

1

2

3

4



EXTERNAL MBS 40kW

Product number: P-105000045-002

A

B

C

D

E

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: EXTERNAL MBS 40kW

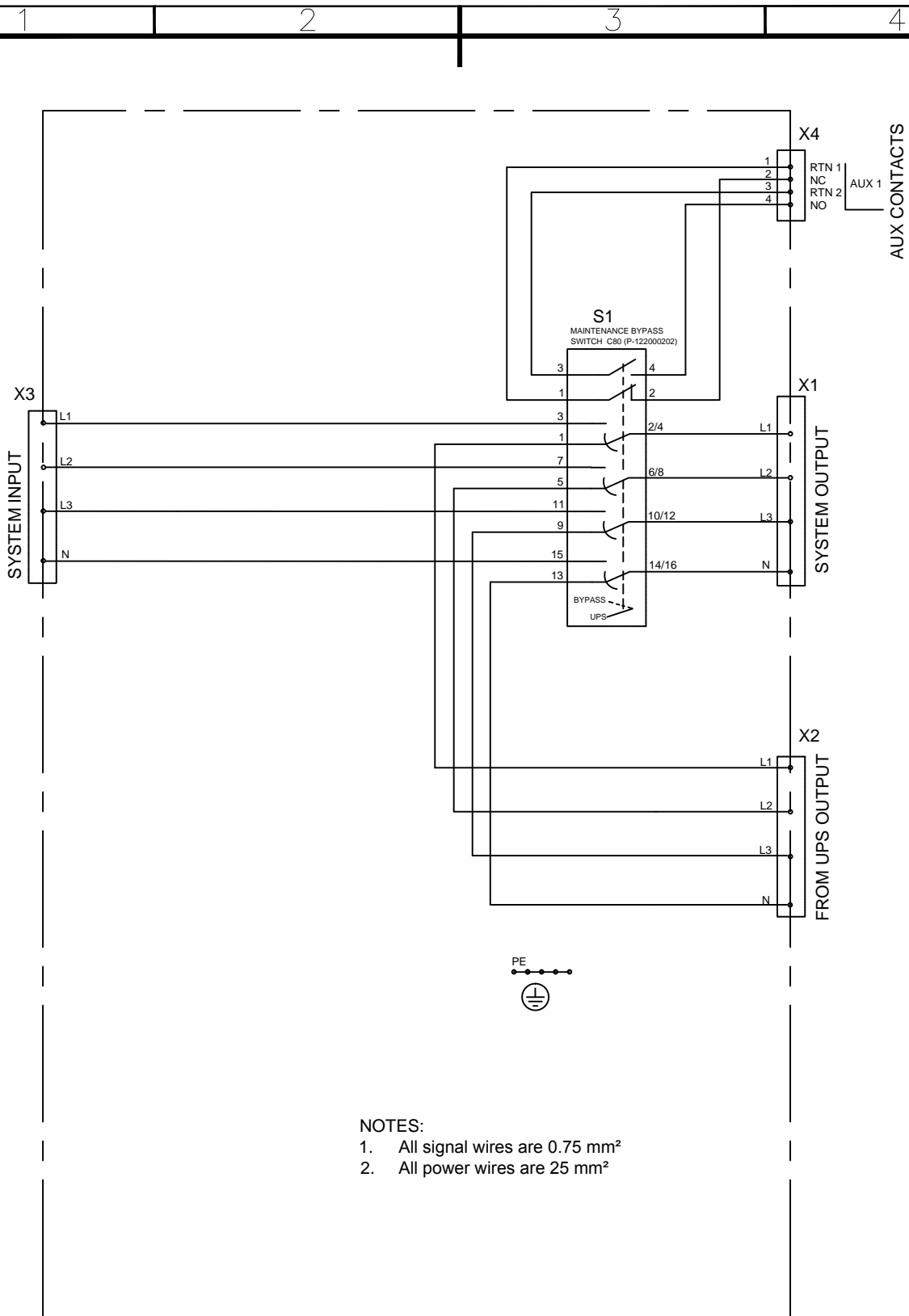
ORIGINATED: E5900083 /JP	13.05.2015	ECO:	NAME:	REVISION:	SIZE: A4
MODIFIED: E5900083/JP	24.11.2015	ECD-092408	P-110000474-002	001	NOT TO SCALE
CHECKED: E5900525/TMK		DOCUMENT TYPE:		STATE:	SHEET:
SAFETY:		AUTOCAD DRAWING		Release	1 OF 8
APPROVED: E5900096/JE		Common sheet			

F

EATON CORPORATION - CONFIDENTIAL AND PROPRIETARY
NOTICE TO PERSONS RECEIVING THIS DOCUMENT AND/OR TECHNICAL INFORMATION

THIS DOCUMENT, INCLUDING THE DRAWING AND INFORMATION CONTAINED THEREON, IS CONFIDENTIAL AND IS THE EXCLUSIVE PROPERTY OF EATON CORPORATION, AND IS MERELY ON LOAN AND SUBJECT TO RECALL BY EATON AT ANY TIME. BY TAKING POSSESSION OF THIS DOCUMENT, THE RECIPIENT ACKNOWLEDGES AND AGREES THAT THIS DOCUMENT CANNOT BE USED IN ANY MANNER ADVERSE TO THE INTERESTS OF EATON AND THAT NO PORTION OF THIS DOCUMENT MAY BE COPIED OR OTHERWISE REPRODUCED WITHOUT THE PRIOR WRITTEN CONSENT OF EATON. IN THE CASE OF CONFLICTING CONTRACTUAL PROVISIONS, THIS NOTICE SHALL GOVERN THE STATUS OF THIS DOCUMENT.

© 2011 Eaton Corporation - All Rights Reserved.



NOTES:

1. All signal wires are 0.75 mm²
2. All power wires are 25 mm²

METRIC



EATON CORPORATION



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

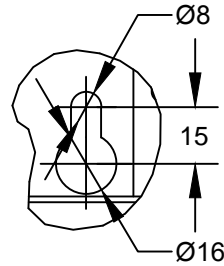
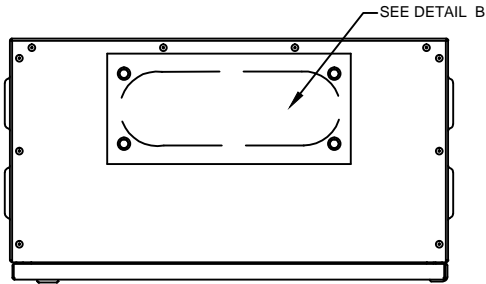
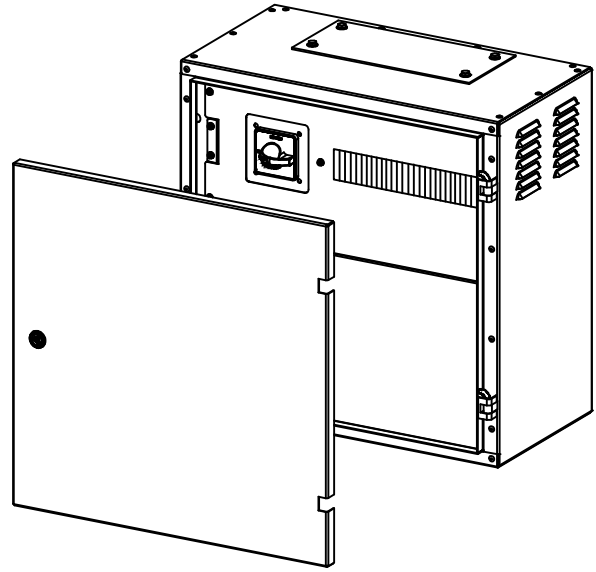
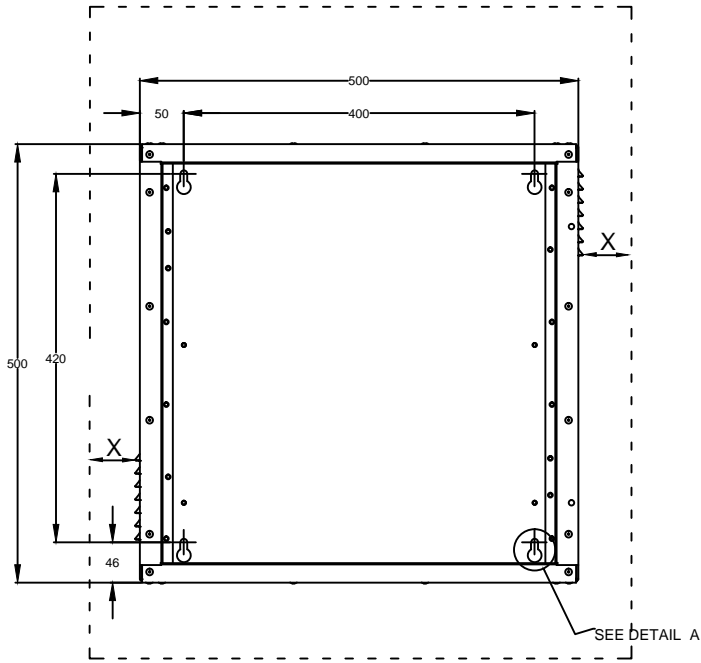
DESCRIPTION: EXTERNAL MBS 40kW

ORIGINATED: E5900525 /TMK	22.04.2015	ECO:	NAME:	REVISION:	SIZE: A4
MODIFIED: E5900083/JP	24.11.2015	ECO-092408	P-110000474-002	001	NOT TO SCALE
CHECKED: E5900525/TMK		DOCUMENT TYPE:		STATE:	SHEET:
SAFETY:		AUTOCAD DRAWING		Release	2 OF 8
APPROVED: E5900096/JE		Switchgear diagram			

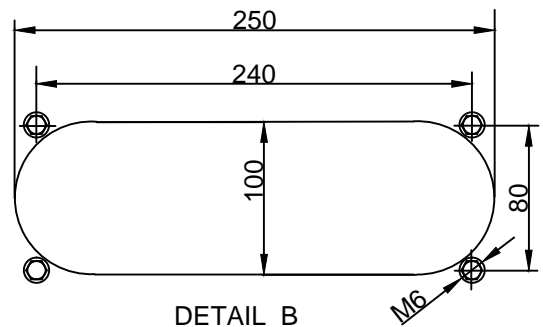
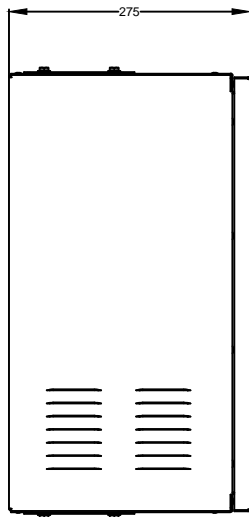
EATON CORPORATION - CONFIDENTIAL AND PROPRIETARY
 NOTICE TO PERSONS RECEIVING THIS DOCUMENT AND/OR TECHNICAL INFORMATION

THIS DOCUMENT, INCLUDING THE DRAWING AND INFORMATION CONTAINED THEREON, IS CONFIDENTIAL AND IS THE EXCLUSIVE PROPERTY OF EATON CORPORATION, AND IS MERELY ON LOAN AND SUBJECT TO RECALL BY EATON AT ANY TIME. BY TAKING POSSESSION OF THIS DOCUMENT, THE RECIPIENT ACKNOWLEDGES AND AGREES THAT THIS DOCUMENT CANNOT BE USED IN ANY MANNER ADVERSE TO THE INTERESTS OF EATON AND THAT NO PORTION OF THIS DOCUMENT MAY BE COPIED OR OTHERWISE REPRODUCED WITHOUT THE PRIOR WRITTEN CONSENT OF EATON. IN THE CASE OF CONFLICTING CONTRACTUAL PROVISIONS, THIS NOTICE SHALL GOVERN THE STATUS OF THIS DOCUMENT.

X = clearance at both sides of cabinet min. 50mm



DETAIL A
SCALE 1:2



DETAIL B

METRIC



EATON CORPORATION



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

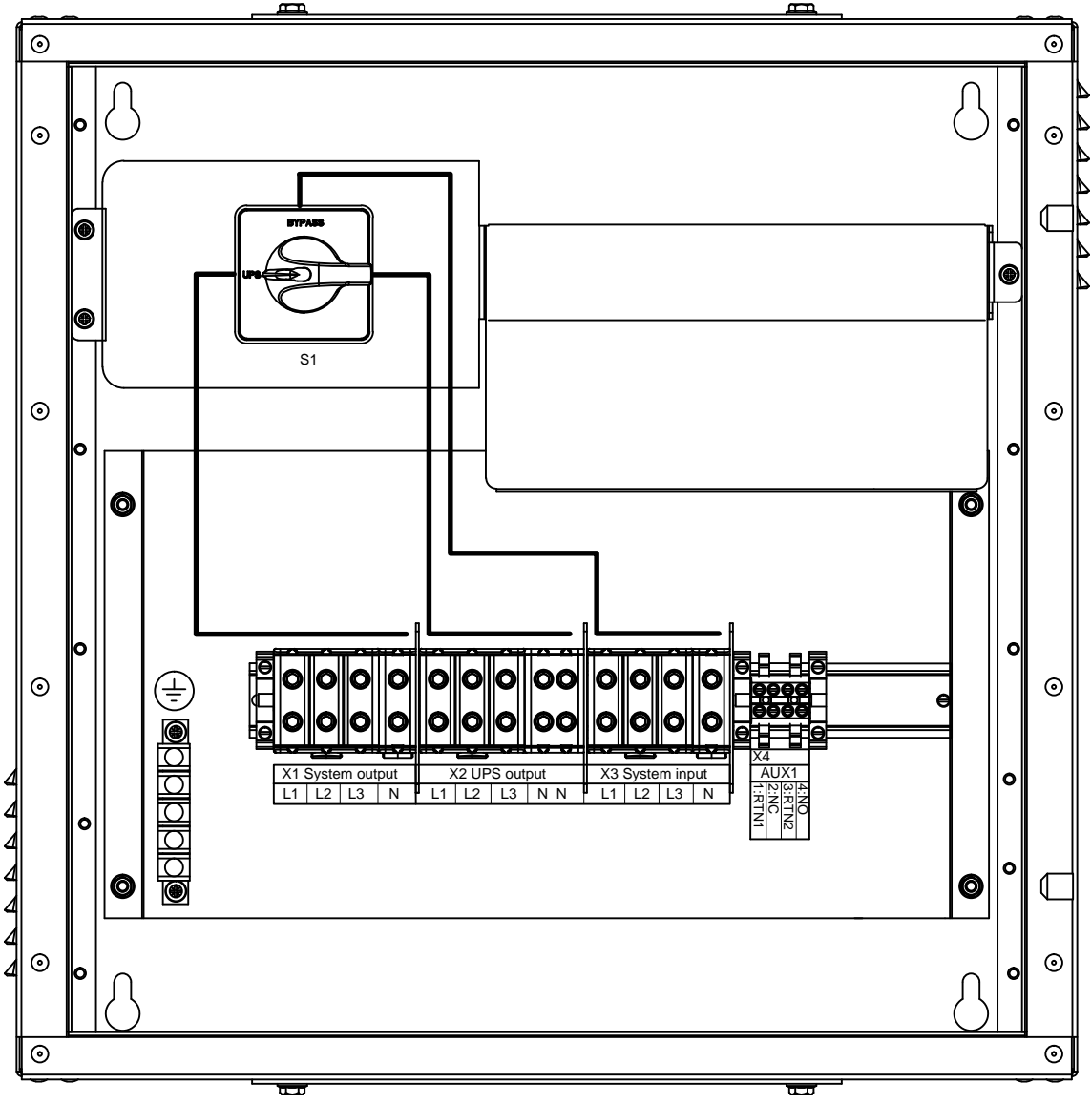
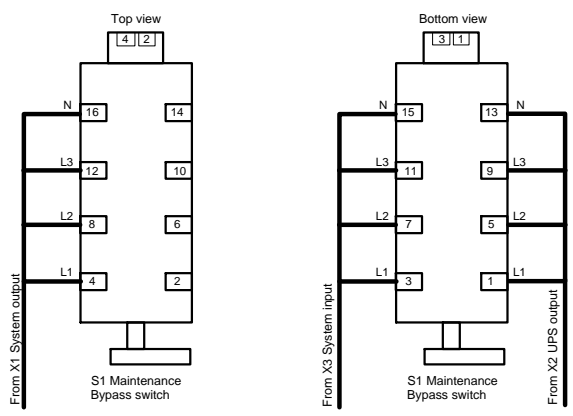
DESCRIPTION: EXTERNAL MBS 40kW

ORIGINATED: E5900083 /JP	13.05.2015	ECO:	NAME:	REVISION:	SIZE: A4
MODIFIED: E5900083/JP	24.11.2015	ECO-092408	P-110000474-002	001	NOT TO SCALE
CHECKED: E5900525/TKM		DOCUMENT TYPE:		STATE:	SHEET:
SAFETY:		AUTOCAD DRAWING	Release	3 OF 8	
APPROVED: E5900096/JE		Dimension diagram			

EATON CORPORATION - CONFIDENTIAL AND PROPRIETARY
NOTICE TO PERSONS RECEIVING THIS DOCUMENT AND/OR TECHNICAL INFORMATION

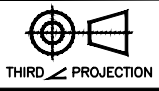
THIS DOCUMENT, INCLUDING THE DRAWING AND INFORMATION CONTAINED THEREON, IS CONFIDENTIAL AND IS THE EXCLUSIVE PROPERTY OF EATON CORPORATION, AND IS MERELY ON LOAN AND SUBJECT TO RECALL BY EATON AT ANY TIME. BY TAKING POSSESSION OF THIS DOCUMENT, THE RECIPIENT ACKNOWLEDGES AND AGREES THAT THIS DOCUMENT CANNOT BE USED IN ANY MANNER ADVERSE TO THE INTERESTS OF EATON AND THAT NO PORTION OF THIS DOCUMENT MAY BE COPIED OR OTHERWISE REPRODUCED WITHOUT THE PRIOR WRITTEN CONSENT OF EATON. IN THE CASE OF CONFLICTING CONTRACTUAL PROVISIONS, THIS NOTICE SHALL GOVERN THE STATUS OF THIS DOCUMENT.

1 2 3 4



A
B
C
D
E

METRIC



EATON CORPORATION



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

DESCRIPTION: EXTERNAL MBS 40kW

ORIGINATED: E5900083 /JP	13.05.2015	ECO:	NAME:	REVISION:	SIZE: A4
MODIFIED: E5900083/JP	24.11.2015	ECO-092408	P-110000474-002	001	NOT TO SCALE
CHECKED: E5900525/TMK		DOCUMENT TYPE:		STATE:	SHEET:
SAFETY:		AUTOCAD DRAWING		Release	
APPROVED: E5900096/JE		Component layout and power wiring diagram			

EATON CORPORATION - CONFIDENTIAL AND PROPRIETARY
NOTICE TO PERSONS RECEIVING THIS DOCUMENT AND/OR TECHNICAL INFORMATION

THIS DOCUMENT, INCLUDING THE DRAWING AND INFORMATION CONTAINED THEREON, IS CONFIDENTIAL AND IS THE EXCLUSIVE PROPERTY OF EATON CORPORATION, AND IS MERELY ON LOAN AND SUBJECT TO RECALL BY EATON AT ANY TIME. BY TAKING POSSESSION OF THIS DOCUMENT, THE RECIPIENT ACKNOWLEDGES AND AGREES THAT THIS DOCUMENT CANNOT BE USED IN ANY MANNER ADVERSE TO THE INTERESTS OF EATON AND THAT NO PORTION OF THIS DOCUMENT MAY BE COPIED OR OTHERWISE REPRODUCED WITHOUT THE PRIOR WRITTEN CONSENT OF EATON. IN THE CASE OF CONFLICTING CONTRACTUAL PROVISIONS, THIS NOTICE SHALL GOVERN THE STATUS OF THIS DOCUMENT.

1 2 3 4

A

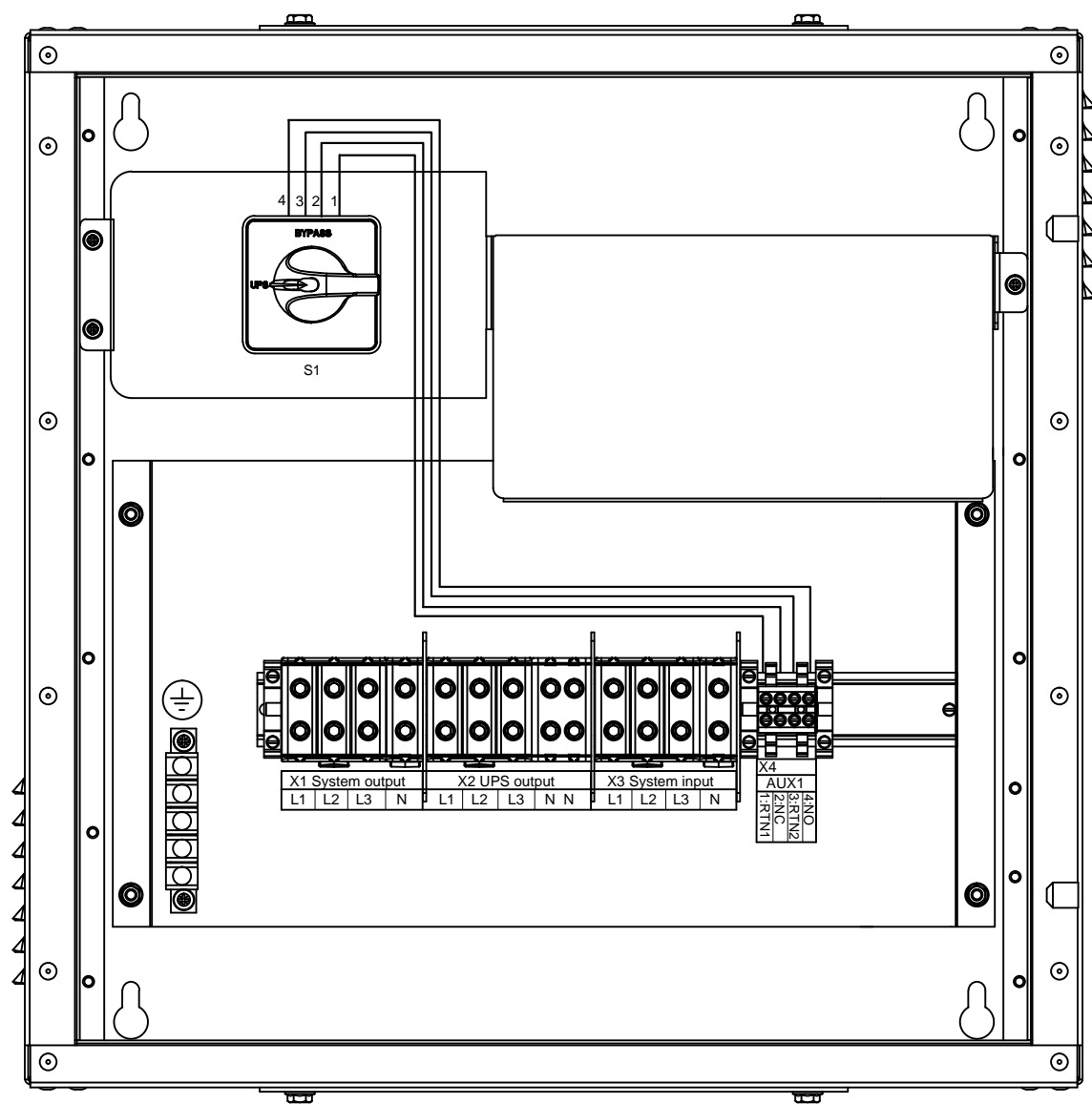
B


C

D

E

F



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: EXTERNAL MBS 40kW

ORIGINATED: E5900083 /JP	13.05.2015	ECO:	NAME:	REVISION:	SIZE: A4
MODIFIED: E5900083/JP	24.11.2015	ECO-092408	P-110000474-002	001	NOT TO SCALE
CHECKED: E5900525/TMK		DOCUMENT TYPE:		STATE:	SHEET:
SAFETY:		AUTOCAD DRAWING		Release	5 OF 8
APPROVED: E5900096/JE		Control wiring Diagram			

EATON CORPORATION - CONFIDENTIAL AND PROPRIETARY
NOTICE TO PERSONS RECEIVING THIS DOCUMENT AND/OR TECHNICAL INFORMATION

THIS DOCUMENT, INCLUDING THE DRAWING AND INFORMATION CONTAINED THEREON, IS CONFIDENTIAL AND IS THE EXCLUSIVE PROPERTY OF EATON CORPORATION, AND IS MERELY ON LOAN AND SUBJECT TO RECALL BY EATON AT ANY TIME. BY TAKING POSSESSION OF THIS DOCUMENT, THE RECIPIENT ACKNOWLEDGES AND AGREES THAT THIS DOCUMENT CANNOT BE USED IN ANY MANNER ADVERSE TO THE INTERESTS OF EATON AND THAT NO PORTION OF THIS DOCUMENT MAY BE COPIED OR OTHERWISE REPRODUCED WITHOUT THE PRIOR WRITTEN CONSENT OF EATON. IN THE CASE OF CONFLICTING CONTRACTUAL PROVISIONS, THIS NOTICE SHALL GOVERN THE STATUS OF THIS DOCUMENT.

A TECHNICAL SPECIFICATION

STANDARD IEC/EN 61439-2

MAINS TN-S, 5W/3P+N+PE, 380/400/415VAC 3~

- 1. Nominal Voltage U_n 380/400/415 V
- 2. Nominal Current I_{nA} 61/58/56 A
- 3. Maximum Current I_{max} 72 A
- 4. Nominal Frequency f_n 50/60 Hz
- 5. Operating Temperature T max +40 °C
- 6. Current capability
 - Thermal I_{cc} 10 kA *)
 - Dynamical I_{pk} _____ kA
- 7. Power dissipation P _____ W
- 8. Electrical Wiring AC
 - L1
 - L2
 - L3
 - N
 - PE
 - PEN

TYPE PLATE, SAMPLE

80
A

EXT MBS 40kW

PART Nr: P-105000045-002 Rev:003

SERIAL Nr: 2761000100 1545

MAINS: TN-S CLASS: IP21

Un: 380/400/415V WEIGHT: 23kg

InA: 61 /58 /56A

fn: 50/60Hz

Icc: 10kA

IEC61439-2

Made in Finland

B
80

CONSTRUCTION OF SWITCHGEAR

- 1. Enclosure Class IP 21
 - Outfield location
 - Interior location
- 2. Installation
 - Surficial
 - Wall mounting
 - Floor mounting
- 3. Additional door
 - Lock-up
- 4. Color
 - Common color RAL7035
 - Custom color Eaton dwg
- 5. Cabling entry 164700509-001
 - Top entry
 - Bottom entry
 - Conduit flange of cable
- 6. Material specification
 - Cable material 90°C, H07V2-K
 - Cable U/Uo 450/750
 - Cover material _____
 - Other demand _____
- 7. Handle location Door handle
 - _____
 - _____
 - _____
 - _____

- Note !**
1. Back-up fuse required for system input 80A gG
 2. For external wiring use wire with temperature class min +90°C
 3. _____
 4. _____
 5. _____

C CUSTOMER ELECTRICAL INFORMATION

- 1. MAINS
 - TN-C-S
 - TN-S
 - IT
- 2. LOAD POWER
 - S _____ kVA
 - P _____ kW
 - p.f. _____

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: EXTERNAL MBS 40kW

ORIGINATED: E5900083/JP	13.05.2015	ECO:	NAME:	REVISION:	SIZE: A4
MODIFIED: E5900083/JP	24.11.2015	ECO-092408	P-110000474-002	001	NOT TO SCALE
CHECKED: E5900525/TKM		DOCUMENT TYPE:		STATE:	SHEET:
SAFETY:		AUTOCAD DRAWING		Release	6 OF 8
APPROVED: E5900096/JE		General information			

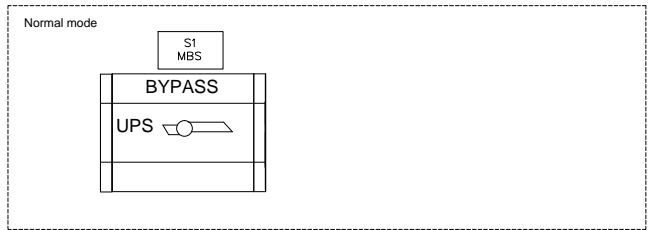
EATON CORPORATION - CONFIDENTIAL AND PROPRIETARY
 NOTICE TO PERSONS RECEIVING THIS DOCUMENT AND/OR TECHNICAL INFORMATION

THIS DOCUMENT, INCLUDING THE DRAWING AND INFORMATION CONTAINED THEREON, IS CONFIDENTIAL AND IS THE EXCLUSIVE PROPERTY OF EATON CORPORATION, AND IS MERELY ON LOAN AND SUBJECT TO RECALL BY EATON AT ANY TIME. BY TAKING POSSESSION OF THIS DOCUMENT, THE RECIPIENT ACKNOWLEDGES AND AGREES THAT THIS DOCUMENT CANNOT BE USED IN ANY MANNER ADVERSE TO THE INTERESTS OF EATON AND THAT NO PORTION OF THIS DOCUMENT MAY BE COPIED OR OTHERWISE REPRODUCED WITHOUT THE PRIOR WRITTEN CONSENT OF EATON. IN THE CASE OF CONFLICTING CONTRACTUAL PROVISIONS, THIS NOTICE SHALL GOVERN THE STATUS OF THIS DOCUMENT.

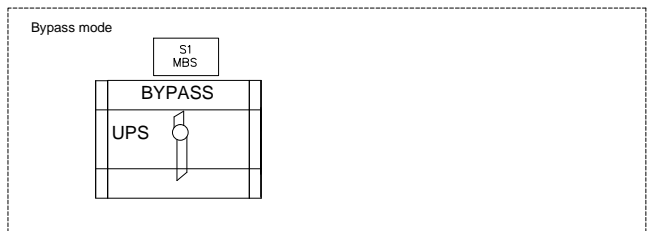
© 2011 Eaton Corporation - All Rights Reserved.

Turn UPS from NORMAL MODE to MECHANICAL BYPASS

1. The start position is following:



2. Use UPS display to turn the UPS on internal static bypass mode. Remember to verify the transfer before proceeding the next step.
3. Turn the MBS (S1) to bypass position to bypass UPS:



4. Use UPS display to turn UPS OFF.
5. Turn the UPS Battery Breaker (CB1) if not automatically tripped and UPS Rectifier Input Switch (S1) to OFF position.
6. Use the external isolators to isolate the UPS rectifier input and bypass input before maintenancing the 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: EXTERNAL MBS 40kW

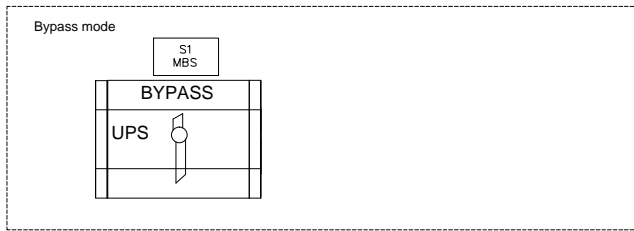
ORIGINATED: E5900083 /JP	13.05.2015	ECO:	NAME:	REVISION:	SIZE: A4
MODIFIED: E5900083/JP	24.11.2015	ECO-092408	P-110000474-002	001	NOT TO SCALE
CHECKED: E5900525/TKM		DOCUMENT TYPE:		STATE:	SHEET:
SAFETY:		AUTOCAD DRAWING		Release	7 OF 8
APPROVED: E5900096/JE		Operating Instructions			

EATON CORPORATION - CONFIDENTIAL AND PROPRIETARY
 NOTICE TO PERSONS RECEIVING THIS DOCUMENT AND/OR TECHNICAL INFORMATION

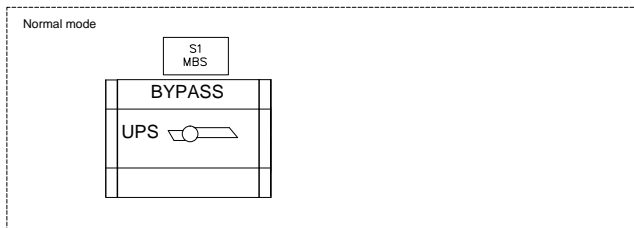
THIS DOCUMENT, INCLUDING THE DRAWING AND INFORMATION CONTAINED THEREON, IS CONFIDENTIAL AND IS THE EXCLUSIVE PROPERTY OF EATON CORPORATION, AND IS MERELY ON LOAN AND SUBJECT TO RECALL BY EATON AT ANY TIME. BY TAKING POSSESSION OF THIS DOCUMENT, THE RECIPIENT ACKNOWLEDGES AND AGREES THAT THIS DOCUMENT CANNOT BE USED IN ANY MANNER ADVERSE TO THE INTERESTS OF EATON AND THAT NO PORTION OF THIS DOCUMENT MAY BE COPIED OR OTHERWISE REPRODUCED WITHOUT THE PRIOR WRITTEN CONSENT OF EATON. IN THE CASE OF CONFLICTING CONTRACTUAL PROVISIONS, THIS NOTICE SHALL GOVERN THE STATUS OF THIS DOCUMENT.

Turn UPS from MECHANICAL BYPASS to NORMAL MODE

1. The start position is following:



2. Use the external isolators to restore bypass and rectifier feed to the UPS.
3. Turn the UPS Battery Breaker (CB1) and UPS Rectifier Input Switch (S1) to ON position.
4. Use UPS display to transfer the UPS to static bypass and give "Start Module" command to start the UPS(s) to "ready"-state.
 - Make sure the UPS is not displaying any alarms or notices.
 - You may verify the output voltage from the meters screen of the display.
5. Turn the MBS (S1) to UPS position to switch the output to UPS:



6. Use UPS display to transfer the UPS to normal mode (Give "Go Online"- command in the "Controls"-menu). Verify the UPS is running in "Normal"-mode, green LED is lit, status is displayed "Online" and no alarms are present.

METRIC



EATON CORPORATION



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

DESCRIPTION: EXTERNAL MBS 40kW

ORIGINATED: E5900083 /JP	13.05.2015	ECO:	NAME:	REVISION:	SIZE: A4
MODIFIED: E5900083/EY	24.11.2015	ECO-092408	P-110000474-002	001	NOT TO SCALE
CHECKED: E5900525/TKM		DOCUMENT TYPE:		STATE:	SHEET:
SAFETY:		AUTOCAD DRAWING		Release	8 OF 8
APPROVED: E59000096/JE		Operating Instructions			

EATON CORPORATION - CONFIDENTIAL AND PROPRIETARY
NOTICE TO PERSONS RECEIVING THIS DOCUMENT AND/OR TECHNICAL INFORMATION

THIS DOCUMENT, INCLUDING THE DRAWING AND INFORMATION CONTAINED THEREON, IS CONFIDENTIAL AND IS THE EXCLUSIVE PROPERTY OF EATON CORPORATION, AND IS MERELY ON LOAN AND SUBJECT TO RECALL BY EATON AT ANY TIME. BY TAKING POSSESSION OF THIS DOCUMENT, THE RECIPIENT ACKNOWLEDGES AND AGREES THAT THIS DOCUMENT CANNOT BE USED IN ANY MANNER ADVERSE TO THE INTERESTS OF EATON AND THAT NO PORTION OF THIS DOCUMENT MAY BE COPIED OR OTHERWISE REPRODUCED WITHOUT THE PRIOR WRITTEN CONSENT OF EATON. IN THE CASE OF CONFLICTING CONTRACTUAL PROVISIONS, THIS NOTICE SHALL GOVERN THE STATUS OF THIS DOCUMENT.

© 2011 Eaton Corporation - All Rights Reserved.