



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

Revision No.: 6

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Specification NPS 328

For

L.V 3x[500\1000]A metering cabinets

SPECIFICATION FOR

L.V 3x[500, 1000 ,500/1000 PV]A metering cabinets

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L.V 3x[500\1000]A metering cabinets

1. PURCHASER

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

2. NAME OF ITEM&PROJECT

This specification covers the manufacturing, testing, preserving, packing and furnishing of low voltage metering cabinet 3*500\1000A (henceforth referred to as "MC 500/1000"), and L.V PV Connection Cabinet (henceforth referred to as "LV PV").

No.	I.E.Co. cat. No.	Description	Sketch no. (Appendix C)
1	2821809	L.V. 3x500A metering cabinet, equipped	C.2
2	4026407	L.V. 3x1000A metering cabinet, equipped	C.3
3	5294844	L.V. 3x[500-1000]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 the requirements for the design, manufacture, testing, packaging, furnishing and supply of metering cabinets.

4.1. SCOPE OF SUPPLY

The cabinets shall be supplied to the I.E.Co.

Provided with the following parts, and shall be assembled acc. to this specification (for more details see Appendix C).

4.2. PARTS SUPPLIED BY THE I.E.C

Parts intended for cabinet assembly that I.E.Co. should supply:

4.2.1. Parts for I.E.C .Cat.No. 2821809:

L.V. 3x500 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.C. Cat.no.
Semi cylinder lock – green	1	3414372
Semi cylinder lock – white	1	3414398

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4.2.2. Parts for I.E.Co. Cat.No. 4026407 and 5294844

1. L.V. 3x1000A metering cabinet – equipped. 2. L.V. 3x [500-1000]A metering cabinet, equipped for PV connection		
Part that the manufacturer will receive from I.E.C. And will assemble in the metering cabinet		
Part Name	Quantity	I.E.C. Cat.no.
Semi cylinder lock – green	1	3414372
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.

See appendix A

8. STANDARDS & CODES

Unless otherwise stated, the Cabinet 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 D 256 – 24	Standard Test Methods for Determining the Izod Pendulum Impact Resistance of Plastics
ASTM D 1044 – 24	Standard Test Method For Resistance Of Transparent Plastics To Surface Abrasion
ASTM D 3359 – 23	Standard Test Methods For Measuring Adhesion By Tape Test
ASTM D 3363 – 22	Standard Test Method For Film Hardness By Pencil Test
ASTM D 4060 - 25	Standard Test Method For Abrasion Resistance Of Organic Coatings By The Taber Abraser
ISO 1518-1	Paints And Varnishes - Determination Of Scratch Resistance Part 1: Constant-Loading Method
ISO 62	Plastics Determination of Water Absorption
ISO 179-1	Plastics - Determination of Charpy Impact Strength
ISO 877	Methods Of Exposure of Plastics to Direct Weathering, to Weathering Using Glass-Filtered Daylight, and to Intensified Weathering by Daylight Using Fresnel Mirrors
ISO 4017 (DIN 933)	Fasteners - Hexagon head screw - product grades A and B.
DIN 53462 ISO 75-1	Testing of Plastics; Martens Method of Determining the Temperature of Deflection Under Abending Stress
ISO 4892-2	Plastics – Methods of exposure to laboratory light sources Part 2: XENON-ARC LAMPS
IEC 60068-2-5	Basic Environmental Testing Procedures Part 2: Tests – Test Sa: Simulated solar radiation at ground level and guidance for solar radiation testing
IEC 62631-3-1, IEC 62631-3-2	Methods of Test for Volume Resistivity and Surface Resistivity of Solid Electrical Insulating Materials
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: Classification Of Groups Of Environmental Parameters And Their Severities Part 4: Stationary Use At Non-Weather protected Locations
ISO 2409	Paints And Varnishes - Cross-Cut Test

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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.
- 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 insure their fitness for use and for purpose they are designed.
- Bidder may propose Standards as alternative for 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.
- The I.E.Co. reserves the right, at its discretion, to allow a Bidder to complete such proposal and to submit such documents at a later date, as prescribed by I.E.C.

9.2. TECHNICAL DOCUMENTS AND SAMPLES TO ACCOMPANY THE PROPOSAL

The Bidder shall submit together with his offer the following documents from the Manufacturer:

- 9.2.1. Valid ISO 9001 certificate as defined in threshold conditions.
- 9.2.2. Documents proving experience – Appendix H
- 9.2.3. A manufacturer who does not have the required experience, shall submit the documents of the know-how supplier (see Appendix I).
- 9.2.4. One (1) sample (free of charge) of an unequipped version of the proposed item or "similar", one sample may be provided for all of 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.C. approval for the same cabinet model (even if it was a non-equipped version) within the last five (5) years up to the date of technical submission may request an exemption from submitting a sample.

The request must be submitted in writing and include a sign 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.

- 9.2.5. Valid type test reports for each the proposed items Or alternatively: if Type test reports are not available for the proposed cabinet, the bidder shall submit a type test reports for Similar* cabinet and obligation (see appendix G) to submit test

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reports upon award of bid as required in Clause 9.4 and Clause 11 of this specification.

The type test reports must include the tests required in clause 11 by the relevant standards and all 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.

- 9.2.6. Completed and filled-in Summary of Data and signed by the Bidder (Appendix "B").
- 9.2.7. A written statement by the bidder in which he undertakes to conform to all the requirements of the specifications – Appendix "J".
- 9.2.8. Schedule up to delivery signed by the bidder and manufacturer (Clause 9.4).
- 9.2.9. Detailed documents for each of the proposed items:
 - Detailed drawings of the manufacture'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.).
 - Technical catalogue.
 - Technical datasheet of all proposed parts.
 - Description of materials and technology of manufacture of the required CABINET or "Similar"* CABINET.
 - Description of locking system
 - Mounting instructions.
 - Test reports acc. to clause 9.2.5
 - Country of Manufacturer.
 - List of sub-contractors.
 - Manufacturer Part number.
 - Description of the marking.
 - Description of the packing.
 - Maintenance instruction (including frequency, procedure and materials required).
 - A written statement by the bidder in which he undertakes to supply all parts included in the cabinet, from a closed list specified in this specification.
 - A list of the required tools, accessories, including P/N for each one.
 - A list of the components manufactured in Israel, name of the local manufacturer and a list of all components manufactured in countries other than ISRAEL.
 - Bill of quantities for each proposed item: The document shall include (part list, description, total amount, I.E.C cat.no, manufacture P.N, notes)
 - Preliminary inspection and test plan to be performed by the manufacturer.
 - Quality Assurance manual including Quality Procedures.
 - If the bidder intends to supply items which are not previously approved by the I.E.C., the bidder is required to submit the documents according to the following table:

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ITEM	Technical document attachment According to appendix D and specific clauses in the specification.
Wires	Israel standard 60227 certificate
Plastic channel width 30 mm depth 25 mm	Israel standard 1381 certificate
40 or 60 mm L.V support Insulators	Appendix D.1
1000A fuse base size 4A	Clause 10.5.3
630A fuse rail size 3	Clause 10.5.4
Insulated box, box content	NPS – 87, Appendix D.2
Meter's board	
Transparent window 320x270 mm	NPS-331
Earthing ball screw	Appendix D.3
Current Transformer	Clause 10.5.8

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

9.2.10. 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 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 Israeli Standard SI 60227.

9.2.11. Commitment to supply "spare parts" for each proposed cabinet, bidder shall submit a detailed chart including:

- Manufacturer's P/N for each part.
- part description.

9.2.12. A Foreign supplier who assembles the cabinets in Israel shall submit the details of the service company in Israel.

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.

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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.**

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9.3. TECHNICAL DOCUMENTS AND SAMPLES AFTER NOTIFICATION OF AWARD

After notification of award and before production of all ordered cabinets, the supplier must deliver the following details to the I.E.Co. for prototype approval and according to the required schedule attached in Clause 9.4 below:

- 9.3.1. Spare parts list according to clause 10.6.
- 9.3.2. A detailed program portfolio includes detailed drawing, list for all the relevant drawings for fabrication, dimensions, packaging, wiring, signage, detailed parts list, materials specification for each component, Q.A. and Q.C. procedures, etc.
- 9.3.3. Bill of quantities for each proposed item.
- 9.3.4. Prototype Approval: Equipped and wired prototype cabinet of each P/N, according to all requirements of the specification for the I.E.C 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.
- 9.3.5. Assembling instructions.
- 9.3.6. C.O.C of all supplied items, including details of raw materials, coatings, etc.
- 9.3.7. List of subcontractors.
- 9.3.8. Inspection and test plan including the quality plan.
- 9.3.9. For purposes of the prototype approval, the manufacturer shall perform the complete type tests as required in **clause 9.2.5** of the specification.
- 9.3.10. The contractor shall be responsible to conduct successfully all the necessary tests, and to deliver to the Israel Electric Corp. all the necessary required reports, in a manner, which will not interfere with or delay any of the time 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.
- 9.3.11. Type test reports as required in clause 11 of this specification.

- **Remarks:**

- All data and descriptive material in the above drawings shall be in English or Hebrew and 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

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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.

9.3.12. **Delivery Approval**

The successful bidder (hereinafter referred to as "the contractor") shall submit to the I.E.C the Routine Test reports for approval prior to the 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".

9.3.12. **Acceptance tests**

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

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

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

- contractor that submitted type test for the proposed item shall submit routine and sample test report 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 DELIVERY 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 the entire 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).

No.	STAGE	Week																				
		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 a 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 IEC Publication 61439 with the following additions and changes.

The equipment shall be suitable for outdoor / indoor mounting with natural ventilation, in the following environmental conditions:

- Severe atmospheric and industrial air pollution, coal dust, sea salt.
- High atmospheric humidity as experienced in coastal or desert areas.
- Long dry periods without any rainfall
- Direct and continuous brilliant solar radiation for long periods.
- Annual variation in air temperature:
 - for indoor equipment : -10°C to +55°C
 - for outdoor equipment : -10°C to +50°C
- Monthly average of the hottest month in the year for many years:
- Annual mean air temperature : +25°C
- Maximum relative humidity
 - for indoor equipment : 90%
 - for outdoor equipment : 95%
- Average relative humidity : 70%
- Average ambient temperature measured over a period of 24 hours does not exceed: +35°C
- Maximum difference of ambient temperature from day to night: +25°C
- Long summer periods with OTCs of sunshine (1120 W/sqm) according to IEC Publication 60721-3-4/95.
- Altitude: up to 1000m
- **Remark:** Some of the Equipment may be installed at altitudes greater than 1000 m above sea level (maximum 2000m) and at altitudes under sea level (minimum -400m). The Bidder shall specify the required operations to be performed in order to install the Equipment in the above altitudes.
- Rapid temperature changes and humidity changes.
- Long summer periods without rain.

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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. Public safety

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

10.2.3. Protection against fibers exposure

For protection against fiber exposure and anti-graphitic, 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.

The cabinet shall be painted/coated as follows:

- Painting /coating of cabinet doors and roof only.
- The painting/coating material shall be polyester powder/dye and with a minimum thickness of 100 microns.

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 ASTM D 4060	Up to 200 mg Less than 27 mg loss weight	Taber Abrasion: 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. FUNCTIONAL REQUIREMENTS

10.3.1. Mechanical requirements

- The cabinet shall be of a double-insulated type.
- The cabinet shall be of a self-supporting type construction.
- The cabinet shall be made of heat molded glass fiber reinforced polyester, without wood insertion
- The material used for the base shall be the same used for the cabinet.
- functional characteristics of the cabinet and the base shall be preserved under the conditions specified in this specification for at least 15 years.

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10.3.2. Geometrical requirements

- Relevant dimensions according to the attached drawings in Appendix C.
- The degree of protection of the cabinet mounted on the base shall be IP44 according to IEC Standard 60529.

10.3.3. Flammability

- The materials shall be chosen and the parts designed as to retard the propagation of any flame from accidental overheating.
- V0 acc. To standard UL94.

10.3.4. Operating requirements.

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

10.3.5. Mounting requirements

- The cabinet shall be suitable for indoor or outdoor mounting conditions and shall assure natural ventilation of the electrical equipment, which will be installed inside
- The cabinet shall be suitable for installation in public areas
- The CABINET shall be suitable for installation on BASE.
- The upper part of the BASE shall be provided with mounting holes suitable for the mounting holes of the CABINET.
- The dimensions of the fixing point between the base and the cabinet (see appendix C)

10.3.6. Warning signs

- The warning signs shall be according to appendix F

10.3.7. Transparent window

The transparent window shall be according to NPS – 331.

10.3.8. Door and Locking requirements.

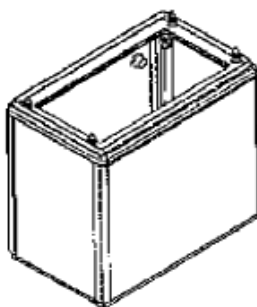
- The cabinet shall be provided with a door/s.
- The door/s consists of two hinges at a minimum.
- The door/s should be removable, from the hinges, with simple hand tools
- The door/s shall be provided with a locking device for a half-cylinder lock. The doors opening shall be $>95^\circ$.
- The locking device shall be suitable for a concealed half-cylinder lock, turning 90° to the right.
- The locking device shall be provided with 3 locking points.

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- The cabinet for P/N 5294844 (PV 500/1000 Metering cabinet) shall be delivered to the I.E.C with the doors unlocked and the lock provided in a plastic bag inside the cabinet.

10.3.9. Base requirements.

- The BASE shall be provided with all the necessary accessories to mount the CABINET on it, i.e. as screws, nuts, rails, etc.
- The internal part of each leg shall be provided with at least one support for the cable-fixing rail.
- Illustrative Example:



10.3.10. Assembly:

- All screws and bolts in the busbars shall be installed "outwards", meaning that the screw/bolt head be on the cabinet back side of the busbar.

10.4. PROPERTIES

10.4.1. Electrical features:

- Dielectric resistance $> 18 \text{ kV/mm}$ (according to IEC 60243-1).
- Superficial resistance $> 10^{12} \Omega$ (according to IEC 60093).

10.4.2. 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).
- Roughness of the surface (Ra) : $0.63 \div 1 \mu\text{m}$.
- Impact resistance: $> 60 \text{ kJ/m}^2$ (according to DIN EN ISO 179).
- Flammability: V0 acc. to UL94.

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10.4.3. Embedded nuts

- The embedded nuts in the walls (including the back wall) and doors shall be made of brass CuZnPb3.
- The embedded nuts shall be placed according to the attached sketches.
- In the external sides of the cabinet 2 nuts shall be installed (1 on each side of the cabinet) in order to fix the cabinet to the wall.
- The embedded nuts shall be at least of M6 dimensions on the back and M8 on the side of the cabinet.
- The nominal value for bending of the embedded nuts:
 - M6 > 5 NM
 - M8 > 11 NM
 - M10 > 33 NM
- Each screw shall be according to ISO 4017 (DIN 933) - 8.8.
- All metallic elements used in the assembling of the Cabinet and the Base shall be zinc plated + passivation against corrosion. The thickness of the zinc layer shall be:
 - Minimum 20 microns for the metallic parts.

10.4.4. Interchangeability

All equipment items of the same ratings shall be interchangeable both electrically and mechanically with each other.

10.4.5. Ratings:

- Rated Voltage $U_n = 230/400V$
- Rated Operational Voltage $U_e = 230/400V$
- Rated Insulation Voltage $U_i = 690V$
- Rated Impulse Withstand Voltage $U_{imp} = 6kV$
- Rated frequency $f_n = 50Hz$
- Rated current:

I.E.C cat. No.	Description	Rated current of the ASSEMBLY	Rated current of a circuit
		$I_{nA}(A)$	$I_{nc}(A)$
2821809	MC 500	630	630
4026407	MC 1000	910	910
5294844	LV PV	1000	1000

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10.5. DESIGN&CONSTRUCTION

Main Cabinet components:

No	Item	Technical requirements according to:	Notes
1	Wires	Acc. Israel standard 60227	
2	Plastic channel width 30 mm depth 25 mm	Israel standard 1381	
3	L.V support insulator including lifting	Acc. to clause 10.5.2 and appendix D.1	From approved manufactures list
4	40 or 60 mm L.V support Insulator		From approved manufactures list
5	1000A fuse base size 4A	Acc. to clause 10.5.3 and specification NPS-250/1.	From approved manufactures list
6	630A fuse rail size 3	Acc. To clause 10.5.4 and NPS - 40	From approved manufactures list
7	Meter's board	Acc. to clause 10.5.6 and appendix D.2.	From approved manufactures list
8	Insulated box, box content		
9	Transparent window	Acc. to NPS – 331	
10	Earthing ball screw	Acc. to clause 10.5.7 and appendix D.3.	From approved manufactures list
11	Current Transformer	Acc to clause 10.5.8 and Specification	From approved manufactures list

10.5.1. Technical requirements for the main components:

10.5.1.1. The bidder must supply the approved items by the purchaser.

10.5.1.2. A written statement by the bidder in which he undertakes to supply all parts approved by I.E.Co. and from the lists below as required in clause 9.2.9

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 to each item according to its technical specification.

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Remark:

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

10.5.1.5. After notification of award, the Contractor shall install in the cabinets only accessories approved by I.E.Co.

If any alternative accessory proposed by the bidder/Contractor does not meet I.E.Co.'s requirements or is not approved by I.E.Co., the Contractor shall supply and install an approved accessory from the approved list, or another accessory approved in writing by I.E.Co., at no additional cost to I.E.Co. and without any extension of the delivery schedule.

10.5.2. 40 and 60 mm L.V support insulators:

10.5.2.1. The approved 40 mm and 60 mm L.V support Insulators are detailed in the tables below:

I.E.C P/N	Supplier / Manufacturer P/N					
	Arco Inbar	Fridenson Engineering Ltd	Akiva Tolochinsky	Kfar Menachem	Nisko	Supergum
503730 (40 mm)	229840	FRE-3730	825391	101722691	80078901	308101671
2802759 (60 mm)	229851	FRE-2759	825393	101722693	80078904	308300090
962787 (40 mm) including raisers	229831	FRE-2787	825371	101722694	80078900	308101048

10.5.2.2. Alternative support Insulators shall meet the technical requirements specified in appendix D.1 of this specification.

10.5.3. 1000A fuse base size 4A

I.E.C P/N	Supplier / Manufacturer P/N	
	Efen EFEN	Energotech JEAN MUELLER

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589978	33.047.0060	T4911030,LTL4A-1x/9/1250A
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10.5.3.1. The approved fuse base size 4a is

detailed in the table below:

10.5.3.2. Alternative fuse base shall meet the technical requirements according to specification NPS-250/1.

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10.5.4. 630A fuse rail size 3

10.5.4.1. The approved fuse rail size 3 is detailed in the table below:

I.E.C P/N	Supplier/ Manufacturer P/N
505776	Nisko WOHNER
	80078620

10.5.4.2. Alternative fuse base shall meet the technical requirements according to specification NPS-40/8 Clauses 3-6.

10.5.5. Meter's board and Insulated box:

10.5.5.1. The Approved parts list is detailed in the table below:

No.	Description	I.E.C P/N	Supplier / Manufacturer / P/N	
			Tolocinsky TOLOCINSKY	Nisko NISKO
1	Empty medium isolated box	963264	910110	80077003
2	Meter's board	4130878	910105	80077020
3	Box Content	Acc. To Appendix D.2		

10.5.5.2. Alternative Meter's board, insulated boxes and box content shall meet the technical requirements specified in the technical specification NPS-87/5 Clauses 3-6.

10.5.6. Earthing ball screw:

10.5.6.1. The Approved parts list is detailed in the table below:

I.E.C P/N	Supplier / Manufacturer / P/N		
	M.Lachman	Kfar Menachem	Tolocinsky
503821	9503821	101490136	200401

10.5.6.2. Alternative earthing ball screw shall meet the technical requirements specified in appendix D.3

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10.5.7. Transparent window:

Windows shall meet the technical requirements specified in Technical specification NPS – 331 (p. 3-6,11)

I.E.C P/N	Supplier / Manufacturer / P/N		
	Yakir Orlite	Nisko	Akiva Tolochinsky
2313245	2313245	80077050	8210002

10.5.8. Current Transformer:

10.5.8.1. The approved current transformers are detailed in the table below:

I.E.C P/N	Item Description	Supplier / Manufacturer P/N
		Shenzhen Chuangyin
5395513	CURRENT TRANS. 500/5A 0.2S Round opening	SAT-0.72 500A
5274324	CURRENT TRANS. 1000/5A 0.2S Round opening	SAT-0.72 1000A

10.5.8.2. Alternative current transformers meet the technical requirements according to I.E.Co. specification 307-01-2026.

Remark:

After approval by I.E.Co., no change of manufacturer, supplier, P/N, material, design, roduction site or subcontractor shall be made without prior written approval of I.E.Co

10.6. OPERATION & MAINTENANCE

SPARE & RENEWAL PARTS

The Bidder shall submit to the Israel Electric Corp. together with his proposal a spare parts list. The spare parts list shall include the following information: Manufacturer names of spare parts, Manufacturer number of spare parts, order number of spare parts (if any), reference number in drawing.

The Contractor shall supply to 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

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ordered Equipment, in the quantities that are needed by the Purchaser for repair of damaged Equipment of Contractor's manufacture, or if any of those went out of stock, the functional equivalent.

10.7. SAFETY

The double insulation of the cabinet shall be maintained after assembling the cabinet and base and after assembling 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
Marking	10.2.7
Mechanical operation	10.2.8
Degree of protection of enclosures	10.3
Short-circuit withstand strength	10.11

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

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11.1.2. GRP properties test:

The Type tests of the glass fiber reinforced polyester shall be performed in order to verify the features specified in clause 10.4.1 and 10.4.2 of this specification.

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

11.1.3. Weather aging test

The weather aging test shall preformed according to ISO 4892-2 (method A)

Duration of the test: **at least 500 hours.**

11.1.3.1. Evaluation

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

11.1.3.2. 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.

11.1.4. Test of the embedded nuts

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

11.2. Routine Tests

Duly certified routine tests are obligatory. Such tests shall be performed at the Manufacturer's laboratory.

Each equipment supplied shall be tested in accordance with IEC-61439-1 Standard:

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

Routine Test Report

- A Routine Test Report shall be prepared by the Contractor for each equipment
- 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.

Remark:

Israel Electric Corp. reserves the right to demand to repeat the type tests during the mass-production of the required CABINET.

12. PACKAGING & DELIVERY

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The packaging of the Equipment shall be suitable for transportation and for outdoor /indoor storage.

Unless specially designated, all Equipment and other items shall be packaged for outdoor storage until erection. Where required by the nature of the Equipment, the supplier shall furnish and install necessary covers to protect the Equipment from sand, rain, hail, wind, dust and salt spray. Equipment shall be adequately sealed and protected during shipment to prevent corrosion and entrance of foreign matter. All exposed machined surfaces shall be protected where required with a suitable antitrust compound or covers before shipment, for shipment and storage until erection.

Each equipment shall be packed together with all the necessary accessories for installation and operation in the same pack.

The packaging shall be:

- 12.1. Each cabinet shall be covered by a hard plastic bag
- 12.2. 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.
- 12.3. Each cabinet shall be supplied lying on its side with its back facing outwards.
- 12.4. Maximum number of cabinets on one pallet shall be – 4, Maximum of 2 layers, I.E 2 Cabinets on each layer
- 12.5. The cabinet shall be supplied on 1200/800 mm EURO pallet in accordance with DIN EN 13698-2
- 12.5. The items on each pallet shall be secured to the pallet using UV resistant poly cord strapping or a polyester strapping (PET). All cabinets must be strapped securely to maintain stability and prevent any movement throughout shipping.
- 12.6. 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
- 12.7. Each shipment shall be accompanied by certification attesting to the conformance of the shipment to the Specification. Certificates shall contain test results identifiable to the acceptance criteria and the items shipped. Documentation shall be submitted in English or have a certified English translation attached.
Certification shall be provided attesting to the fact that the 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 I.E.C.
- 12.8. Each packaging shall be clearly marked in print (large letters) with the following:
 - Manufacturer's name or Trademark.
 - Country of manufacture
 - Supplier name
 - Product name
 - P/N and denomination of the equipment
 - Israel Electric Corp. Catalogue Number

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- Contract and/or Order Number.
- Weight
- Dimensions
- Serial number.

12.9. One copy of the packing list shall be attached to each packaging.

12.10. The packaging shall include instruction documents (installation instruction, wiring diagram, etc.) for each proposed item. The documents will be placed in the upper part of the cabinet and shall be tied to the meters board using a zip tie.

12.11. A Quality Control label shall be attached to each packaging.

12.12 Israel Electric Corp., before the first supply, shall approve the packaging.

13. STORAGE & HANDLING

See Clause 12 above

14. NAMEPLATE/MARKING

The equipment shall be provided with durable and clearly legible inscription.

14.1. Nameplate

The nameplate shall be made of a long lasting material

The nameplate shall be installed by glue suitable for polyester material.

The nameplate shall be glued in the internal part of the upper cabinet door.

The nameplate shall contain:

- Manufacturer's name or trademark;
- Manufacturing date;
- Manufacturer P/N;
- Serial number;
- I.E.C cat. No;
- Stamp of Quality Control.

14.2. QR Code

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

- The QR code shall be provided by I.E.C
- 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.

14.3. Warning inscription (labels, signs, etc.)

According to Appendix C&F

15. NOTES



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N/A

16. SPECIAL REQUIRMENTS

N/A

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17. REVISIONS:

Rev	Description	Date
0	New specification	28/02/2021
1	Addition of cable types in Appendix "C"	11/11/2021
5	- Updated specification to new format - Updated environmental requirements - Updated screws direction on Phase and neutral busbars - Updated drawings for Insulated box including content - Updated Drawing C.2 to include Fuse rail to be supplied with cabinet - Updated shipping and packaging - Updated list of approved items suppliers - Removed non equipped cabinet I.E.C.Cat.no 2450336 - Added demand for up-to-date COC - Updated Type test and GRP demands - Replace 3 pronged electrical socket with 2 pronged socket in all cabinets - Moved electrical socket location to the left side of the meter board - Updated tolerances and drawings for cabinet sizes - Updated wires demands regarding Mark certificate - Updated 1000/5 Current transformer to new Cat.No - Cabinet P/N 5294844 PV 500/1000 locking on delivery requirements (unlocked) - Updated requirement for cabinets door to be removable with simple hand tools - Updated time window for sample submission and exemption request - Updated Current transformers mounting requirements - Updated window sizing and location. - Updated Phase/Neutral Bus Bars on 500A metering cabinet - Updated cabinet P/N 5294844 PV 500/1000A Drawings and requirements - Updated Appendix list, add Appendix G-K - Updated type-test requirements	1/12/2025
6	- Schedule change - Threshold conditions - Prototype approval - Approved accessories	05/2025



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APPENDIX “A”
Standard specification for quality control
Q-APP-02-PR Rev.5 (11/2019)

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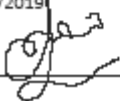
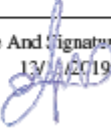
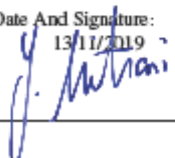
For

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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/Contract, 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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For

L.V 3x[500\1000]A metering cabinets

	THE ISRAEL ELECTRIC CORPORATION LTD. Procurement Division QUALITY CONTROL UNIT		
TITLE	APPENDICES FOR CONTRACTS / ORDERS	Spec. No.	Q - APP - 02-PR
		Rev.	04
		Status	05/11/2019
SUB TITLE	QUALITY REQUIREMENTS	Volume	PAGE 4 FROM 7

- 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

CONTRACTORS: Name, I&T Plan Title, The Product Inspected/Tested, and Document Identity & Approval. PURCHASERS: Name And Project's Name And Location. Purchase Order No. & Materiel No. or CI Item No.									
No	The inspection or test	Applicable documents	Wp/Ip 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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APPENDIX “B” – Summary of data

Bidder's name: _____

Bidder's phone no.: _____

Bidder's E-mail: _____

Manufacturer's name and address: _____

Manufacturer's E-mail: _____

Manufacturer's phone no.: _____

Manufacturing country: _____

Manufacturer's signature: _____

	(Insert all data in this column)
1. <u>I.E.C Metering Cabinets Cat. No List.</u>	
a) Is the manufacture/bidder offers the I.E.C Cat. No. 2821809 – "L.V 3x500A metering cabinet equipped" (Yes/no)? If yes, what are the P/N and the manufacturer name?	
b) Is the manufacture/bidder offers the I.E.C Cat. No. 4026407 – "L.V 3x1000A metering cabinet equipped" (Yes/no)? If yes, what are the P/N and the manufacturer name?	
c) Is the manufacture/bidder offers the I.E.C Cat. No. 5294844 – " L.V 3x[500-1000]A metering cabinet equipped for PV connection " (Yes/no)? If yes, what are the P/N and the manufacturer name?	

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2. <u>Cabinet Details</u>		
2.1.Documents:		
Are the following documents attached to the proposal?		
(a) Detailed drawings and cross sections of the CABINET (yes/no)		
(b) Mounting instructions (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 proposed/similar cabinet/s (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)		

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(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.C in the last 5 years (yes/no)? If yes, is Appendix "K" attached?	
(q) Is Appendix "H" – statement of manufacturing experience attached? (yes/no)?	
(r) Is the manufacturer's quality control manual attached? (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 and indoor 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)	

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2.4.6. <u>Material and Construction:</u>	
Is the CABINET made of heat molded glass fiber reinforced polyester material? (yes/no)	
2.4.6.1.Mechanical features:	
Impact resistance..... (kJ/m)	
According to which standard	
Attached test report no.....	
2.4.6.2.Electrical features	
(a) Dielectric resistance..... (kV/mm)	
According to which standard.....	
Attached test report no.	
(b) superficial resistance	
According to which standard.....	
Attached test report no.	
2.4.6.3.Physical features	
(a) stability of shape	
According to which standard.....	
Attached test report no.	
(b) temperature resistance	
According to which standard.....	
Attached test report no.	
(c) stability by light	
According to which standard.....	
Attached test report no.	
2.4.6.4.Tropical and moisture resistance (without any degradation)	
According to which standard.....	
Attached test report no.	
2.4.6.5.Water absorption: (≤--mg)	
According to which standard.....	
Attached test report no.	
2.4.6.6.Flame resistance: UL94-V0	
According to which standard.....	
Attached test report no.	

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2.4.7. <u>Embedded nuts</u>	
2.4.7.1. Material of all embedded nuts.....	
2.4.7.2. All the embedded nuts will be placed according to the attached sketch(yes/no)	
2.4.7.3. The size of the embedded nuts.....	
2.4.7.4. The minimum bending value for all kinds of nuts in the cabinet.	M- size: Torque(N.M):
2.4.7.5. Is The closing Torque of the screws and nuts of the busbars as specify in appendix E (yes/no)?	
2.4.8. <u>Protection against corrosion:</u>	
2.4.8.1. The thickness of the protection layer of all metallic part.....	
2.4.8.2. The thickness of the protection layer of all screws and nuts.....	
2.4.9. <u>Will the CABINET be of a self-supporting type?</u> (yes/no)	
2.4.10. <u>Cabinet door:</u>	
As per attached drawing No.....	
2.4.10.1. Will one of the panels be provided with a locking device and plate for a semi-cylindrical lock? (yes/no)?	
2.4.10.2. Will the locking device be suitable for a concealed semi-cylindrical lock, turning 90° to the right?(yes/no)	
2.4.10.3. Will the locking device be provided with 3 locking points?..... (yes/no)	
2.4.10.4. Will the door/s should be removable, from the hinges, with simple hand tools? (yes/no)	
2.4.10.5. Is the back wall of the CABINET made with SMC elements? (yes/no)	
2.4.10.6. Please state the number of elements	

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<u>2.5.Type tests report</u>	
Are the following Type Tests Reports attached to the proposal:	
2.5.1. Type test according to IEC 61439-1&5 for the proposed cabinets and bases?	
2.5.2. Type test according to IEC 622208 and IEC 61439-1&5 for the proposed cabinets and bases?	
2.5.3. Tests performed in an authorized laboratory acc. To ISO17025 (Yes/No)	
2.5.4. Type test for GRP from mass-production line	
2.5.5. Weather aging test report? (yes/no)	
Duration of test (h)	
Serial.No. of test report	
Samples attached? (yes/no)	
2.5.6. Test report of the embedded nuts (yes/no)	
No. of test report	
<u>2.6.Supplied items by the bidder</u>	
2.6.1. <u>Wires</u>	
2.6.1.1. Are all the wires according to SI 60227? (yes/no)	
2.6.1.2. Type test for the wires attached? (yes/no)	
2.6.1.3. Alternatively is the Approval Mark Certificate attesting the manufacturer meets the SI 60227 attached?(yes/no)	
2.6.2. Plastic conduits – PVC reinforced (between insulation box and meters plate)	
2.6.2.1. According to which standard?	
2.6.3. <u>Insulator support L.V</u>	
2.6.3.1. Is the proposed item from the approved list by I.E.C? (yes/no)	
2.6.3.2. If no, then fill-in the clauses below:	
2.6.3.3. Are the documents as required in clause 10.5.2 attached? (yes/no)	
2.6.3.4. Is the proposed item conforms to all technical requirements in appendix D.1? (yes/no)	
2.6.3.5. Manufacture name?	
2.6.3.6. Manufacture P/N?	
2.6.3.7. material:	

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2.6.4. <u>1000A fuse base size 4A</u>	
2.6.4.1. Is the proposed item from the approved list by I.E.C? (yes/no)	
2.6.4.2. If no then fill-in the clauses below:	
2.6.4.3. Are the documents as required in clause 10.5.3 attached? (yes/no)	
2.6.4.4. Manufacture name?	
2.6.4.5. Manufacture P/N?	
2.6.4.6. material:	
2.6.5. <u>630A fuse rail size 3</u>	
2.6.5.1. Is the proposed item from the approved list by I.E.C? (yes/no)	
2.6.5.2. If no then fill-in the clauses below:	
2.6.5.3. Are the documents as required in clause 10.5.3 attached? (yes/no)	
2.6.5.4. Manufacture name?	
2.6.5.5. Manufacture P/N?	
2.6.5.6. material:	
2.6.6. <u>Meter's board, Isolated box, Box contents</u>	
2.6.6.1. Is the proposed item from the approved list by I.E.C? (yes/no)	
2.6.6.2. If no then fill-in the clauses below:	
2.6.6.3. Are the documents as required in clause 10.5.5 attached? (yes/no)	
2.6.6.4. Is the proposed item conforms to all technical requirements in appendix D.2? (yes/no)	
2.6.6.5. Manufacturer's name?	
2.6.6.6. Manufacture P/N?	
2.6.6.7. material:	
2.6.7. <u>Transparent window</u>	
2.6.7.1. Are the documents as required in Technical specification NPS - 331 attached (yes/no)?	
2.6.7.2. Manufacture name?	
2.6.7.3. Manufacture P/N?	
2.6.7.4. The material:	

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2.6.8. <u>Earthing ball</u>	
2.6.8.1. Is the proposed item from the approved list by I.E.C? (yes/no) If no then fill-in the clauses below:	
2.6.8.2. Is the proposed item conforms to all the technical requirements in appendix D.3? (yes/no)	
2.6.8.3. Manufacture name?	
2.6.8.4. Manufacture P/N?	
2.6.8.5. The material:	
2.7. <u>Prototype approval</u>	
2.7.1. Will the Contractor Submit One unit of CABINET for approval? (yes/no)	
2.7.2. Is the schedule up to the prototype approval attached? (Yes/No)	
2.7.3. Does the bidder guarantee to present the prototypes cabinets (after notification on award and before production all ordered items)? (Yes/no)?	
2.8. <u>Packaging and Markings</u>	
2.8.1. Is the packaging shall be suitable for transportation and prolonged storage period ? (yes/no)	
2.8.2. Is the packaging shall prevent any deterioration during transportation and storage? (yes/no)	
2.8.3. Is each CABINET covered by a hard plastic bag? (yes/no)	
2.8.4. Each Cabinet Shall be supplied lying on its side (yes/no)?	
2.8.5. Maximum number of cabinets in one pallet – 4, maximum floors – 2, two cabinets on each floor (yes/no)?	
2.8.6. The CABINET shall be supplied on 1200/1000 mm pallet in accordance with DIN EN 13698-2	
2.8.7. Will each package be clearly marked in print (large letters) with the following :	
Trade Mark (yes/no)	
Product name (yes/no)	
I.E.C item's cat.No (yes/no)	
Supplier P/N (yes/no)	
Order No. (yes/no)	
Serial No. (yes/no)	



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Are the warning labels requirements according to
appendix F? (yes/no)

Conformity with Bid documents

Bidder hereby certifies that he agrees to all the provisions of the Inquiry Documents.

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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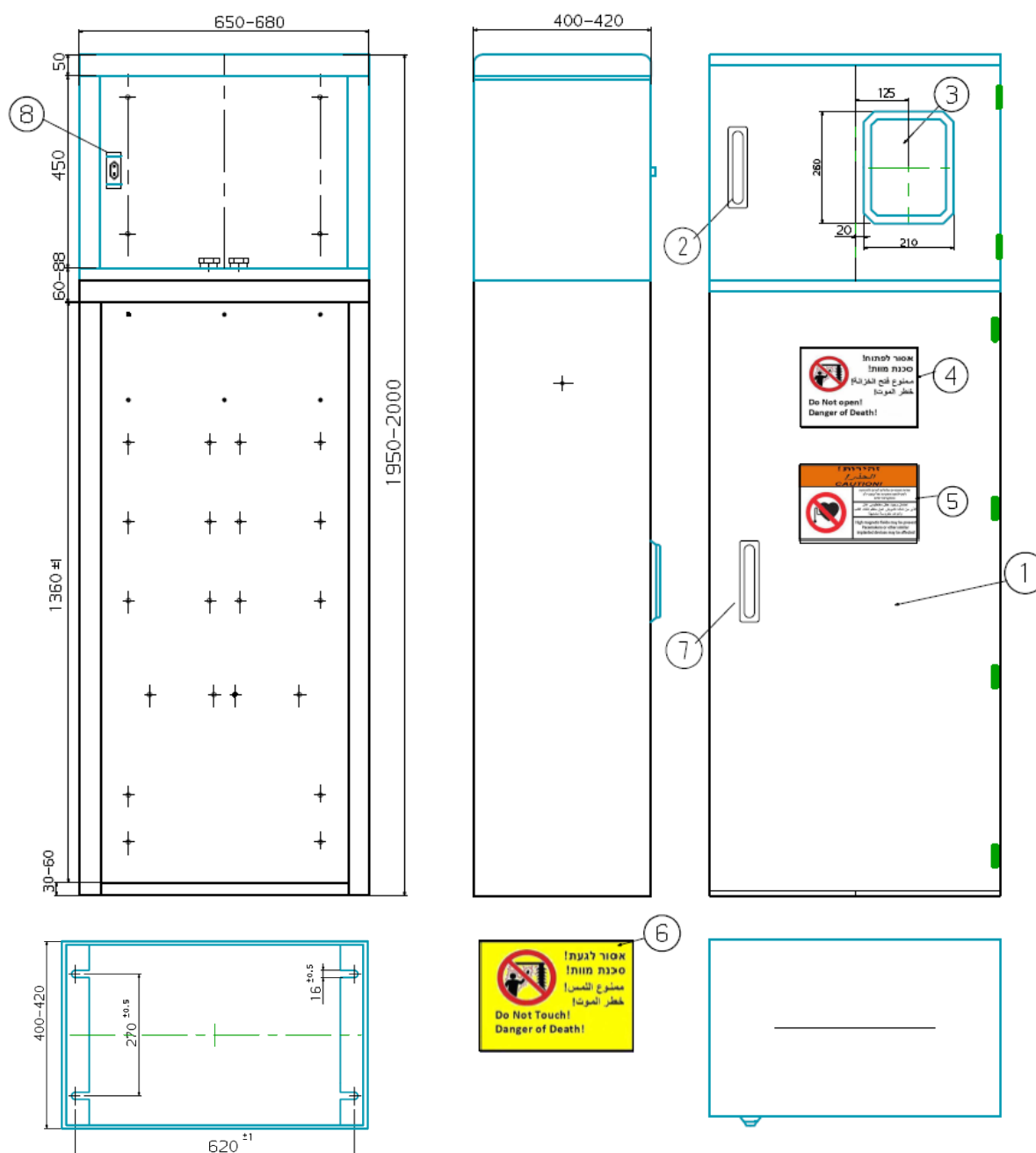
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Drawing C.1: L.V 3x500\1000A Polyester metering cabinet unequipped sketches

Cabinet dimensions:



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Note: dimension, locks kinds and position is for all types of the cabinets

1. L.V. 3x500\1000A polyester metering cabinet.
2. Semi cylinder lock white – Cat. No 3414398.
3. Window according to NPS – 331.
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. Semi cylinder lock (green) – Cat. No 3414372.
8. 2-pin socket 10A installed on DIN rail 35 mm **(for all types of cabinets, see also electrical wiring)** (may use standard 2-pin socket with din adapter)

REMARKS:

- For closing torque screws & nuts see appendix E
- 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.C.

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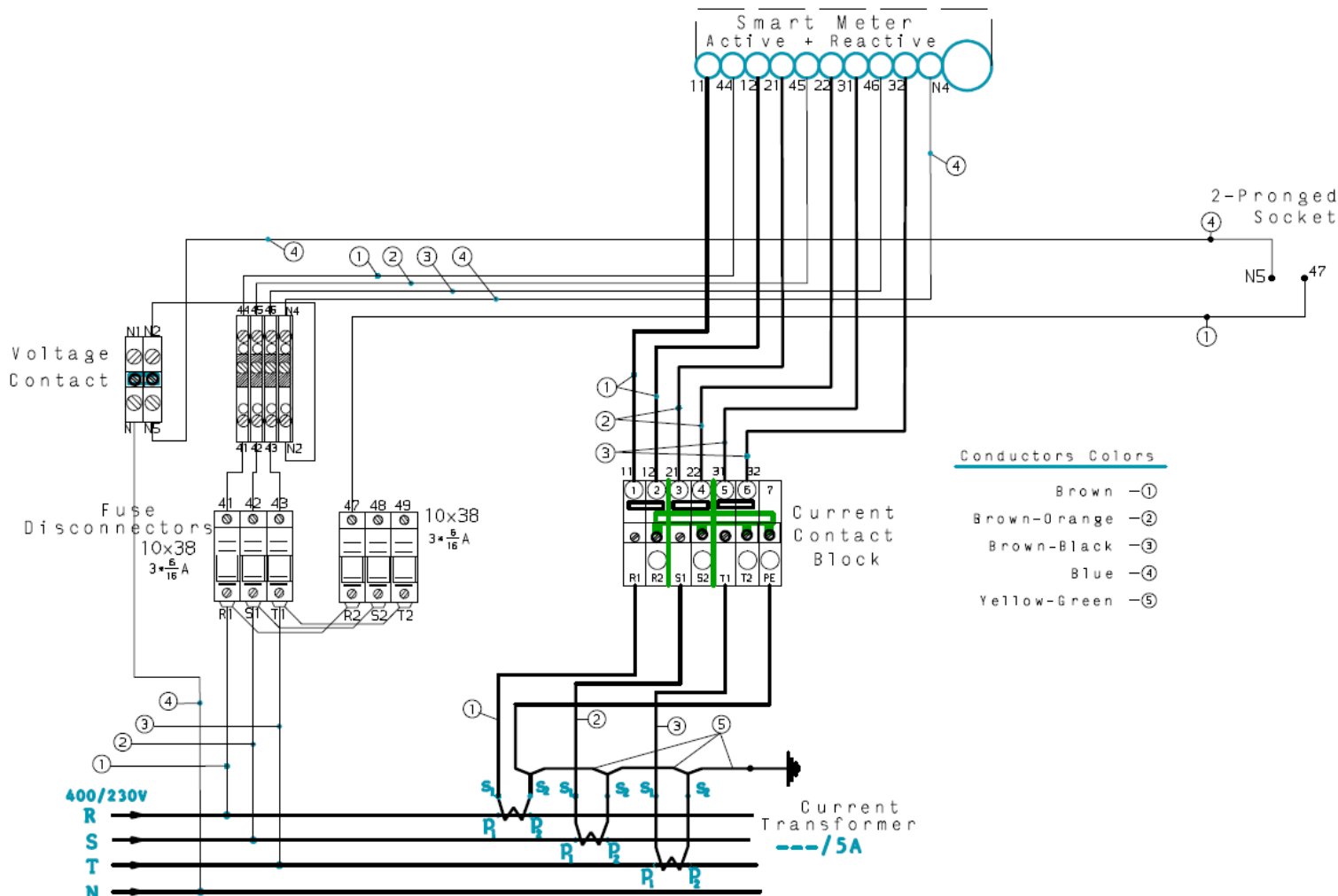
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Electrical wiring:



Remarks:

- ❖ The Current contact block shall be **delivered in the shorted to ground position.**
- ❖ The fuses shall be supplied in a separate bag inside the enclosure.
- ❖ The cross-section of the current conductors shall be 4 mm².
- ❖ The cross-section of the voltage conductors shall be 2.5 mm², 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 solid 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 contacts.
- ❖ 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.**

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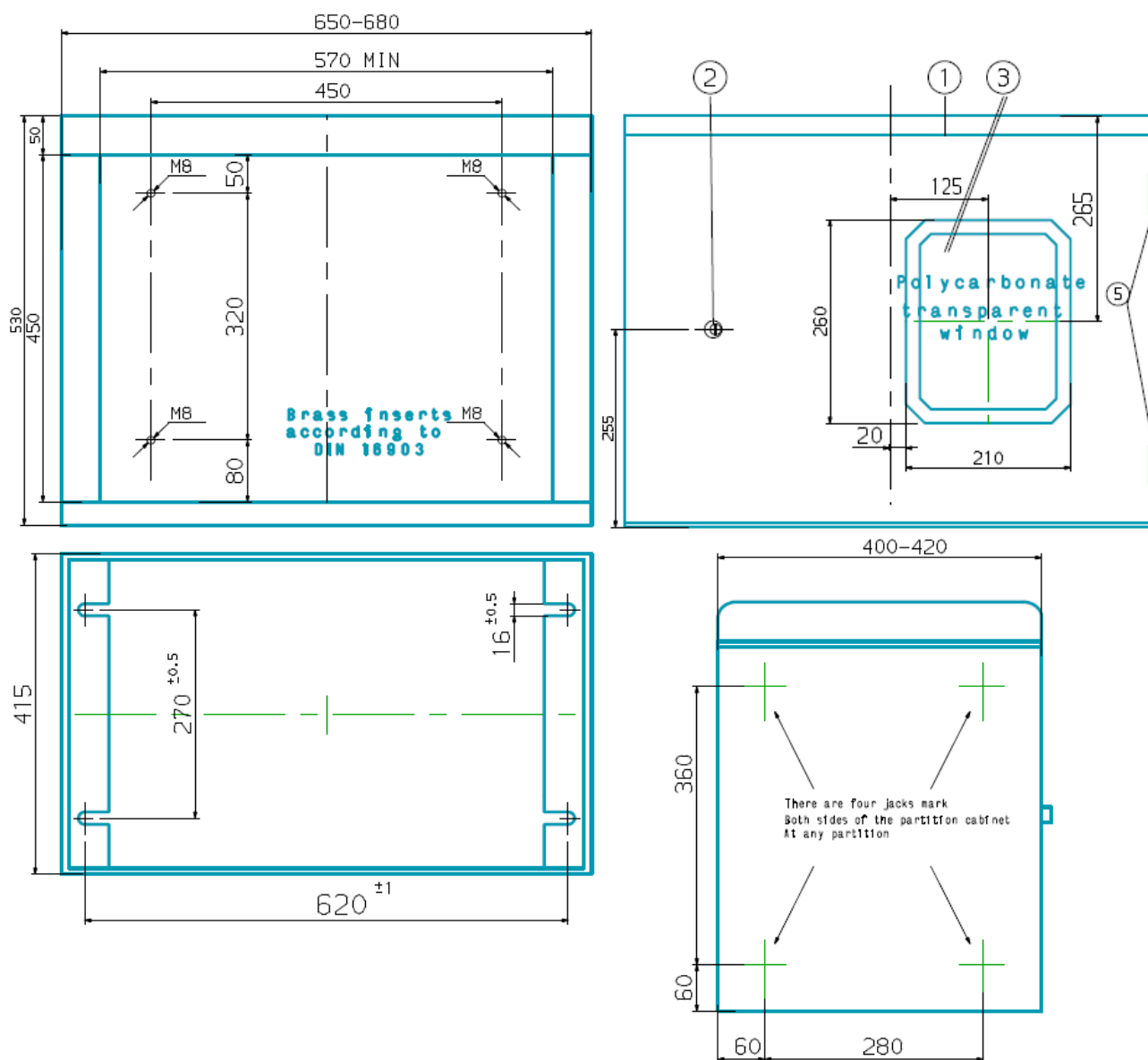
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Upper Cabinet:



1. The upper part of the L.V. 3x500\1000A polyester metering cabinet.
2. Semi cylinder lock white – Cat. No 3414398.
3. Window according to NPS – 331.
4. Rubber gasket from EPDM.
5. The door consists of two hinges at a minimum.
The door should be removable, from the hinges, with simple hand tools

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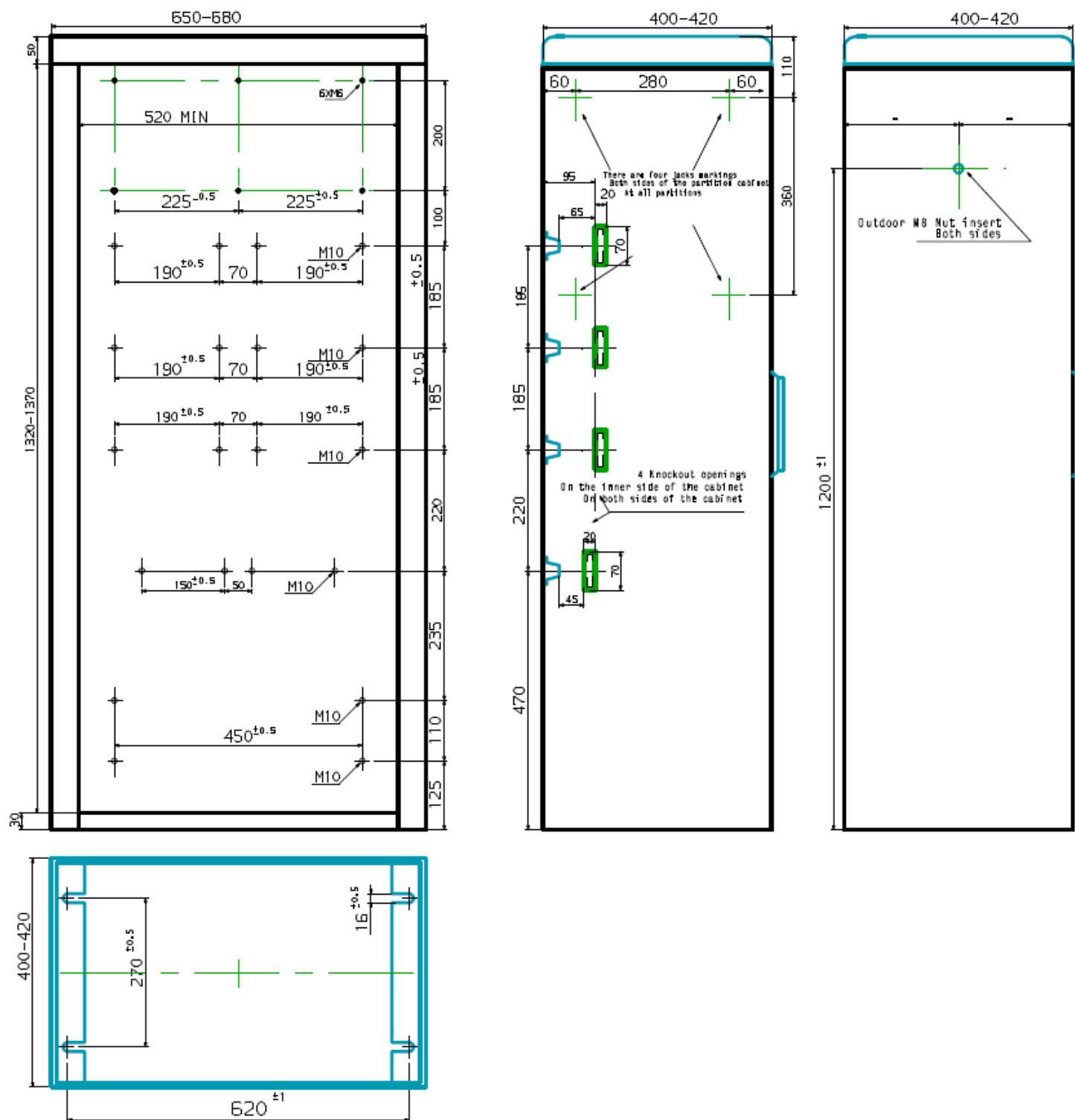
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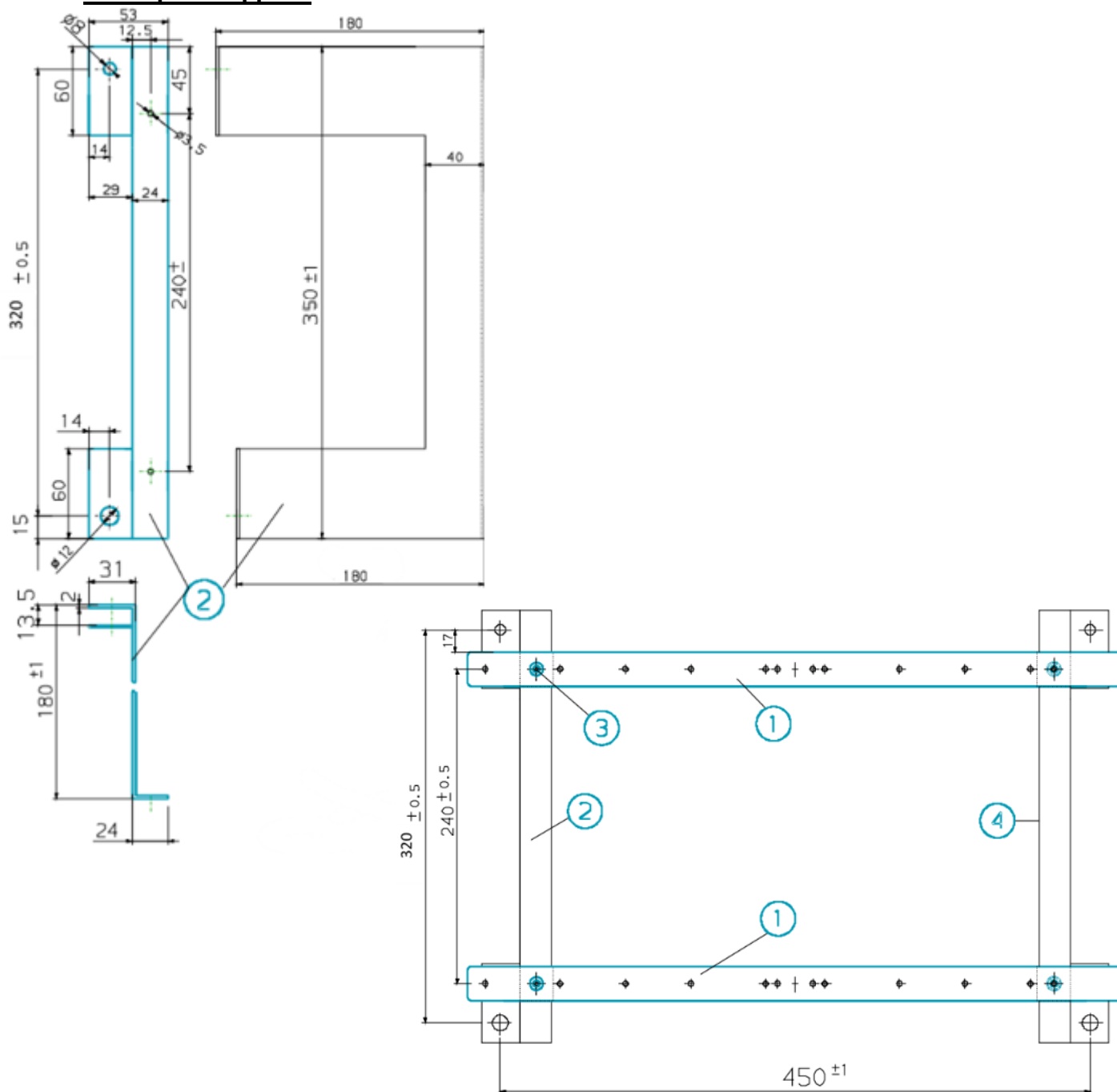
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Lower Cabinet:



Meter plate support:



1. Polycarbonate according to the following drawings.
2. SS 304 profile.
3. M5x20mm SS screw.
4. SS 304 profile (a mirror image of part 1).

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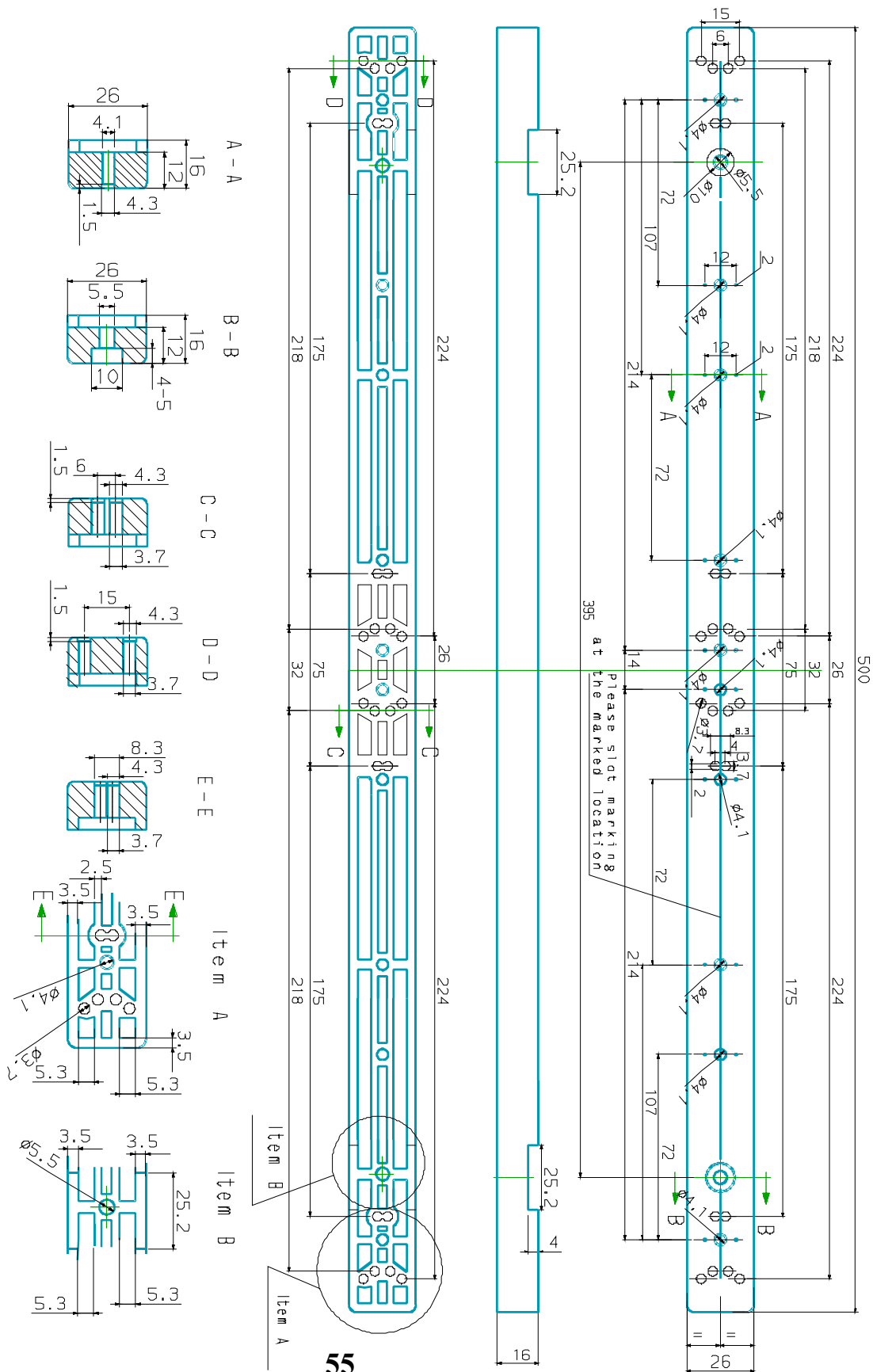
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REMARK:

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

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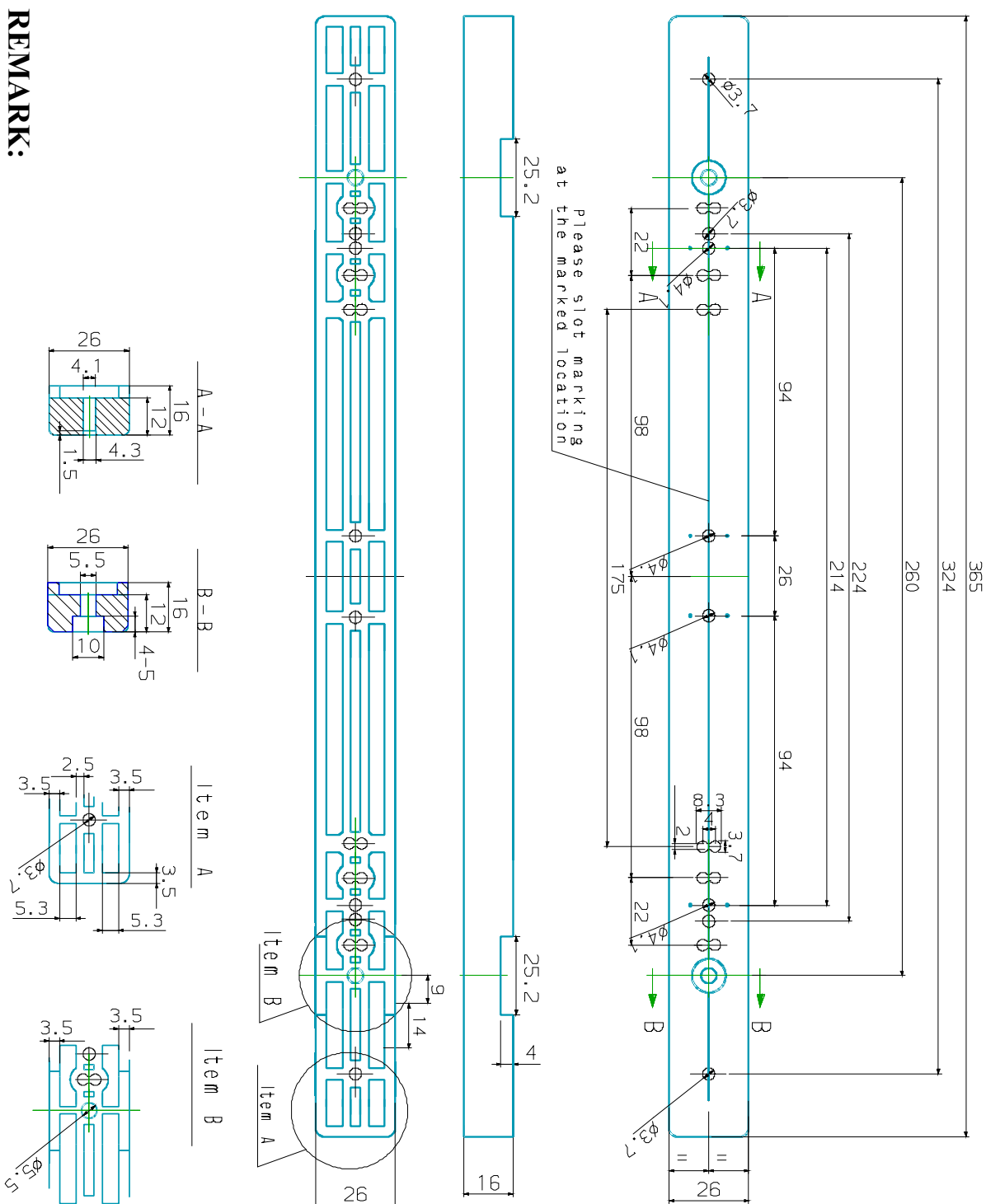
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REMARK:

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

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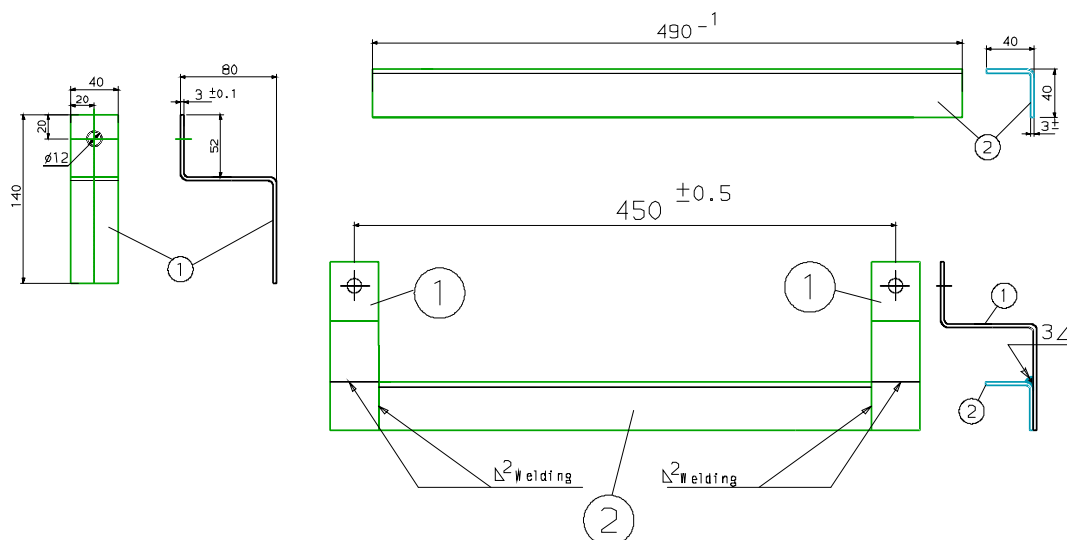
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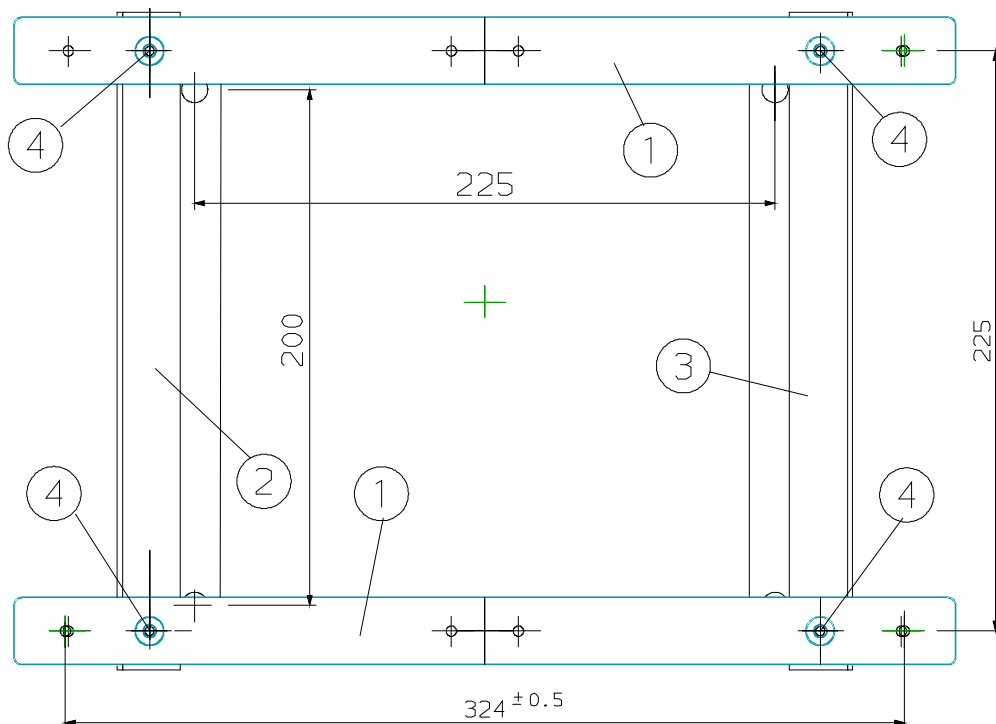
Cable Supports:



1. SS 304 (2 pcs.)

2. SS 304 (1 pcs.)

Support for insulated box (for terminals, fuses voltage and current contacts):



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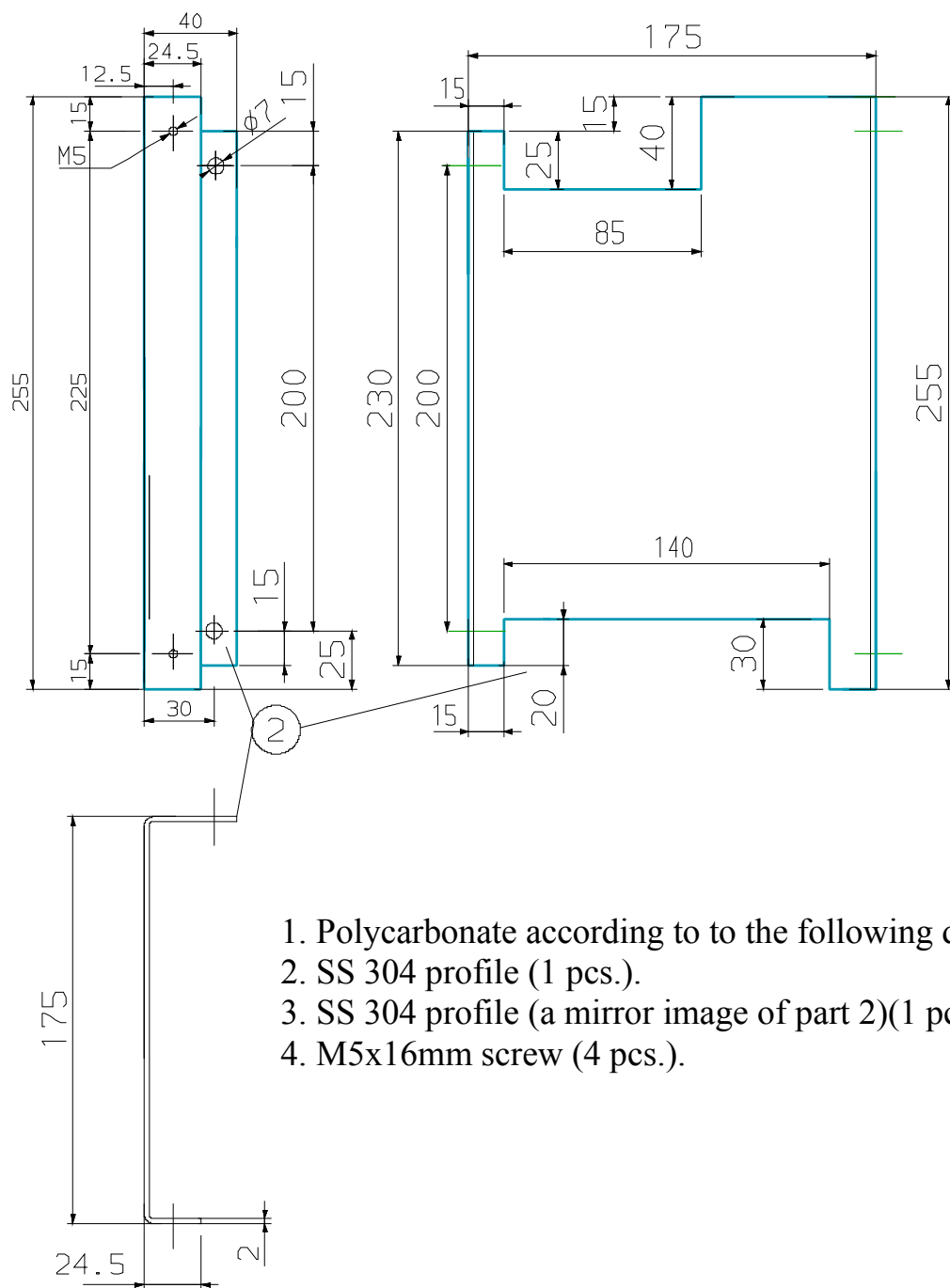
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1. Polycarbonate according to to the following drawings (2 pcs.).
2. SS 304 profile (1 pcs.).
3. SS 304 profile (a mirror image of part 2)(1 pcs.).
4. M5x16mm screw (4 pcs.).

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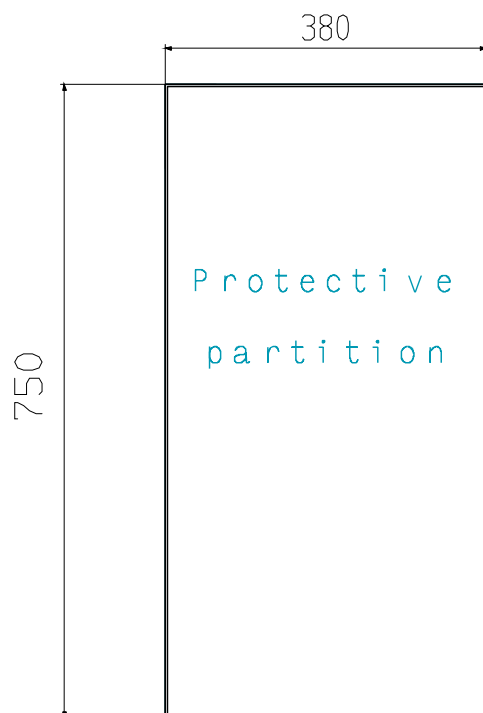
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For

L.V 3x[500\1000]A metering cabinets

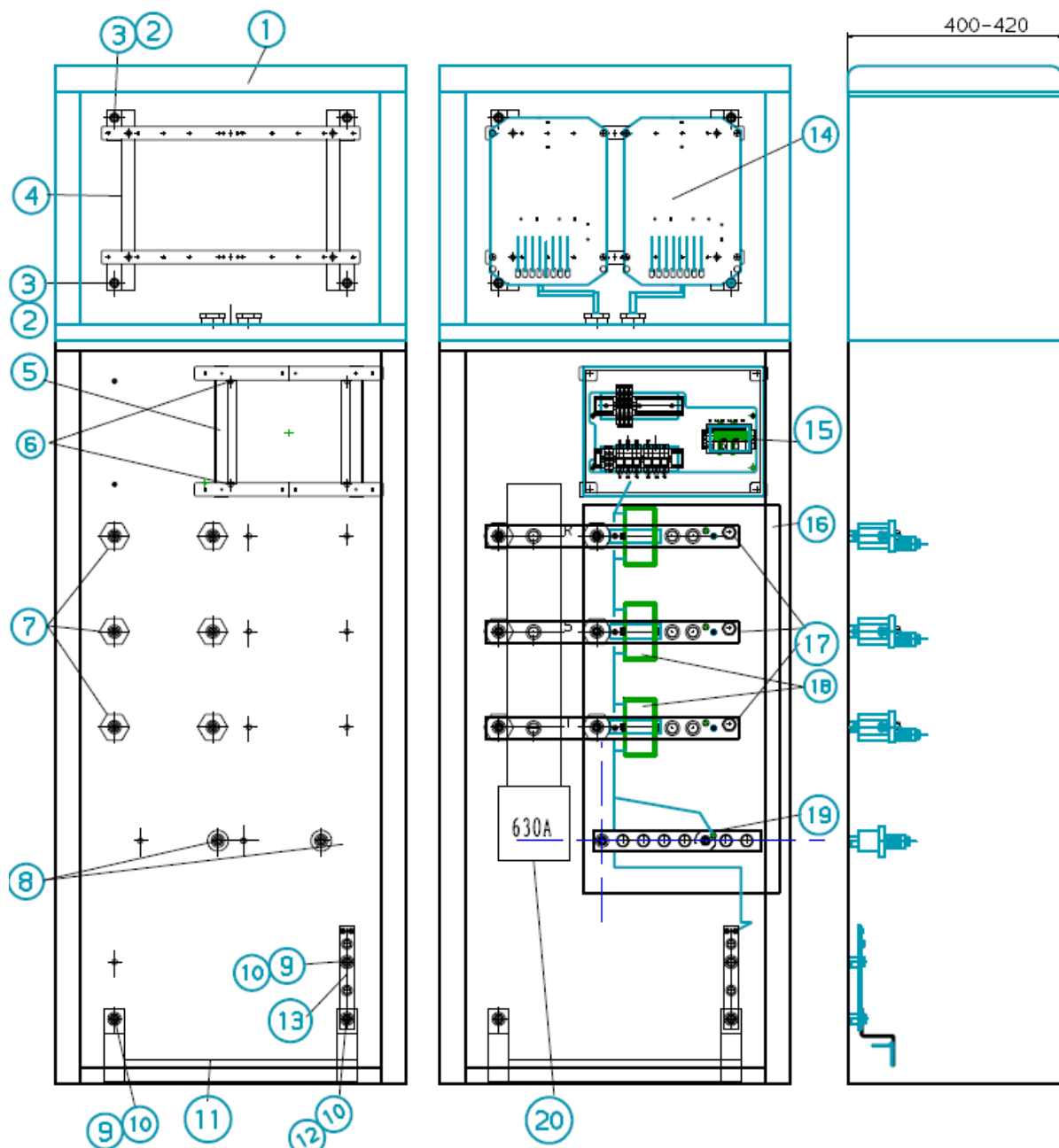
Protective partition (for the busbars):



1. Material: Fiberglass according to HM 2471 DIN 7735 or NEMA GRADE LI1-15 GPO3. Flame rate V0 according to UL94. Thickness: 4mm.
2. 750x380x3mm (L) profile, made from fiberglass.
3. Stainless steel hinges connected to the protective partition and to (L) profile with 5mm stainless steel rivets.
4. Insolated closing mechanism the protective partition.
5. Hinges shall be installed on the cabinet side with hinges that allow door movement of 90 degrees.

Note: The protective partition shall be supplied in all the cabinets types.

**Drawing C.2: L.V 3x500A Metering cabinet equipped
(I.E.C Cat.No 2821809)**



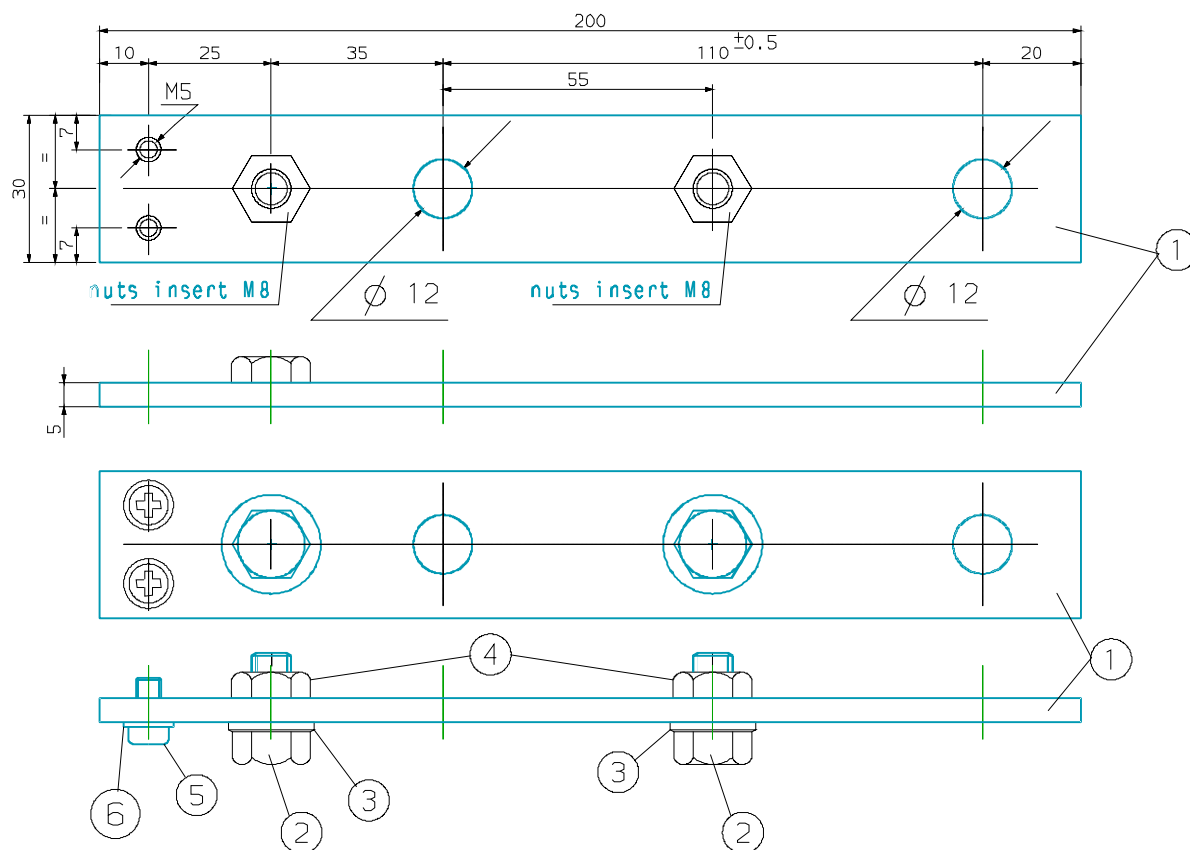
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Note: for the cabinet dimension and locks kinds see E1 sketch.

1. L.V. 3x500A polyester metering cabinet.
2. Conical spring washer for M8 screw according DIN 6796, coating thickness of min 8 micron (4 pcs.).
3. M8X12mm screw according ISO 4017 (DIN 933), coating thickness of min12 micron (4 pcs.).
4. Meters plate support.
5. Supporting for insulated box (for terminals, fuses and plate with current contact).
6. M6X12mm screw + disk according ISO 4017 (DIN 933), coating thickness of min 5 micron (4 pcs.).
7. 60 mm supported insulator (6 pcs.), according to clause 10.5.2 and appendix D.1.
8. 40 mm supported insulator (2 pcs.) according to clause 10.5.2 and appendix D.1.
9. M10X12mm screw according ISO 4017 (DIN 933), coating thickness of min 12 micron (2 pcs.).
10. Conical spring washer for M10 screw according DIN 6796, coating thickness of min 12 micron (3 pcs.).
11. Cables supporting.
12. M10X16mm screw according ISO 4017 (DIN 933), coating thickness of min 12 micron (1 pcs.).
13. Earthing busbar.
14. Meters plate – See clause 10.5.5
15. Insulated box (for terminals, fuses and plate with current contact) - See clause 10.5.5
16. Protective partition (for the busbars), shall be installed on the cabinet side with hinges (1 pcs.).
17. Phase busbars.
18. Current transformer 500/5A Cat. No 5395513 – see clause 10.5.8.
the current transformer shall be mounted on the back panel, without contact to the phase busbar.
(The manufacturer may submit a mounting solution to the I.E.C's approval)
19. Neutral busbar.
20. Fuse rail disconnecter size 3 (630A) according to clause 10.5.4 of this specification.

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

Earthing busbar:

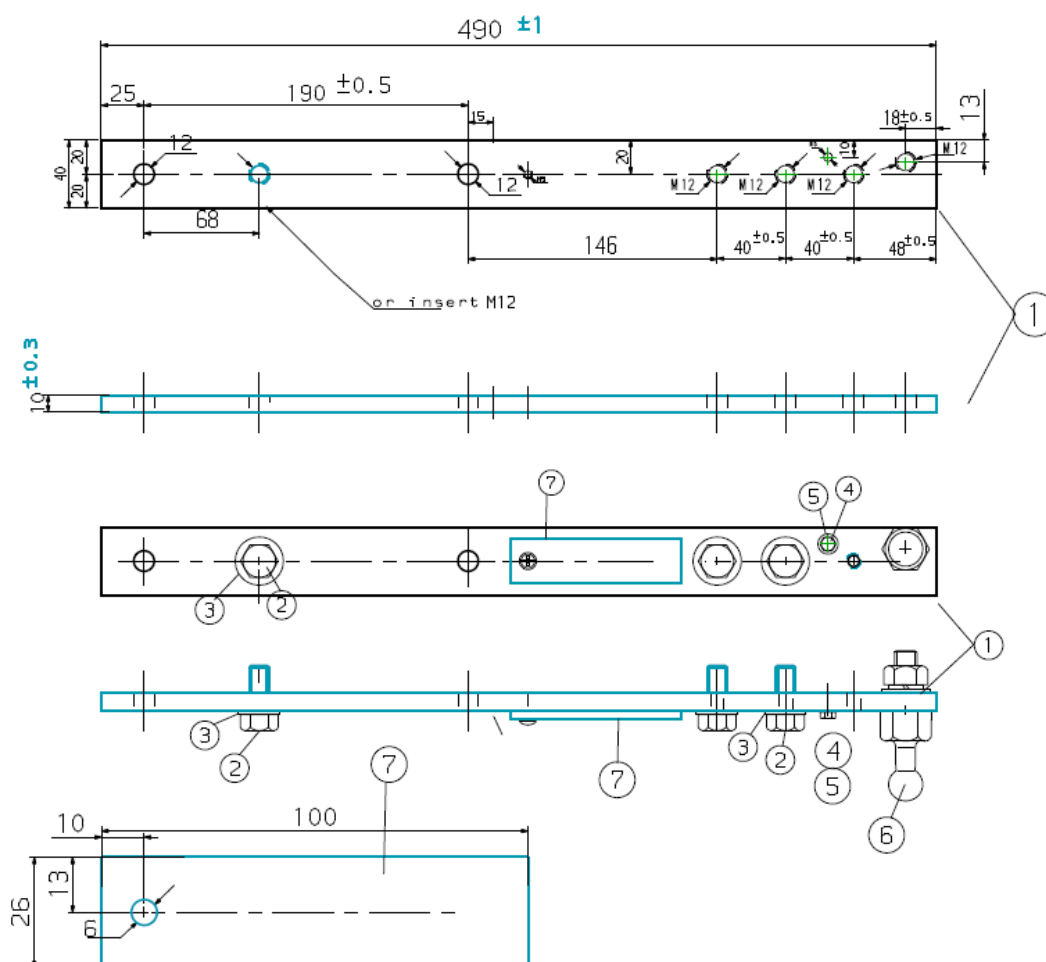


1. Ground busbar BAR EN 13601 CU-ETP/CW004A R250/R300 SH (E-Cu-F25 acc. DIN 40500/3) with coating thickness of min 20 micron – tin plated.
2. M8X20mm screw according ISO 4017 (DIN 933), coating thickness of min 7 micron(2 pcs.).
3. Conical spring washer for M8 screw according DIN 6796, coating thickness of min 8 micron(2 pcs.).
4. M8 insert nuts coating thickness of min 8 micron.(2 pcs)
5. M5x10mm Phillips screw according DIN 7985, coating thickness of min 5 micron(2 pcs.).
6. Conical spring washer for M5 screw according DIN 6796, coating thickness of min 5 micron(2 pcs.).

REMARKS:

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

Phase busbars:



1. Phase busbar BAR EN 13601 CU-ETP/CW004A R250/R300 SH (E-Cu-F25 acc. DIN 40500/3) with coating thickness of min 20 micron – tin plated.
2. M12X30mm screw according ISO 4017 (DIN 933)/steel 8.8, coating thickness of min 12 micron(3 pcs.).
3. M12 nuts + conical spring washer acc. to DIN 6796 connected together, coating thickness of min 12 micron (3 pcs.).
4. M5x16mm Phillips screw according DIN 7985/steel 5.6, coating thickness of min 5 micron(2 pcs.).
5. Flat washer for M5 screw, according DIN 125/steel, coating thickness of min 5 micron(2 pcs.).
6. Earthing ball screw: (1 pcs.) see appendix D.3 For technical data.
7. Fiberglass according to NEMA GRADE L11-15 GPO3, thickness – 5mm (1 pcs.)

REMARKS:

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

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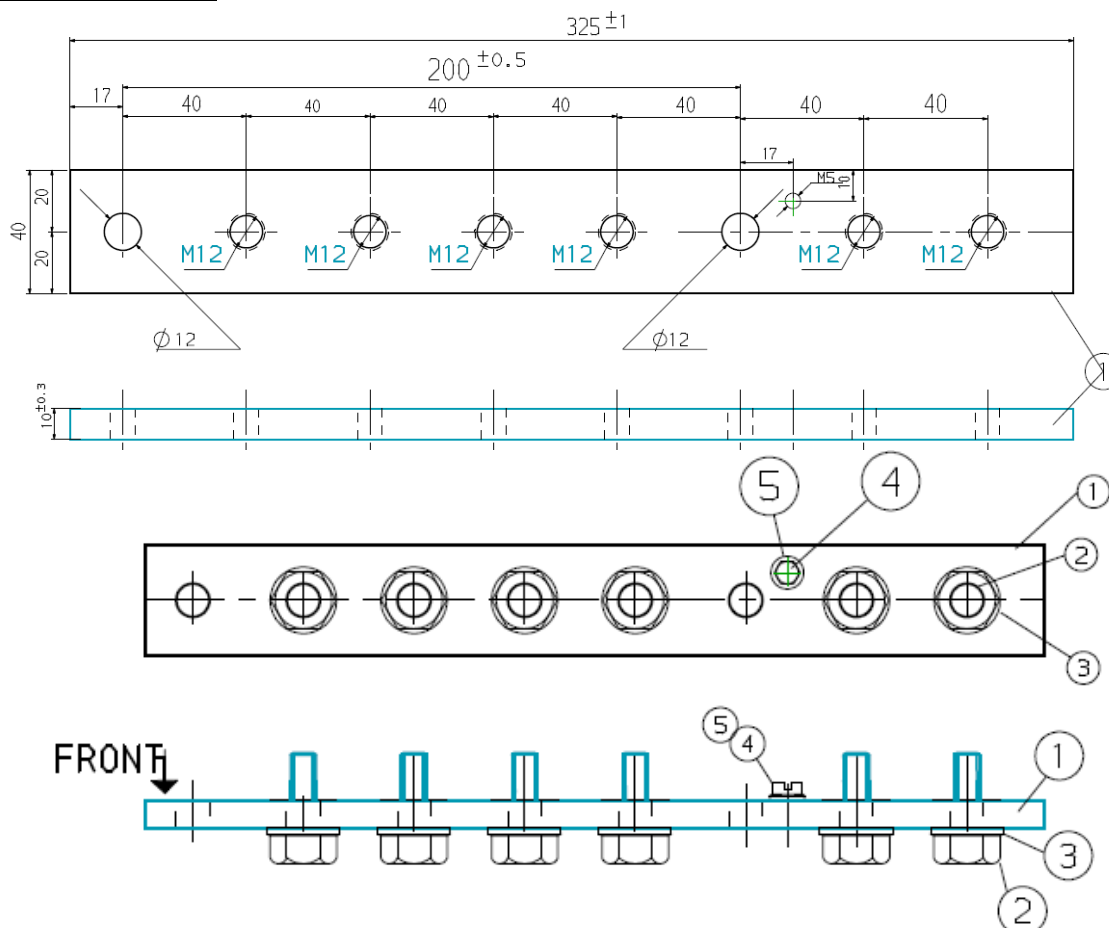
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For

L.V 3x[500\1000]A metering cabinets

Neutral Busbar:

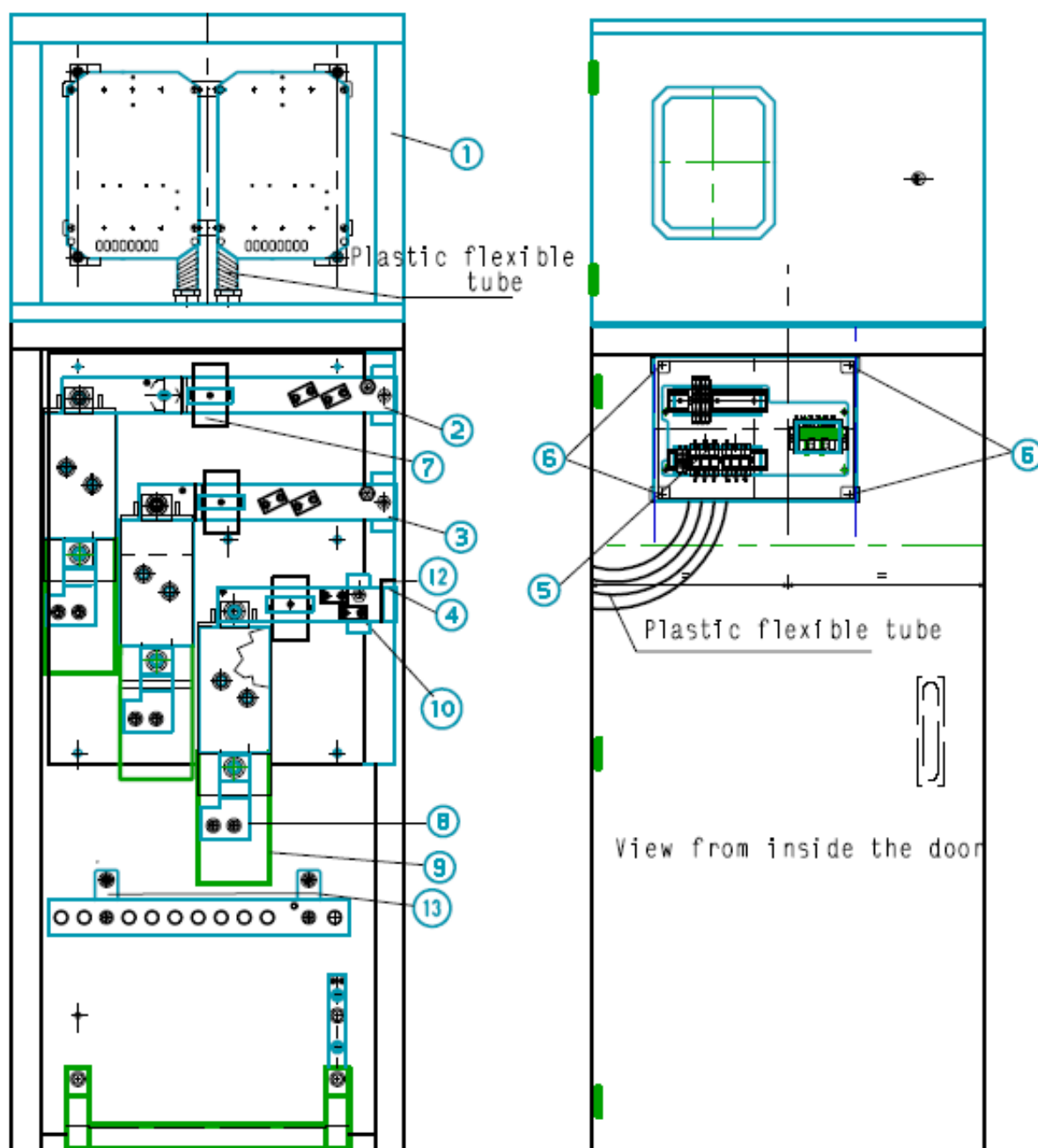


1. Neutral busbar BAR EN 13601 CU-ETP/CW004A R250/R300 SH (E-Cu-F25 acc. DIN 40500/3) with coating thickness of min 20 micron – tin plated.
2. M12X30mm screw according ISO 4017 (DIN 933), coating thickness of min 12 micron(6 pcs.).
3. Conical spring washer for M12 screw according DIN 6796, coating thickness of min 12 micron(6 pcs.).
4. M5x16mm Phillips screw according DIN 7985, coating thickness of min 5 micron(1 pcs.).
5. Flat washer 5.3x10x1, according DIN 125, coating thickness of min 5 micron(1 pcs.).

REMARKS TO ALL THE BUSBARS:

1. All the screws, springs washer and nuts will plated with zinc coating + yellow/blue passivation (dichromate).
2. The Screws (2. In drawing) should be fitted with M12 nuts + conical spring washer connected together.
3. The Screws (Part no' 2) should be facing outwards

**Drawing C.3: L.V 3x1000A Metering cabinet equipped
(I.E.C Cat.No 4026407)**



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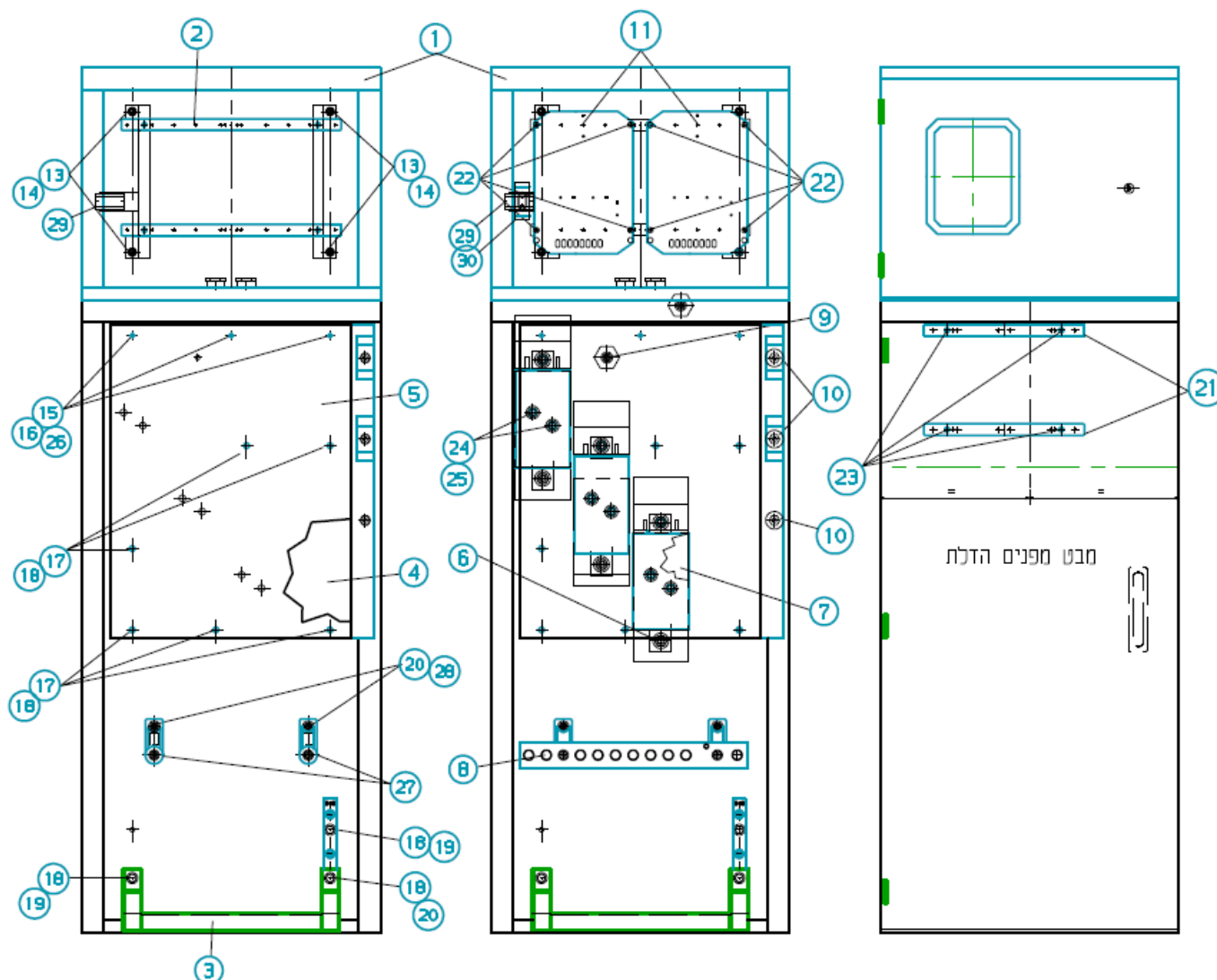
Specification NPS 328

For

L.V 3x[500\1000]A metering cabinets

1. L.V. 3x1000A polyester metering cabinet.
2. Busbar for upper phase (1 pcs.).
3. Busbar for middle phase (1 pcs.).
4. Busbar bottom phase (1 pcs.).
5. Insulated box (for terminals, fuses and plate with current contact) See clause 10.5.5
6. Screw for plastics, steel 8.8 din 7981, coating thickness of min 5 micron (4 pcs.).
7. Current transformer S 1000/5A Cat. No 5274324 – see clause 10.5.8 (3 pcs.),
(The manufacturer shall submit a mounting solution to the I.E.C's approval)
8. Adaptor plate for fuse base size 4a – copper, 3 pcs.
9. Cover for fuse base size 4 a, polycarbonate, 3 pcs.
10. Conical spring washer for M6 screw according to DIN 6796, coating thickness of min 8 micron
11. Plate connection for fuse base 1000A, material: Copper.
12. Cover for Busbar bottom phase (1 pcs.).
13. Adapter for neutral Busbar (2 pcs.).

REMARK: All the screws, springs washer and nuts will plated with zinc coating + yellow/blue passivation (dichromate). Plastic flexible pipes from an not flammable plastic material.

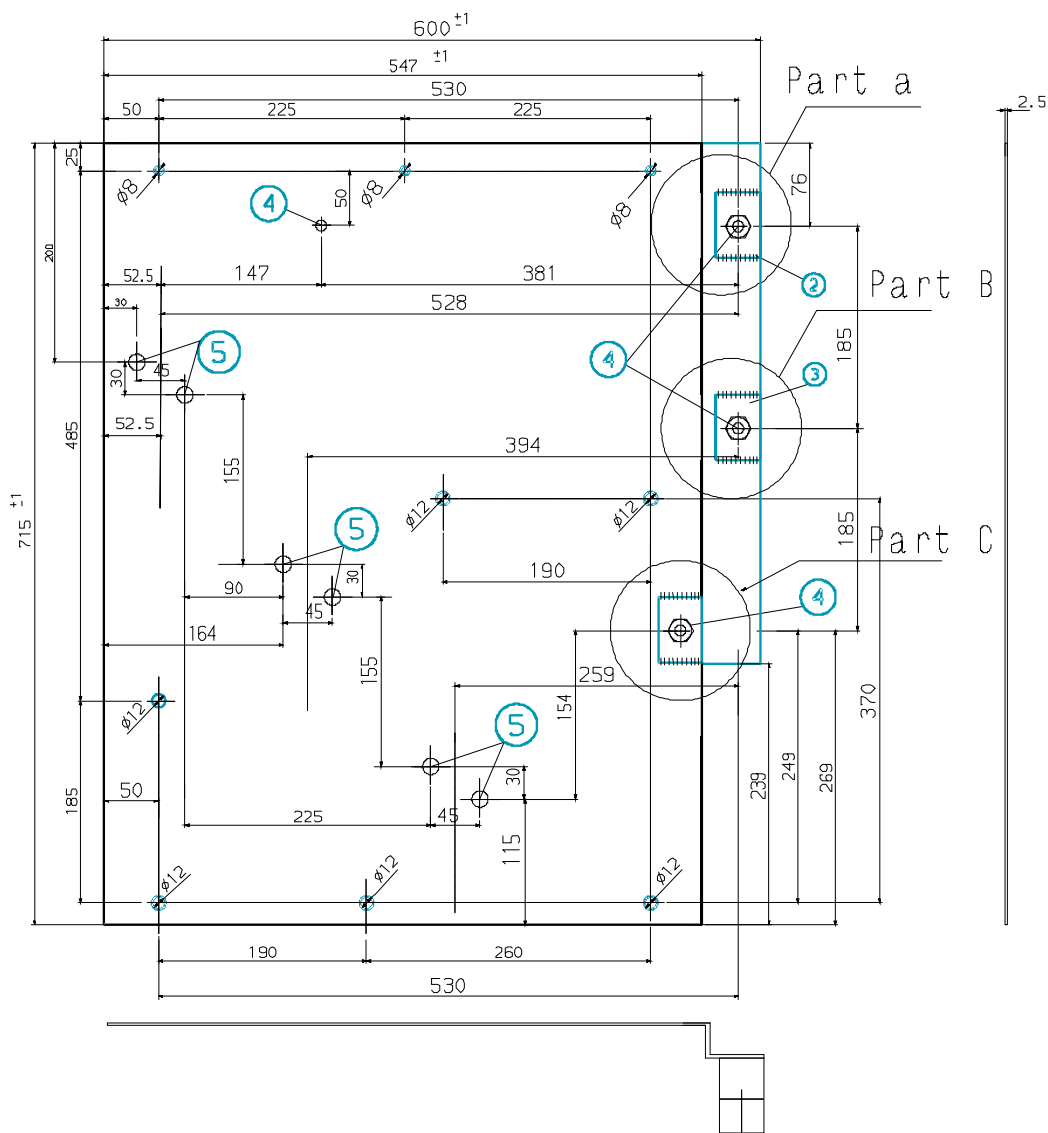


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For
L.V 3x[500\1000]A metering cabinets

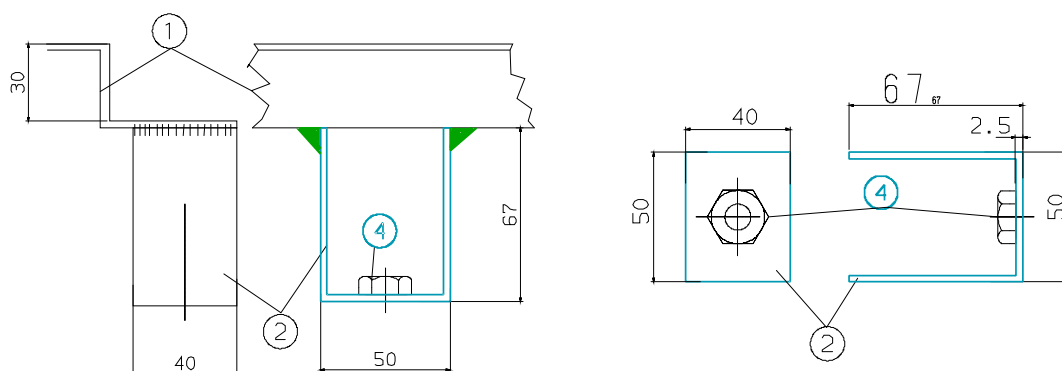
1. L.V. 3x1000A polyester metering cabinet.
2. Meters plate support see clause 10.5.5.
3. Cables support.
4. Fuse base support.
5. Cover for Fuse base.
6. Fuse base 1000A, Size 4A- see clause 10.5.3.
7. Riser plate for fuse base.
8. Neutral busbar.
9. 60 mm supported insulator (6 pcs.), according to clause 10.5.2 and appendix D.1.
10. 40 mm supported insulator (2 pcs.), according to clause 10.5.2 and appendix D.1.
11. Meters plate - See clause 10.5.5.
12. Earthing busbar (according to C.2 Drawing)
13. M8X12mm screw according to ISO 4017 (DIN 933), coating thickness of min 8 micron (4 pcs.).
14. Conical spring washer for M6 screw according to DIN 6796, coating thickness of min 8 micron (4 pcs.).
15. M6X12mm screw according to ISO 4017 (DIN 933), coating thickness of min 6 micron (3 pcs.).
16. Conical spring washer for M6 screw according to DIN 6796, coating thickness of min 6 micron (3 pcs.).
17. M10X12mm screw according to ISO 4017 (DIN 933), coating thickness of min 12 micron (6 pcs.).
18. Conical spring washer for M10 screw according to DIN 6796, coating thickness of min 12 micron (9 pcs.).
19. M10X16mm screw according to ISO 4017 (DIN 933), coating thickness of min 12 micron (2 pcs.).
20. M10X20mm screw according to ISO 4017 (DIN 933), coating thickness of min 12 micron (3 pcs.).
21. Polycarbonate support according to NPD 364 / TSC 3163 see drawings below.
22. Screw for plastics, M5X16 ST-304 8.8 din 7981, coating thickness of min 5 micron (8 pcs.).
23. M5X16mm screw according to ST-304, coating thickness of min 12 micron (4 pcs.).
24. M12X40mm screw according to ISO 4017 (DIN 933), coating thickness of min 12 micron (6 pcs.).
25. Conical spring washer for M12 screw according to DIN 6796, coating thickness of min 12 micron (6 pcs.).
26. Booster bushing 12mm, reinforced polyester Connection between the Cabinet insert to part 4(3pcs.).
27. 40 mm supported insulator (2 pcs.) according to clause 10.5.2 and appendix D.1.
28. Flat washer to the screw for M10 screw according to DIN 125, coating thickness of min 12 micron (2 pcs.).
29. DIN rail 35mm for mounting the socket.
30. 2-pin socket 10A installed on DIN rail 35 mm (may use standard 2-pin socket with din adapter)

Remark: for the parts that are similar with the 3*500 A cabinet (such as: earthing busbar, cable support, meters support, insulated box support etc. – see the drawings from the C.1 part in this specification.

Fuse base supports:



Part A



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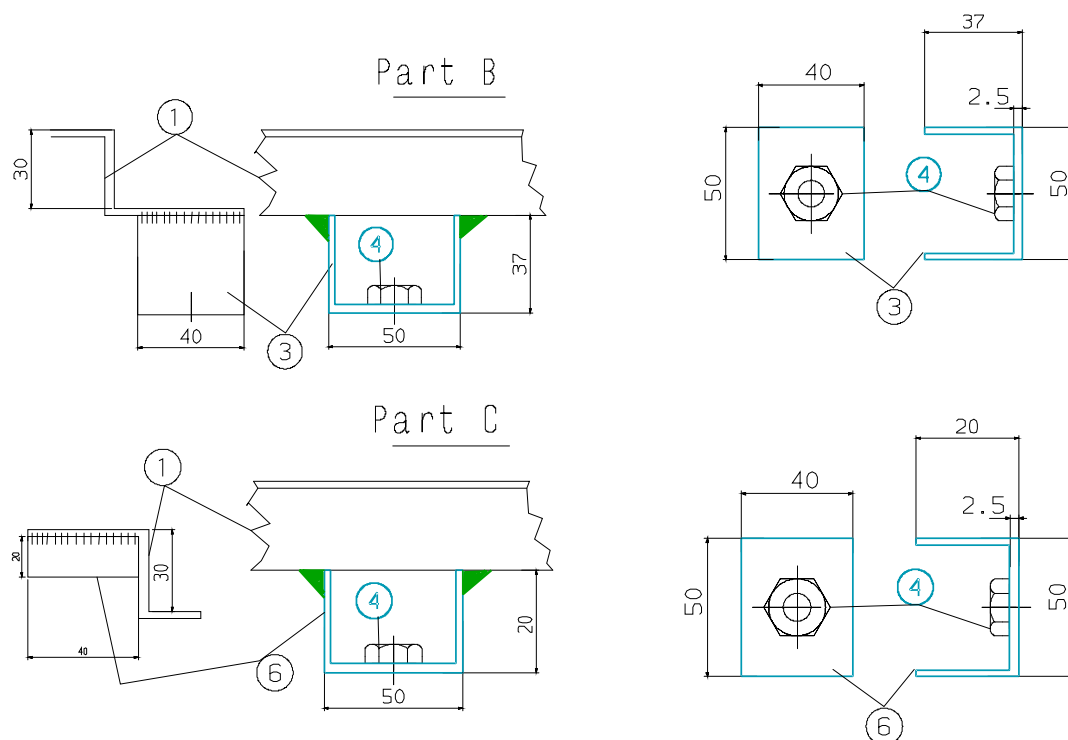
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For

L.V 3x[500\1000]A metering cabinets



1. Cover for Fuse base supporting.
2. Upper insulator bracket (1 pcs.).
3. Middle insulator bracket (1pcs.).
4. Steel M10 insert nut, Steel 8,8 coating thickness of min 12 micron(5 pcs.).
5. Steel M12 insert nut, Steel 8. 8, coating thickness of min 12 micron (6 pcs.).
6. Lower insulator bracket (1pcs.).

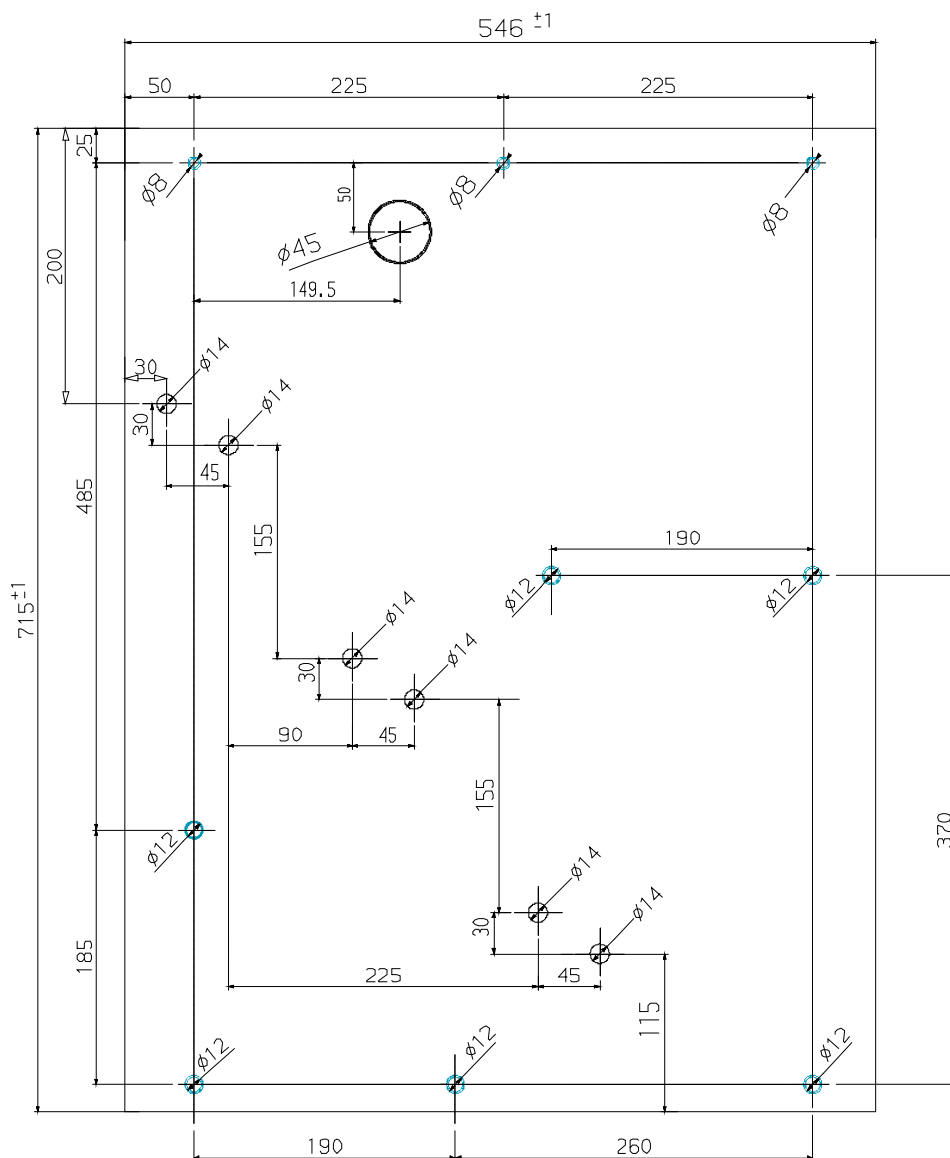
REMARK:

Fuse base support material: ST-37

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

Parts 1,2,3,6 plated with zinc coating + yellow/blue passivation of min 15 micron.

Cover for fuse base supports:



REMARK:

Material: Fiberglass according to HM 2471 DIN 7735 or NEMA Grade LI1-15 GPO3.

Fire resistance rating: V0 acc. To UL 94.

Thickness : minimum 2 mm.

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For

L.V 3x[500\1000]A metering cabinets

Cover for fuse base size 4 a, Polycarbonate:

Material: Transparent polycarbonate

Flame rating: V2

Thickness: 2mm.

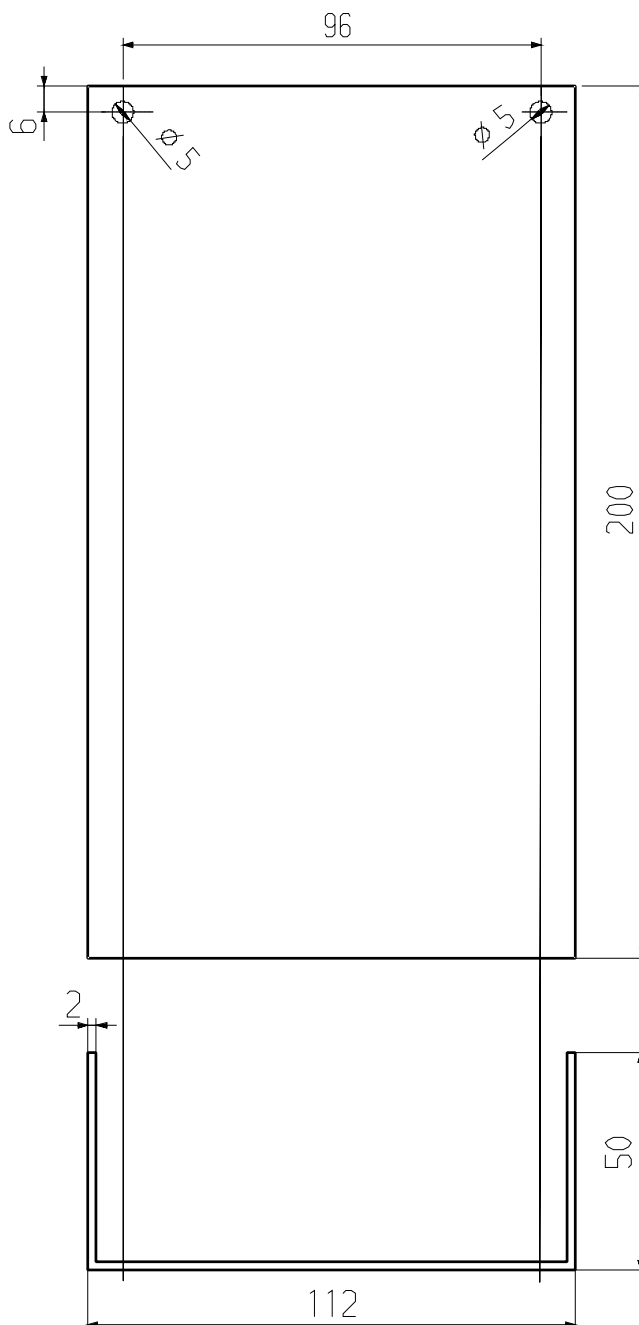
Cover will be provided with:

2 insert nuts M4,

Material Polycarbonate,

2 M4x10 screw

2 convex washers for M4 screw.



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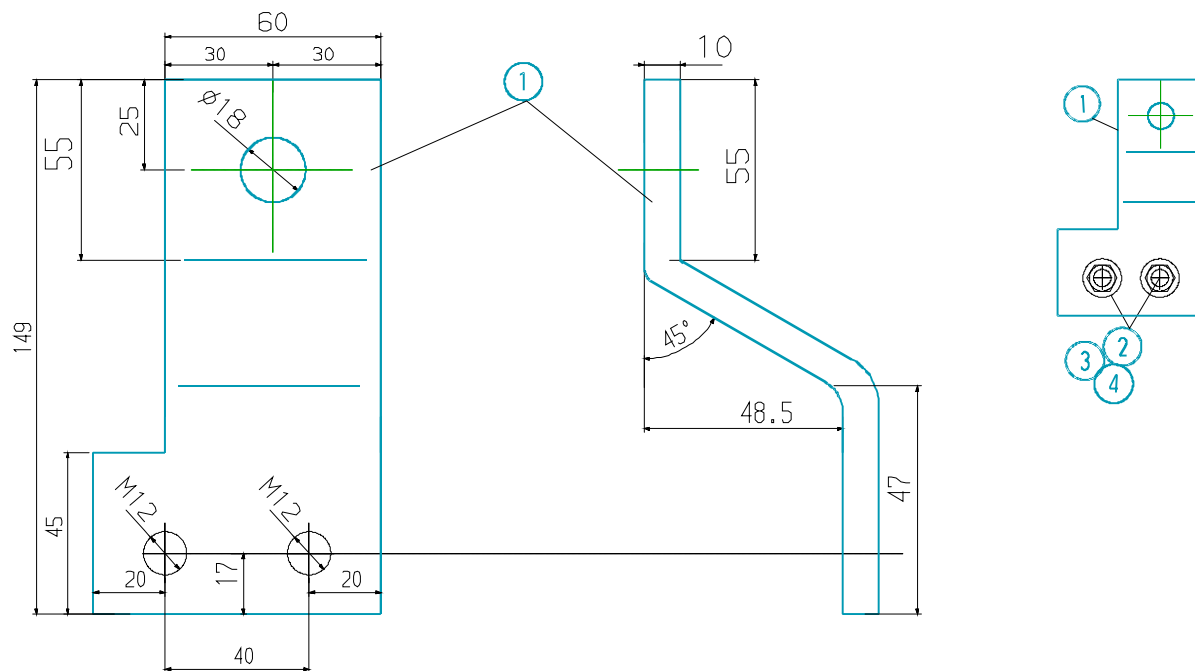
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Specification NPS 328

For

L.V 3x[500\1000]A metering cabinets

Adapter plate for fuse base:



1. Fuse base bus bar material: Electrolytic copper according EN 13601 (Din 40500/3) coating thickness of min 20 micron, galvanic tin plated .
2. M12X50mm screw according ISO 4017 (DIN 933), coating thickness of min 12 micron(2 pcs.).
3. Convex spring washer for M12 screw according DIN 6796, coating thickness of min 12 micron.(2pcs.).
4. Nuts M12 with convex spring washer connected together (2pcs.).

REMARK:

- All the screws, springs washer and nuts will plated with zinc coating + yellow/blue passivation (dichromate).
- The screws (part 3) shall be facing outwards.

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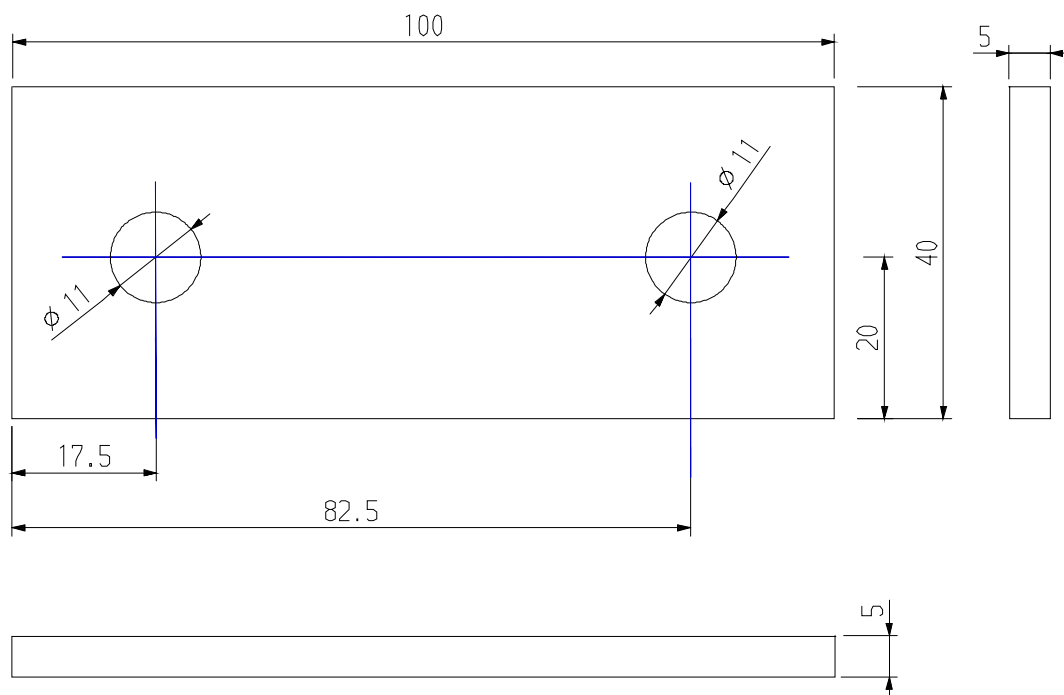
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Specification NPS 328

For

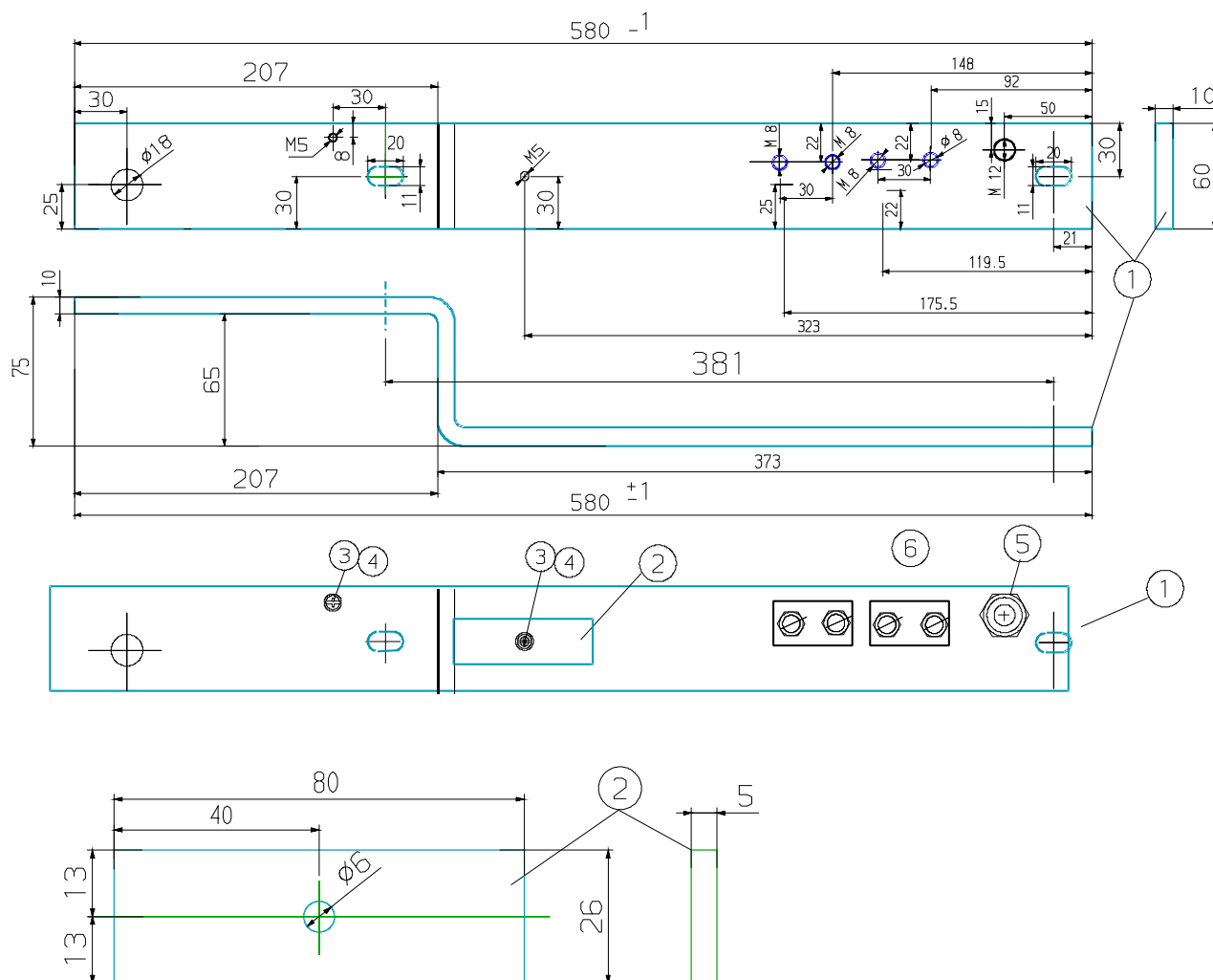
L.V 3x[500\1000]A metering cabinets

Adapter plate for neutral busbar:



Material: ST-37

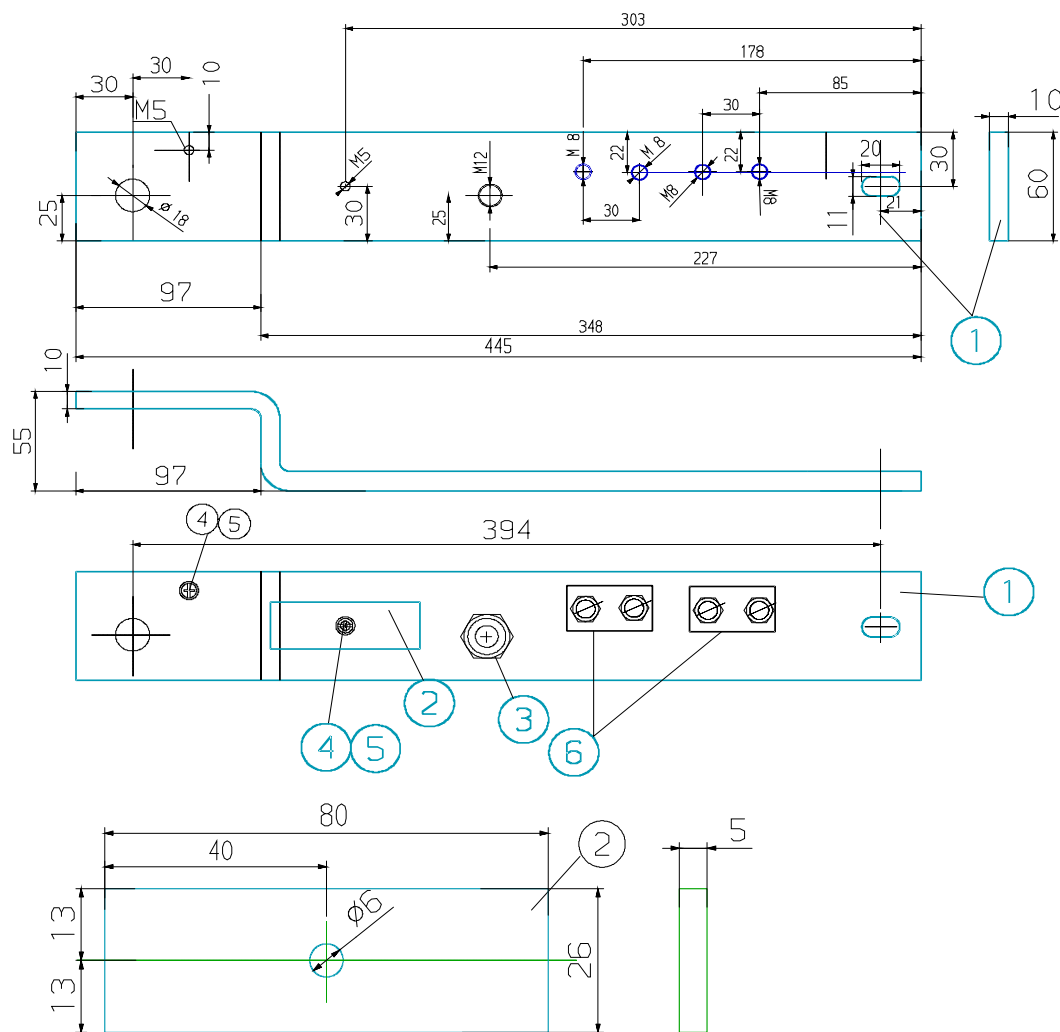
Phase busbar (top)



1. Phase busbar BAR EN 13601CU-ETP/CW004A R250/R300 SH (E-Cu-F25 acc. DIN 40500/3) with coating thickness of min 20 micron – tin plated.
2. Fiberglass according to NEMA GRADE L11-15 GPO3, thickness – 5mm (1 pcs.).
3. M5x12mm Phillips screw according to DIN 7985, coating thickness of min 5 micron (2 pcs.).
4. Flat washer for M5 screw, according to DIN 125, coating thickness of min 5 micron (2 pcs.).
5. Earthing ball screw 20mm (1 pcs.).
6. Al/Cu 120÷300 mm² copper – bronze alloy double clamps, according to VDE 220, coating thickness of min 12-micron, tin plated (2 pcs.) – Item acc. to the I.E.C approval.

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

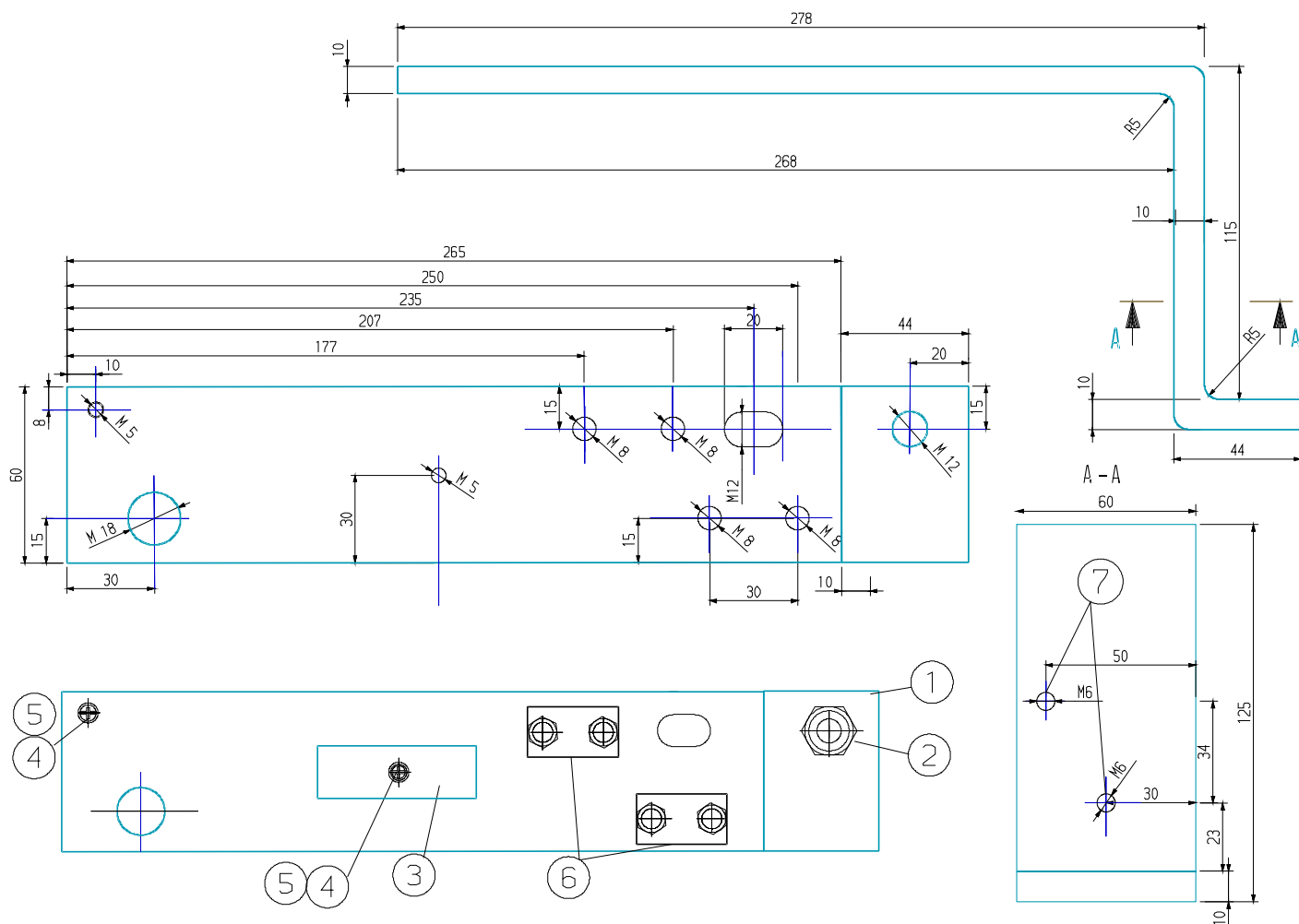
Phase busbar (middle):



1. Phase busbar BAR EN 13601 CU-ETP/CW004A R250/R300 SH (E-Cu-F25 acc. DIN 40500/3) with coating thickness of min 20 micron – tin plated.
2. Fiberglass according to NEMA GRADE L11-15 GPO3, thickness – 5mm(1 pcs.).
3. Earthing ball screw 20mm (1 pcs.).
4. M5x12mm Phillips screw according DIN 7985, coating thickness of min 5 micron(2 pcs.).
5. Flat washer for M5 screw, according DIN 125, coating thickness of min 5 micron(2 pcs.).
6. Al/Cu 120÷300 mm² copper – bronze alloy double clamps, according to VDE 220, coating thickness of min 12 micron, tin plated(2 pcs.) – Item acc. to the I.E.C approval.

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

Phase busbar (bottom):



1. Phase busbar BAR EN 13601 CU-ETP/CW004A R250/R300 SH (E-Cu-F25 acc. DIN 40500/3) with coating thickness of min 20 micron – tin plated.
2. Earthing ball screw 20mm (1 pcs.).
3. Fiberglass according to NEMA GRADE L11-15 GPO3, thickness – 5mm(1 pcs.).
4. M5x12mm Phillips screw according DIN 7985, coating thickness of min 5 micron(2 pcs.).
5. Flat washer for M5 screw, according DIN 125, coating thickness of min 5 micron(2 pcs.).
6. Al/Cu 120÷300 mm² copper – bronze alloy double clamps, according to VDE 220, coating thickness of min 12 micron, tin plated(2 pcs.).
7. M6x18 Screw heads isolated (2 pcs.).

Remark: this busbar shall be protected – in the area of 115+10 mm – with a polycarbonate cover, min. 1 mm thickness, for the touch protection of the part of this busbar witch is out from the horizontal part. The concept shall be approved by I.E.C before the production.

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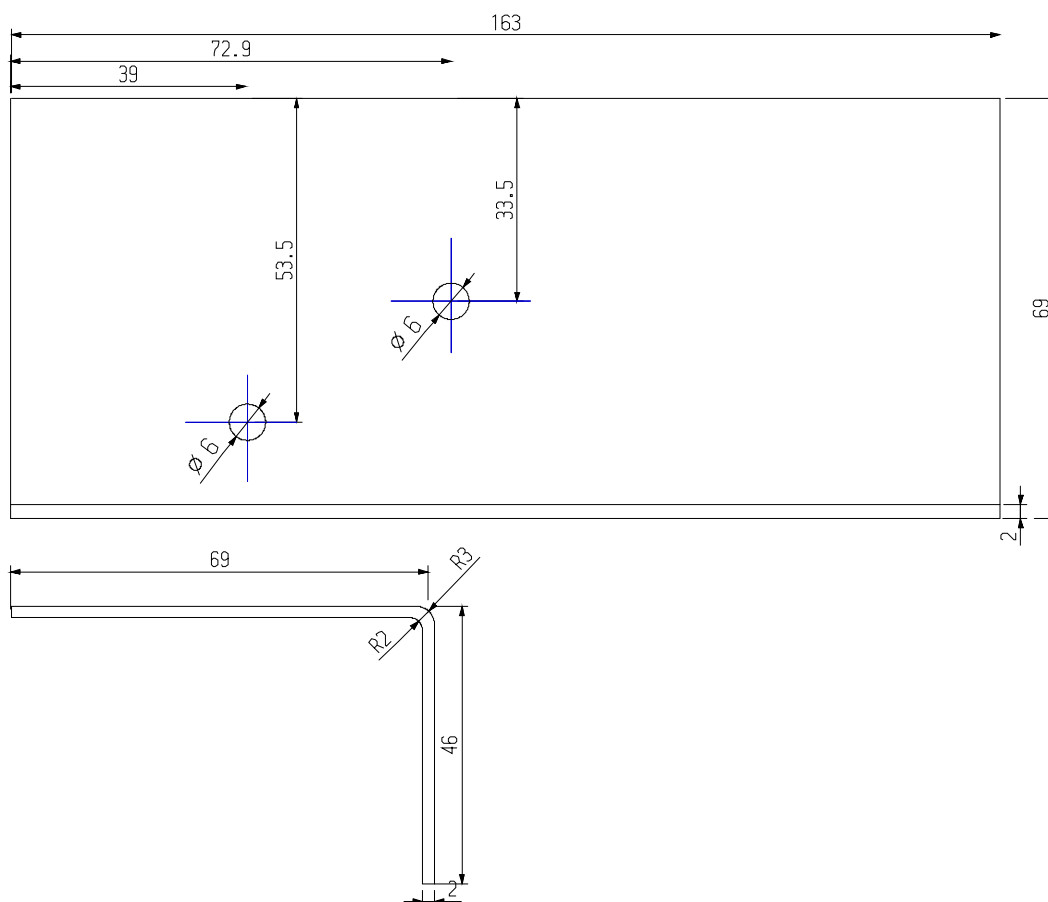
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For

L.V 3x[500\1000]A metering cabinets

Cover for bottom phase busbar:



Material: polycarbonate cover,

Thickness: minimum 1mm,

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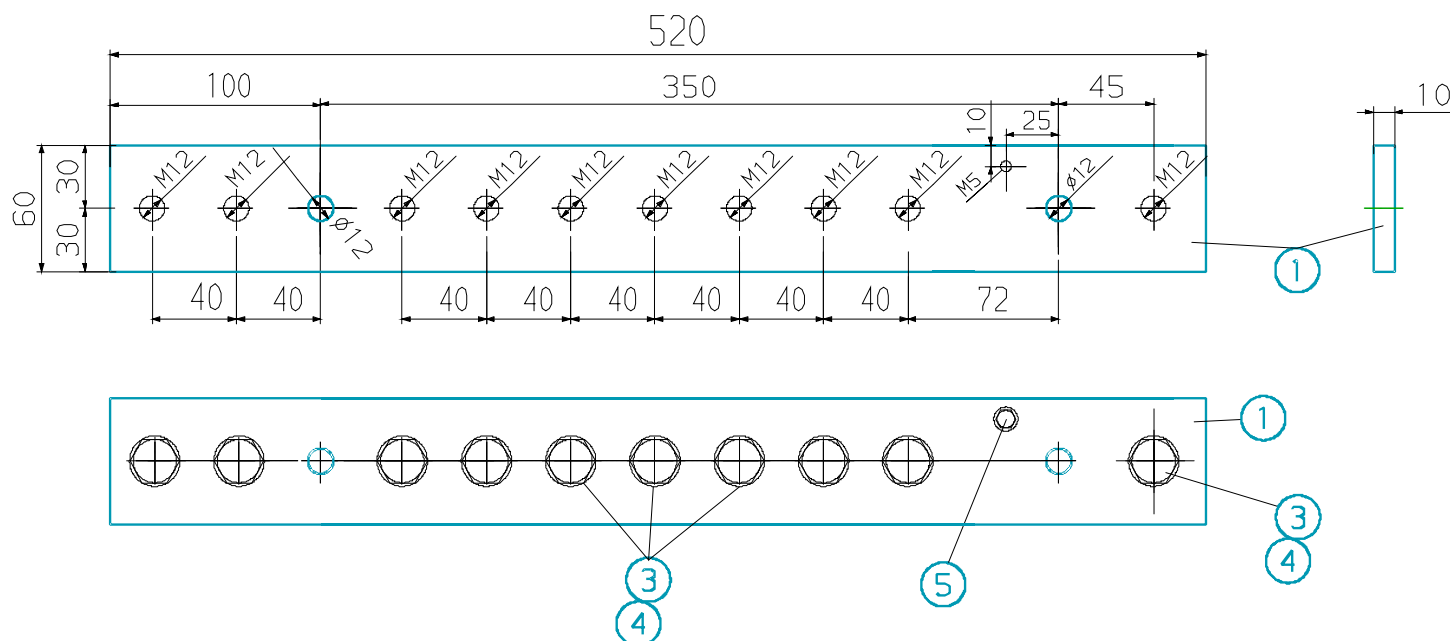
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Specification NPS 328

For

L.V 3x[500\1000]A metering cabinets

Neutral busbar:



1. Neutral BAR EN 13601 CU-ETP/CW004A R250/R300 SH (E-Cu-F25 acc. DIN 40500/3) with coating thickness of min 20 micron – tin plated.
2. M12X35mm screw according ISO 4017 (DIN 933), coating thickness of min 12 micron(10 pcs.).
3. Nuts M12 according DIN 934, with convex spring washer according DIN 6796 connected together, coating thickness of min 12 micron (10pcs.).
4. M5x16mm Phillips screw according DIN 7985, coating thickness of min 5 micron(1 pcs.).
5. Flat washer 5.3x10x1, according DIN 125, coating thickness of min 5 micron(1 pcs.).

REMARK:

- All the screws, springs washer and nuts will plated with zinc coating + yellow/blue passivation (dichromate).
- The screws (part 2) shall be facing outwards.

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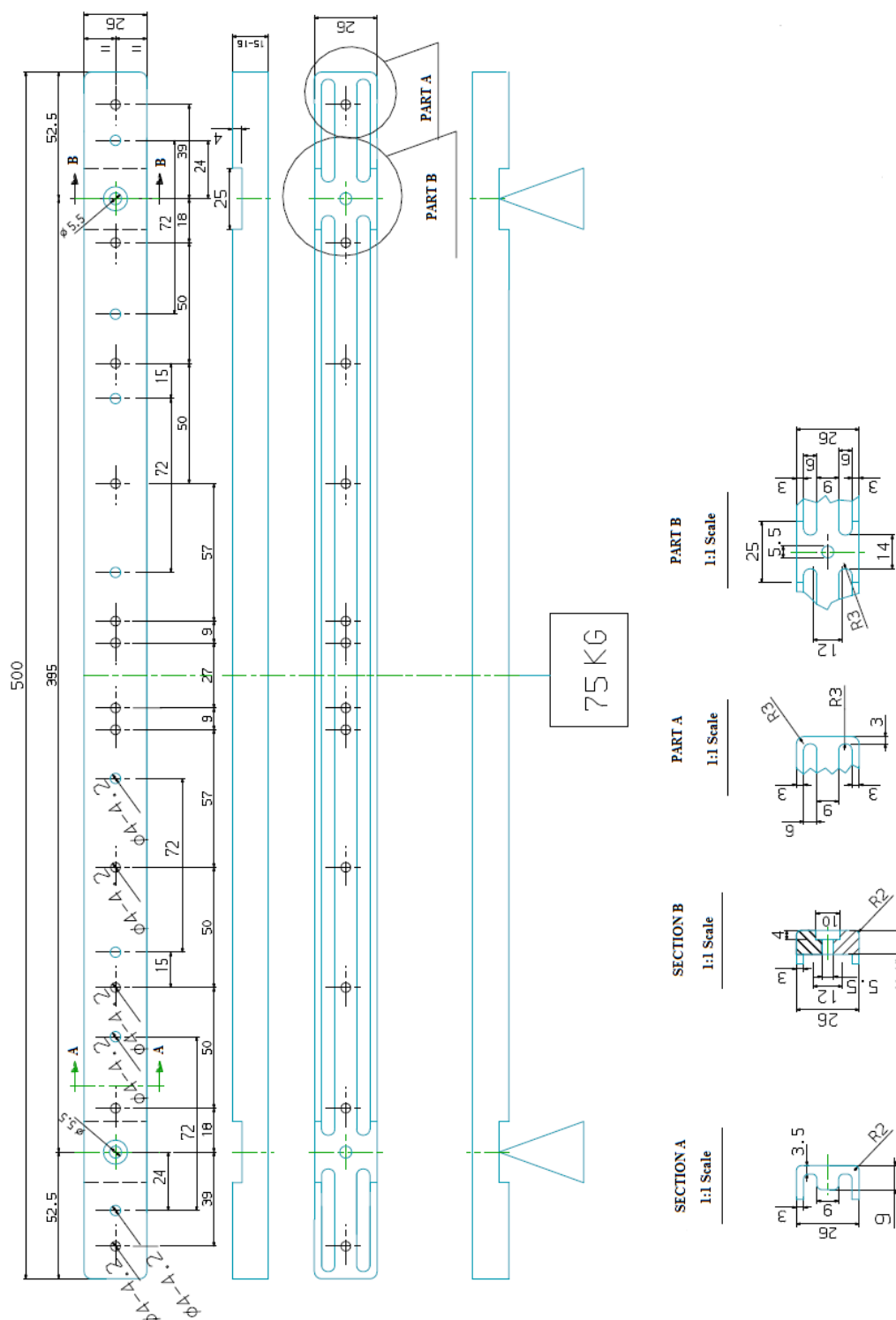
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For

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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.

NPD:364

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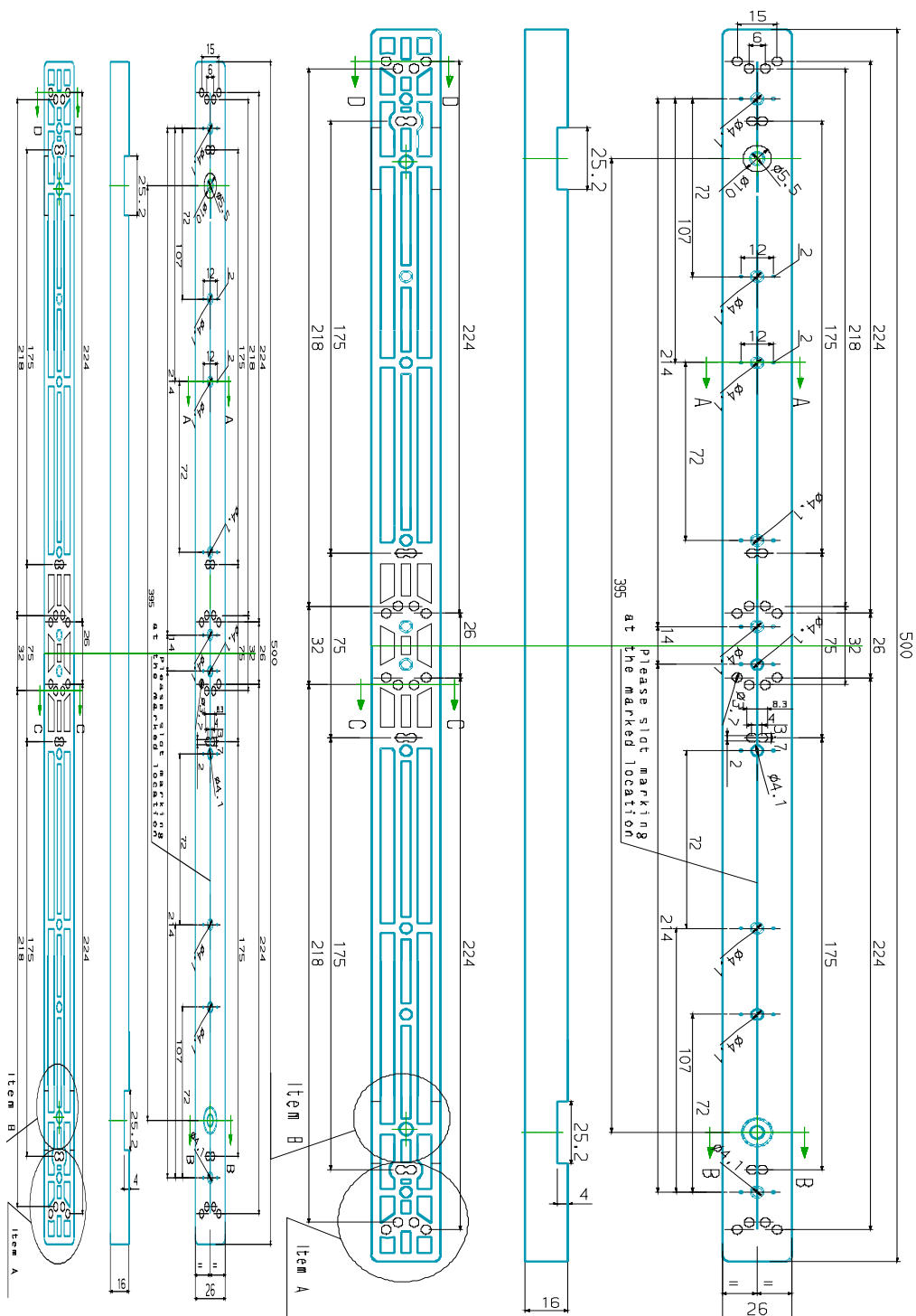
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For

L.V 3x[500\1000]A metering cabinets



REMARK:

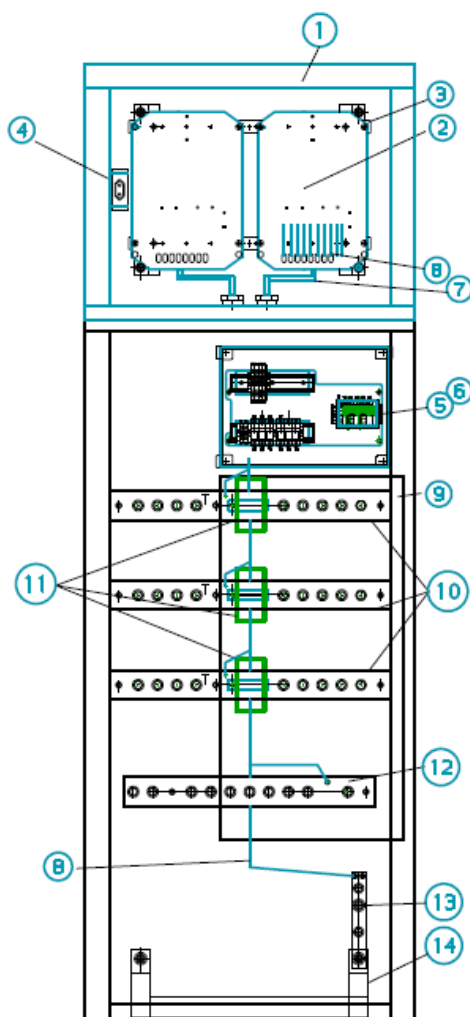
TSC:3163

Material: linear polycarbonate, Original or grainy.

Combustion resistance: according UL-94, Class V0.

Phase should withstand the weight of 75 kg for a minute.

**Drawing C.4: L.V 3x500-1000A PV Metering cabinet equipped
(I.E.C Cat.No 5294844)**



1. LV 500/1000A Polyester metering cabinet (See App. C.1)
2. Meters plate - See clause 10.5.5.
3. Meters plate support see clause 10.5.5.
4. 2-pin socket 10A installed on DIN rail 35 mm (may use standard 2-pin socket with din adapter)
5. Insulated box (for terminals, fuses and plate with current contact) - See clause 10.5.5
6. Supporting for insulated box (for terminals, fuses and plate with current contact).
7. Pliable smooth conduits – self-extinguishing (1.5m).
8. 2.5mm² / 4mm² Conductors (See App C.1)
9. Protective partition (for the busbars) shall be installed on the cabinet side with hinges (1 pcs.).
10. Phase bus bars (See drawing below)
11. Current transformer 1000/5A Cat. No 5274324 – see clause 10.5.8 (3 pcs.),

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12. Neutral busbar.
13. Earthing busbar (according to C.2 Drawing)
14. Cables support.

REMARK:

The PV cabinet shall be on the same design of 3x500\1000A LV cabinet (equipped with the same type of internal door, labels, metering wiring dimensions, socket, etc.), without the fuse base 4A.

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.C'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).
The bidder shall provide a secure method for implementing this arrangement, conditional upon approval by the I.E.C.
- ❖ 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.C.
- ❖ This cabinet external dimensions shall match those of 3x500/1000 LV metering cabinet.
- ❖ All the screws, springs washer and nuts will be plated with zinc coating + yellow/blue passivation (dichromate).
- ❖ The Screws shall be fitted with M12 nuts + conical spring washer connected together.

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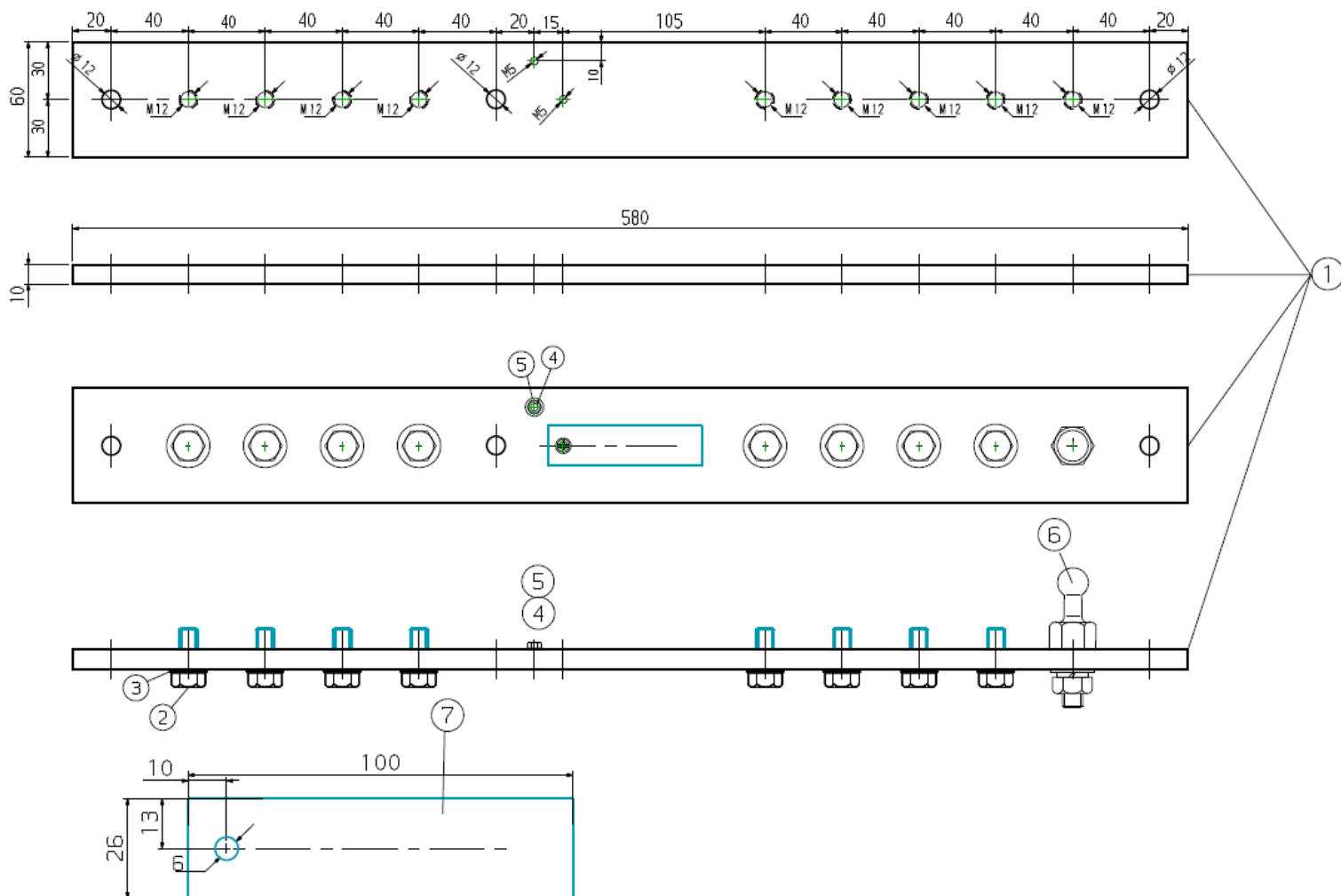
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For

L.V 3x[500\1000]A metering cabinets

Phase busbar:



1. Phase busbar BAR EN 13601 CU-ETP/CW004A R250/R300 SH (E-Cu-F25 acc. DIN 40500/3) with coating thickness of min 20 micron – tin plated.
2. M12X30mm screw according ISO 4017 (DIN 933)/steel 8.8, coating thickness of min 12 micron(3 pcs.).
3. Conical spring washer for M12 screw according DIN 6796, coating thickness of min 12 micron (3 pcs.).
4. M5x16mm Phillips screw according DIN 7985/steel 5.6, coating thickness of min 5 micron(2 pcs.).
5. Flat washer for M5 screw, according DIN 125/steel, coating thickness of min 5 micron(2 pcs.).
6. Earthing ball screw: (1 pcs.) see appendix D.3 For technical data.
7. Fiberglass according to NEMA GRADE L11-15 GPO3, thickness – 5mm (1 pcs.)

Remarks:

- All the screws, springs washer and nuts will plated with zinc coating + yellow/blue passivation (dichromate).
- The screws (part 2) shall be facing outwards.
- The Screws shall be fitted with M12 nuts + conical spring washer connected together.

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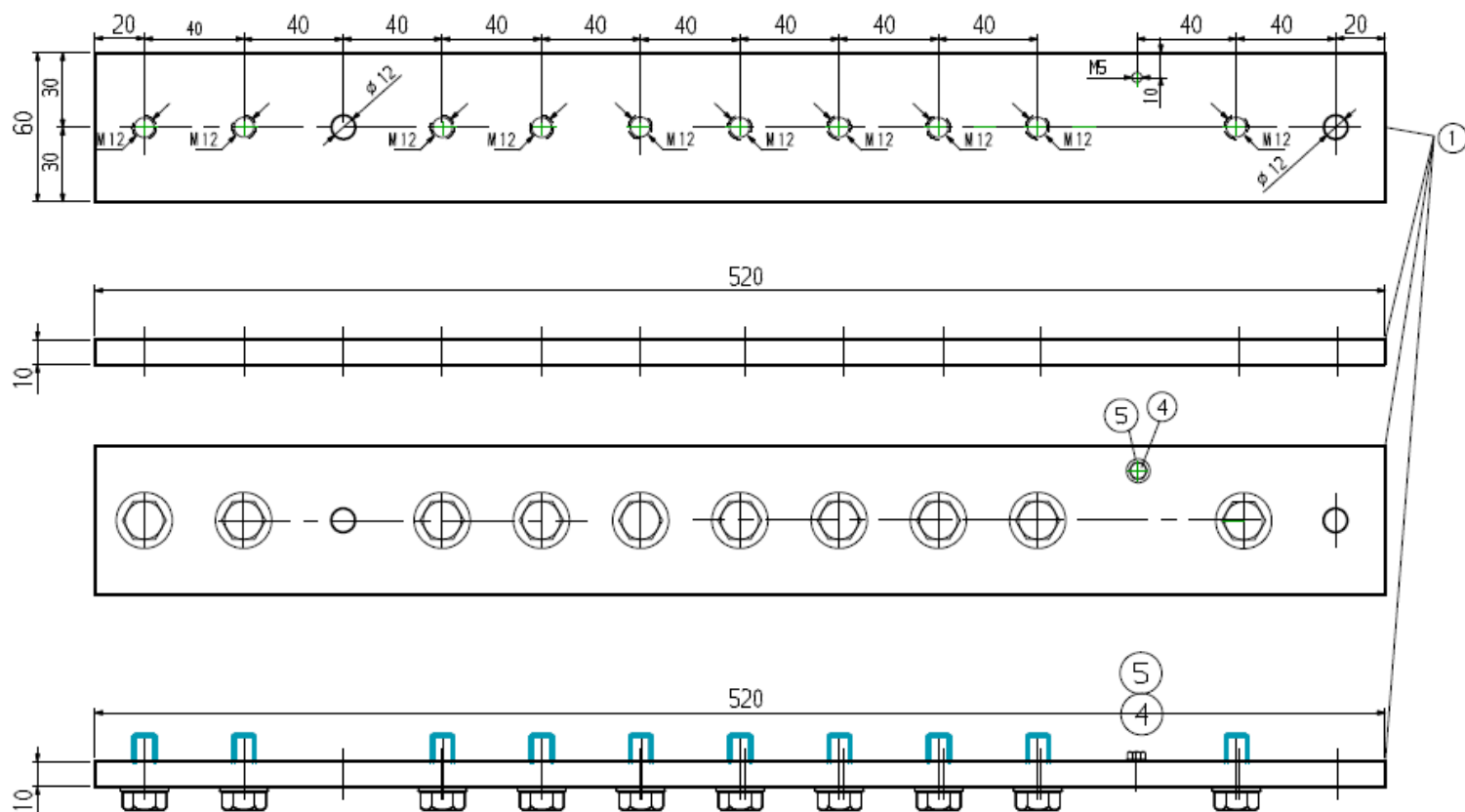
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For

L.V 3x[500\1000]A metering cabinets

Neutral busbar:



1. Neutral busbar BAR EN 13601 CU-ETP/CW004A R250/R300 SH (E-Cu-F25 acc. DIN 40500/3) with coating thickness of min 20 micron – tin plated.
2. M12X30mm screw according ISO 4017 (DIN 933), coating thickness of min 12 micron(6 pcs.).
3. Conical spring washer for M12 screw according DIN 6796, coating thickness of min 12 micron(6 pcs.).
4. M5x16mm Phillips screw according DIN 7985, coating thickness of min 5 micron(1 pcs.).
5. Flat washer 5.3x10x1, according DIN 125, coating thickness of min 5 micron(1 pcs.).

REMARKS:

- All the screws, springs washer and nuts will plated with zinc coating + yellow/blue passivation (dichromate).
- The Screws (2. In drawing) shall be fitted with M12 nuts + conical spring washer connected together.
- The Screws (Part 2) shall be facing outwards

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APPENDIX “D” – Technical requirements for items to be supplied by the supplier

D.1: L.V Support insulator including raiser:

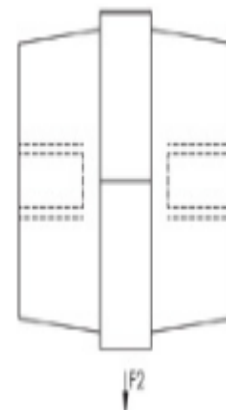
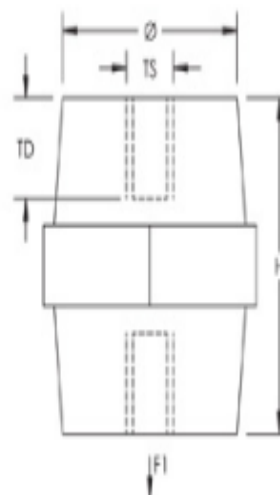
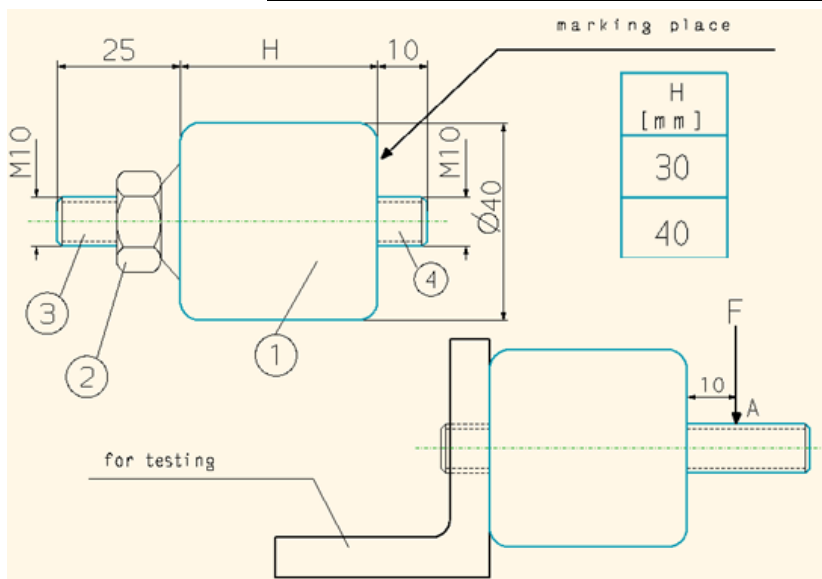
Document for the proposal:

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:

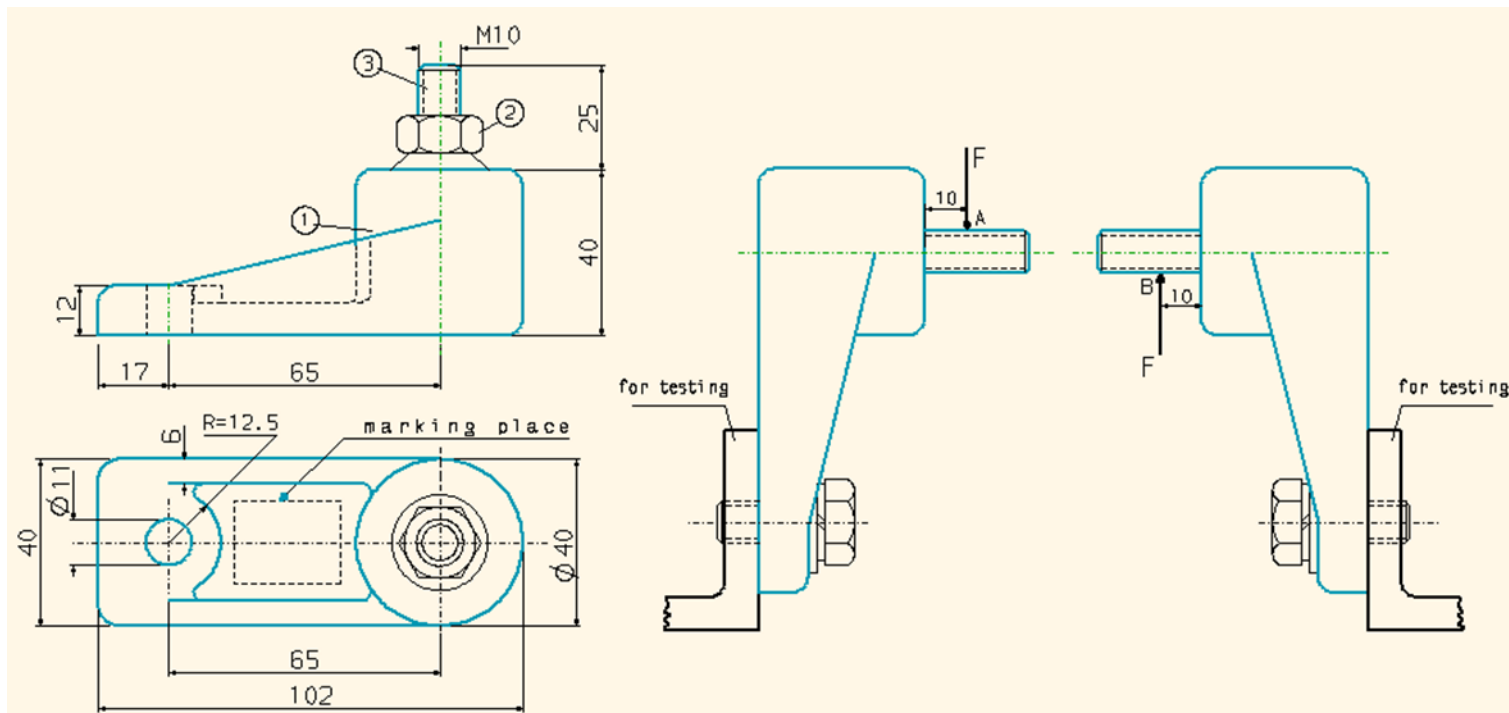
- Material: Polyamide 6.6 with 30% fiberglass, flame rate V0 according to UL94.
- Color: Black.
- The insulator will stand a voltage of 5,000V for one minute without suffering any damage.
- Absorption capacity of the insulator in cold water should not exceed 100 milligrams, according to DIN 53495.
- 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/trade mark
 - 1000V.
- The insulators will be supplied with screws, washers (flat + spring or conical) and galvanized nuts suitable for assembly.

Technical instructions for 30 and 40 mm insulators:



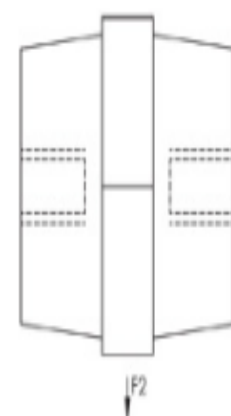
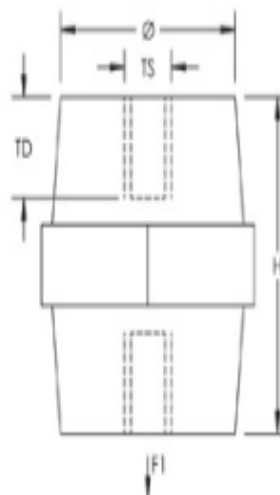
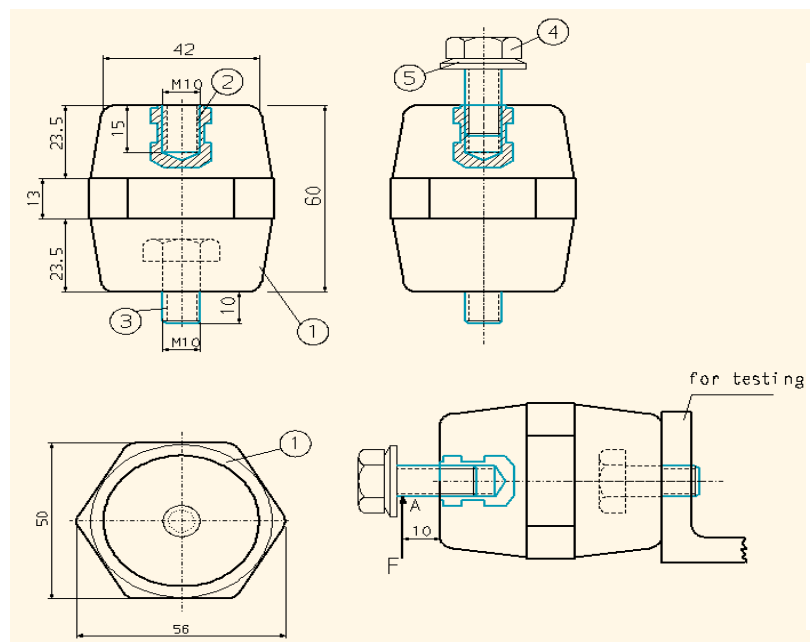
- The insulator will stand at a temperature of 150°C for 15 minutes, when a force of $F = 300\text{kg}$ is applied on point A.
- For 40 mm insulator - $F1$ static load 11,000N, $F2$ static load = 4500N.
- For 30 mm insulator - $F1$ static load 6000N, $F2$ static load = 3000N.
- The insulator will stand when a force of $F1=11,000\text{ N}$
- 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 DIN 933, coating thickness of min 10 micron, plated with zinc coating + yellow/blue passivation (dichromate).

Technical instructions for 40 mm supported insulator including raiser:



- The insulator will stand at a temperature of 150°C for 15 minutes, when a force of $F = 300\text{kg}$ is applied on point A and B.
- The top surface shall be parallel to the bottom surface, the deviation does not exceed 1%.
- The top screw axis shall be parallel to the bottom screw axis, the deviation does not exceed 1%.
- The surfaces shall be smooth.
- 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).
- Part 3: M10 steel 8.8 screw according DIN 933, coating thickness of min 10 micron, plated with zinc coating + yellow/blue passivation (dichromate)

Technical instructions for 60 mm supported insulator including raiser:

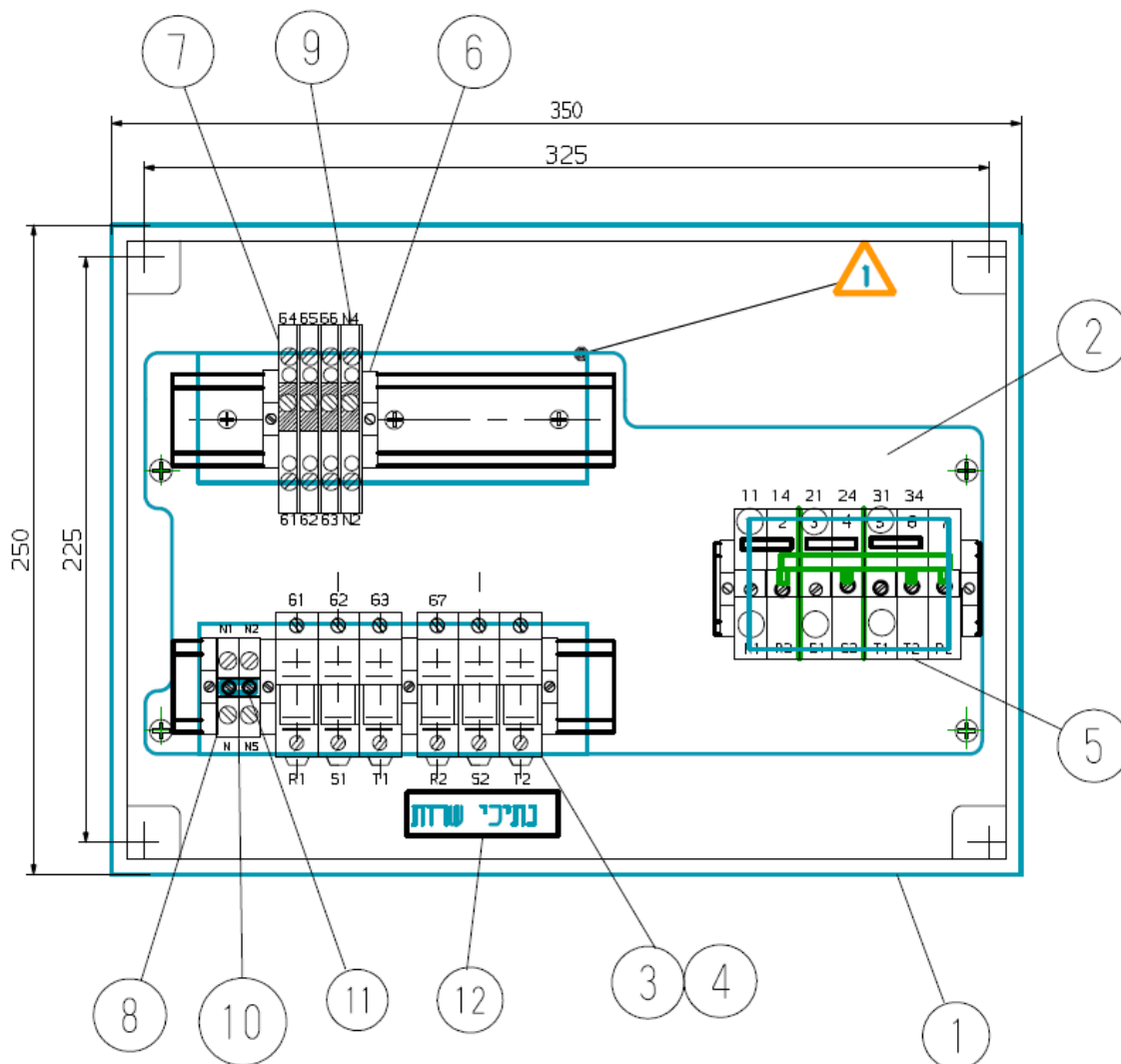


- The insulator will stand at a temperature of 150°C for 15 minutes, when a
- force of $F = 300\text{kg}$ is applied on point A.
- For 60 mm insulator - F_1 static load 22,000N, F_2 static load = 10,000N
- The deviation between the screws axes does not exceed 1%.
- The screw and nut will stand minimum 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 minimum 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)

D.2: Insulated box (Terminals, fuses, current and voltage contacts), metering plate base

Technical requirements for insulated enclosures and mounting assemblies (hereafter M.A), to be used as the main equipment and accessories for connection of the electrical distribution network to private customers, **shall be according to I.E.C technical specification NPS- 87**

Insulated enclosure:



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1. Medium insulated enclosure – according to 10.5.5.
2. Content base. According to the drawing below.
3. 6 Fuse switch disconnecter 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.
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 includes 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.1 with numbering labels on each wire connection.
- Closing Torque Screws for the electrical equipment in the enclosure shall be 4 Nm. with permission of I.E.C the bidder shall suggest another torque value.
- The fuses shall be supplied in a separate bag inside the enclosure.

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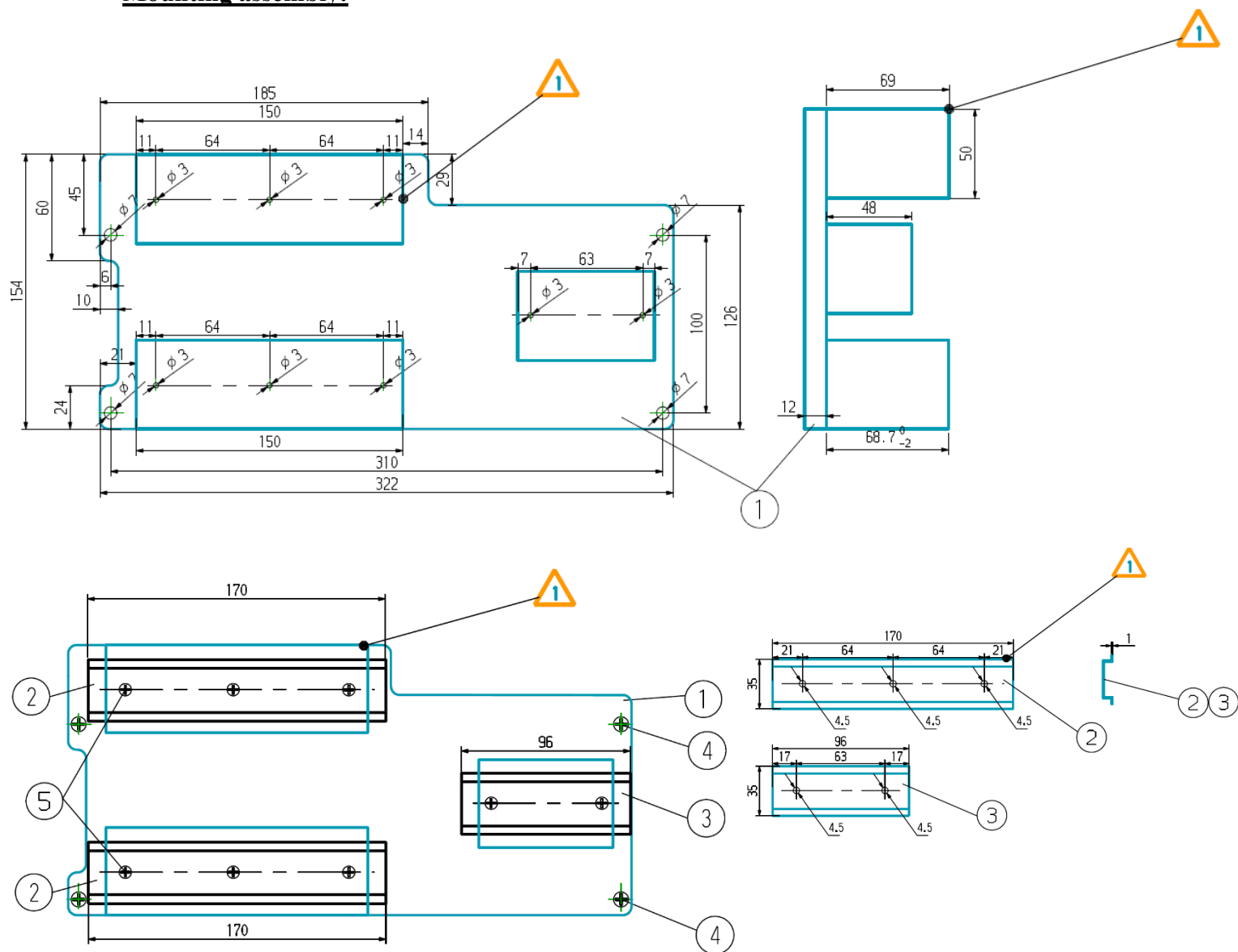
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Mounting assembly:



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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.

D.3: Earthing ball screw:

Technical requirements:

- The earthing ball shall withstand thermal and dynamic effects of at least 18.7 kA/1s (26.5 kA/0.5s) short-circuit current according to Standard IEC 61230.
- The earthing ball shall be made of copper alloy, minimum tensile strength 300N/mm² according to DIN 48088-1.
- The earthing ball shall be electro-tinned with at least 20µm coating.
- Each earthing ball shall be provided with threaded bolt (screw), nut and washer(s) that shall be made of carbon steel or stainless steel.
- If these elements are made of carbon steel, the threaded bolt shall be made according to DIN 976-1-8.8, the nut shall be made according to ISO 8673-8 (DIN 934-8) and a conical spring washer according to DIN 6796-8-FSt.
- The fastening nut, conical spring washer and threaded bolt shall be zinc electro-plated coating with at least 8µm according to ISO 4042.
- If these elements are made of stainless steel the threaded bolt shall be made according to DIN 976-1-A2 -70, the nut shall be made according to ISO 8673-A2-70 (DIN 934-A2 -70), a plain washer according to ISO 7089 -A2 (DIN 125A-A2) and a spring lock washer according to DIN 127B-A2.
- For the nut the property class as required by the mentioned standards must be marked.

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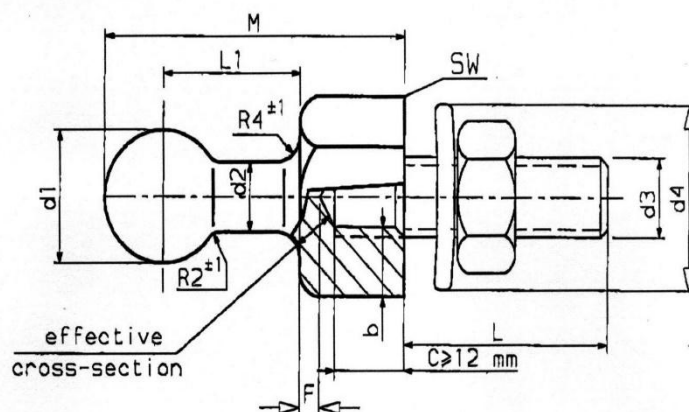
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For the relevant required dimensions please see attached drawing no.1

For the allowed dimensions of the stainless-steel washer and spring washer see the relevant standards mentioned above.



Drawing No. 1

Phase earthing ball pin connection with steel threaded stud

d1(±0,1)	M(-0,+10)	d2(±0,5)	L1(0,+5)	d3	d4	SW	F(min)	L(0,+5)	Catalog No.
20	53	10,5	24	M12	29	22/24	2	35	503821
20	53	10,5	24	M16	39	24	2	45	503979

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

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APPENDIX “E” – Closing Torque Screws & Nuts

Closing Torque for Screws & nuts

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.

APPENDIX “F” – Warning signs

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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- 1.3. 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) then 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.C 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.C.
 - 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 reports upon award of bid

1. We hereby undertake to perform all the tests required for the proposed item 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 of this specification.

No. of tender: _____

Manufacturer name: _____

Bidder name: _____

Date: _____

Manufacturer signature: _____ Bidder signature: _____

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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 with regards to I.E.C'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 another dimensions, manufactured from the same material and in the same technology.

7. I hereby undertake to provide, upon I.E.C'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” – Know how agreement

A. 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.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;
- 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;
- 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;
- 4.To participate in type tests of the proposed equipment(of the know how recipients manufacturer) and to instruct/support the know-how recipient in undertaking corrective act/procedure if required or approved by the I.E.C;
- 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;



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B. The I.E.C 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.C, or in connection with any failures or omissions to carry out such duties, or commitments.



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APPENDIX “J” – c

Subject: Statement of obligation

We hereby undertake that the proposed items will be accordingly to the requirements specified in specification _____.

Tender No.: _____

Manufacture name: _____

Supplier name: _____

Date: _____

Supplier Signature: _____

Manufacture Signature: _____

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APPENDIX “K” – Statement of obligation – Same product

Subject: Statement of obligation – same product.

We hereby undertake that the proposed products already supplied and approved by I.E.C. and will be identical to the previously supplied to I.E.C. (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						