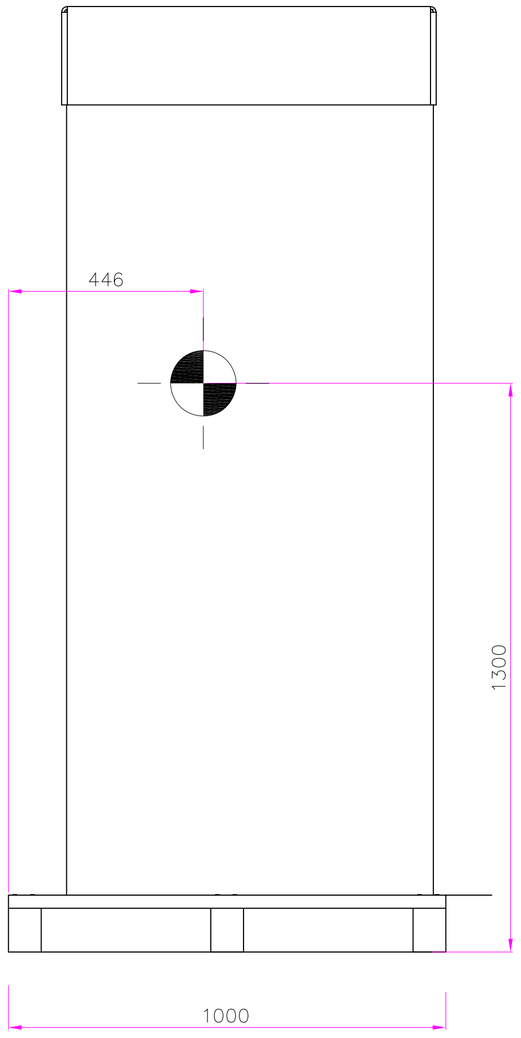
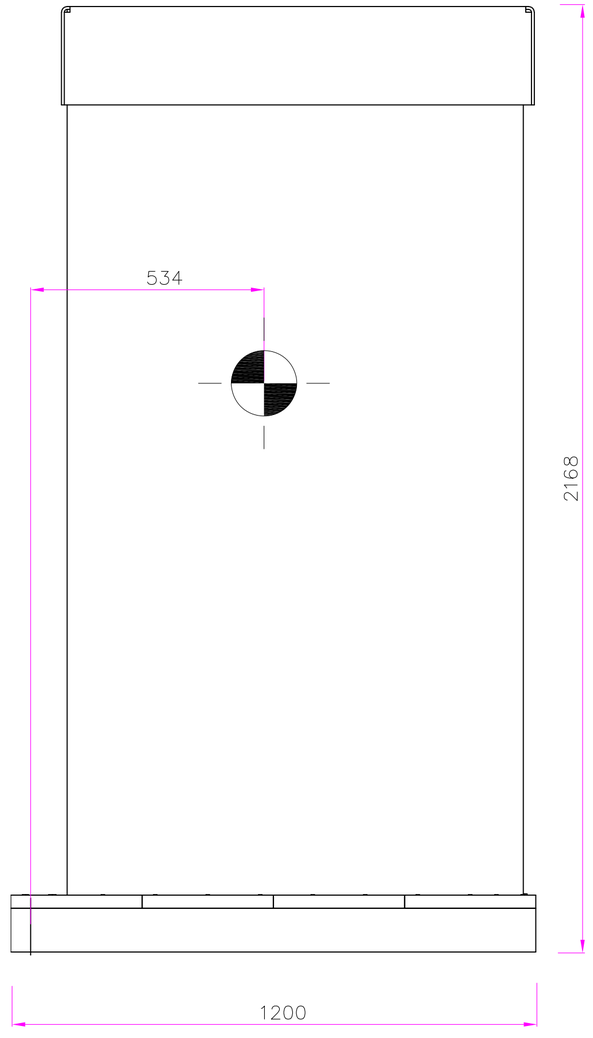
Powering Business Worldwide

SITE PLANNING DATA EATON 93PM G2 50-240kVA UPS

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: EATON 93PM G2 50–240kVA UPS site planning data					
ORIGINATED: Atif R.	7.09.2020	ECO: ECO–116278	NAME: P–110000788	REVISION: 01	SIZE: A2
MODIFIED:					SCALE: N/A
CHECKED:		DOCUMENT TYPE: AUTOCAD DRAWING		STATE: RELEASED	
SAFETY:					SHEET: OF
APPROVED:					



FRONT VIEW



RIGHT VIEW

Product Specifications			
UPS Rating		Shipping Dimensions WXDXH	Approx. Weight[6] Shipping
kVA	kW	mm	kg
50	50	1000 x 1200 x 2168	401
60	54	1000 x 1200 x 2168	401
100	100	1000 x 1200 x 2168	444
120	108	1000 x 1200 x 2168	444
150	150	1000 x 1200 x 2168	487
180	162	1000 x 1200 x 2168	487
200	200	1000 x 1200 x 2168	530
240	216	1000 x 1200 x 2168	530

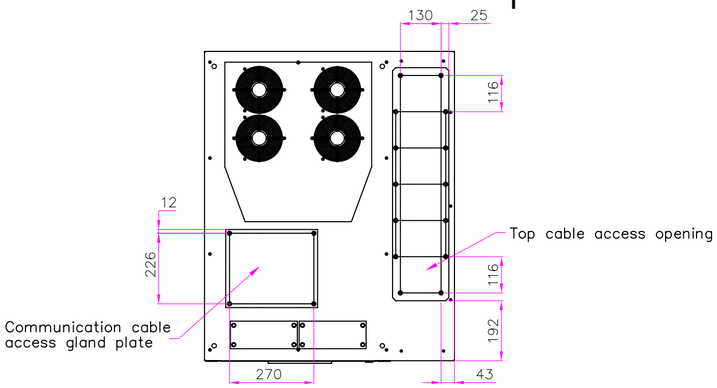
Notes:
1. The COG dimensions for the cabinet are approximated values for the unit configuration with highest COG point.

METRIC | THIRD ANGLE PROJECTION | EATON CORPORATION

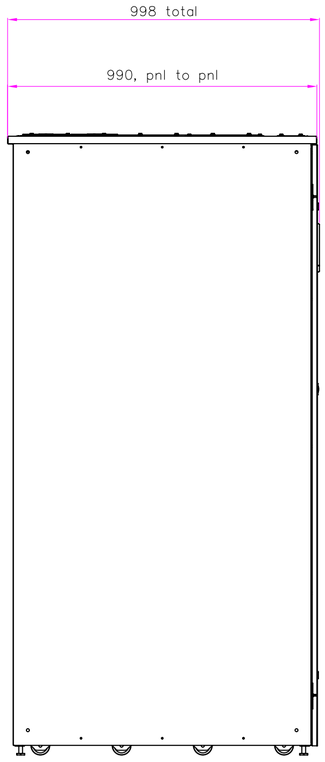
DIMENSIONS ARE IN MILLIMETERS AFTER PLATING, DIMENSIONS AND TOLERANCES IN ACCORDANCE WITH ASME Y14.5M–1994. SEE NOTES FOR TOLERANCES.

DESCRIPTION: EATON 93PM G2 50–240kVA UPS Packaging Dimensions

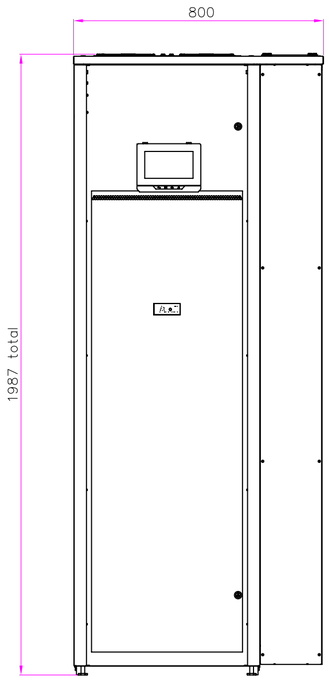
ORIGINATED: Atif R.	07.09.2020	ECO: ECO–116278	NAME: P–110000788	REVISION: 01	SIZE: A2
MODIFIED:					SCALE: 1:10
CHECKED:		DOCUMENT TYPE: AUTOCAD DRAWING		STATE: RELEASED	
SAFETY:					SHEET: 1 OF 8
APPROVED:					



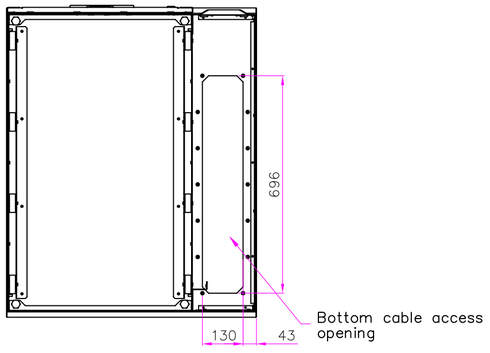
TOP VIEW



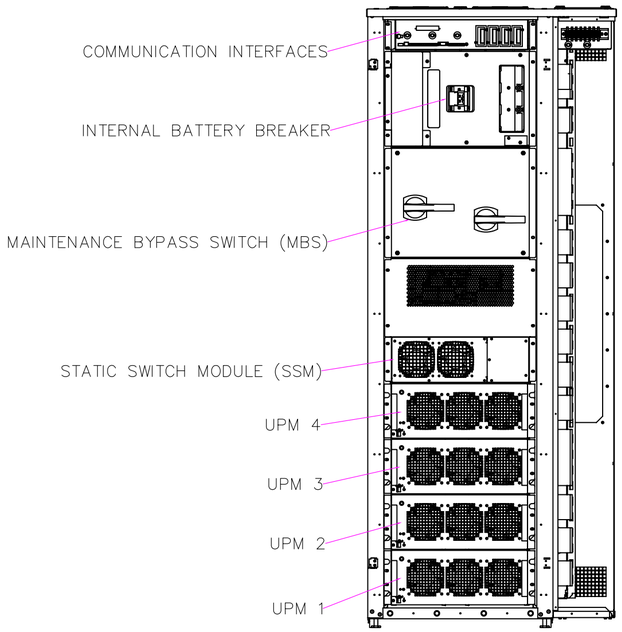
SIDE VIEW



FRONT VIEW



BOTTOM VIEW



FRONT VIEW
(DOOR REMOVED)

Notes:
1. The system must be installed in a temperature and humidity controlled indoor area free of conductive contaminants.
2. Continuous ambient temperature range for units rated at unity output PF : 0-40°C ; Maximum relative humidity: 95% non-condensing.
3. Continuous ambient temperature range for unites rated at 0,9 output PF : 0-35°C ; Maximum relative humidity: 95% non-condensing.
4. Cabling may require more space.
5. Clearance requirements can be found on next page of this document.

Product Specifications

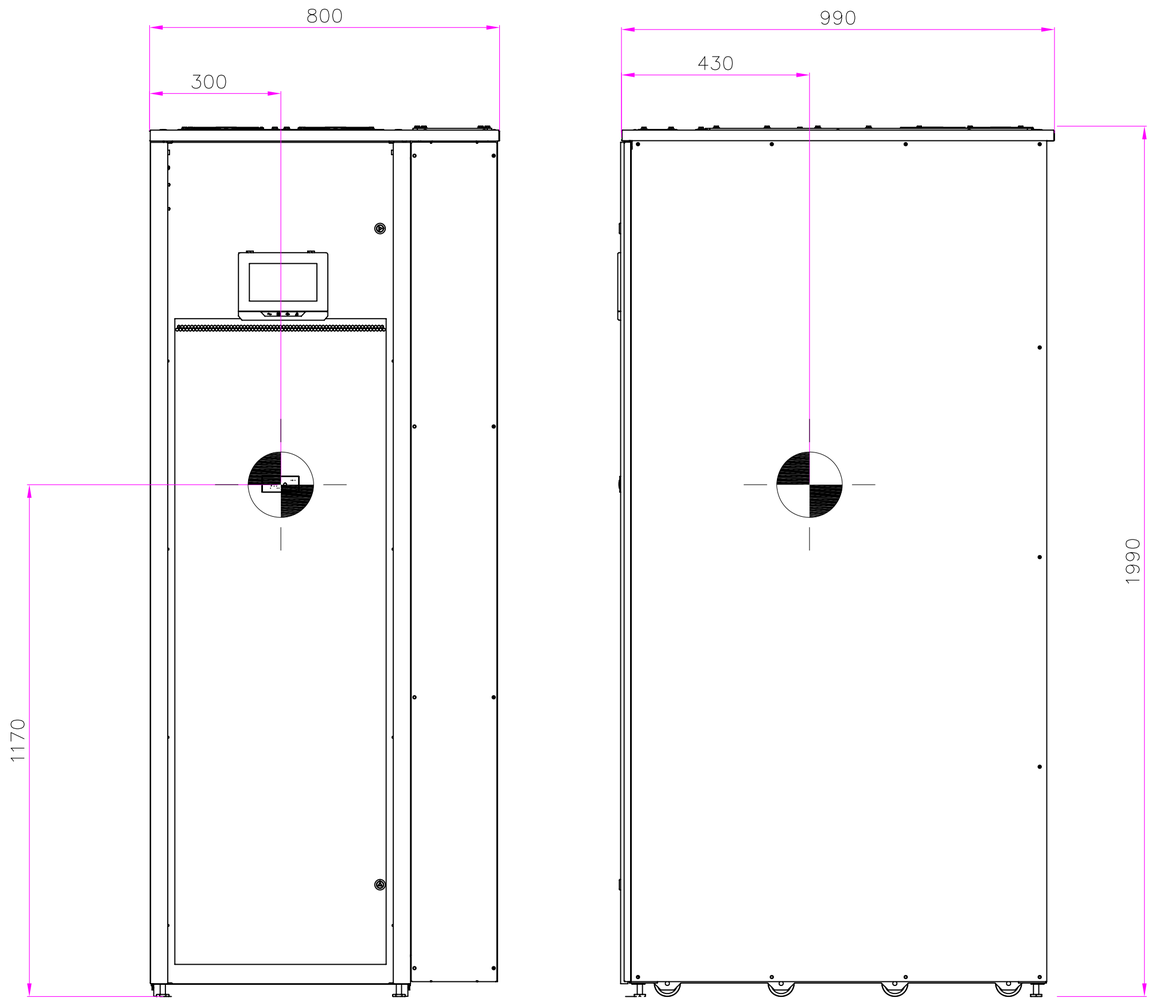
UPS Rating		Max Heat Dissipation at 100% Load	Dimensions W x D x H	Approx. Weight Installed	Floor Loading	Cooling Air
kVA	kW	kW	mm	kg	kg/m²	l/s
50	50	2	800 x 990 x 1987 mm	361	456	260
60	54	2,3	800 x 990 x 1987 mm	361	456	260
100	100	4,1	800 x 990 x 1987 mm	404	510	405
120	108	4,7	800 x 990 x 1987 mm	404	510	405
150	150	5,9	800 x 990 x 1987 mm	447	564	550
180	162	6,8	800 x 990 x 1987 mm	447	564	550
200	200	7,8	800 x 990 x 1987 mm	490	619	695
240	216	9	800 x 990 x 1987 mm	490	619	695

METRIC | THIRD ∠ PROJECTION | EATON CORPORATION

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

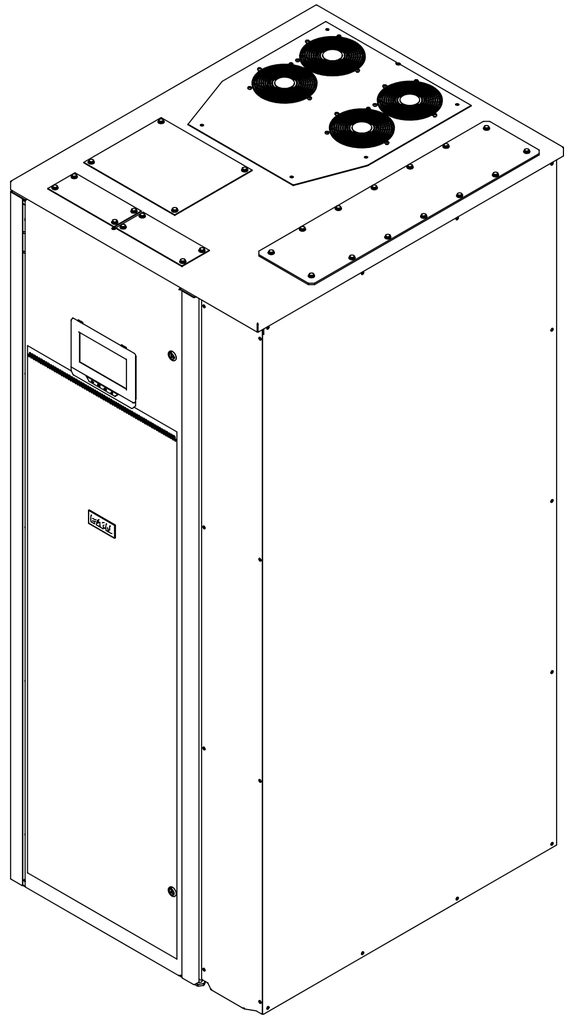
DESCRIPTION: EATON 93PM G2 50–240 kVA UPS Dimensional drawings

ORIGINATED: Atif R.	7.09.2020	ECO: ECO–116278	NAME: P–110000788	REVISION: 04	SIZE: A2
MODIFIED:					SCALE: 1:14
CHECKED:		DOCUMENT TYPE: AUTOCAD DRAWING		STATE: RELEASED	
SAFETY:					SHEET: 2 OF 8
APPROVED:					



FRONT VIEW

RIGHT VIEW



Cabinet Installation Clearances		
UPS Rating	**50, 100, 150 200kW Unity PF units**	**60, 120, 180, 240 kVA 0,9 PF units**
From Top of cabinet	400 mm	500 mm
From Front of cabinet	1000 mm	1000 mm
From Back of cabinet	200 mm (0 mm if top air exhaust kit installed	300 mm (0 mm if top air exhaust kit installed
From Sides of cabinet	0 mm	0 mm

Notes:
1. The COG dimensions for the cabinet are approximated values for the unit configuration with highest COG point.

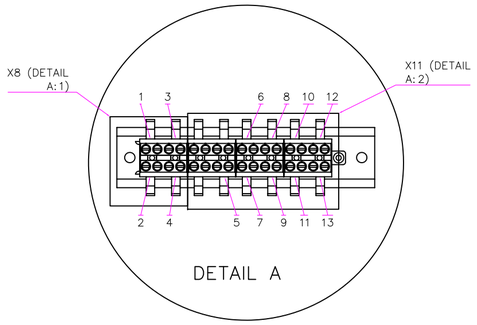
METRIC | THIRD ANGLE PROJECTION | EATON CORPORATION

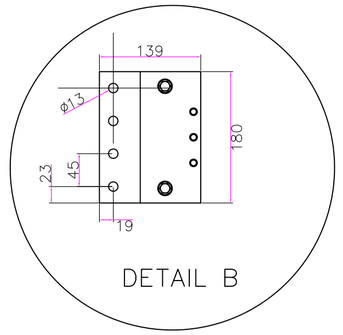
DIMENSIONS ARE IN MILLIMETERS AFTER PLATING, DIMENSIONS AND TOLERANCES IN ACCORDANCE WITH ASME Y14.5M–1994. SEE NOTES FOR TOLERANCES.

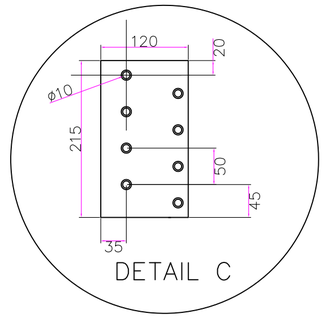
DESCRIPTION: 93PM G2 50–240kVA UPS COG And Clearance Dimensions

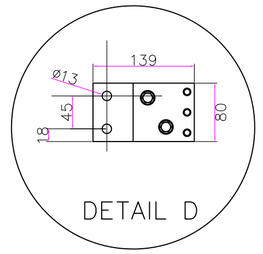
ORIGINATED: Atif R.	7.09.2020	ECO: ECO–116278	NAME: P–110000788	REVISION: 01	SIZE: A2
MODIFIED:					SCALE: 1:10
CHECKED:		DOCUMENT TYPE: AUTOCAD DRAWING		STATE: RELEASED	
SAFETY:					SHEET: 3 OF 8
APPROVED:					

X6 Battery breaker terminal (detail A:1)	
1.	+ 24V_Trip_Power
2.	BAT_Shunt_Trip
3.	BAT_Shunt_DET
4.	GND
X11 Sync Control interface (detail A:2)	
6.	BYPASS L1
7.	BYPASS L2
8.	BYPASS L3
9.	OUT L1
10.	OUT L2
11.	OUT L3
12.	SYNC L1
13.	SYNC L2
14.	SYNC L3

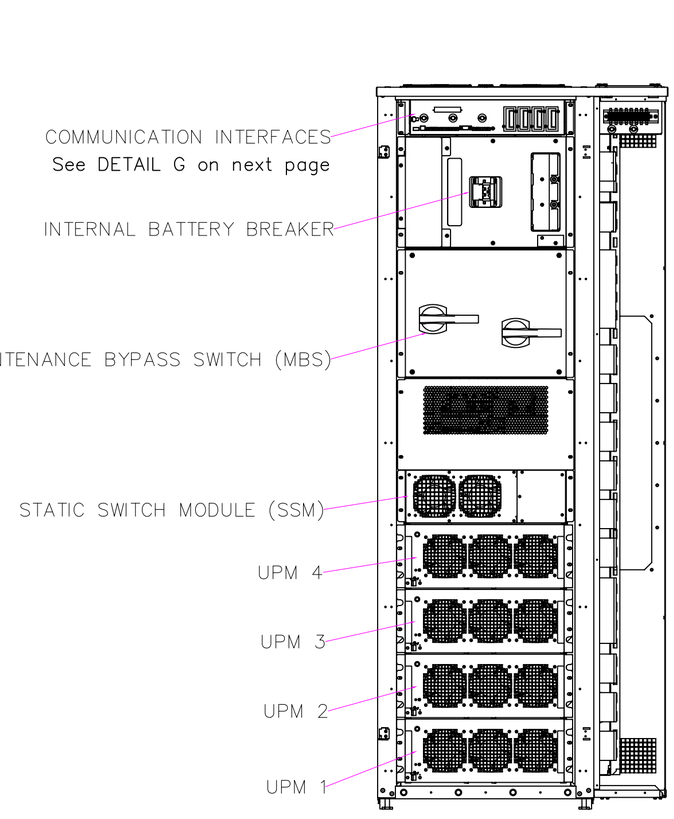




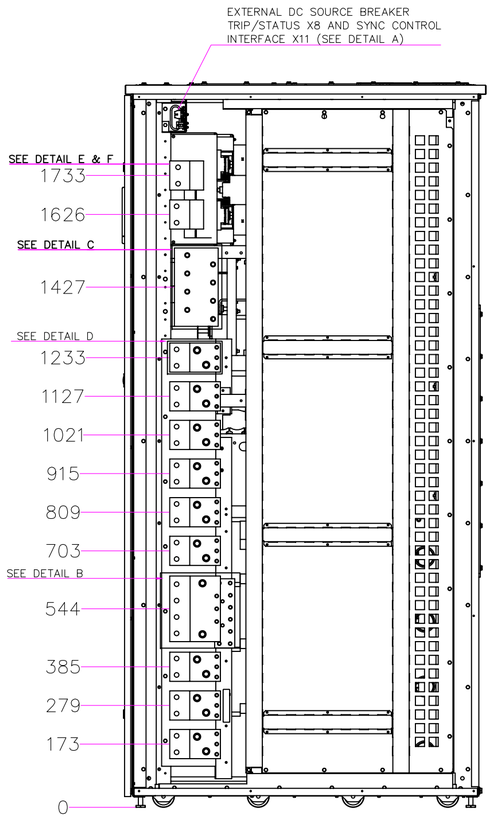




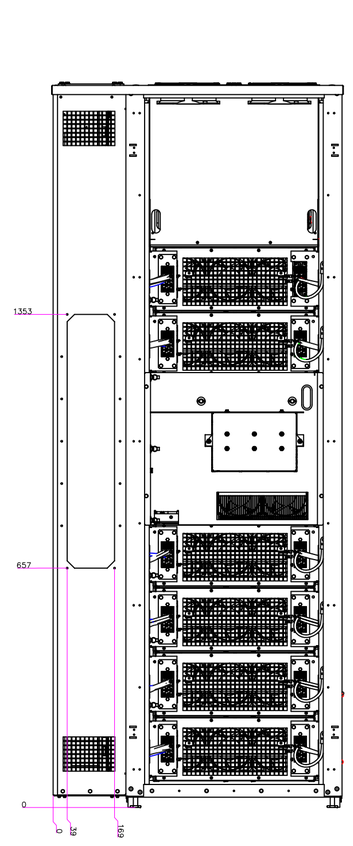
Scale 1:6



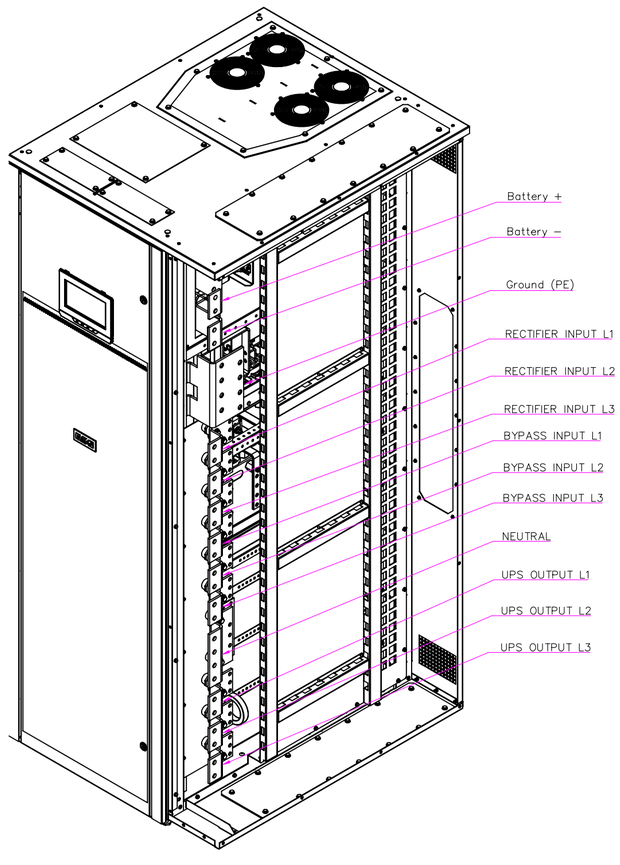
FRONT VIEW
(DOOR REMOVED)

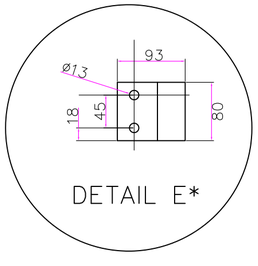


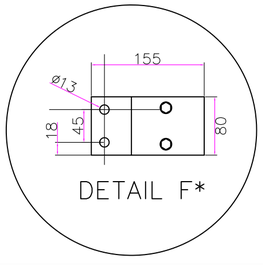
Right View



rear View





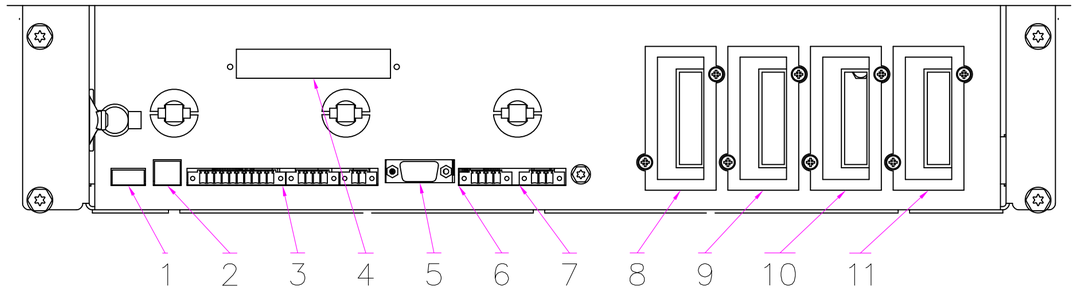


Scale 1:6

Notes:
1. The bus bars are Sn coated and suitable for both Cu and Al connections.
2. M12 size power cable bolts are used for UPS input and output phase connections (L1, L2, L3). They require 80 Nm of tightening torque.
3. M10 size power cable bolts are used for PE and neutral connections and it requires 47 Nm of tightening torque.
4. Detail E illustrates battery bus bar connection for UPS without internal battery breaker.
5. Detail F illustrates battery bus bar connection for UPS with internal battery breaker.

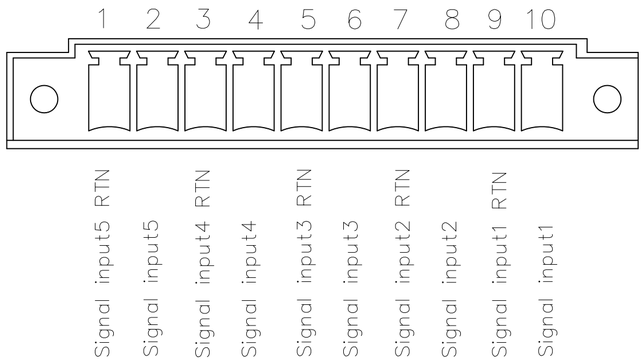
METRIC	THIRD ANGLE PROJECTION	EATON CORPORATION			
DIMENSIONS ARE IN MILLIMETERS AFTER PLATING, DIMENSIONS AND TOLERANCES IN ACCORDANCE WITH ASME Y14.5M–1994. SEE NOTES FOR TOLERANCES.					
DESCRIPTION: EATON 93PM G2 50–240kVA UPS Customer Connections					
ORIGINATED: Atif R.	07.09.2020	ECO: ECO–116278	NAME: P–110000788	REVISION: 01	SIZE: A2
MODIFIED:					SCALE: 1:12
CHECKED:		DOCUMENT TYPE: AUTOCAD DRAWING		STATE: RELEASED	
SAFETY:					SHEET: 4 OF 8
APPROVED:					

DETAIL G
COMMUNICATION INTERFACES

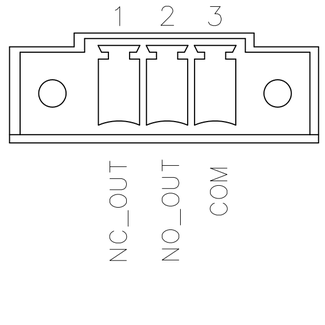


Detail G	
1	USB host (connection to accessories)
2	USB device (connection to computer)
3	Signal inputs
4	External parallel interface
5	RS–232 port for service
6	Emergency Power Off (EPO)
7	Relay Output
8	Minislot 1
9	Minislot 2
10	Minislot 3
11	Minislot 4

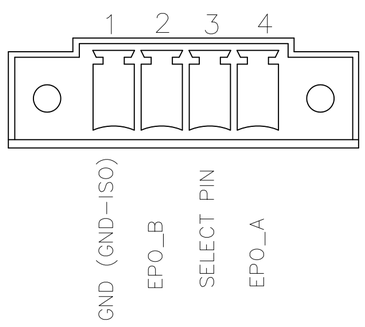
Signal Inputs



Relay output

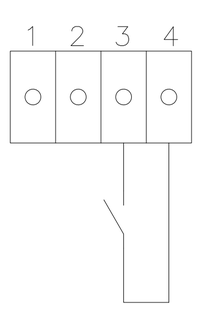


External parallel connector

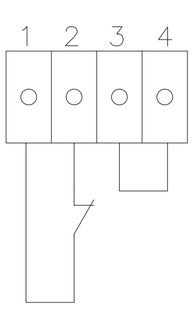


EPO

EPO NO

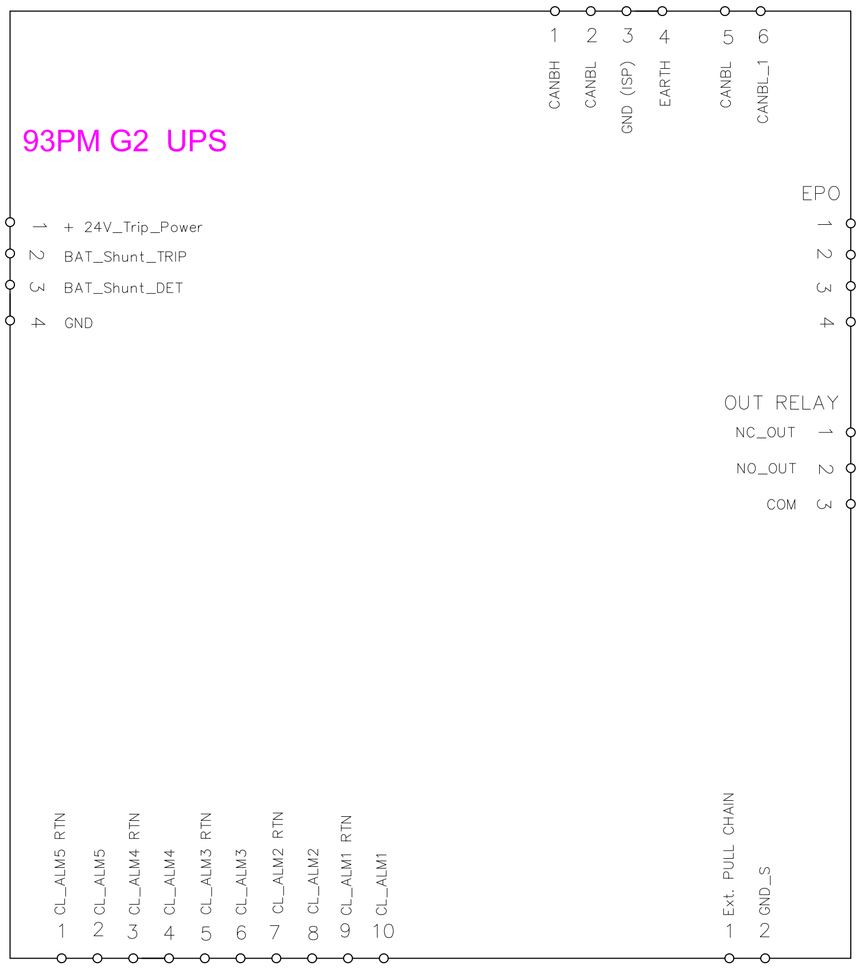


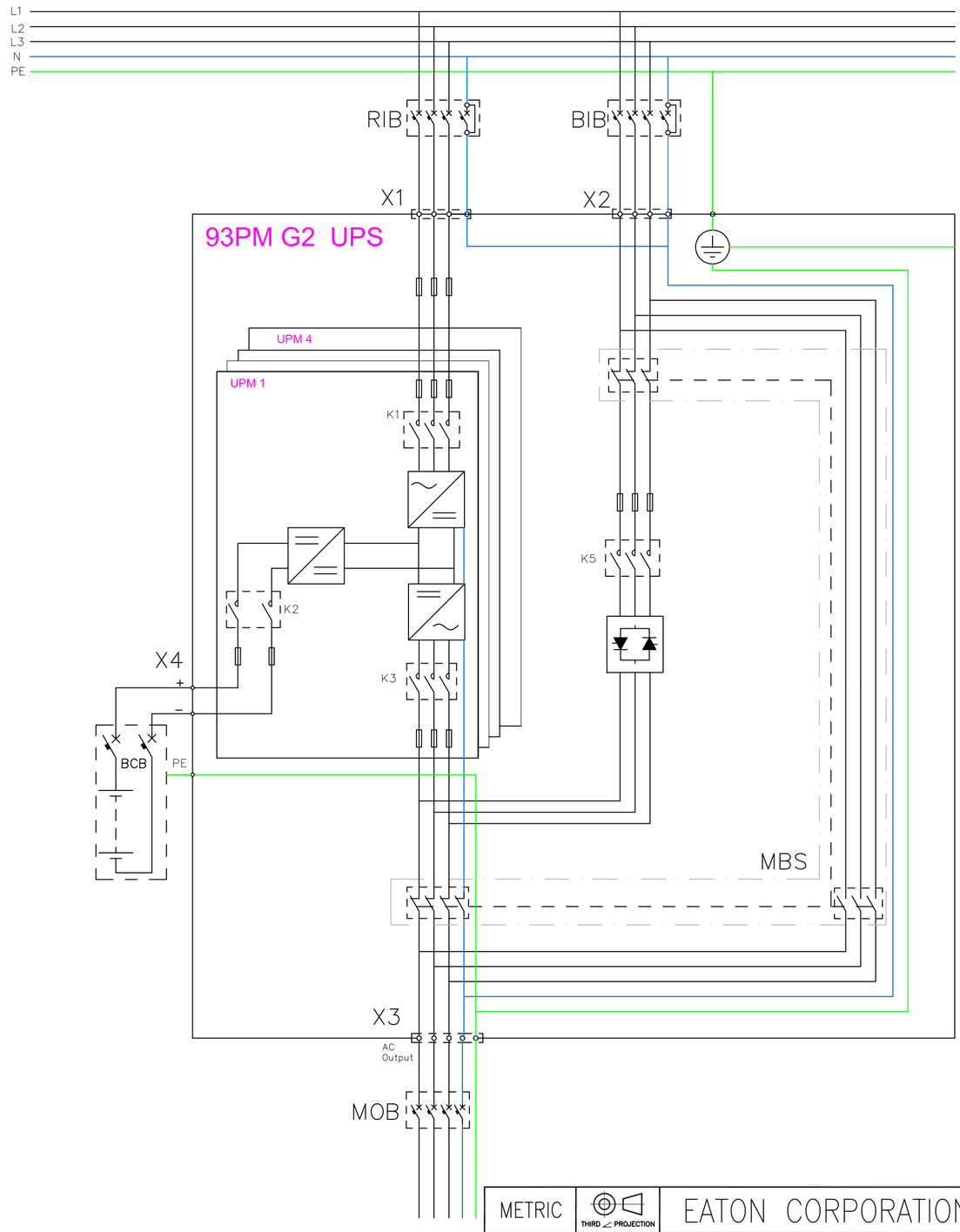
EPO NC



EPO Connections

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: EATON 93PM G2 50–240kVA UPS Customer Connections detail				
ORIGINATED: Atif R.	07.09.2020	ECO: ECO–116278	NAME: P–110000788	REVISION: 01
MODIFIED:				SIZE: A2
CHECKED:		DOCUMENT TYPE: AUTOCAD DRAWING		SCALE: 1:12
SAFETY:			STATE: RELEASED	
APPROVED:				SHEET: 5 OF 8





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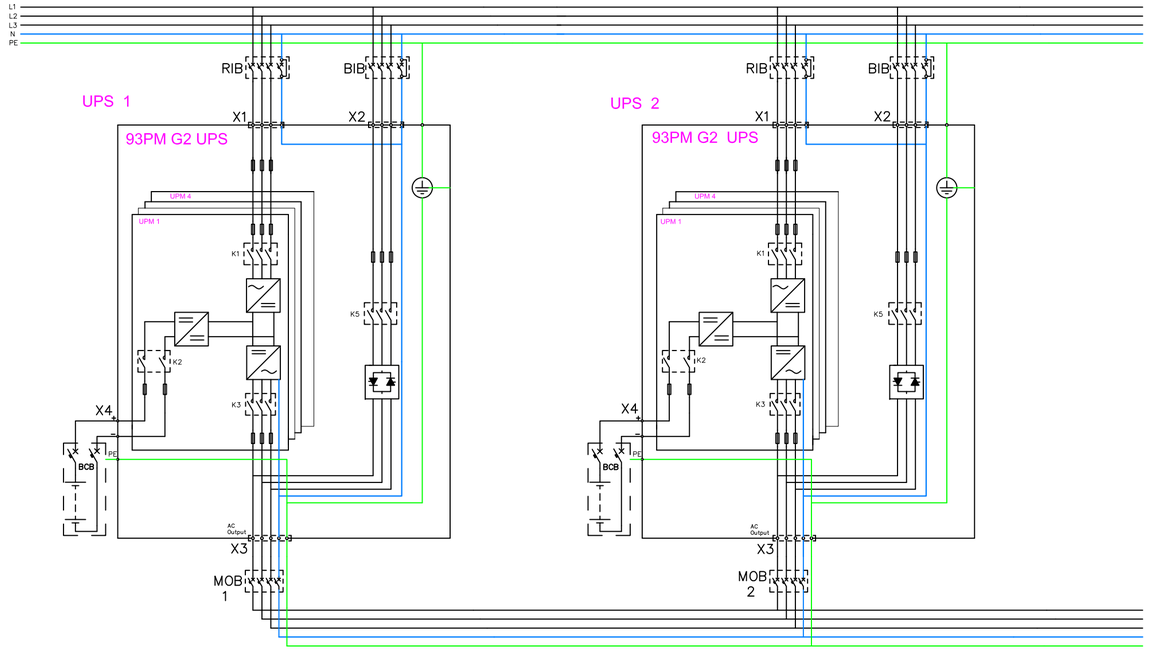
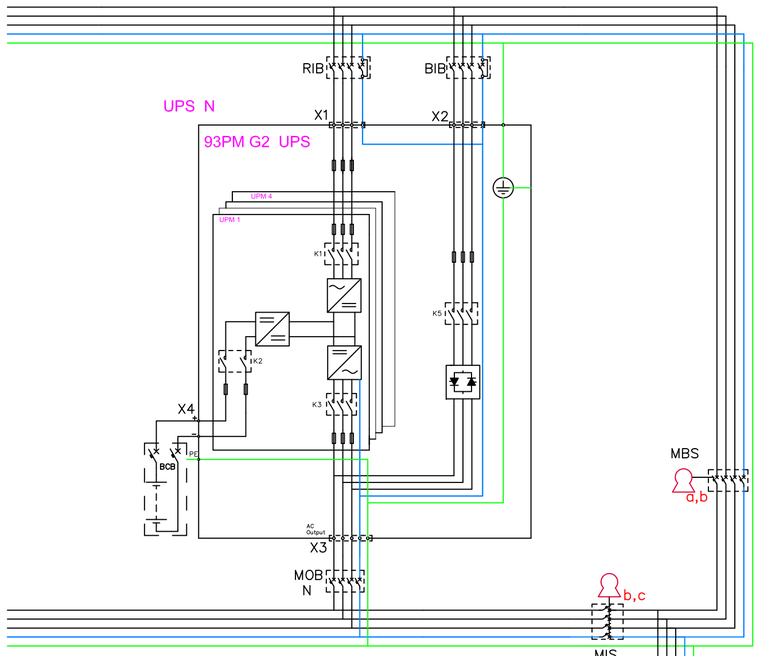
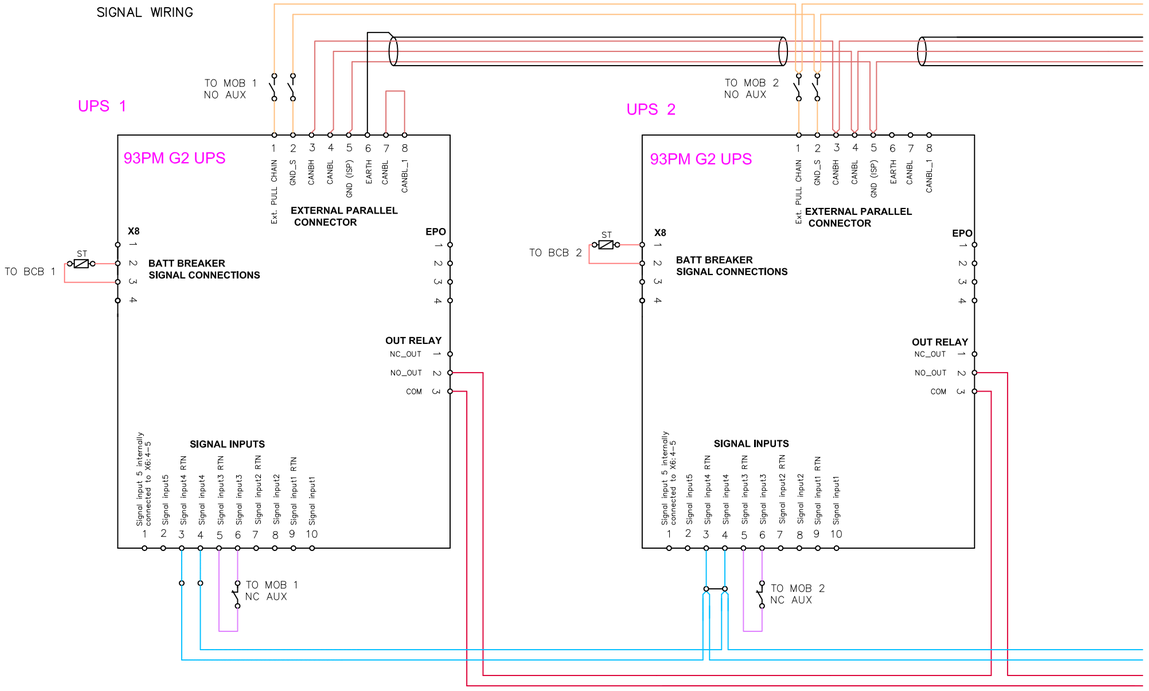
DIMENSIONS ARE IN MILLIMETERS AFTER PLATING, DIMENSIONS AND TOLERANCES IN ACCORDANCE WITH ASME Y14.5M–1994. SEE NOTES FOR TOLERANCES.					
DESCRIPTION: EATON 93PM G2 50–240kVA UPS Wiring Single Unit					
ORIGINATED: Atif R.	07.09.2020	ECO: ECO–116278	NAME: P–110000788	REVISION: 01	SIZE: A2
MODIFIED:					SCALE: N/A
CHECKED:		DOCUMENT TYPE: AUTOCAD DRAWING		STATE: RELEASED	
SAFETY:					SHEET: 6 OF 8
APPROVED:					

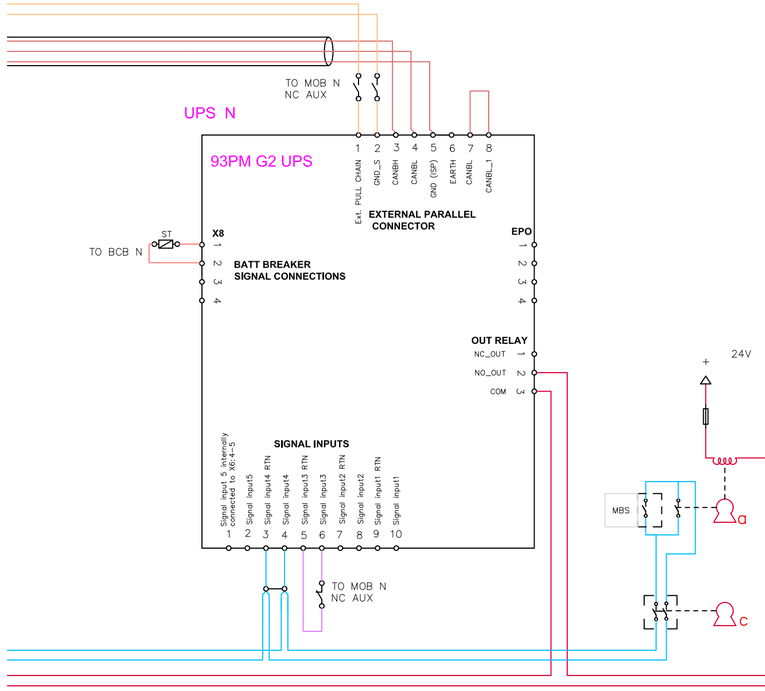




POWER WIRING

SIGNAL WIRING





MBS STATUS (Provided by others, Installed by others)
Twisted pair (if possible, else shielded)
No earth needed

MOB STATUS (Provided by others, Installed by others)
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)
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: EATON 93PM G2 50–240kVA UPS Wiring Parallel Units

ORIGINATED: Atif R.	07.09.2020	ECO: ECO–116278	NAME: P–110000788	REVISION: 01
MODIFIED:				SIZE: A2
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SAFETY:				STATE: RELEASED
APPROVED:				SHEET: 7 OF 8

Eaton 93PM G2 50-240kVA 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) (Maximum ratings at the end of discharge, 1.67VPC)					For Parallel Units Common Maintenance Bypass Switch (MBS)	
			Nominal Current	Maximum Current	Nominal Current at 400 V Input	Integrated Bypass Fuse		Output Current	Inverter Short Circuit Current	Auxiliary Switches	Voltage Rating	Rated current	Maximum Current	Trip Device (Shunt Trip)	Auxiliary Switches	Rating	Auxiliary Switches
kVA	kW	V	A	A	A	Type	V	A	A / 400ms	Qty	VDC	A	A	VDC	Qty	A	Qty
50	50	400	86	96	72	Bussman 900A uR 170M4419	400	72	180	2	600	114	139	24	1	72 x N	1
60	54	400	93	96	87	Bussman 900A uR 170M4419	400	87	180	2	600	123	150	24	1	87 x N	1
100	100	400	172	192	144	Bussman 900A uR 170M4419	400	144	360	2	600	227	277	24	1	144 x N	1
120	108	400	186	190	174	Bussman 900A uR 170M4419	400	174	360	2	600	246	300	24	1	174 x N	1
150	150	400	258	288	217	Bussman 900A uR 170M4419	400	217	540	2	600	341	416	24	1	217 x N	1
180	162	400	278	285	261	Bussman 900A uR 170M4419	400	261	540	2	600	370	450	24	1	261 x N	1
200	200	400	343	384	289	Bussman 900A uR 170M4419	400	289	720	2	600	455	554	24	1	289 x N	1
240	216	400	371	384	346	Bussman 900A uR 170M4419	400	346	720	2	600	491	600	24	1	346 x N	1

Notes:
1. Rectifier AC input current calculations: Nominal - 100% load with charging; Maximum - 100% load with low input voltage (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. Shunt trip voltage can be changed to 48Vdc.
10. The battery current calculations are based on 36 blocks.The unit can be configured with 36-44 battery blocks.
11.Specifications are subject to change.

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.					
DESCRIPTION: EATON 93PM G2 50–240kVA UPS Specifications					
ORIGINATED: Atif R.	07.09.2020	ECO: ECO–116278	NAME: P–110000788	REVISION: 01	SIZE: A2
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