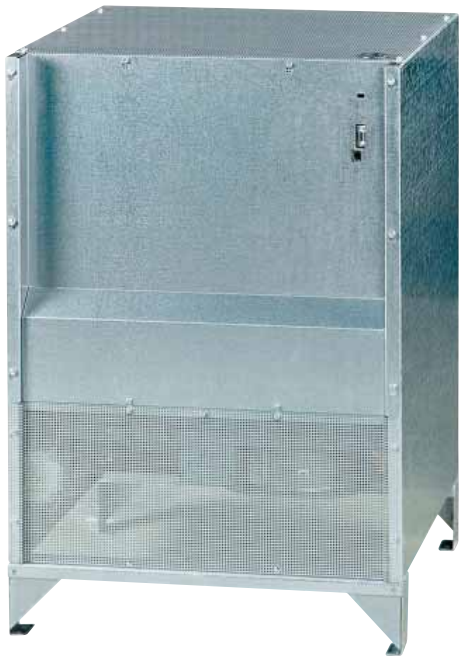
STATYS

200-400-600A Cabinet and Integrable Frame

Installation manual GB



Энергетические и телекоммуникационные системы

socomec
Innovative Power Solutions UPS

INDEX

1. WARRANTY CERTIFICATE

The warranty terms are stipulated in the offer, by default the following clauses apply.

The SOCOMEC UPS warranty is strictly limited to the product(s) and does not extend to equipment which may be integrated with this(these) product(s), nor the performance of this equipment.

The manufacturer guarantees its material to be free from manufacturing faults and defects in design, material or workmanship, subject to the limits set forth below.

The manufacturer reserves the right to modify the delivery with a view to fulfilling these guarantees or to replace defective parts. The manufacturer's warranty does not apply in the following cases:

- fault or defect in the design of parts added or supplied by the customer;
- fault due to unforeseen circumstances or force majeure;
- replacement or repair resulting from the normal wear of the modules or machinery;
- damage caused by negligence, lack of proper maintenance or misuse of the products;
- repair, modification, adjustment or replacement of parts performed by unqualified third parties or personnel without the express agreement of SOCOMEC UPS.

The warranty period is twelve months commencing from the date of delivery of the product.

The repair, replacement or modification of the parts during the warranty period does not extend the warranty period.
In order to establish a valid warranty claim, the purchaser must notify the manufacturer in writing immediately after the discovery of any defects which are attributed to the material and provide any and all supporting evidence of the defects at the latest within eight days before the date of expiry of the warranty.

Defective parts which have been returned and replaced free of charge shall become the property of SOCOMEC UPS.
The warranty is void if the purchaser has undertaken modifications or repairs on the devices on his or her own initiative and without the express consent of the manufacturer.

The manufacturer's responsibility is strictly limited to the obligations defined in this warranty (repair and replacement) excluding any other right to claim compensation or indemnity.

Any import tax, duty, fee or charge of any nature whatsoever imposed by European regulations or those of an importing country or of a transit country shall be paid by the purchaser.

2. PRESENTATION

2. 1. Foreword

Thank you for choosing the STATYS Static Transfer System from SOCOMEC UPS.

2. 2. The role of Statys

STATYS watches permanently both sources of supply and the output to insure the automatic transfer of the use on the alternate source in case of failure of the priority source and to allow a return of the use on that source when she will be exploitable.

STATYS is defined by the rating of the current which passes through it by phase (in Amps), irrespective of other electrical characteristics. The power for a given rating is a function of the nominal voltage used.

Two categories of STATYS unit are described in this manual:

- cabinet-mounted STATYS units,
- "integrable chassis" STATYS units, for installation in a custom environment such as distribution switchboards.

2. 3. Operating principle

STATYS is an autonomous electrical device which permits the seamless transfer of the load between an alternate electrical source S1 and another alternate source S2 (see schematic diagrams § 4).

Under normal operation, STATYS supplies the load from the priority source. The priority source is selected by the user according to on-site restrictions.

Two transfer modes are possible:

– manual transfer mode, controlled by the operator locally or remotely by means of a BMS or other communicating system,

– automatic transfer mode, which occurs when an out-of-tolerance voltage is detected on the priority source. The break-before-make switching principle prevents source overlap.

NOTE: The priority source (source 1 or source 2) is selected using the keyboard and this selection is displayed on-screen.

2. 4. Product range:

STATYS is available in 4 ratings: 200A, 300A, 400A and 600A

Each is available in two installation versions cabinet or integrable chassis version

Different options must be defined when the order is placed (with or without protection fuses, number of poles switched, mimic panel...)

3. SAFETY INSTRUCTIONS

3. 1. Standards and certificates of compliance

SOCOMEC UPS designs and markets its products in accordance with the following European and international standards, in addition to meeting the requirements of manufacturers of sensitive electronic and IT equipment.

CEI 62310-1	STS: general requirements and safety regulations
CEI 62310-2	STS: electromagnetic compatibility (EMC) requirements
CEI 62310-3	STS: performance specification method and testing requirements
CEI 60364-4	Electrical installations of buildings
CEI 60950	Information handling material security -
CEI 60529	Degrees of protection provided by the packaging (IP code)
CEI 60439-1	Low voltage equipment

A comprehensive quality process certified to ISO 9001 ensures high-quality production and associated services.
Specifications are subject to change without prior notice.
Do not hesitate to contact your nearest SOCOMEC UPS sales office for further details.

This equipment conforms to EC directives applicable to this type of product. This conformity is indicated by the CE mark:

CE

3. 2. Warning plate symbols

We remind you of the need to observe the safety recommendations and warnings shown on the labels located inside and outside of the unit.


Danger ! High voltage (black/yellow)


Ground terminal


Read the user manual before performing any operation

3. 3. Precautions

This document provides essential instructions regarding safety, handling and connections for STATYS cabinet-mounted and/or integrable units.
Carefully read this manual before operating STATYS.
Keep this manual in a safe place for future reference.

CAUTION

For optimal use, it is recommended to maintain the ambient temperature and humidity at the values specified by the manufacturer.
Do not expose STATYS to rain or any other type of liquid. Do not introduce foreign bodies into the unit.

WARNING

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This document is not a specification. SOCOMEC UPS reserves the right to modify the content of this document without notice.

•This unit must be exclusively installed, commissioned and repaired by specialist technical personnel authorised by SOCOMEC UPS.

The product which you have chosen taking into consideration its conditions of use, capacities and performance limits, is designed for commercial and industrial use only.
For use with so-called “critical applications”, the product may be required to comply with legal and regulatory obligations as well as specific local standards, and be adapted based on the recommendations of SOCOMEC UPS. In all cases where the equipment is to be used for critical applications, you are advised to contact SOCOMEC UPS in advance to confirm that the products are capable of meeting the required levels of safety, performance and reliability.
The term “critical applications” notably includes life support systems, medical applications, commercial transport, nuclear installations or any other system or application where the failure of the product is likely to cause substantial damage to persons or property.

3. 4. Electrical risk

WARNING

All operations and maintenance must be performed by authorised personnel who have undertaken suitable training.
Scrupulously follow the operating or maintenance instructions described in this manual.
Take maximum precautions and determine which parts are live:
- by following the load diagrams,
- by checking the presence of power with a voltmeter, for example.

DANGER

The cabinet is permanently powered by sources 1 and 2 if Q41 and Q42 are closed.

In normal operating conditions, there is no danger for personnel handling this equipment.

3. 5. Risk of power cut

WARNING

Scrupulously follow the operating instructions described in this manual to prevent inadvertent power cuts which may pose a safety hazard to the user.

DANGER

Taking into account the presence of high leakage currents, it is essential to connect the ground cable before connecting the upstream and load sources.

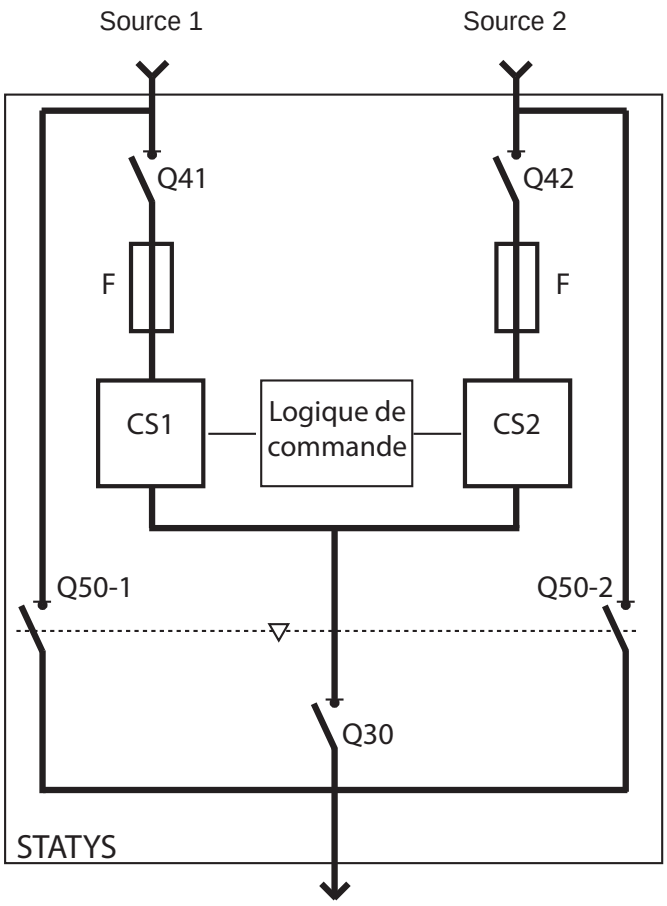
Hazardous voltage may be present within STATYS after it is switched off.

In fact, the power supply voltage remains present at the input of each static contactor

STATYS MUST be moved by at least two people. They MUST stand on either side of the unit according to the direction of movement.

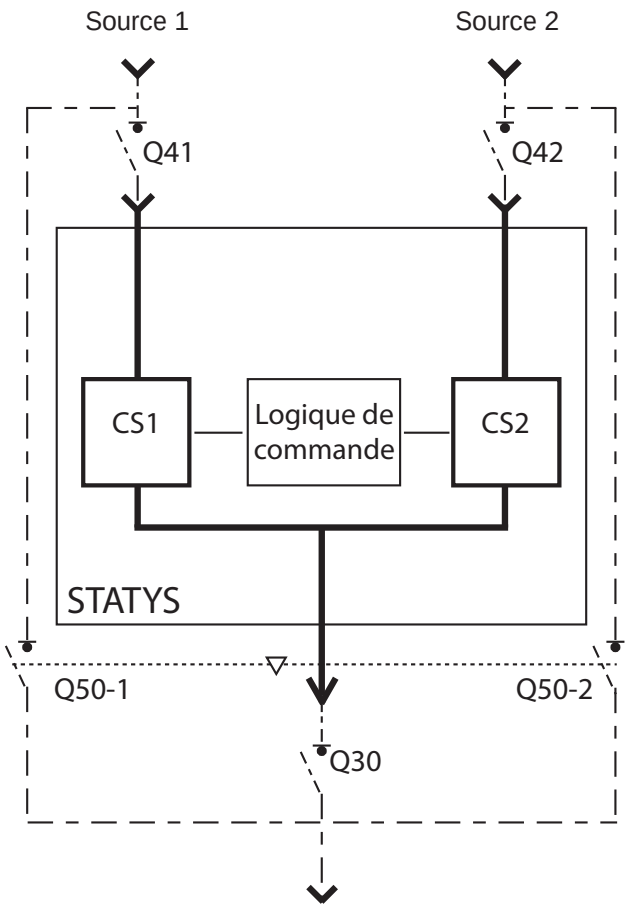
4. SCHEMATIC DIAGRAMS

In cabinet



Load outgoing line

Integrable Chassis



Load outgoing line

KEY:

Q41 = Source 1 input switch*,
Q42 = Source 2 input switch*,
Q30 = Output switch*,
Q50 = Inverter, for source 1 or 2 maintenance bypasses*,
CS1 = Switch 1,
CS2 = Switch 2,
F = Protection by Fuse (optional),

⚠ Dashed-line circuit "- -- -" and components marked "*" = Supplied to customer in Integrable Chassis version.

5. TRANSPORT, UNPACKING AND HANDLING

STATYS is packaged using materials which keep it stable during transport and handling.

⚠ During transport and handling, STATYS must be kept in an upright position.

⚠ When handling the unit on inclined surfaces (even on surfaces with a minimal incline), use equipment fitted with suitable braking devices in order to prevent the risk of serious accidents.

5. 1. Transport

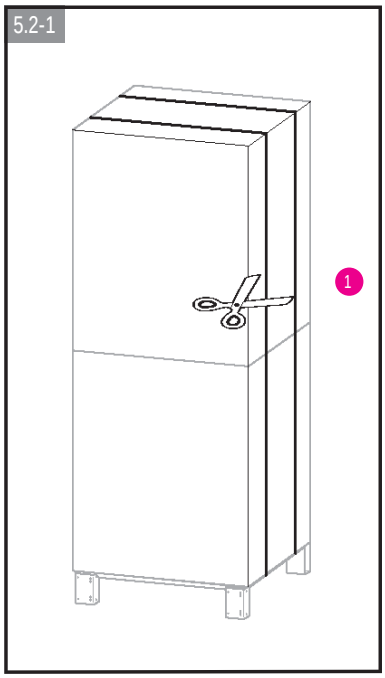
Transport the unit as close as possible to the connection area before removing the packaging.
Ensure that the floor can withstand the weight of STATYS

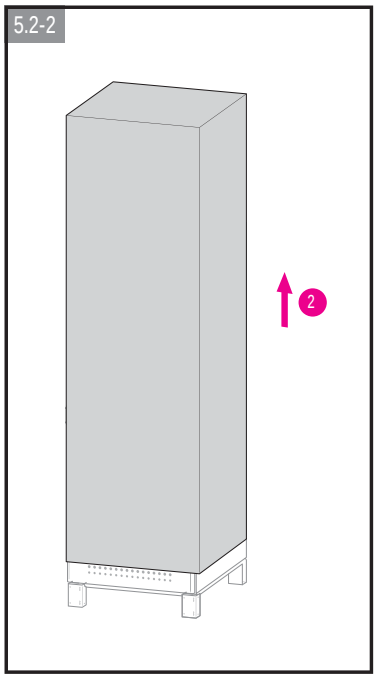
⚠ When moving the unit, avoid supporting it by the front panels.

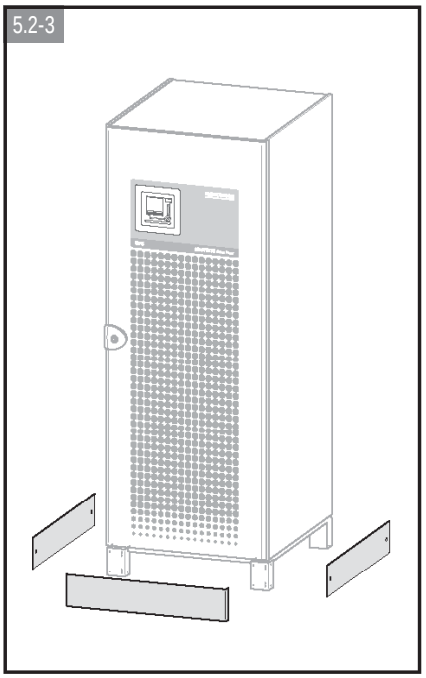
⚠ STATYS MUST be moved by at least two people. They MUST stand on either side of the STATYS unit according to the direction of movement.

⚠ If the packaging is damaged on receipt, its content must be immediately collected and isolated. The shipper or consignee must be contacted.

5. 2. Unpacking





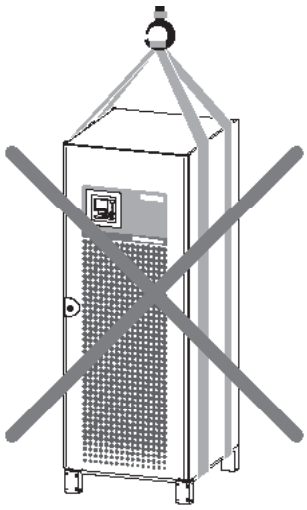


POSITION STATYS IN ITS INSTALLATION AREA.

All packaging materials must be recycled in accordance with regulations in force in the country of installation.

5. 3. Handling from above

5.3-1

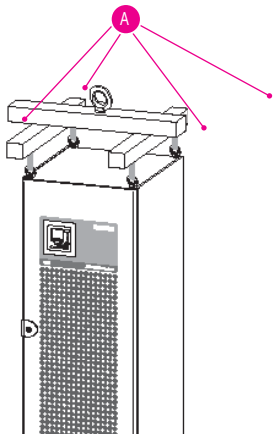


⚠ Never use general-purpose straps!

5. 3.1. Handling 200-300-400-600A cabinets from above

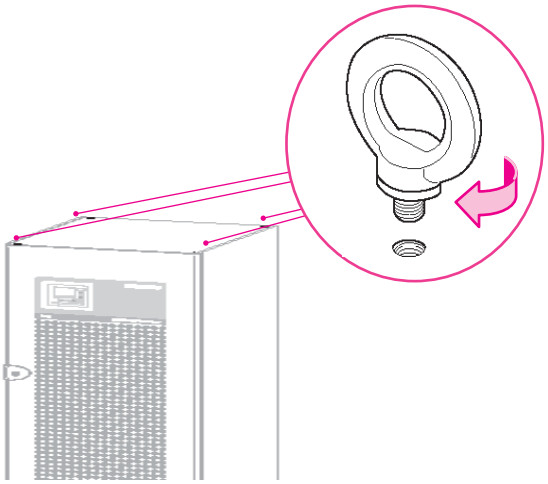
5.3.1-1

Remove the plastic caps A.

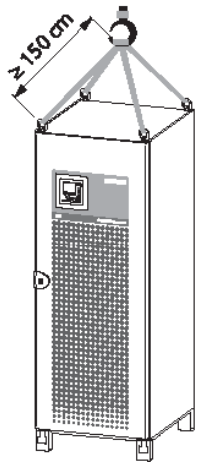


5.3.1-2

Fit the lifting rings [M12) supplied on request.

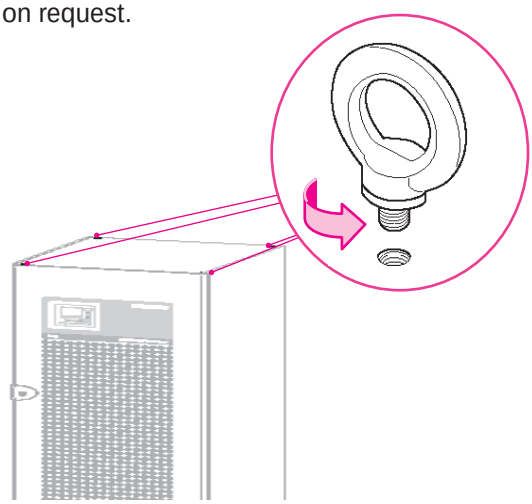


5.3.1-3



5.3.1-4

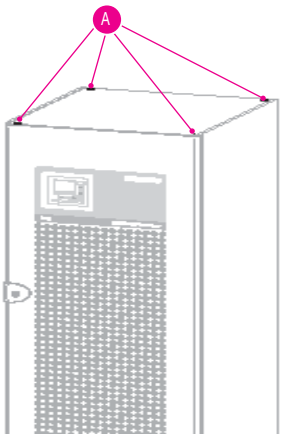
Remove the lifting rings (M12) supplied on request.



The length of the lifting slings must be greater than or equal to 150 cm.

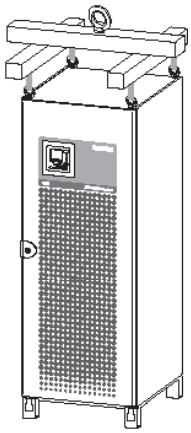
5.3.1-5

Refit the plastic caps A.



5.3.1-6

If the ceiling height is too low, trusses can be used.



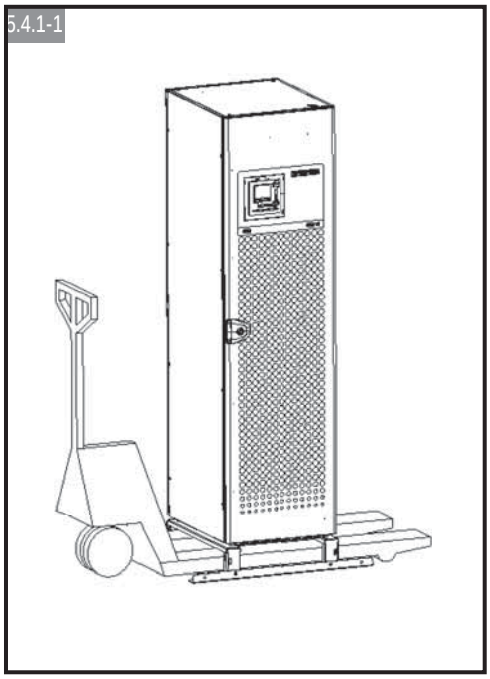
5. 3.2. Handling STATYS integrable units from above

⚠ The handling of integrable units from above (using slings, spreader beam, straps...) is strictly prohibited.

5. 4. Handling from underneath

5. 4.1. Handling 200A STATYS units from underneath

5.4.1-1



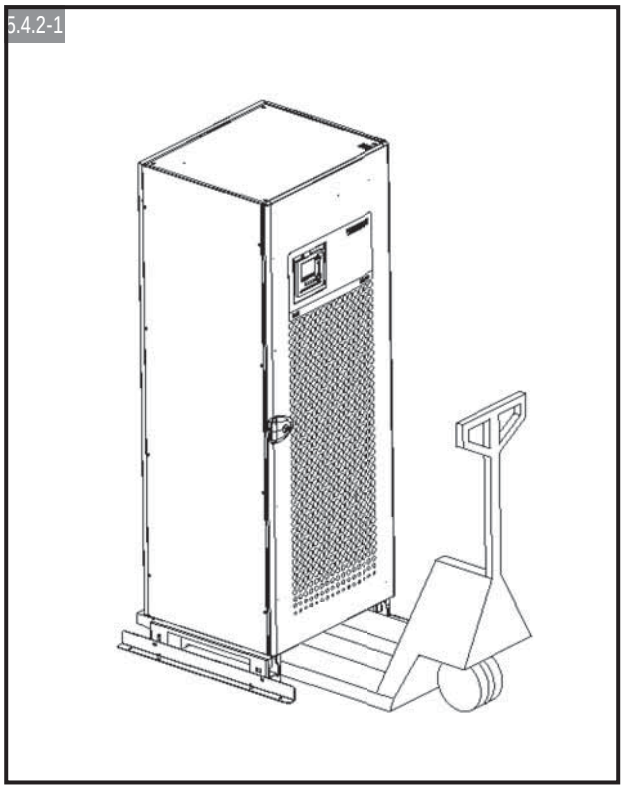
To facilitate handling, two yellow skis (700mm) are screwed onto the feet, in the widthwise direction
The cabinets can be handled from underneath using a pallet truck or forklift truck, with the forks introduced from the sides only. Remove the side grids of the cabinet, then position the forks underneath it:

⚠ The skis must be detached before the machine is installed in its final position.

5. 4.2. Handling 300-400-600A STATYS units from underneath

To facilitate handling, two yellow skis (700mm) are screwed onto the feet in the depthwise direction.
The cabinets can be handled from underneath using a pallet truck or forklift truck, with the forks introduced from the front or rear only.

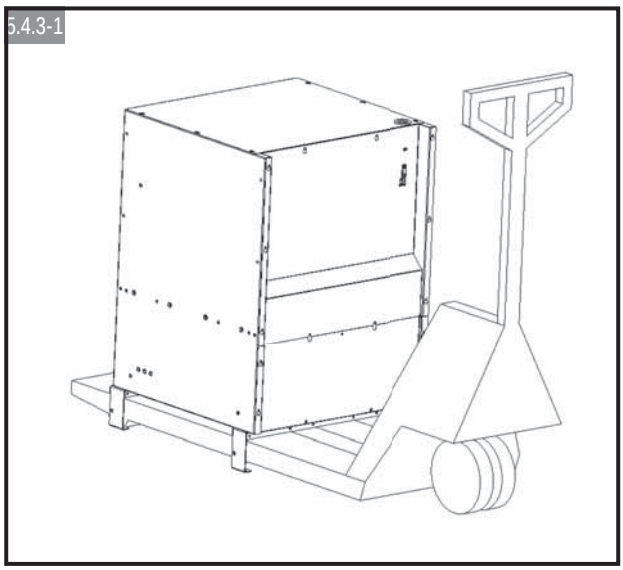
5.4.2-1



5. 4.3. Handling STATYS integrable units from underneath

To facilitate maintenance, two feet are screwed onto the underside of the body, along its width.
The integrable units can be handled from underneath by means of a pallet truck or forklift truck, with the forks introduced from the front or rear only (**except for STATYS 200A**). Remove the side grids of the cabinet, then position the forks under the unit.

5.4.3-1



6. MECHANICAL INSTALLATION OF CABINETS

6. 1. Environmental conditions

STATYS has been designed for use in an environment defined as follows:

	200A	300A	400A	600A
Temperature (transport and storage)	-25°C -- +70 °C			
Humidity (transport and storage)	0% -- 95%			
Operating temperature	0°C -- +40 °C			
Operating relative humidity	0% -- 95%			
Altitude	maximum 1000 a.s.l without derating			

6. 2. Mechanical and acoustic characteristics

	200A	300A	400A	600A
Height (mm)	1930			
Width (mm)	500	700		900
Depth (mm)	640*			
Floor space (m^3)	0.24	0.42		0.54
Degree of protection	IP 20			
Weight (kg)	195	270		345
Sound pressure dB (A)	60	56		54

Indicates overall dimensions (*including handle)

See plans 1 in 2 in appendix (§14)

ENGLISH

6. 3. General Installation Recommendations

6. 3.1. Environment

See the technical data table (§ 6.1) for permissible temperature, humidity and altitude values. If necessary, cooling and air conditioning systems should be used.
Avoid dusty atmospheres or environments containing dust from conductive or corrosive materials (e.g. dust from metal or chemical solutions).
Use STATYS only in a closed environment.
Do not expose STATYS to direct sunlight or excessive heat sources.

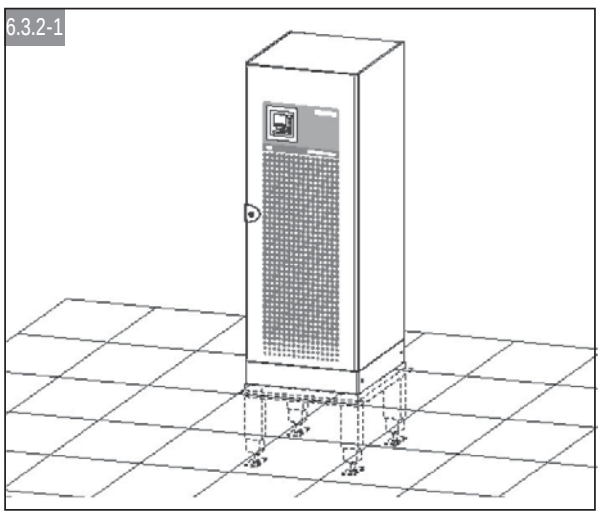
STATYS provides front access to the breaker components; leave a minimum space of 1.5 metres in front of STATYS to allow for maintenance work.

⚠ The skis must be detached before the machine is installed in its final position.

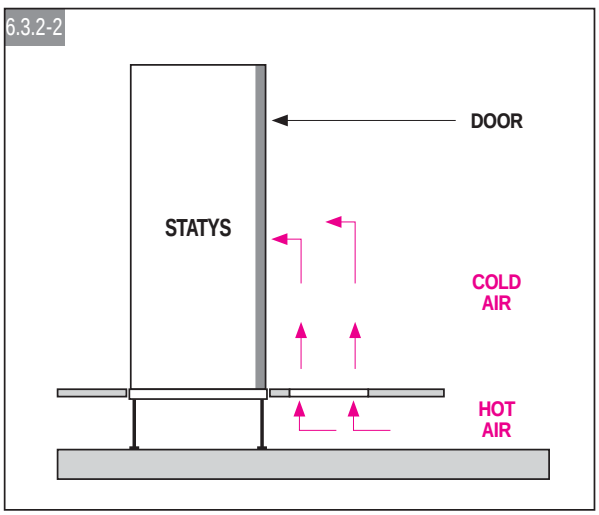
6. 3.2. Installation on raised technical flooring

In the event of installation on technical flooring, a frame must be used to support the weight of the unit (figure 6.3.2-1). Cold air is drawn in through the front and hot air exits through the top of the unit.

6.3.2-1

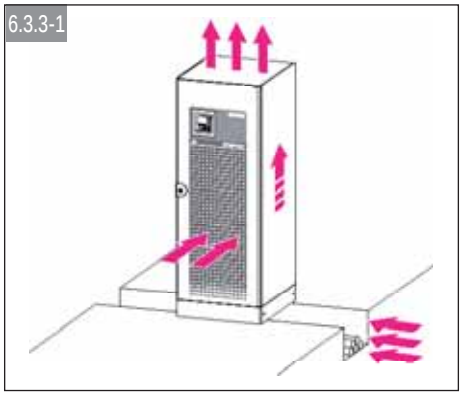


6.3.2-2



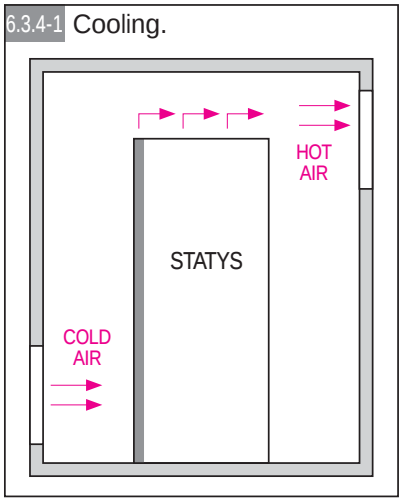
6. 3.3. Installation above air duct

6.3.3-1

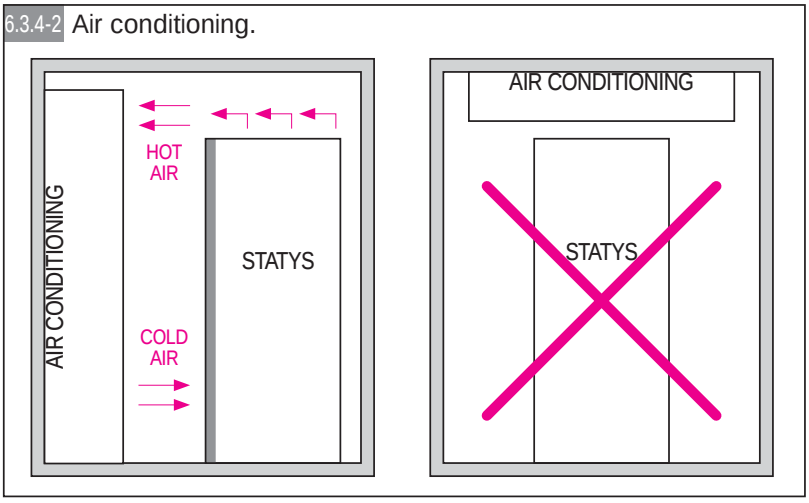


6. 3.4. Cooling and air conditioning

6.3.4-1 Cooling.



6.3.4-2 Air conditioning.



	200A	300A	400A	600A
Cooling	forced cooling (redundant)			
Air flow (m^3 / h)	553	642		627
Max Dissipation (W)	1330	1690	2530	3730

When fitting the modules in their environment, ensure that there is sufficient space to allow for unrestricted air flow and heat dispersal (see §6.3).

7. MECHANICAL INSTALLATION OF INTEGRABLE UNITS

7. 1. Environmental conditions

STATYS has been designed for use in an environment defined as follows:

	200A	300A	400A	600A
Transport and storage temperature	-20°C -- +70 °C			
Transport and storage relative humidity	0% -- 95%			
Operating temperature	0°C -- +40 °C			
Operating relative humidity	0% -- 95%			
Altitude	maximum 1000 a.s.l without derating			

7. 2. Mechanical and acoustic characteristics

	200A	300A	400A	600A
Height (mm)	765			
Width (mm)	400	600		800
Depth (mm)	586			
Floor space (m^3)	0.18	0.27		0.36
Degree of protection	IP 20			
Weight (kg)	70	105		130
Sound pressure dB (A)	63	50	60	59

Indicates overall dimensions

See plan 3 in appendix (§14)

7. 3. General Installation Recommendations

7. 3.1. Environment

See the technical data table (§ 7.1) for permissible temperature, humidity and altitude values. If necessary, cooling and air conditioning systems should be used.

Avoid dusty atmospheres or environments containing dust from conductive or corrosive materials (e.g. dust from metal or chemical solutions).

Only use STATYS in an internal environment.

Do not expose STATYS to direct sunlight or excessive heat sources.

The detachable feet must be removed before the machine is installed in its final position.

7. 3.2. Cabinet-mounted installation of STATYS

The integrable chassis can be installed in one of two ways:

– Placed on crossbeams and fastened from underneath using screws (see plan 3 in appendix §14)

– Fastened on the sides by 4 x M6 threaded inserts on each side (see plan 3 in appendix §14). You can also use the brackets supplied on request (see plan 10 in appendix §14).

⚠ Do not fasten the integrable chassis using the front and rear panels.

⚠ When fitting the modules in their environment, ensure there is sufficient space to allow for unrestricted air flow and heat dispersal (200 mm under chassis).

⚠ Multiple integrable units can be installed in the same cabinet. Nevertheless, air flowing out from the top panel of an integrable unit must not be used to cool other integrable units.

7. 3.3. Cooling

Air inflow:

If the underside of the integrable chassis is not obstructed, air is drawn through it.

If the underside of the integrable chassis is obstructed, air is drawn through the front panel.

⚠ To prevent impaired thermal performance of the STATYS unit mounted in a cabinet with the underside obstructed or blocked, it must be raised by 200 mm so that the fans draw air from the front panel at door level.

Air outflow:

Air flows out through the top surface of the integrable chassis

⚠ Ensure that there is a minimum distance of 50 mm between the roof grid of STATYS and the roof grid of the cabinet.

	200A	300A	400A	600A
Type of cooling	Forced cooling			
Required air flow (m^3 / h)	553	642		627
Dissipation (W)	1090	1430	1990	3020

8. ELECTRICAL POWER INSTALLATION

8. 1. Electrical environment

Inputs / Output				
	200A	**300A**	**400A**	**600A**
Voltage (V)	208 - 220 / 380 - 415 / 440			
Voltage tolerance	+/- 10%			
Overload	60 minutes: 110% - 2 minutes: 150%			
Max short circuit current (kA)	30	45	45	45
Frequency (Hz)	50 or 60			
Frequency tolerance	Configurable +/- 10%			
Sizing of neutral	315A	630A		1000A

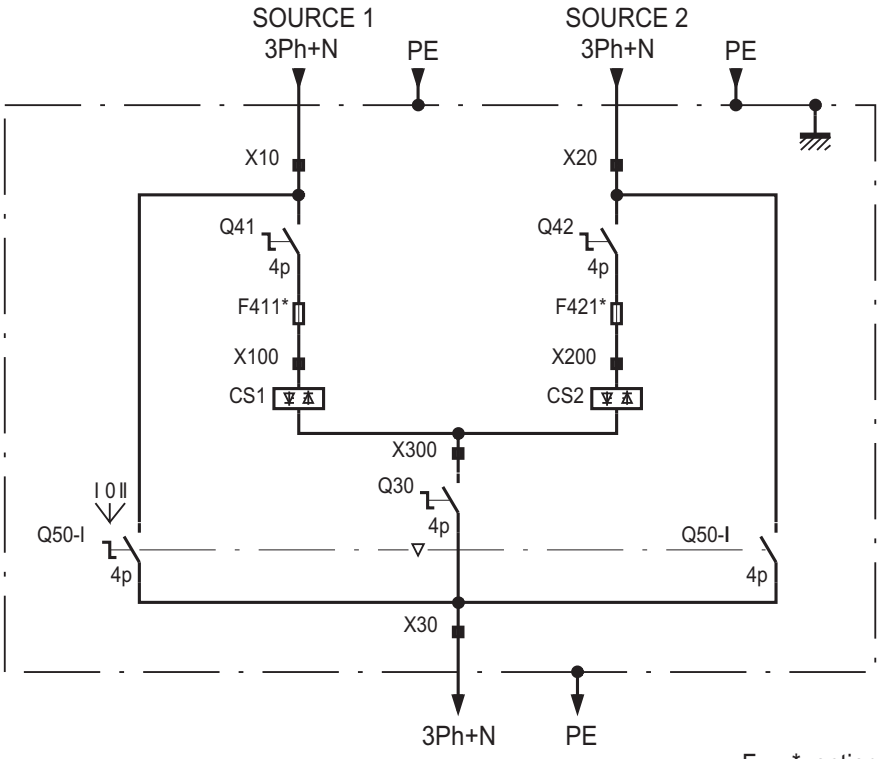
8. 2. Earthing diagrams

The STATYS range is compatible with all earthing systems. Nevertheless you should ensure that you have a suitable safety device (3-pole breaker or 4-pole breaker) installed.

8. 3. Electrical diagram

8. 3.1. Cabinet (plans 4, 5 and 6 appendix §14)

Schematic diagram:



Fxxx*: option

Connection terminals:

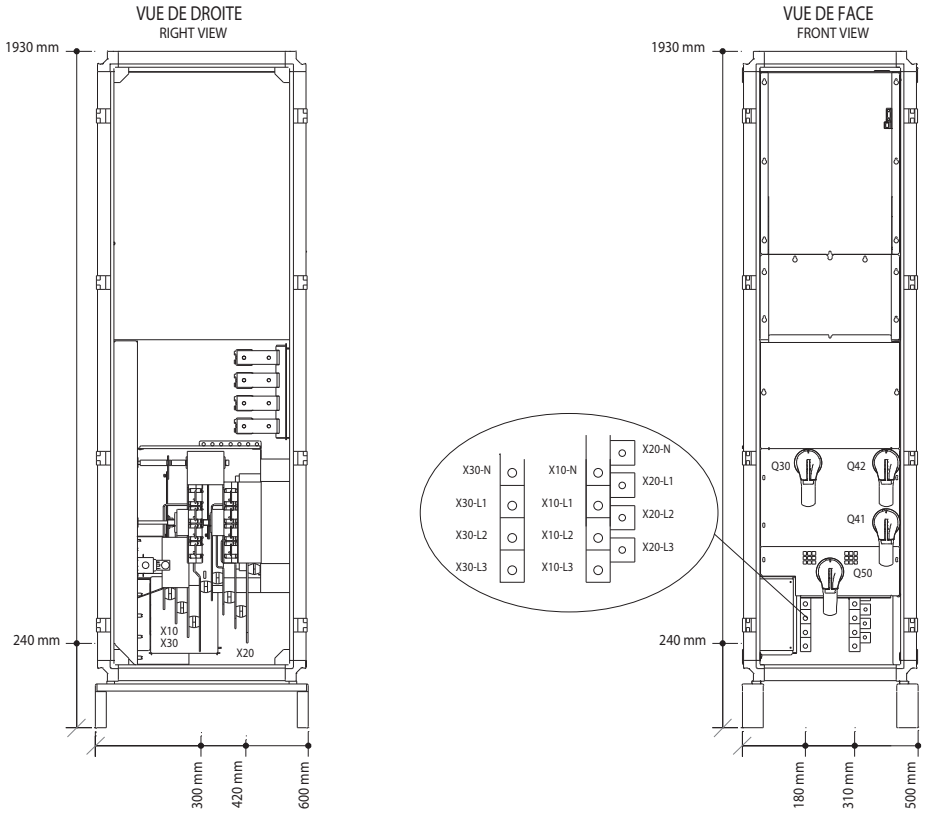
Description	Load	Description	Load
X10	Source 1 phases input	Q41 / Q42	Input switch
X20	Source 2 phases input	Q30	Output switch
X30	Load phases output	Q50 (I - 0 - II)	Maintenance bypass

⚠ Remember to connect the ground at the marked point ⏚

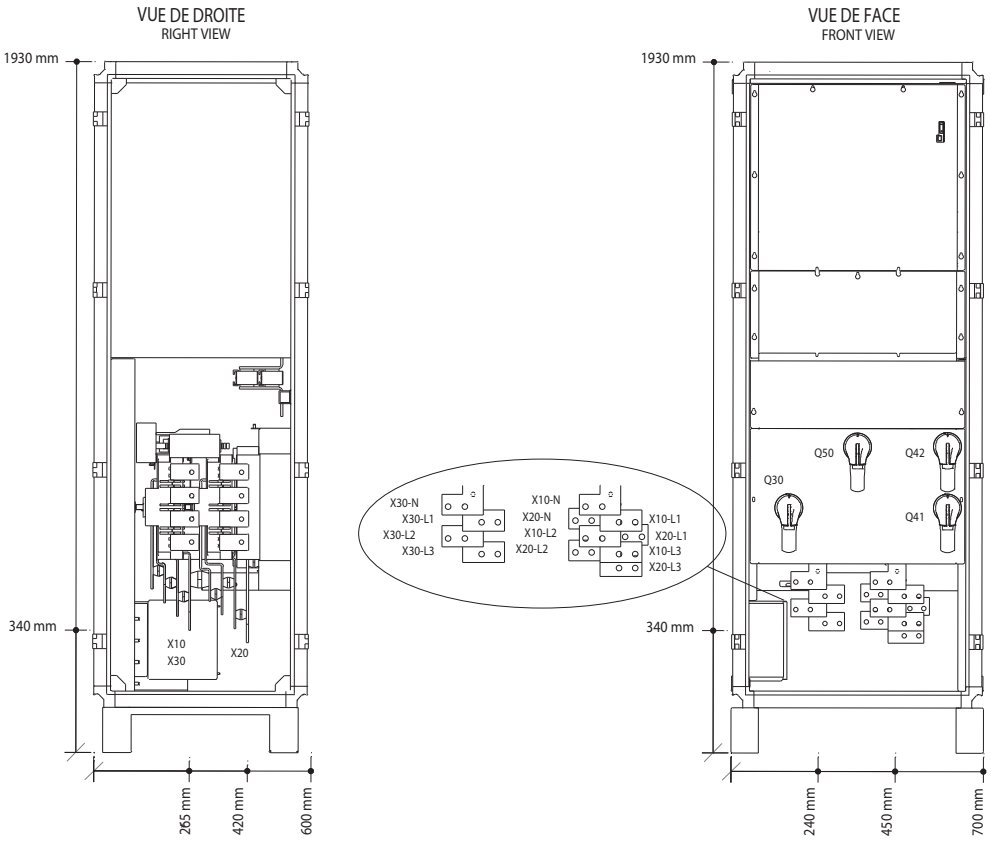
Min. distance between centre of connection pad and the floor:

	200A	300A	400A	600A
X10	240 mm	340 mm	340 mm	290 mm
X20				
X30				

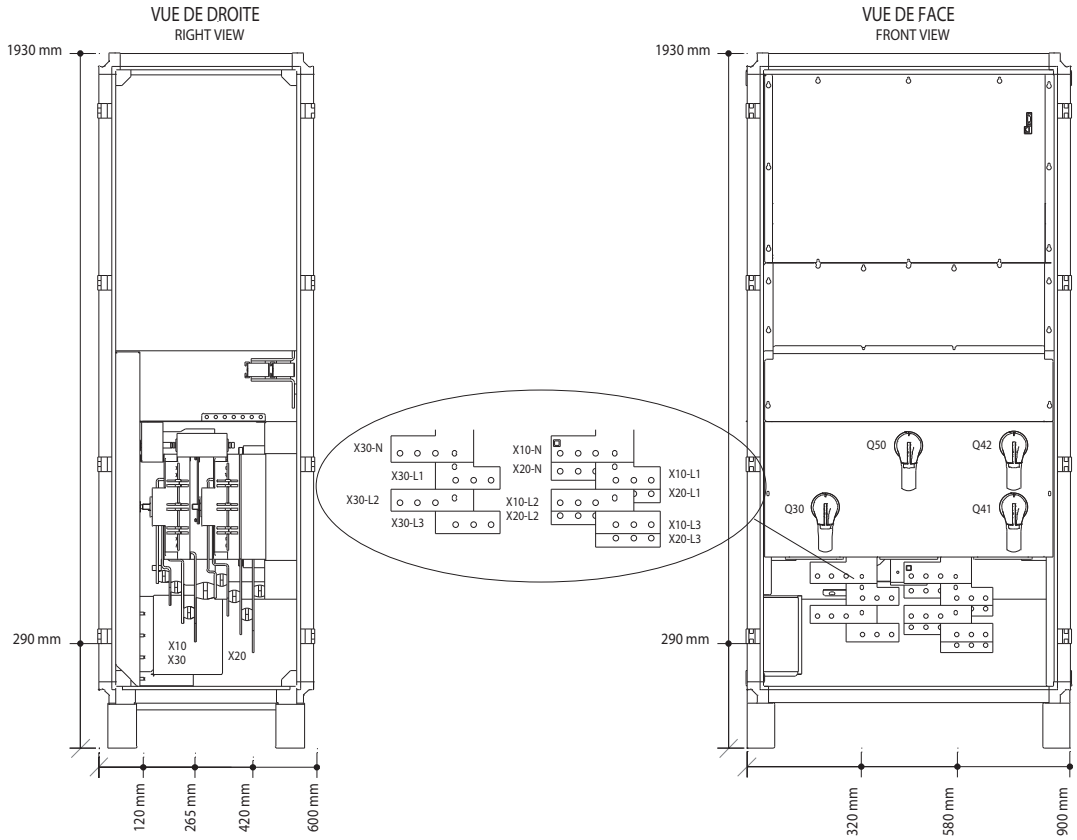
STATYS 200A connection:



STATYS 300-400A connection:

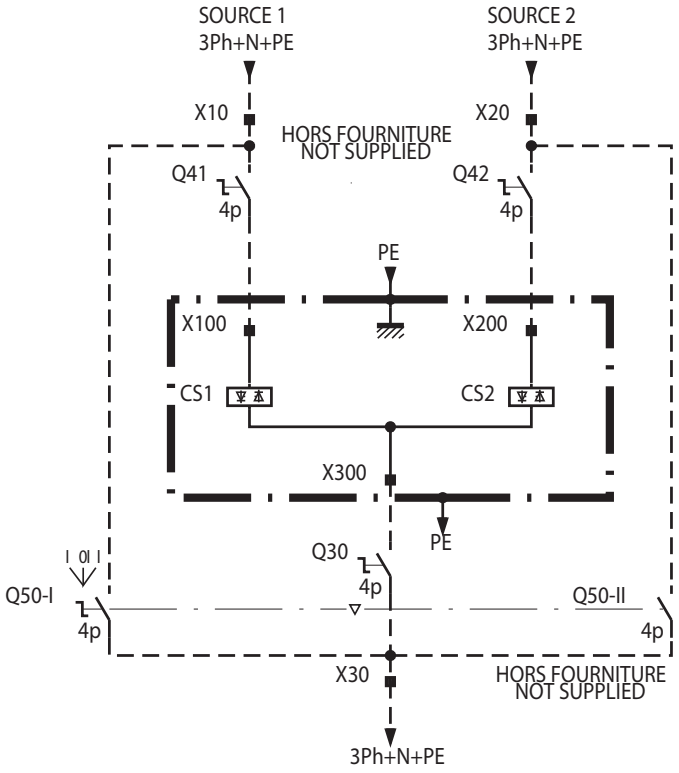


STATYS 600A connection:



8. 3.2. Integrable Chassis (plans 7, 8 and 9 appendix §14)

Schematic diagram:



Connection terminals:

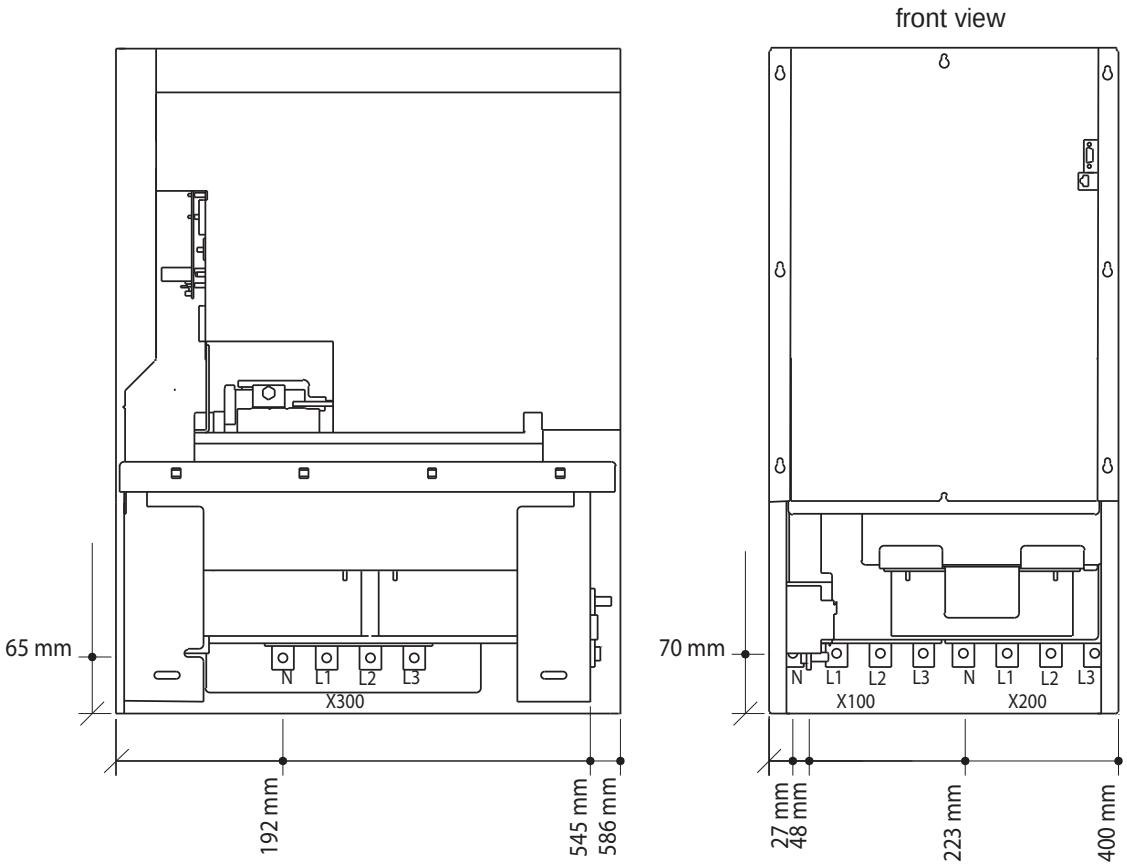
Description	Load
X100	Source 1 input
X200	Source 2 input
X300	Load output

Remember to connect the ground at the marked point

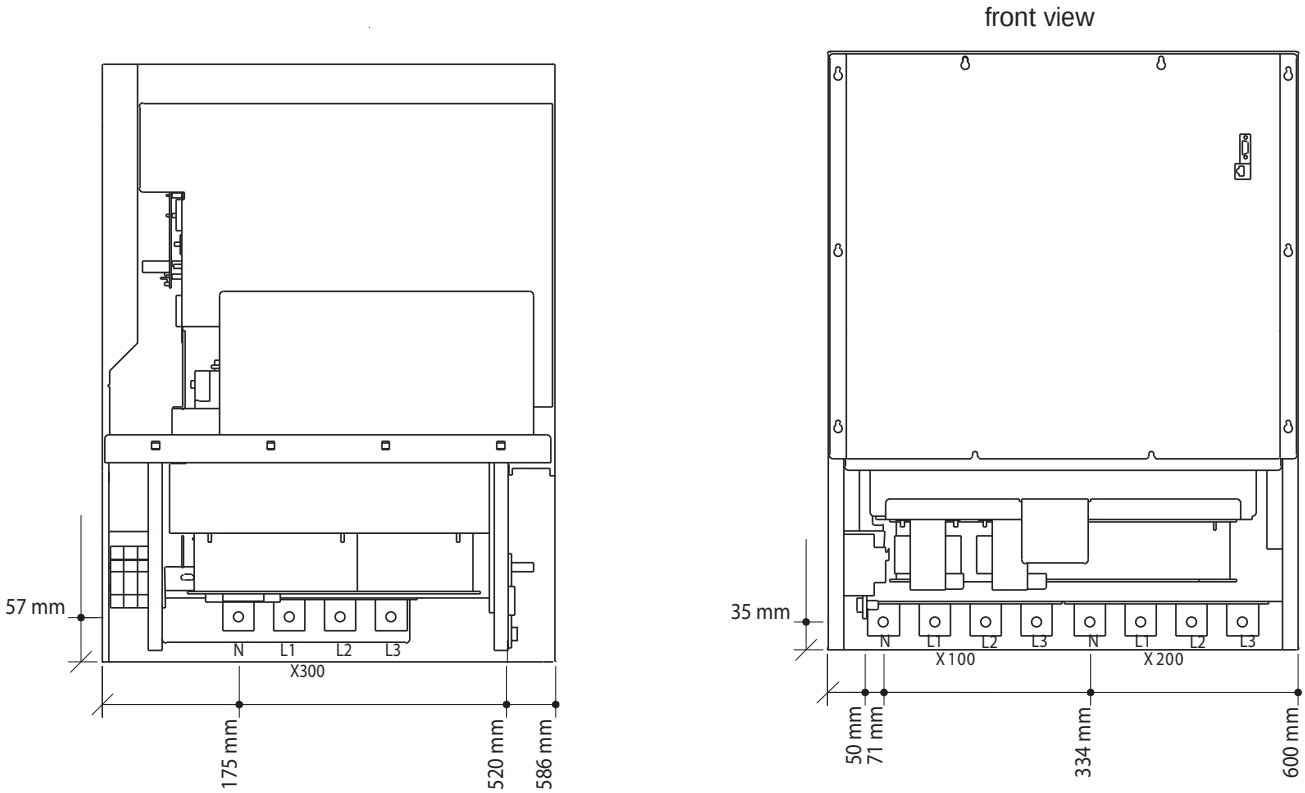
Min. distance between centre of connection pad and the floor:

	200A	300A	400A	600A
X100	70 mm	35 mm	35 mm	35 mm
X200	70 mm	35 mm	35 mm	35 mm
X300	65 mm	57 mm	57 mm	57 mm

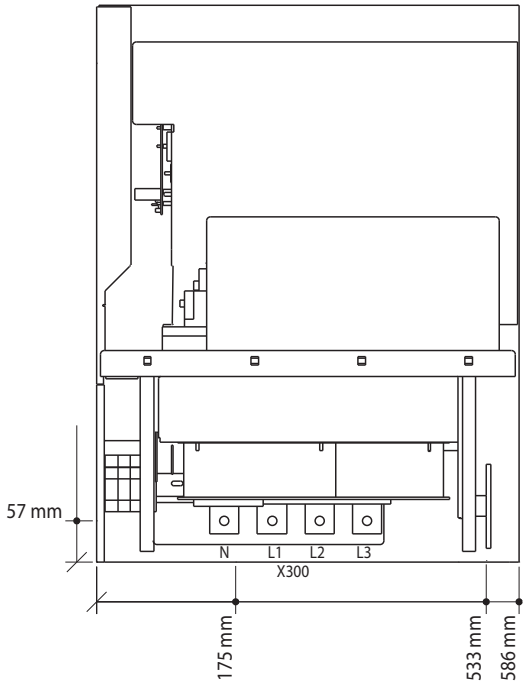
STATYS 200A connection:



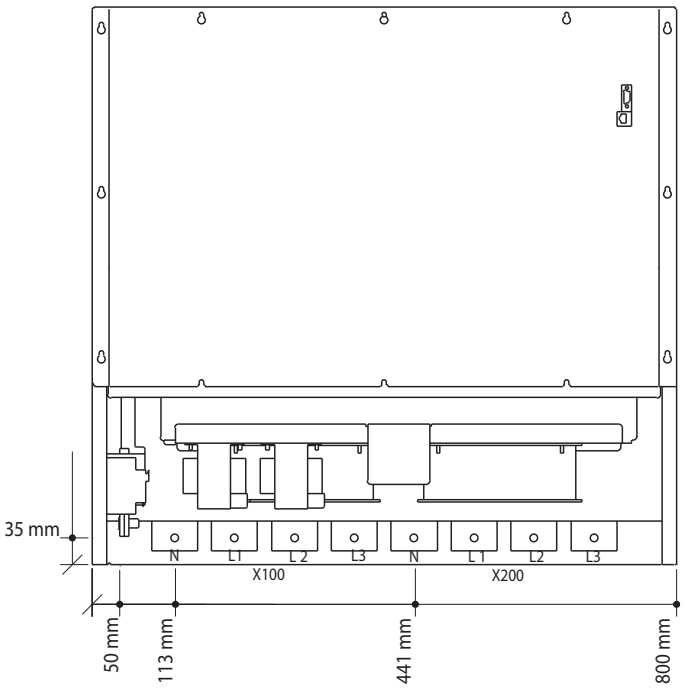
STATYS 300-400A connection:



STATYS 600A connection:



front view



8. 4. Cable sizing

The connection pads are adapted for connection of copper cables. The connection pads cannot receive tinned conductors. These pads are spaced at 30mm intervals, which prevents accidental contact between 1 strand and a pad

8. 4.1. Ground cable

⚠ Failure to observe grounding procedures may lead to the risk of electrical shock, or the risk of fire if a ground fault occurs.

	Cabinet	Integrable
Screw diameter	3 x diameter 10	3 x M8

⚠ Remember to connect the ground at the marked point ⏚

⚠ Ground connections must be in compliance with local regulations and applicable standards

8. 4.2. Neutral (N or PEN)

	Cabinet				Integrable			
Rating [A]	**200**	**300**	**400**	**600**	**200**	**300**	**400**	**600**
Screw diameter	1 x 11	2 x 13 mm²		3x13	1 x M10			1 x M12
Diameter (mm²)	1 x 185	2 x 240		3 x 240	1 x 150	2 x 185		2 x 240
Tightening torque (Nm)	26	45			26			45

⚠ The neutral is not always wired and depends on the neutral condition of the installation (see § 8.3)

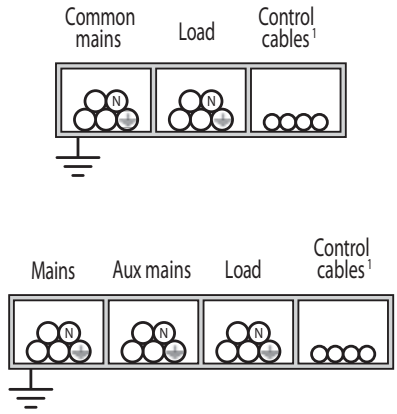
⚠ Ground connections must be in compliance with local regulations and applicable standards

8. 4.3. Phases or PE

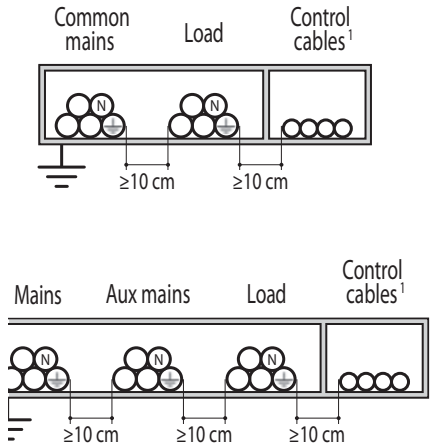
	Cabinet				Integrable			
Rating [A]	**200**	**300**	**400**	**600**	**200**	**300**	**400**	**600**
Screw diameter	1 x 11	2 x 13 mm²		3 x 13	1 x M10			1 x M12
Diameter (mm²)	1 x 150	2 x 150		3 x 185	1 x 120	1 x 240		2 x 185
Tightening torque (Nm)	26	45			26			45

8. 5. Cable routing

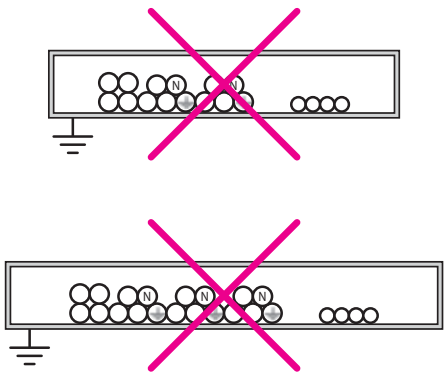
8.5-1 Correct installation.



8.5-2 Authorised installation.



8.5-3 Incorrect installation.



Control cables[1]: connections between the cabinets and each unit, alarm messages, remote mimic panel, BMS connection, emergency stop, connection to breaker components...

Power cables and control cables must never be installed in the same raceway

Power cables near to sensitive equipment must not be exposed to electromagnetic fields.

8. 6. Devices for protecting persons and property

8. 6.1. Backfeed protection

In order to comply with the standard, STATYS is fitted with a control for backfeed protection devices. In case of default on one input, STATYS delivers a voltage signal on terminal block XB2 (see § 9.3) to triggers the breaker component by means of a pulse-type shunt trip coil.

In the integrable chassis version, the L1/ L3 voltage must be returned to the level of the fuse holder.

⚠ It is a phase to phase voltage

⚠ Backfeed cabling is mandatory

⚠ The breaker components triggered by the shunt trip coils must be marked with a warning label

8. 6.2. Internal protective device (Cabinet model only)

Depending on the STATYS model ordered, an internal protective device may be present:

	200A	300A	400A	600A
Calibre fusible UR (A)	400	630		1000
I^2t pré-arc à 1ms (kA^2s)	19	54		240
I^2t total à 440V (kA^2s)	65	182		812

⚠ If possible, replace using an identical model of the same brand.

⚠ In any case the neutral is not protected (never broken).

⚠ The internal protective does not provide external upstream protection.

8. 6.3. External upstream protection

These protective devices need to be selected and configured taking into account the size of the STATYS unit, the installation and the diameter of cable used.

⚠ Neutral rating if the load is non-linear (x 1.7).

⚠ The installation's short-circuit current must not exceed that permitted by STATYS (see § 8.1)

8. 6.4. TNC wiring

Available optional, cables allow to connect each neutrals with the ground in the case of a connecting on an installation using the plan of TNC connection.

8. 7. Cabling procedure

8. 7.1. Preliminary checks

Ensure that STATYS is correctly installed in its final position.
Check that the installation is isolated.

Set all switches to position 0.

8. 7.2. Cabinet cabling

Remove the protective devices to gain access to the power connections.

Check that the ground connector is clamped in firm contact with ground.

Check that the other installation devices are securely attached to this ground.

The diameter of the cable must comply with table § 8.5.

Fit a cable linking the ground connector to the PE terminal block.

Wire the source 1 phases on terminal block X10. Pay attention to the direction of rotation of the phases.

Note : Whether or not the neutral is wired on terminal block X10 depends on your neutral condition.

Wire the source 2 phases on terminal block X20. Pay attention to the direction of rotation of the phases.

Note: Whether or not the neutral is wired on terminal block X20 depends on your neutral condition.

Wire the output on terminal block X30. Pay attention to the direction of rotation of the phases.

Note: Whether or not the neutral is wired on terminal block X30 depends on your neutral condition.

Refit the protective panels.

8. 7.3. Integrable chassis cabling

Remove the protective panels to gain access to the power connections.

Check that the ground connector is clamped firmly in contact with ground.

Check that the other installation devices are securely attached to ground.

The diameter of the cable must comply with table 8.5.

Wire the ground connector to the PE terminal block.

Wire the source 1 phases on terminal block X100. Pay attention to the direction of rotation of the phases.

Note: Whether or not the neutral is wired on terminal block X100 depends on your neutral condition.

Wire the source 2 phases on terminal block X200. Pay attention to the direction of rotation of the phases.

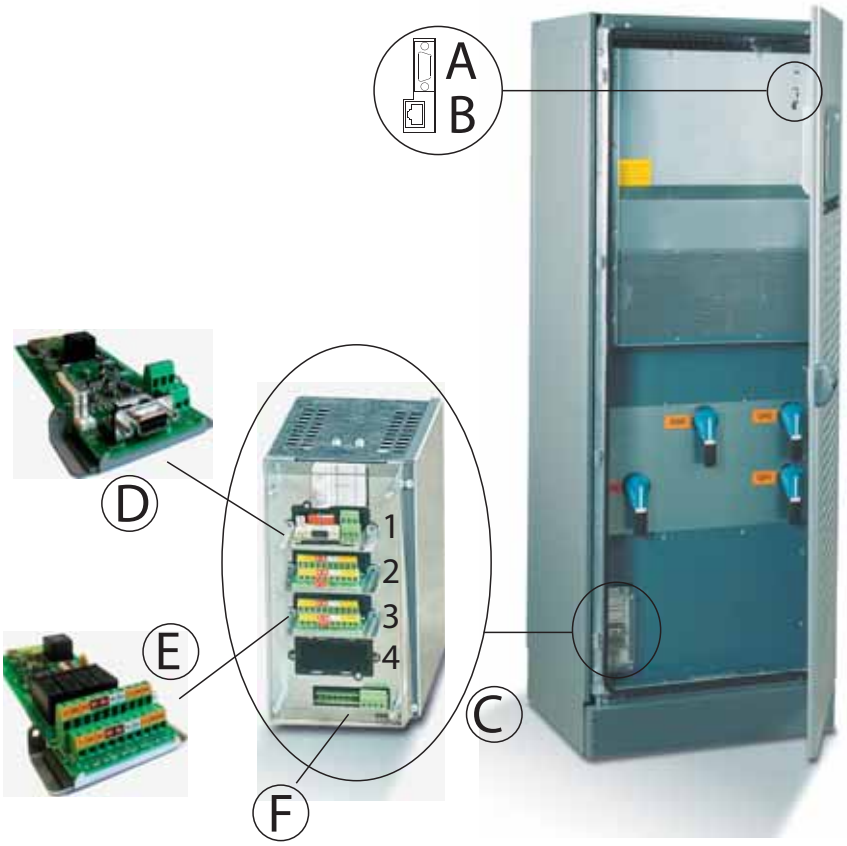
Note: Whether or not the neutral is wired on terminal block X200 depends on your neutral condition.

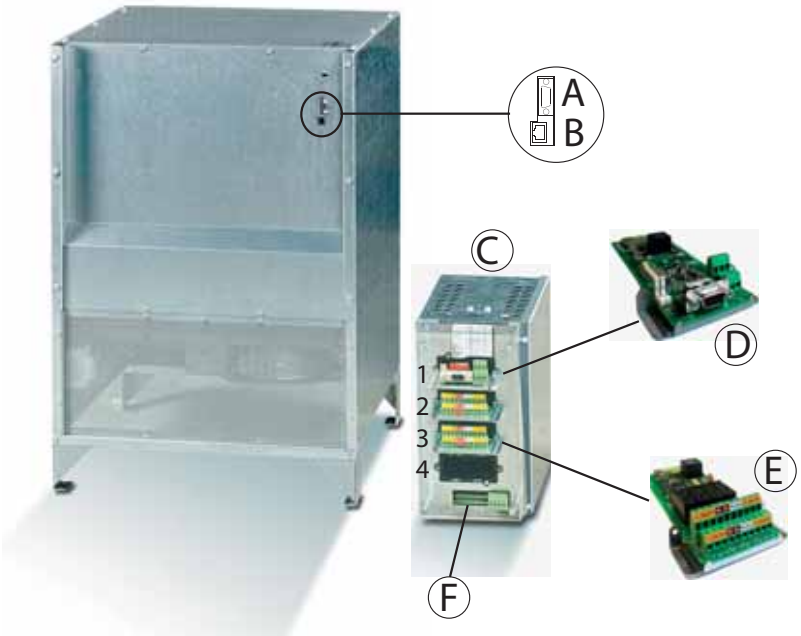
Wire the output on terminal block X300. Pay attention to the direction of rotation of the phases.

Note: Whether or not the neutral is wired on terminal block X300 depends on your neutral condition.

Refit the protective panels.

9. ELECTRICAL INSTALLATION OF AUXILIARY CONNECTIONS





A = port reserved for SOCOMEC maintenance

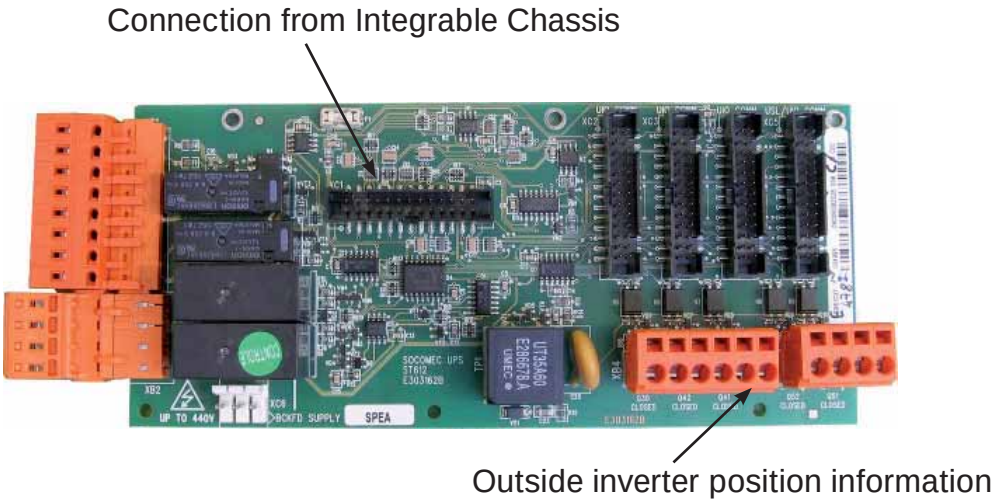
B = TCP/IP port, communication via Ethernet (sending e-mails, SNMP-based monitoring, embedded Web browsing, ...) => RJ45 Ethernet cable

C = 4-slot rack for boards D and E in addition to a relay terminal block F:

9. 1. Rack Slot

Footprint and mounting: see plan 3 in appendix §14

9. 1.1. Connection (outside integrable chassis):



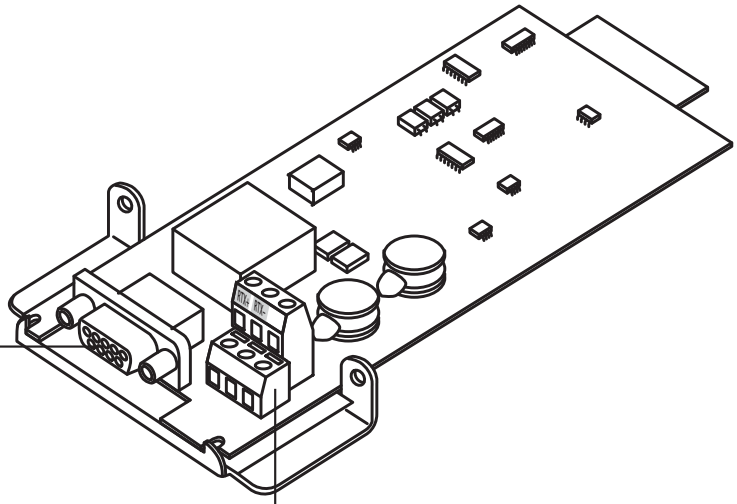
9. 1.2. Card Compatibility / Com Slot:

	Slot 1	Slot 2	Slot 3	Slot 4
Serial link	●			
ADC	●	●	●	●

9. 2. Serial link card

D = RS485 or RS232 serial port board - PROFIBUS DP, ModBus RTU or DeviceNet protocol

⚠ Com Slot 1 only



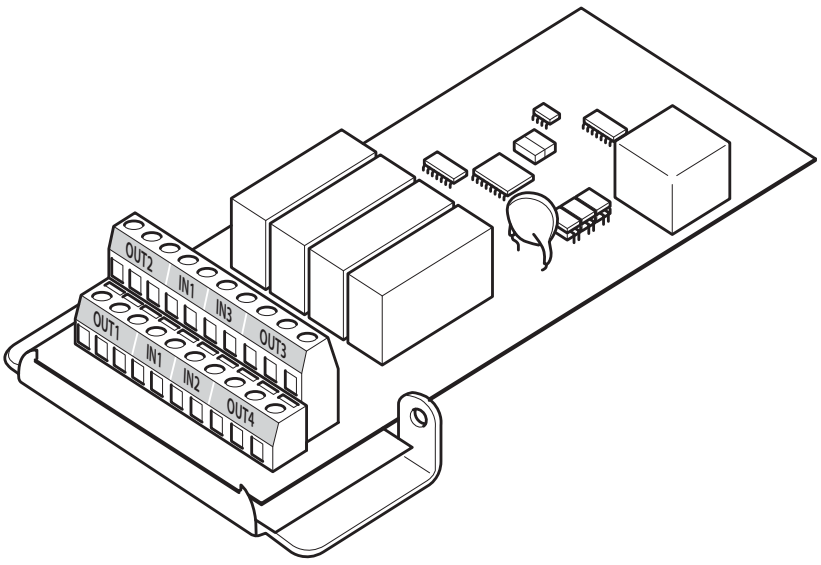
RS485 2 FILS JBUS	
1	RTx+
2	RTx-
3	ALIM TELES.
4	NC
5	NC
6	GNDI

RS485 / RS422 4 FILS JBUS	
1	RTx+
2	RTx-
3	ALIM TELES.
4	Rx+
5	Rx-
6	GNDI

RS232	
1	NC
2	Rx
3	Tx
4	NC
5	GNDI
6	NC
7	NC
8	NC
9	NC

9. 3. Information card report (ADC card)

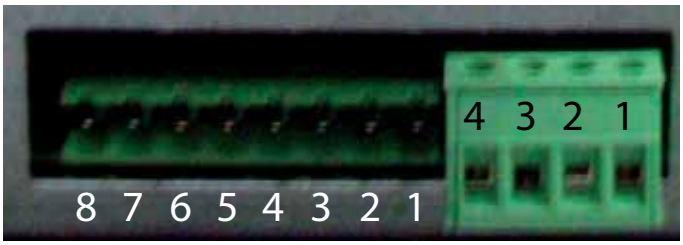
E = alarm board



Description of the output alarm according to chosen Com Slot:

Relay	Slot 1	Slot 2	Slot 3	Slot 4
C1	Load on preferred source	Source 1 OK	Electronic alarm	Load not supplied
C2	Load on alternate source	Source 2 OK	Overload alarm	Output OK
C3	Transfer impossible	Sources are synchronised	Imminent stop	Load on manual by pass 1
C4	Auto re-transfer impossible	S1 is the preferred source	Consecutive detection	Load on manual by pass 2

9. 4. Relay terminal block (F)



XB 1 XB 2

XB 1:

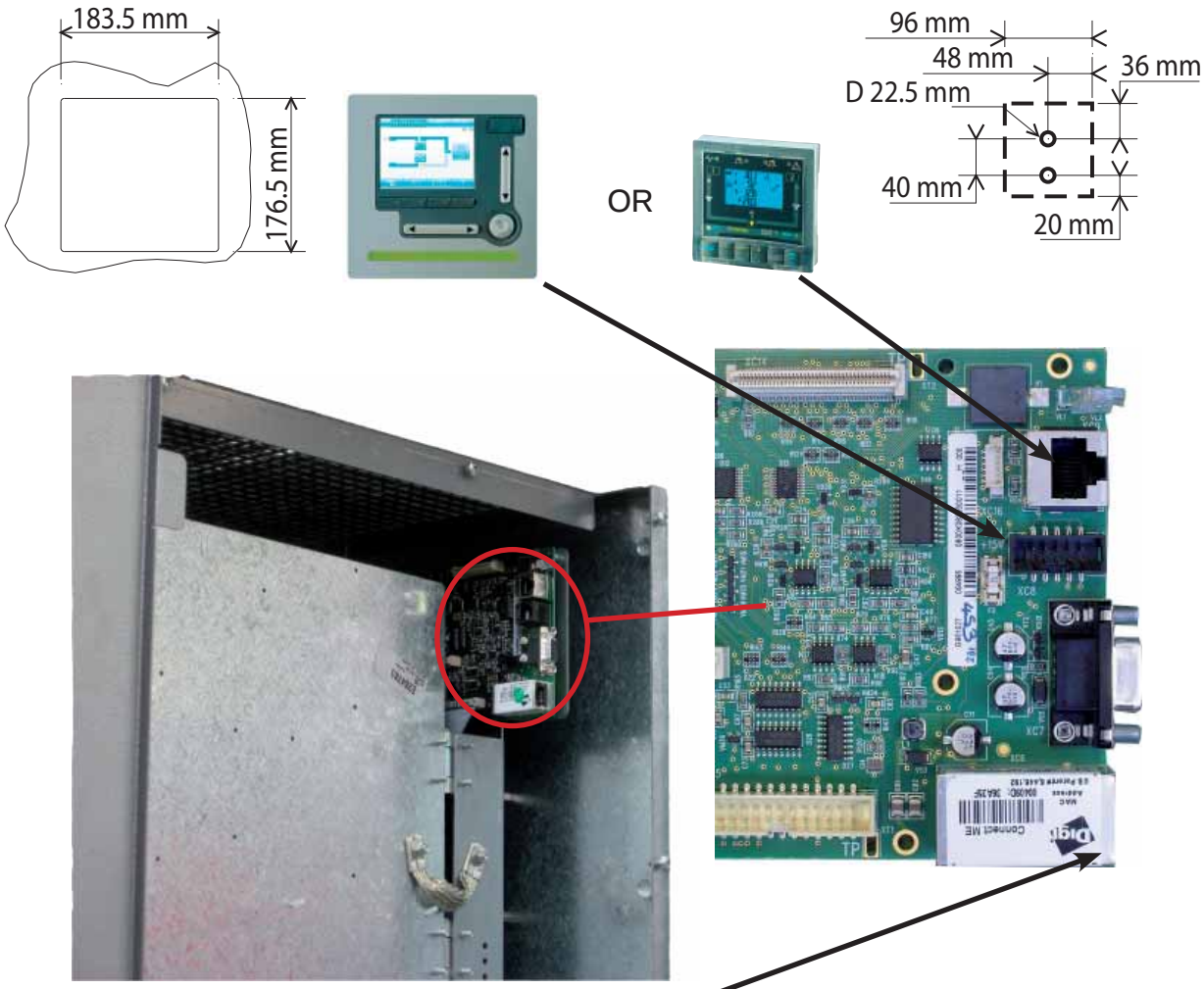
- 1 output general alarm, contact 1 = NO, 2 = COM, 3 = NC,
- 1 output alarm of preventive maintenance , 4 = NO, 5 = COM, 6 = NC,
- 1 output for Emergency Shutdown Device (Not supplied), contact 7 et 8.

XB 2:

- 1 relay for cut off of upstream protection source 1, contact 1 et 2,
- 1 relay for cut off of upstream protection source 2, contact 3 et 4.

10. DISPLAY CONNECTION (INTEGRABLE CHASSIS)

The remote display must be connected to STATYS. In order to do this, remove the screws securing the front plate. You will then have access to a RJ-45 connector for connecting the LCD type D20 display and a HE-10 connector for connecting the ADICOM colour screen, depending on the option selected.



Do not use to connect the display

The display connection cable must pass through the grommet located at the top left of the integrable chassis

11. COMMISSIONING

11. 1. Start conditions

- Source 1 and Source 2 voltages are present.

In the case of a standard cabinet installation:
- switches Q41, Q42, Q30 are open,
- inverter Q50 is set to position "0".

11. 2. Power-up of STATYS

- Close switches Q41 and Q42.

At this stage, the mimic panel lights up and the control electronics are powered ON. According to the autorestart configuration (see operating manual) conduction can then be activated on the output.

11. 3. Priority source selection

Note: According to the factory default setting, the priority source is source 1.
Under normal operation, the load is supplied by the priority source.

REMINDER: automatic transfer switches the supply from the priority source to the alternate source. It is therefore important that the user defines the priority source.

The priority source is selected in "programming" mode (see operating manual).

11. 4. Load supply

If conduction is not activated, the user may force the conduction (see see operating manual Monitoring mode).
When STATYS is in conduction state, close switch Q30. The  icon lights up.

11. 5. Transfer to maintenance bypass

STATYS is equipped with two bypasses (except the "integrable" model) which enable it to directly supply the load from source 1 or 2 without interrupting your application's power supply.
This function is entirely secure, the switches are equipped with mechanical and electronic locks to minimise the risk of human error.

Since each source has its own maintenance bypass, two cases may be considered:

a. The load is supplied by source 1:
– set inverter Q50 to position I,
– open switches Q30, Q41 and Q42.
At this stage, the static contactors and the electronics are powered OFF.

b. The load is supplied by source 2:
– set inverter Q50 to position I,
– open switches Q30, Q41 and Q42.
At this stage, the static contactors and the electronics are powered OFF.

11. 6. Maintenance bypass return

Since each source has its own maintenance bypass, two cases may be considered:

a. Inverter Q50 is set to position I:
– close Q41,
– switch conduction onto source 1
– visually check that the green LED of static switch 1  is lit,
– once the LED is lit, close Q30,
– set Q50 to position "0".
– also close Q42 to enable a further switch.

b. Inverter Q50 is set to position II:
– close Q42,
– switch conduction onto source 2,
– visually check that the green LED of static switch 2  is lit,
– once the LED is lit, close Q30,
– set Q50 to position "0".
– also close Q41 to enable a further switch.

12. COMMUNICATION INTERFACE

STATYS is equipped as standard with:

– one Ethernet port which allows for ModBus TCP communication, use of the SNMP protocol, sending of emails following alarm activation, and integrated Web browsing,

– one terminal block giving access to:

- 1 dry contact relay for the general alarm,
- 1 dry contact relay for the preventive maintenance alarm,
- 1 relay for an emergency stop button (not supplied),
- 2 relays for accidental tripping of upstream protection (source 1 and source 2).

STATYS is also equipped with 4 spare slots which can each house one communication module:

– 1 serial port (JBus/ModBus or Profibus or DeviceNet) only on slot ,

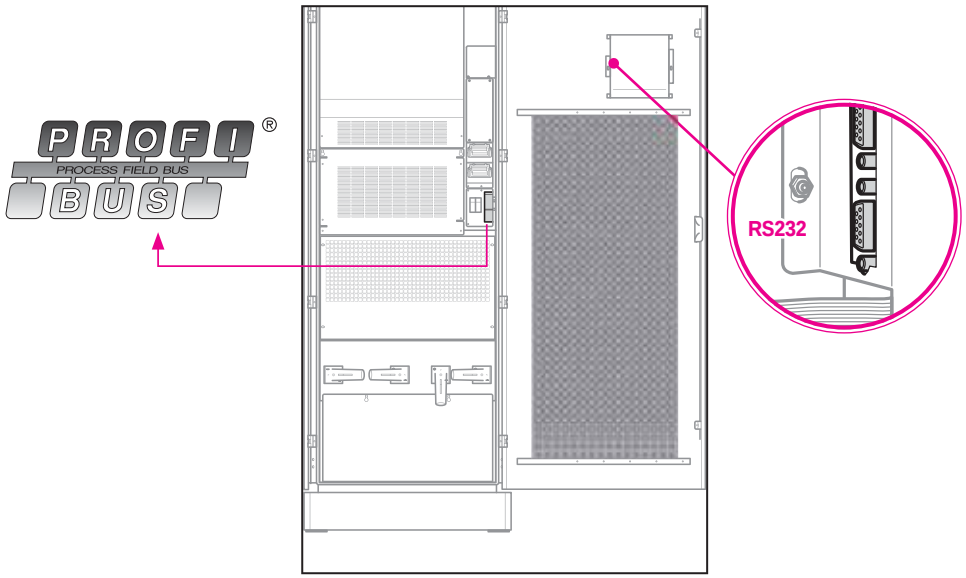
– 1 to 4 alarm relay modules (each module providing 3 inputs and 4 outputs).

12. 1. Profibus

On request, STATYS can be provided with a Profibus protocol converter, installation and configuration software and user manuals.

12. 2. Gsm modem

Enables sending of SMS messages regarding the equipment's operating status.

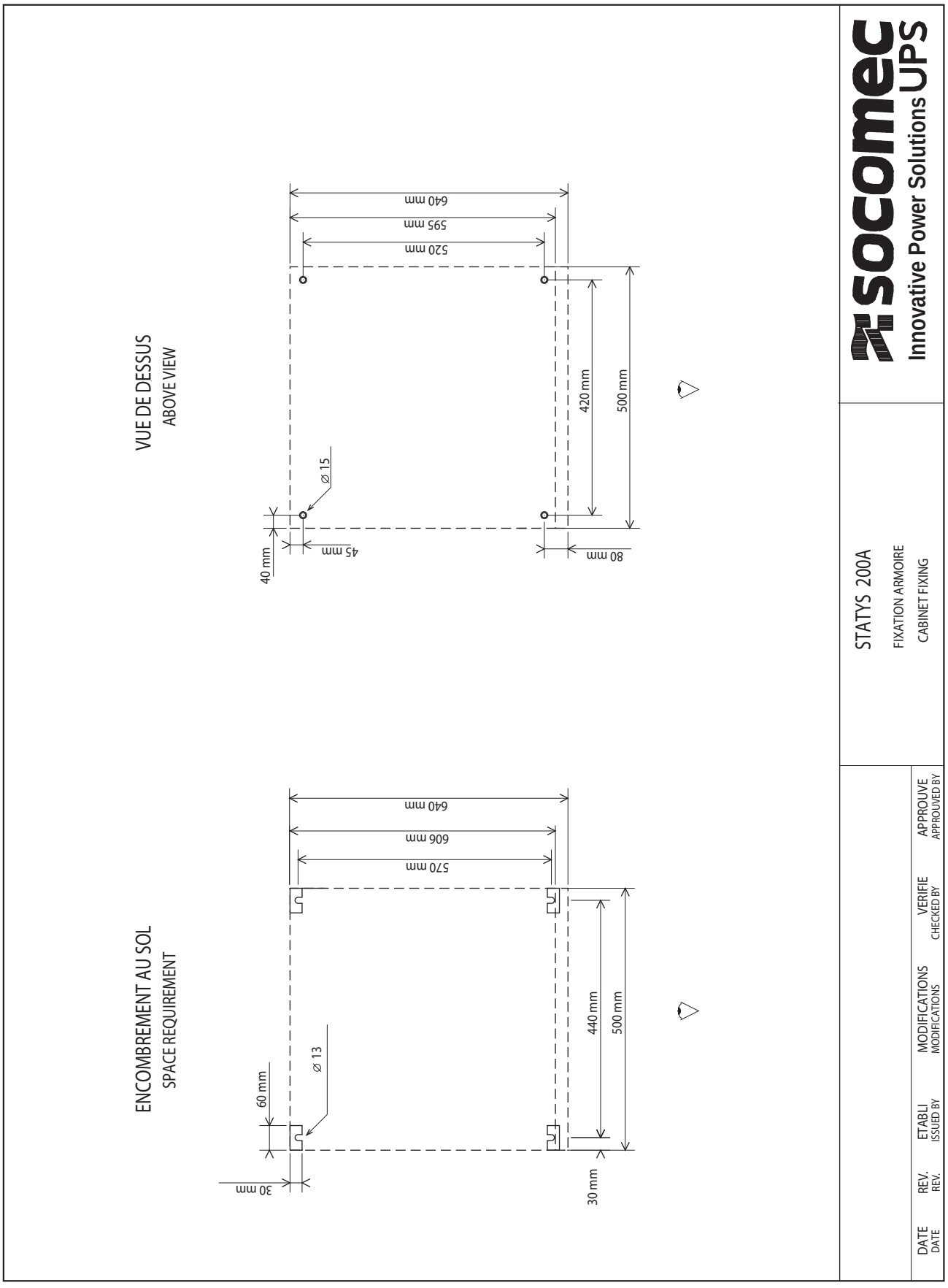


13. ADVANCED DIAGNOSTICS AND PARAMETERS

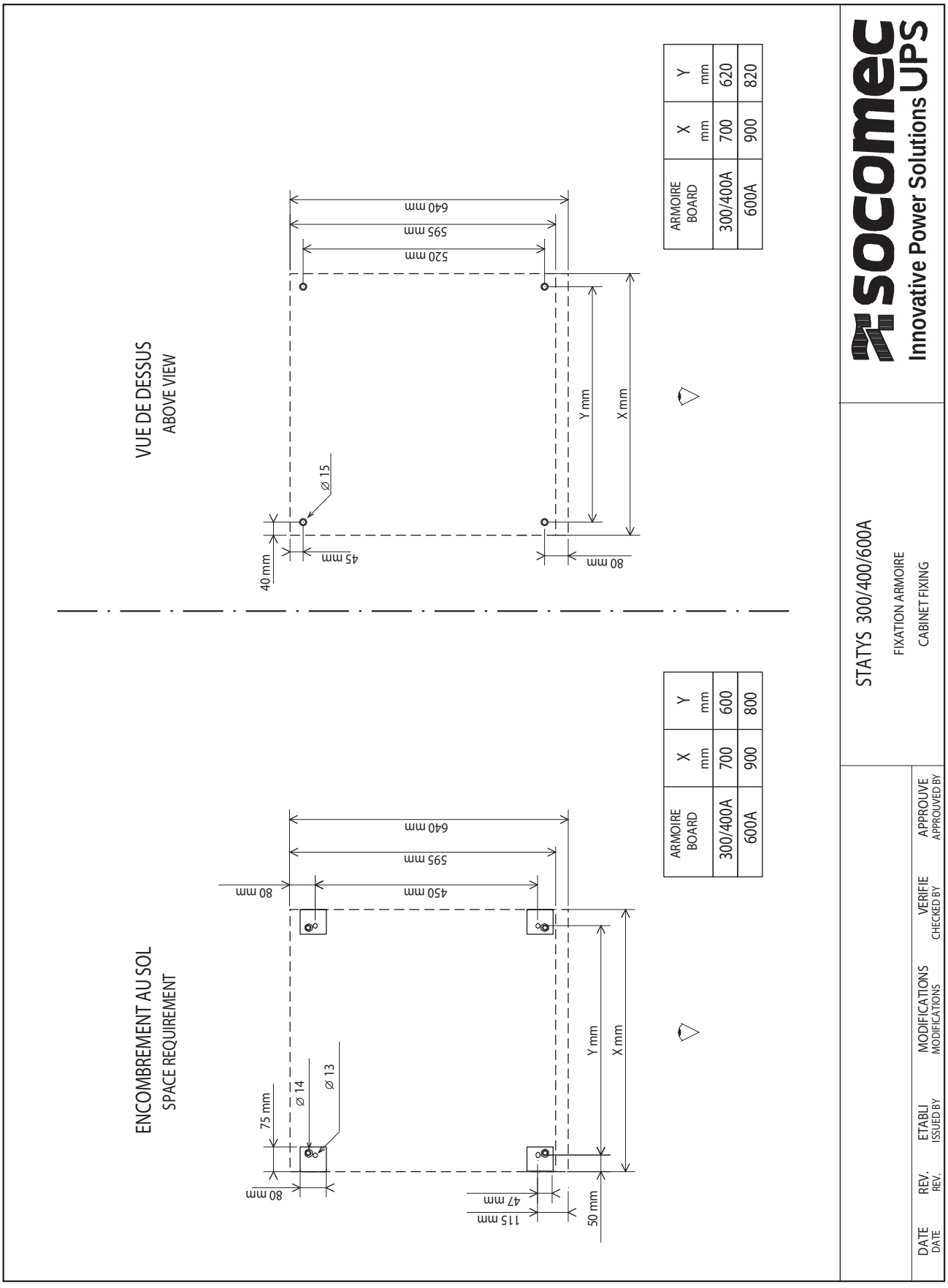
STATYS is equipped with a diagnostic card for connection to a maintenance computer. This link can be used for adjusting the advanced parameters and other settings according to specific operational needs. Maintenance personnel can also use this link to download the event log, statistics and comprehensive information for rapid and complete diagnostics

14. APPENDICES

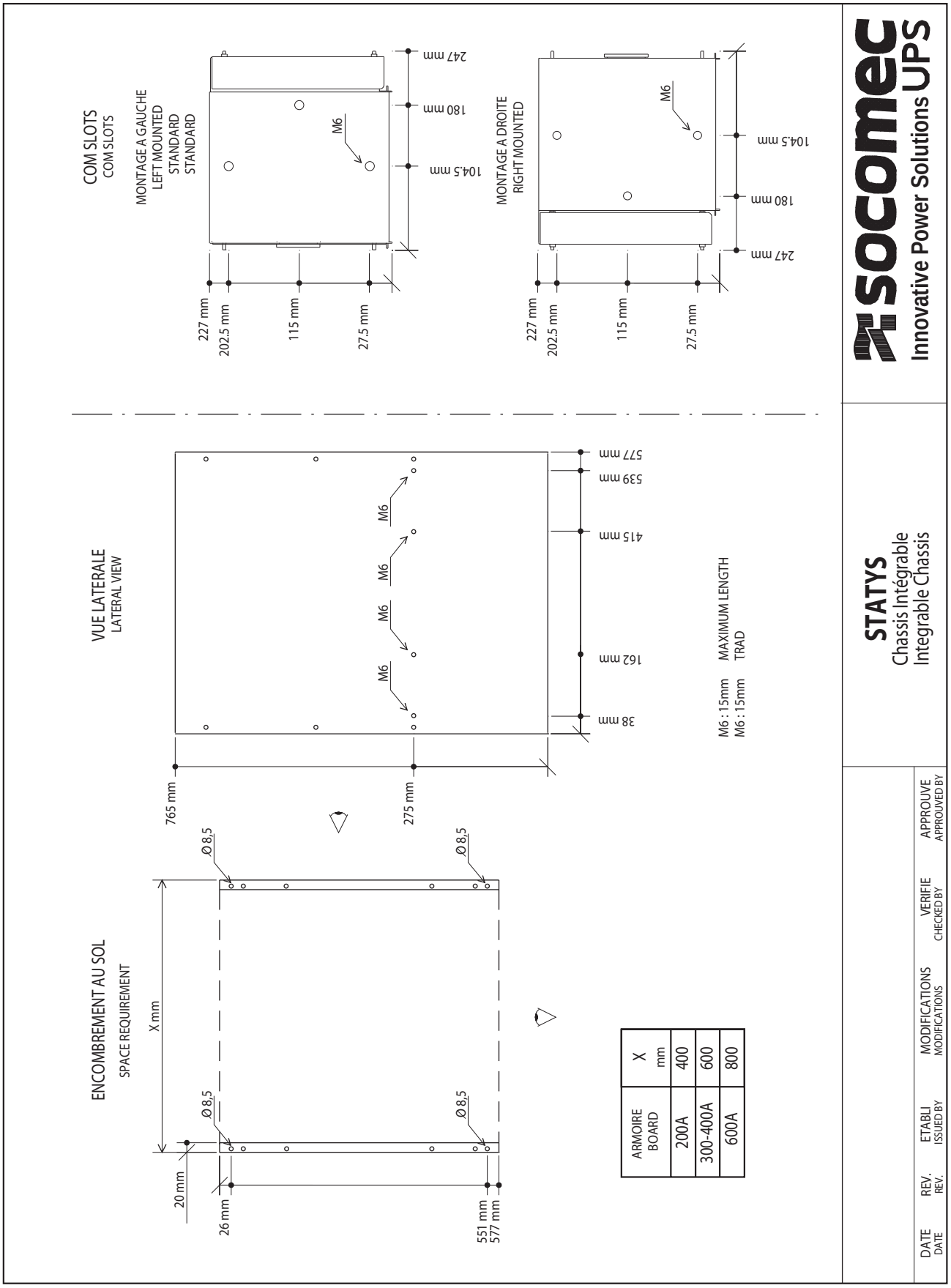
14. 1. Plan 1: 200a Cabinet footprint and mounting



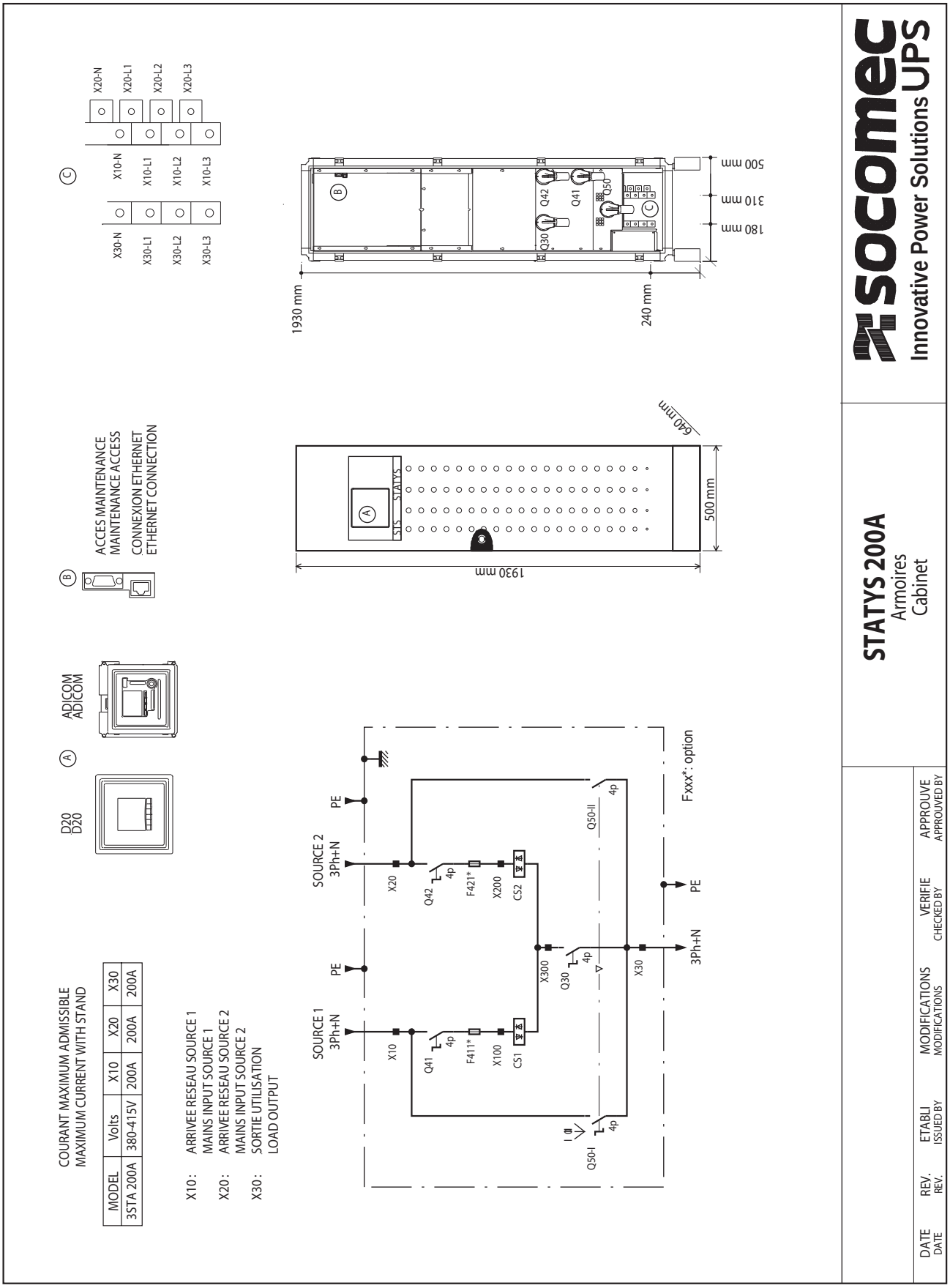
14. 2. Plan 2: 300/400/600a Cabinets footprints and mounting



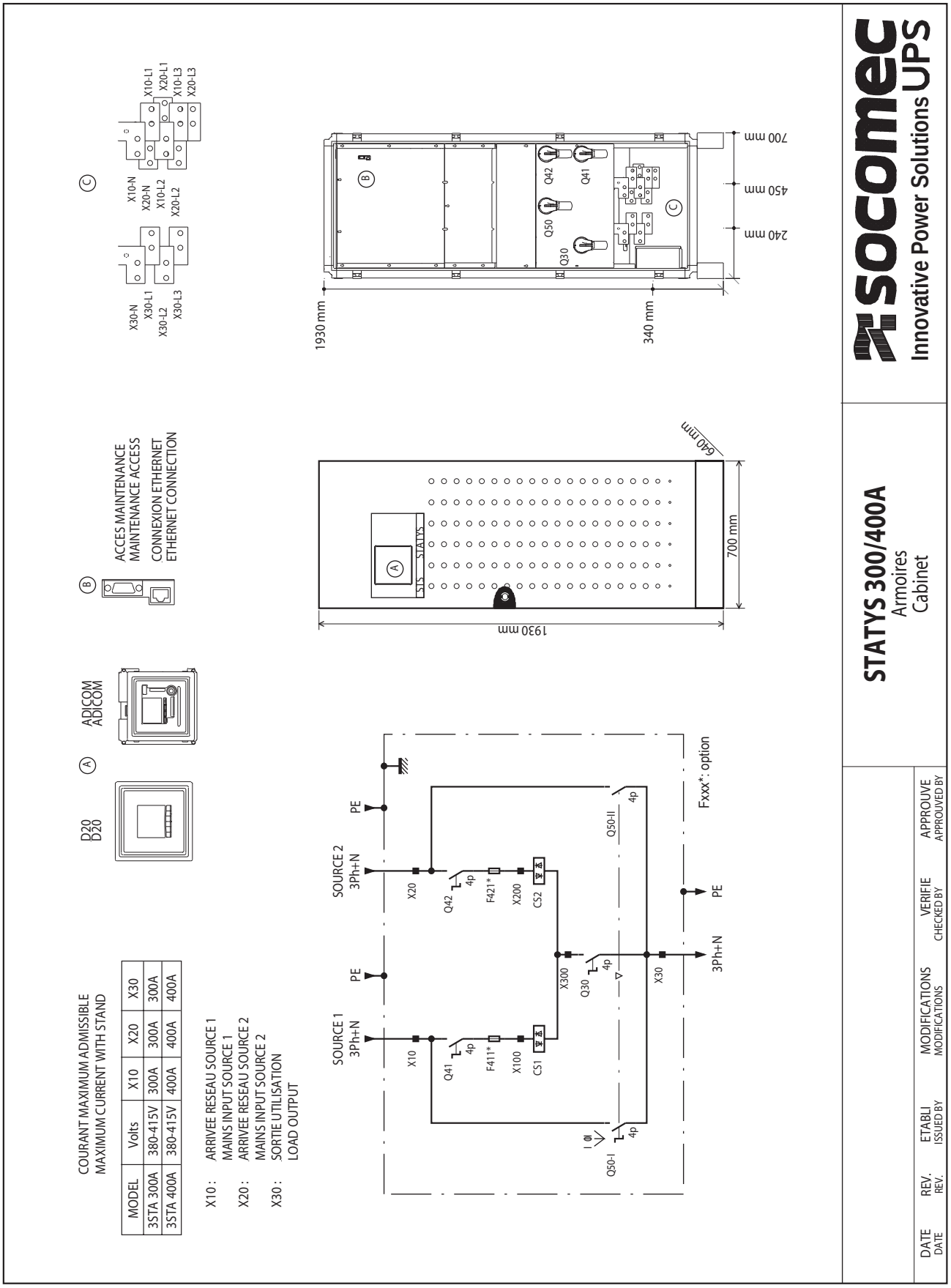
14. 3. Plan 3: Integrable Chassis and rack slots footprints and mounting



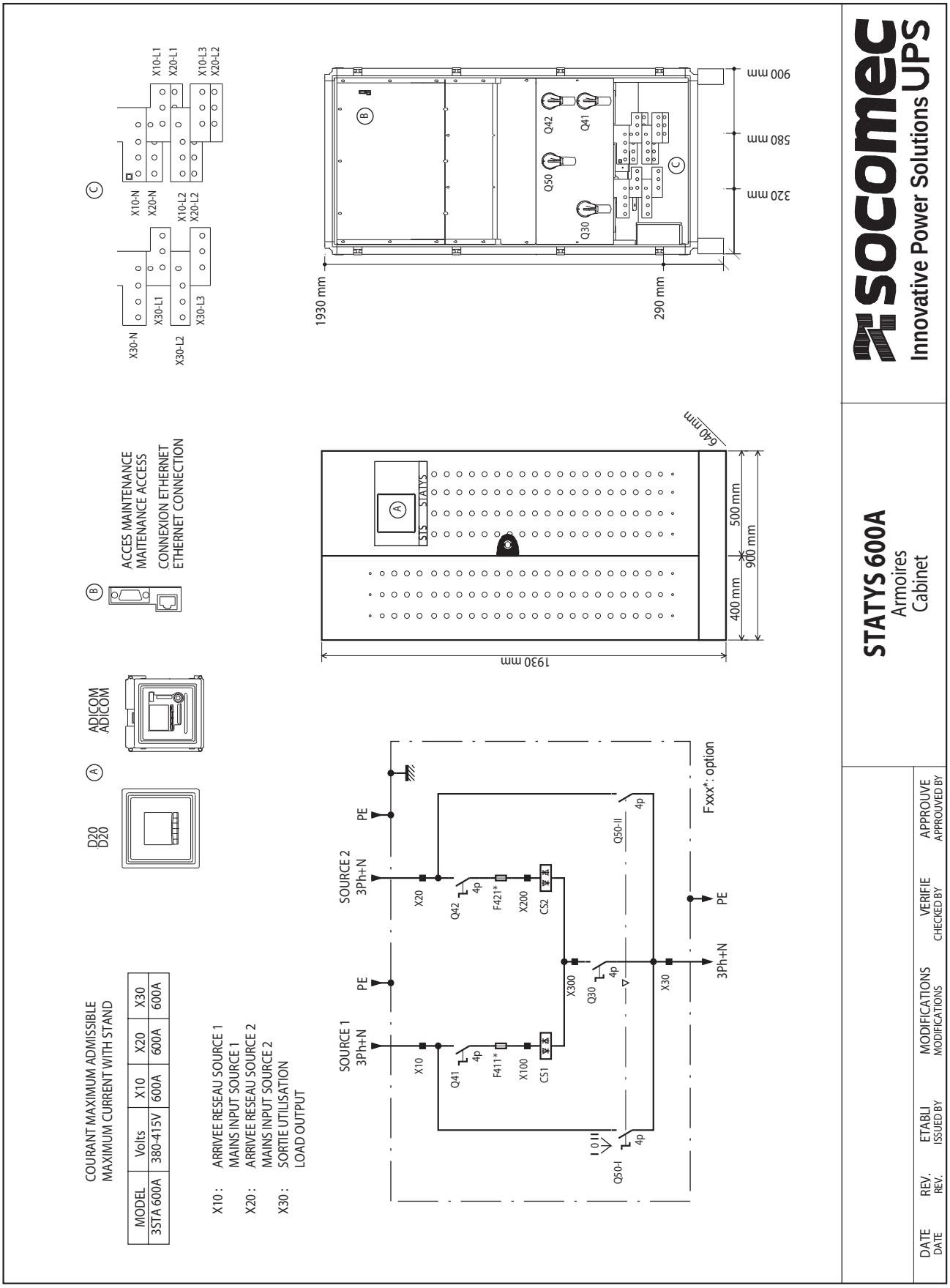
14. 4. Plan 4: 200A Cabinet electrical connections



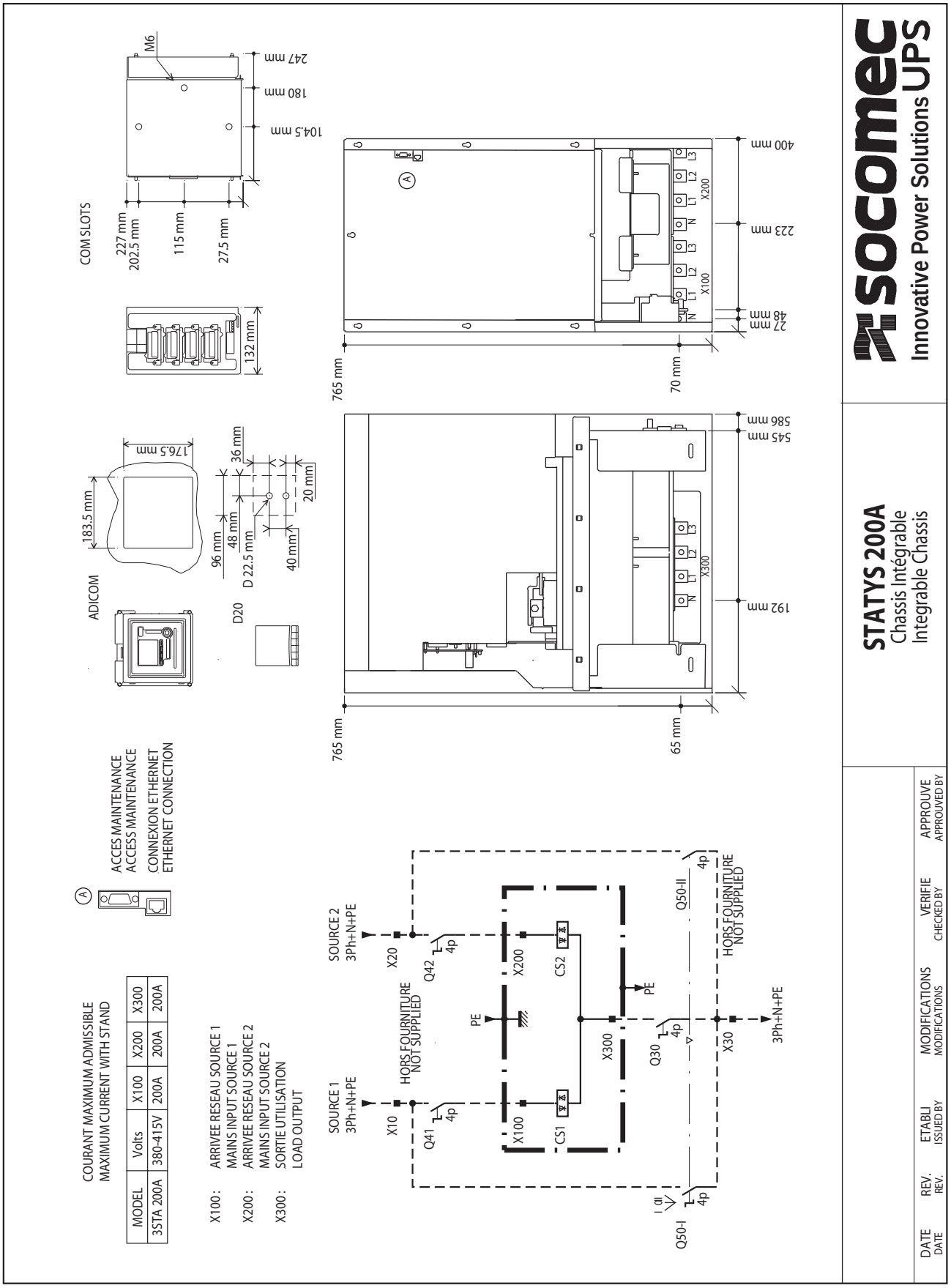
14. 5. Plan 5: 300/400A Cabinets electrical connections



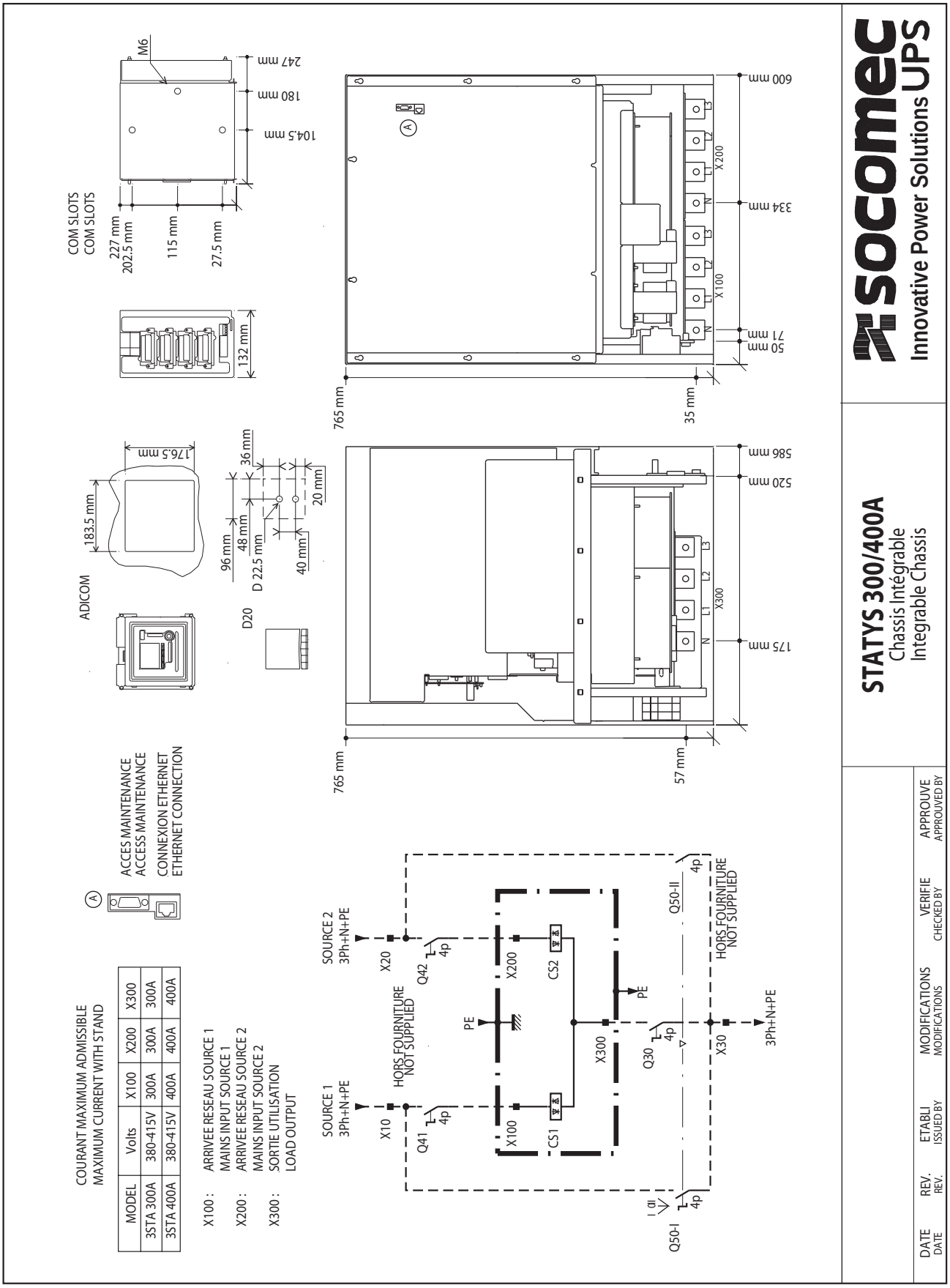
14. 6. Plan 6: 600A Cabinet electrical connections



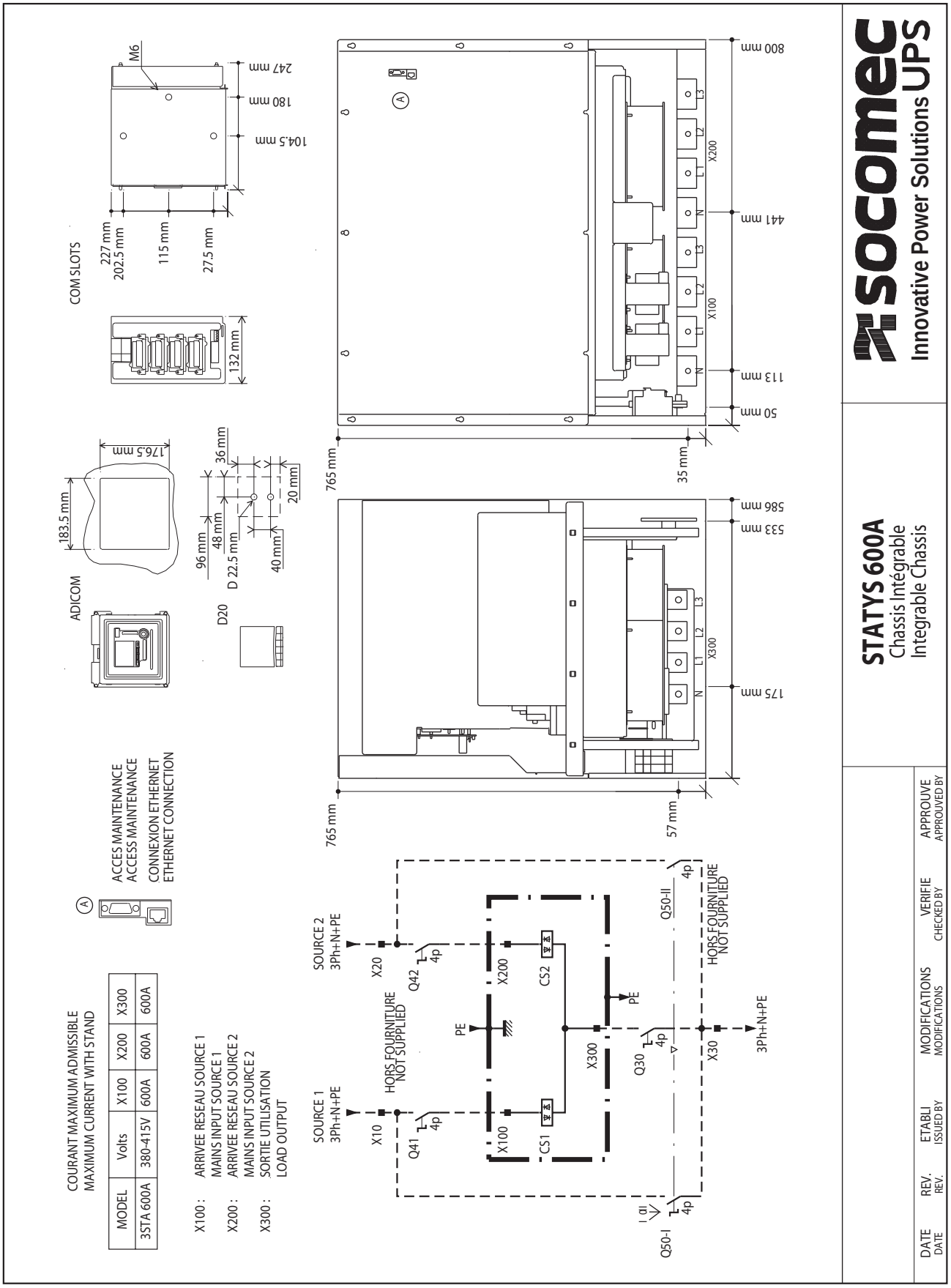
14. 7. Plan 7: 200A Integrable Chassis electrical connections



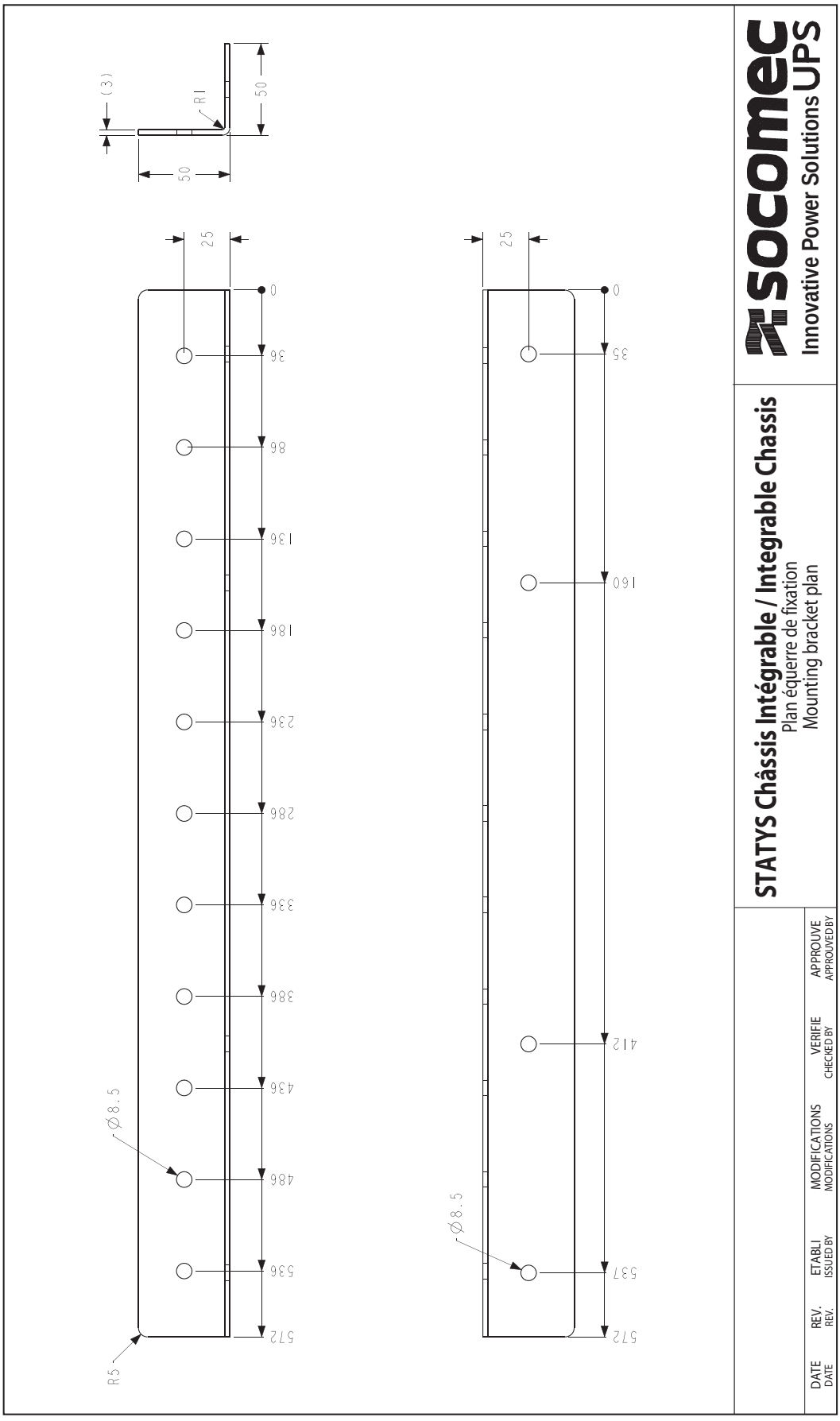
14. 8. Plan 8: 300/400A Integrable Chassis electrical connections



14. 9. Plan 9: 600a Integrable Chassis electrical connections



14. 10. Plan 10: Integrable Chassis mounting bracket plan



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