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# EXTERNAL MBS 20kW WITH BYPASS INPUT BREAKER

Product number: P-105000044-003

METRIC



## EATON CORPORATION



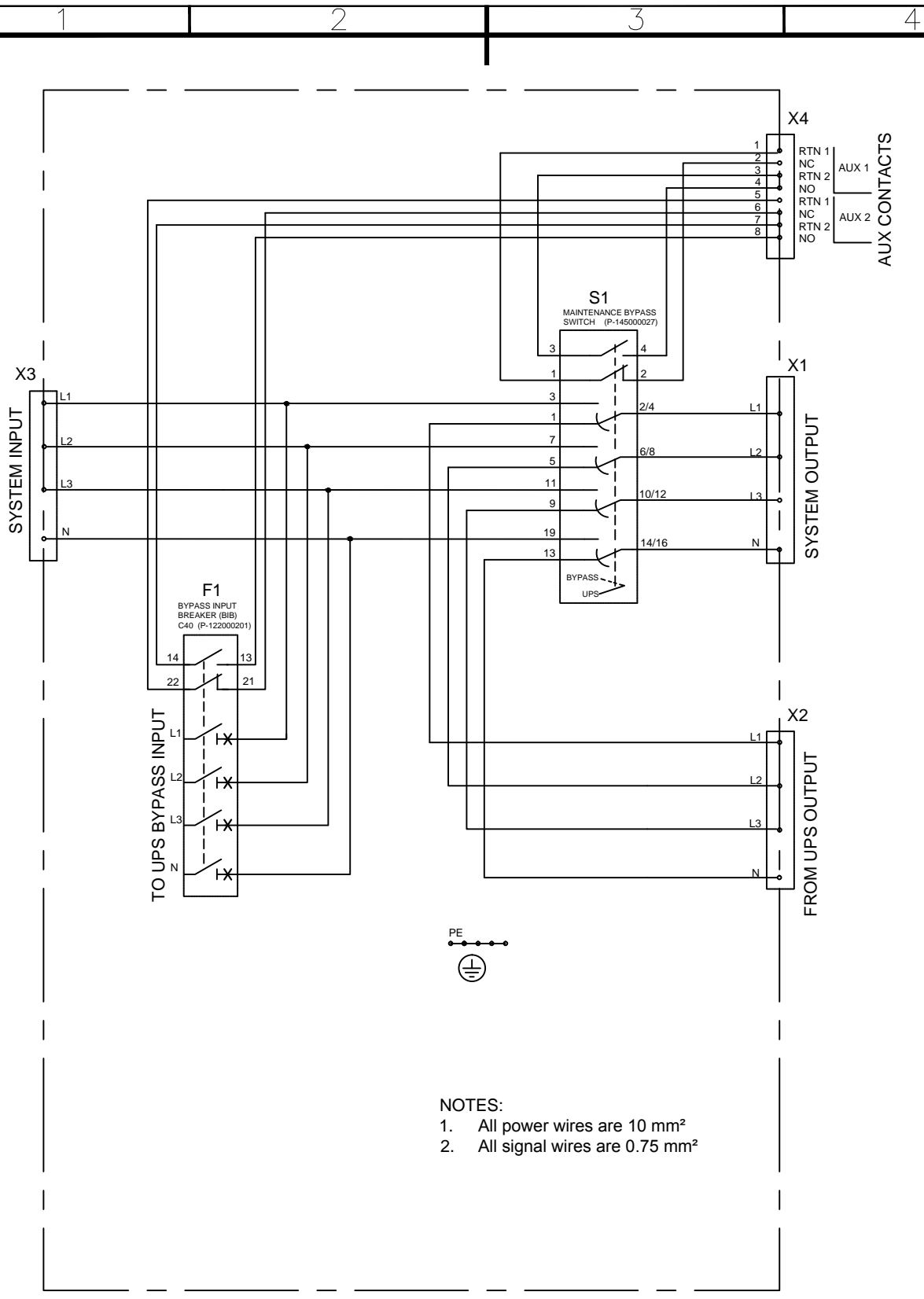
DIMENSIONS ARE IN MILLIMETERS AFTER PLATING, DIMENSIONS AND TOLERANCES IN ACCORDANCE WITH ASME Y14.5M-1994. SEE NOTES FOR TOLERANCES.

DESCRIPTION: EXTERNAL MBS 20kW WITH BIB

ORIGINATED: E5900083 /JP	15.05.2015	ECO:	NAME:	REVISION:	SIZE: A4
MODIFIED: E5900083/JP	20.11.2015	ECD-092408	P-110000473-003	001	NOT TO SCALE
CHECKED: E5900525/TMK		DOCUMENT TYPE:		STATE:	SHEET:
SAFETY:		AUTOCAD DRAWING		Release	1 OF 8
APPROVED: E5900096/JE		Common sheet			

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NOTES:

1. All power wires are 10 mm<sup>2</sup>
2. All signal wires are 0.75 mm<sup>2</sup>

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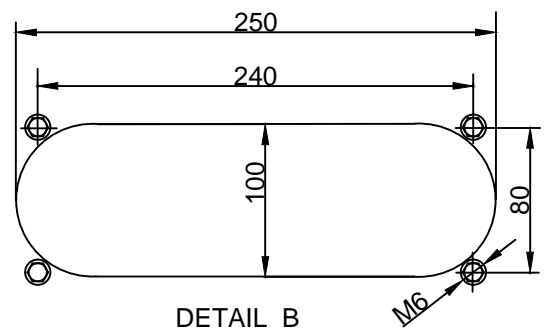
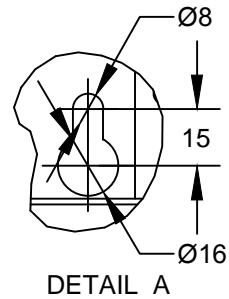
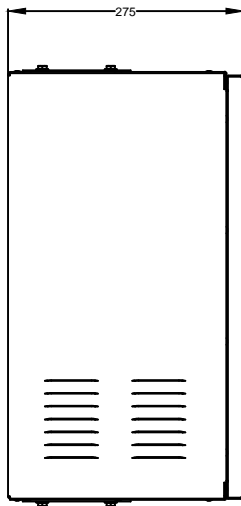
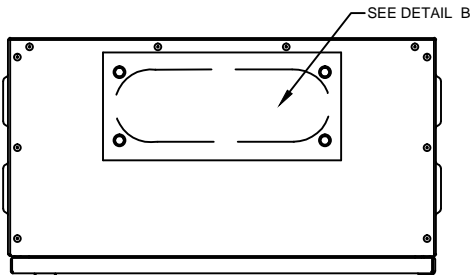
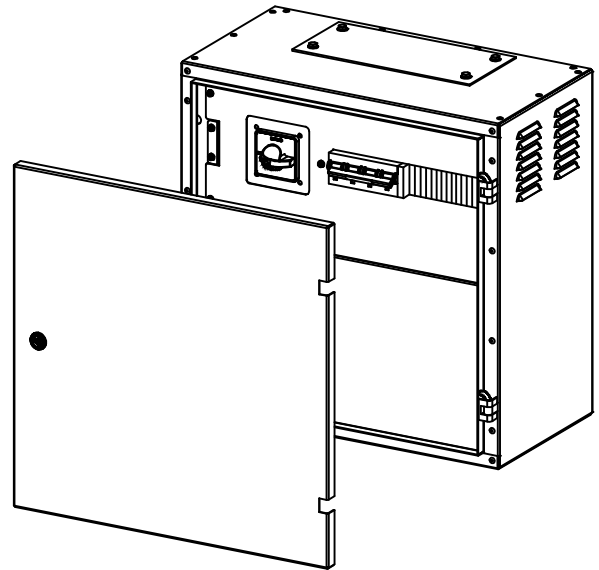
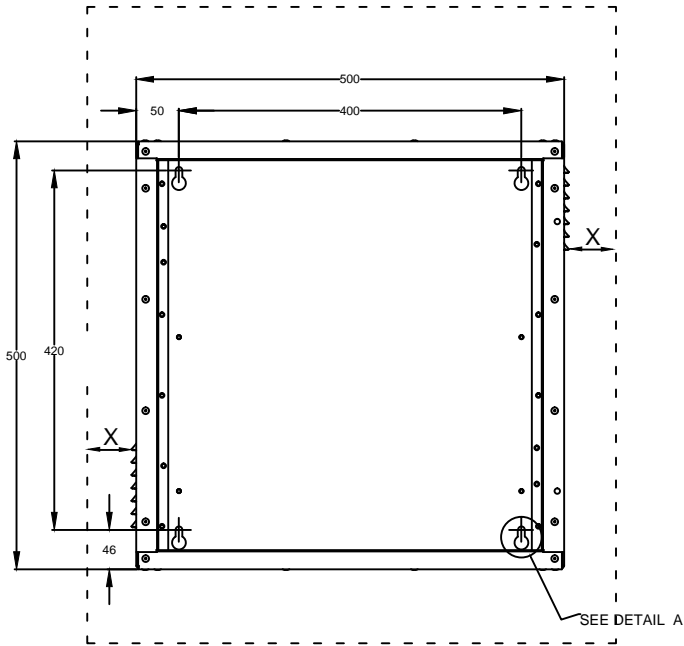
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SAFETY:		AUTOCAD DRAWING		Release	2 OF 8
APPROVED: E5900096/JE		Switchgear diagram			

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



METRIC



THIRD ANGLE PROJECTION

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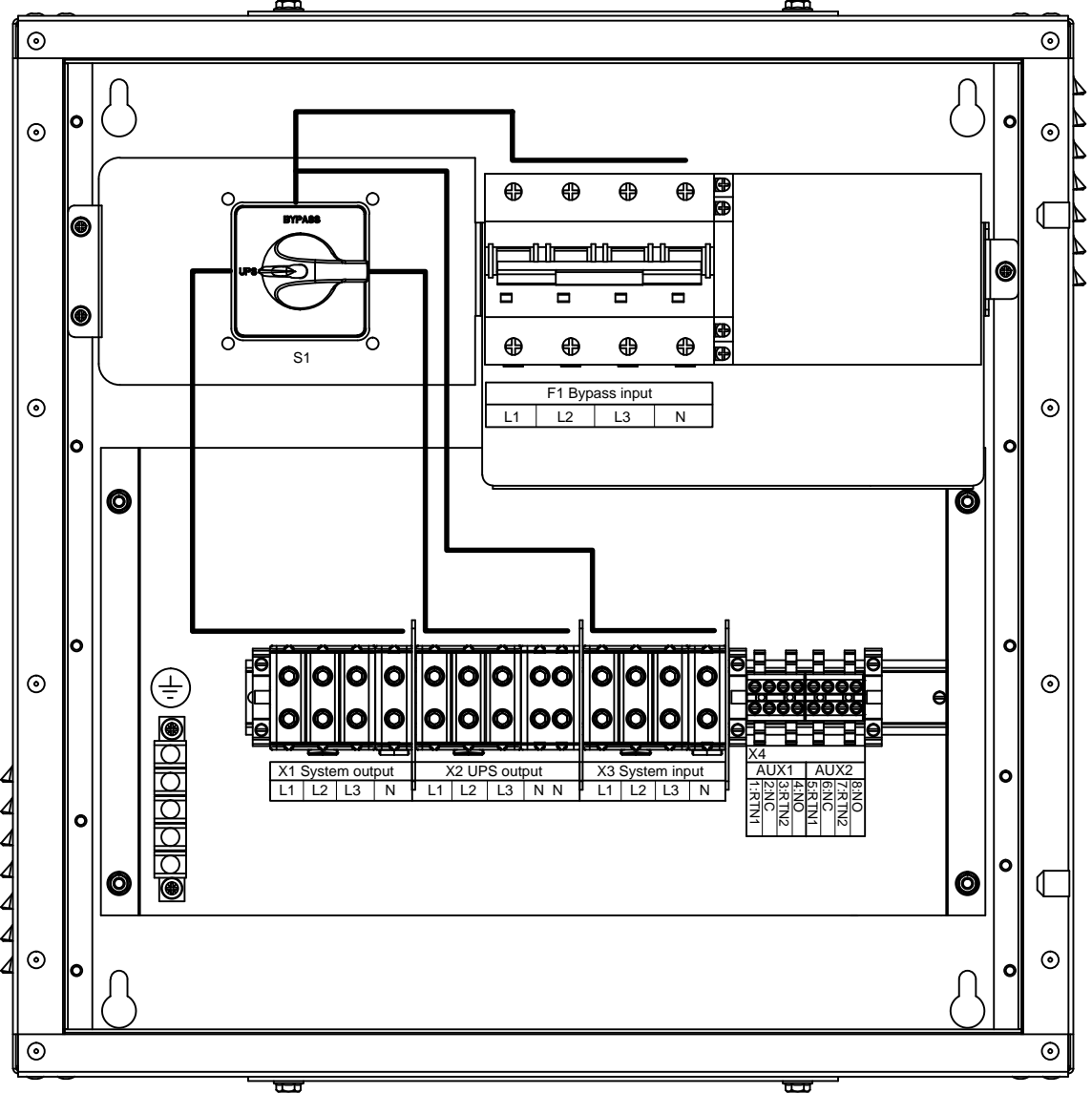
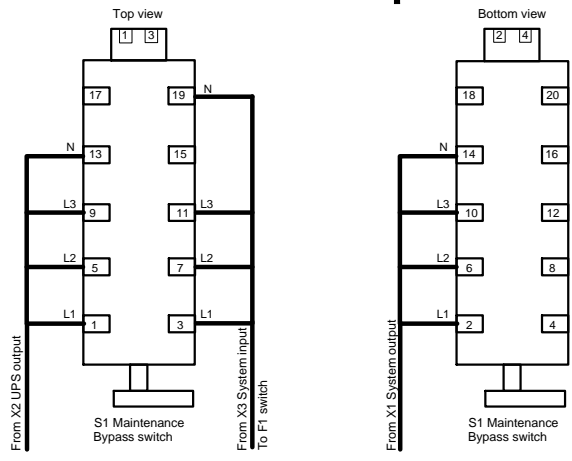
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SAFETY:		AUTOCAD DRAWING		Release	3 OF 8
APPROVED: E5900096/JE		Dimension diagram			

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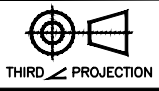
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SAFETY:		AUTOCAD DRAWING		Release	4 OF 8
APPROVED: E5900096/JE		Component layout and power wiring diagram			

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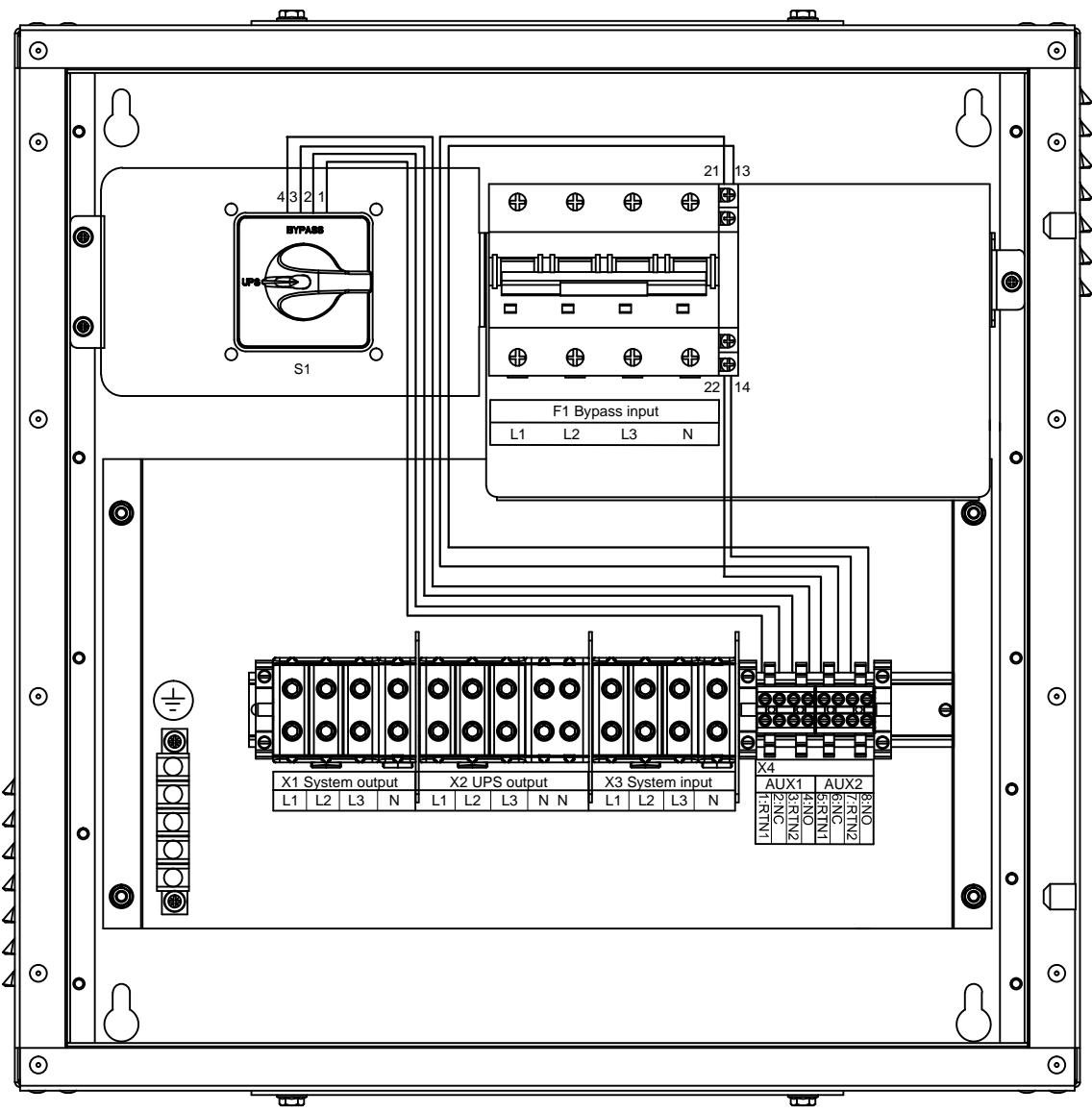
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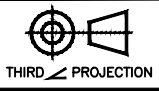
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CHECKED: E5900525/TMK		DOCUMENT TYPE:		STATE:	SHEET:
SAFETY:		AUTOCAD DRAWING		Release	5 OF 8
APPROVED: E5900096/JE		Control wiring Diagram			

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**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  $I_{nA}$  30/29/28 A
- 3. Maximum Current  $I_{max}$  36 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**

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EXT MBS 20kW WITH BIB

PART Nr: P-105000044-003      Rev:003

SERIAL Nr: 2761000100      1545

MAINS: TN-S      CLASS: IP21

Un: 380/400/415V      WEIGHT: 24kg

InA: 30 /29 /28A

fn: 50/60Hz

Icc: 10kA

IEC61439-2

Made in Finland

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**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 40A gG
- 2. For external wiring use wire with temperature class min +90°C
- 3. \_\_\_\_\_
- 4. \_\_\_\_\_
- 5. \_\_\_\_\_

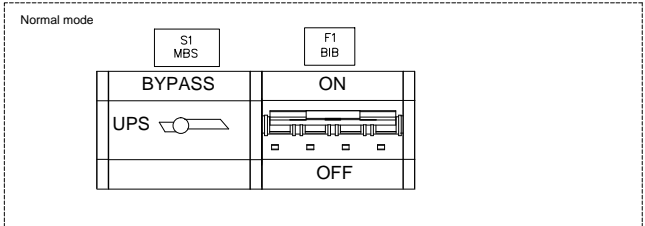
**C CUSTOMER ELECTRICAL INFORMATION**

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

METRIC	 THIRD ANGLE PROJECTION	EATON CORPORATION	
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MODIFIED: E5900083/JP	20.11.2015	DOCUMENT TYPE: AUTOCAD DRAWING	REVISION: 001
CHECKED: E5900525/TKM			STATE: Release
SAFETY:			SHEET: 6 OF 8
APPROVED: E5900096/JE		General information	

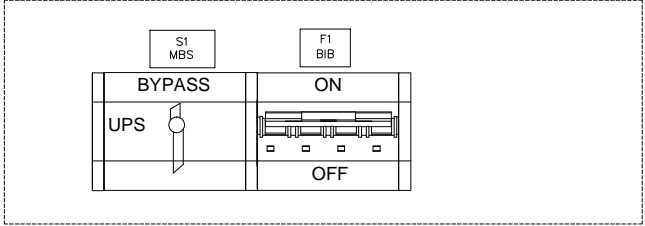
### Turn UPS from NORMAL MODE to MECHANICAL BYPASS

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.

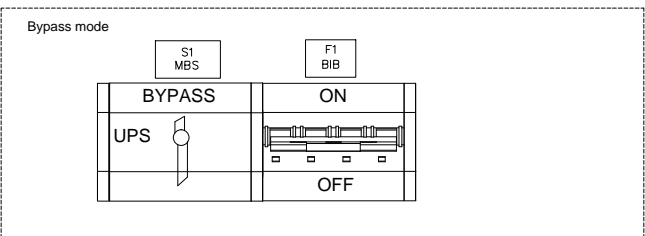
3. Turn the MBS (S1) to bypass position to bypass UPS:



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. Turn OFF the BIB (F1) to disconnect UPS from bypass and rectifier input:

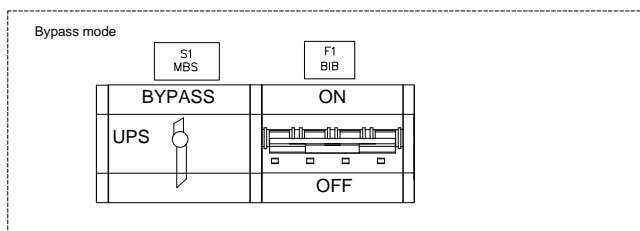


7. Use the external isolator to isolate the UPS rectifier input before maintaining the UPS, unless the UPS is supplied from a single feed.

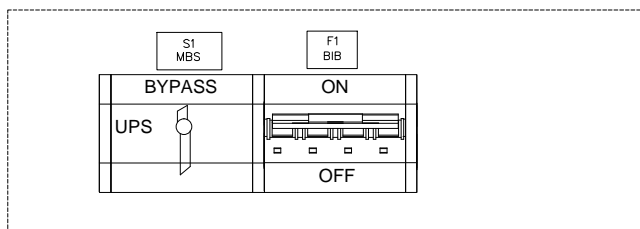
METRIC	 THIRD ANGLE PROJECTION	<h1 style="margin: 0;">EATON CORPORATION</h1>	
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CHECKED: E5900525/TKM			STATE: Release
SAFETY:			SHEET: 7 OF 8
APPROVED: E5900096/JE		Operating Instructions	

## Turn UPS from MECHANICAL BYPASS to NORMAL MODE

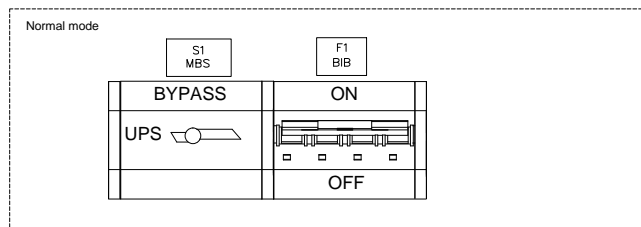
- The start position is following:



- Turn ON the BIB (F1) to connect Bypass and rectifier input to UPS:



- Use the external isolator to restore rectifier feed to the UPS, unless the UPS is supplied from a single feed.
- Turn the UPS Battery Breaker (CB1) and UPS Rectifier Input Switch (S1) to ON position.
- 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.
- Turn the MBS (S1) to UPS position to switch the output to UPS:



- 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



THIRD ANGLE PROJECTION

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