Powering Business Worldwide

SITE PLANNING DATA 91PS 8-30 kW

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: 91PS 8–30 kW					
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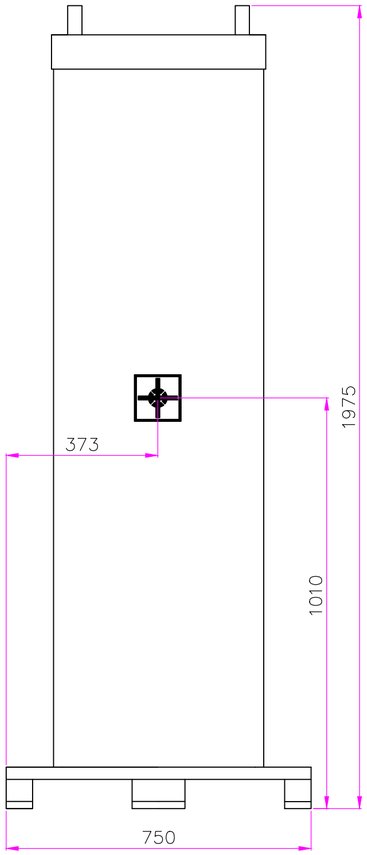
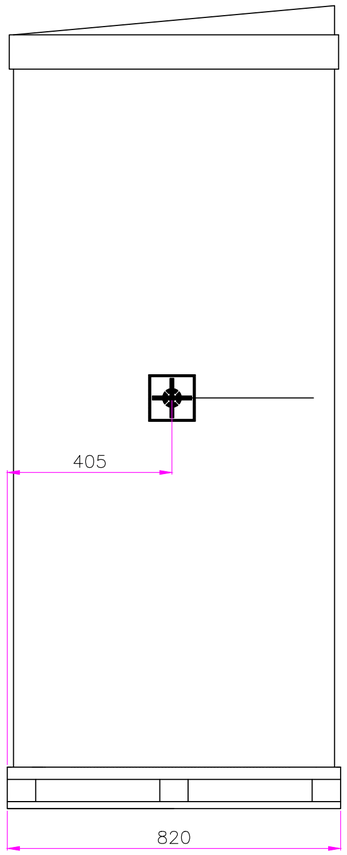
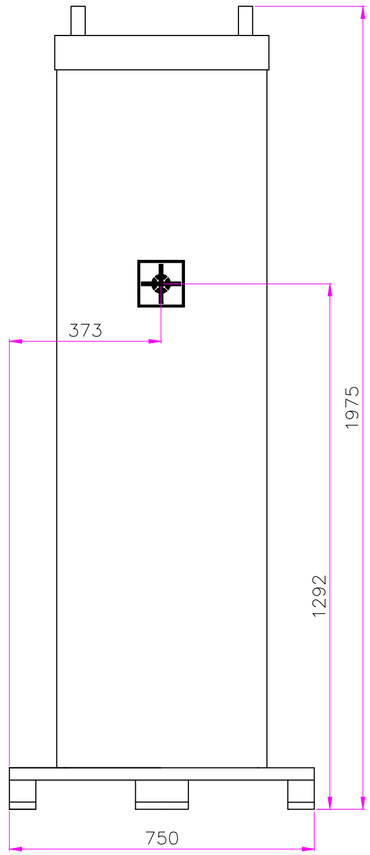


FRONT VIEW

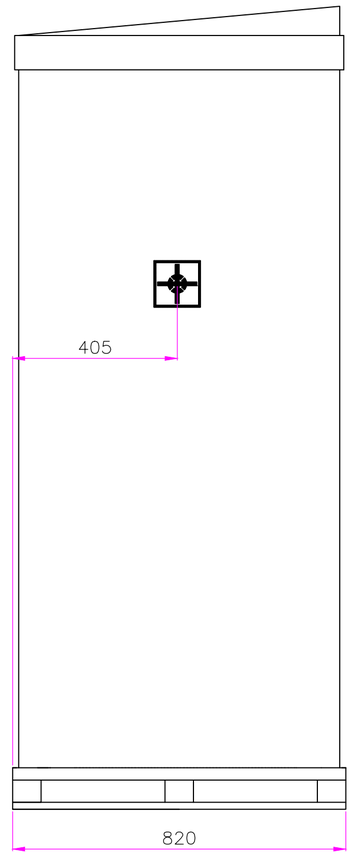


SIDE VIEW

COG(Center Of Gravity) Dimensions with Internal Batteries



FRONT VIEW



SIDE VIEW

COG(Center Of Gravity) 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=373 mm, Y=405 mm, Z=1010 mm including Batteries and X=373 mm, Y=405mm, Z=1292 mm without batteries.
3. Store the unit in a 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. Units without batteries can be stored in −25°C to +55°C without risk of immediate damage.
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 W x D x H	Approx. Weight Shipping with Batteries	Approx. Weight Shipping without Batteries
kVA	kW	mm	kg	kg
8-30	8-30	750 x 820 x 1975	530	214

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: 91PS 8–30 kW Packaging Dimensions					
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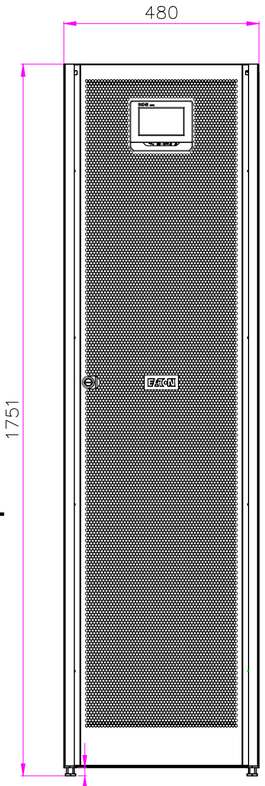
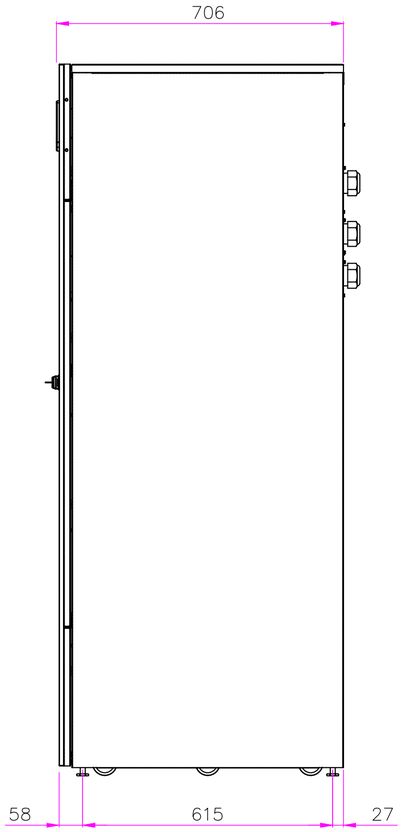
Product Specifications

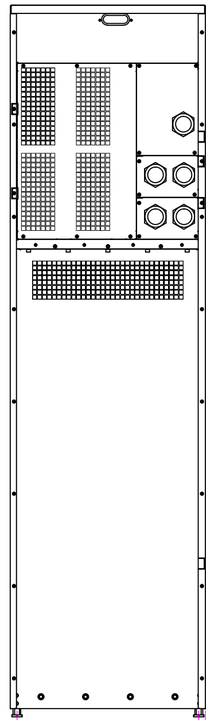
UPS Rating		Max Heat Dissipation at 100% Load	Cabinet Dimensions W x D x H	Shipping Dimensions W x D x H	Approx. Weight Cabinet with Batteries	Approx. Weight Cabinet without Batteries	Approx. Weight Shipping with Batteries	Approx. Weight Shipping without Batteries	Floor Landing	Min. air flow for internal batteries
kVA	kW	W	mm	mm	kg	kg	kg	kg	kg/m²	m³/h
8	8	368	480 x 750 x 1750	750 x 820 x 1975	504	188	530	214	1478	3
10	10	460	480 x 750 x 1750	750 x 820 x 1975	504	188	530	214	1478	3
15	15	720	480 x 750 x 1750	750 x 820 x 1975	504	188	530	214	1478	3
30	30	1410	480 x 750 x 1750	750 x 820 x 1975	504	188	530	214	1478	3



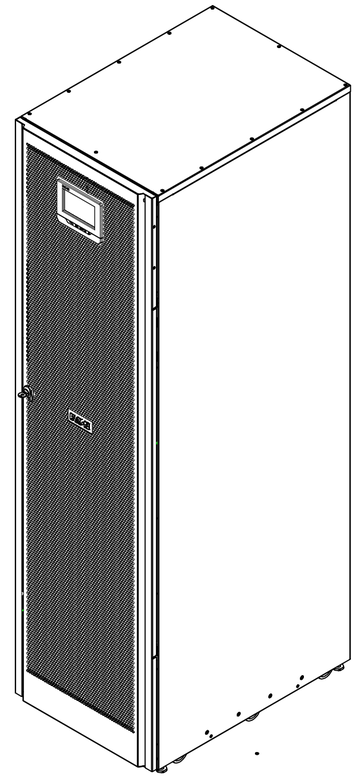
FRONT VIEW

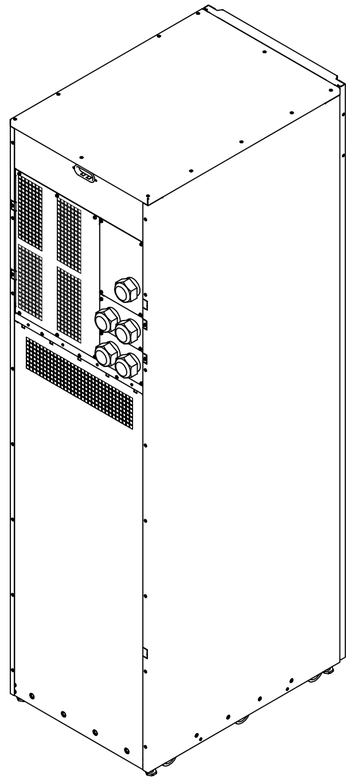


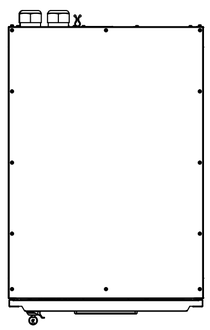
SIDE VIEW



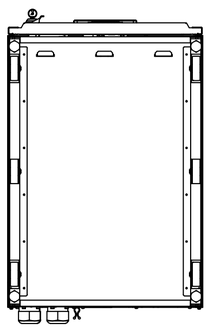
REAR VIEW







TOP VIEW



BOTTOM VIEW

Notes:
1. The system must be installed in a temperature and humidity controlled indoor area free of conductive contaminants.
2. Continuous ambient temperature range: 0–40°C (32–104F); 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 for all configurations.Access plates shall be custom–modified to suit conduit sizes.
5. Ensure the necessary minimum air flow rate of 3 m^3/h for internal batteries to avoid explosive gas mixture that can be created if the hydrogen concentration exceeds 4% by volume in air.

METRIC	THIRD ANGLE PROJECTION	EATON CORPORATION			EATON
DIMENSIONS ARE IN MILLIMETERS AFTER PLATING, DIMENSIONS AND TOLERANCES IN ACCORDANCE WITH ASME Y14.5M–1994. SEE NOTES FOR TOLERANCES.					
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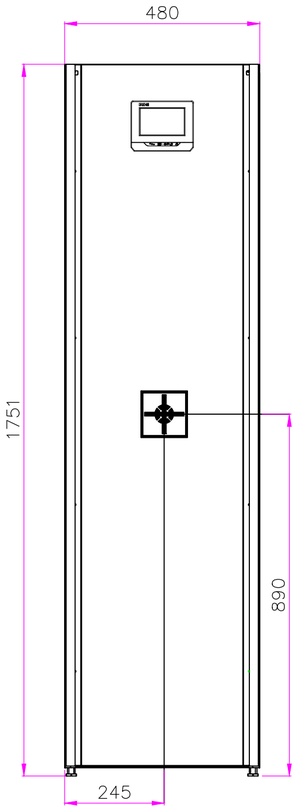
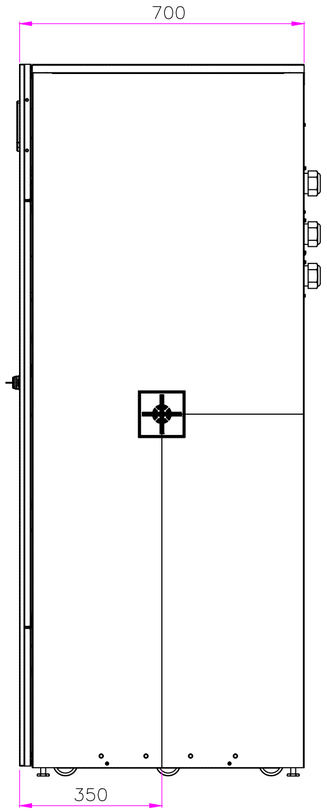
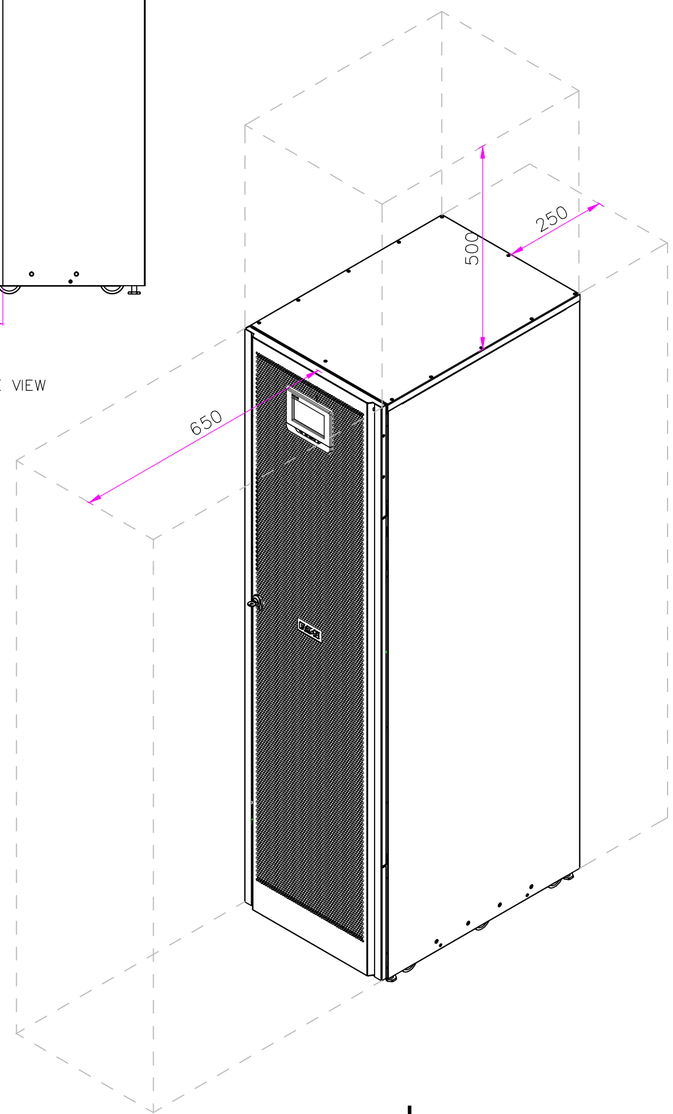


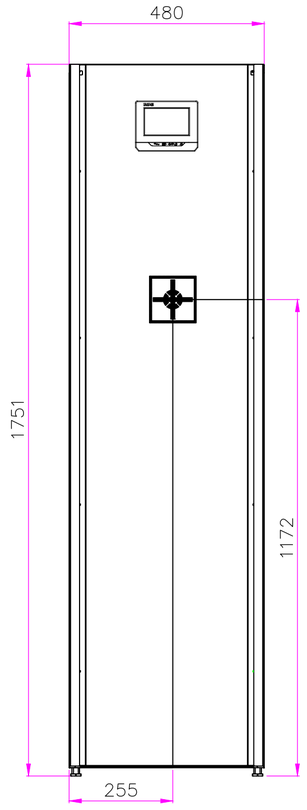
FRONT VIEW



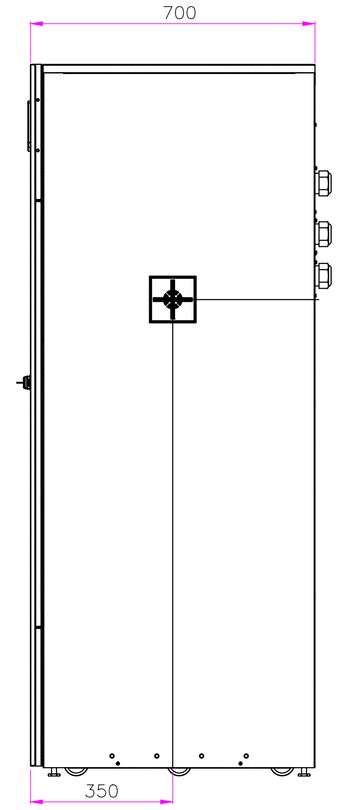
SIDE VIEW

COG(Center Of Gravity) Dimensions with Internal Batteries





FRONT VIEW



SIDE VIEW

COG(Center Of Gravity) Dimensions without Internal Batteries

Notes:
1. The COG dimensions for UPS cabinet are approximated values including batteries and without batteries.
2. The COG dimensions of UPS cabinet without package are X=245 mm , Y=350 mm, Z=890 mm including batteries and X=255 mm , Y=350 mm, Z=1172 mm without batteries.
3. Minimum overhead clearance above the UPS cabinet is 500 mm (20 in) for servicing space.
4. Minimum 650 mm (26 in) clearance in front of the UPS cabinet is required for cooling air intake and servicing space.
5. Minimum 250 mm (10 in) clearance in back of the UPS cabinet is required for cooling air exhaust and servicing space.

Clearances	
From Top of cabinet	500 mm
From Front of cabinet	650 mm
From Back of cabinet	250 mm

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: 91PS 8–30 kW COG and Clearance Dimensions

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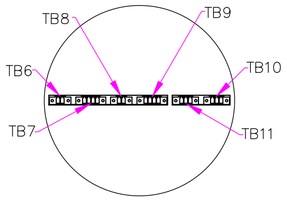

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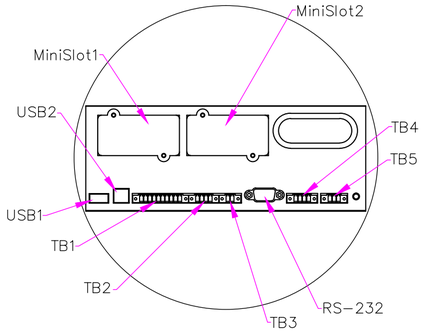
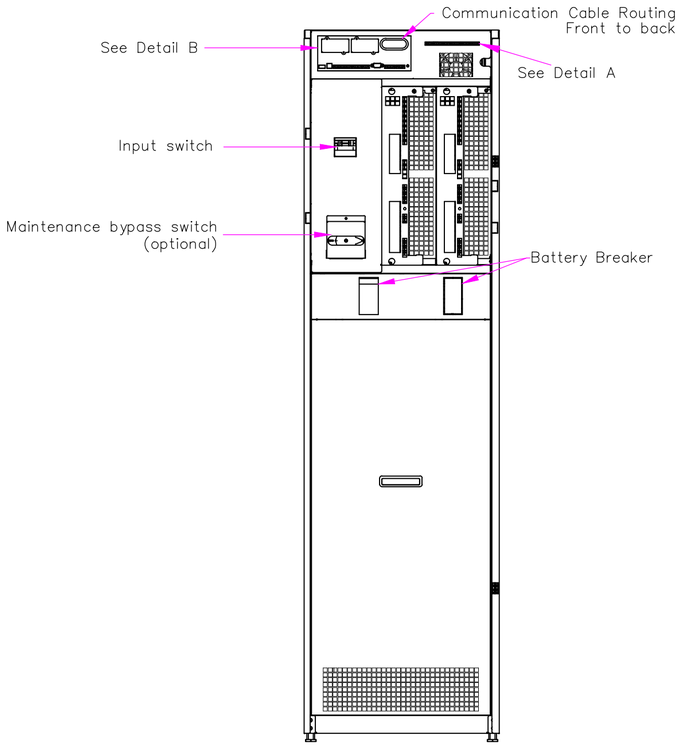
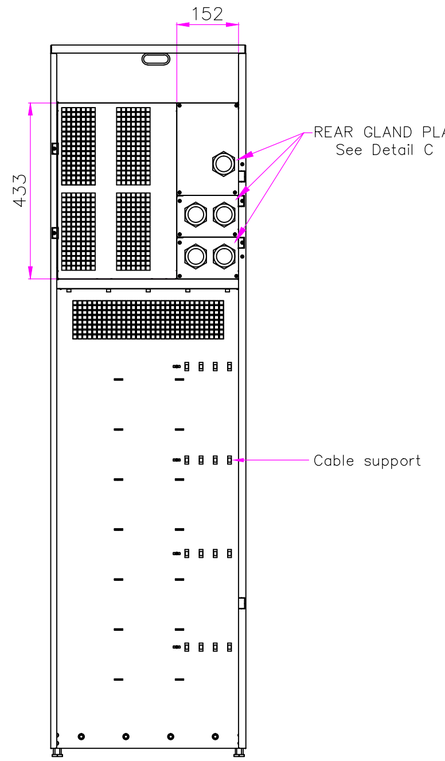
DETAIL VIEW A



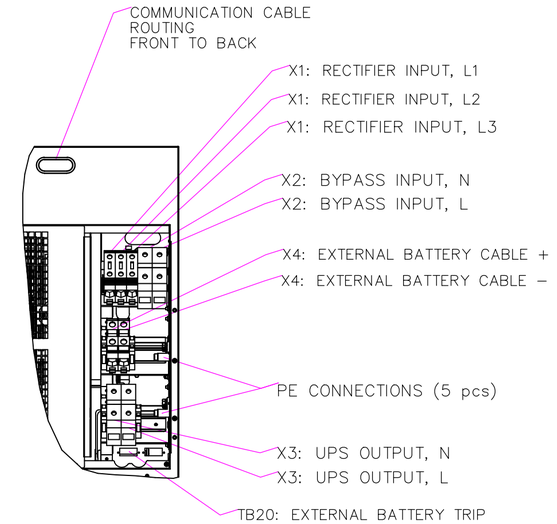
SCALE 3:1
DETAIL VIEW B



CONNECTIONS WITH FRONT PANEL REMOVED



REAR CONNECTIONS



DETAIL VIEW C

CONNECTIONS BEHIND REAR GLAND PLATES

Notes:
1. M50 size cable gland plates with strain relief bushing are used on the rear side of unit for power cabling.

METRIC	THIRD PROJECTION	EATON CORPORATION			
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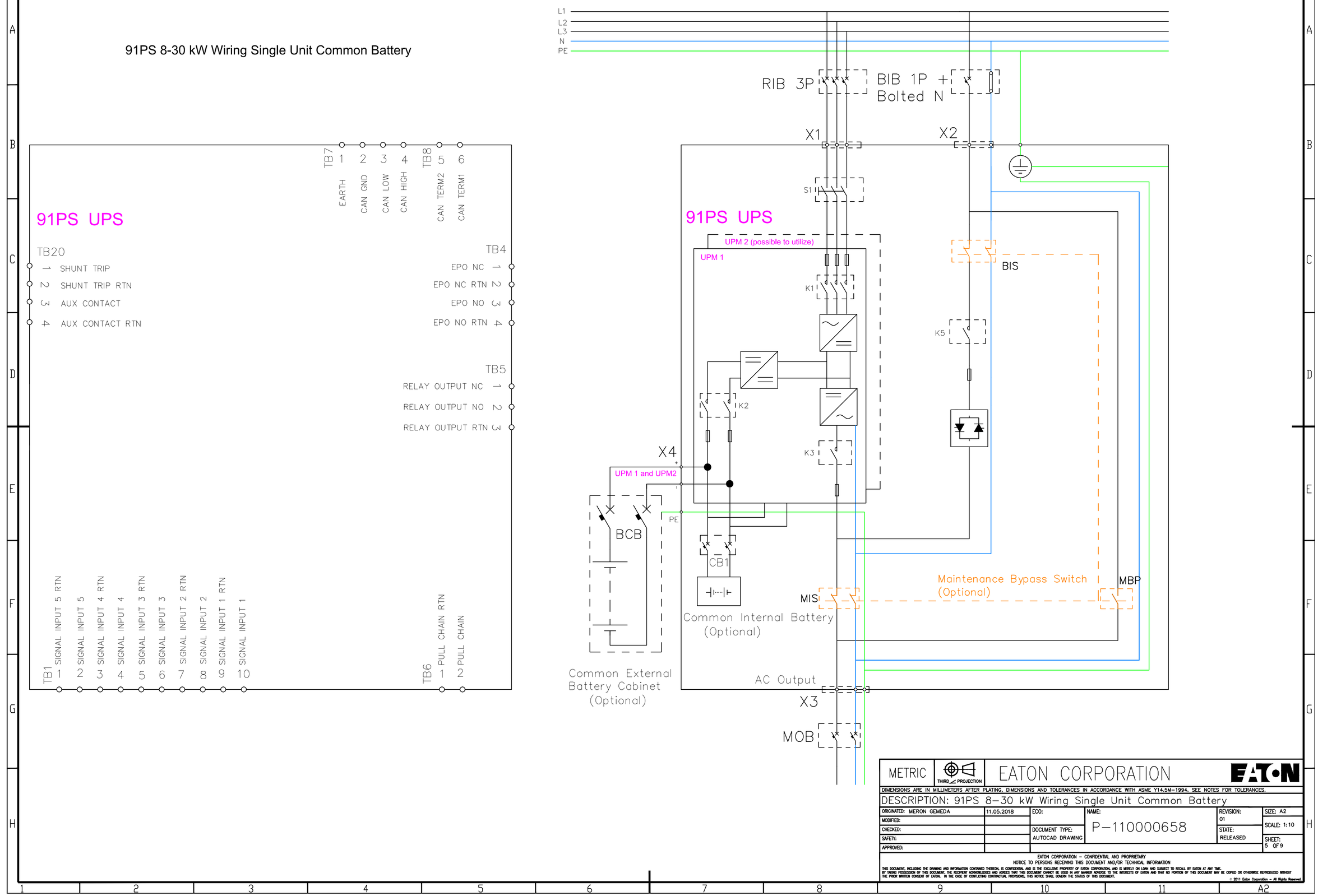
91PS 8-30 kW Wiring Single Unit Common Battery



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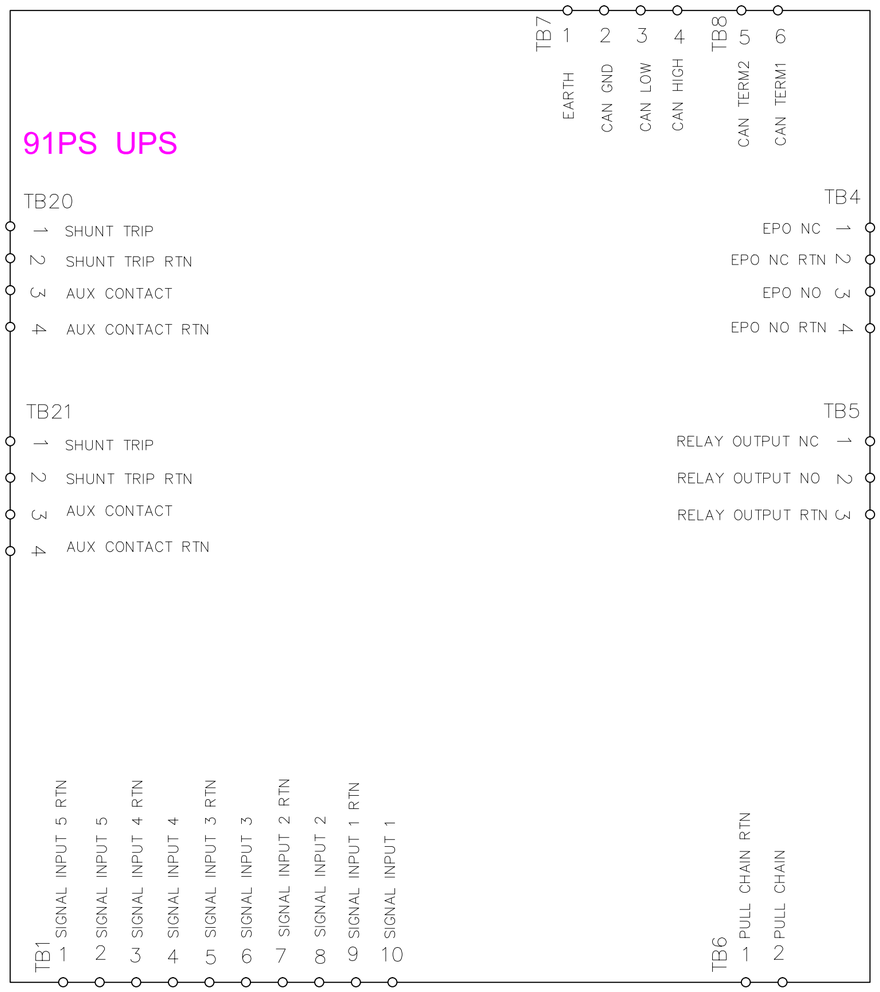
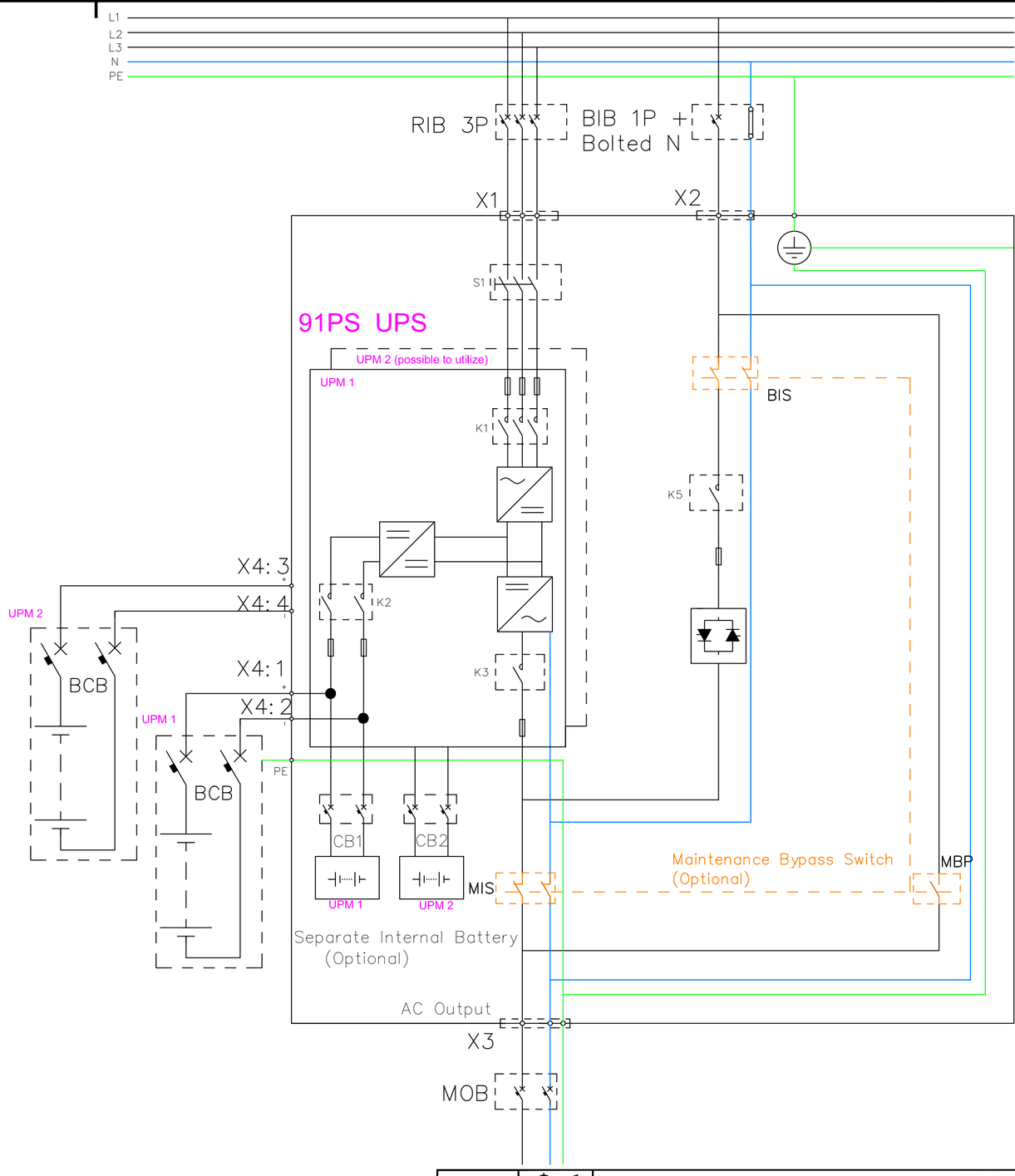
91PS 8-30 kW Wiring Single Unit Separate Battery





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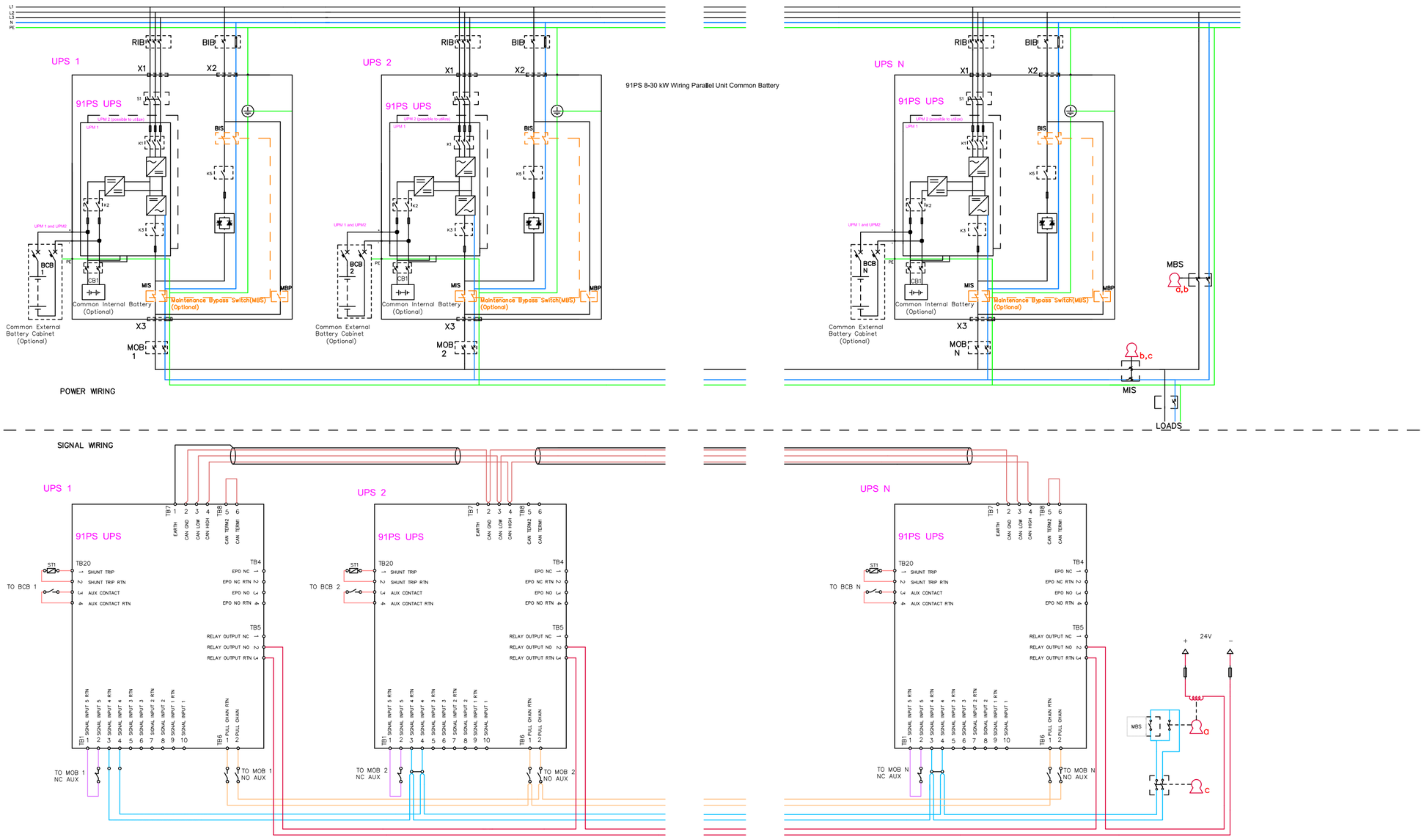
91PS 8-30 kW Wiring Parallel Unit Common Battery



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

MOB 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)
0.75 - 2.5mm², provided by others, Installed by others

Mechanical bypass interlocking sequence

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

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: 91PS 8–30 kW Wiring Parallel Units Common Battery

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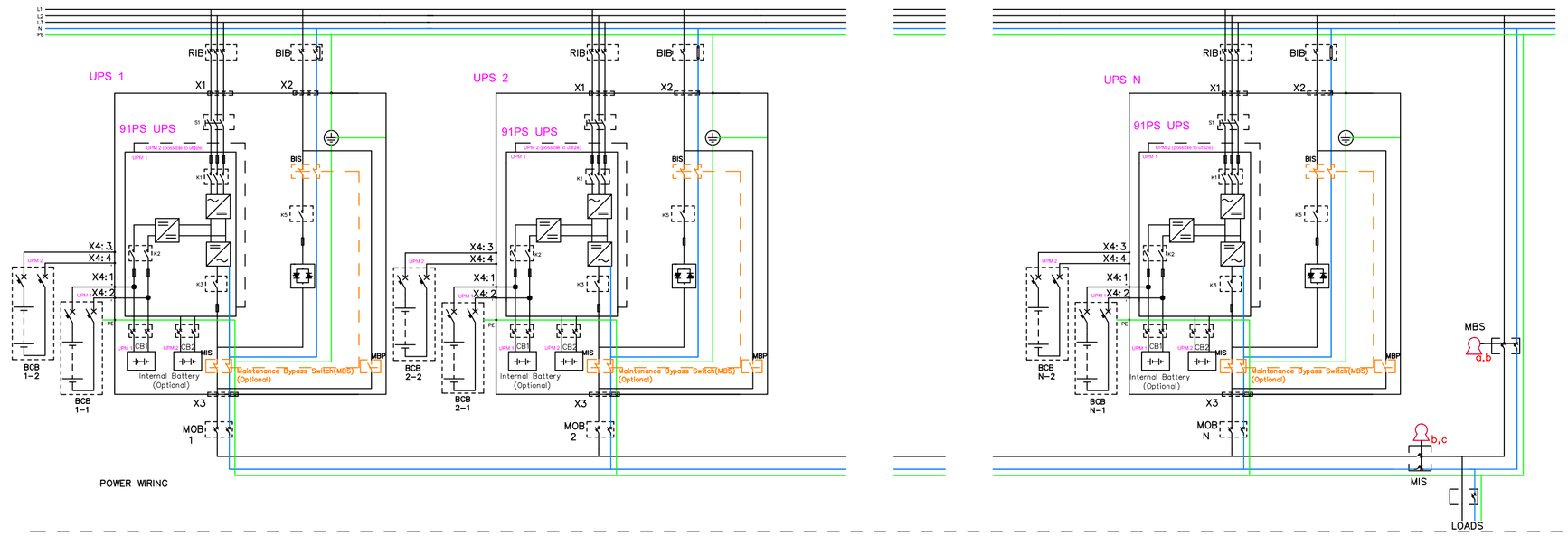
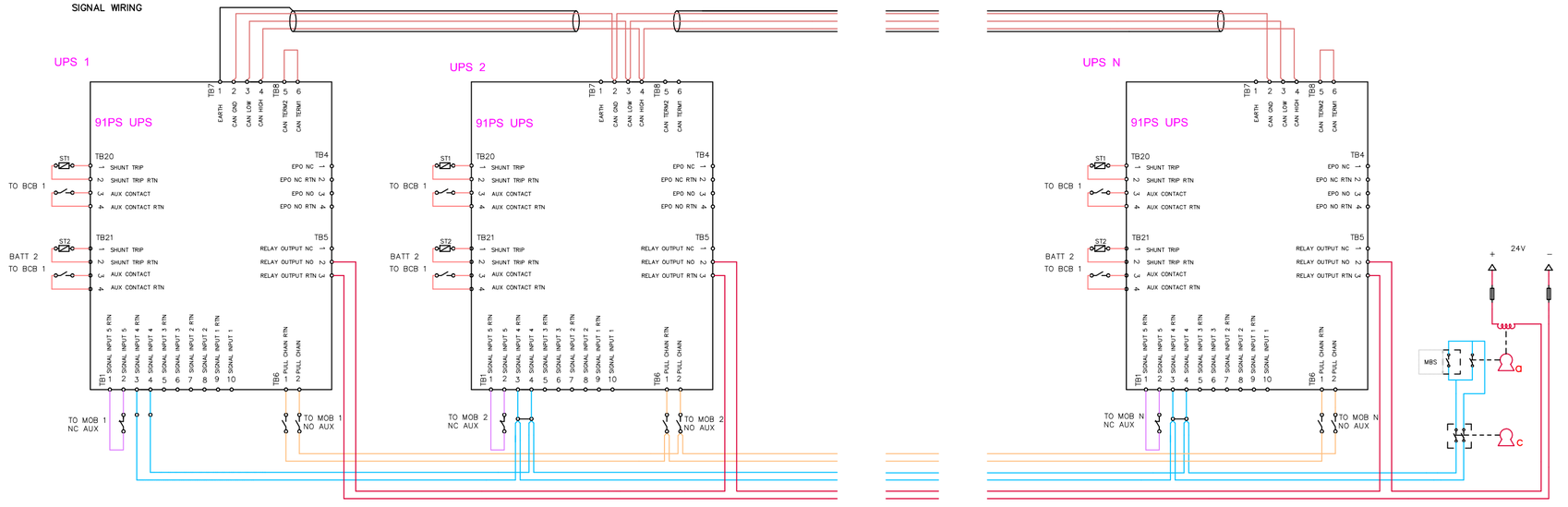
91PS 8-30 kW Wiring Parallel Unit Separate Battery



SIGNAL WIRING



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

MOB 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)
0.75 - 2.5mm², provided by others, Installed by others

Mechanical bypass interlocking sequence

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

METRIC | THIRD PROJECTION | EATON CORPORATION

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DESCRIPTION: 91PS 8–30 kW Wiring Parallel Units

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91PS 8-30 kW UPS Site Planning Data

Product Specifications

UPS Rating		Rectifier AC Input	3P Rectifier Input Breaker (RIB)		Bypass AC Input	1P+Bolted N Bypass Input Breaker (BIB)			AC Output	2P Inverter AC output Breaker MOB			Battery Breaker (BCB) (Ratings at the end of discharge, 1.67 V/cell)					For Single Unit Maintenance Bypass Switch (MBS)	For Parallel Units Common Maintenance Bypass Switch (MBS)	
			Nominal Current	Maximum Current		Nominal Current at 230 V Input	Maximum Current at 15% under voltage	Integrated Bypass Fuse		Output Current	Inverter Short Circuit Current	Auxiliary Switches	Rating	Separate Battery Configration (UPM Bttery)	Common Battery Configration (UPS Battery)	Trip Device (Shunt Trip)	Auxiliary Switches	Rating	Rating	Auxiliary Switches
kVA	kW	V	A	A	V	A	A	Type	V	A	A / 300 ms	Qty	VDC	A	A	VDC	Qty	A	A	Qty
8	8	400	12	18	230	36	41	3 x 200FEE (parallel)	230	36	310	2	500	63	125	24	1	36	36 x N	1
10	10	400	15	22	230	45	51	3 x 200FEE (parallel)	230	45	310	2	500	63	125	24	1	45	45 x N	1
15	15	400	23	29	230	68	77	3 x 200FEE (parallel)	230	68	310	2	500	63	125	24	1	68	68 x N	1
20	20	400	30	38	230	91	102	3 x 200FEE (parallel)	230	91	310	2	500	63	125	24	1	91	91 x N	1
30	30	400	45	57	230	136	153	3 x 200FEE (parallel)	230	136	310	2	500	63	125	24	1	136	136 x N	1

Minimum recommended cable and fuse sizes (common battery)

UPS RATING kW	Rectifier cable [mm²]	Rectifier Fuse [A]	Bypass, output cable [mm²]	Bypass Fuse [A]	PE Cable [mm²]	POS. & NEG. Line [mm²]	Battery Fuse [A]	EXT BATT PE Cable [mm²]
8	2,5	20	10	50	10	35	125	16
10	4	20	16	63	16	35	125	16
15	10	32	25	80	16	35	125	16
20	10	40	35	100	16	35	125	16
30	16	63	70	160	35	35	125	16

Minimum recommended cable and fuse sizes (separate battery)

UPS RATING kW	Rectifier cable [mm²]	Rectifier Fuse [A]	Bypass, output cable [mm²]	Bypass Fuse [A]	PE Cable [mm²]	POS. & NEG. Line [mm²]	Battery Fuse [A]	EXT BATT PE Cable [mm²]
8	2,5	20	10	50	10	16	63	16
10	4	20	16	63	16	16	63	16
15	10	32	25	80	16	16	63	16
20	10	40	35	100	16	16	63	16
30	16	63	70	160	35	16	63	16

Maximum conductor cross section

Rectifier/Bypass/Output	Bypass/Output	EXT. Battery (common)	EXT. Battery (separate)
Solid/stranded wire: 70 mm² Stranded wire with ferrule: 50 mm²	Solid/stranded wire: 95 mm² Stranded wire with ferrule: 95 mm²	Solid/stranded wire: 95 mm² Stranded wire with ferrule: 70 mm²	Solid/stranded wire: 50 mm² Stranded wire with ferrule: 35 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. Rectifier AC input to UPS: (3) phases and (1) ground.
   Bypass AC input to UPS: (1) phase, (1) neutral, (1) ground.
   AC output to load: (1) phase, (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. The static bypass switch is rated to a maximum value of 59 Amperes, nominal current at 400v and 85 Amperes, maximum current at 15% under voltage.If using the bigger rating BIB than mentioned in the table, output cable thermal protection should be rechecked.
8. For UPS installation that utilizes single feed input, The input breaker should be configured according to the rated rectifier input current.
9. 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.
10. Specifications are subject to change.

METRIC	THIRD ANGLE PROJECTION	EATON CORPORATION	EATON

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DESCRIPTION: 91PS 8–30 kW Product specifications

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