metering PT

Locator shall follow 2CT and 3PT Meter Type specification as per recommended by MJTD.

a. Metering CT

Locator shall provide the primary rating, to be nearest same value of transformer full load ampere. Secondary ratio shall be 5 Ampere. Accuracy class shall be 0.5 and Burden 15VA minimum. In case the Locators want to use accuracy class higher than 0.5 (0.2 or more) due to any reason, the locator shall confirm to MJTD.

b. Metering PT

Phase to Ground PT shall be used. Voltage rating shall be (33,000 V/ root 3) :(110 V/ root 3). Accuracy class shall be 0.5 and Burden 30VA minimum.

4.5 Turn Ratio Testing of Metering CT and PT

The Locator shall provide turn ratio testing of metering PT and CT at site with MJTD. If testing result is unsymmetrical value, MJTD has the right to reject and locator has to change.

4.6 Power Meter Location

The Locators shall arrange the power meter mounting space at Metering Panel Cubicle LV compartment.

5.0 SURGE ARRESTER AND MISCELLANEOUS INSTALLATIONS

5.1 Surge Arrester

The Locator must install surge arrester at incoming side of Medium Voltage panel. The surge arrester shall be the metal-oxide type without gaps, polymer or porcelain housing, connected between phase and earth suitable for outdoor or indoor installation, complying with the requirement of IEC 60099-4.

5.2 33kV Power Cable

Cross sectional area of 33kV power cable shall be 95 mm2 as minimum for copper cable. Only armoured cable shall be used for Underground Power Cable (19/33(36)) kV. Aluminium Underground cables are not allowed to be used as 33kV power cable.

5.3 Low Voltage Circuit Breaker

If locator's transformer rated secondary ampere is 1,000 and above, Air Circuit Breaker (ACB) shall be used.

5.4 Auto Transfer Switch

If locator use generator, Auto Transfer Switch (ATS) shall be installed. For four poles ATS has to be used to separate neutral between transformer and generator, and for three poles ATS is not allowed. Locator also can use the ATS function by using 4 Pole Air Circuit Breaker (ACB) with mechanical interlock and electrical interlock (under voltage release coil function).

5.5 Power Factor

Locator shall install an automatic power factor correction equipment that is 30% kVAR of Transformer Capacity. Locator shall maintain power factor of not less than ***0.85*** (leading or lagging).

If MJTD found that power factor in locators' power system is ***less than 0.85 (leading or lagging) and consumption load is 50kW and above***, MJTD will send notice to locator and locator shall modify power system within 14 working days from MJTD's notice date. If the power factor will be less than 0.85 after 14 working days from MJTD notice date, Locator shall pay power factor surcharge based on the following calculation;

Total KWH x Penalty Percent at the Table x Tariff.

Power Factor	Penalty
0.699 or lower	Not permitted – 25%
0.700 to 0.749	3%
0.750 to 0.799	2%
0.800 to 0.849	1%
0.850 to 1.000	No penalty

5.6 Earthing System

Only TT earthing system should be applied. If Locator plan to use other earthing system, requirement are as follows:

i. Transformer neutral earthing shall be separated from other earthing system and shall be less than 2 ohms.

ii. Generator neutral shall be separated from other earthing and shall be less than 2 ohms.

iii. 33kV Lightning Arrester shall be separated from other earthing and shall be less than 10 ohms.

iv. Earthing resistance shall be less than 2 Ohms for any earthing point except Lightning Arrester Earthing.

v. Lightning Arrester Earthing shall be less than 10 Ohm. Earthing cable size shall be selected based on IEC standard.

The size of earthing wire or cable shall be ensured to withstand short time current capacity until circuit breaker is tripped by earth fault.

By considering based on 20kA short circuit ampere and total opening time of circuit breaker, MJTD recommend to use 95 mm2 for earthing cable.

6.0 ROLES OF LOCATOR AND MJTD RELATED TO THIS REGULATION

6.1 Power System Stability

Locator operation shall not affect to MJTD power system stability such as voltage fluctuation and Transformer inrush current.

6.2 Overhead Power Cable

If locator's power infrastructure includes overhead power cable, only insulated power cable shall be used and clearance between power cable and ground should be 7-m minimum at maximum sag condition. Bare conductor is not allowed. Overhead power cable is not allowed to be installed by factories in main road.

6.3 Sudden Outage of Power Supply

Sudden outage of power supply may occur due to power system failure. MJTD cannot provide advance information to any locator for this situation and MJTD shall not be responsible due to any reason.

6.4 Power Supply Failure.

If in case, MJTD could not supply power if power system failure due to any kind of reasons and in such conditions, MJTD shall not be liable and not responsible for any or all damages caused to locator.

6.5 Compliance of Locator

For safety point of view and protecting the power system inside the Thilawa SEZ, MJTD has the right to cut-off power supply to the locator, due to the locator's non-compliance with this regulation.

MJTD also reserves the rights to disconnect power for the locator at any time, if MJTD finds non-compliance with this regulation. Under severe circumstances in the sole opinion of MJTD, may additionally penalize the locator with non-compliance to this regulation.

6.6 Locators' During Power Usage Time

During the power usage time, Locator need to have *(QUALIFIED PERSON) who has experience in medium or high voltage power operation which were (i.e, Switching, Maintenance and Installation work). The operators of locator are not allowed to operate or switch-on the Earth Switch of incoming line, without MJTD's approval. The locator shall arrange for interlocking system to prevent from human error and/or wrong operation.

***Note: QUALIFIED PERSON**

Who had sufficient, documented trainings and experiences, and can demonstrate appropriate knowledge and skills to be able to work in electrical equipment, whether energized or de-energized, maintenance, repair, etc.,

6.7 Information to MJTD if Short Circuit or Earth Fault Happened from Locator

If a short circuit or earth fault happened at locators' electrical system facility such as at the location of upstream side of circuit breaker, the circuit breaker of Thilawa Substation will trip and all the factories on that loop will have a power outage. In such condition, locator shall inform to MJTD immediately.

If short circuit or earth fault happen in a certain factory at the upstream side of locators' factory circuit breaker during night time, locator may not notice and MJTD will have difficulty to know the fault location. It may take longer time to restore the power. To avoid this situation, locators' electrical room key shall be kept at security guard house 24 hours. MJTD has the right to enter locators' electrical room to find the abnormal condition.

6.8 Locators' Electrical Engineer

Every locator shall hire competent electrical engineer to operate MV switchgear panel properly according to "Excerpt from Myanmar Electricity Law on Prohibitions is shown in ANNEX E".

7.0 PROCEDURE OF DESIGN APPROVAL APPLICATION FOR SOLAR POWER SYSTEM (DAASPS)

7.1 Purpose and Document Structure

The purpose of this Regulation is to identify requirements for the Locators' **Solar Power** system and installation. Prior to any and all installation works of the power system, the Locators shall receive approval of MJTD and relevant Authority.

7.2 Scope

This Regulation applies to all Locators or any other persons involved in the design, construction, installation, maintenance and Operation of Solar Power system within Thilawa Special Economic Zone (TSEZ).

This Regulation shall apply and is a requirement to all new Solar Power Installations, extensions, alterations and repairs. This applies also to existing Solar Power that was active during the making of this regulation. In summary all Solar Power installations are covered under this regulation.

7.3 General Procedure

i. Locator that intends to install Solar Power energy shall have to secure from MJTD an approval. No approval from MJTD shall mean no installations of Solar Power facilities in the premises of locators. This approval consists of the following:
   a. Detailed Design
   b. Single Line Diagram
   c. List of Main Equipment
   d. Load List
   e. Installed Capacity
   f. Testing Procedure on the Equipment
   g. Sequence of Operation on Solar Power
   h. Approved Location Plan and Mechanical Design

ii. As soon as MJTD made the final approval, this approval will be valid for one (1) year subject to another scrutiny of MJTD should there be laws to be followed as enacted by Myanmar government related to solar power system

iii. MJTD may allow at its own discretion the solar power installations subject to evaluation on the Solar Power System Design Approval.

iv. This Solar Power System shall be a Zero Export System to Grid and shall include anti-Islanding Protection.

v. MJTD may allow the Locator to install Solar Power System with 100% of Installed Transformer Capacity.

vi. Locator shall provide MJTD a one (1) year generated power data every end of December.

7.4 Technical Standards, Materials, Requirements

Only good quality materials shall be used in Solar Power installation.

All materials and equipment shall comply with IEC (International Electro-Technical Commission) standards and MNBC (Myanmar National Building Code) as referenced to in this Regulation. Other international Regulations may be used with the prior approval of the MJTD subject to TSMC intervention.

Locator shall install the Low Voltage Tariff Meter at Main Solar Cable Connection Point. CT ratio (Current Transformer) shall be at the nearest rating with Main Breaker size.

Locator shall ensure that any specification or requirements are consistent with this regulation, and unless otherwise approved by MJTD.

7.5 Submission of the DAASPS Documents

The Solar Power design shall be approved by MJTD before commencement of construction, installation and purchasing of the equipment. Applicant locator shall submit "DAASPS" one (1) month in advance for review of MJTD.

MJTD shall not receive the insufficient document. Detailed design shall be submitted with appropriate documents show in ANNEX A.

7.6 Review of Documents (DAASPS).

MJTD shall review the documents and shall feedback to Locators within ten (**10**) days (business day).

7.7 Approval of Documents from MJTD.

MJTD shall return two (**2**) sets of documents (DAASPS) for Locator with ***"APPROVED"*** stamp and signature of Officer and General Manager of MJTD.

7.8 Approval of Documents from TSMC.

Locator shall submit **"Solar Power Installation Plan"** document including with approved DAASPS to TSMC in accordance with the governmental regulations. Any Alternative Energy Installation that may be installed in the premises of locator shall comply with the regulations as described in ANNEX D.

7.9 Locator's Commencement of Installation.

The Locator shall obtain all permits, licenses, authorizations and necessary work approvals for installation of power system, operation and maintenance.

The Locator may commence installation works of Solar Power system upon receipt of approval from both MJTD and TSMC.

7.10 Protective Control During Installation Work.

The Locator shall ensure that no obstruction, destruction is caused to any common utility and property in TSEZ and locator shall take sole responsibility for all the work, employees and agents of its contractor(s) in TSEZ.

The locator shall indemnify MJTD against all proceedings, claims, cost and expenses which MJTD may incur or may be held liable as a result of the locators' installation works and/or any act, neglect or default of the locators, its employees, contractors, agents or their respective employees.

Any work not complying with this regulation shall be suspended or remedied upon the sole and exclusive decision of MJTD, at the responsibility and cost of the locator.

7.11 Inspection by MJTD.

The Locator shall invite MJTD for Solar Power system pre-inspection by email one (**1**) week in advance. MJTD shall inspect first at site after Solar Power system installation is finished.

7.12 Inspection by TSMC & Witnessed by MJTD.

The Locator shall request inspection to TSMC (Industry Section / EI (Electrical Inspection)) after complete installation for solar power system, in order to obtain official approval as a requisite to energizing.

Solar Power installations must be inspected, tested and validated by TSMC (Industry Section) in accordance with the required relevant standards of equipment used in the Solar Power installation prior to energizing.

7.13 Solar Power Energizing Request.

The Locator shall submit "Solar Power Energizing Request" Letter and "Approval Letter" from TSMC to MJTD.

MJTD shall review all requested information from locator in three (**3**) working days.

MJTD shall review the documents consisting of:

a. Final Certification of testing and commissioning from TSMC.

7.14 Solar Power Energizing Approval

MJTD will issue ***"Acceptance Letter of Solar Power Energize Request"*** for Locator when approved.

8.0 ANNEXES

8.1 Annex A (Paper Requirement for DAAPS/DAASPS)

a. Number of copies and media required: The Locator must submit 3 sets of soft copies and 3 sets of hard copies for any submission required.

b. The electronic submission: shall consist of a full and complete set of documents generated electronically or converted from paper elements. Electronic media shall be submitted in CD or DVD form, properly labelled (jewel case and disc).

c. The paper submission shall consist of the following:

- Written documentation: A4 submission generated from Microsoft Office applications, together with copies of manufacturer's literature as set out elsewhere in this document.
- Drawings, Schematic diagrams etc. are required in 2 size formats:
- A3 reductions (which must state the size at which they are to scale).
- Full size paper plots.

8.2 Annex B (Necessary Documents Requirement for DAAPS/DAASPS)

Necessary Documents for submission of DAAPS/DAASPS to MJTD:

1) Format (DAAPS) and or DAASPS
2) Single Line Diagram including:
   a. Transformer capacity.
   b. CT and PT specification with rating for metering and protection.
   c. Underground Cable specification with rating for 33kV side and 0.4kV side.
   d. Power Factor Controller Panel with step and Capacitor & Reactor rating.
   e. Type of Relay and Name.
   f. Short Circuit Current rating of 33kV Switchgear
3) Drawing of layout plan of power cable and UG Cable from tapping point to Main Distribution Board (MDB)
4) Drawings of site plan showing locations of substation, electrical room and generator room
5) Earthing layout drawing with Earthing Cable size and values (Neutral Earthing, Body

Earthing and Lightning Arrestor)

6) Detailed drawings of 33kV switchgear panel with its brand and specification
7) Technical specification of Over Current and Earth Fault relay
8) Declaration of relay operating time during short circuit and earth fault with coordination curve
   a. Relay setting summary sheet including overcurrent and earth fault ampere setting and time setting
9) Installed Load List
10) Cable termination kit specification for outdoor type and indoor type.
11) Schedule of installation works including power energizing date
12) Any technical specification or drawing that MJTD may require (MJTD may request more other document if necessary)
13) Application to Yangon Electricity Supply Corporation (YESC) for 33/**kV Transformer
14) Power factor control plan. (Shall include calculation sheet)

8.3 Annex C (Reference of Material Specification)

Power Meter: (CEWE-Premier 300 below is a reference only, not a requirement)

Prometer 100

precision metering series

Best in class accuracy | User friendly multilingual display | Field configurable for various installations | Hot pluggable communication modules

in-built IEC 61850 support

Prometer 100, series of next generation energy meter designed for power transfer points requiring precise measurements and revenue transactions. Flexible and modular communications ensure integration with AMR / AMI / SCADA systems and upgrade to future sub-station automation systems. 4 quadrant energy measurement allows monitoring of generation, transmission and distribution loads.

Applications

- Energy transfer measurement and reconciliation
- Power plants, feeder monitoring, grid substations, wind turbines, renewable/PV, industrial and commercial premises
- On-line monitoring of energy exchange at various interface points
- Energy accounting, automation and system integration

Benefits

- Minimal integration cost through multiple communication interfaces
- Suitable for diverse applications through wide range voltage, current and auxiliary supply inputs
- Support of industry standard DLMS, MODBUS and IEC 61850 reading protocols
- Meter reading and display viewing under power outage
- Field replaceable hot pluggable communication modules
- Multi lingual support on display (English, Swedish, German, French, Spanish, Italian, Russian and Arabic)

Features

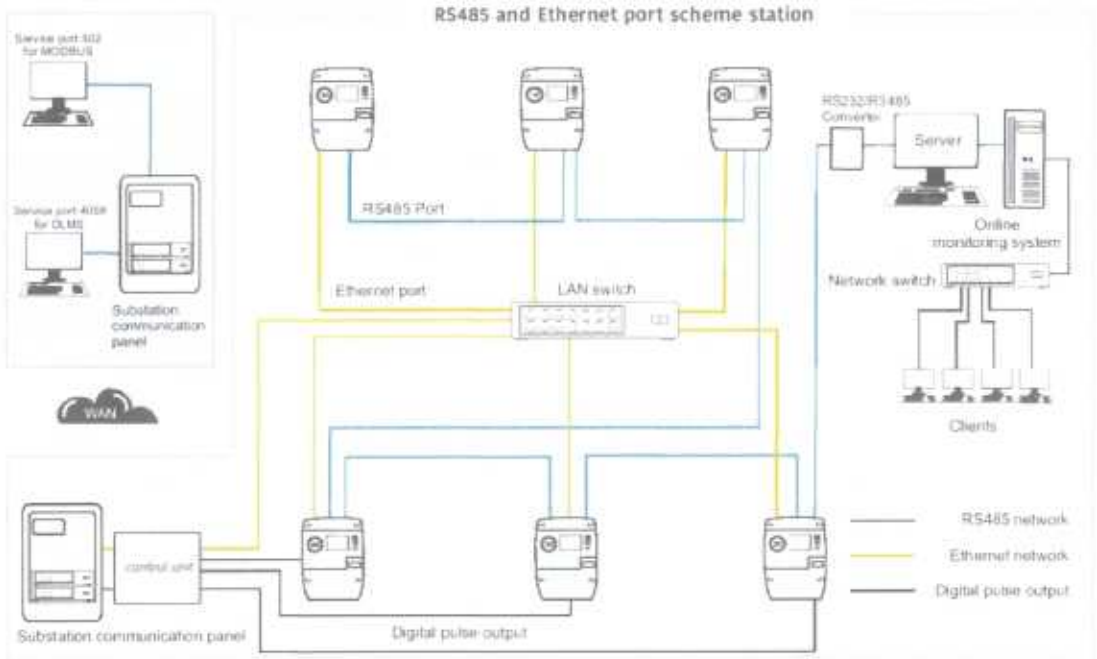
- 0.2S/0.5S accuracy for active and reactive measurement
- Wide-range dual auxiliary supply with options for AC/DC and self-power (VT powered)
- Power quality features including THD, sag, swell, voltage unbalance and interruption recording
- Dynamic error compensation for CT/VT
- Transformer/Line loss adjustment (Copper and iron losses)
- Intuitive graphical display including vector diagram, wave forms and bar chart for consumption
- Remote configuration of communication ports
- Simultaneous DLMS and MODBUS over Ethernet port
- Support of meter reading / display over field replaceable battery
- In built IEC61850 along with RS232/RS485 and Ethernet ports in a single product & capability of simultaneous communication through all these ports
- Dual loggers for energy and instantaneous parameters
- Flexible time of day tariff, maximum demand support, DST (Daylight saving time) support with automatic billing dates
- Meter cover and terminal cover open detection
- RS232 port compatible with meter powered modem

CEWE INSTRUMENT
a Secure brand

Prometer 100

System architecture

The Prometer 100 offers various communication modules such as RS232 with output to power up terminal modem, RS485 for multi-drop connectivity and Ethernet for integrating into communication bus. The communication modules can be hot plugged in field and locally or remotely configured for ids, IP addresses. Dual socket support on Ethernet allows for simultaneous communication over MODBUS and DLMS through different clients. All communication ports can simultaneously transfer data at high speeds.



Product options*

Class	Measurement	Power supply 1	Power supply 2
0.2S	HV3 / HV4 / LV4	Self power	60-240 V AC/DC (±20%)
0.5S	LV4	90-240 V AC/DC (±20%)	24-48 V DC (±20%)
			none

Communication port 1	Communication port 2	Communication port 3	Pulse input / output
Ethernet	RS232	RS232	No pulse I/O
	RS485	RS485	4 configurable I/O
	IEC61850		4 configurable I/O and 7 fixed pulse O/P

Technical specifications

Electrical	
Connection type	HV1/HV4/LV4
Measurement voltage range	100 V to 415 V (L-L) ±20% 3P 4W; 100 V to 240 V (L-L) ±30% 3P 3W
Measurement current range	1-10 A (configurable)
Frequency	50/60 Hz
Burden with auxiliary / Self (VT) powered	Current circuit: < 0.1 VA/phase @ 1A, < 0.5 VA/phase @ 5A Voltage circuit in case of Aux power: < 0.1 VA/phase Voltage circuit in case of internal / self power < 6 VA/phase
Accuracy	Class 0.2S / class 0.5S / class C
Maximum withstand Voltage	1.5 times of nominal voltage continuously 2 times of nominal voltage for 0.5 second
Maximum withstand current	1.5 times of Imax continuously 10 times Imax for 1 second 20 times Imax for 0.5 second
Compliance	
Standards	IEC 62052-11, IEC 62052-21, IEC 62059-21-1 , IEC 62053-22, IEC 62053-23, IEC 62053-24, IEC 62056-52, IEC 61010-1, IEC 61010-2-030, CE, MID (EN 50470-1, EN 50470-3), IEC 61000-6, 7-1, 7-2, 7-3, 7-4, 8-1 (as per edition 1 and 2)
Environmental	
Ingress protection	IP54
Operating temperature	-25°C to + 60°C
Limit range of operation	-25°C to + 70°C
Storage temperature	-40°C to + 80°C
Temperature coefficient	<0.3%/10 C (UPF) for class 0.5
Temperature coefficient	<0.1%/10 C (UPF) for class 0.2
Mechanical	
Dimension	292.7 x 201.5 x 105.2 mm (± 0.5 mm) (H x W x D)
Weight	2 kg (+/- 200 gm)
Software	Two data loggers: • Maximum 50 parameters configurable in each logger • Logging of up to 34 energy channels and 80+ instantaneous values, with integration period 1 to 60 minutes • ~4800 Parameter-days capacity at 30 minute interval in each logger Configurable parameters: • 16 time-of-use tariffs, 16 Seasons, 16 Day types and 16 Time zones, 53 Billing dates, DST dates for 25 years • Logging of up to 100 day for daily energy snapshots • 7 configurable display sequences along with fixed, auto and sealed button sequences • 50+ alarms and 10+compartments for event logging - Logging of up to 15 sets of historical data logging - Up to 31st individual harmonic component measurement Power quality features, including voltage sag, swell, unbalance recording Delta values monitored and logged

Prometer 100

Technical specifications

Features	
Power supply	Dual / Single auxiliary supply Range: 60-240 V AC/DC (±20%), Burden: <10VA * Optional range: 24-48 V DC (±20%),Burden: <10VA*
Display	Graphical, with green backlight extended temperature range -20°C to +70°C Size: 69 x 39 mm (H x W), 128x80 pixels Pixel size: 0.5 mm² Max display character size 10 x 5 mm (H x W)
Battery	Field-replaceable battery for RTC backup and meter reading/display viewing during power outage
Inputs and Outputs	7 fixed pulse outputs 4 configurable as pulse inputs/outputs • Pulse outputs: Type: Volt-free, 100 mA Voltage: 48-240 V AC/DC, Option for 24-40 V DC. Pulse width: 20 - 1000 ms (for 50Hz); 16 - 1000 ms (for 60Hz) • Configurable as pulse input/output Pulse output Type: Volt-free, 100mA Pulse input type: Optical isolator Voltage: 24-240 V AC/DC • Indicator Six LEDs: 2 for metrology, 2 for pulse outputs, 2 for alarms/events
Communication	
Optical 1107 port	Protocol: DLMS, Baud rate: 1200 - 19200 bps, Half duplex
RS232 port	Built-in supply of 4 V @ 550 mA, Protocol: DLMS, Baud rate: 1200 -57600 bps, Half duplex
RS485 port	Protocol: Configurable DLMS/MODBUS RTU, Baud rate: 1200 - 57600 bps, Half duplex
Ethernet port	10/100 Mbps, Protocol: DLMS and MODBUS TCP simultaneous client Full duplex
Inbuilt IEC61850	Logical nodes: LLN0, LPHD, MMXU, MMTR, MHAI, MABT Reports (RCB) Up to 5 clients Time synchronization - SNTP
Connector type	standard RJ45 for all the ports except optical
Accessories (optional)	Panel mounting kit / RS232 communication module / RS485 communication module / Terminal modem / Software

* Electrical compliance, mechanical, software, features options, depend on variant selected

Australia
Dubai
Europe
India, SE Asia, Africa
UK

www.cewesecure.se

ECD 310

Intelligent GSM/GPRS meter powered modem

GSM/GPRS technology supported | Automatic meter reading | Power outage notification

Smart and reliable AMR

ECD 310 is a modem for data transfer between an electronic energy meter and a central station over the GSM / GPRS communications network. Working in conjunction with base computer software (BCS) it provides a cost-effective solution for remote automatic meter reading (AMR).

It is designed for fitting under the meter's terminal cover, providing a neat, tamper-resistant installation.

Application

- GSM/GPRS-based remote meter reading (RMR) systems
- Outstation modem, connected at the meter end
- HV or LV metering installations

Benefits

- Easy installation under the meter's terminal cover
- No need for external power supply input
- Tamper-resistant installation under utility sealed cover

Features

- Meter-powered GSM/ GPRS modem
- Meter connectivity through serial RS-232 communication port
- Status LEDs
- SIM card provision
- Engineering plastic enclosure
- Compact size: fits under the meter's terminal cover

SECURE energy together

ECD 310

Technical specifications

Electrical	
Power supply input	Powered from RS-232 port of meter RJ 45 variants: 3.7 V @ 500 mA
Antenna	Stub antenna (3dBi)
Compliance	
Operating frequency	Dual Band EGSM / GPRS 900 / GSM 1800MHz
ETSI GSM Phase 2+ Standard	Class 4: 2W @ 900 MHZ Class 1: 1W @1800 MHZ
GPRS multi-slot class	Class 10
Mechanical	
Dimensions (W x H x D)	58 x 75 x 37 mm (approx.)
Weight	0.1 kg (approx.)
Sealing	Two sealable terminals on the cover
Connectors	SMA for antenna connection (with flying lead) RJ 45 for connection to meter (RS-232 port on modem)
SIM card*	Externally accessible Sliding tray type (with sealing arrangement) 3 V interface
Environmental	
Temperature	-10 C to +55 C (operating)
Humidity	95% non-condensing

* A data enabled SIM card must be procured separately from the service provider for the location where device is to be used

Australia | Dubai | Europe | India, SE Asia, Africa | UK

www.securemeters.com

Cable terminations

Interface C (Bolted) type 400 series

SafeRing/SafePlus 36 are equipped with cable bushings which comply with CENELEC EN 50181 and IEC 60137 for termination of cables.

The bushings fulfil the requirements of DIN47636T1.

The following cable bushings are used:

Interface C with M16 x 2 metric threads
400 series, In = 630 A
Standard on all modules and for side connection

Interface B (Plug in type 200 series)

Interface B with plug
400 series, In = 400 A
Optional for all modules

The yellow area indicates the silver coated contact spring.

The installation instructions from the manufacturer of cable terminations must be followed. Be sure to lubricate the bushings thoroughly with the silicone supplied.

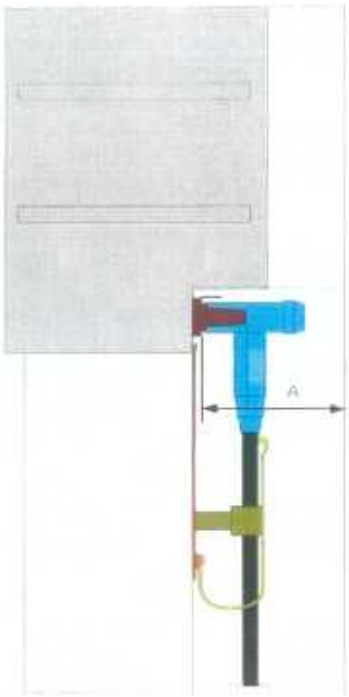
Important: Where cables are not connected, the earthing switch must be locked in closed position or the bushings must be fitted with dead end receptacles before the unit is energized.

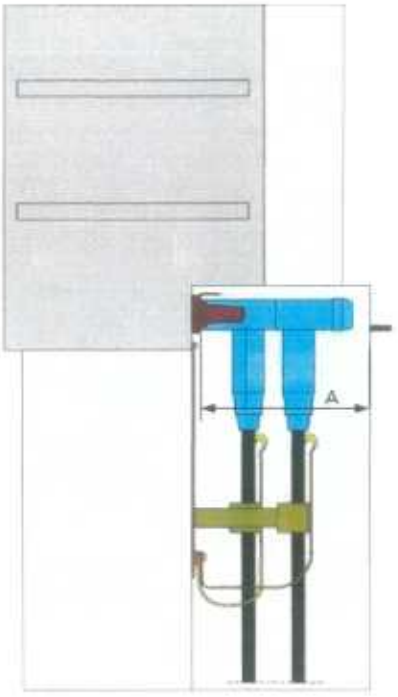
Cable termination of RMU (ABB brand below is a reference only, not a requirement)

Cable terminations

All bushings are protected by cable compartment cover. The drawings below show typical arrangements with cable connectors.

The table below the drawings shows the distance A in millimeter from cable bushing to the inner part of cable compartment cover.





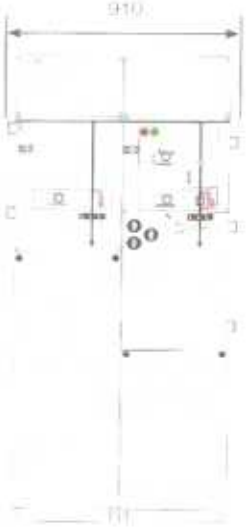
	Distance A
Standard	350 mm
Double cables	350 mm
Arc proof cable covers	521 mm

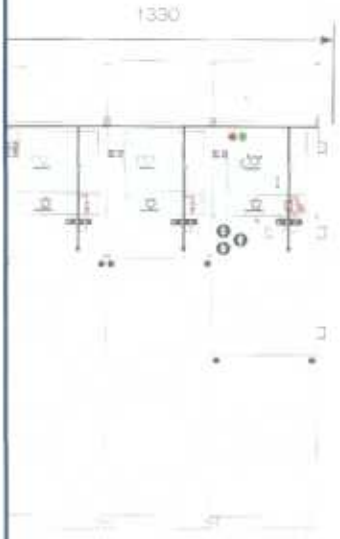
The following manufacturers of cable terminations are recommended:

- ABB & Nexans

Dimensions

Standard units

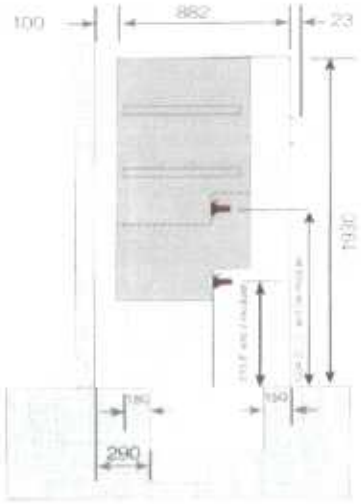




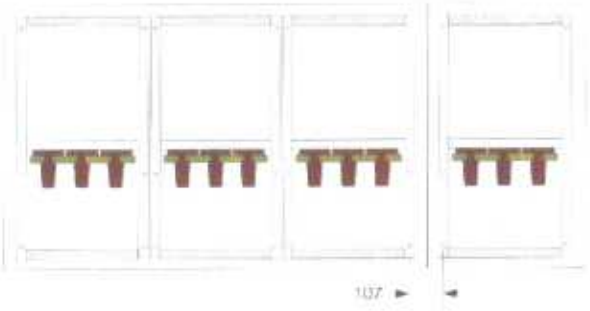
Product catalogue | Dimensions 43

Dimensions

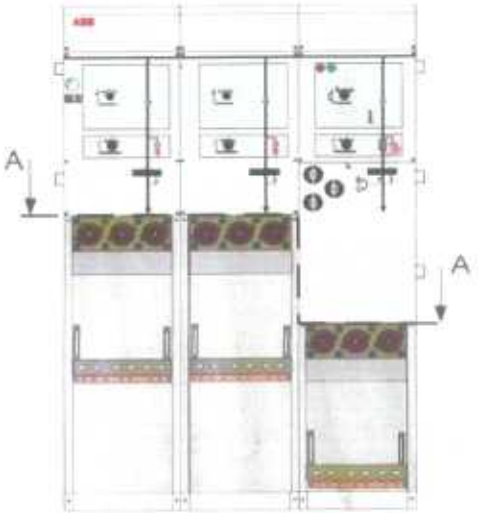
Floor and wall fixing including cable entry



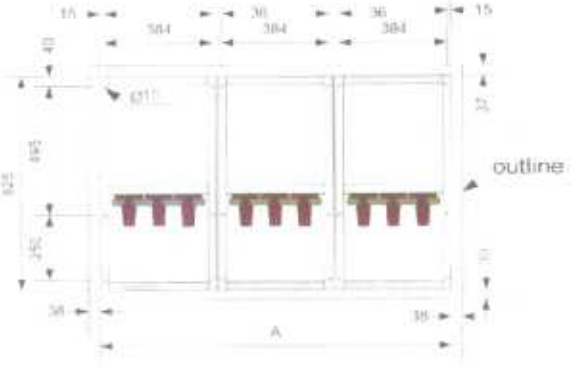
Cable trench and wall fixing



Distance between two units which are connected to each other by means of external busbars

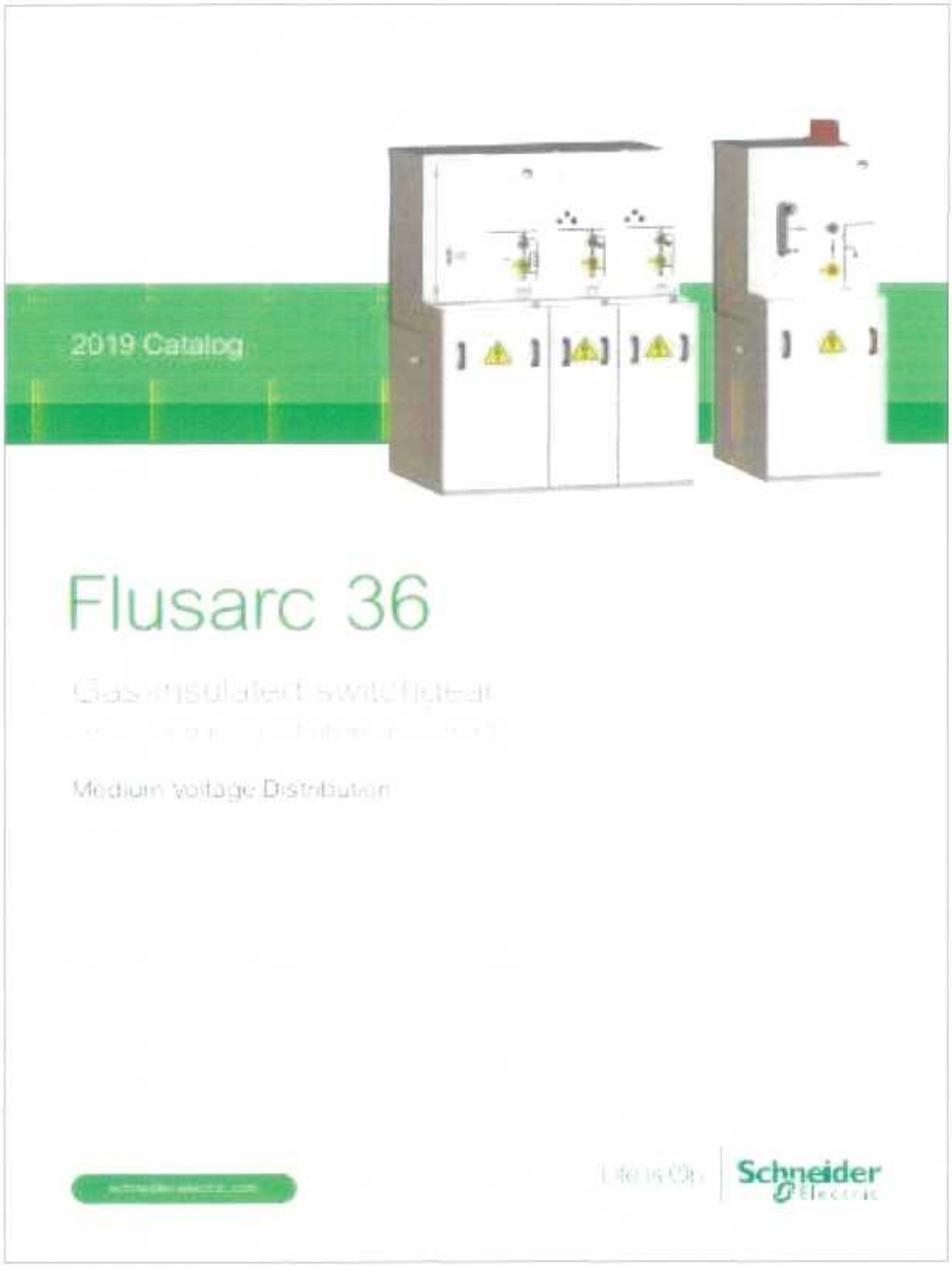


3-way unit with removed cable compartment covers



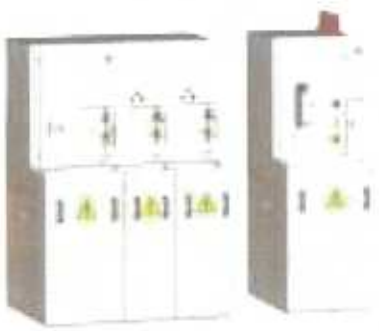
A - A

Unit	1 way	2 way	3 way	4 way
A [mm]	420	840	1260	1680


2019 Catalog
Flusarc 36
Medium voltage Distribution
Schneider Electric

General characteristics

General description



examples of Flusarc 36 configurations
a 3-function compact unit (left) and a modular unit (right)

Flusarc 36

Flusarc 36 is a range of SF6 gas-insulated switchgear for medium-voltage power distribution up to 36 kV. It is designed for secondary substations of ring or radial networks of energy distributors and for wind power and photovoltaic applications. Small in size, Flusarc switchgear fits easily in prefabricated substations, kiosk substations and wind towers. Featuring gas insulated technology, it has an extended service life and very low maintenance costs.

Flusarc 36 offers a wide range of functions based on switch disconnectors, vacuum circuit breakers, switch disconnector fuse combinations, earthing switches, and metering units.

Flusarc 36 switchgear comes in two ranges, modular or compact. A few versions of the compact range are available for outdoor applications.

Modular range

Modular functional units

The modular range is made up of different functional units with reduced widths (604, 894, or 564 mm depending on the unit). Each function is integrated in its own tank filled with SF6 gas.

Flexible configurations for any type of substation

The units can be assembled and connected together in any order via extensible insulated busbars, mounted on bushings on top of each unit. The modular range offers maximum flexibility for adaptation to the requirements of any substation.

Types of unit

The following units are available:

- Incoming/outgoing unit with switch-disconnector (C);
- Incoming/outgoing or transformer protection unit with circuit-breaker (CB);
- Transformer protection unit with switch-disconnector fuse combination (T);
- Direct incoming/outgoing unit (R);
- Air-insulated metering units (M1 to M5) with different combinations of CTs and VTs pre-installed in a basic unit (M) designed for easy connection.

Types of unit

Compact units are available with the following combinations of functions:

- Incoming/outgoing unit with switch disconnectors (C):
  - C-C-C
  - C-C-C-C
  - R-C
- Transformer protection unit with one or more switch-disconnector fuse combinations (T):
  - T1-C, T1-R
  - T1-C-C, T1-C-R
  - T1-C-C-C, T1-C-C-R
  - T1-T1-C-C
- Transformer protection unit with one or more circuit breakers (CB):
  - CB-C, CB-R, CB-RE
  - CB-C-C, CB-C-R
  - CB-C-C-C, CB-C-C-R
  - CB-CB-C, CB-CB-C-C
  - CB-CB-CB

Compact range

Compact units combining up to 4 functions

The compact range is made up of integrated compact units that combine a number of functions in a single tank filled with SF6. One tank can house up to 4 functions. The integration of several functions in a single unit, with a common tank for the switchgear, reduces overall dimensions compared to configurations combining modular units. The smaller electrical clearances required inside the SF6 tank reduce the width of the assembly. Integration of the busbars in the tank reduces the height of the units.

Different combinations for a wide variety of substations

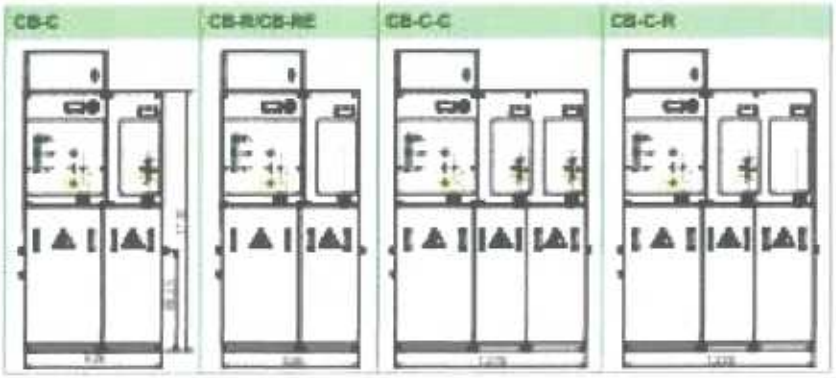
Compact units are available with different predefined combinations of functions each arranged in a given order corresponding to the most commonly encountered configurations. In this way, the compact range significantly reduces the footprint of typical substations. A compact unit can be extended to the right (viewed from the front) by ordering the unit with extension busbars on the right-hand side. Extension busbars cannot be retrofitted and must be ordered with the unit if future extension is foreseen.

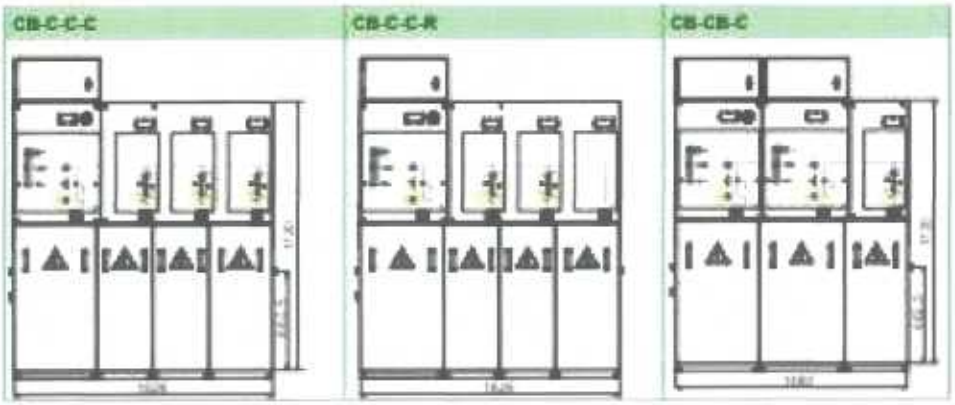
Dimension drawings

Compact units

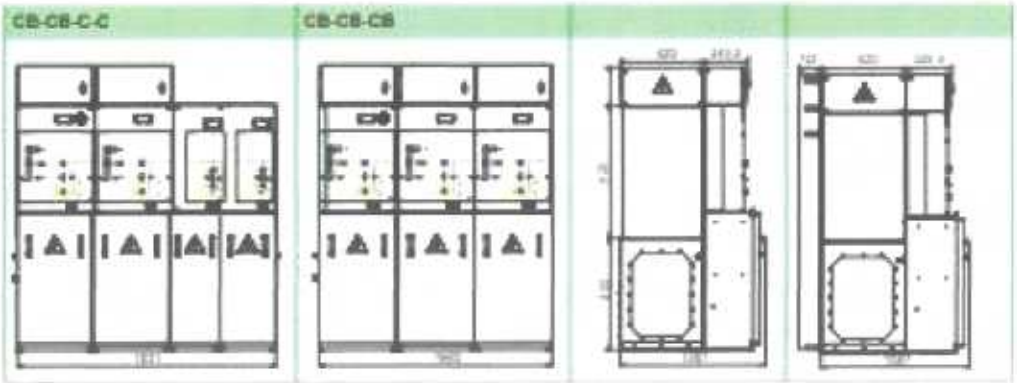
Circuit breaker units (CB)

CB units - Front view





Side view without duct Side view with duct



All dimensions are expressed in mm.

When VPIS relays are installed, there is no low-voltage compartment on top.
Versions with reduced heights are available on request.
Indicated widths do not include external anchor plate.

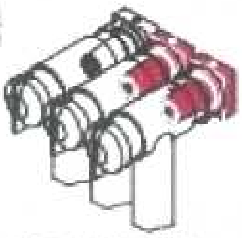
Connecting the cables

Connectors on insulated bushings

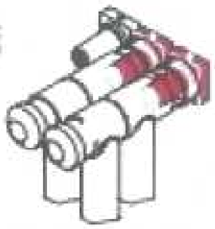
Cable connection to Flusarc 36 switchgear is made easy by the front position of the insulated bushings, accessible simply by removing the cable compartment cover.
The insulated bushings are suitable for plug-in or screw connections. The connectors are completely insulated.

- The bushings for the circuit breaker and switch-disconnector functions provide a type C interface.
- The bushings for the T1 function provide either a type C or type B (plug-in) interface.
- Type B is limited to 400 A, while type C is up to 630 A.
- Type B and type C bushings comply with standard EN 50181.
- Only type B and C connectors according to standard EN 50181 can be used; other connections are not allowed and will void the warranty.
- It is possible to install two cables per phase only on C and R functions and one cable + surge arrester in all functions.

When cables are not connected, the earthing switch must be locked in the closed position and the bushings must be fitted with end caps before the unit is energized.



630 A single-cable connectors



630 A double-cable connectors

Single-cable connectors

Brand	Screw type	Plug-in type	Interface type (as per EN 50181)		Rated current (A)	Separable connector type	Cable cross-section (mm²) Min.	Max.	Note
Euromold		■		B	400	M400LR/G	35	185	
	■		C		630	M400TB/G	35	240	
	■		C		630	M440TB/G	185	630	
	■		C		630	M430TB/G	50	240	
nkt		■		B	400	CB 36-400	25	300	Crimp type cable
							25	240	Screw type cable
	■		C		630	CB 36-630	25	300	
Tyco Electronics Raychem	■		C		630	RSTI-68	50	300	Crimp type cable
							35	300	Screw type cable
		■		B	400	RSES-64	50	300	
Prysmian	■		C		400	FMCTs-400	25	300	For 300 mm² please consult Prysmian
	■		C		630	FMCTXs-630/C	25	400	

Double-cable connectors

Brand	Screw type	Interface type (as per EN 50181)	Rated current (A)	Separable connector type Model 1	Model 2	Cable cross-section (mm²) min	max	Note
Euromold	■	C	630	M430TB/G	M300PB/G	50	240	
nkt	■	C	630	CB 36-630	CC36-630	25	300	
Tyco Electronics Raychem	■	C	630	RSTI-68	RSTI-CC-68	50	300	Crimp type cable
						35	300	Screw type cable

For other connector types please consult Schneider Electric.

Data on connectors is provided only as a general indication.

Consult connector manufacturers for up-to-date information concerning these products.

Cable and surge arrester connectors

Brand	Screw type	Plug-in type	Interface type (as per EN 50181)		Rated current (A)	Separable connector type	Surge arrester	Rated discharge current In (kA)	Note
Euromold	■		C		630	M430TB/G	300SA-10-36N	10	
nkt	■		C		630	CB 36-630	CSA 36	10	For coupling with connector type C with a backside thread of M16

8.4 Annex [*D*] Alternative Energy Installations

This Annex [*D*] shall apply and supplement the Regulations when the Locator has granted a third party (the "**Licensee**") a right to use the Lot to install alternative energy installations (including but not limited to solar and wind installations), such as through PPA arrangements ("**Alternative Energy Installation(s)**"). This Annex constitutes an integral part of the Regulations and shall prevail over the Regulations in the event of a conflict.

1. **License Agreement and Extent of Right to Use Lot by Licensee**

   1.1. The Locator and Licensee shall enter into a license agreement in order to entitle the Licensee to use the Lot for the purposes of installing, maintaining and operating the Alternative Energy Installations (the "**License Agreement**").

   1.2. The Licensee shall, and the License Agreement shall set out that the Licensee shall:

   (a) be granted a license to use the Lot only. The Licensee shall not be granted any proprietary interests in the Lot (whether by lease, sublease or otherwise);

   (b) use the Lot for the purposes of installing, maintaining and operating the Alternative Energy Installations only, with all other purposes being strictly prohibited, including but not limited to any other commercial activities; and

   (c) automatically lose any rights to use the Lot in the event that the LAND SUBLEASE AGREEMENT or RENTAL AGREEMENT is terminated, and shall not be entitled to any claims against MJTD or any other third parties to the License Agreement including but not limited to the new Locator of the Lot.

   1.3. For clarity, the term "**Lot**" for the purposes of this Annex shall means all parts of TSEZ leased by the Locator pursuant to the LAND SUBLEASE AGREEMENT or RENTAL AGREEMENT entered into with MJTD inclusive of any structures thereon, including roofs, car parks, and yards over which a license is granted to the Licensee under the License Agreement for the purposes of installing, maintaining and operating the Alternative Energy Installations.

2. **MJTD and Government Approvals Prior to Granting License**

2.1. Prior to granting the Licensee the right to use the Lot under the License Agreement in order to install an Alternative Energy Installation, the Locator shall separately apply the Design Approval Application (DAA) regulations, which must be complied with by the Locator when making improvements to the power system.

2.2. The Licensee shall also have obtained all proper clearances and approvals from TSMC and any other regulating government institutions ("**Government Approvals**") before the Locator and the Licensee enter into the License Agreement and commence installation, maintenance and operation of the Alternative Energy Installations in the Lot, with prior consultation with MJTD having taken place before making such applications for Government Approvals. Copies of any and all Government Approvals must be promptly furnished to MJTD.

3. **Locator's Obligations**

3.1. As the Locator is ultimately responsible for the occupation and use of the Lot and the Improvements conducted thereon, the Locator shall keep MJTD indemnified and hold MJTD free and harmless against all liabilities, losses, damages, claims, expenses and costs owing to or which may be owed to any neighbor and/or any Locator in TSEZ or any other third party arising out of or caused by the Licensee or the Alternative Energy Installation.

3.2. The Locator shall cause the Licensee to adhere to the Regulations by stipulating in its agreement with the Licensee regarding the Alternative Energy Installations including but not limited to License Agreement and PPA that the Licensee shall adhere to the Regulations. Any breach of the Regulations by the Licensee shall be deemed a breach by the Locator.

3.3. The Locator shall not mortgage, lien or encumber the land use right attached to the Lot and/or any Improvements in the Lot to any third party including but not limited to the Licensee, for the purpose of, or in relation to, the Alternative Energy Installations. Any such mortgage, lien or encumbrance provided to any third party shall be null and void.

4. **Remedies**

4.1. MJTD shall have the right to exercise those rights and remedies against the Locator and the Licensee set forth in Article 32 of the Regulations, in addition to any other rights and remedies available to MJTD at law, by agreement, or otherwise, in the event that any of the Locator or the Licensee breaches or fails to comply with any provision hereunder, or the applicable laws and regulations and requirements of any competent governmental authority.

4.2. MJTD and/or its assigns reserve the right to enter, inspect and maintain at any reasonable time and, except in case of emergency at MJTD's sole opinion, with at least twenty-four (24) hours' prior notice in writing to Locator, the Alternative Energy Installation for the purpose of determining compliance by the Licensee and/or the Locator with any laws, rules and regulations of the Government of the Republic of the Union of Myanmar. Such prior written notice (except in case of emergency at MJTD's sole opinion) shall state the nature of the inspection and/or maintenance.

8.5 Annex E (Excerpt from Myanmar Electricity Law on Prohibition)

Chapter 12

Prohibitions

44. No one shall be engaged in electricity-related work without having obtained a license from the relevant government department or organization.

45. No license holder shall engage in any work except the work contained in the license.

46. No one shall perform electrical installations and repairs without having an electrical aptitude certificate.

47. No one shall engage in electrical power generation, transmission, connection or use without having an electrical safety certificate.

48. No one shall engage in the import, domestic production, export, distribution or sale of electrical appliances which do not conform to the norms stipulated by the relevant ministry.

49. No holder of a license to engage in electricity-related work shall perform the work jointly with, or transfer it to, someone else without the permission of the relevant department or organization.

50. No holder of a license to engage in electricity-related work shall sell, mortgage, lease, exchange, or use any other method to transfer the license or the whole work for which the license was granted or any part thereof without the permission of the relevant government department or organization which issued the license.

51. No one shall construct anything, grow trees, or engage in other inopportune activities within the electrical power line area.

52. No one shall, without the permission of the holder of the license to engage in electricity- related work, obtain electric power through a connection to the line, or waste or use electric power.

53. No one shall divert electric power, cut off a power line or destroy any electrical apparatus used an electricity-related work.