



Israel Electric Corp. Ltd.
Grid Engineering Division
Distribution Engineering Department

Revision No.: 11

Issued date: 05/2026

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Specification NPS 120

1. 3x400A Low Voltage Metering Cabinet (M.C)
2. Medium Voltage Metering Cabinet (M.V).
3. 3x [100-500] A Low Voltage, PV connection
4. Base for Metering Cabinets.

SPECIFICATION FOR:

1. 3x400A Low Voltage Metering Cabinet (MC 400)
2. Medium Voltage Metering Cabinet (MVC).
3. 3x [100-500] A Low Voltage, PV Connection (LV. PV)
4. Base For Metering Cabinets

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1. PURCHASER

The Israel Electric Corporation Limited (I.E.Co.).

2. NAME OF ITEM & PROJECT

This specification covers the requirements for a 3×400A Low Voltage Metering Cabinet, its base, Medium Voltage Metering Cabinet, and a 100–500A Low Voltage PV Cabinet, designed for customer energy metering applications.

Remark: For more details see drawings in Appendix C of this specification.

No.	I.E.Co cat. No.	Description	Sketch no. (Appendix C)
1	5242798	Base for L.V. 3x400A metering cabinet	C.1
2	3251535	L.V. 3x400A metering cabinet, equipped	C.2
3	1028109	M.V metering cabinet, equipped	C.3
4	5294843	L.V. 3x [100 – 500]A metering cabinet, equipped for PV connection	C.4

3. LOCATION OF ITEM & PROJECT

- L.V network.
- The cabinet will be mounted indoors/outdoors.

4. SCOPE OF WORK

This specification covers requirements for the manufacturing, testing, preserving, packaging and furnishing of low voltage metering cabinet 3*400 A (hereinafter referred to as "MC 400"), M.V metering cabinet, and L.V PV Connection Cabinet (hereinafter referred to as "LV PV"), bases.

4.1. SCOPE OF SUPPLY

The cabinets shall be supplied to the I.E.Co. with the following parts and assembled to this specification (for more details see Appendix C).

4.1.1 Parts intended for cabinet assembling that the I.E.Co. should supply:

Parts for I.E.Co Cat.No. 3251535 and 5294843:

1. L.V. 3x400A metering cabinet, equipped		
2. L.V. 3x [100 – 500]A metering cabinet, equipped for PV connection		
Parts to be received from I.E.Co. and assembled by the manufacturer in the Metering Cabinet		
Part Name	Quantity	I.E.Co. cat.no.
Semi cylinder lock - green	1	3414372

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Parts for I.E.Co Cat.No. 1028109:

M.V metering cabinet, equipped		
Part that the manufacturer will receive from I.E.Co. and will assemble in the Metering Cabinet		
Part Name	Quantity	I.E.Co. cat.no.
Semi cylinder lock - white	1	3414398

5. TERMINAL POINTS & TERMINAL CONNECTION

- N/A

6. CYBER & INFORMATION SECURITY

- N/A

7. QUALITY ASSURANCE & QUALITY CONTROL

The quality assurance and quality control of the Manufacturer shall conform to The Threshold Conditions of the Bid documents.

The Q.C system of the manufacturer shall comply with the requirements of Specification Q-APP-02-PR 05 (05/11/2019) (Procurement Quality Requirements) - Appendix A. If the present Specification or the Threshold Conditions of the Bid Documents contain requirements which differ from those of specification Q – APP – 02-PR 05 (05/11/2019), the requirements of this specification and of the Threshold Conditions of the Bid shall take precedence.

8. STANDARDS & CODES

Unless otherwise stated, the Equipment shall be designed, manufactured and tested in accordance with the requirements of the following standards:

SI 61439-1 (equivalent to IEC 61439-1)	Low-Voltage Switchgear and Controlgear Assemblies Part 1: General rules
SI 61439-5 (equivalent to IEC 61439-5)	Low-Voltage Switchgear and Controlgear Assemblies Part 5: Assemblies for power distribution in public networks
IEC 62208	Empty Enclosures For Low-Voltage Switchgear And Controlgear Assemblies - General Requirements
ASTM D256-24	Standard Test Methods for Determining the Izod Pendulum Impact Resistance of Plastics
ASTM D1044-24	Standard Test Method For Resistance Of Transparent Plastics To Surface Abrasion by the Taber Abraser
ASTM D3359-23	Standard Test Methods For Measuring Adhesion By Tape Test
ASTM D3363-22	Standard Test Method For Film Hardness By Pencil Test
ASTM D4060-25	Standard Test Method For Abrasion Resistance Of Organic

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	Coatings By The Taber Abraser
BS EN ISO 1518-1	Paints And Varnishes - Determination Of Scratch Resistance Part 1: Constant-Loading Method
DIN EN ISO 62	Plastics - Determination of Water Absorption
DIN EN ISO 179-1	Plastics - Determination of Charpy impact properties - Part 1: Non-instrumented impact test
DIN EN ISO 877	Methods of exposure of plastics to direct weathering, to weathering using glass-filtered daylight, and to intensify weathering by daylight using Fresnel mirrors
DIN EN ISO 4017	Fasteners - Hexagon head screws - Product grades A and B
ISO 75-1	Plastics - Determination of temperature of deflection under load
DIN EN ISO 4892-2	Plastics - Methods of exposure to laboratory light sources - Part 2: Xenon-arc lamps
IEC 60068-2-5	Environmental testing - Part 2-5: Tests - Test S: Simulated solar radiation at ground level and guidance for solar radiation testing and weathering
DIN EN IEC 62631-3-1	Dielectric and resistive properties of solid insulating materials - Part 3-1: Determination of resistive properties (DC methods) - Volume resistance and volume resistivity - General method
DIN EN IEC 62631-3-2	Dielectric and resistive properties of solid insulating materials - Part 3-2: Determination of resistive properties (DC methods) - Surface resistance and surface resistivity
IEC 60243-1	Electric strength of insulating materials - Test methods - Part 1: Tests at power frequencies
IEC 60529	Degrees of Protection Provided by Enclosures (IP-Code)
IEC 60721-3-3	Classification of environmental conditions - Part 3-3: Classification of groups of environmental parameters and their severities - Stationary use at weather protected locations
ISO 2409	Paints And Varnishes - Cross-Cut Test
IEC 60695-2 10 & 11	Fire hazard testing
UL 94	Tests for Flammability of Plastic Materials for Parts in Devices and Appliances

REMARKS:

- ❖ Standards referred to this Specification and in Supplements to this Specification are an integral part of this specification unless otherwise provided. All such Standards referred to the most current issue, including all amendments, supplements etc., as of the date of the Contract, unless otherwise indicated.

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- ❖ **CABINET, including all appurtenances and accessories, shall be fabricated, inspected, tested and preserved in compliance with the Standards as, specified herein, unless otherwise indicated.**
- ❖ **In the event that no reference to Standard is made herein, all components and parts shall be fabricated, inspected, tested and preserved, so as to ensure their fitness for use and for the purpose for which they are designed.**
- ❖ **The bidder may propose Standards as alternative to or additions to those specified herein. A copy of each proposed Standard, if any, shall be included with the proposal. The Israel Electric Corp. reserves the right to accept or to reject the proposed alternative Standards.**
- ❖ **If the present Specification contains requirements which differ from those of the above-mentioned. Standards, the requirements of this Specification shall take precedence.**

9. TECHNICAL DOCUMENTATION

9.1. GENERAL

Bidders shall submit their technical offers in the following way:

- The table of contents of the offer shall be provided at the beginning of the offer.
- Each proposed item shall be submitted in a separate folder that includes all the technical data (drawings, routine/type test report, summary of data, etc.)
- All the mentioned documents shall be in English or Hebrew.
- I.E.Co. reserves the right, at its discretion, to allow a bidder to complete its proposal and submitting such documents later, as prescribed by I.E.Co.

9.2. TECHNICAL DOCUMENTS AND SAMPLES TO ACCOMPANY THE PROPOSAL

For the technical evaluation, the bidder shall submit to the Israel Electric Corp. together with his proposal the following documents:

9.2.1. Valid ISO 9001 certificate as defined in threshold conditions.

9.2.2. Type Test Reports acc. to clause 11.

Or alternatively: if type test report is not available for the proposed cabinet, the bidder shall submit type test report for Similar cabinet and obligation (see appendix G) to submit test reports upon award of bid as required in clause 11 and 9.4.

The type test reports must include the tests required by the relevant standards and the results. A laboratory, authorized according to the International Standard ISO/IEC Guide 17025 shall perform the tests.

The type test shall be from the manufacturer or from the know-how supplier in the case of know how agreement.

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("Similar" The same system of cabinets with other dimensions manufactured from the same material and in the same technology).

- 9.2.3.** Mounting instructions.
- 9.2.4.** Data sheet and catalogs, of all proposed parts, including P/N list.
- 9.2.5.** A written statement by the bidder in which he undertakes to supply all parts contained in the cabinet, from a closed list specified in this specification.
A bidder which does not undertake or only partially undertakes shall conform to clause 9.2.7.
- 9.2.6.** Appendix "I": Statement of obligation – conform with specification requirements signed by the bidder and manufacturer.
- 9.2.7.** If the bidder intends to supply products that are not previously approved by the I.E.Co., the bidder is required to submit the following documents according to the following table:

ITEM	Technical document to be attachment According to
Wires	Israel standard 60227 certificate
Copper end sleeves for wires	Appendix D.1
40 or 60 mm L.V support Insulators	Appendix D.2
Flexible cable 150 sq.mm	Specification 329/2 page.3-13
Fuse switch disconnecter	Specification 207/9 page.3-9
Empty medium insulated box	Specification 87/5
Small insulated box	Appendix C.3
Box content	Appendix D.3
Meter's board	Specification 87/5
Transparent window 260x210 mm	Specification 331/4 page.3-6,11
Terminal blocks for 16&35 mm ²	Specification 245/4 page.4-7
Current Transformer	Specification 307-01-2026

- 9.2.8.** For the wires, the bidder shall submit:
- Full type test reports according to SI 60227. A laboratory authorized according to the International Standard ISO/IEC 17025 shall perform the tests.
 - Certificate issued by the Standards Institute of Israel (SII) or any agreed accredited institution attesting that the Manufacturer meets the requirements of the Israeli Standard SI 60227.

Remark:

Alternatively, the bidder may submit an Approval Mark Certificate attesting the Manufacturer meets the requirements of the Israeli Standard SI 60227.

- 9.2.9.** In case of know-how agreement, signed by the manufacturer.
(see Appendix J).
- 9.2.10.** Bill of quantities for each proposed item: The document shall include (part list, description, total amount, I.E.CO cat.no, manufacture P.N, notes)

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- 9.2.11.** Clause 9.4: schedule for delivery approval, signed by the manufacturer and the know-how supplier (in case of know how agreement).
- 9.2.12.** Appendix B: Completed and filled in summary of data, signed by both the bidder and the manufacturer.
- 9.2.13.** Appendix H: filled-in and signed Statement of manufacturing experience.
- 9.2.14.** Detailed drawings of the manufacturer's item. The drawings must be detailed to the fullest (including: manufacturer's part number, standard of manufacturing, dimension, tolerance, material of each part, plating, marking etc.).
- 9.2.15.** Description of the locking system.
- 9.2.16.** Description of materials and technology used for manufacturing the required cabinet or "**Similar**" cabinet.
- 9.2.17.** For each proposed cabinet, the bidder shall submit a commitment to supply "spare parts". For each proposed the bidder shall submit a detailed chart according to clause 10.6.1 including:
- Manufacturer's P/N for each part.
 - part description.
- 9.2.18.** Quality Assurance Manual including Quality Procedures according to Appendix A.
- 9.2.19.** One (1) sample (free of charge) of an unequipped version of the proposed item or "similar"*, one sample may be provided for all the proposed cabinets in this specification.
- The sample/s shall be marked to identify the manufacturer.
 - The sample/s shall be from the manufacturer production line or from the know-how supplier (in the case of know how agreement).
 - The sample/s shall be supplied up to one (1) month after the technical proposal submission day.
- The sample shall complying with all the requirements in this specification.
A bidder that has previously supplied and received I.E.Co. approval for the same cabinet model (even if it was a non-equipped version) within the last five (5) years may request an exemption from submitting a sample.
The request must be submitted in writing and include a signed Appendix "K".
The request shall be sent up-to and including the proposal submission date.
I.E.Co. will reply within two (2) weeks from the day of receipt of the request.
If I.E.Co declines the request, the bidder shall supply the sample up to one (1) month after the technical proposal submission date.

Remark:

For the avoidance of doubt, the sample submitted under this clause refers only to the unequipped cabinet or similar cabinet sample. It shall not exempt the bidder from submitting samples of alternative accessories, if proposed, in accordance with clause 10.5.1.3.

- 9.2.20.** A foreign supplier who assembles the cabinets in Israel shall submit the details of the service company in Israel.

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REMARKS:

- ❖ Bidder which will not submit all the above may be disqualified.
- ❖ The above mentioned documents shall be in English or Hebrew. All dimensions and quantities must be in M.K.S. (Meter, Kilogram, Second) measurement units.
- ❖ All the technical documentation shall be presented to I.E.Co. in organized files/folders. A hard copy is not required in case of electronic submission documents.
- ❖ The files need to be organized in folders named after each P/N of the proposed items, and each main folder contains 4 sub folders:
 - 1) Documents of the proposal.
 - 2) Summary of data.
 - 3) Test reports.
 - 4) Technical documents for each proposed item. Each proposed item shall be in a separate folder.
- ❖ Foreign suppliers may deliver the cabinets from his production plant as a kit. The cabinets will be assembled by a service company in Israel. The supplier shall indicate, as part of the technical proposal, which company will serve as the service provider in Israel. It is to be noted that the cabinets shall be supplied to I.E.Co's stores assembled and ready for use.
- ❖ The offered items shall meet all the technical requirements of the I.E.Co.

9.3. TECHNICAL DOCUMENTS AFTER NOTIFICATION OF AWARD

After notification of award and before production of all the ordered cabinets, the successful bidder (hereinafter referred to as "the Contractor") must deliver the following details to the purchaser for prototype approval and according to the required schedule at clause 9.4:

- Spare parts list according to clause 10.6.1.
- One set of detailed drawings, materials specifications for each component. The drawings shall show the overall outside dimensions, mounting dimensions, gross weight.
- The Contractor shall also submit a list for all the relevant as made drawings. These drawings shall be approved by the Israel Electric Corp. Each modification on the above drawings shall be approved by the Israel Electric Corp.
- Complete type test reports as required in clause 11 of this specification.
- Q.A. and Q.C. procedures, as required in this specification.
- Bill of quantities for each proposed item.
- Prototype Approval – equipped and wired prototype cabinet of each P/N, according to all requirements of the specification for I.E.Co. approval.
If the cabinet is equipped with accessories not manufactured by the approved manufacturers listed in this specification, the prototype approval requirements of this specification shall take precedence over the prototype approval defined in the attached specifications.

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- Assembly instructions.
- C.O.C of all supplied items, including details of raw materials, coatings, etc.
- List of subcontractors.
- Inspection and test plan including the quality plan.
- The contractor shall be responsible for conduct successfully all the necessary tests, and to deliver to the Israel Electric Corp. all necessary reports, in a manner, which will not interfere with or delay any of the schedules, pertaining to any action or undertaking, required of the winning bidder, including, but not limited to delivery schedule. Such responsibility shall include proper and reasonable advance notifications to the Israel Electric Corp., prior to any action, required of it. If type and special tests have already been conducted with reference to the identical equipment which is offered by the proposer and the Israel Electric Corp. approves the reports, pertaining to such tests, the Israel Electric Corp. has a right (but not a duty) to waive all or part of the required tests.
A written notice of tests for which an exemption has been granted will be forwarded to the bidder at the technical stage of the tender, and an updated prototype approval process schedule will be forwarded accordingly.

Remarks:

- ❖ All data and descriptive material in the above drawings shall be in English or Hebrew.
- ❖ All dimensions shall be stated in the metric system.
- ❖ **The Israel Electric Corp. reserves the right to cancel the order for the supply of equipment if the prototype will not be approved by the Israel Electric Corp. In any case, the contractor shall not resume manufacture of the rest of the ordered equipment before receiving the Israel Electric Corporation's final approval of the prototype.**

9.3.1. Delivery approval

The successful bidder (hereinafter referred to as "the contractor") shall submit the following for I.E.Co. approval:

- The contractor shall submit to the Purchaser the Routine Test reports for approval prior to delivery of the equipment.
The equipment shall be delivered only after approval of the routine test report of each unit.
- A contractor that submitted type test for similar item shall submit for I.E.C approval of all the required documents and samples of identical items and within the period time as indicated in par. 9.4: "schedule up to delivery approval".

9.3.2. Acceptance tests

The I.E.Co. reserves the right to verify compliance of the delivered items with this specification.

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The acceptance test may be performed partially or fully according to the standards mentioned in par. 8 of this specification.

The successful bidder (henceforth referred to as "the contractor") shall submit:

- A contractor that submitted type test reports for the proposed item shall submit routine and sample test reports before each delivery.

“If the supplier fails to stand in the above requirements, in accordance with the terms of the tender documents and/or the order/contract within the periods above, it shall constitute a substantial breach, entitling the I.E.C to be paid liquidated damages according to Annexure ”A”, and to pursue all other remedies available under the law for a substantial breach of contract.”

A delivery that does not pass acceptance test will be rejected.

Any repeated inspection, repeated test, replacement, transportation, storage or handling required due to non-compliance or failure in the acceptance tests shall be at the Contractor's expense and shall not entitle the Contractor to any extension of the delivery schedule, unless otherwise agreed by I.E.Co. at its sole discretion.

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9.4. SCHEDULE UP TO PROTOTYPE APPROVAL

For supplier that didn't supply the order cabinets to I.E.Co. Or proposed main components which are unapproved by I.E.Co.

Required Schedule up to Prototype Approval for CABINET and BASE and all main components.

(after the date on which a binding contractual obligation is created between the parties as specified in the invitation to submit proposals in the Tender/RFP).

		Week																				
No.	STAGE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1.	- Detailed program portfolio includes: detailed drawings, list of all the relevant drawings for fabrication, dimensions, packaging, wiring, signage, detailed parts list, materials specification for each component, Q.A. and Q.C - C.O.C of all items supplied, including details raw material, coatings, etc. - List of subcontractors. - Inspection and test plan including in the Quality Plan.																					
2.	Israel Electric Corp. approval for the above documents/samples. And Completion or modification (if necessary).																					
3.	- Submitting sample/s. - Prototype checking and final approval																					
4.	Complete type tests as required in this specification. (from supplier that didn't supply the ordered item to the I.E.Co.)																					
5.	Final I.E.Co. approval.																					

Signature of Bidder: _____ Signature of know how supplier: _____ Tender No. _____ date: _____

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10. TECHNICAL REQUIREMENTS

10.1. ENVIROMENTAL CONSIDERATIONS & SERVICE CONDITION

The service conditions shall be in general according to IEC 61439 with the following additions and changes.

- 10.1.1. Severe atmospheric and industrial air pollution, coal dust, sea salt.
- 10.1.2. Long dry period without any rainfall.
- 10.1.3. High atmospheric humidity as experienced in coastal or desert areas.
- 10.1.4. Direct and continuous brilliant solar radiation for long periods.
- 10.1.5. Annual variation in air temperature: -10°C to +55°C
- 10.1.6. Annual mean air temperature: +25°C
- 10.1.7. Maximum relative humidity: 90%
- 10.1.8. Average relative humidity: 70%
- 10.1.9. Average ambient temperature measured over a period of 24 hours does not exceed: +35°C
- 10.1.10. Maximum difference of ambient temperature from day to night: +25°C
- 10.1.11. Long summer periods with OTCs of sunshine (1120 W/sqm) according to IEC Publication 60721-3-4/95.

10.2. RELIABILITY, AVAILABILITY, MAINTAINABILITY (RAM)

10.2.1. Life span

The functional characteristics of the cabinet and the base shall be preserved under the conditions specified in this specification for at least 15 years.

- 10.2.2. The cabinet and the base shall be suitable for installation in public areas.

10.3. FUNCTIONAL REQUIREMENTS

10.3.1. Ventilation

The cabinet shall be suitable for outdoor mounting conditions and shall assure natural ventilation of the electrical equipment which will be installed inside.

10.3.2. Degree of protection

The degree of protection of the cabinet mounted on the base shall be IP44 according to IEC Standard 60529.

10.3.3. Protection and short circuit withstand

The cabinet shall withstand a short circuit current of at least 25 kAmps/1sec.

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10.3.4. Dimensions

The cabinet shall have the following clearance dimensions:

Height _{min} [mm]	Width _{min} [mm]	Depth _{min} [mm]
1400	650	400

Remark: For others dimensions see the attached drawings in Appendix C.

10.3.5. Materials and Construction

- 10.3.5.1 The cabinet shall be of a double-insulated type.
- 10.3.5.2 The cabinet shall be of a self-supporting type of construction.
- 10.3.5.3 The cabinet shall be suitable for both indoor and outdoor installations.
- 10.3.5.4 The cabinet shall be made of heat molded glass fiber reinforced polyester, without wood insertions.
- 10.3.5.5 The relevant technical feature of the molded glass fiber reinforced polyester shall be:
 - Mechanical features
Impact resistance: $> 60 \text{ kJ/m}^2$ (according to DIN EN ISO 179).
 - Electrical features
 - Dielectric resistance $> 18 \text{ kV/mm}$ (according to IEC 60243-1).
 - Superficial resistance $> 10^{12} \text{ Ohm}$ (according to IEC 62631-3-1&2).
 - Physical features
 - Stability of shape $> 200^\circ\text{C}$ (according to DIN 53462, martens' method).
 - Temperature resistance – $50 \div 150^\circ\text{C}$ - continuous – ISO 877.
 - Tropical and moisture resistance: without any degradation (IEC 60068-2-5-ED69).
 - Water absorption $\leq 45 \text{ mg}$ (acc. to DIN EN ISO 62).
 - Flame resistance: 960°C , 4mm (acc. to IEC 60695-2-10&11).
 - Flammability: V0 acc. to UL94.
 - Roughness of the surface: $0.63 \div 1 \text{ }\mu\text{m}$.

10.3.6. Embedded nuts

- 10.3.6.1 The embedded nuts in the walls (including the back wall) and doors shall be made of brass CuZnPb₃.
- 10.3.6.2 The embedded nuts shall be placed according to the attached sketches.
- 10.3.6.3 In the external part of the cabinet there shall be 2 nuts (1 for each side of the cabinet) in order to fix the cabinet to the wall.
- 10.3.6.4 The embedded nuts shall be at least of M6 dimensions on the back and M8 on the side of the cabinet.
- 10.3.6.5 The nominal value for bending torque in the embedded nuts:

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- M6 >5 NM
- M8 >11 NM
- M10 > 33 NM

10.3.6.6 Each screw shall be according to DIN 933 - 8.8.

10.3.6.7 All metallic elements used in the assembling of the Cabinet and the Base shall be zinc plated + passivation against corrosion.

The zinc layer thickness shall be:

- Minimum 20 microns for the metallic parts.
- Minimum 10 microns for screw and nuts.

10.3.7. Doors and locking device

10.3.7.1 The cabinet shall be provided with a door that can be disassembled using standard hand tools.

10.3.7.2 The door shall be provided with a locking device for a semi-cylindrical lock. The door opening >95°.

10.3.7.3 The locking device shall be suitable for a concealed semi-cylindrical lock, turning 90° to the right.

10.3.7.4 The locking device shall be provided with 3 locking points.

10.3.7.5 For the Low Voltage, PV Connection I.E.Co cat. No' 5294843 the lock shall be supplied in a bag attached to the door.

10.3.8. Protection against fibers exposure

10.3.8.1 For protection against fiber exposure and anti-graffiti, the Bidder shall select one of the following two methods of protection:

- Painting after parts production.
- Painting /coating during production of the parts within the mold.

10.3.8.2 The cabinet shall be painted/coated as follows:

- Painting /coating of cabinet doors and roof only.

10.3.8.3 The painting/coating material shall be polyester powder/dye with a minimum thickness of 100 microns.

10.3.8.4 The painting/coating shall meet the following requirements:

Property	Units	Test method	requirement	testing means
Thickness	µm	Optical measurement	≥100	Stand Microscope
Adhesion	Level	ISO 2409 or ASTM 3359	Up to 1	Crisscross + Standard adhesive tape
Resistant to scratches	Newton	BS 3900 E2	At least 30 at Loading	Scratches test tool – 0.8 mm Tungsten pin
UV resistance	Hour	ISO 4892-2	at least 5000 hours without fiber exposure	Method A
Abrasion resistant	mg	ASTM-D 1044-08	Up to 200 mg	Taber Abrasion:

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Property	Units	Test method	requirement	testing means
		ASTM D 4060	Less than 27 mg loss weight	1000 cycles, 1000g load, S17 paper Or acc. To ASTM 4060: CS10, 1000 cycles, 1000g load
Coating hardness	Level	ASTM D 3363	At least H2	Pencil

10.3.9. Warnings sign

The warning signs shall be according to Appendix F.

10.3.10. Transparent window

The transparent window shall be according to clause 10.5.2.

10.3.11. Technical requirements for the BASE

10.3.11.1 The material used for the BASE shall be the same used for the cabinet.

10.3.11.2 The upper part of the BASE shall be provided with mounting holes suitable for the mounting holes of the cabinet.

10.3.11.3 The BASE shall be provided with all the necessary accessories to mount the CABINET on it, i.e. as screws, nuts, rails, etc.

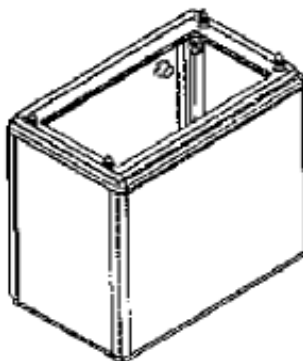
10.3.11.4 The internal part of each leg shall be provided with at least one support for the cable-fixing rail.

10.3.11.5 Installation

The cabinet shall be suitable for installation on BASE.

The dimensions of the fixing point between the base and the cabinet shall be according to appendix C.

Illustrative Example:



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10.4. PROPERTIES

	3x400A LV Metering Cabinet	3x [100-500]A LV PV Cabinet
Rated voltage U_n [V]	230/400	230/400
Rated operational voltage U_e [V]	230/400	230/400
Rated insulation voltage U_i [V]	690	690
Voltage U_{imp} [kV]	6	6
Rated current of the ASSEMBLY/circuit $I_{nA} = I_{cc}$ [A]	400	500
Rated conditional short-circuit current of an ASSEMBLY $I_{cc} \left[\frac{kA}{1sec} \right]$	25	25

10.5. MAIN CABINET COMPONENTS

10.5.1. Technical requirements for the main components

- 10.5.1.1** The bidder must supply the approved items, by the I.E.Co. and as detailed below.
- 10.5.1.2** The bidder shall submit a written statement, as required under clause 9.2.5, undertaking to supply all I.E.Co. approved parts included in the lists below.
- 10.5.1.3** As an alternative, the bidder may propose alternative accessories than those listed in this specification. The alternative accessories shall meet the technical requirements specified in this specification, one identical sample must be provided for each item proposed up to one (1) month after the proposal submission date. For alternative accessories submitted at a later stage, including during the supply period, the bidder/Contractor shall submit the technical documentation and samples required by I.E.Co. No such accessory shall be supplied or installed in the cabinets before receiving I.E.Co.'s written approval. This instruction overrides the sample-submission requirements specified in the technical specifications referenced above.
- 10.5.1.4** P/N of the alternative items which will be supplied, including technical data and catalog, should be attached for each item.

Remark:

I.E.Co. reserves the right to approve alternative accessories submitted at any stage of the tender process and during the supply period.



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10.5.1.5 The bidder must undertake (after notification on award) install the approved items in the cabinets, if the alternative accessories will not meet the requirements of I.E.Co. and will not be approved by it.

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10.5.2. Approved components

Component	I.E.Co P/N	Supplier / producer / P/N			Alternative proposal acc. to:
Wires					Israel standard 60227
Copper end sleeves for wires	4035614	Uriel Shay		Energotech	Appendix D.1
		06077 B150032		ICAE15032	
40 mm L.V support Insulators	503730	Akiva Tolochinsky	Nisko	Arco-Inbar	Appendix D.2
		825391	80078901	229840	
60 mm L.V support Insulators	2802759	Akiva Tolochinsky	Supergum	Arco-Inbar	Appendix D.2
		825393	308300090	229851	
Flexible cable 150 sq.mm	5256798	Synergy cables			Specification NPS-329/2 page.3-13
		2091791A			
Fuses switch disconnecter	555573 (size"2")				Specification NPS-207/9 page.3-9
Empty medium insulated box	963264	Akiva Tolochinsky		Nisko	Specification NPS-87/5
		910110		80077003	
Empty small insulated box	866053	Akiva Tolochinsky		Nisko	Specification NPS-87/5
		910107		80077001	
Box content	2809440				Appendix D.3
Meter's board	4130878	Akiva Tolochinsky		Nisko	Specification NPS-87/5
		910105		80077020	
Transparent Window 210x260 mm	2313245	Yakir Orlite	Nisko	Akiva Tolochinsky	Specification NPS-331/4 page.3-6,11
		2313245	80077050	810002	
Terminal blocks for 16mm ²	2389161	M.M.S Electric Ltd		Akiva Tolochinsky	NPS-245
		KUT-16+KPY		932040	
Terminal blocks for 35mm ²	2191310	M.M.S Electric Ltd		Akiva Tolochinsky	NPS-245
		KUT-35G		UT35	
Current Transformer	5395513	Shenzhen Chuangyin			Specification 307-01-2026
		SAT-0.72 500A			

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Remarks:

1. The bidder shall offer wires in accordance with Section 9.2.8.
2. After approval by I.E.Co., no changes of manufacturer, supplier, P/N, material, design, reduction site or subcontractor shall be made without prior written approval of I.E.Co.

10.6. OPERATION & MAINTENANCE

10.6.1. Spare part

The Contractor shall supply the Purchaser, if required, and by a particular order at any time during a period of 15 years from the last Purchaser's order, spare parts for the previously ordered CABINETS and BASES, in the quantities required by the Purchaser for repair of damaged CABINET and BASE of Contractor's manufacture, or if any of those went out of stock, their functional equivalent.

10.7. SAFETY

The double insulation of the cabinet shall be maintained after assembling the cabinet and base and after assembly the cabinet with all its accessories (such as inserts, ventilation opening etc.).

11. TESTS & INSPECTIONS

11.1. TYPE TESTS

11.1.1. The following type tests shall be performed:

IEC61439-1&5 Type test	
Characteristics to be verified	Clauses or subclauses
Strength of material and parts	10.2
Resistance to corrosion	10.2.2
Properties of insulating materials	10.2.3
Thermal stability	10.2.3.1
Resistance to abnormal heat and fire due to internal electric effects	10.2.3.2
Category of flammability	10.2.3.101
Resistance to ultra-violet (UV) radiation	10.2.4
Lifting	10.2.5
Mechanical impact	10.2.101
Resistance to static load	10.2.101.2
Resistance to shock load	10.2.101.3
Resistance to torsional stress	10.2.101.4
Impact force withstand	10.2.101.5
Mechanical strength of doors	10.2.101.6
Resistance to axial load of metal inserts in synthetic material	10.2.101.7
Resistance to mechanical shock induced by sharp objects	10.2.101.8
Mechanical strength of a base intended to be embedded in the ground	10.2.101.9

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Marking	10.2.7
Mechanical operation	10.2.8
Degree of protection of enclosures	10.3
Short-circuit withstand strength	10.11

Remarks:

The tests shall be performed by an authorized laboratory according to the International Standard ISO/IEC Guide 17025 or EN 45011.

11.1.2. Type tests of the glass fiber reinforced polyester

The Type tests of the glass fiber reinforced polyester shall be performed in order to verify the features specified in this clause 10.3.5.

The samples which will be type tested, shall be from the mass-production line of the cabinet.

11.1.3. Degree of protection

The cabinet and the BASE shall be type tested according to standard IEC 60529 for IP44.

11.1.4. Weather aging test

The weather aging test shall be performed according to ISO 4892-2 (method A). Duration of the test: **at least 500 hours**.

11.1.4.1. Evaluation

- Visual: No fiber exposure after 250 hours.
- Mechanical properties:
 - Flexural strength according to ISO 178.
 - Charpy impact according to ISO 179.

11.1.4.2. Data for the type test report

The following data shall be noted in the type test report:

- The values before and after each test for each tested sample.
- The catalogue no. of the raw material of the samples.
- The dimensions of the samples.

Remarks:

- a) During the mass production, the manufacturer shall assure that the CABINET is made of materials identically with the samples, which passed successfully the test.
- b) Israel Electric Corp. reserves the right to demand to repeat the type tests during the mass-production of the required CABINET.

11.1.5. Test of the embedded nuts

Each type (size) of the embedded nuts that included in the cabinets, shall be tested for bending and tightening moment as required by this specification.

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11.2. ROUTINE TEST AND ROUTINE TEST REPORT

11.2.1. Routine test

Duly certified routine test is obligatory.

The following Routine Tests shall be performed by the Contractor in accordance with IEC-61439-1 Standard for each supplied L.V. Cabinet:

- a) General inspection
- b) Insulation/dielectric test

11.2.2. Routine Test Report

- A Routine Test Report shall be prepared for each L.V. Cabinet.
- The Routine Test Report shall state according to which standard and clause the test was performed.
- The Routine Test Report shall contain the serial no. of the equipment, the results of the tests, the required values and the values obtained during the test.

12. PACKAGING & DELIVERY

- 12.1** The packaging shall be suitable for transportation and prolonged storage period.
- 12.2** The packaging shall prevent any deterioration during transportation and storage.
- 12.3** Each CABINET shall be covered by hard plastic bag.
- 12.4** The plastic bag shall not obstruct the entry of the forklift tines during loading. The plastic bag shall be transparent and resistant to prolonged exposure to sunlight.
- 12.5** Each Cabinet shall be supplied lying on its side with its back facing outwards.
- 12.6** Maximum number of cabinets on one pallet – 4, maximum floors – 2, two cabinets on each floor.
- 12.7** The CABINET shall be supplied on 1200/800 mm EURO pallet.
- 12.8** The items on each pallet shall be secured to the pallet using poly cord strapping or a polyester strapping (PET) with UV resistant.
- 12.9** On the first floor, each cabinet shall be individually secured to the platform, and the entire floor shall be interconnected. Subsequently, the second floor shall be connected as a whole to the floor beneath it.
- 12.10** Each package shall be clearly marked in print (large letters) with following:
 - Manufacturer's name or Trademark
 - Product name
 - I.E.C. item's catalogue no
 - Supplier catalogue no
 - Order no.
 - Serial no.
- 12.11** Each shipment shall be accompanied by certification attesting the conformance of the shipment to the Specification. Certificates shall contain test results identifiable to the acceptance criteria and the items shipped.

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Documentation shall be submitted in Hebrew or have certified English translation attached.

- 12.12** Certification shall be provided attesting to the fact that special processes used in the manufacture and testing of items supplied do conform to the project Specifications. The certificates shall include the signature and name of the agency performing the tests and shall the signature and name of the agency performing the test be subject to the review and acceptance of the Purchaser.
- 12.13** The packaging shall include instruction documents (sketches, installation, wiring, etc.) for each proposed item. The documents will be tied to the meters board using a zip tie.
- 12.14** The packaging shall be approved by I.E.Co. before the first supply.

13. STORAGE & HANDLING

See clause 12 above.

14. NAMEPLATE/MARKING

Each cabinet shall be marked according to the sketches in Appendixes C & F. Each cabinet shall be marked with a 100x150 mm label that includes the following data:

- Manufacturer's name
- Manufacturing date
- Product name
- Manufacturer P/N
- I.E.Co cat. no
- Stamp of Quality Control
- The label shall be from long lasting material.
- The label shall be glued in the internal part of the upper cabinet door.
- The glue of the label shall be suitable for polyester material.

Each cabinet shall be marked with label that includes a QR code:

- The QR code shall be provided by I.E.Co
- The label shall be glued in the external part of the cabinet either the back or the side panels.
- The label and QR code shall be in size and location that enable scanning the QR code comfortably.
- The label shall be from long lasting material.
- The glue of the label shall be suitable for polyester material.

15. NOTES

- N/A

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16. SPECIAL REQUIRMENTS

- N/A

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17. REVISIONS

Version	Date	Update by	Modifications
6	06/11/2019	Avi Sharf	The revision include the following : 1. Revised due to update necessary. 2. Title of the Specification. 3. Addition of metering cabinet item for PV connection. 4. Removing items that the manufacture received from IEC: fuse switch, meters plate, insulated box 5. Clause E3 addition in Appendix E. 6. Appendix I Addition. 7. General errors are corrected in all section.
7	18/03/2020	Avi Sharf	1. General changes in all specification parts
8	17/08/2020	Avi Sharf	1. Revised due to update necessary. 2. Standards update. 3. General changes in all specification parts. 4. Appendix A update. 5. Appendix G addition. 6. Appendix D update. 7. Packing update.
9	31/12/2020	Avi Sharf Yazan Khatib	1. C.4 drawings update. 2. Drawings for the base added.in page 37. 3. Packing requirements in clause 8 addition.(sub clause -8.7,8.10). 4. Error correction in page 23 for I.E.Co. Cat. No of base and PV cabinet. 5. Clause 2.5.3 addition in Appendix B. 6. Additional requirement for all cabinet types in page 40. 7. Addition of approved items. 8. Appendix D.5 – Metering board drawing updated
10	12.2025	Gilad Abukrat	This revision includes the following: 1. Update to a new format. 2. A requirement for conductors has been added, along with an exemption from type testing for those with Israeli Standards Institute marking approval.

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			3. Requirement for cabinet doors to be easily removable. 4. Protection against fibers exposure 5. Added electrical properties. 6. Updated approved components and their alternatives. 7. Packing update – 1200/800 mm pallet. 8. Appendix C – Significant drawings updates: 8.1 Changes to rear cabinet holes and external dimensions. 8.2 electrical schematics – wiring for single Smart metering. 8.3 Modification of L.V Medium isolated box. 8.4 Configuration change for 3x400A LV metering cabinet and its contents. 8.5 Configuration change for PV 3x[100-500]A cabinet and its contents. 8.6 Modification of the M.V metering cabinet window. 9. Appendix D updated 10. Updated time window for sample submission and exemption request. 11. Updated type tests demands.
11	05/2026 06/2026	Osnat Kahana Tami Zemach	1. Schedule update. 2. Threshold conditions update. 3. Prototype approval update. 4. Approved accessories update. 5. Alternative accessories clarification. 6. General wording and consistency corrections.

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APPENDIX

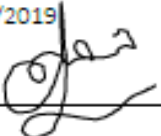
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– Standard specification for quality control
Q-APP-02-PR Rev.5 (11/2019)

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1. GENERAL

- 1.1 The quality requirements specified herein constitute an integral part of the Contract and should be implemented without any additional cost to the Purchaser or any change in the Contract schedule. These requirements are in addition to, and without derogation from other applicable provisions of the Contract, if any, including, without limitation, the general provisions of the General Conditions – Annexure "A", the specific requirements of Annexure "M" and the Specification requirements – Annexure "B".
- 1.2 The Contractor shall make all the necessary arrangements and prepare all the required and necessary means to enable IEC's Quality Control Unit Representative(s) to review, observe, audit, inspect, test and survey the Work - at any of the facilities where Work or any part thereof is performed, including those of the Contractor and of its Sub-Contractor(s). Upon Purchaser's request the Contractor shall submit un-priced copies of its orders to the Sub-Contractor(s) pertaining to the Work/Contact, clearly marked with the Purchaser's name and Contract number, specifically indicating Contractor's quality requirements from its Sub-Contractor(s), to allow verification of proper implementation of the quality requirements.
- 1.3 The Contractor shall nominate promptly after Contract award a quality engineer or a quality specialist to control and manage the quality requirements of the Contract. This person shall have the authority and responsibility with respect to maintaining the quality plan, coordinating the tests and inspections and verifying compliance with the quality requirements.
- 1.4 Manufacturing shall not commence prior to respective drawing approval by the Purchaser.
- 1.5 All materials used in the manufacture of the Equipment shall conform to the Specification, approved drawings, and accepted Standards. Use of alternate materials and subassemblies is not accepted unless a specific and documented authorization is granted in writing by the Purchaser.

PREPARED BY	CHECKED BY	APPROVED BY
B. Ben-Akiva Q.C. Unit Quality Engineering	K. Arbiv Manager Of Quality Control I.E.C	Y.Mitrani Deputy Head of Procurement Division I.E.C
Date And Signature: 05/11/2019 	Date And Signature: 13/11/2019 	Date And Signature: 13/11/2019 

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2. DEFINITIONS, CLASSIFICATIONS AND ABBREVIATIONS

- 2.1 CORRECTIVE ACTION (CA) – As defined in ISO 9000:2005.
- 2.2 QUALITY PLAN (QP) – a plan, prepared by the Contractor especially for the Contract, in accordance with ISO 10005, to ensure that the Work meets all the quality requirements.
- 2.3 INSPECTION AND TEST PLAN (ITP) – a plan, in the format of Exhibit "A" attached hereto or any other form approved by the Purchaser, specifying all the inspections and tests for the Work (including witness and hold points) covering all aspects of design, type tests, first article inspection, manufacturing, in process inspection, product qualification, final inspection/s and test/s, packing, transportation, erection and commissioning.
- 2.4 QCUR - the Purchaser's Quality Control Unit Representative and/or any other representative authorized by it.
- 2.5 WITNESS POINT (WP) - a planned visit of the QCUR to Contractor's facility, before delivery of any portion of the Work, in order to witness a specific inspection and/or test detailed in the ITP.
- 2.6 HOLD POINT (HP) – the same as WP but with the distinction that the Contractor is not permitted to proceed with its planned activities without having received Purchaser's written approval.
- 2.7 NON CONFORMANCE (NC) - deviation from any specified quality characteristic of the Work.
- 2.8 NON CONFORMANCE REPORT (NCR) - a report, on Contractor's numbered serial form, describing the details of a Non Conformance, from its detection through its disposition and corrective action(s).
- 2.9 QUALITY CHARACTERISTIC – any identifiable property of the Work (i.e. physical, chemical, functional, visual, technical, environmental, economical and statistical requirement of applicable standard/code, etc.)
- 2.10 WORK - equipment and services to be provided by the Contractor, all as further detailed in the Contract.
- 2.11 SPECIAL PROCESS - irreversible manufacturing process, or a process which requires special or specific tools.

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3. QUALITY PLAN AND INSPECTION AND TEST PLAN

- 3.1 The Contractor shall submit, in accordance with the documentation submission schedule (Annx. J) or if not specified therein within fourteen (14) days after Contract award, detailed Inspection and Test Plan, for Purchaser's review and approval. Any subsequent alterations to these plans shall be submitted for Purchaser's approval prior to start of any portion of the Work that may be affected by such alterations.
- 3.2 Contractor shall not commence purchasing and manufacturing prior to receiving Purchaser's written approval to the Quality and/or the Inspection and Test Plans.

4. DOCUMENTATION

- 4.1 The Contractor shall submit for Purchaser's review, as an integral part of the Quality Plan, the quality and manufacturing/operations procedures pertaining to the Work, and shall promptly provide any explanations as may be requested by the Purchaser with respect thereto.
- 4.2 The Contractor shall submit to the Purchaser, for review, comment and approval, in accordance with the documentation submission schedule but at least twenty one (21) days prior to the implementation of special processes, the relevant procedures including all the process qualifications and the employees' certifications for said special processes.

5. INSPECTIONS AND TESTS

- 5.1 The Contractor shall provide test and inspection equipment and/or any other means required in accordance with applicable industrial standards, all as may be required for the proper execution of the Work and especially for the execution of the ITP .
- 5.2 The Contractor shall ensure that all tests or inspections (including source inspections) forming part of the Work shall be carried out by proficient organizations or individuals certified to EN 45004 (level A or C). Any independent inspector shall be subject to Purchaser's approval.
- 5.3 Type tests, Routine tests and Sample tests (where applicable) shall be carried out in accordance with the provisions set forth in Annexure "B", Annexure "M", or as otherwise specified in the Contract.

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- 5.4 All other qualification tests (for mechanical equipment) shall be witnessed by the QCUR, and subsequently all the relevant quality records shall be submitted for Purchaser's review. The 1st article/piece test shall be considered a witness point and the serial manufacturing shall commence only after its successful completion.

6. INSPECTION NOTIFICATION

Unless otherwise specified in the General Conditions, Annexure "A", or elsewhere in the Contract:

- 6.1 The Contractor shall provide the Purchaser with preliminary notification of readiness for testing and inspection of each part of the Work two (2) months prior to such readiness. Final notification shall be provided to the Purchaser two (2) weeks prior to such readiness in the format of Exhibit "B".
- 6.2 Purchaser shall provide Contractor with notice of its attendance and shall bear the expenses related to such attendance. In the event the Purchaser's representatives fail to attend the tests or inspections as scheduled, the Contractor may proceed whilst properly recording the test procedures and all the test results for timely submission to Purchaser, except in the case of specific hold points agreed upon in the Contract, for which Contractor shall require Purchaser's permission to continue.
- 6.3 The witnessing of the Contractor's tests and inspection(s) by the Purchaser shall in no way whatsoever relieve the Contractor of any of its responsibilities or liabilities under the Contract, nor shall it be interpreted in any way as implying acceptance of the Work.

7. QUALITY RECORDS

- 7.1 The Quality Records referenced in this clause shall be submitted in Hebrew and/or in English.
- 7.2 Contractor shall make available to Purchaser, upon Purchaser's request, for review and comment, at Purchaser's premises or at any other mutually agreed upon place in Israel, the quality records of any - Type test, Routine test, Qualification test, First Article Inspection/Test, Process qualification, Special process and/or any other inspection/test/examination called for by the Contract.

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7.3 Original Material test reports and Test and Inspection certificates, including quality records of WP not witnessed by the QCUR, signed and attested by the Contractor, and containing actual measured values, in accordance with EN 10204-3.1/3.2, shall be submitted by the Contractor to the Purchaser within 5 days following their generation for approval by IEC.

7.4 The submission of the applicable quality records shall constitute a condition precedent to delivery of the relevant portion of the Work.

8. HANDLING OF NONCONFORMANCES AND CORRECTIVE ACTIONS

8.1 It is the Contractor's obligation to report to the Purchaser of any nonconforming item/event pertaining to the Work. The relevant documentation and quality records shall be submitted to the Purchaser immediately after said NC has been observed.

8.2 In case the Contractor fails to report of a non conformance in due time, Purchaser may request Contractor to dismantle the nonconforming part (to witness the NC) at no additional cost to the Purchaser.

8.3 Following observation of a Non Conformance, the Contractor shall propose, get Purchaser's approval and thereafter implement suitable corrective action/s (CA). In case a CA is not implemented and the Work is adversely affected, the Purchaser may request the Contractor to stop related activities and hold the Contractor responsible for delays in the Contract schedule until the problem is reasonably resolved.

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EXHIBIT A

I&T Plan FORM

CONTRACTOR'S: Name, I&T Plan Title, The Product Inspected/Tested, and Document Identity & Approval. PURCHASER'S: Name And Project's Name And Location. Purchase Order No. & Materiel No. or C1 Item No.									
No	The inspection or test	Applicable documents	Wp/Hp or Other	Inspected / Tested By				The Report / Certificate and Its Ref. Std/ Procedure	Remarks
				Subcont/ Supplier	Contractor	Purchaser	Other		
Approval By The Contractor's Quality Assurance/Control									

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EXHIBIT B

INSPECTION NOTIFICATION.

Supplier details:	
-------------------	--

1 Project:

2 Contract No.:

3 Owner: Israel Electric Corporation Ltd.

4 Contractor:

5 Address of Place of inspection:

Company:

Contact Person:

Telephone No.:

Fax No.:

6 Proposed Date of Inspection: preliminary: confirmed:

The Inspection and/or Testing shall be carried out on the following Items :

7 Description of item:			
8 Description of Inspection:	☐ Intermediate stage	☐ Final inspection	
9 Reference to ITP/other Documents:			
It is certified that: a) Approved drawings/quality plans/data sheets/any relevant specifications for the items as above shall be available at the time and place of inspection. b) Internal inspections and/or testing of the items as above have been carried out by the Contractor to his satisfaction. The Contractor finds the items satisfactorily for participation in or witnessing of inspection and/or testing by the Customer / any other person authorized under or designated in accordance with the Contract.			
Date:		Signature	Contact Person:

Participation Contractor ☐ yes ☐ no Date: _____ Signature: _____

Participation Purchaser ☐ yes ☐ no Date: _____ Signature: _____

Comments:

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2. Medium Voltage Metering Cabinet (M.V).
3. 3x [100-500] A Low Voltage, PV connection
4. Base for Metering Cabinets.

APPENDIX

B

Summary of data



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SUMMARY OF DATA

Bidder's name: _____

Bidder's phone no.: _____

Bidder's E-mail: _____

Manufacturer's name and address: _____

Manufacturer's E-mail: _____

Manufacturing country: _____

Manufacturer's signature: _____

	(Insert all data in this column)
1. <u>I.E.Co. Metering Cabinets Cat. No List.</u> <u>I.E.Co. Cat. No For The Base of Metering Cabinets.</u>	
a) The manufacturer/bidder offers the I.E.Co. Cat. No. 3251535 – "3x400 L.V Metering Cabinet" (Yes/no)? If yes, what are the P/N and the manufacturer's name?	
b) The manufacture/bidder offers the I.E.Co Cat. No. 1028109 – "M.V Metering Cabinet" (Yes/no)? If yes, what are the P/N and the manufacturer name?	
c) The manufacturer/bidder offers the I.E.Co. Cat. No. 5294843 – "3x [100-500] L.V, PV Connection" (Yes/no)? If yes, what are the P/N and the manufacturer's name?	
d) The manufacturer/bidder offers the I.E.Co. Cat. No. 5242798 – Base for Metering Cabinet (Yes/no)? If yes, what is the P/N and the manufacturer's name?	
2. <u>Cabinet Details</u> 2.1. Documents:	
Are the following documents attached to the proposal?	



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	(Insert all data in this column)
(a) Detailed drawings and cross sections of the CABINET (yes/no)	
(b) Mounting instruction (yes/no)	
(c) Details about ventilation (yes/no)	
(d) Description of the locking system (yes/no)	
(e) Description of materials and technology of the CABINET (yes/no)	
(f) Technical data of the glass fiber reinforced polyester / similar material (yes/no)	
(g) Samples of each proposed/similar item (yes/no)	
(h) Appendix H – statement of manufacturing experience (yes/no)	
(i) Quality Assurance Manual including Quality Procedures (yes/no)	
(j) Preliminary Inspection and Test Plan (yes/no)	
(k) Valid ISO Standard 9001 certificate given by an authorized inspection agency (yes/no)	
(l) Know-how Agreement (yes/no)	
(m) Type test reports in accordance with Paragraph No. 11 of this Specification (yes/no)	
(n) Data sheet and catalog of all the parts supplied inside the cabinet are attached? (yes/no)	
(o) Bill of quantities for each proposed item attached? (yes/no)	
(p) Is the Bidder previously supplied the proposed item (non-equipped cabinet) to I.E.Co. in the last 5 years (yes/no)? If yes, the bidder shall attach a confirmation letter – confirming that the proposed item will be identical to the previously supplied items	
(q) Are the statements by the bidder according to clauses 9.2.5, 9.2.6 and 9.2.13 attached? (yes/no)?	
(r) Is the manufacturer's quality control manual attached? (yes/no)?	

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	(Insert all data in this column)
(s) Spare parts list (yes/no)?	
2.2. Service conditions:	
2.2.1. Permissible ambient air temperature: • Maximum (°C) • Minimum..... (°C) • Daily average (°C)	
2.2.2. Permissible relative humidity: • Maximum..... (%) • Daily average (%) • Monthly average (%)	
2.3. Minimum life span	
2.4. Technical requirements	
2.4.1. Is the CABINET suitable for outdoors mounting conditions? (yes/no)	
2.4.2. Is the CABINET assuring natural ventilation of the electrical equipment installed inside? (yes/no)	
2.4.3. Degree of protection of the CABINET mounted on the BASE.....	
2.4.4. dimensions:	
a) Height.....(mm)	
b) Depth..... (mm)	
c) Width..... (mm)	
2.4.5. Is the CABINET of double-insulated type? (yes/no)	
2.4.6. Material and Construction:	
Is the CABINET made of heat molded glass fiber reinforced polyester material? (yes/no)	
1. Mechanical features:	
Impact resistance..... (kJ/m)	
• According to which standard.....	
• Attached test report no.....	
2. Electrical features	



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	(Insert all data in this column)
(a) Dielectric resistance..... (kV/mm)	
• According to which standard.....	
• Attached test report no.	
(b) <u>superficial resistance</u>	
• According to which standard.....	
• Attached test report no.	
3. Physical features	
(a) stability of shape	
• According to which standard.....	
• Attached test report no.	
(b) <u>temperature resistance</u>	
• According to which standard.....	
• Attached test report no.	
4. Tropical and moisture resistance (without any degradation)	
• According to which standard.....	
• Attached test report no.	
5. Water absorption: (≤--mg)	
• According to which standard.....	
• Attached test report no.	
6. Flame resistance: UL94-V0	
• According to which standard.....	
• Attached test report no.	
2.4.7. Embedded nuts	
a) Material of all embedded nuts.....	
b) All the embedded nuts will be placed according to the attached sketch.....(yes/no)	
c) The size of the embedded nuts.....	
d) The minimum bending value for all kinds of nuts in the cabinet.	<u>M- size:</u> <u>Torque (N.M):</u>
e) The closing Torque of the screws and nuts of the busbar is as specified in appendix E (yes/no)	



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	(Insert all data in this column)
2.4.8. Protection against corrosion by:	
1. The thickness of the protection layer of all metallic part.....	
2. The thickness of the protection layer of all screws and nuts.....	
2.4.9. Will the CABINET be of a self-supporting type? (yes/no)	
2.4.10. Cabinet door:	
As per attached drawing No.....	
1. Will one of the panels be provided with a locking device and plate for a semi-cylindrical lock?.....(yes/no)?	
2. Will the locking device be suitable for a concealed semi-cylindrical lock, turning 90° to the right?(yes/no)	
3. Will the locking device be provided with 3 locking points?..... (yes/no)	
4. Will the door be easily removable? (yes/no)	
5. Is the back wall of the CABINET made by SMC elements?(yes/no) Please state the number of elements.....	
2.4.11. Type tests report	
Are the following Type Tests Reports attached to the proposal:	
1. Degree of protection test report.....(yes/no) No. of test report.....	
2. Aging test report.....(yes/no)? No. of test report..... Attached samples..... (yes/no)?	
3. Tests according to IEC 61493-5 (yes/no)?	
4. Test report of the embedded nuts..... (yes/no) No. of test report.....	
2.5. Supplied items by the bidder	
2.5.1. Wires	
1. Is Approval Mark Certificate attesting the Manufacturer meets the requirements of SI 60227 attached (yes/no)? If no then fill in the clause below:	
2. Full type test reports according to SI 60227 by an authorized laboratory acc. to clause 9.2.8 (yes/no)?	
3. Certificate of compliance with the SI 60227 standard acc. to clause 9.2.8 (yes/no)?	
2.5.2. Copper end sleeve for wire	



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	(Insert all data in this column)
1. Is the proposed item from the approved list by I.E.Co. (yes/no)? If no then fill in the clause below:	
2. Is it according to appendix - D.1 (yes/no)?	
2.5.3. 40 mm LV support insulators	
1. Is the proposed item from the approved list by I.E.Co. (yes/no)? If no then fill in the clauses below:	
2. Manufacture name?	
3. Manufacture P/N?	
4. material:	
5. Is the proposed item conforming to all technical requirements in appendix D.2? (yes/no)	
2.5.4. 60 mm LV support insulators	
1. Is the proposed item from the approved list by I.E.Co. (yes/no)? If no then fill in the clauses below:	
2. Manufacture name?	
3. Manufacture P/N?	
4. material:	
5. Is the proposed item conforming to all technical requirements in appendix D.2? (yes/no)	
2.5.5. Flexible cable 150 sq.mm	
1. Is the proposed item from the approved list by I.E.Co. (yes/no)? If no then fill in the clauses below:	
2. Manufacture name?	
3. Manufacture P/N?	
4. material:	
5. Is the proposed item conforming to all technical requirements in appendix D.2? (yes/no)	
6. Manufacture P/N?	
7. Specify the standards that the cable will comply:	
8. Cable:	
9. Rating voltage (U0/U) (kV)	
- Current rating in air (at 35°C)..... (A).	
- Short circuit rating current for 1 sec duration.....(kA)	
- Cable weight..... (kg/m)	
- Flame retardant.....(yes/no)	
- Bending radius.....(mm)	
- Max permissible operating temp. on conductor.....(C)	
- Tensile strength.....(N)	

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		(Insert all data in this column)
10. Conductor:		
- Material:		
- Nominal cross-sectional area.....(mm ²)		
- Max diameter of individual strand.....(mm)		
- Number of fine wires X cross section..... (mm)		
- DC resistance at 200C.....(Ohm/km)		
11. <u>Insulation</u>		
- Material/type		
- Nominal thickness.....(mm)		
- Insulation color		
12. <u>Outer sheath</u>		
- Material/type		
- Minimum thickness.....(mm)		
- Overall diameter..... (mm)		
- Outer sheath color		
13. <u>Marking</u>		
Is the cable marked as specify in specification NPS-329/2.....(yes/no)?		
2.5.6. <u>Fuse switch disconnecter</u>		
1. Is the proposed item from the approved list by I.E.Co. (yes/no)?		
If no then fill in the clauses below:		
2. Manufacturer's name?		
3. Manufacture P/N?		
4. Is the proposed item conforming to all technical requirements that are specified in specification NPS-207/9? (yes/no)		
5. Are the documents required in specification NPS-207/9 attached (yes/no)?		
2.5.7. <u>Empty medium insulated box</u>		
1. Is the proposed item from the approved list by I.E.Co. (yes/no)?		
If no then fill in the clauses below:		
2. Manufacturer's name?		
3. Manufacture P/N?		
4. material:		
5. Are the documents as required in specification NPS-87/5 attached? (yes/no)		
2.5.8. <u>Empty small insulated box</u>		



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	(Insert all data in this column)
1. Is the proposed item from the approved list by I.E.Co. (yes/no)? If no then fill in the clauses below:	
2. Manufacturer's name?	
3. Manufacture P/N?	
4. material:	
5. Are the documents attached? (yes/no)	
2.5.9. Box content	
1. Manufacturer's name?	
2. Manufacture P/N?	
3. material:	
4. Are the documents as required in specification NPS-87/5 attached? (yes/no)	
5. Is the proposed item conforming to all technical requirements that are specified in appendix D.3?	
2.5.10. Meters board	
1. Is the proposed item from the approved list by I.E.Co. (yes/no)? If no then fill in the clauses below:	
2. Manufacturer's name?	
3. Manufacture P/N?	
4. material:	
5. Are the documents as required in specification NPS-87/5 attached? (yes/no)	
2.5.11. Transparent window	
1. Is the proposed item from the approved list by I.E.Co. (yes/no)? If no then fill in the clauses below:	
2. Is the proposed item conforming to all the technical requirements in specification NPS-331/4? (yes/no)	
3. Manufacture name?	
4. Manufacture P/N?	
5. The material:	
2.5.12. Terminal blocks for 16&35mm²	
1. Is the proposed item from the approved list by I.E.Co. (yes/no)? If no then fill in the clauses below:	
2. Is the proposed item conforming to all the technical requirements in Appendix D.4? (yes/no)	
3. Manufacture name?	
4. Manufacture P/N?	
5. The material:	



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	(Insert all data in this column)
2.5.13. <u>Plastic conduits</u> – PVC reinforced (between insulation box and meters plate)	
1. according to which standard?	
2.6. <u>Prototype approval</u>	
1. Will the Contractor Submit One unit of CABINET for approval (yes/no)?	
2. Is the schedule up to the prototype approval attached (Yes/No)?	
3. Does the bidder guarantee to present the prototypes cabinets (after notification on award and before production all ordered items)? (yes/no)?	
2.7. <u>Packaging and Markings</u>	
• Shall the packaging shall be suitable for transportation and prolonged storage period (yes/no)?	
• Shall the packaging shall prevent any deterioration during transportation and storage (yes/no)?	
• Is each CABINET covered by a hard plastic bag (yes/no)?	
• Each Cabinet Shall supply lying on its side (yes/no)?	
• Maximum number of cabinets in one pallet – 4, maximum floors – 2, two cabinets on each floor (yes/no)?	
• The CABINET will be supplied on 1200/800 mm pallet (yes/no)?	
• Will the packaging method be submitted to I.E.Co. for approval before the first supply (yes/no)?	
• Will each package be clearly marked in print (large letters) with following:	
Trademark..... (yes/no)	
Product name..... (yes/no)	
I.E.Co. item's cat.No.... (yes/no)	
Supplier cat.No (yes/no)	
Order No. (yes/no)	
Serial No. (yes/no)	
• Are the warning labels requirements according to appendix F (yes/no)?	
• Will each CABINET be marked with a QR label provided by I.E.Co., installed on the external back or side of the cabinet, made of long-lasting material and suitable glue for polyester material (yes/no)?	
<u>Conformity with Bid documents</u>	
Bidder hereby certifies that he agrees to all the provisions of the Inquiry Documents.	



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(Insert all data in this column)

Bidder hereby certifies that he agrees to all conditions of the cover letter of the Israel Electric Corporation Limited, which accompanied the Proposal Documents.

Date of Bid _____

Signature of Bidder _____

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APPENDIX

C

Drawings



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Drawing C.1

– Base

**Base for L.V. 3x400A metering cabinet
and L.V [100-500] PV cabinet (5242798)**

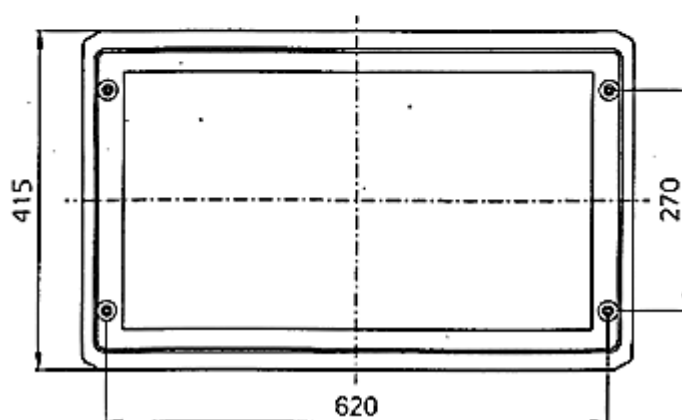
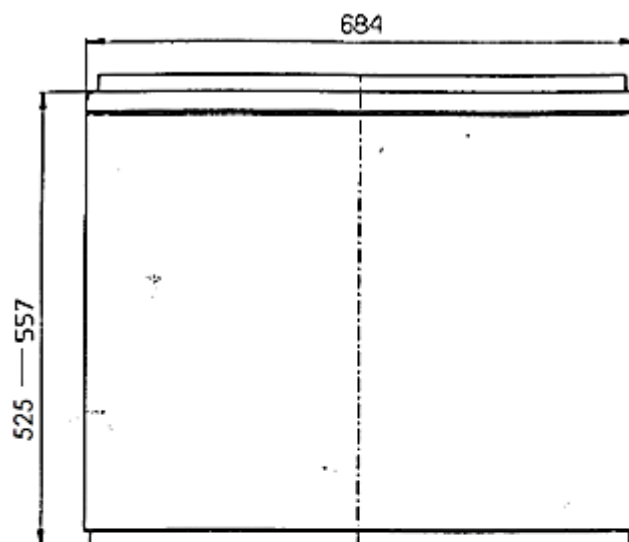
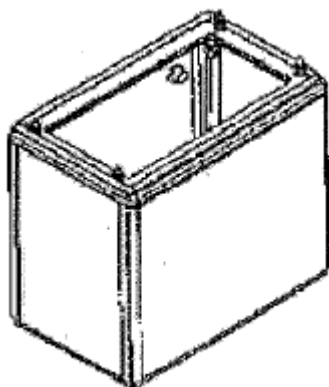
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1. The material used for the BASE shall be the same used for the CABINET.
2. The upper part of the BASE shall be provided with mounting holes suitable for the mounting holes of the CABINET.
3. The BASE shall be provided with all the necessary accessories to mount the CABINET on it, i.e. as screws, nuts, rails, etc.
4. The internal part of each leg shall be provided with at least one support for the cable fixing rail.

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Specification NPS 120

1. 3x400A Low Voltage Metering Cabinet (M.C)
2. Medium Voltage Metering Cabinet (M.V).
3. 3x [100-500] A Low Voltage, PV connection
4. Base for Metering Cabinets.

Drawing C.2

**– L.V. 3x400A polyester metering
cabinet
equipped (3251535)**

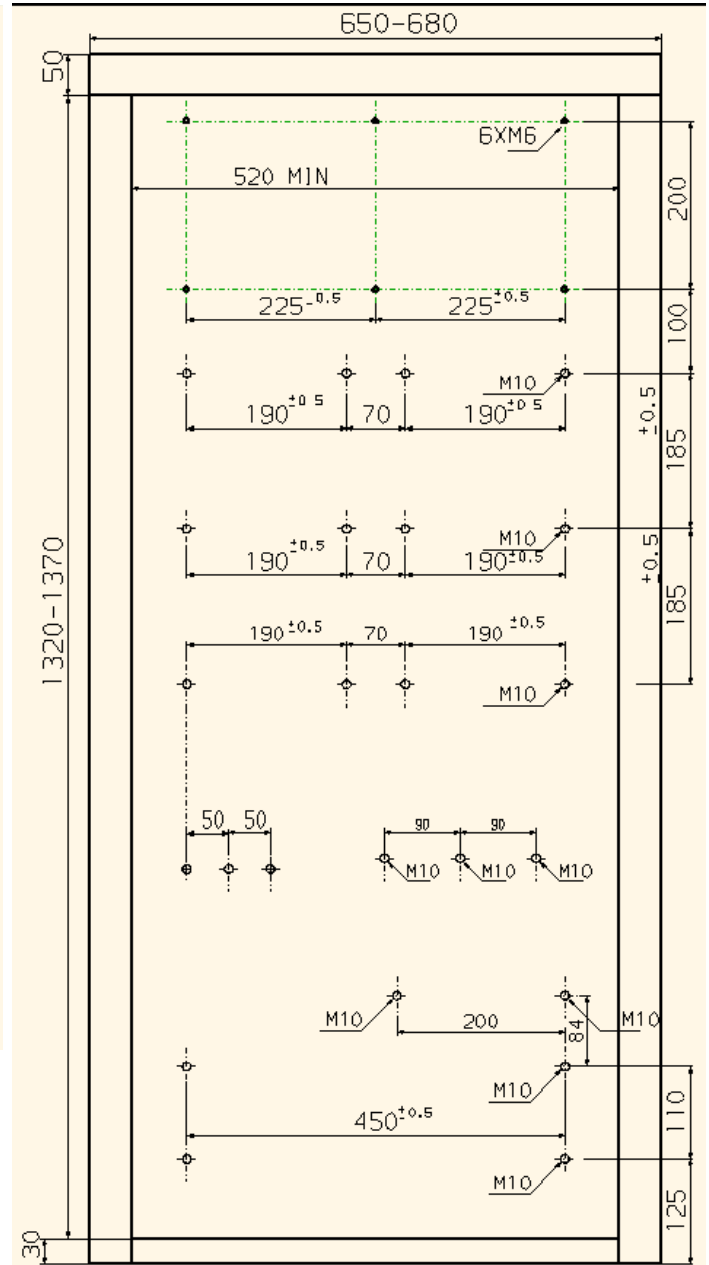
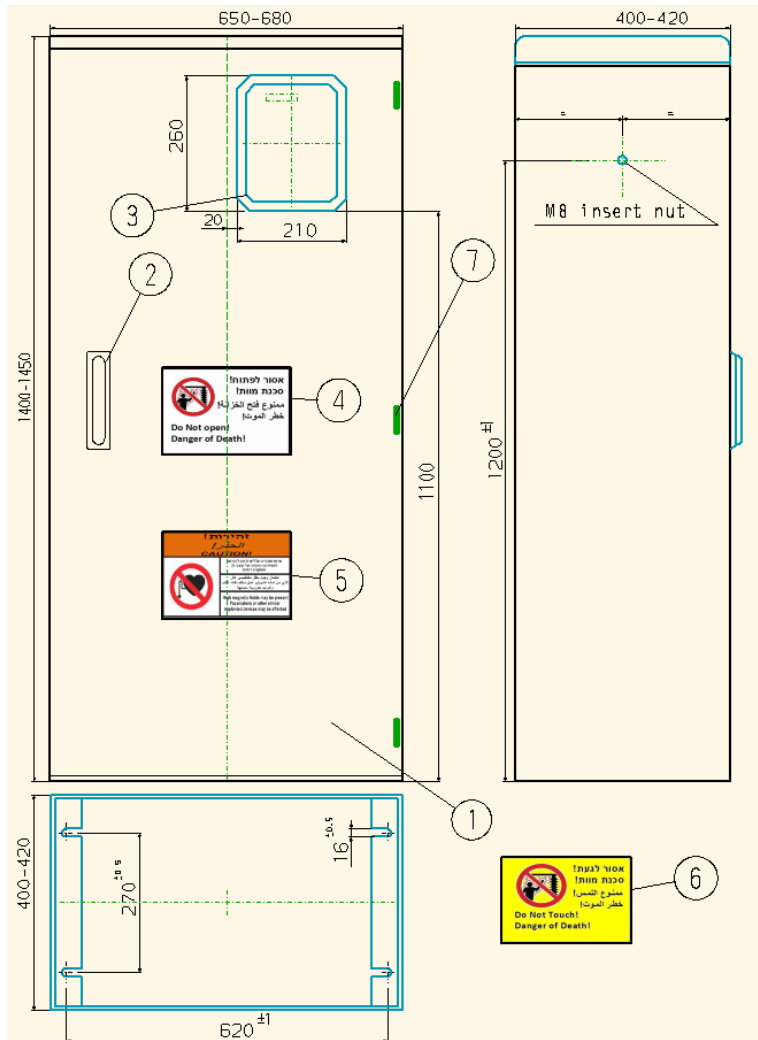
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Specification NPS 120

1. 3x400A Low Voltage Metering Cabinet (M.C)
2. Medium Voltage Metering Cabinet (M.V).
3. 3x [100-500] A Low Voltage, PV connection
4. Base for Metering Cabinets.



TSC-3117

1. L.V. 3x400A polyester metering cabinet.
2. Semi cylinder lock (green) – Cat. No 3414372.
3. Window according to clause 10.5.2.
4. Warning sign (white) according to Appendix F.
5. Warning sign (magnetic fields) according to Appendix F.
6. Warning sign (yellow – inside the door) according to Appendix F.
7. Minimum three door hinges.

Remark: The bidder may offer an alternative embedded nuts form on the back cabinet's panel, and such proposal will be considered by the I.E.Co.

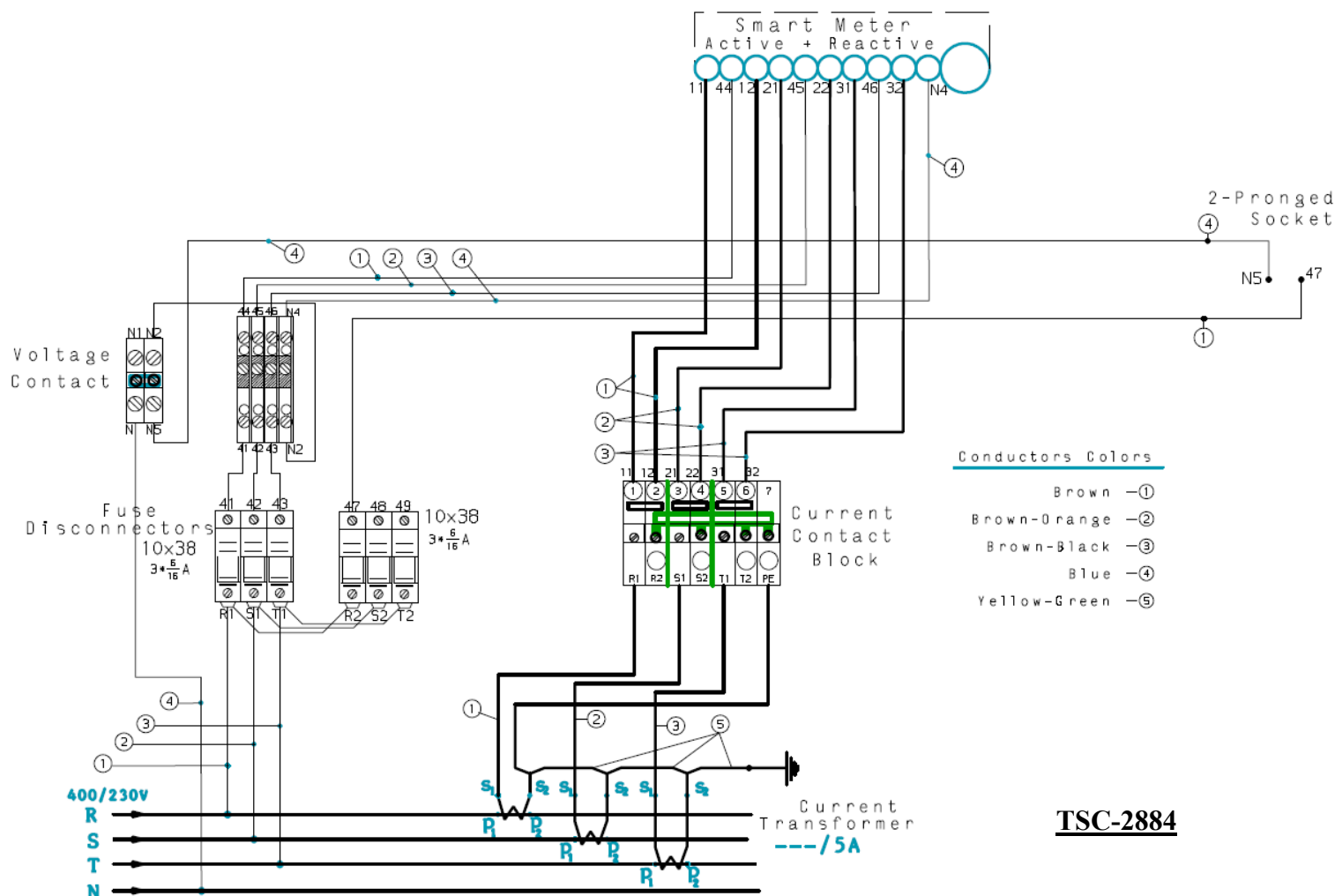
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Specification NPS 120

1. 3x400A Low Voltage Metering Cabinet (M.C)
2. Medium Voltage Metering Cabinet (M.V).
3. 3x [100-500] A Low Voltage, PV connection
4. Base for Metering Cabinets.



TSC-2884

Remarks:

- ❖ The cross-section of the current conductors shall be 4 mm², solid.
- ❖ The cross-section of the voltage conductors shall be 2.5 mm², solid, including the electrical outlet (socket).
- ❖ The grounding conductor (yellow-green), from the current contact block to the current transformer and to the grounding bar, shall be continuous along its entire length.
- ❖ The conductors shall be of rigid type, with PVC insulation for low voltage, in accordance with 60227 Israeli standard.
- ❖ When wiring the conductors, a loop shall be made around the current transformer screw.
- ❖ Accessories for connecting test devices shall be installed in the voltage circuit clamps.
- ❖ All the wiring between the insulation box and meters plate shall be protected with plastic conduits – PVC reinforced with suitable inner diameter – **for all the cabinets**.
- ❖ The current contact block shall be delivered in the shorted to ground position.
- ❖ The current transformer shall be mounted on the back panel (The manufacturer may submit a mounting solution to the I.E.Co's approval).

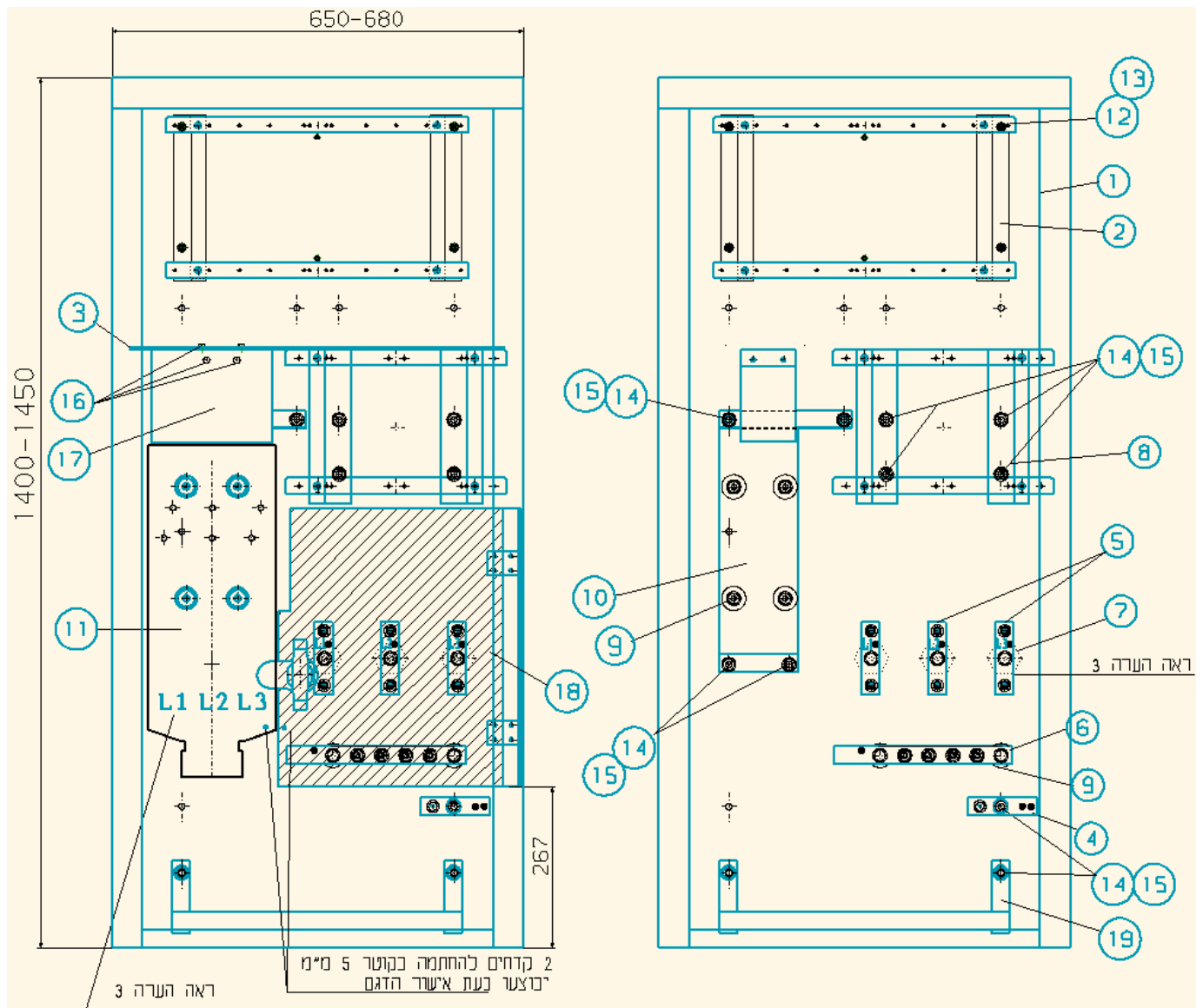
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Specification NPS 120

1. 3x400A Low Voltage Metering Cabinet (M.C)
2. Medium Voltage Metering Cabinet (M.V).
3. 3x [100-500] A Low Voltage, PV connection
4. Base for Metering Cabinets.



TSC-3116

1. L.V. 3x400A polyester metering cabinet.
2. Meters plate support (1 pcs.).
3. Separation plate (1 pcs.).
4. Ground busbar (1 pcs.).
5. Phase busbars (3 pcs.).
6. Neutral busbar (1 pcs.).
7. 60 mm supported insulator according to D.2 in appendix C (3 pcs.).
8. Supporting for insulated box (for terminals, fuses and plate with current contact) (1 pcs.).
9. 40 mm supported insulator according to D.2 in appendix C (6 pcs.).
10. Base for fuses switch disconnecter plate (1 pcs.).
11. Fuses switch disconnecter plate (1 pcs.).

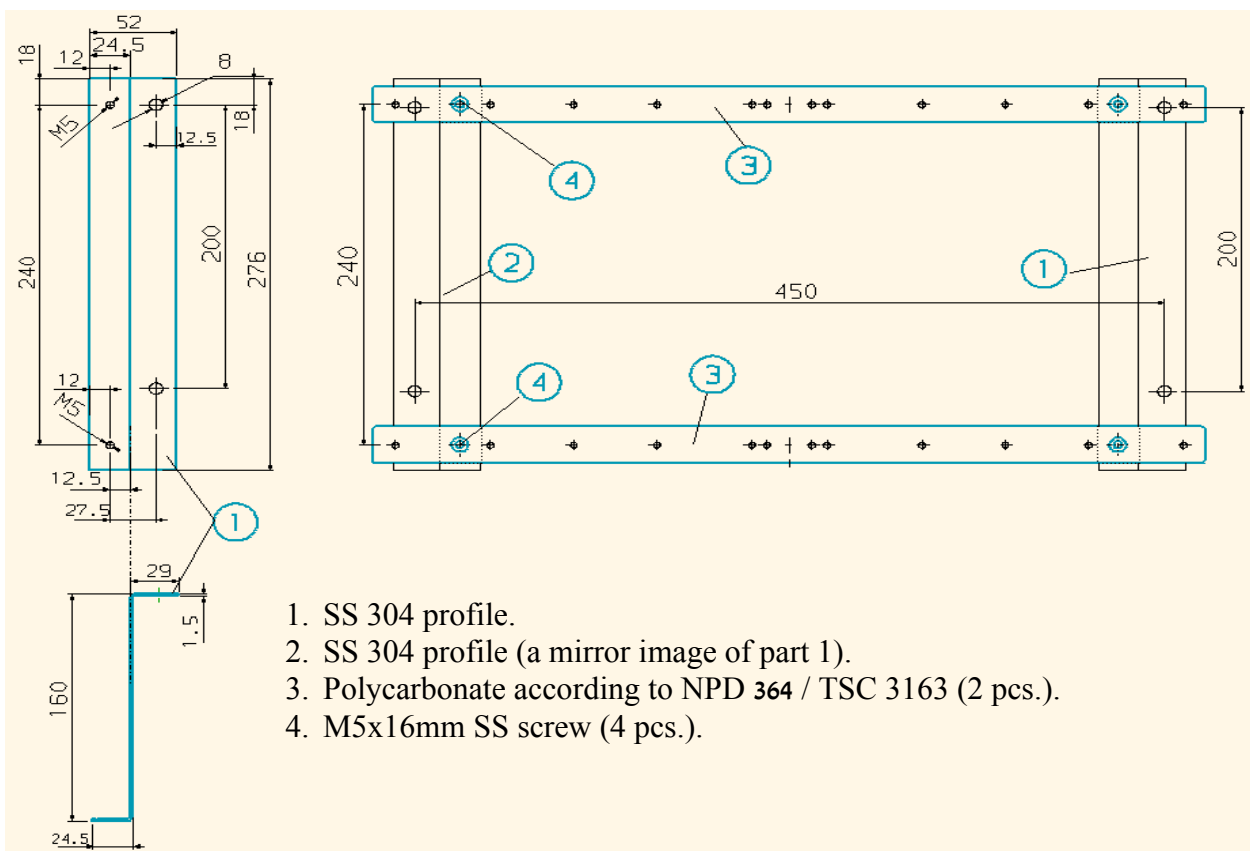
 Israel Electric	Israel Electric Corp. Ltd. Grid Engineering Division Distribution Engineering Department
Revision No.: 11	Specification NPS 120 1. 3x400A Low Voltage Metering Cabinet (M.C) 2. Medium Voltage Metering Cabinet (M.V). 3. 3x [100-500] A Low Voltage, PV connection 4. Base for Metering Cabinets.
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12. M6X10mm screw according to DIN 933 (4 pcs.).
13. Conical spring washer for M6 screw according to DIN 6796 (4 pcs.).
14. M10X12mm screw according to DIN 933.
15. Conical spring washer for M10 screw according to DIN 6796.
16. M6X15mm screw (with insulated head) according to DIN 933, coating thickness of min 6 micron (6 pcs.).
17. Protective partition (for the fuse switch disconnecter). (1 pcs.)
18. Protective partition (for the busbars) shall be installed on the cabinet side with hinges.
19. Cables supporting (1 pcs.).

Remarks:

- L1.L2.L3 markings shall be printed on the fuses switch disconnecter plate and busbars.
- Two holes (5mm), the holes should be done at the prototype approval stage.
- All the screws, springs washer and nuts will be plated with zinc coating + yellow/blue passivation (dichromate).

Meters plate support:





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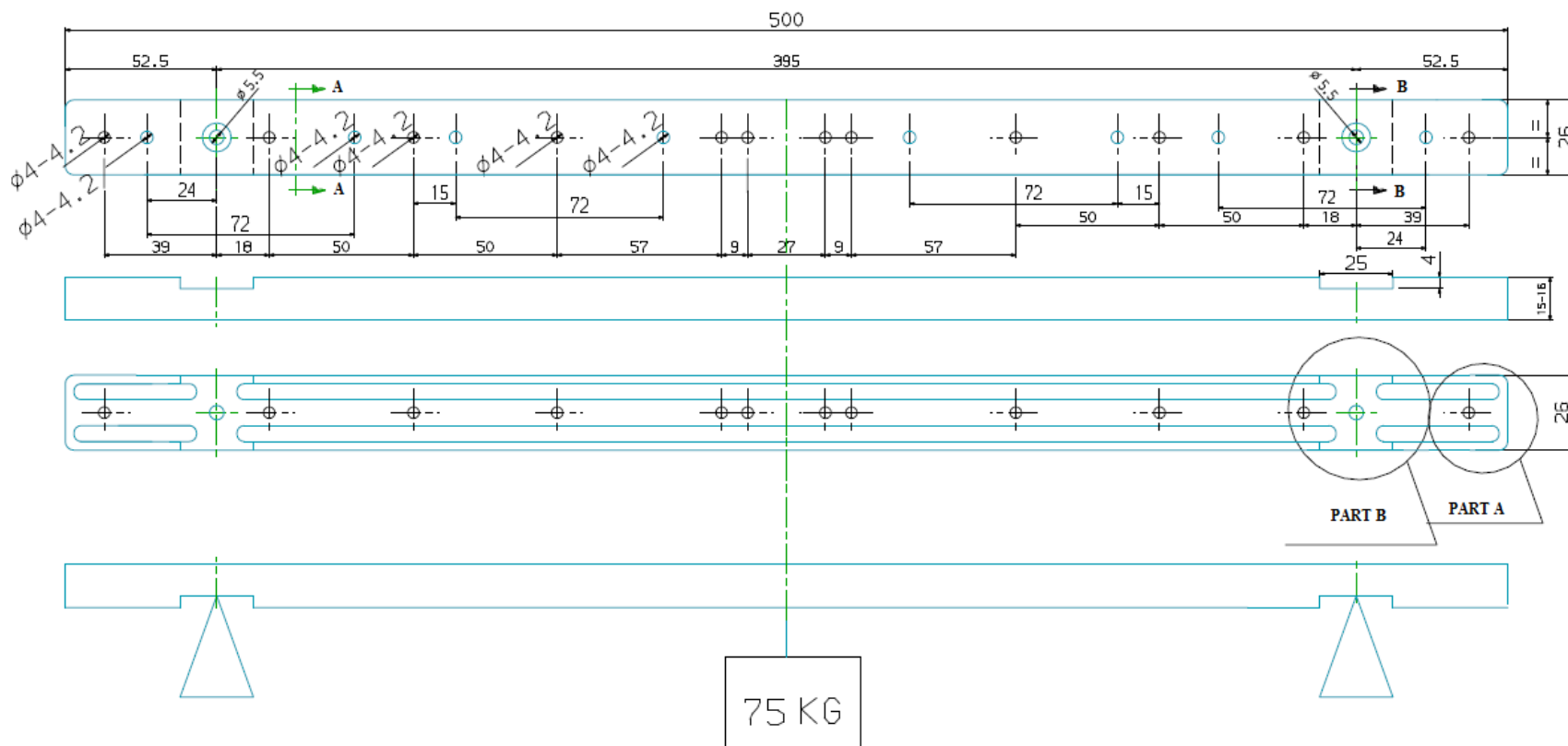
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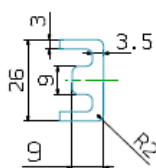
1. 3x400A Low Voltage Metering Cabinet (M.C)
2. Medium Voltage Metering Cabinet (M.V).
3. 3x [100-500] A Low Voltage, PV connection
4. Base for Metering Cabinets.

REMARK:

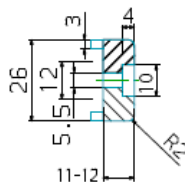
Material: linear polycarbonate, Original or grainy.
 Combustion resistance: according to UL-94, Class V0.
 Phase should withstand the weight of 75 kg for a minute.



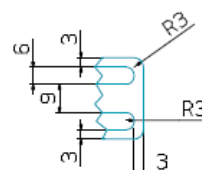
SECTION A
 1:1 Scale



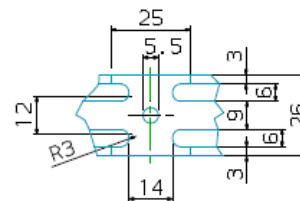
SECTION B
 1:1 Scale



PART A
 1:1 Scale



PART B
 1:1 Scale



NPD:364

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Grid Engineering Division
Distribution Engineering Department

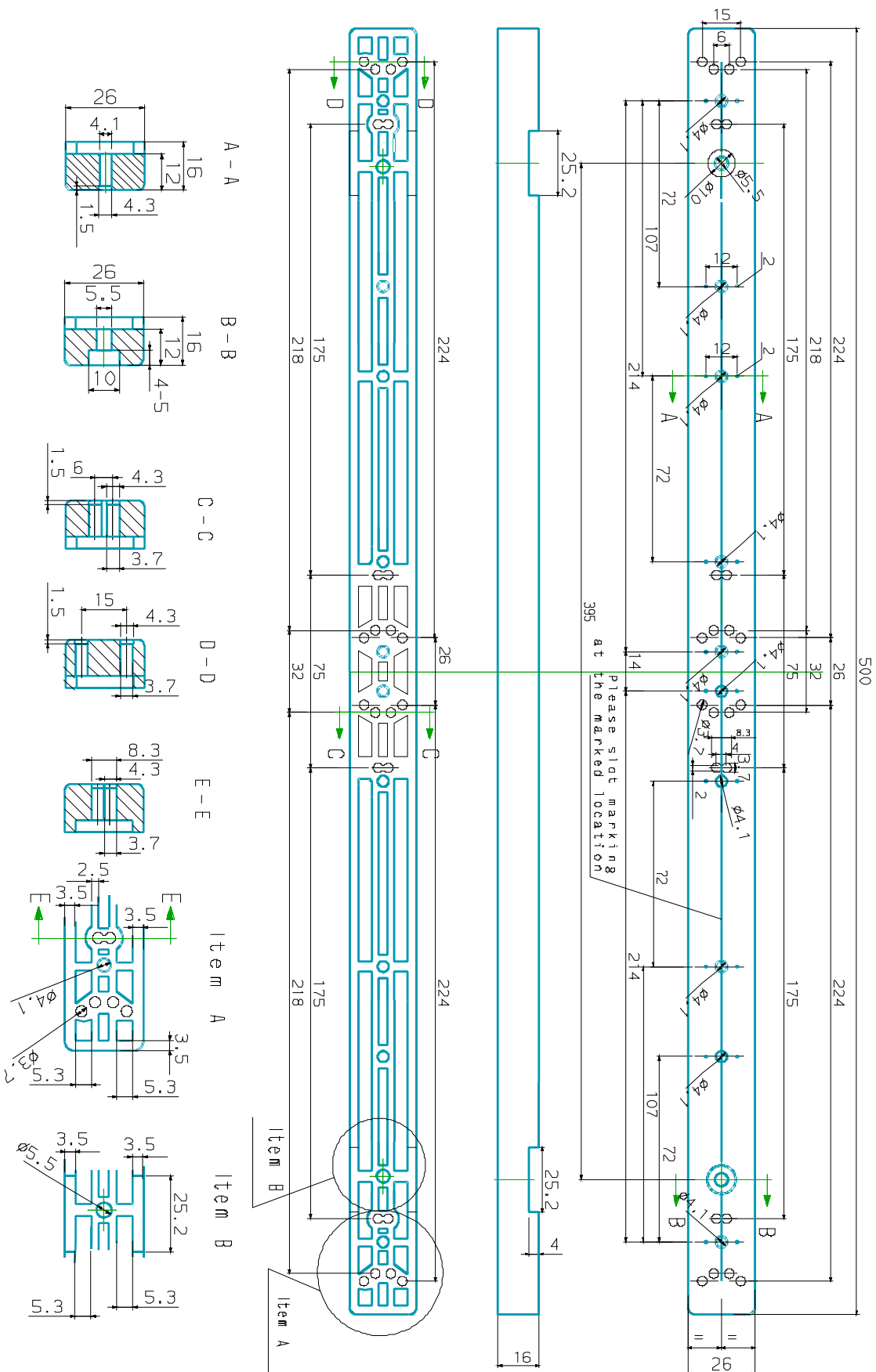
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Specification NPS 120

1. **3x400A Low Voltage Metering Cabinet (M.C)**
2. **Medium Voltage Metering Cabinet (M.V).**
3. **3x [100-500] A Low Voltage, PV connection**
4. **Base for Metering Cabinets.**



REMARK:

Material: linear polycarbonate, Original or grainy.
Combustion resistance: according to UL-94, Class V0.
Phase should withstand the weight of 75 kg for a minute.

TSC:3163

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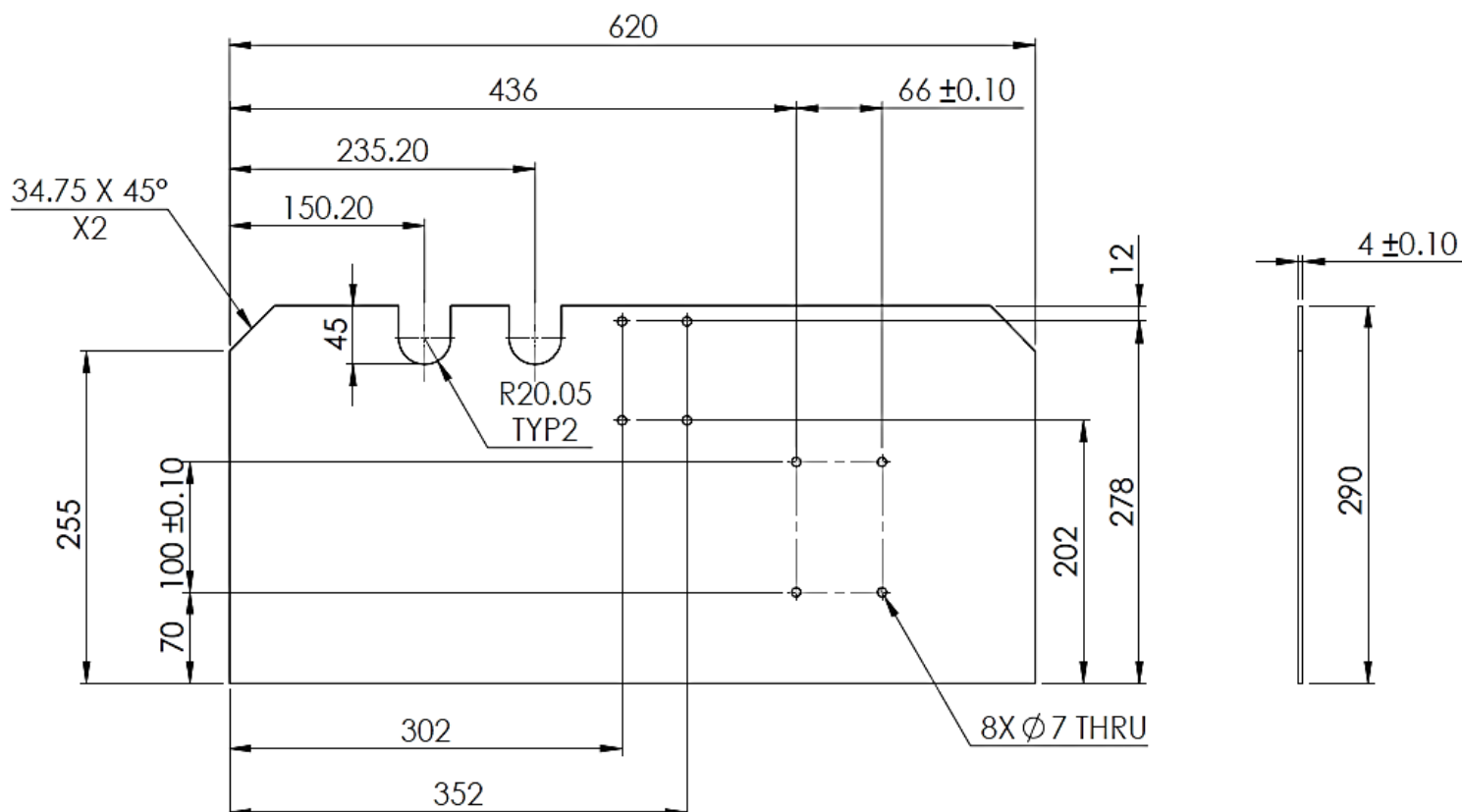
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Specification NPS 120

1. 3x400A Low Voltage Metering Cabinet (M.C)
2. Medium Voltage Metering Cabinet (M.V).
3. 3x [100-500] A Low Voltage, PV connection
4. Base for Metering Cabinets.

Separation plate:



Material:

- Polyester + GF 25 %
- Fiberglass according to HM 2471 DIN 7735 or NEMA GRADE LI1-15 GPO3.
- Flame rate V0 according to UL94.

Plate thickness: 4 mm.

Notes:

- Deburr and break sharp edges.
- Dimensions are in millimeters unless otherwise specified
- Linear tolerance: ± 0.5
- Angular tolerance: ± 0.5

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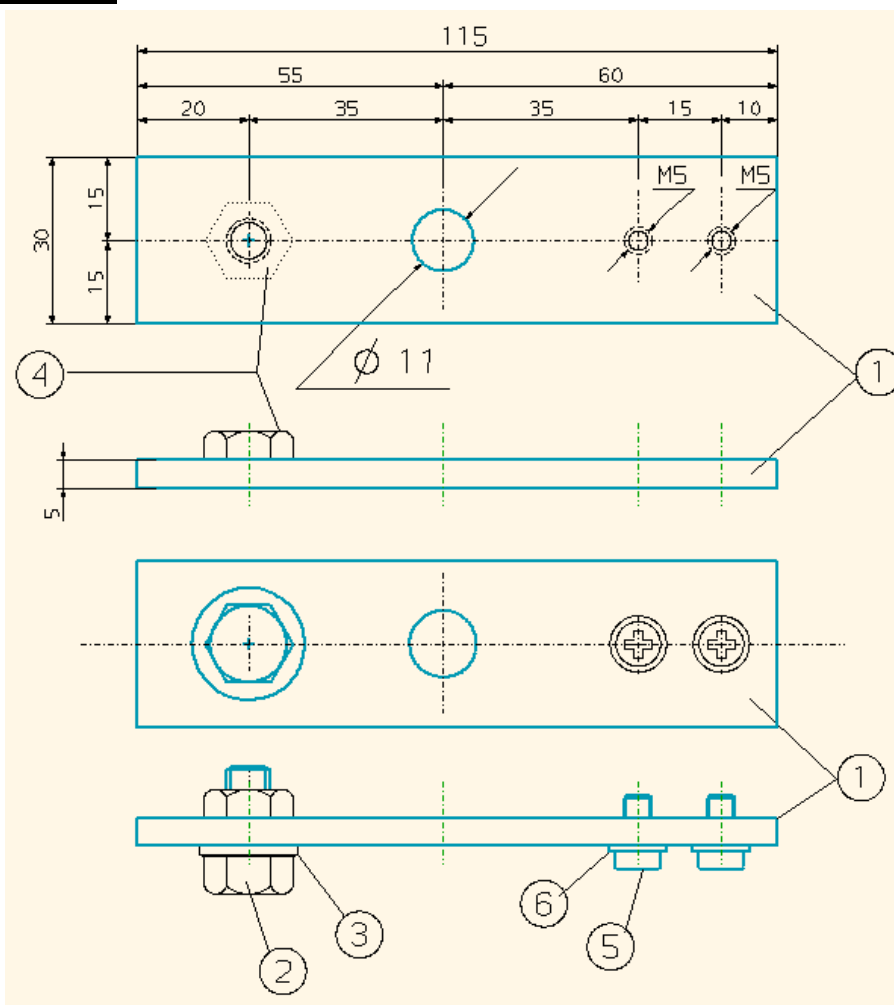
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Specification NPS 120

1. 3x400A Low Voltage Metering Cabinet (M.C)
2. Medium Voltage Metering Cabinet (M.V).
3. 3x [100-500] A Low Voltage, PV connection
4. Base for Metering Cabinets.

Ground busbar:



1. Ground busbar E-Cu-F25 acc. DIN EN 13601 with coating thickness of min 20 micron – tin plated.
2. M8X16mm screw according to DIN 933, coating thickness of min 8 micron.
3. Conical spring washer for M8 screw according to DIN 6796, coating thickness of min 8 micron.
4. M8 insert nuts coating thickness of min 8 micron.
5. M5x10mm Phillips screw according to DIN 7985, coating thickness of min 5 micron (2 pcs.).
6. Conical spring washer for M5 screw according to DIN 6796, coating thickness of min 5 micron (2 pcs).

Remark:

- All the screws, springs washer and nuts will be plated with zinc coating + yellow/blue passivation (dichromate).
- Part 2 the screw shall be installed facing outward.

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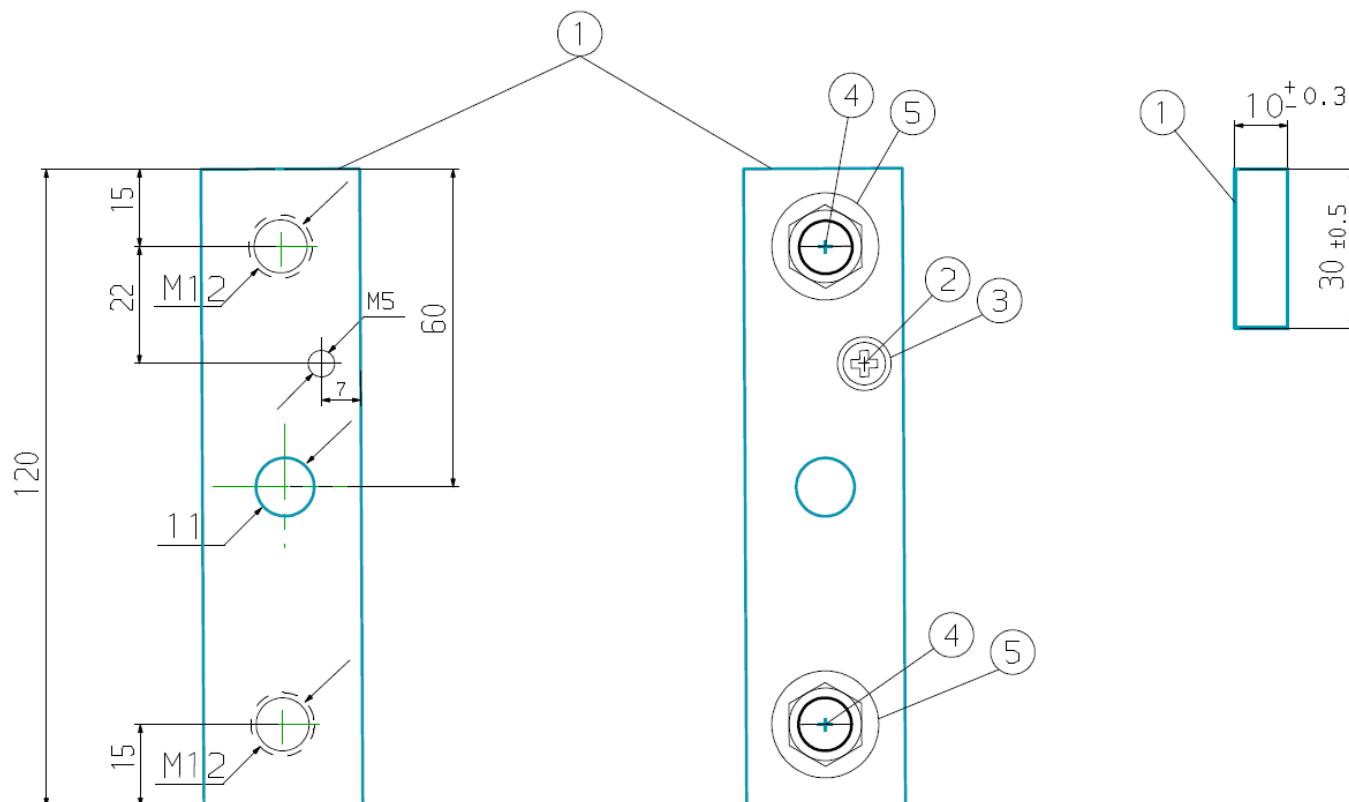
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Specification NPS 120

1. 3x400A Low Voltage Metering Cabinet (M.C)
2. Medium Voltage Metering Cabinet (M.V).
3. 3x [100-500] A Low Voltage, PV connection
4. Base for Metering Cabinets.

Phase busbars:



1. Phase busbar E-Cu-F25 acc. DIN EN 13601 with coating thickness of min 20 micron – tin plated.
2. M5x12mm Phillips screw according to DIN 7985, coating thickness of min 5 micron (1 pcs).
3. Flat washer 5.3x10x1, according to DIN 125, coating thickness of min 5 micron (1 pcs.).
4. M12X25mm screw according to DIN 933, coating thickness of min 12 micron (2 pcs).
5. M12 nuts + Conical spring washer connected together according to DIN 6796, coating thickness of min 12 micron (2 pcs).

Remarks:

- ❖ All the screws, springs washer and nuts will plate with zinc coating + yellow/blue passivation (dichromate).
- ❖ General tolerance is 0.5 mm, except where otherwise specified.
- ❖ M12 bolts shall be installed facing outward.

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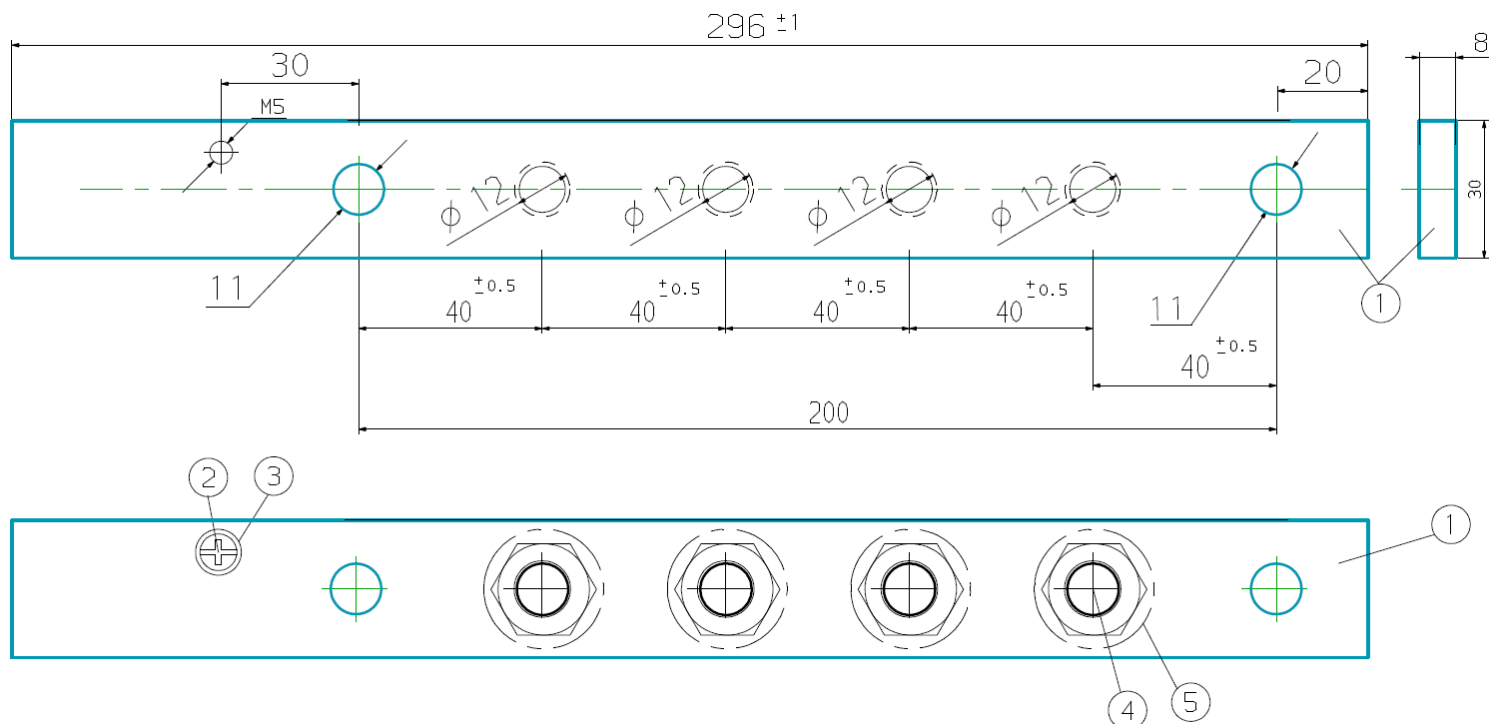
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Specification NPS 120

1. 3x400A Low Voltage Metering Cabinet (M.C)
2. Medium Voltage Metering Cabinet (M.V).
3. 3x [100-500] A Low Voltage, PV connection
4. Base for Metering Cabinets.

Neutral busbar:



1. Neutral busbar E-Cu-F25 acc. DIN EN 13601 with coating thickness of min 20 micron – tin plated.
2. M5x12mm Phillips screw according to DIN 7985, coating thickness of min 5 micron.
3. Flat washer 5.3x10x1, according to DIN 125, coating thickness of min 5 micron
4. M12X25mm screw according to DIN 933, coating thickness of min 12 micron (4 pcs.).
5. M12 nuts + Conical spring washer for M12 screw acc. to DIN 6796 connected together, coating thickness of min 12 micron (4 pcs.).

Remarks:

- ❖ All the screws, springs washer and nuts will be plated with zinc coating + yellow/blue passivation (dichromate).
- ❖ M12 bolts shall be installed facing outward.

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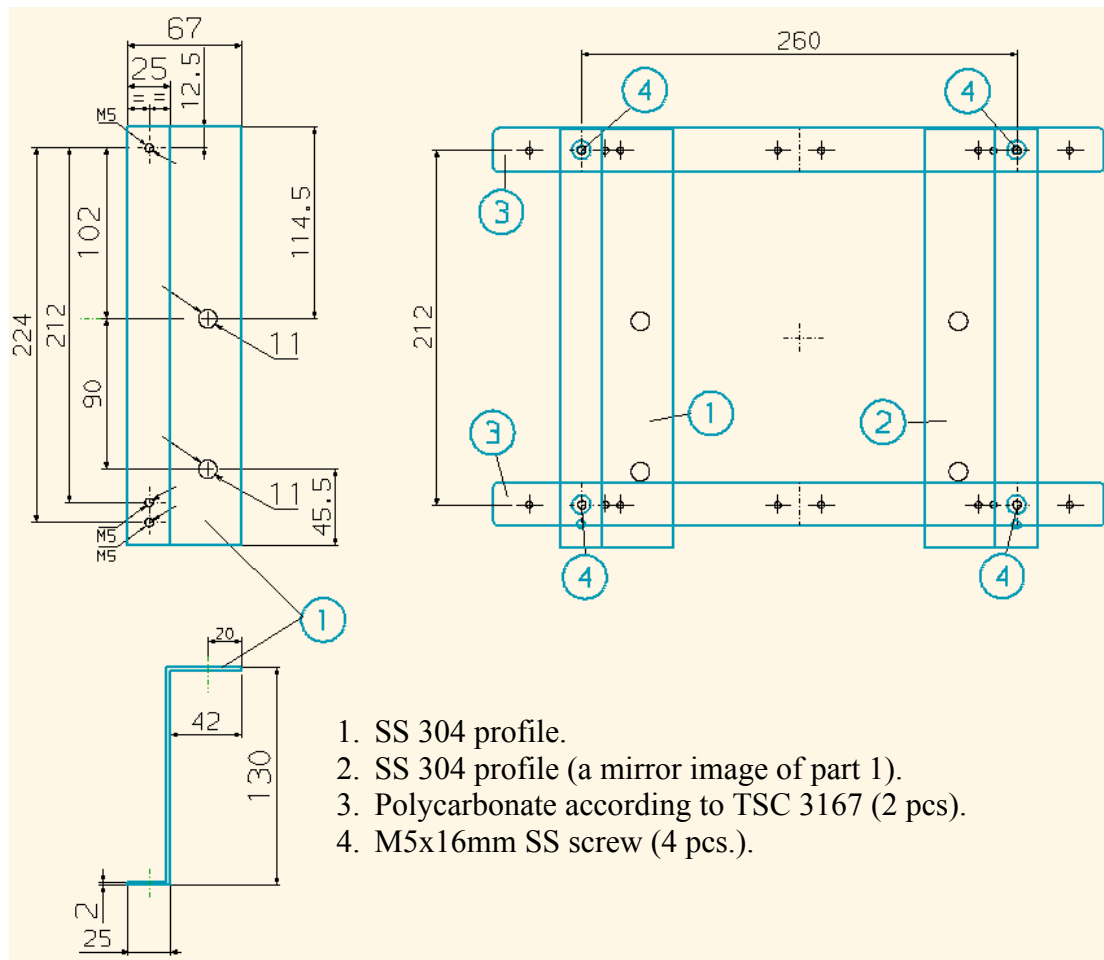
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Specification NPS 120

1. 3x400A Low Voltage Metering Cabinet (M.C)
2. Medium Voltage Metering Cabinet (M.V).
3. 3x [100-500] A Low Voltage, PV connection
4. Base for Metering Cabinets.

Supporting for insulated box (for terminals, fuses and plate with current contact):



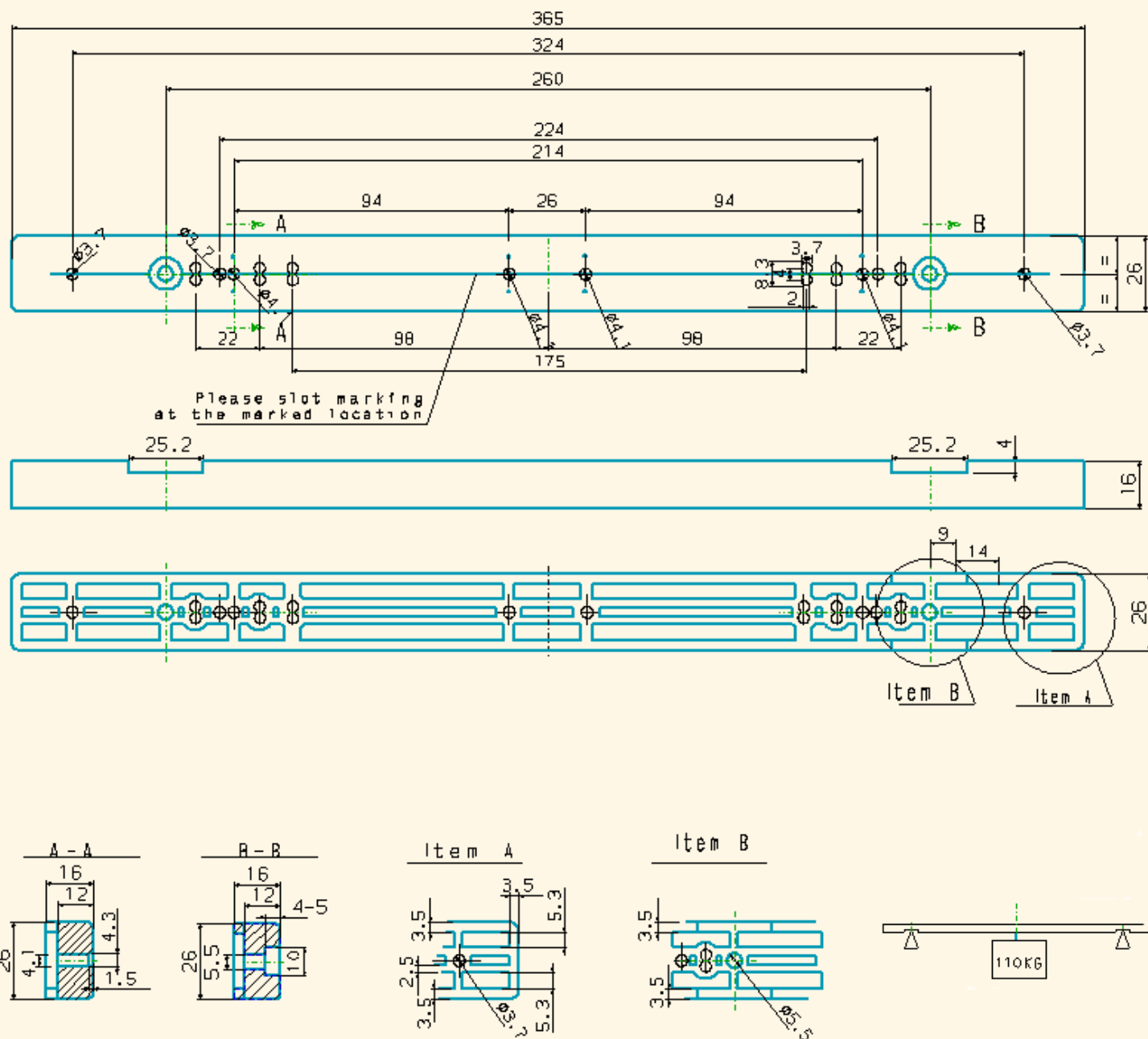
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Specification NPS 120

1. 3x400A Low Voltage Metering Cabinet (M.C)
2. Medium Voltage Metering Cabinet (M.V).
3. 3x [100-500] A Low Voltage, PV connection
4. Base for Metering Cabinets.



TSC: 3167

REMARK:

Material: linear polycarbonate, Original or grainy.

Combustion resistance: according to UL-94, Class V0.

Phase should withstand the weight of 110 kg for a minute.

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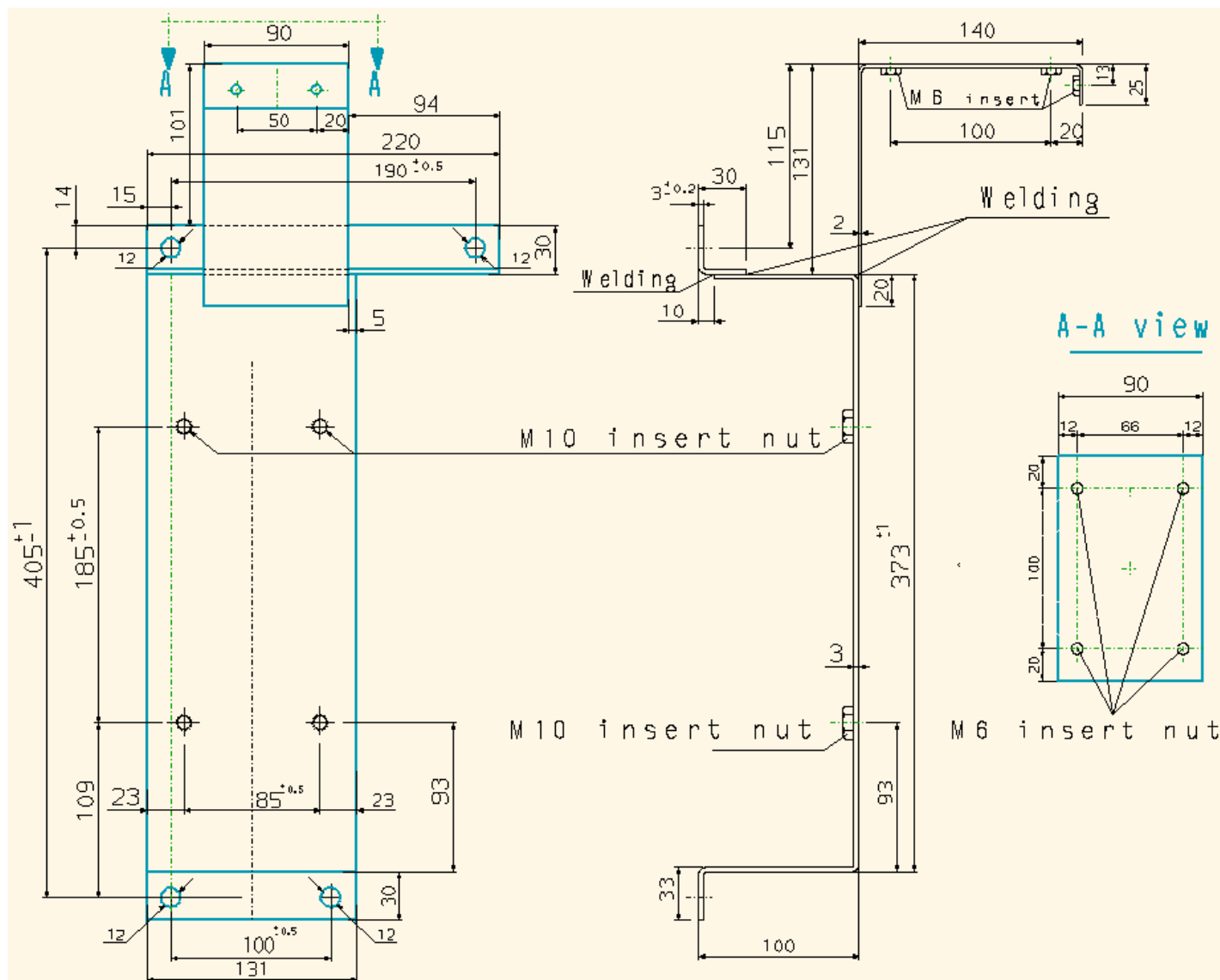
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Specification NPS 120

1. 3x400A Low Voltage Metering Cabinet (M.C)
2. Medium Voltage Metering Cabinet (M.V).
3. 3x [100-500] A Low Voltage, PV connection
4. Base for Metering Cabinets.

Base for fuses switch disconnecter plate:



Material: ST 37, with hot deep galvanized or SS 304.

Nuts: insert or welding (M6 - coating thickness of min 6 micron, M10 - coating thickness of min 10 micron).

REMARK: All the nuts will be plated with zinc coating + yellow/blue passivation (dichromate).

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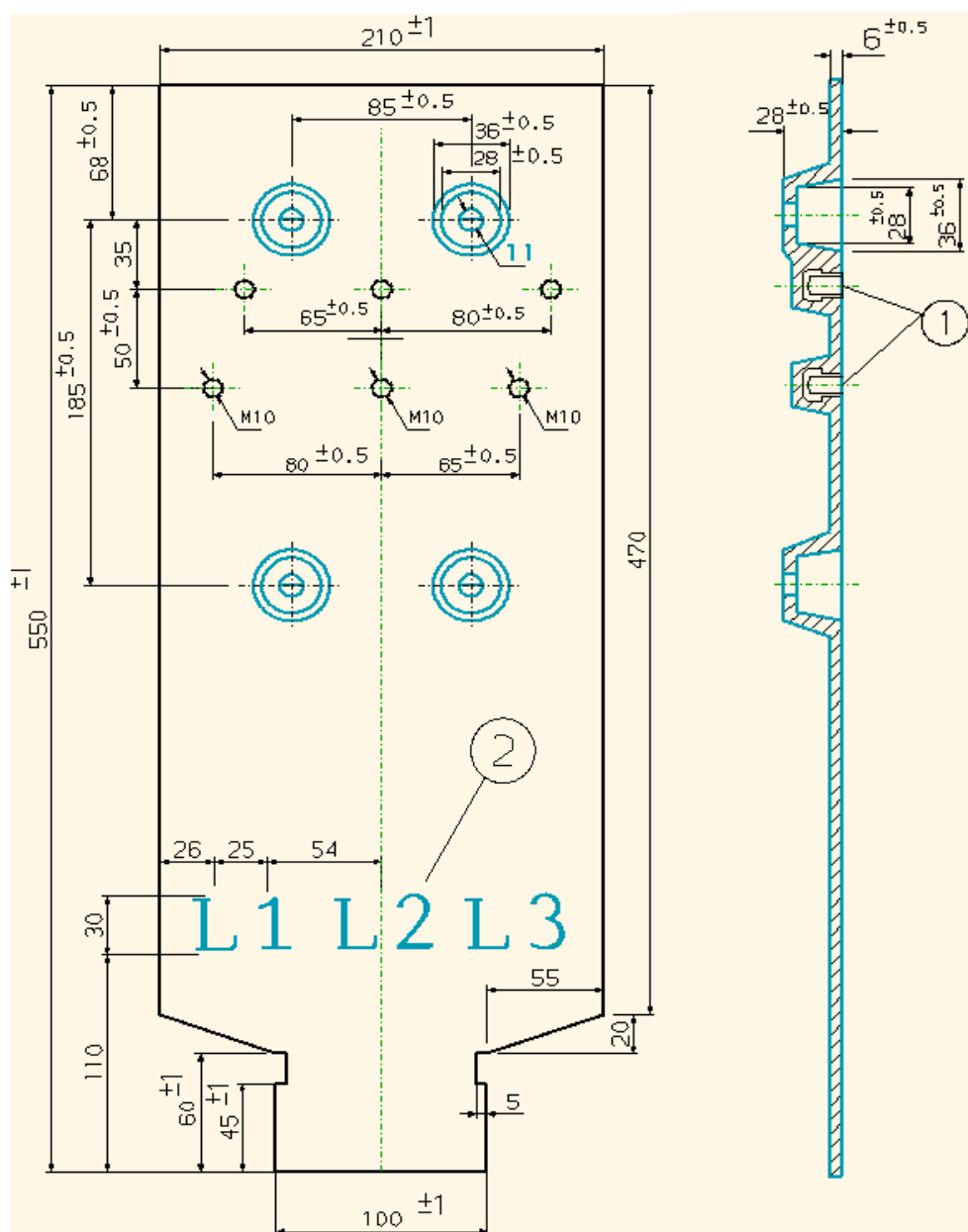
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Specification NPS 120

1. 3x400A Low Voltage Metering Cabinet (M.C)
2. Medium Voltage Metering Cabinet (M.V).
3. 3x [100-500] A Low Voltage, PV connection
4. Base for Metering Cabinets.

Fuses switch disconnecter plate:



1. M10 inserted nuts – torque 38Nm (6 pcs.).
2. Red markings – the markings shall be printed on the plate and not a sticker.

Remark: Material – Polyester according to the requirements of this specification.

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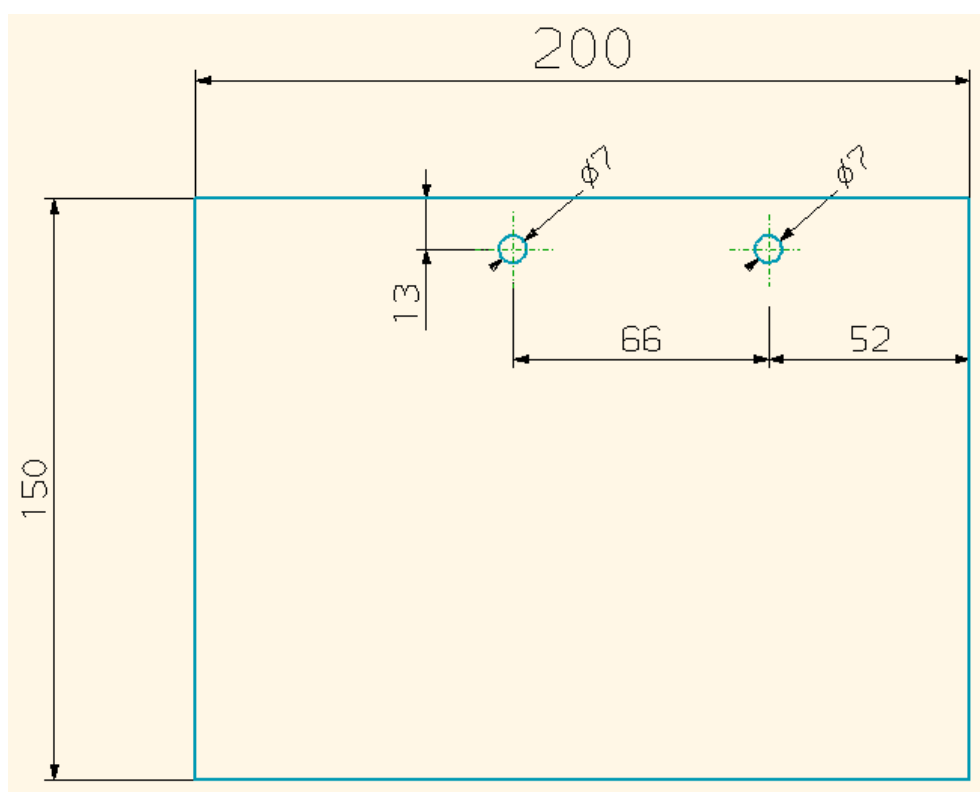
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Specification NPS 120

1. 3x400A Low Voltage Metering Cabinet (M.C)
2. Medium Voltage Metering Cabinet (M.V).
3. 3x [100-500] A Low Voltage, PV connection
4. Base for Metering Cabinets.

Protective partition (for the fuse switch disconnecter):



Material:

- Fiberglass according to HM 2471 DIN 7735 or NEMA GRADE LI1-15 GPO3.
- Flame rate V0 according to UL94.

Plate thickness: 4mm.

Remark: The size of the protective partition shall be adjusted after the fuse switch disconnecter installation.

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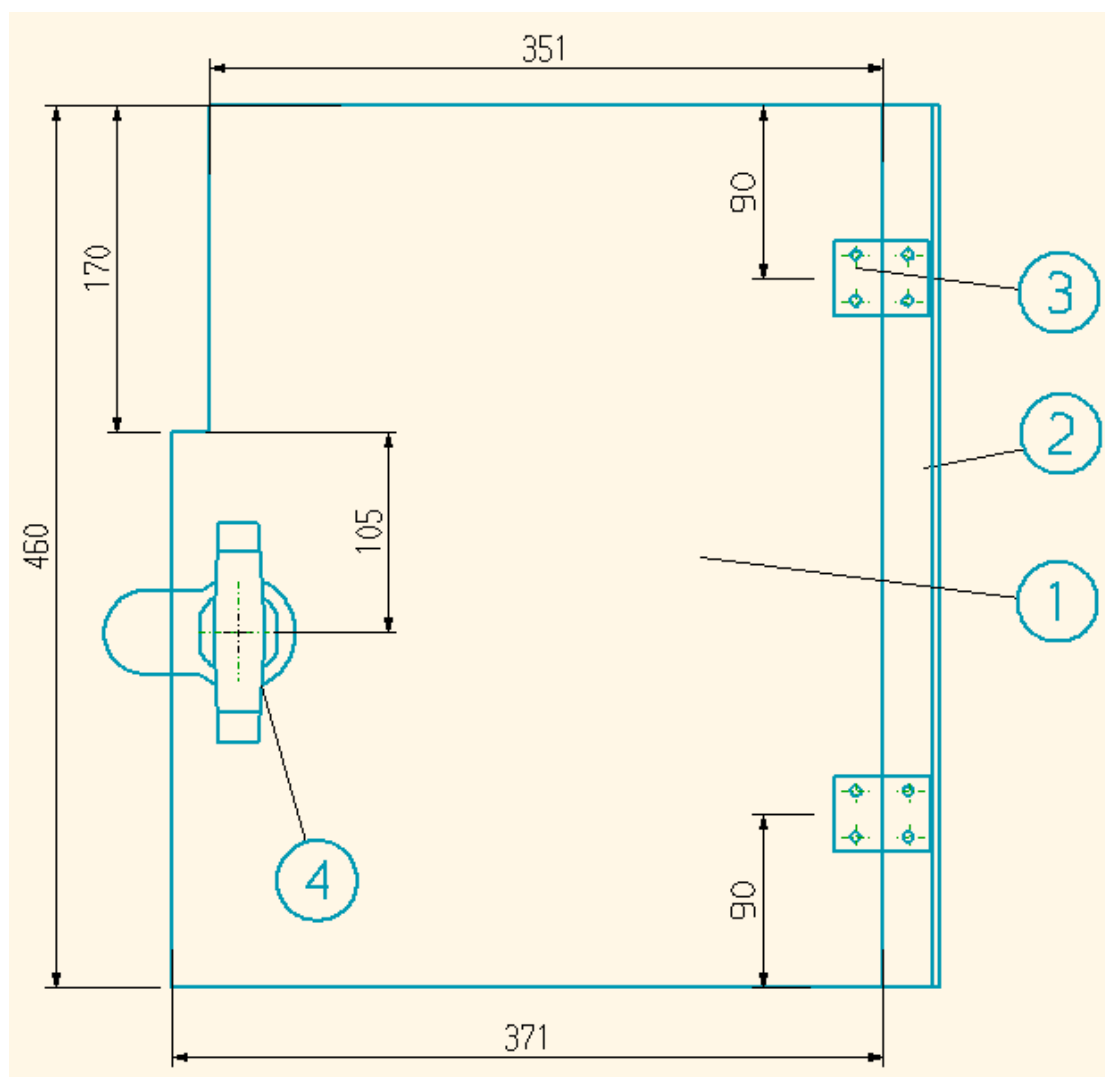
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Specification NPS 120

1. 3x400A Low Voltage Metering Cabinet (M.C)
2. Medium Voltage Metering Cabinet (M.V).
3. 3x [100-500] A Low Voltage, PV connection
4. Base for Metering Cabinets.

Protective partition (for the busbars), shall be installed on the cabinet side with hinges:



1. Material: Fiberglass according to HM 2471 DIN 7735 or NEMA GRADE LI1-15 GPO3. Flame rate V0 according to UL94. Thickness: 4mm.
2. 30x30x4mm (L) profile, made from fiberglass.
3. Stainless steel hinges connected to the protective partition and to (L) profile with 5mm stainless steel rivets.
4. Isolated lock to close the protective partition.

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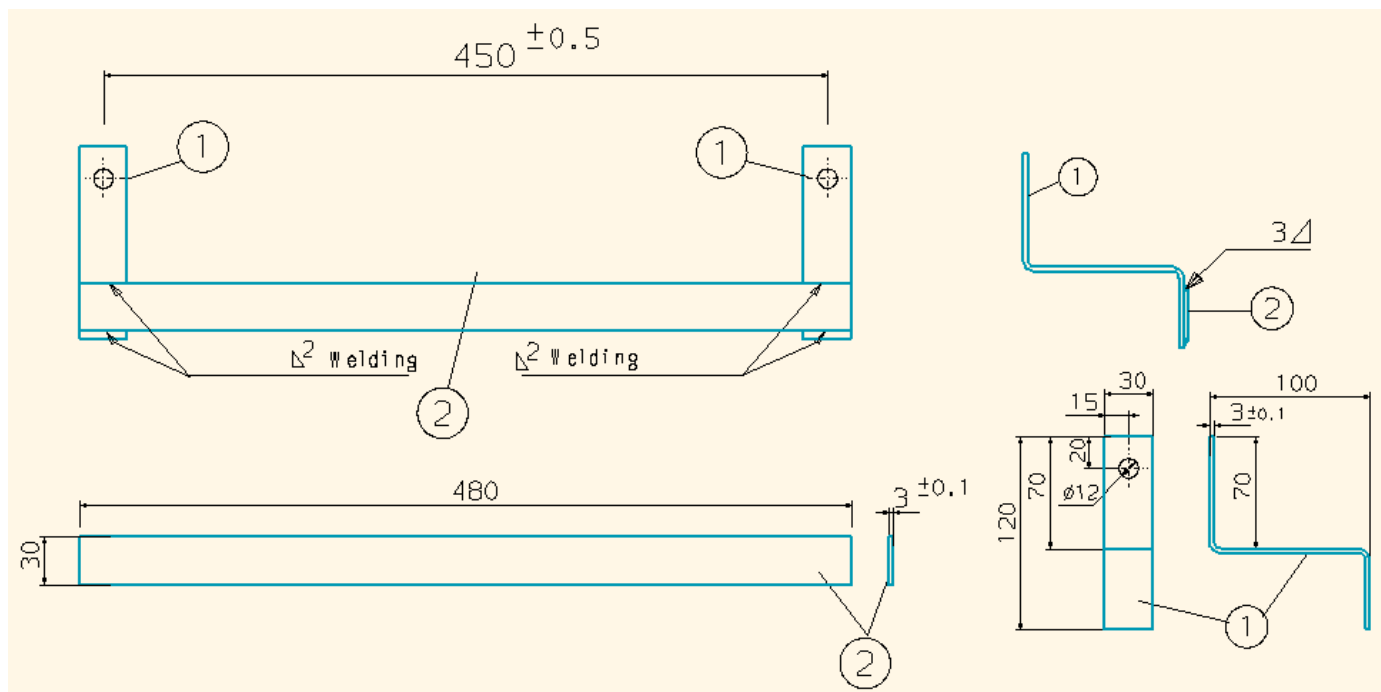
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Specification NPS 120

1. 3x400A Low Voltage Metering Cabinet (M.C)
2. Medium Voltage Metering Cabinet (M.V).
3. 3x [100-500] A Low Voltage, PV connection
4. Base for Metering Cabinets.

Cables supporting:



1. SS 304 (2 pcs.).
2. SS 304.

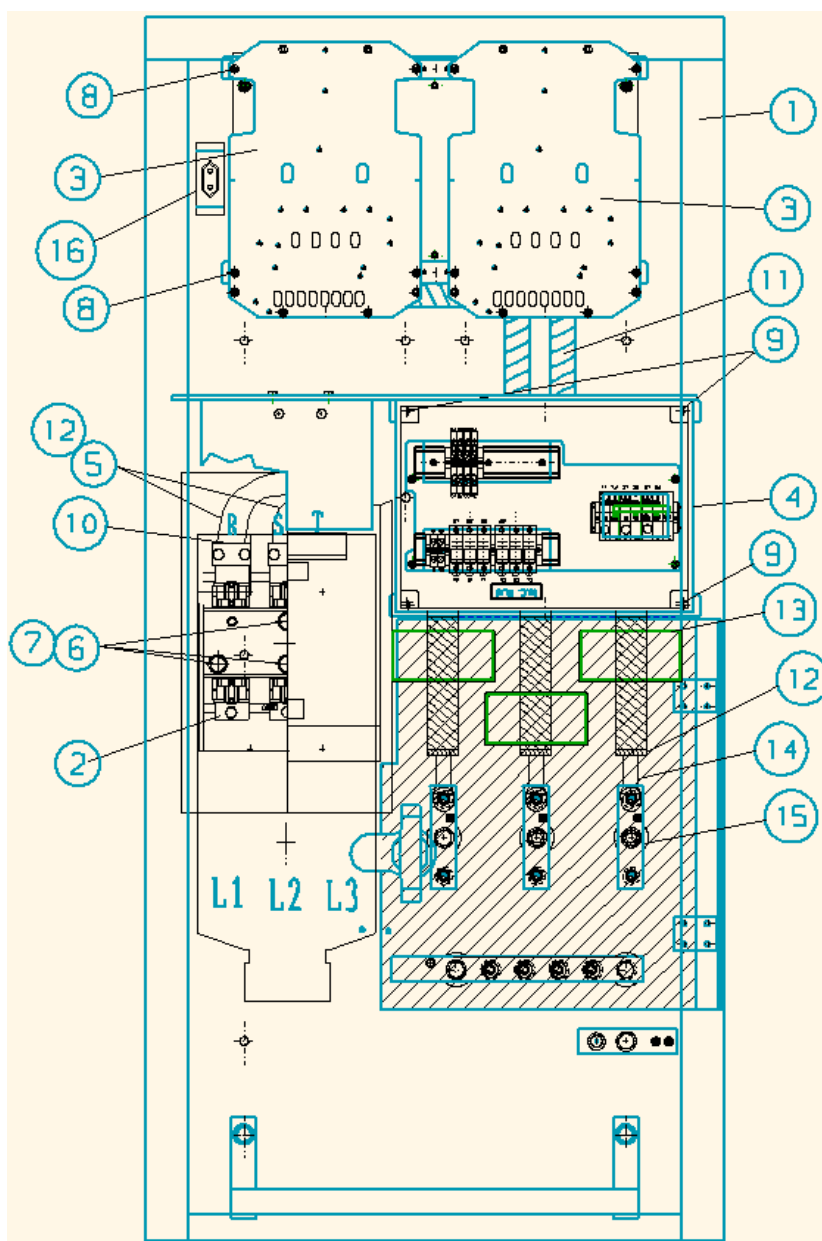
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Specification NPS 120

1. 3x400A Low Voltage Metering Cabinet (M.C)
2. Medium Voltage Metering Cabinet (M.V).
3. 3x [100-500] A Low Voltage, PV connection
4. Base for Metering Cabinets.



1. L.V 3x400A polyester metering cabinet.
2. Fuses switch disconnecter – Acc. Specification NPS-207/9.
3. Meters plate – Acc. Specification NPS-87/5.
4. L.V Medium isolated box with fuses, terminal block, current block – Acc. D.3 in Appendix D.
5. Flexible phase cable 150 mm², according to SI 60227 (3m) and Specification NPS-329/2.
6. M10X20mm screw according to DIN 933 (4 pcs.).
7. Conical spring washer for M10 screw according to DIN 6796 (4 pcs.).
8. SS screw 5x16mm, use for plastic material (8 pcs.).
9. Screw 4.2x25mm, use for plastic material (4 pcs.).

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10. Cable end sleeve 150mm², copper, according to DIN 46228 (3 pcs.) See appendix D.1.
11. Pliable smooth conduits – self extinguish (1.5m).
12. 150mm² heat shrinks tubing – for phase marking (3 pcs).
13. Current transformer 500/5A – Cat. No 5395513 (3 pcs).
14. Cable lug with 13 mm hole for 150 mm² copper cable (3 pcs).
15. Phase busbar 30x10 mm (3 pcs).
16. Two pin outlet (1 pcs).

Remarks:

- ❖ Part 6 and 7 will be plated with zinc coating + yellow/blue passivation (dichromate).
- ❖ For closing torque screws and nuts see appendix E.
- ❖ **The current transformers shall be securely mounted on the back panel (The manufacturer may submit a mounting solution to the I.E.Co's approval).**

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1. 3x400A Low Voltage Metering Cabinet (M.C)
2. Medium Voltage Metering Cabinet (M.V).
3. 3x [100-500] A Low Voltage, PV connection
4. Base for Metering Cabinets.

Drawing C.3

**– M.V metering cabinet
equipped (1028109)**

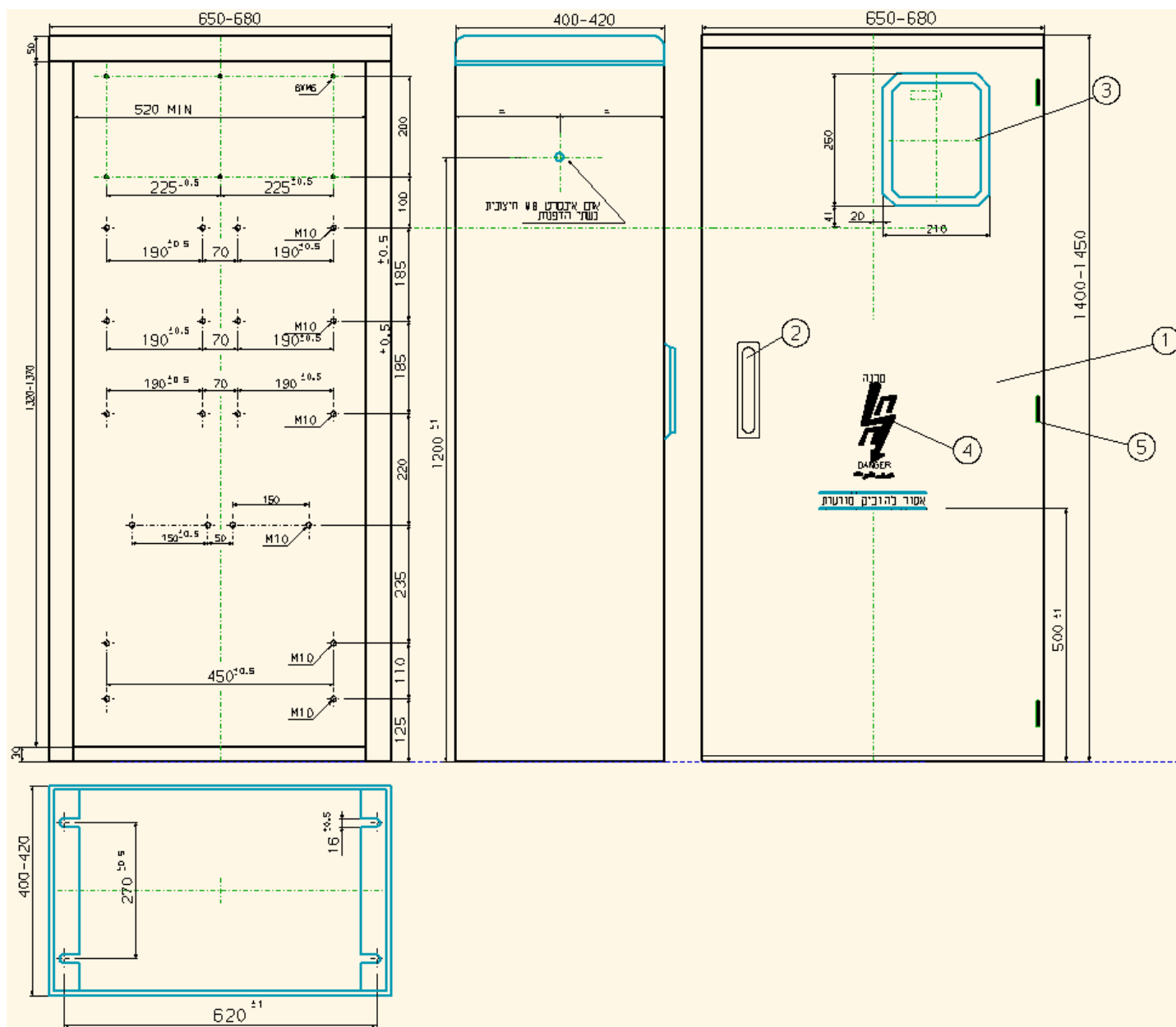
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1. 3x400A Low Voltage Metering Cabinet (M.C)
2. Medium Voltage Metering Cabinet (M.V).
3. 3x [100-500] A Low Voltage, PV connection
4. Base for Metering Cabinets.



TSC-3113

1. M.V metering cabinet, equipped.
2. Semi cylinder lock – white – Cat. No 3414398.
3. Window according to clause 10.5.2.
4. Warning sign according to Appendix F.
5. Minimum three door hinges.

Remark: The bidder may offer an alternative embedded nuts form on the back cabinet's panel, and such proposal will be considered by the I.E.Co.

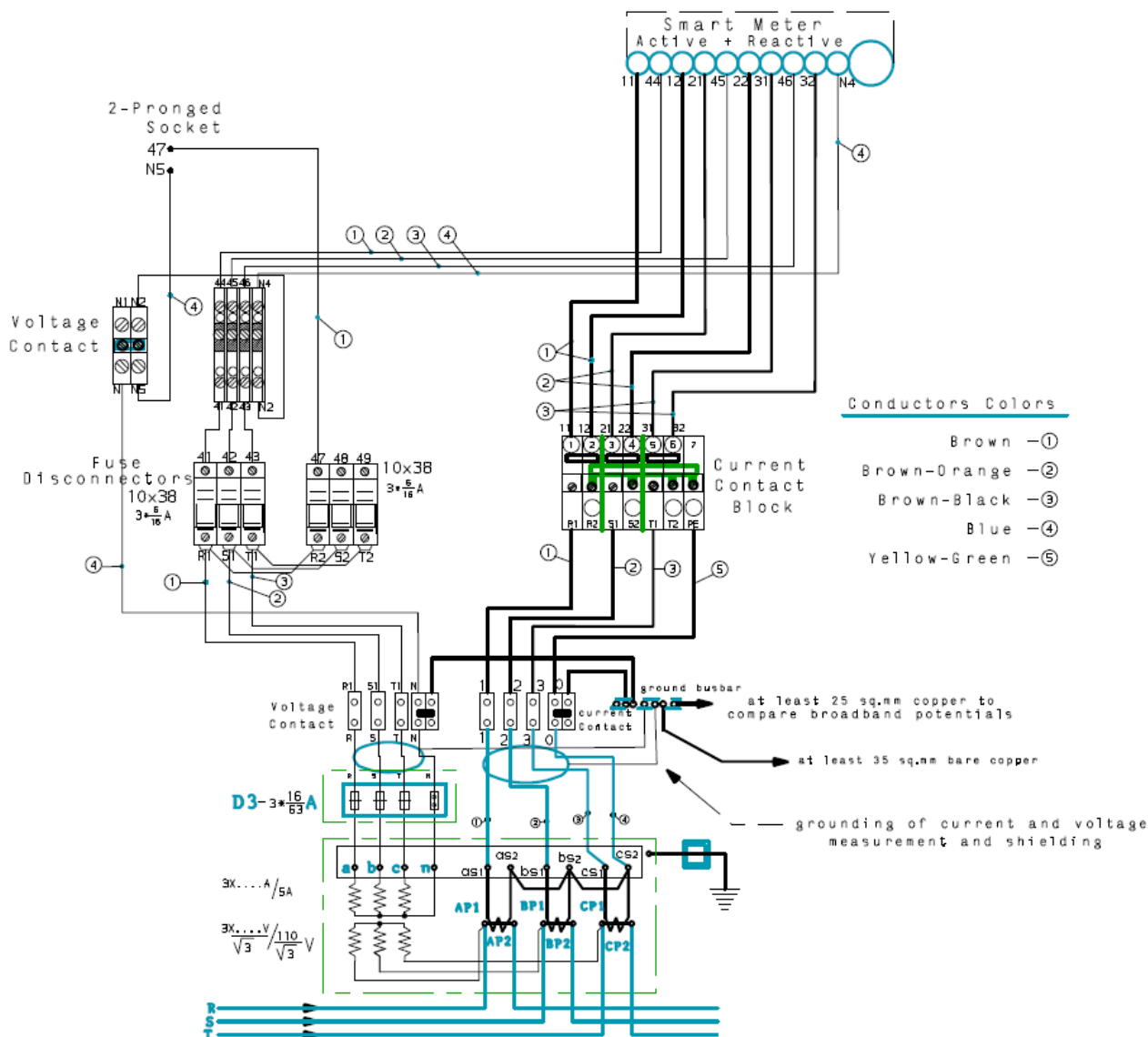
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Specification NPS 120

1. 3x400A Low Voltage Metering Cabinet (M.C)
2. Medium Voltage Metering Cabinet (M.V).
3. 3x [100-500] A Low Voltage, PV connection
4. Base for Metering Cabinets.



Remarks:

- ❖ The cross-section of the current conductors shall be 4 mm², solid.
- ❖ The cross-section of the voltage conductors shall be 2.5 mm², solid.
- ❖ The grounding conductor (yellow-green) shall be 4 mm².
- ❖ The conductors shall be of rigid type, with PVC insulation for low voltage, in accordance with 60227 Israeli standard.
- ❖ Accessories for connecting test devices shall be installed in the voltage circuit clamps.
- ❖ All the wiring between the insulation box and meters plate shall be protected with plastic conduits – PVC reinforced with suitable inner diameter – **for all the cabinets**.
- ❖ The current contact block shall be delivered in the shorted to ground position.

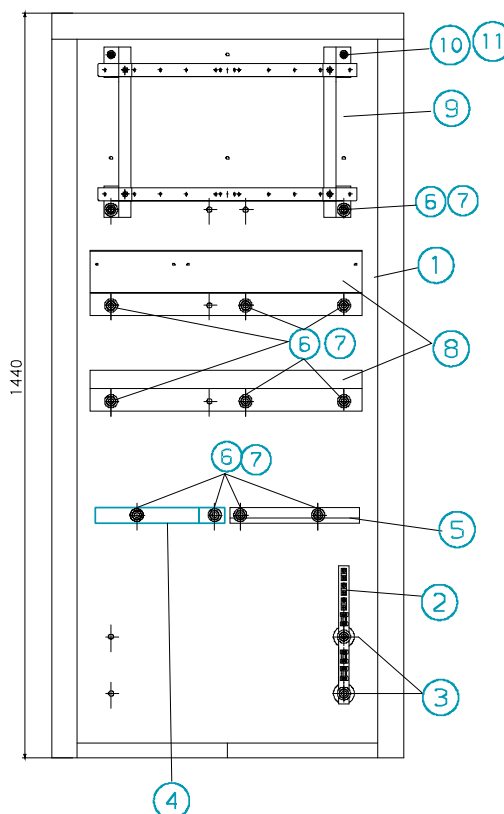
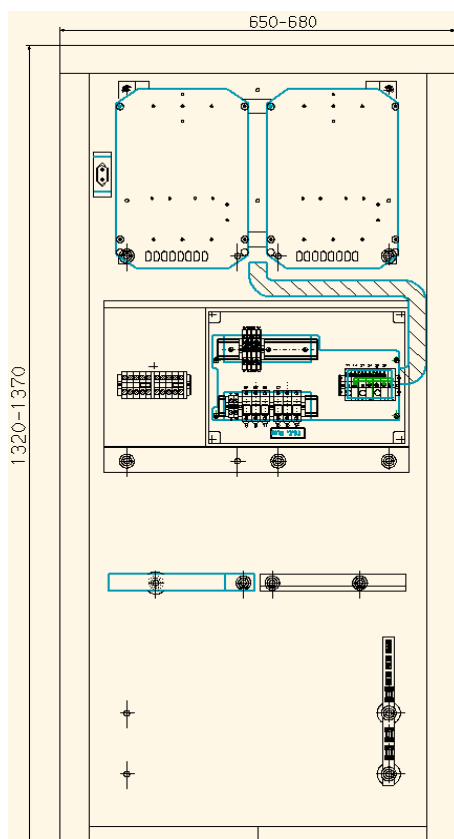
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Specification NPS 120

1. 3x400A Low Voltage Metering Cabinet (M.C)
2. Medium Voltage Metering Cabinet (M.V).
3. 3x [100-500] A Low Voltage, PV connection
4. Base for Metering Cabinets.



1. M.V metering cabinet.
2. Ground busbar.
3. 40 mm supported insulator according to D.2 in appendix D.
4. Cables supporting.
5. Equipment support.
6. M10X12mm screw according DIN 933, coating thickness of min 10 micron (12 pcs.).
7. Conical spring washer for M10 screw according DIN 6796, coating thickness of min 10 micron (12 pcs.).
8. Boxes support.
9. Meters plate support.
10. M10X12mm screw according DIN 933, coating thickness of min 10 micron (2 pcs.).
11. Conical spring washer for M10 screw according DIN 6796, coating thickness of min 10 micron (2 pcs.).
12. Meters plate
13. SS screw 5x16mm, use for plastic material (8 pcs.).
14. Small insulated box with terminal blocks.
15. Insulated box (for terminals, fuses and plate with current contact) - Acc. D.3 in Appendix D.
16. Pliable smooth conduits – self extinguish (1m).

REMARK: All the screws, springs washer and nuts will plated with zinc coating + yellow/blue passivation (dichromate).

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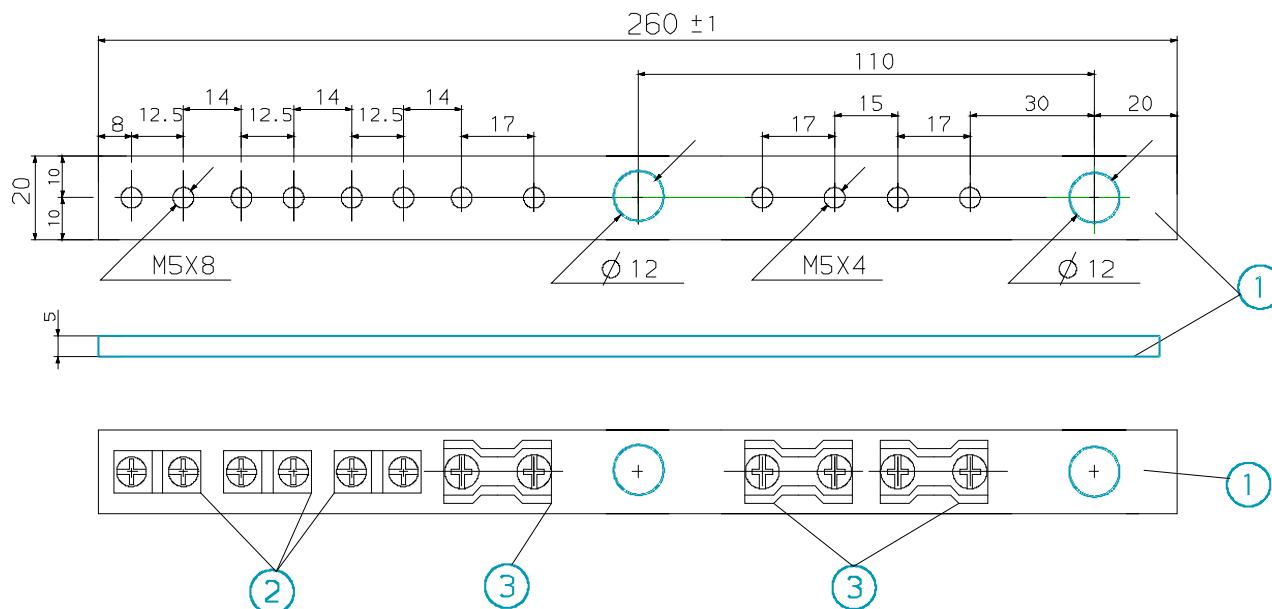
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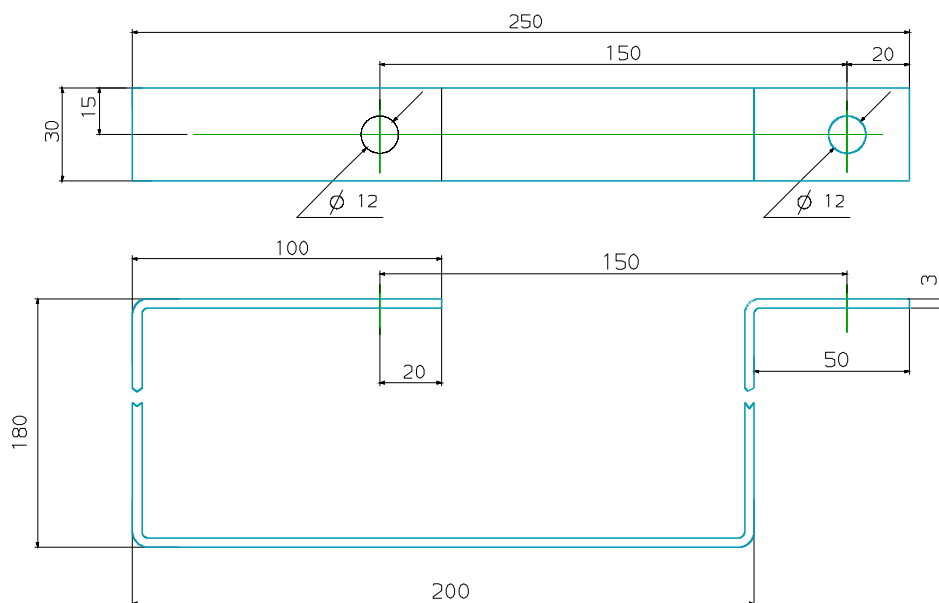
1. 3x400A Low Voltage Metering Cabinet (M.C)
2. Medium Voltage Metering Cabinet (M.V).
3. 3x [100-500] A Low Voltage, PV connection
4. Base for Metering Cabinets.

Ground busbar:



1. Ground busbar E-Cu-F25 acc. DIN EN 13601 with coating thickness of min 20 micron – tin plated.
2. 1.5÷16 mm² copper – bronze alloy clamps, according to VDE 220, tin plated (3 pcs.).
3. 10÷70 mm² copper – bronze alloy clamps, according to VDE 220, tin plated (3 pcs.).

Cables supporting – SS 304:



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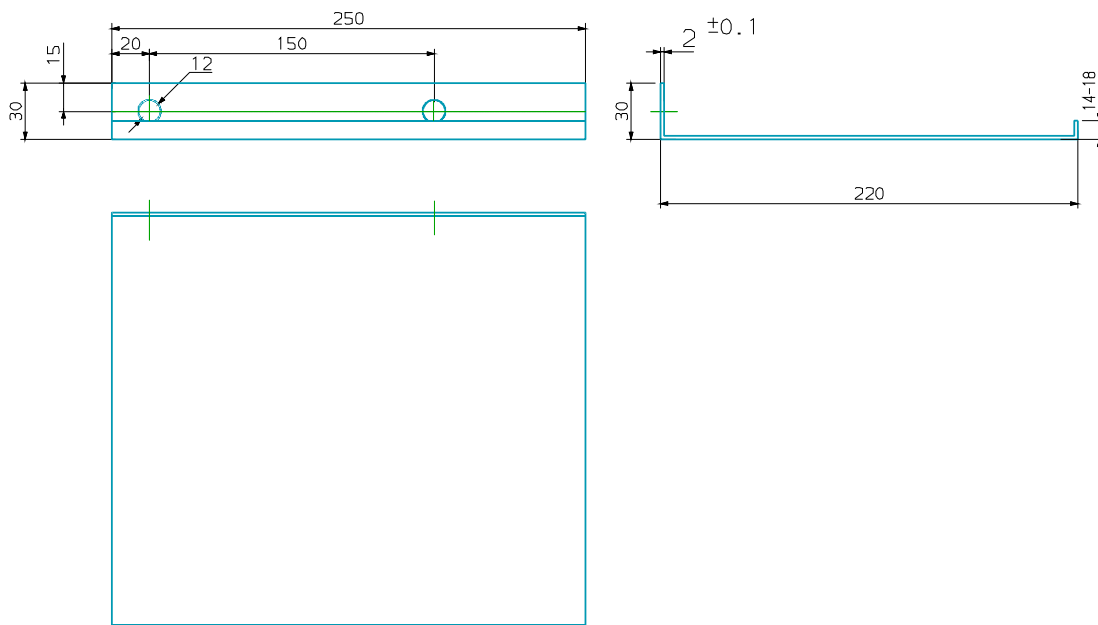
Issued date: 05/2026

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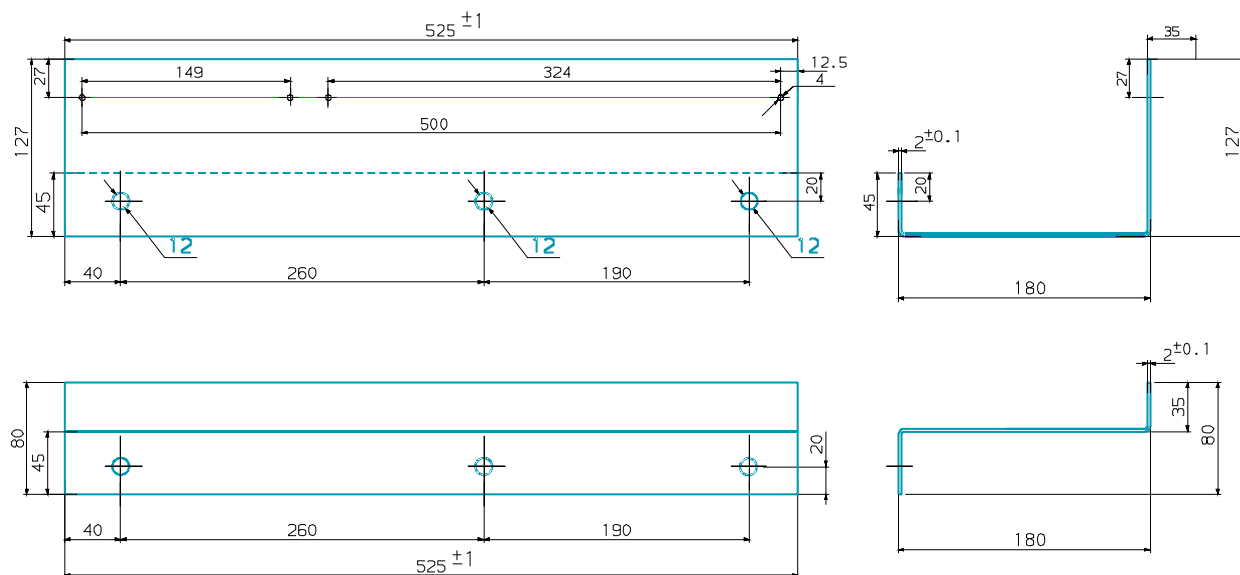
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1. 3x400A Low Voltage Metering Cabinet (M.C)
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Equipment support – SS 304:



Boxes support – SS 304:



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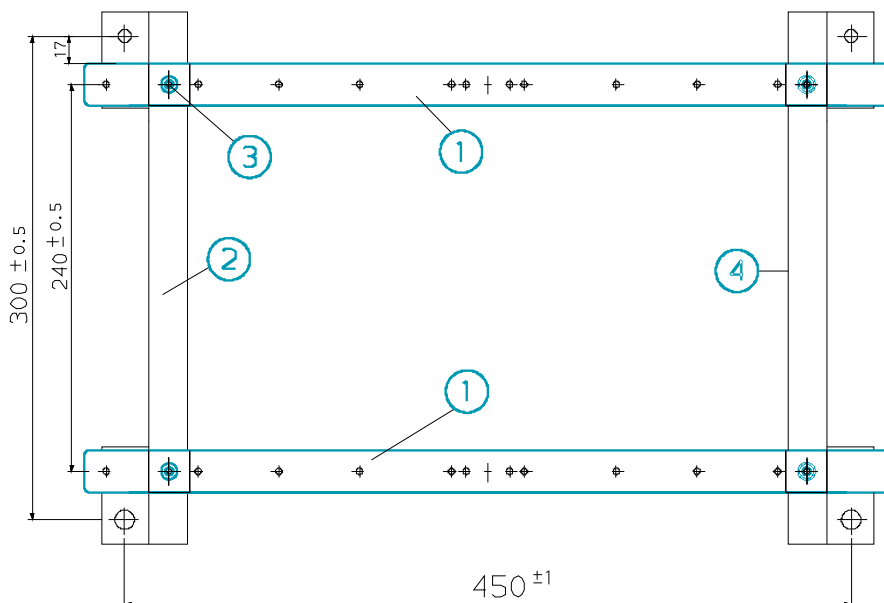
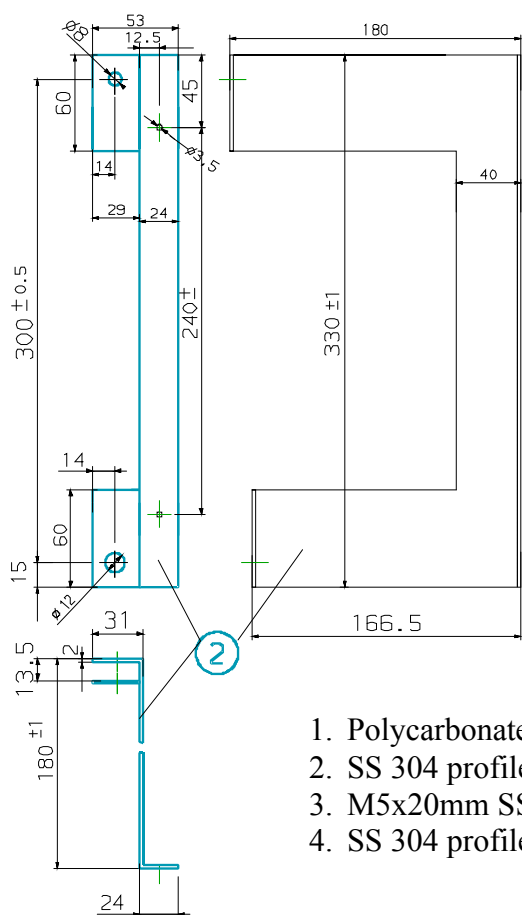
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3. 3x [100-500] A Low Voltage, PV connection
4. Base for Metering Cabinets.

Meters plate support:



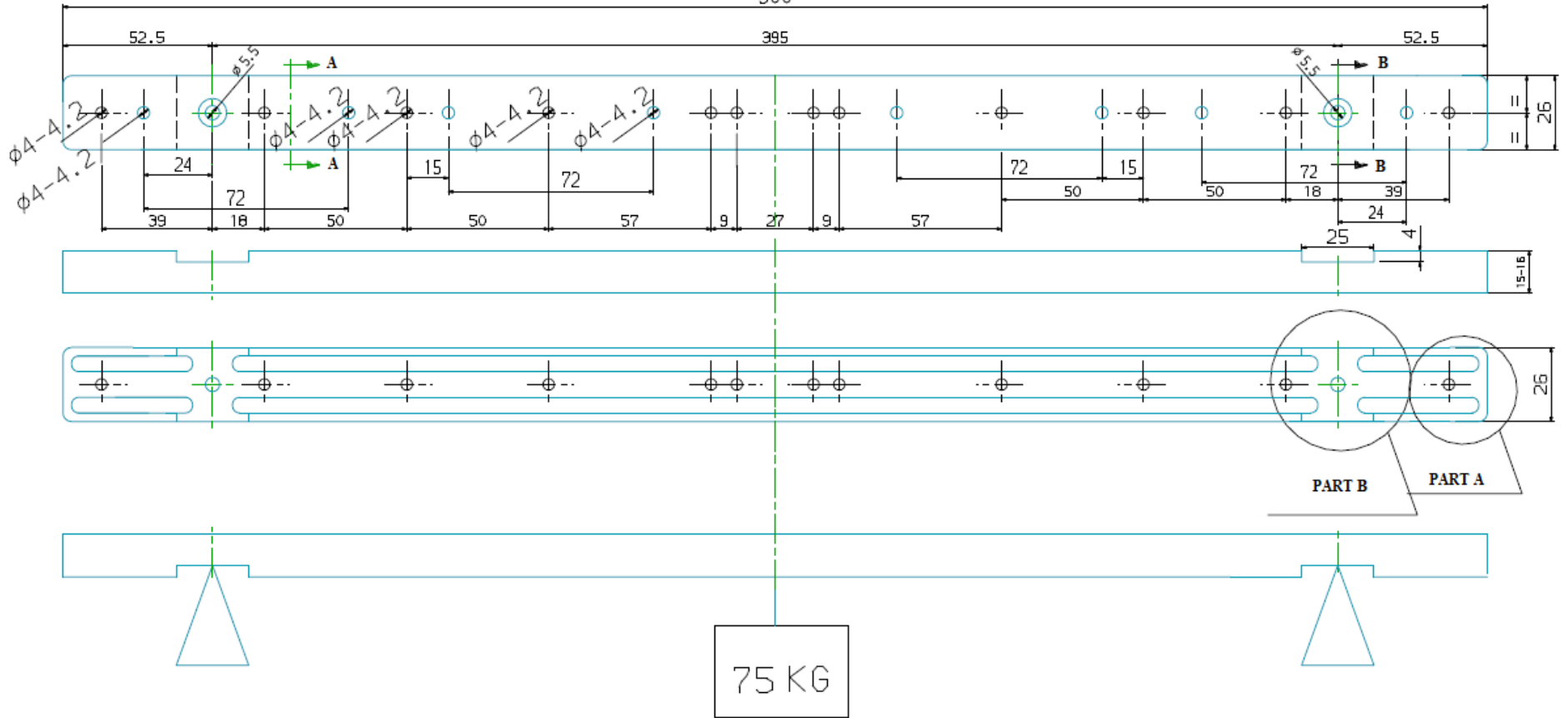
1. Polycarbonate according to NPD 364 / TSC 3163.
2. SS 304 profile.
3. M5x20mm SS screw.
4. SS 304 profile (a mirror image of part 1).

500

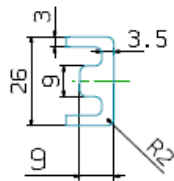


REMARK:

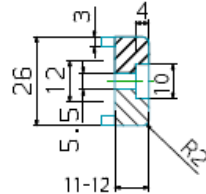
Material: linear polycarbonate, Original or grainy.
Combustion resistance: according UL-94, Class V0.
Phase should withstand the weight of 75 kg for a minute.



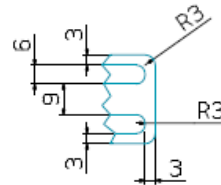
SECTION A
1:1 Scale



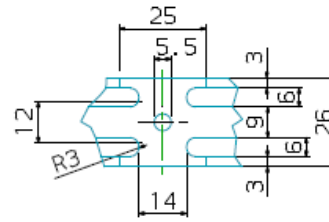
SECTION B
1:1 Scale



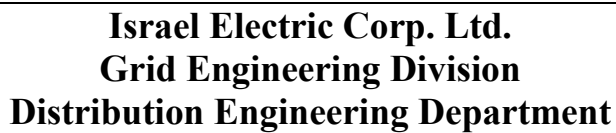
PART A
1:1 Scale



PART B
1:1 Scale



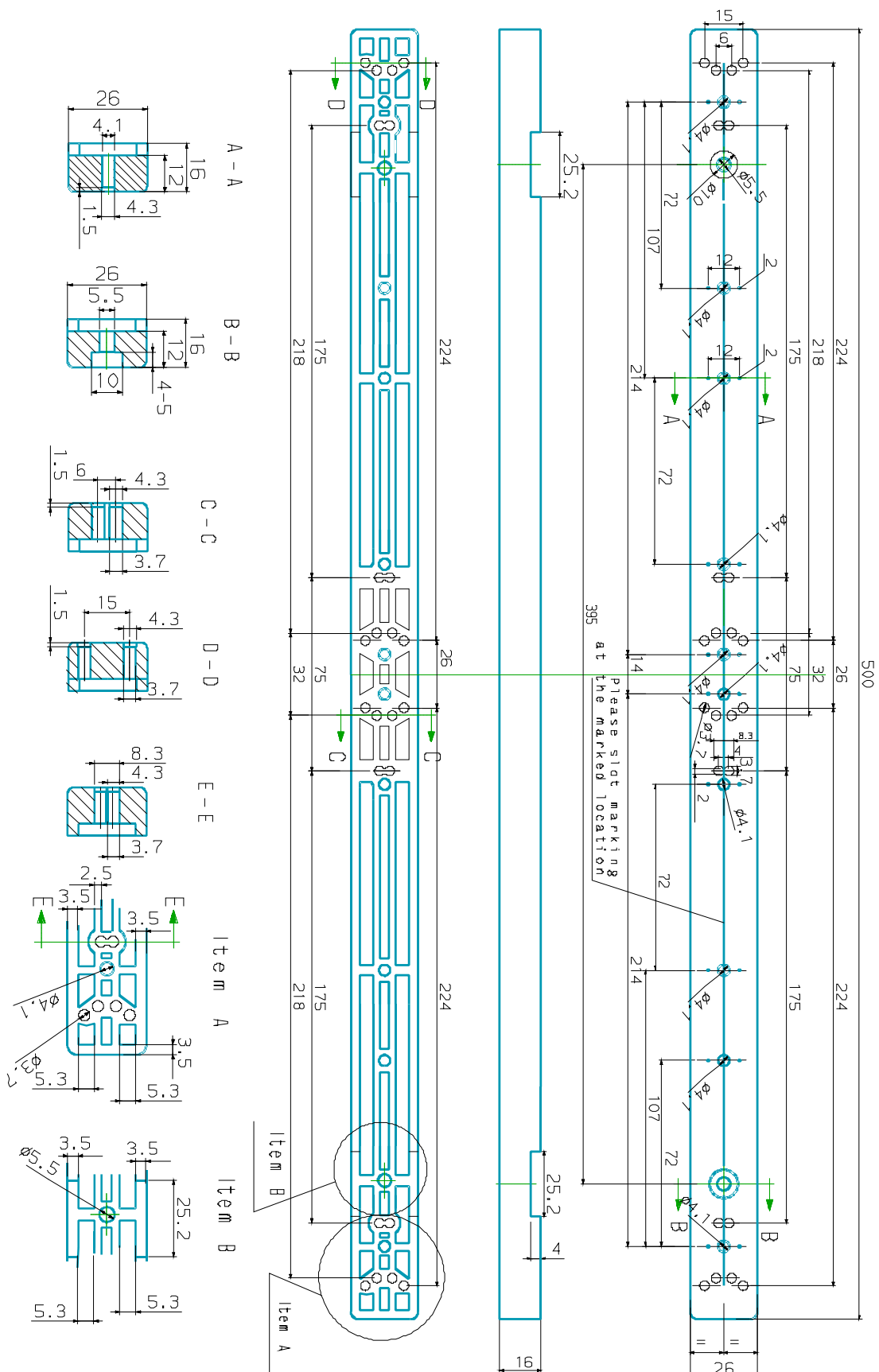
NPD 364



Specification NPS 120

1. **3x400A Low Voltage Metering Cabinet (M.C)**
2. **Medium Voltage Metering Cabinet (M.V).**
3. **3x [100-500] A Low Voltage, PV connection**
4. **Base for Metering Cabinets.**

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Material: linear polycarbonate, Original or grainy.
Combustion resistance: according UL-94, Class V0.
Phase should withstand the weight of 75 kg for a minute

TSC:3163

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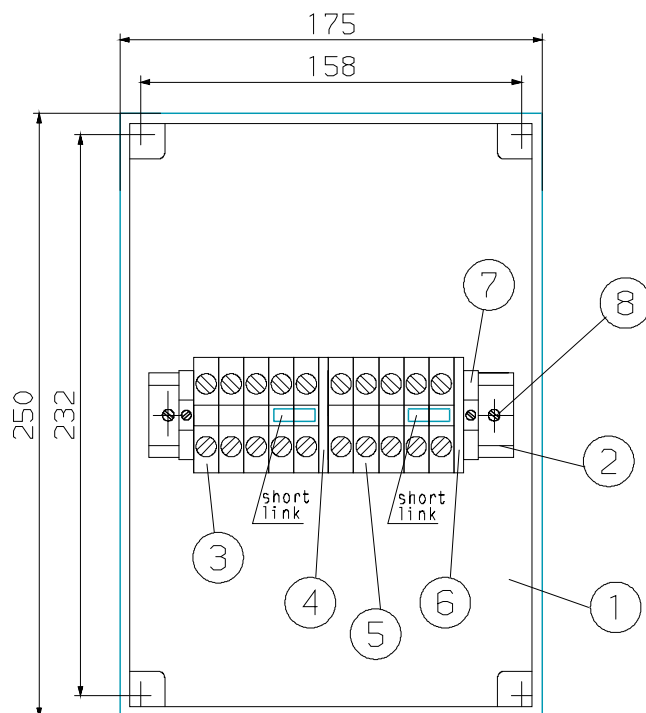
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2. Medium Voltage Metering Cabinet (M.V).
3. 3x [100-500] A Low Voltage, PV connection
4. Base for Metering Cabinets.

Small insulated box with terminal blocks:



1. Small insulated box.
2. 35 mm DIN rail.
3. Terminal blocks for 16mm² cooper conductors, according to IEC 60947-7-1 (5 pcs.).
4. Terminal sides cover (1 pcs.).
5. Terminal blocks for 35mm² cooper conductors, according to IEC 60947-7-1 (5 pcs.).
6. Terminal sides cover (1 pcs.).
7. Din rail stopper (2 pcs.).
8. Steel screw for din rail (2 pcs.).

REMARK:

For closing torque screws and nuts see appendix E.

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4. Base for Metering Cabinets.

Drawing C.4

**– L.V. 3x[100-500]A polyester
metering cabinet
equipped for PV connection (5294843)**

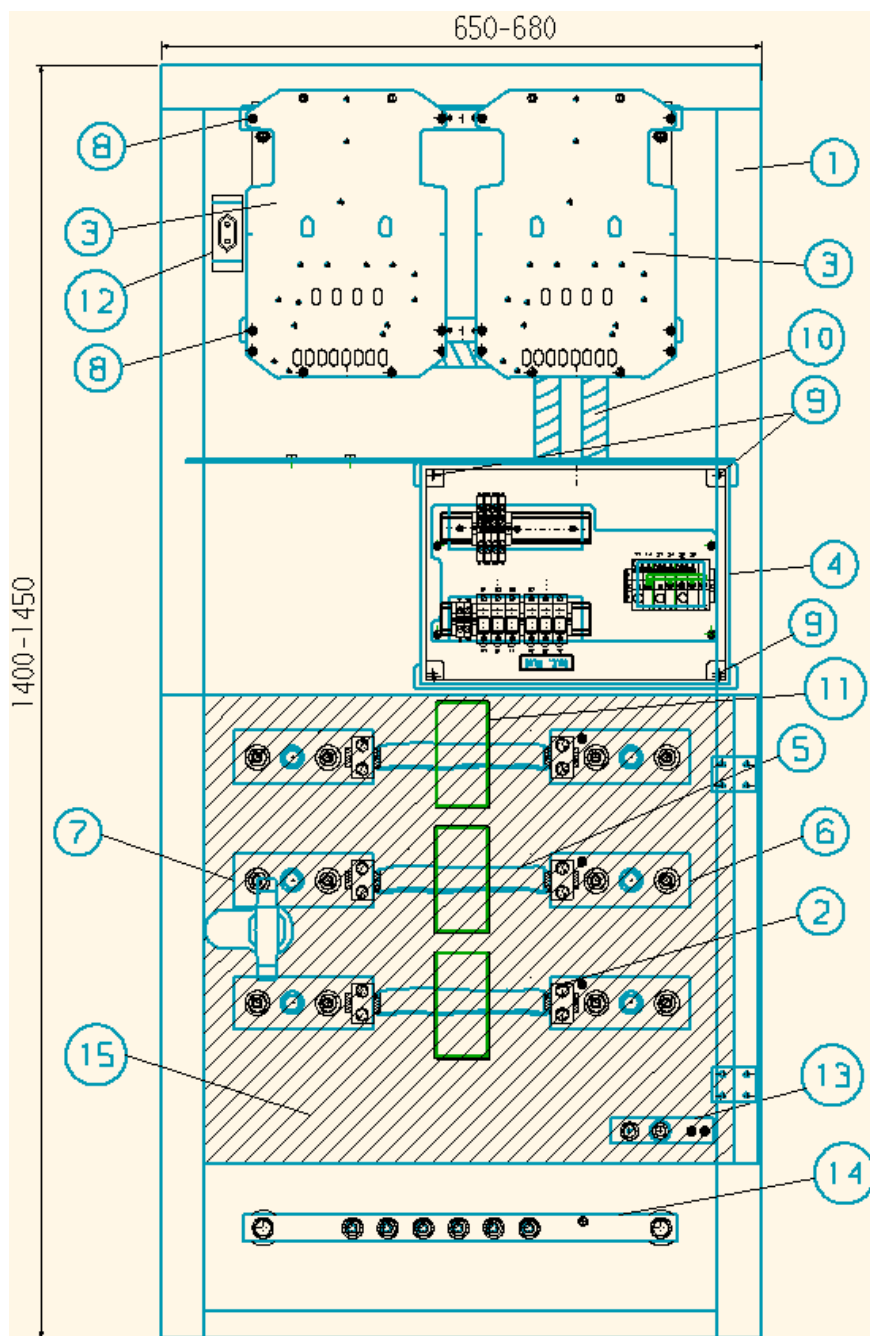
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2. Medium Voltage Metering Cabinet (M.V).
3. 3x [100-500] A Low Voltage, PV connection
4. Base for Metering Cabinets.



1. L.V 3x400A polyester metering cabinet.
2. Al/Cu 120÷300 mm² copper – bronze alloy double clamps, according to VDE 220, coating thickness of min 12 micron, tin plated – Item acc. to the I.E.Co approval. (6 pcs).
3. Meters plate – Acc. Specification NPS-87/5 (2 pcs).
4. L.V Medium isolated box with fuses, terminal block, current block – Acc. D.3 in Appendix D.

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5. Flexible phase cable 150 mm² (length: 27 cm), according to SI 60227 and Specification NPS-329/2 (6 pcs).
6. Right phase busbar 60x10 mm, E-Cu-F25 acc. DIN EN 13601 with coating thickness of min 20 micron – tin plated (3 pcs):
 - M5x12mm Phillips screw according to DIN 7985, coating thickness of min 5 micron (1 pcs).
 - Flat washer 5.3x10x1, according to DIN 125, coating thickness of min 5 micron (1 pcs.).
 - M12X25mm screw according to DIN 933, coating thickness of min 12 micron (2 pcs).
 - M12 nuts + Conical spring washer connected together according to DIN 6796, coating thickness of min 12 micron (2 pcs).
7. Left phase busbar 60x10 mm, E-Cu-F25 acc. DIN EN 13601 with coating thickness of min 20 micron – tin plated (3 pcs):
 - Flat washer 5.3x10x1, according to DIN 125, coating thickness of min 5 micron (1 pcs.).
 - M12X25mm screw according to DIN 933, coating thickness of min 12 micron (2 pcs).
 - M12 nuts + Conical spring washer connected together according to DIN 6796, coating thickness of min 12 micron (2 pcs).
8. SS screw 5x16mm, use for plastic material (8 pcs.).
9. Screw 4.2x25mm, use for plastic material (4 pcs.).
10. Pliable smooth conduits – self extinguish (1.5m).
11. Current transformer 500/5A – Cat. No 5395513 (3 pcs).
12. Two pin outlet (1 pcs).
13. Ground busbar 30X5 mm:
 - Ground busbar E-Cu-F25 acc. DIN EN 13601 with coating thickness of min 20 micron – tin plated.
 - M8X16mm screw according to DIN 933, coating thickness of min 8 micron.
 - Conical spring washer for M8 screw according to DIN 6796, coating thickness of min 8 micron.
 - M8 insert nuts coating thickness of min 8 micron.
 - M5x10mm Phillips screw according to DIN 7985, coating thickness of min 5 micron (2 pcs.).
 - Conical spring washer for M5 screw according to DIN 6796, coating thickness of min 5 micron (2 pcs).
14. Neutral busbar 30X8 mm
 - E-Cu-F25 acc. DIN EN 13601 with coating thickness of min 20 micron – tin plated.
 - M5x12mm Phillips screw according to DIN 7985, coating thickness of min 5 micron.
 - Flat washer 5.3x10x1, according to DIN 125, coating thickness of min 5 micron
 - M12X25mm screw according to DIN 933, coating thickness of min 12 micron (6 pcs.).
 - M12 nuts + Conical spring washer for M12 screw acc. to DIN 6796 connected together, coating thickness of min 12 micron (6 pcs.).
15. Protective partition (for the busbars) shall be installed on the cabinet side with hinges.

Remarks:

- ❖ For closing torque screws and nuts see appendix E.
- ❖ The current transformers shall be securely mounted on the back panel (The manufacturer may submit a mounting solution to the I.E.Co's approval).
- ❖ The phase busbars shall be arranged in a stepped configuration, with the lower busbar positioned deeper (closer to the rear of the cabinet).



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2. Medium Voltage Metering Cabinet (M.V).
3. 3x [100-500] A Low Voltage, PV connection
4. Base for Metering Cabinets.

- ❖ The screws in the busbars (parts 6,7,13,14) shall be facing outwards.
The bidder shall provide a secure method for implementing this arrangement, conditional upon approval by the I.E.Co.
- ❖ The bidder shall offer each component of the cabinet assembly (such as protective partition, phase busbars, neutral busbars, ground busbars, etc.) including detailed drawings, for approval by the I.E.Co.
- ❖ This cabinet external dimensions shall match those of 3x400 LV metering cabinet.

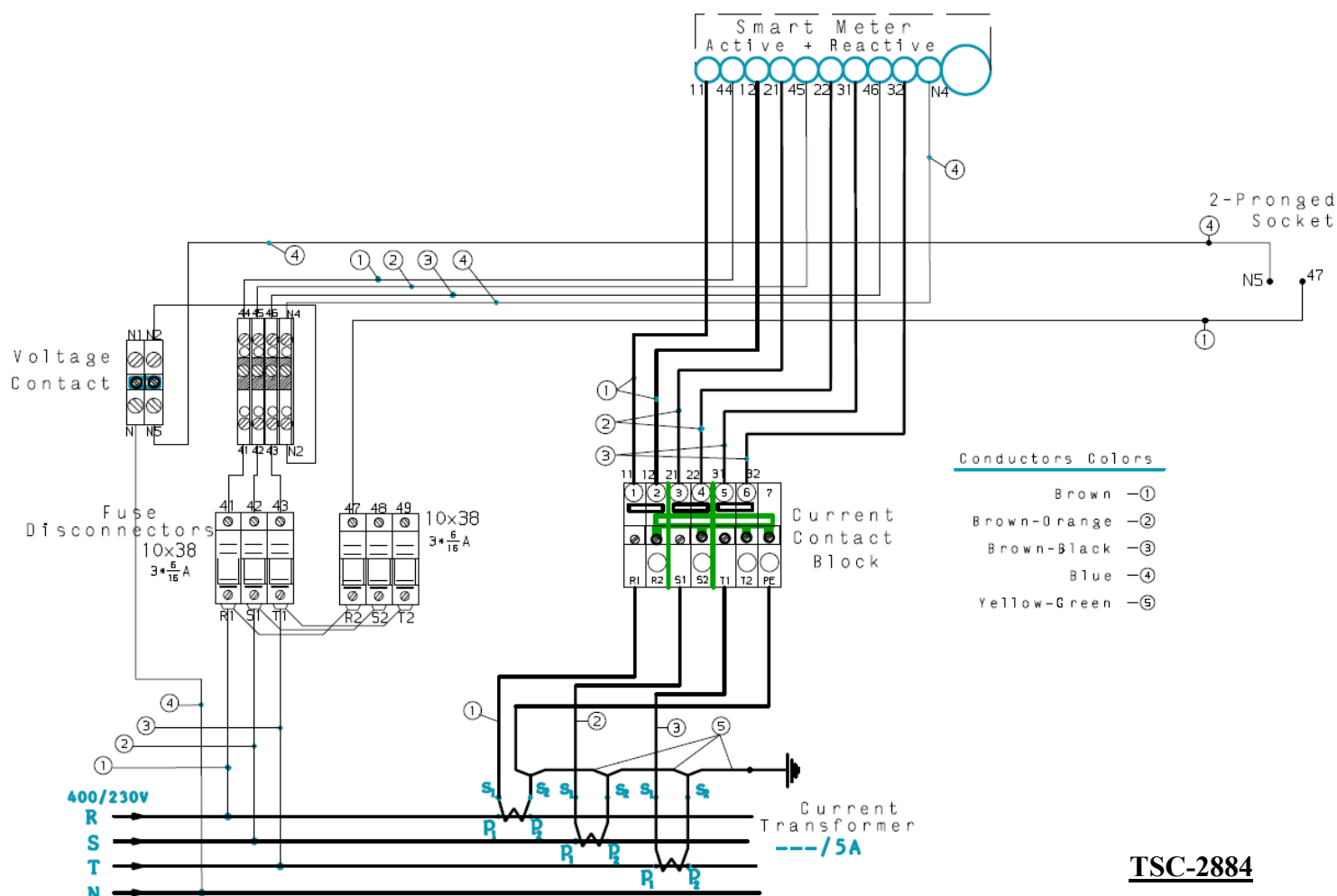
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3. 3x [100-500] A Low Voltage, PV connection
4. Base for Metering Cabinets.



Remarks:

- ❖ The cross-section of the current conductors shall be 4 mm², solid.
- ❖ The cross-section of the voltage conductors shall be 2.5 mm², solid, including the electrical outlet (socket).
- ❖ The grounding conductor (yellow-green), from the current contact block to the current transformer and to the grounding bar, shall be continuous along its entire length.
- ❖ The conductors shall be of rigid type, with PVC insulation for low voltage, in accordance with 60227 Israeli standard.
- ❖ When wiring the conductors, a loop shall be made around the current transformer screw.
- ❖ Accessories for connecting test devices shall be installed in the voltage circuit clamps.
- ❖ All the wiring between the insulation box and meters plate shall be protected with plastic conduits – PVC reinforced with suitable inner diameter – **for all the cabinets**.
- ❖ The current contact block shall be delivered in the shorted to ground position.
- ❖ The current transformer shall be mounted on the back panel (The manufacturer may submit a mounting solution to the I.E.Co's approval).

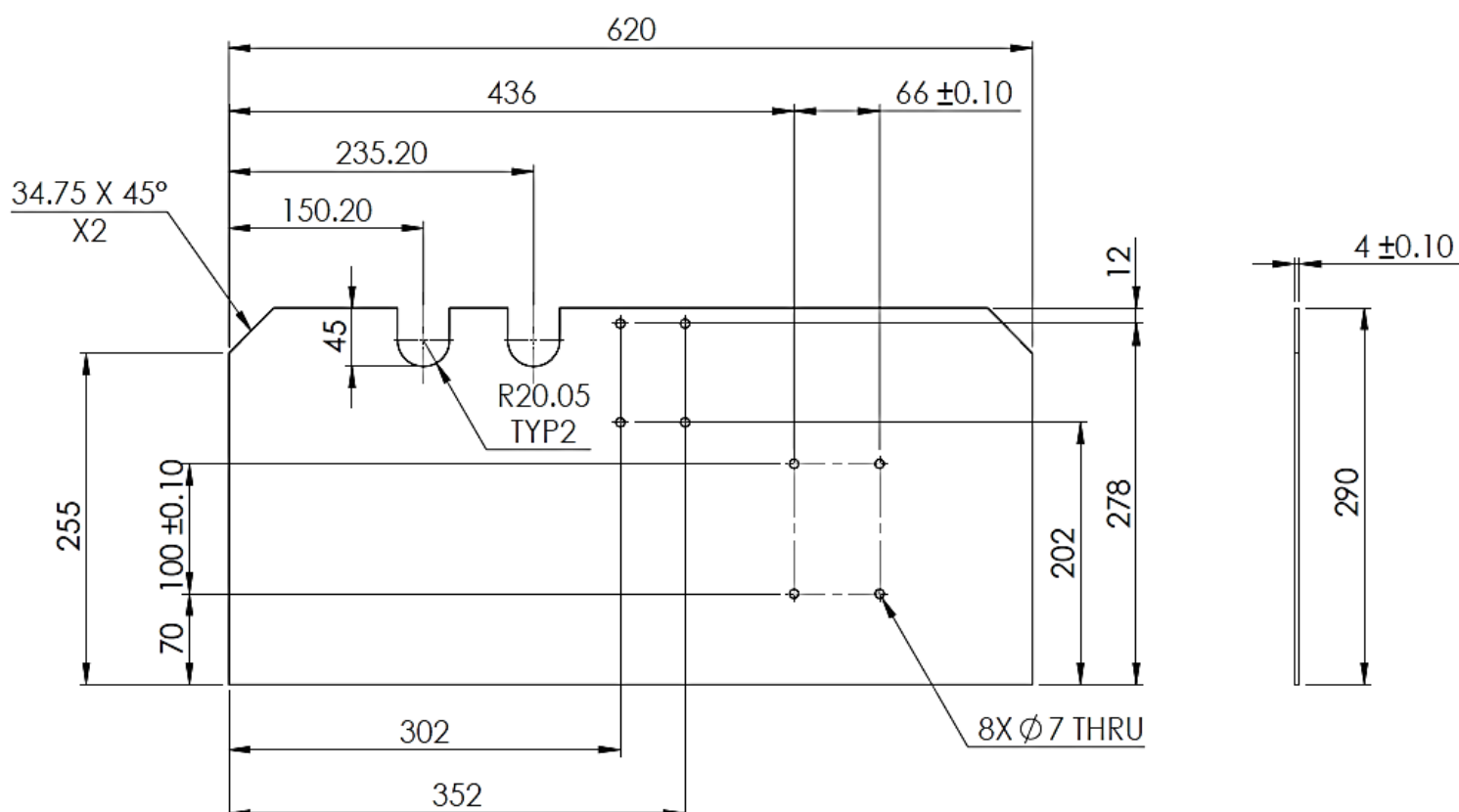
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2. Medium Voltage Metering Cabinet (M.V).
3. 3x [100-500] A Low Voltage, PV connection
4. Base for Metering Cabinets.



Material:

- Polyester + GF 25 %
- Fiberglass according to HM 2471 DIN 7735 or NEMA GRADE LI1-15 GPO3.
- Flame rate V0 according to UL94.

Plate thickness: 4 mm.

Notes:

- Deburr and break sharp edges.
- Dimensions are in millimeters unless otherwise specified
- Linear tolerance: ± 0.5
- Angular tolerance: ± 0.5

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4. Base for Metering Cabinets.

APPENDIX

D

**Technical requirements for items to be
supplied by the supplier**

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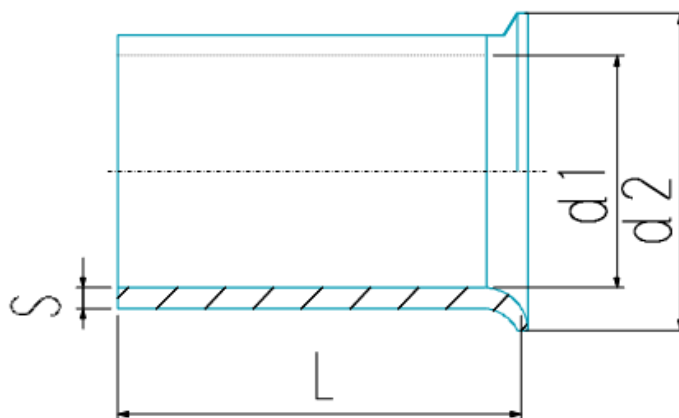
1. 3x400A Low Voltage Metering Cabinet (M.C)
2. Medium Voltage Metering Cabinet (M.V).
3. 3x [100-500] A Low Voltage, PV connection
4. Base for Metering Cabinets.

D.1 – copper end sleeve for wire

The proposed cooper end sleeve shall comply with the requirements specified in Standard DIN 46228 tail 1

Material: Copper.

Coating: Tin with minimum thickness of at least 3 microns.



Cross section in sq.mm	Thickness of the wall in mm [S]	Inner diameter in mm [d1]	External diameter in mm [d2]	Length of the end sleeve in mm [L]
150	0.5	18.5	21	32

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D.2 – L.V Support Insulator including raising

❖ Document for the proposal:

Detailed drawing. The drawings must be detailed to the fullest (including: manufacturer's part number, standard of manufacturing, dimension, tolerance, material, plating, marking etc.).

❖ Technical requirement for all the insulators:

- Material: Polyamide 6.6 with 30% fiberglass, flame rate V0 according to UL94.
- Color: Black.
- The insulator will stand a voltage of 5,000V for one minute without suffering any damage.
- Absorption capacity of the insulator in cold water should not exceed 100 milligrams, according to DIN EN ISO 62.
- The outer surface will be smooth, at least level N8, according to SI 780.
- Axis line of screws should not exceed more than one degree.
- Dimensions are in mm, tolerance 0.5mm.
- Each Insulator shall be marked with the following:
 - Manufacture name/trademark
 - 1000V

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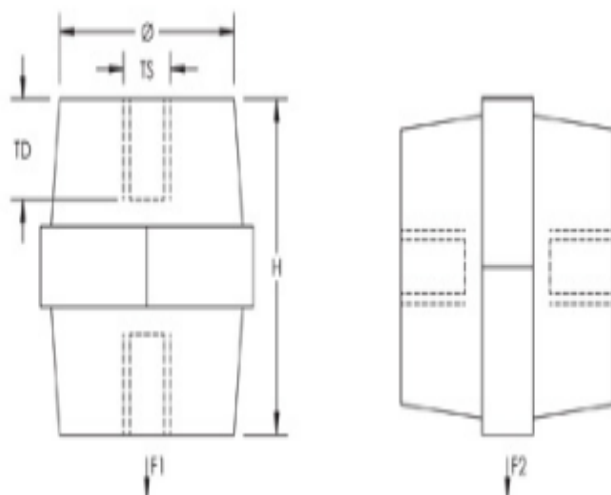
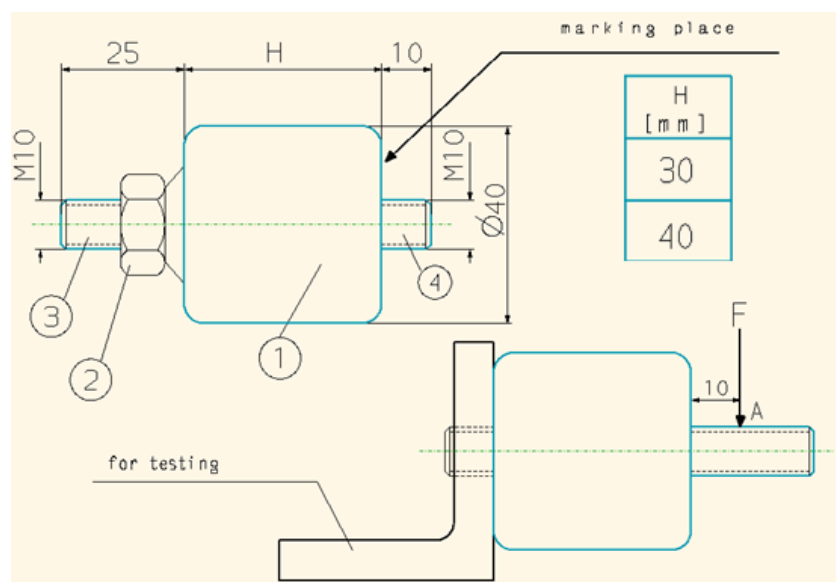
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4. Base for Metering Cabinets.

❖ **Technical instructions for 30 and 40 mm insulators:**



- The insulator will stand at a temperature of 150°C for 15 minutes, when a force of **F = 300kg** is applied on point A.
- For 40 mm insulator - F1 static load 11,000N, F2 static load = 4500N.
- For 30 mm insulator - F1 static load 6000N, F2 static load = 3000N.
- The insulator will stand when a force of F1=11,000 N
- The deviation between the screws axes does not exceed 1%.
- Part 1: Insulator.
- Part 2: M10 nuts with conical spring washer, coating thickness of min 10 micron, plated with zinc coating + yellow/blue passivation (dichromate).
- Parts 3 and 4: M10 steel 8.8 screw according to DIN 933, coating thickness of min 10 micron, plated with zinc coating + yellow/blue passivation (dichromate).

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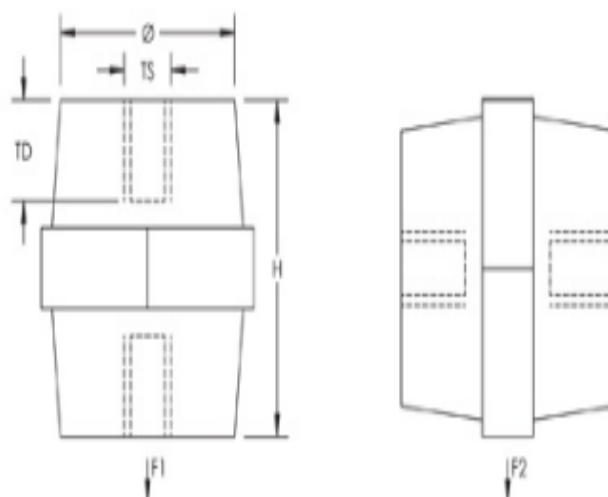
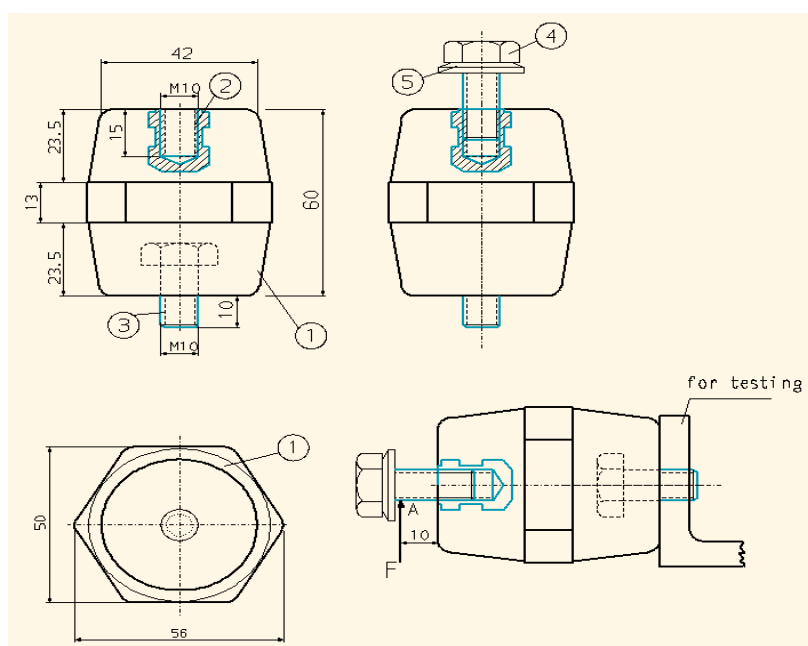
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2. Medium Voltage Metering Cabinet (M.V).
3. 3x [100-500] A Low Voltage, PV connection
4. Base for Metering Cabinets.

❖ **Technical instructions for 60 mm supported insulator include lifting:**



- The insulator will stand at a temperature of 150°C for 15 minutes, when a force of **F = 300kg** is applied on point A.
- For 60 mm insulator - F1 static load 22,000N, F2 static load = 10,000N
- The deviation between the screws axes does not exceed 1%.
- The screw and nut will stand minimum torque of 45Nm.
- Drawing details:
 - Part 1: Insulator
 - Part 2: Brass M10 insert nut.
 - Part 3: M10 steel 8.8 screw according to DIN 933, coating thickness of min 10 micron, plated with zinc coating + yellow/blue passivation (dichromate)
 - Part 4: M10x25 steel 8.8 screw according to DIN 933, coating thickness of min 10 micron, plated with zinc coating + yellow/blue passivation (dichromate).
 - Part 5: Conical spring washer for M10 screw according to DIN 6796, coating thickness of min 10 micron, plated with zinc coating + yellow/blue passivation (dichromate).

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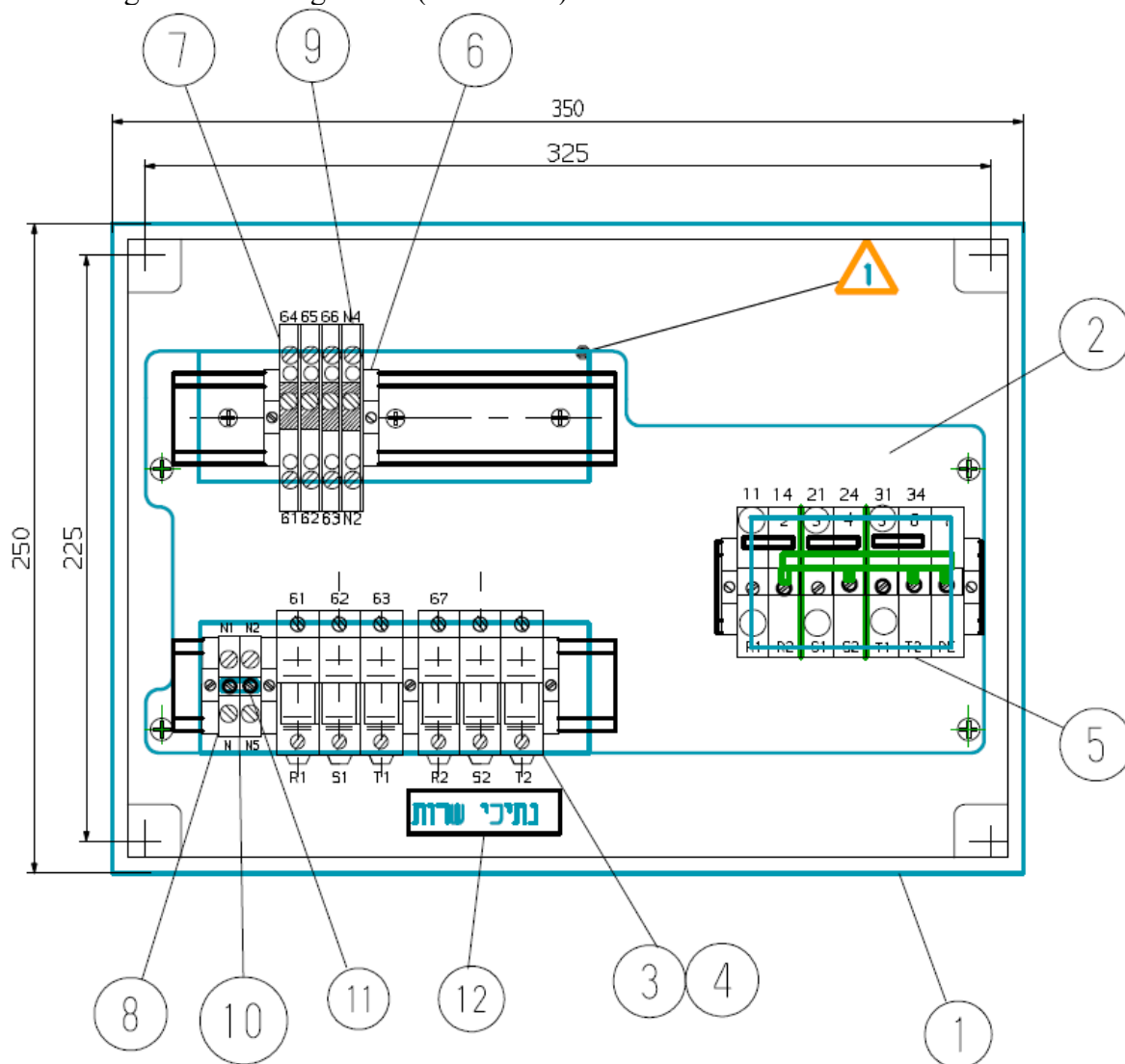
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4. Base for Metering Cabinets.

D.3 – L.V Medium isolated box with fuses, terminal block, current block

❖ **Parts Drawings:**

According to the drawing below (NPD 1139):



1. Medium insulated enclosure.
2. Content base. According to the drawing below.
3. 6 Fuse switch disconnector AC22B 10x38 according to IEC 60269/2 and IEC 60947.
4. 6A fuse X6, type 10x38. **Shall be supplied in a separate plastic bag inside the enclosure.**
5. Current Contact Terminal Block. **To be delivered in a bridged shorted to ground state – According to NPS-447.**
6. 8 Din rail stoppers from plastic material.
7. 3 Test disconnect terminal blocks for 4 sq.mm conductor – grey color.

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4. Base for Metering Cabinets.

8. 6 Side covers for terminal block.
9. Test disconnect terminal block for 4 sq.mm conductor – blue color.
10. 2 terminal blocks for 4 sq.mm conductor.
11. Terminal block jumper.
12. Sticker.

Remarks:

- ❖ All the terminal blocks and side covers will be installed on 35 mm din rail according to IEC 60947-7 standard.
the terminal block include disconnecting tool, holder official standard marking on him and suitable to 400V working voltage.
- ❖ All the connection between the electrical elements, wires kinds, shall be according to electrical wiring specified in Appendix C.2 with numbering labels on each wire connection.
- ❖ Closing Torque Screws for the electrical equipment in the enclosure shall be 4 N.M. with permission of I.E.C the bidder shall suggest another torque value.

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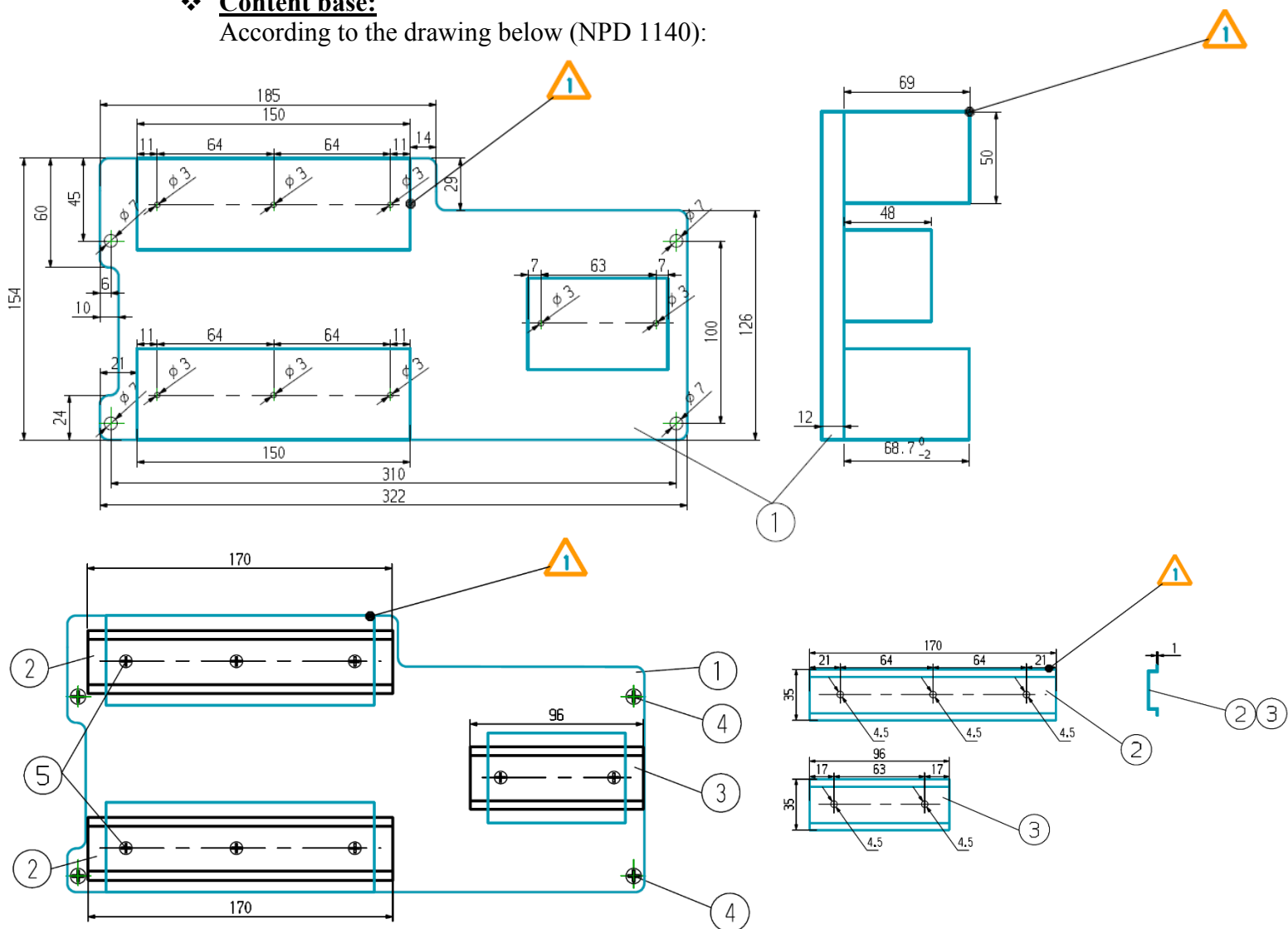
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2. Medium Voltage Metering Cabinet (M.V).
3. 3x [100-500] A Low Voltage, PV connection
4. Base for Metering Cabinets.

❖ **Content base:**

According to the drawing below (NPD 1140):



1. The base – Made of polycarbonate with fiberglass.
2. DIN rail, 35 mm wide, 170 mm long – material: SS-304 according to din 50022.
3. DIN rail, 35 mm wide, 96 mm long – material: SS-304 according to din 50022.
4. M5X12 – steel combi head screw, plated with minimum 5 micro zinc coating + yellow passivation.
5. M4X10 – steel screw for plastic material, plated with minimum 5 micro zinc coating + yellow passivation.

Remarks:

- ❖ The M5 screw (Section 5) shall be mounted on the base in such a way that it cannot loosen on its own.
- ❖ Dimensional tolerance is 0.5 mm, except where otherwise specified.

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2. Medium Voltage Metering Cabinet (M.V).
3. 3x [100-500] A Low Voltage, PV connection
4. Base for Metering Cabinets.

APPENDIX

E

Closing Torque for Screws & nuts

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The closing Torque of the screws and nuts of the busbar shall be:

1. Screw M12X45 – 49-51 N/m.
2. Screw M8X35 – 21-23 N/m.
3. Screw M6X30 – 8-10 N/m.
4. Nuts M12, M8 and M6 – 4-6 N/m

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APPENDIX

F

Warning signs

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1. Warning labels:

- 1.1** A warning label (No. 1) according to drawing no. 1. The dimensions of the label shall be 200×250 mm. the label shall meet the requirements specified in clause 2 of this appendix.



Drawing 1 - Warning Label No. 1

- 1.2** A warning label (No. 2) according to drawing no. 2. The dimensions of the label shall be 200×250 mm. the label shall meet the requirements specified in clause 2 of this appendix.



Drawing 2 - Warning Label No. 2

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1. 3x400A Low Voltage Metering Cabinet (M.C)
2. Medium Voltage Metering Cabinet (M.V).
3. 3x [100-500] A Low Voltage, PV connection
4. Base for Metering Cabinets.

1.3 A warning label (No. 3) according to drawing no.3. The dimensions of the label shall be 200×250 mm. the label shall meet the requirements specified in clause 2 of this appendix.



Drawing 3 - Warning Label No. 3

1.4 A warning label (No. 4) according to drawing no.4. The label shall meet the requirements specified in clause 2.5.1 of this appendix – silk printing, only with one color (red, RAL-3000).



Drawing 4 - Warning Label No. 4

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2. Technical requirements for labels No. 1, 2, 3

2.1 The colors of the labels shall be according to drawings No. 1, 2, 3.

2.2 The Labels shall withstand the service conditions as defined under clause 10.1.

2.3 The labels shall be printed on one of the following materials:

- Avery Dennison® T-1000 & W-1000 Series Engineering Grade Beaded Retro reflective Film.
- 3M Engineer Grade Prismatic Reflective sheeting Series 3430 with 3 Pressure Sensitive Adhesive.

2.4 The silk print colors shall be resistant to UV and shall be one of the following:

- Avery Dennison Series 4930 Inks
- 3M Process color Series 880I
- Sun Chemicals- Coates GmbH HG-XL

2.5 If the bidder would prefer to use different materials or different methods (such as silk printing) than the labels shall meet the following requirements:

2.5.1 In case of silk printing:

- The thickness of the printing colors shall be at least 50µm.
- The I.E.Co. enables two-color silk printing. The colors will be agreed with the successful Bidder during the prototype approval stage.

2.5.2 The labels shall be tested and approved by a recognized laboratory according to the Last Edition of Standard ISO 4892-2 for 300 hours. The Change of color shall not exceed $\Delta YI=10$.

The Bidder may offer another alternative for testing. Alternative testing shall be approved by I.E.Co.

2.5.3 Additional Testing

The following tests are required:

- Visual testing
- Adhesion Test according to SI 758 part 27 (level 1)
- Adhesion properties test of the label
- Additional tests (dimensions, coating, finishing etc.)

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APPENDIX

G

**Obligation to submit tests report upon award of
bid**



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OBLIGATION TO SUBMIT TESTS REPORT UPON AWARD OF BID

1. We hereby undertake to perform all the tests required for each proposed P/N upon award of bid.
2. The tests shall be performed in accordance with the requirements specified in paragraph 11 of this specification.
3. Tests reports will be submitted as acc. to schedule in clause 9.4.

No. of tender: _____

Manufacturer name: _____

Bidder name: _____

Date: _____

Manufacturer signature: _____ Bidder signature: _____

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APPENDIX

H

Statement of manufacturing experience



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APPENDIX H: STATEMENT OF MANUFACTURING EXPERIENCE

I, _____ (enter name), hereby state the following:

1. I _____ (enter name) am authorized to sign this statement on behalf of _____
("The Manufacturer")
2. I hold the position of _____
(enter job title and description, i.e. partner, production manager, sales manager, etc.)
at the Manufacturer.
3. I have been in this position since _____ (enter date).
4. I am providing this statement regarding I.E.Co's tender number _____ ("the Tender").
5. The facts/details given in this statement have been checked and verified by me.
6. _____ (the Manufacturer) has experience in production of the
proposed or similar equipment, for at least 3 years in the last 5 years, prior to tender
submission.

**Similar means: The same system of cabinets with other dimensions
manufactured from the same material and in the same technology.**

7. I hereby undertake to provide, upon I.E.Co.'s request and at its sole discretion, any
other documents (reference list, quantity, dates of supply, letter of recommendations
etc.) or other Information requested for this Tender for purposes of proving said
experience.

Signature

Date

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APPENDIX

I

**Statement of obligation – conform to
specification requirements**



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Subject: Statement of obligation

We hereby undertake that the proposed items will be accordingly to the requirements specified in specification NPS-120

Tender No.: _____

Manufacture name: _____

Supplier name: _____

Date: _____

Supplier Signature: _____

Manufacture Signature: _____

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APPENDIX

J

Know How

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KNOW HOW

1. Where a "Know-how" agreement is required under the tender/inquiry documents, or under the specification, such "Know-how" agreement must include the following commitments, or substantially similar commitments, on part of the provider of the know-how:
 - 1.1. To transfer to the know-how recipient, all the technical documents and drawings, necessary for the manufacturing, fabrication, testing, proper packing, operating and maintaining of the proposed equipment;
 - 1.2. To adequately instruct and provide technical support to the know recipient in the field of manufacture/fabrication, design, quality control, testing and repair of the proposed equipment;
 - 1.3. To conduct an inspection of the manufacturing line of the know-how recipient and to approve its adequacy to manufacture the proposed equipment up to the standards of the know-how provider;
 - 1.4. To participate in type tests of the proposed equipment (of the know how recipients manufacture) and to instruct/support the know-how recipient in undertaking corrective act/procedure, if required or approved by the I.E.Co.;
 - 1.5. To provide technical support/instructions to the know-how recipient during the first two years following the start of manufacturing by the know-how recipient;
2. The I.E.Co. waives any and all claims it may have against the know-how provider, for any conduct, act or omission, on part of the know-how provider, or any of its employees, agents, or representatives, directly or indirectly related to the transfer of know-how, the know-how agreement, or any action, or omission thereunder.

This waiver of claims shall insure to the benefit of the know-how provider and to the benefit of any of its employees, agents or representatives.
Nothing said herein shall release the know-how recipient from any duties or commitments, undertaken by it, as part of its proposal to the I.E.Co., or in connection with any failures or omissions to carry out such duties, or commitments.

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APPENDIX

K

Statement of obligation – same product



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Subject: Statement of obligation – same product.

We hereby undertake that the proposed products already supplied and approved by I.E.Co.

and will be identical to the previously supplied to I.E.Co. (item without any changes) and

will be according to the requirements of this specification.

Tender No.: _____

Manufacture country: _____

Manufacture name: _____

Supplier name: _____

Date: _____

No	I.E.C cat. No.	Manufacturer P/N	Supplier P/N	Date of most recent supply	Bidder signature	Manufacturer signature
1						
2						
3						
4						