



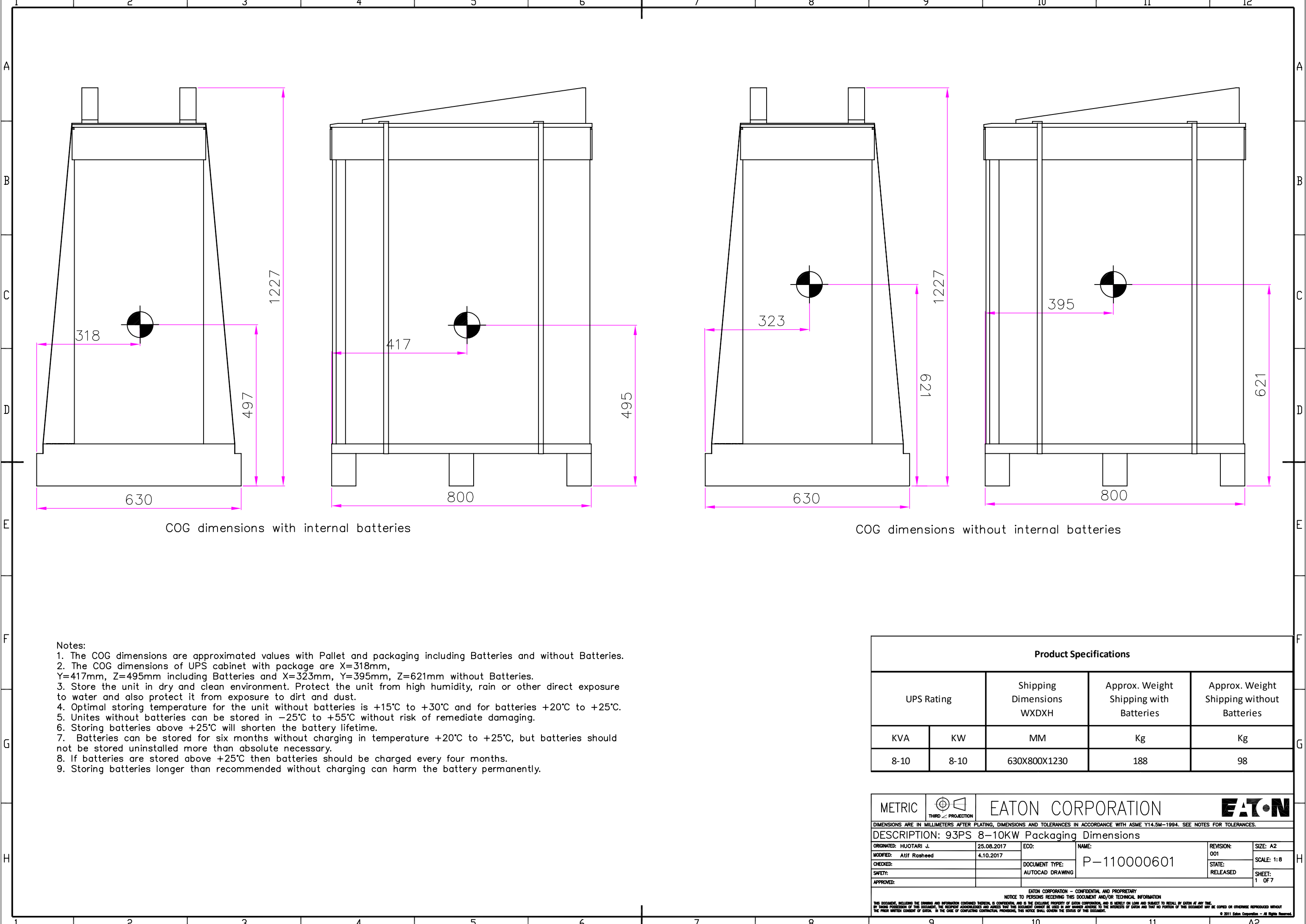
Powering Business Worldwide

SITE PLANNING DATA 93PS 8-10kW

Page 1	Packaging Dimensions
Page 2	Dimensional Drawings
Page 3	COG and Clearance Dimensions
Page 4	Customer Connections
Page 5	Electrical Wiring of Single Unit
Page 6	Electrical & Signal Wiring of Parallel Units
Page 7	Product Specifications



METRIC				EATON CORPORATION			
DIMENSIONS ARE IN MILLIMETERS AFTER PLATING, DIMENSIONS AND TOLERANCES IN ACCORDANCE WITH ASME Y14.5M-1994. SEE NOTES FOR TOLERANCES.							
DESCRIPTION: 93PS 8-10KW							
ORIGINATED: Atif Rasheed	4.10.2017	ECO:	NAME:	REVISION: 001	SIZE: A2		
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COG dimensions with internal batteries

COG dimensions without internal batteries


- Notes:
1. The COG dimensions are approximated values with Pallet and packaging including Batteries and without Batteries.
 2. The COG dimensions of UPS cabinet with package are X=318mm, Y=417mm, Z=495mm including Batteries and X=323mm, Y=395mm, Z=621mm without Batteries.
 3. Store the unit in dry and clean environment. Protect the unit from high humidity, rain or other direct exposure to water and also protect it from exposure to dirt and dust.
 4. Optimal storing temperature for the unit without batteries is +15°C to +30°C and for batteries +20°C to +25°C.
 5. Unites without batteries can be stored in -25°C to +55°C without risk of remediate damaging.
 6. Storing batteries above +25°C will shorten the battery lifetime.
 7. Batteries can be stored for six months without charging in temperature +20°C to +25°C, but batteries should not be stored uninstalled more than absolute necessary.
 8. If batteries are stored above +25°C then batteries should be charged every four months.
 9. Storing batteries longer than recommended without charging can harm the battery permanently.

Product Specifications				
UPS Rating		Shipping Dimensions WXDXH	Approx. Weight Shipping with Batteries	Approx. Weight Shipping without Batteries
KVA	KW	MM	Kg	Kg
8-10	8-10	630X800X1230	188	98

METRIC


THIRD ANGLE PROJECTION

EATON CORPORATION



DIMENSIONS ARE IN MILLIMETERS AFTER PLATING, DIMENSIONS AND TOLERANCES IN ACCORDANCE WITH ASME Y14.5M-1994. SEE NOTES FOR TOLERANCES.

DESCRIPTION: 93PS 8-10KW Packaging Dimensions

ORIGINATED: HUOTARI J.

MODIFIED: Atif Rasheed

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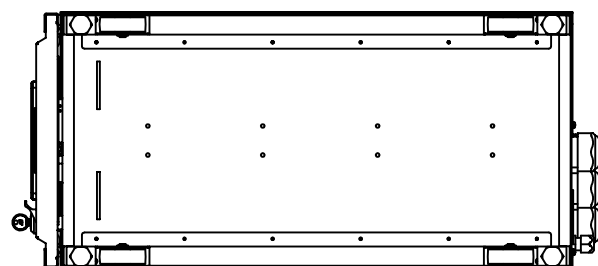
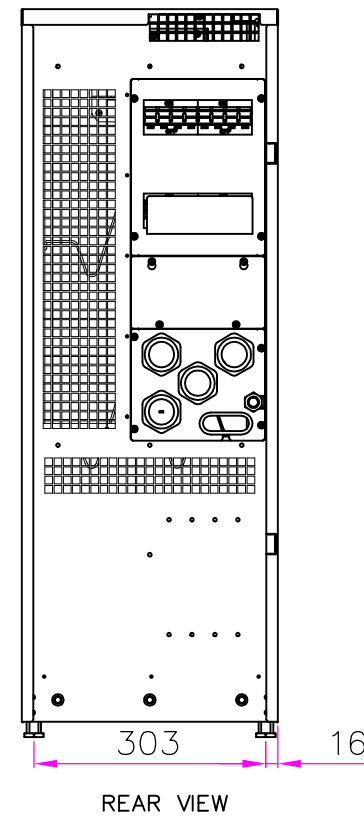
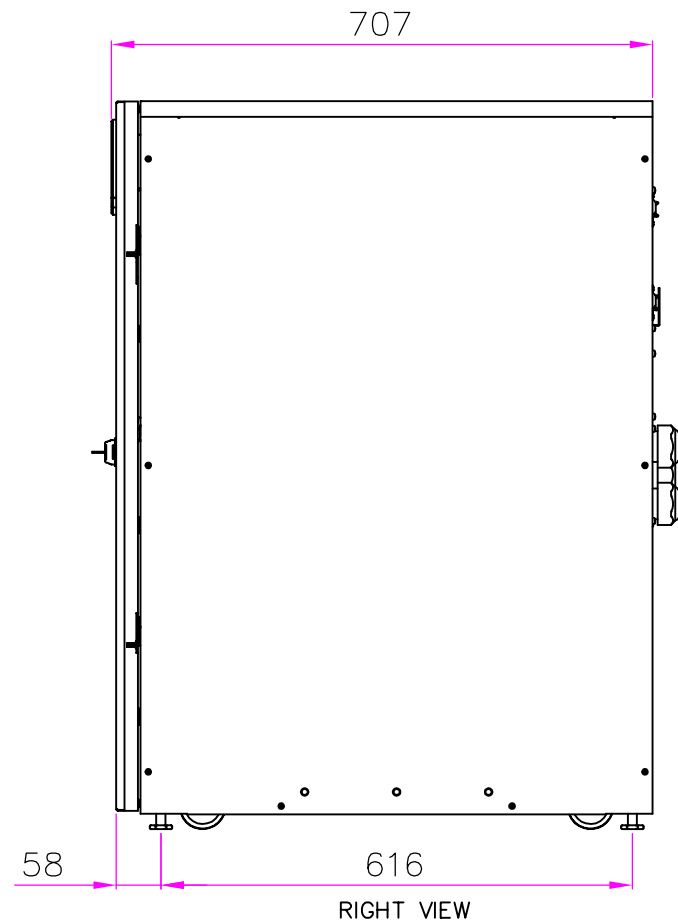
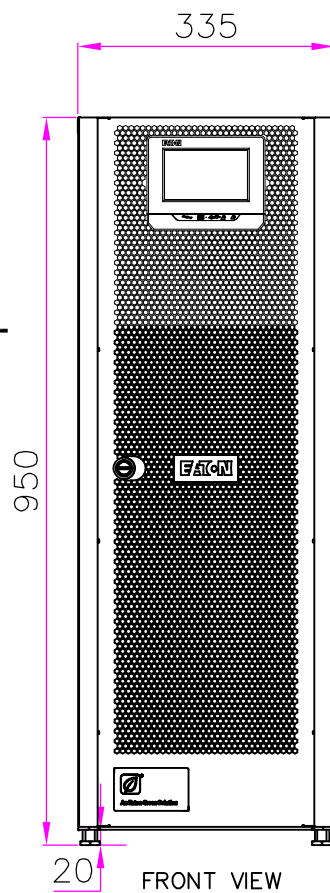
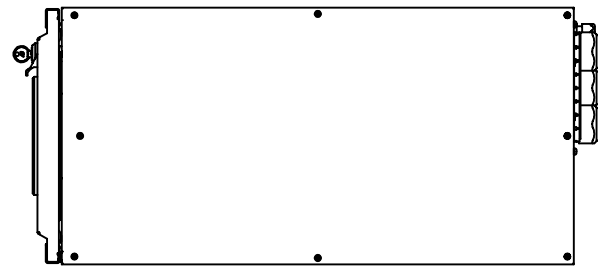
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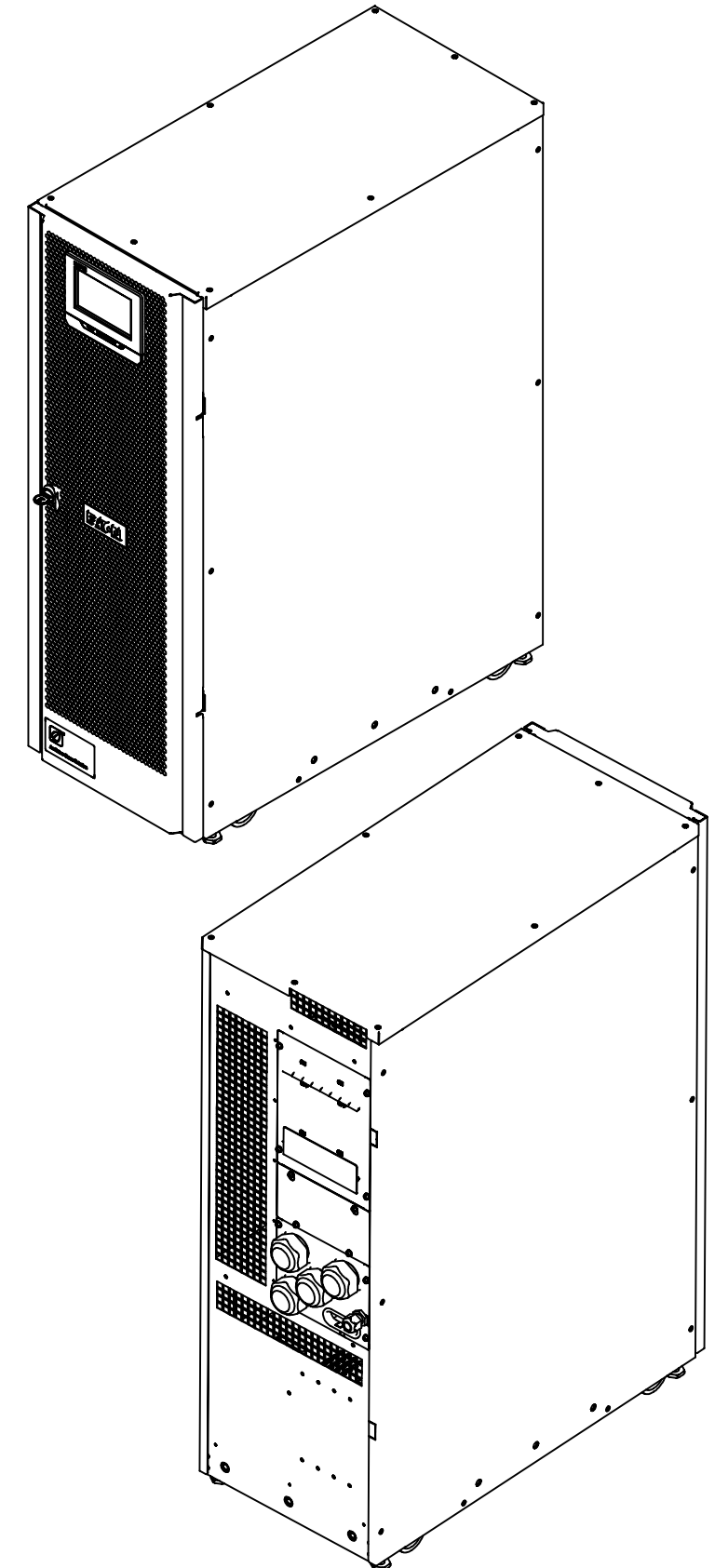
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Product Specifications										
UPS Rating		Max Heat Dissipation at 100% Load	Cabinet Dimensions WXD _X H	Shipping Dimensions WXD _X H	Approx. Weight Cabinet With Batteries	Approx. Weight Cabinet without Batteries	Approx. Weight Shipping with Batteries	Approx. Weight Shipping without Batteries	Floor Landing	Min. air flow for internal batteries
KVA	KW	W	MM	MM	Kg	Kg	Kg	Kg	Kg/m ²	m ³ /H
8	8	325	335 x 750 x 950	630X800X1230	163	73	188	98	700	1.5
10	10	406	335 x 750 x 950	630X800X1230	163	73	188	98	700	1.5

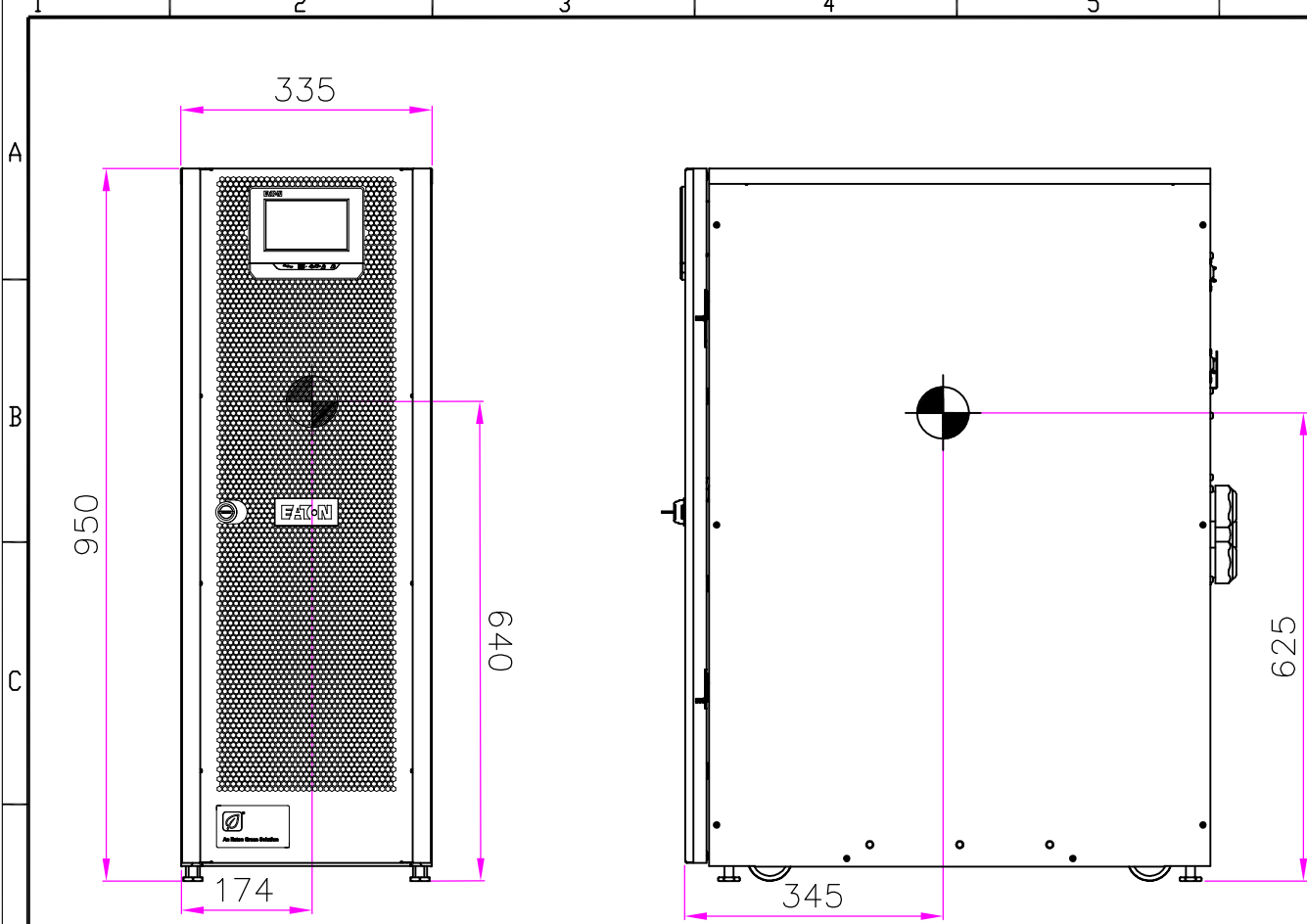


Notes:

1. The system must be installed in a temperature and humidity controlled indoor area free of conductive contaminants.
2. Continues ambient temperature range: 0–40°C (32–104°F); Maximum relative humidity: 95% non-condensing.
3. The UPS can be installed in line-up-and-match or standalone configurations.
4. The rear cable entries through the removable access gland plate are standard. Access plates shall be custom-modified to suit conduit sizes.
5. Ensure the necessary minimum air flow rate of 1,5 m³/H for internal batteries to avoid explosive gas mixture that can be created if the hydrogen concentration exceeds 4% by volume in air.

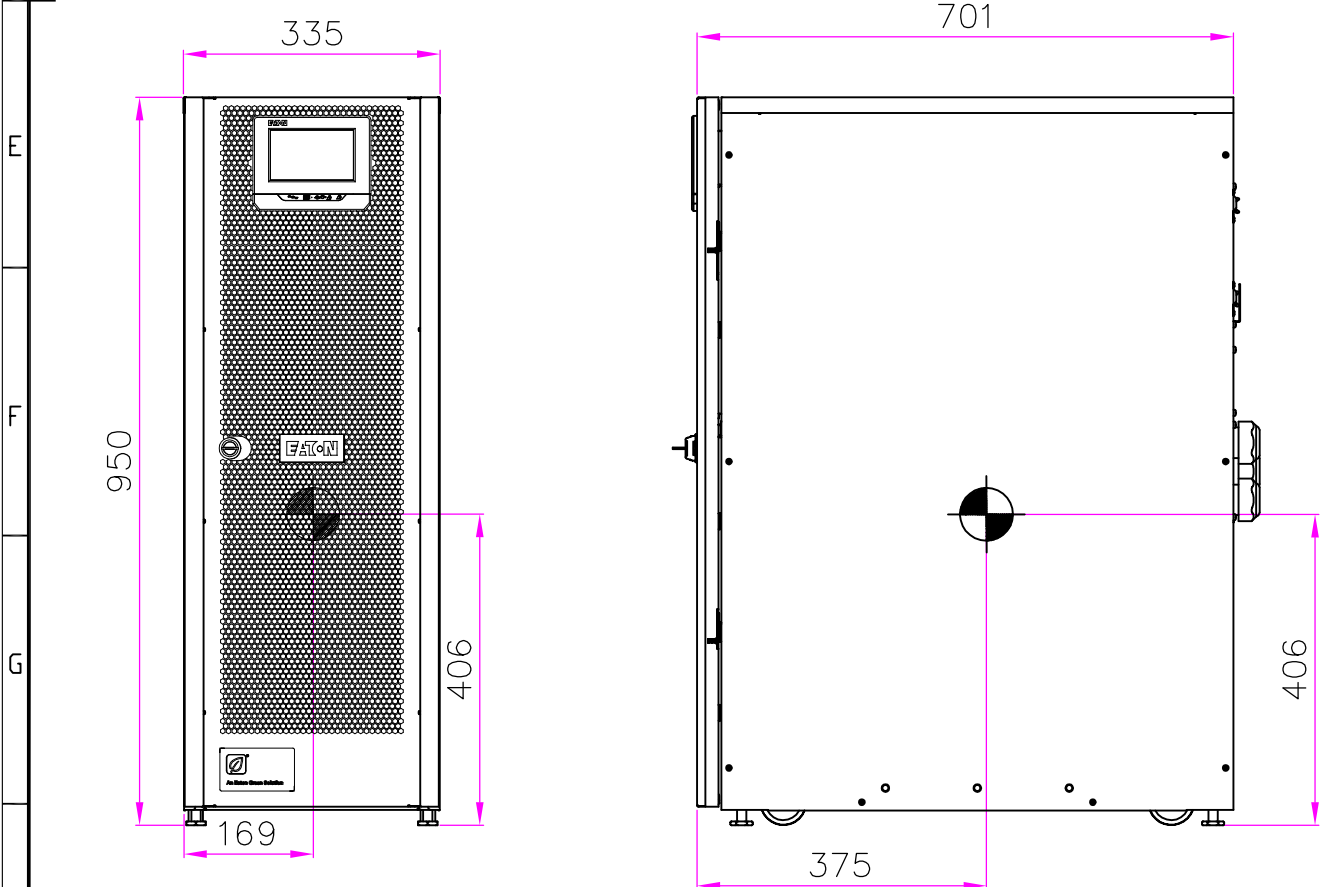
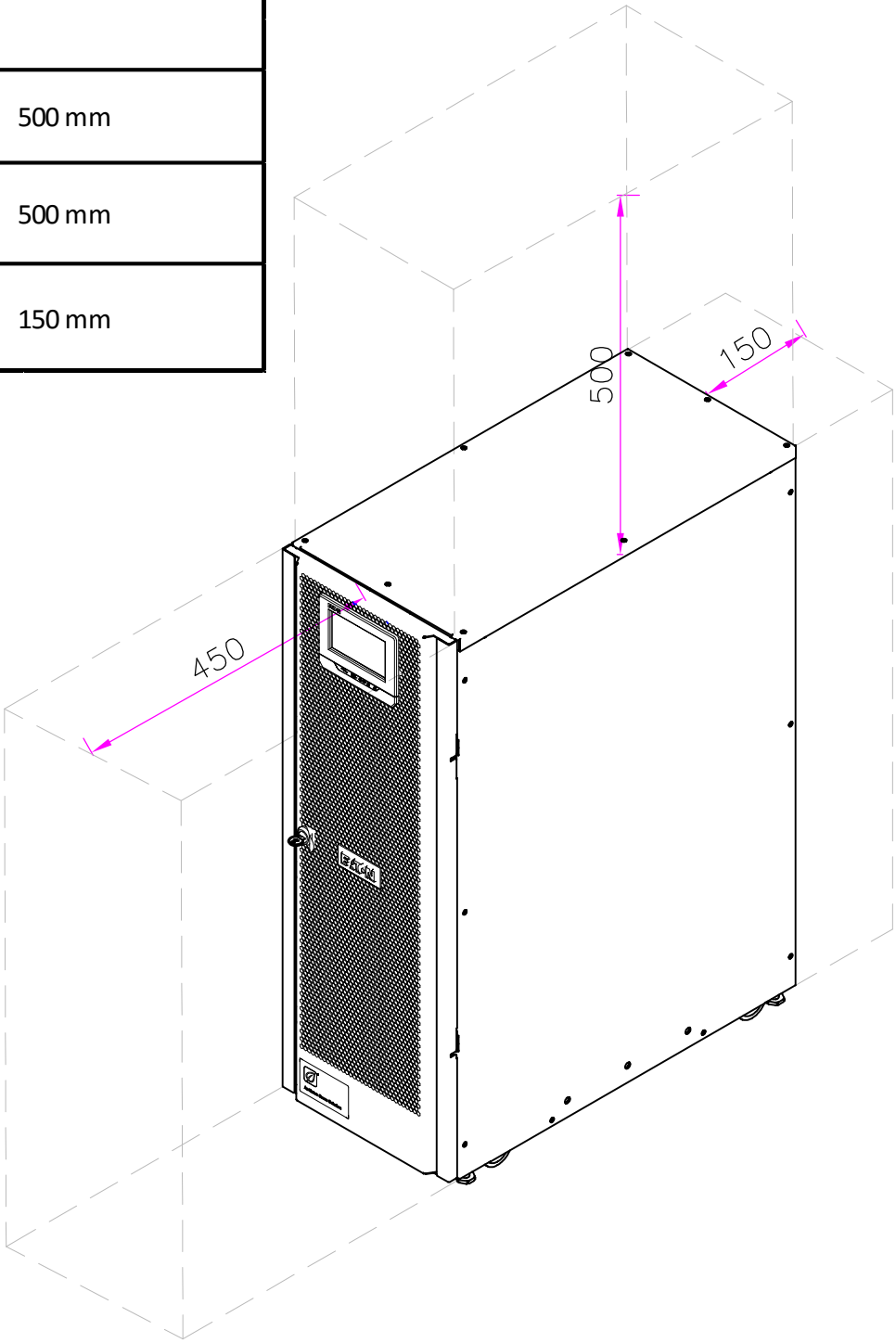


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DESCRIPTION: 93PS 8-10KW Dimensional Drawing							
ORIGINATED: HUOTARI J.		25.08.2017		ECO:		NAME:	
MODIFIED: Atif Rasheed		4.10.2017		DOCUMENT TYPE:		P-110000601	
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COG Dimensions without Internal Batteries

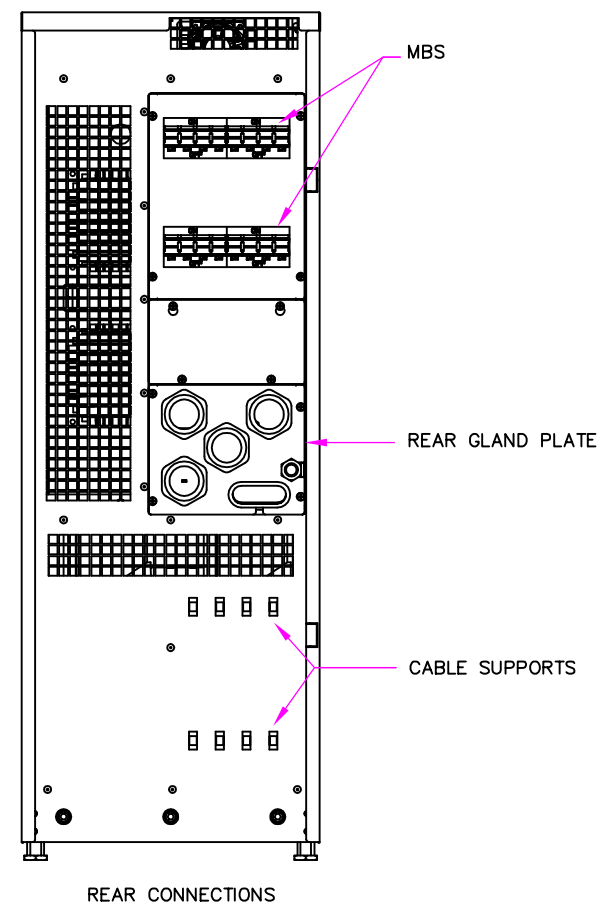
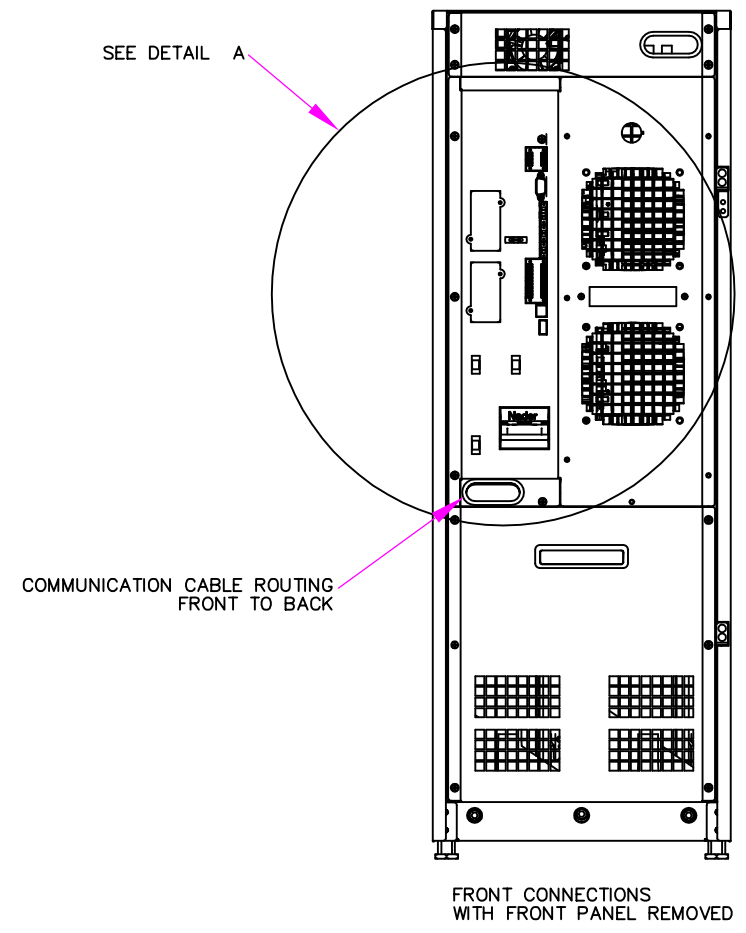
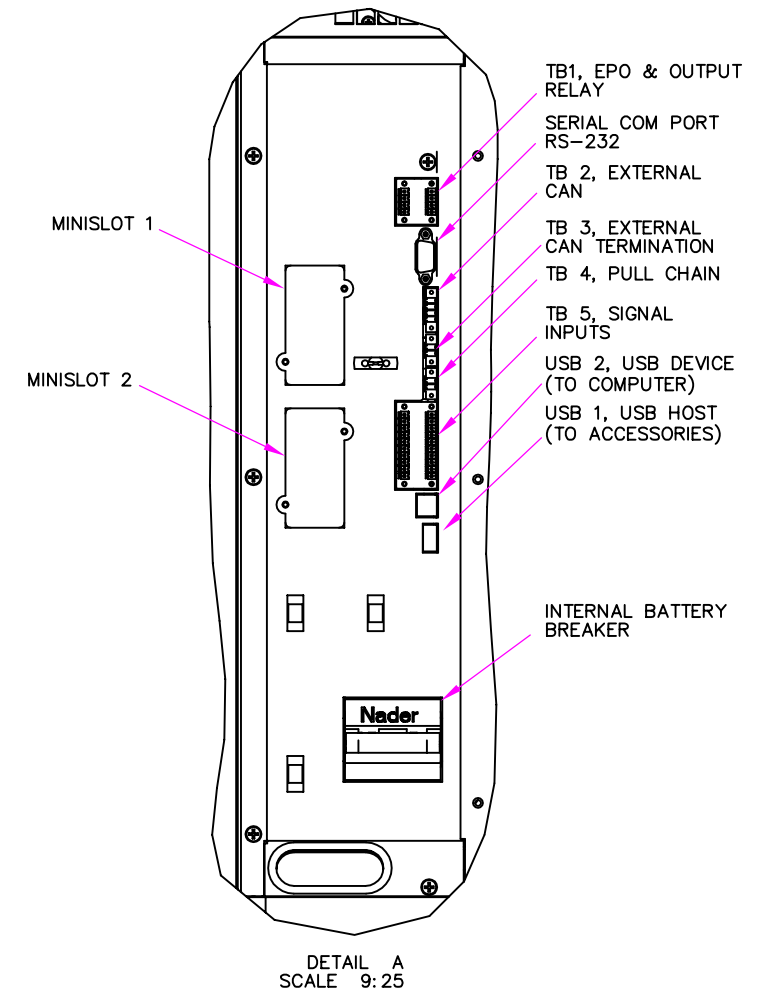
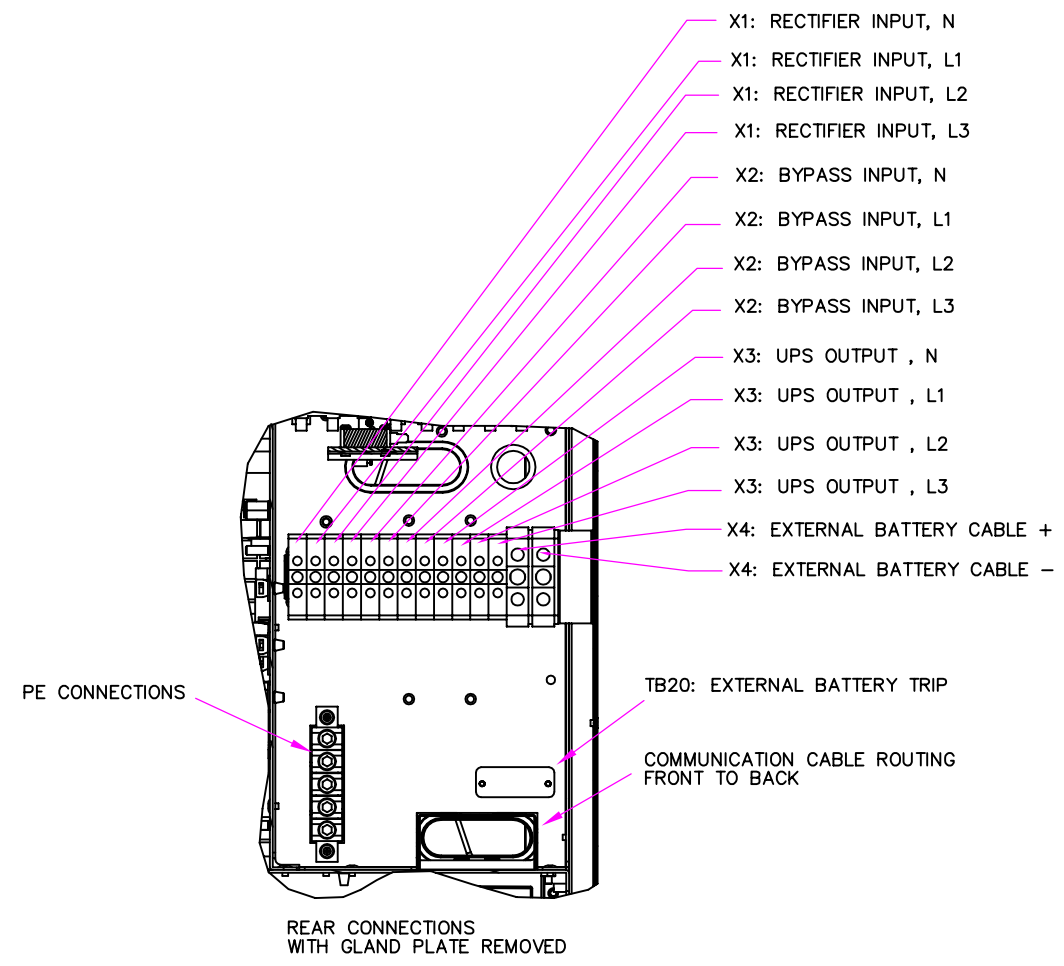
Clearances	
From Top of cabinet	500 mm
From Front of cabinet	500 mm
From Back of cabinet	150 mm



COG Dimensions with Internal Batteries

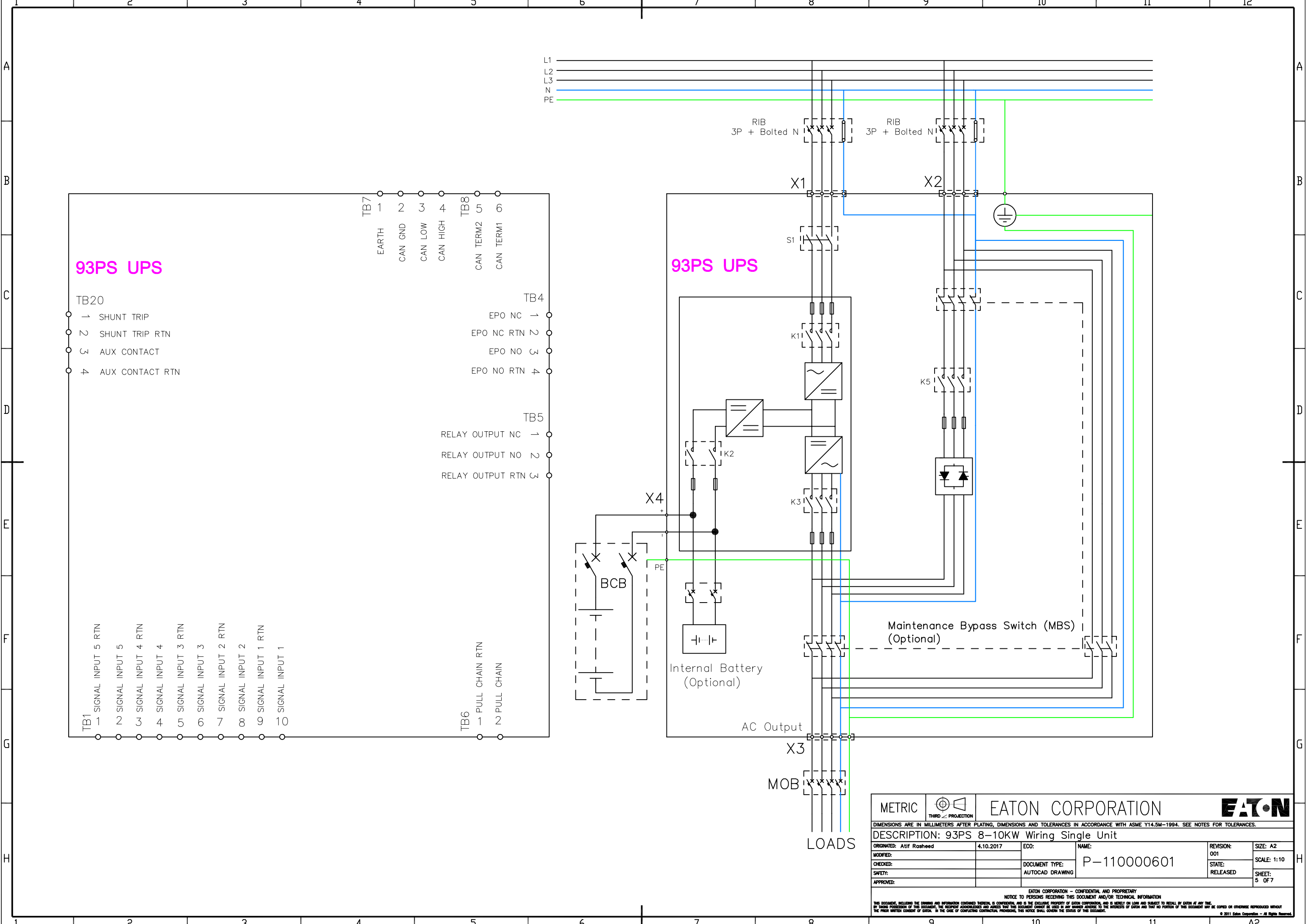
- Notes:
1. The COG dimensions for UPS cabinet are approximated values including internal Batteries and without Batteries.
 2. The COG dimensions of UPS cabinet without package are X=169mm , Y=375mm, Z=406mm including Batteries and X=174mm , Y=345mm, Z=625mm without Batteries.
 3. Minimum overhead clearance above the UPS cabinet is 500mm (20in.) for servicing space.
 4. Minimum 500mm (20in.) clearance in front of the UPS cabinet is required for cooling air intake and servicing space.
 5. Minimum 150mm (6in.) clearance in back of the UPS cabinet is required for cooling air exhaust and servicing space.

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DESCRIPTION: 93PS 8-10KW Clearance and COG					
ORIGINATED: HUOTARI J.	25.8.2017	ECO:	NAME:	REVISION: 001	SIZE: A2
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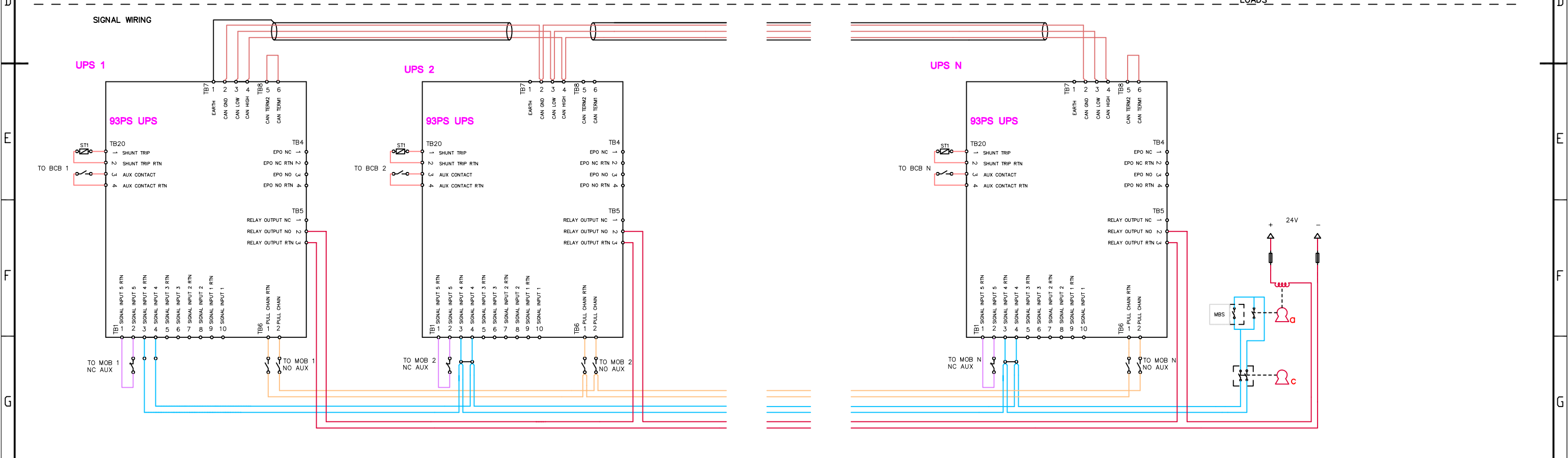
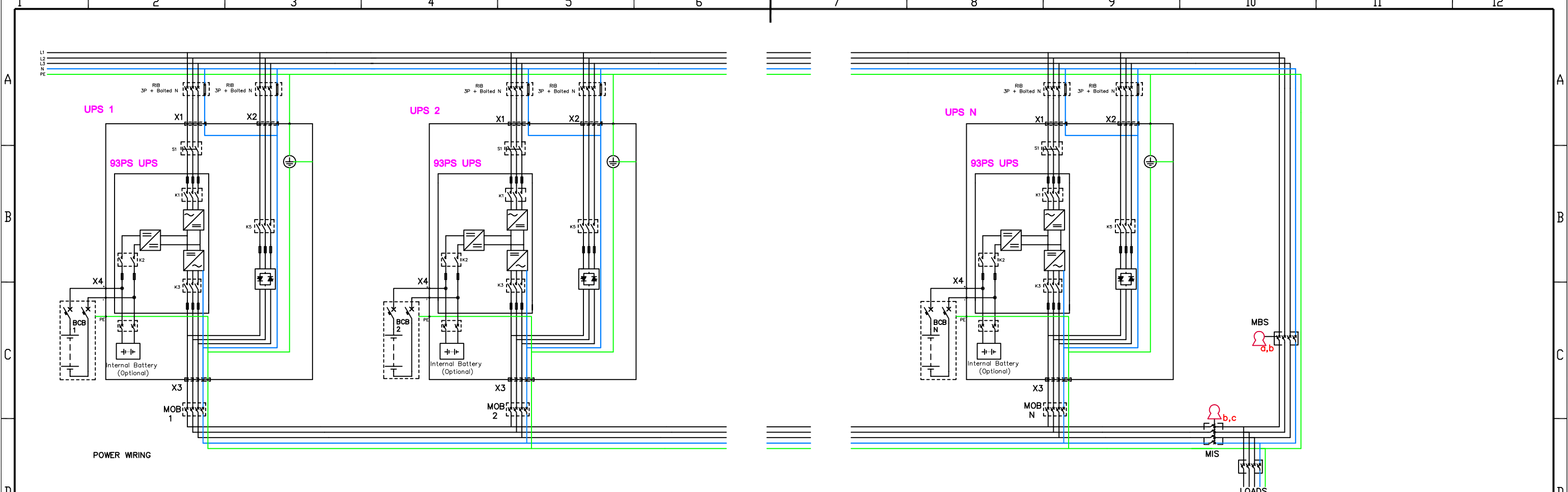


Notes:
1.M33 size cable gland plates with strain relief bushings are used on rear side of unit for power cabling.
2.Recommended minimum cable size for rectifier, bypass and UPS output.
8 kW: 4X2.5mm²
10 kW: 4X4mm²
PE cable: 1X6mm²

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DESCRIPTION: 93PS 8-10KW Customer Connections					
ORIGINATED: HUOTARI J.	25.04.2017	ECO:	NAME:	REVISION: 001	SIZE: A2
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DESCRIPTION: 93PS 8-10KW Wiring Single Unit							
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MBS STATUS (Provided by others, Installed by others)
0.75 - 2.5mm² twisted pair (if possible, else shielded)
No earth needed

MBS STATUS (Provided by others, Installed by others)
0.75 - 2.5mm² twisted pair (if possible, else shielded)
No earth needed

PCAN (DUAL AS OPTION)
Provided by Eaton, Installed by Eaton

PULL CHAIN (REDUNDANT ON BYP STATUS)
Provided by Eaton, Installed by Eaton

ON BYPASS STATUS (NO INVERTORS ONLINE)
1.5 - 2.5mm², provided by others, Installed by others

Mechanical bypass interlocking sequence

- Place UPS system to bypass. On bypass status (K3) will energize Key A solenoid to release it
- Removing key A will switch on "force bypass" to the UPS system
- Place key A to MBS breaker and close breaker. Key B will be released.
- Aux contact of MBS will keep "force bypass" on UPS system
- Place key B to MIS breaker and open MIS to isolate UPS system from load. Key C will be released
- Place key C to it's dedicated keyhole to release "force bypass" command to allow UPS system testing

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DESCRIPTION: 93PS 8-10KW Wiring Parallel Units

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93PS 8-10KW UPS Site Planning Data


Product Specifications																			
UPS Rating		AC Input	3P+Bolted N Rectifier Input Breaker (RIB)		3P+Bolted N Bypass Input Breaker (BIB)			AC Output	4P Inverter AC output Breaker MOB			Battery Breaker (BCB) (Ratings at the end of discharge, 1.67VPC)					For Single Unit Maintenance Bypass Switch (MBS)	For Parallel Units Common Maintenance Bypass Switch (MBS)	
			Nominal Current	Maximum Current	Nominal Current at 400v Input	Maximum Current at 15% under voltage	Integrated Bypass Fuse		Output Current	Inverter Short Circuit Current	Auxiliary Switches	Rating	Rated Current	Maximum current	Trip Device (Shunt Trip)	Auxiliary Switches	Rating	Rating	Auxiliary Switches
KVA	KW	v	A	A	A	A	Type	v	A	A / 300ms	Qty	VDC	A	A	VDC	Qty	A	A	Qty
8	8	400	12	14	12	17	80ET	400	12	36	2	500	22	26	24	1	12	12 x N	1
10	10	400	15	18	14	21	80ET	400	15	36	2	500	27	33	24	1	14	14 x N	1

Minimum recommended cable and fuse sizes							
UPS RATING KW	Cable [mm²]	Rectifier Fuse [A]	Bypass Fuse [A]	PE Cable [mm²]	POS. & NEG. Line [mm²]	Battery Fuse [A]	EX BATT PE Cable [mm²]
8	4x2.5	16	20	1x2.5	1x10	32	1x10
10	4x4	16	20	1x4	1x10	32	1x10


Maximum conductor cross section	
Rectifier/Bypass/Output	EX. Battery
Solid/stranded wire: 16 mm² Stranded wire with ferrule: 10 mm²	Solid/stranded wire: 25 mm² Stranded wire with ferrule: 16 mm²

- Notes:
- 1. Rectifier AC input current calculations: Nominal – 100% load without charging; Maximum – 100% load with maximum charging (Rectifier current limit).
 - 2. Inverter AC output current calculation: At 100% rated output load.
 - 3. The system must be installed on a level floor suitable for computer or electronic equipment.
 - 4. All wiring and installations must be in accordance with applicable National and Local Electric Regulations.
 - 5. AC input to UPS: (3) phases, (1) neutral, (1) ground.
AC output to load: (3) phases, (1) neutral, (1) ground.
DC input from battery to UPS: (1) positive, (1) negative, (1) ground.
 - 6. All breakers should be adjusted according to the specified Ampere values to protect the UPS and installation.
 - 7. For UPS installation that utilizes single feed input, The input breaker should be configured according to the rated rectifier input current.
 - 8. Cable sizing is based on the standard IEC 60364–5–52 and IEC 60364–5–54.The sizing is for 70°C rated copper cables.
 - 9. Specifications are subject to change.

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DESCRIPTION: 93PS 8–10KW Specifications

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