

# 防爆構造電気機械器具型式検定合格証

申請者	東京都港区赤坂八丁目11番37号 クーパー・インダストリーズ・ジャパン株式会社				
製造者	Great Marlins, Butterfield, Luton, LU2 8DL United Kingdom Eaton Electric Limited				
品名	電源モジュール				
型式の名称	Gecma PSU Module DC				
防爆構造の種類	安全増防爆構造 (e b) 樹脂充填防爆構造 (m b) 本質安全防爆構造 (i b)				
対象ガス又は蒸気の爆発等級及び発火度	IIC T4 Gb				
防爆記号	Ex ebmbib IIC T4 Gb				
適用基準	工場電気設備防爆指針（国際整合技術指針） JNIOSH-TR-46-1, 6:2015 及び 5, 7 : 2018 ルーチン試験 (QAR) 適用				
定格	定格電圧 DC 18 – 36 V 定格電流 5.5 A 非本安回路許容電圧 AC 250 V 50 / 60 Hz 出力電圧 DC 22 V 最大出力電圧 DC 28 V 最大出力電流 4 A  周囲温度 -30 °C ~ +60 °C				
使用条件	1. 周囲温度が 50 °C を超える場合は、定格 90 °C 以上のケーブルを使用すること。 2. ケーブルルグランドの近傍でケーブルに追加の引留機能をもたせること。				
型式検定合格番号	第 TC22825X 号				
有効期間		型式検定者の所属及び氏名			
2022年 9月27日から 2025年 9月26日まで		試験認証部 後藤 隆			
年	月	日から	年	月	日まで
年	月	日から	年	月	日まで
年	月	日から	年	月	日まで

機械等検定規則による型式検定に合格したことを証明する。

2022年 9月27日

型式検定実施者 公益社団法人 産業安全技術協会長

ルーチン試験について

2022年9月27日

公益社団法人 産業安全技術協会

ルーチン試験の対象品：

受付番号 Ex17942 号（2022年9月16日）／合格番号 TC22825X 号（2022年9月27日）

本型式検定合格品は、ルーチン試験が適用されます。新規に型式検定に合格してから輸入する合格品すべてを対象とする有効な品質審査レポート(QAR)を更新検定申請する際に資料として添付してください。QAR が添付されていないと、更新申請できません。QAR が更新されずに失効した場合、輸入したすべての合格品について適切にルーチン試験を実施したかどうか調査の対象となる場合がございますので、ご留意願います。更新申請しない場合においても、監督行政又は機械等登録型式検定機関から QAR の提示を求められる場合がございますので、併せてご留意願います。

ルーチン試験に関して、ご不明な点がございましたら、検定部までお問い合わせ願います。

以上

添付図面一覧表

順番号	図面名称	図面番号	備考
1	GENERAL ARRANGEMENT DC-DC PSU (1)	CI6811-624-1	
2	GENERAL ARRANGEMENT DC-DC PSU (2)	CI6811-624-2	
3	GENERAL ARRANGEMENT DC-DC PSU (3)	CI6811-624-3	
4	GENERAL ARRANGEMENT DC-DC PSU (4)	CI6811-624-4	
5	+24VDC Active Voltage Barrier Board – Title Page	10-500480-1	
6	+24.0VDC Active Voltage Barrier (Part A)	10-500480-2	
7	+24VDC Active Voltage Barrier (Part B)	10-500480-3	
8	FAB AND DRILL DRAWING +24VDC ACTIVE VOLTAGE BARRIER	11-500480-1	
9	+24VDC ACTIVE VOLTAGE BARRIER (1)	11-500480-2	
10	+24VDC ACTIVE VOLTAGE BARRIER (2)	11-500480-3	
11	+24VDC ACTIVE VOLTAGE BARRIER (3)	11-500480-4	
12	+24VDC ACTIVE VOLTAGE BARRIER (4)	11-500480-5	
13	+24VDC ACTIVE VOLTAGE BARRIER (5)	11-500480-6	
14	+24VDC ACTIVE VOLTAGE BARRIER (6)	11-500480-7	
15	+24VDC ACTIVE VOLTAGE BARRIER (7)	11-500480-8	
16	+24VDC ACTIVE VOLTAGE BARRIER (8)	11-500480-9	
17	+24VDC ACTIVE VOLTAGE BARRIER (9)	11-500480-10	
18	+24VDC ACTIVE VOLTAGE BARRIER (10)	11-500480-11	
19	+24VDC ACTIVE VOLTAGE BARRIER (11)	11-500480-12	
20	+24VDC ACTIVE VOLTAGE BARRIER (12)	11-500480-13	
21	GECMA RT DC PSU, MTL6811 TRACK LAYOUT	CI6811-622	
22	GECMA DC PSU, MTL6811 COMP LAYOUT	CI6811-623	
23	24VDC Active Voltage Barrier Board	20-500480	
24	6811 PCB Critical Component List	CI6811-621	
25	CIRCUIT DIAGRAM FOR MTL6811	CI6811-620	
26	CABLE ASSEMBLY, THERMAL FUSE, PSU ASSY, GECMA PSU	CI6810-626	
27	CABLE ASSEMBLY, THERMAL FUSE, PSU ASSY 2, GECMA PSU	CI6810-627	
28	UT 10 & ZFKDS	TIIS002	
29	ADE1F2-M16	1F2 ISO M16	
30	ADE1F2-M25	1F2 ISO M25	
31	GECMA PSU MODULE DC Certification Label Details - SIRA	CI6811-625	
32	Gasket dimensions	TIIS001	
	以下余白		

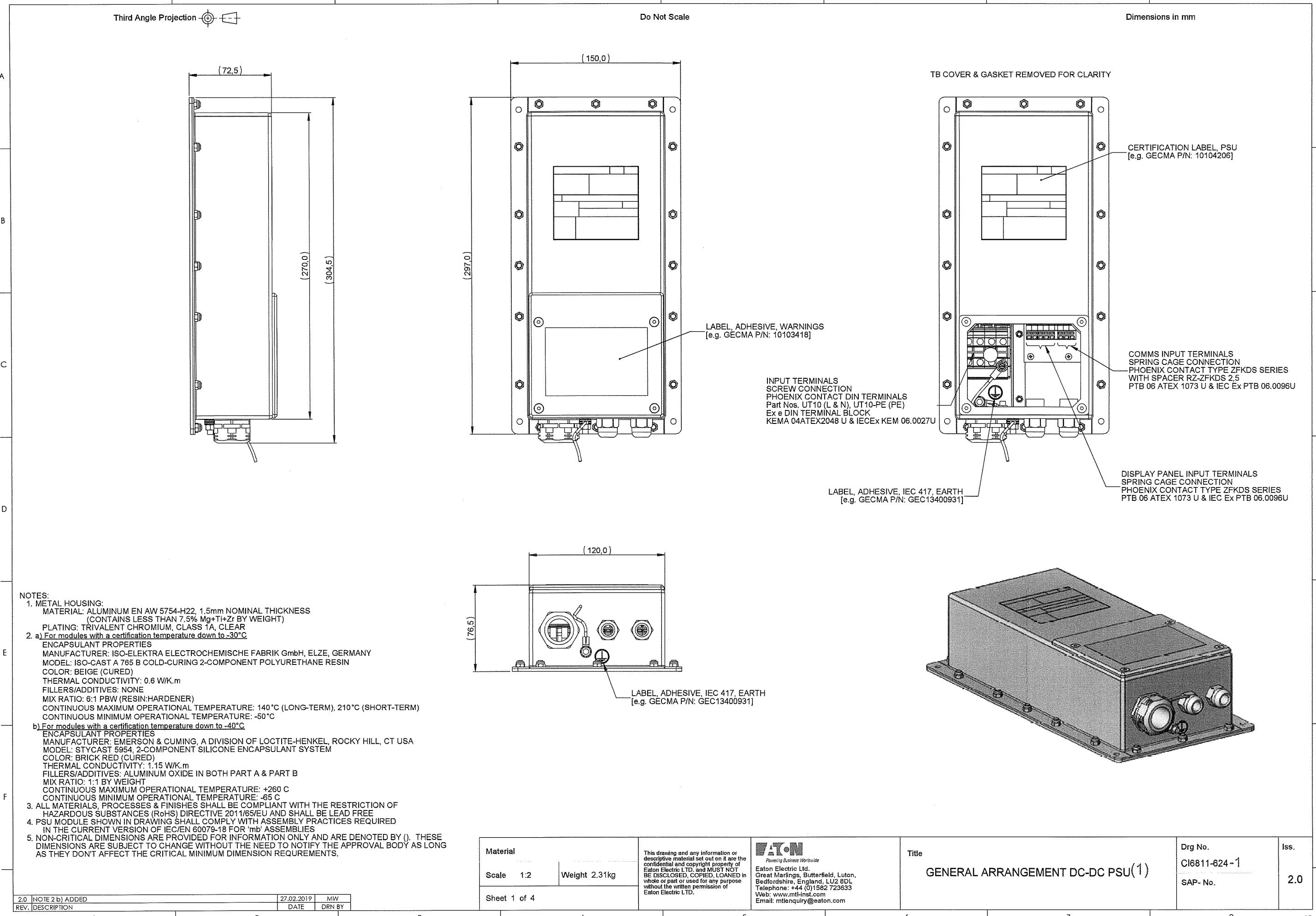
TC22825X\_0\_添付図面は  
図面1/32~32/32

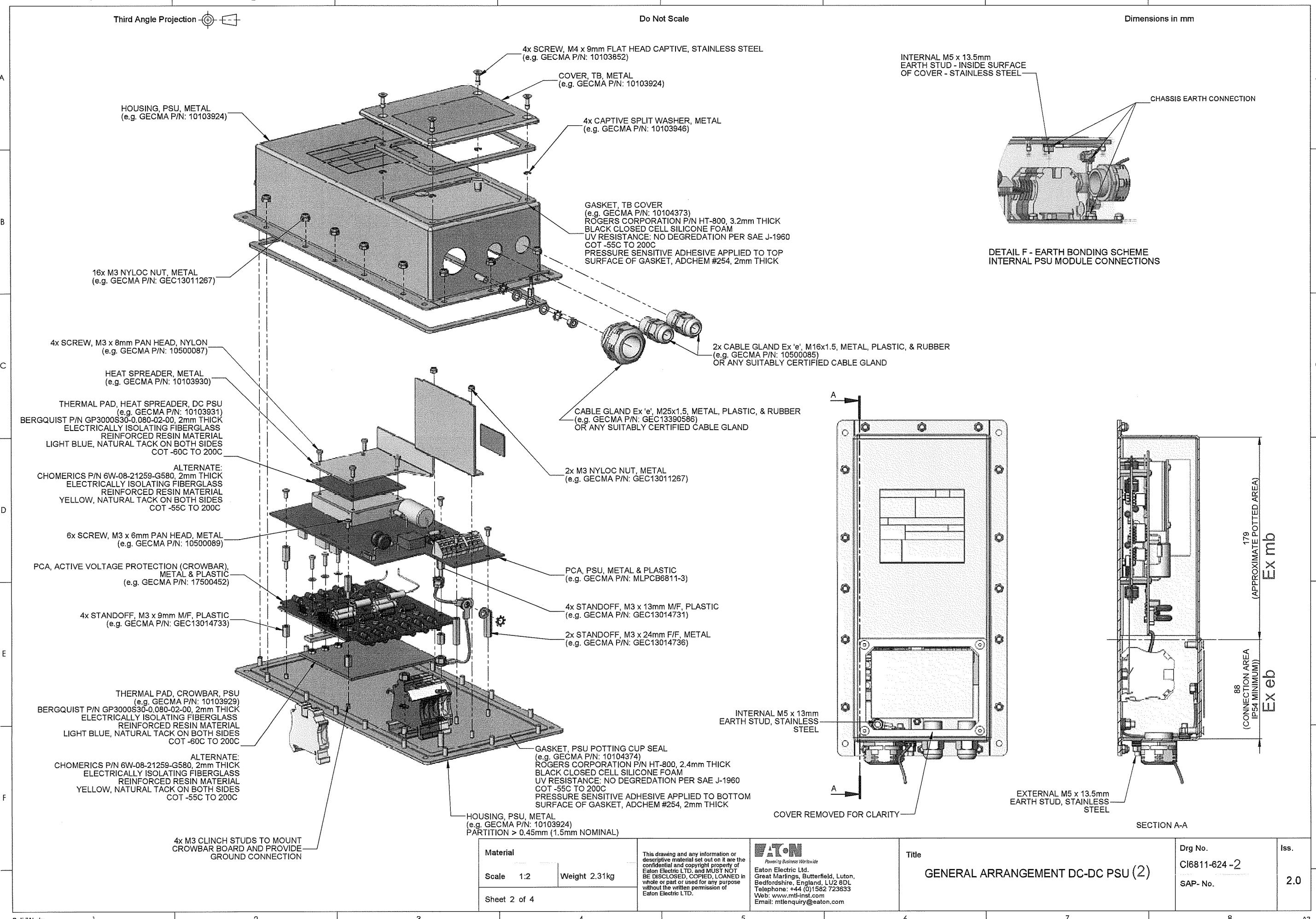
Third Angle Projection

Do Not Scale

Dimensions in mm

Ex Scheduled Drawing DO NOT modify without prior approval from Sira Certification Service





1 2 3 4 5 6 7 8 Dimensions in mm

Third Angle Projection

Do Not Scale

A

B

C

D

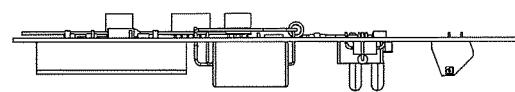
E

F

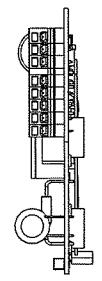
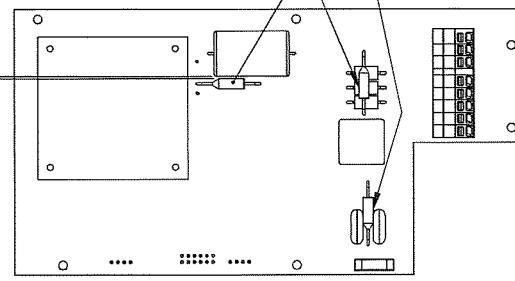
Approved on behalf of Sira Certification Service by ihulse

15/04/2019

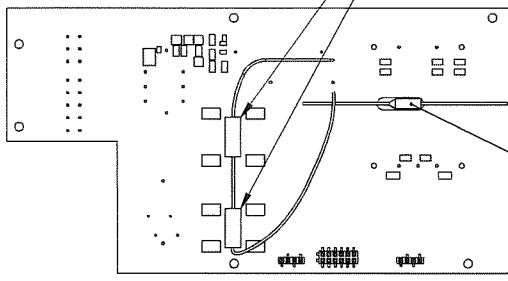
&lt;1mm GAP REQUIRED



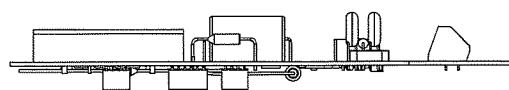
NON-RESETTABLE THERMAL CUTOUT, QTY 3  
CANITHERM P/N: DF110S OR DONG-YANG ELECTRONICS P/N: DF110S  
UL/cUL FILE No. E117626, 250VAC, 10A RATED  
TRIP TEMPERATURE +110°C +0°C/-5°C  
FUSES MUST BE >1mm FROM OTHER ELECTRONIC COMPONENTS



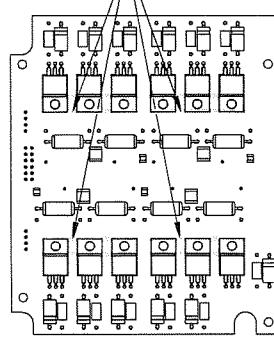
NON-RESETTABLE THERMAL CUTOUT, QTY 2  
CANITHERM P/N: DF110S OR DONG-YANG ELECTRONICS P/N: DF110S  
UL/cUL FILE No. E117626, 250VAC, 10A RATED  
TRIP TEMPERATURE +110°C +0°C/-5°C  
CABLE ASSEMBLY REMAINS IN <30V Ex ib SECTION  
AND SHALL BE SUPPLIED WITH A MINIMUM OF 1MM SOLID INSULATION



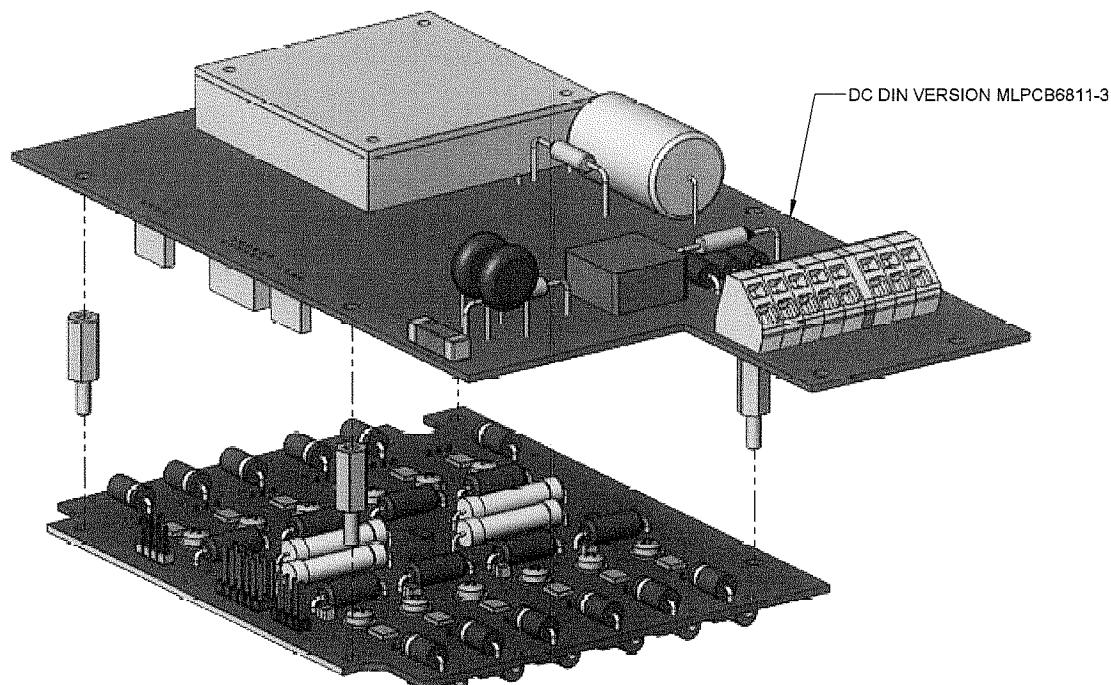
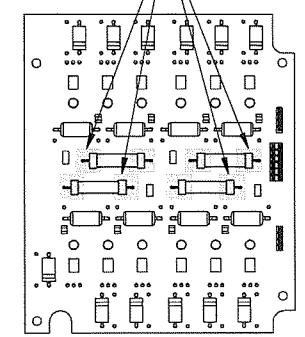
NON-RESETTABLE THERMAL CUTOUT, QTY 1  
[e.g. GECMA PCB P/N: XXXXX] CONTAINING  
CANITHERM P/N: DF110S OR DONG-YANG ELECTRONICS P/N: DF110S  
UL/cUL FILE No. E117626, 250VAC, 10A RATED  
TRIP TEMPERATURE +110°C +0°C/-5°C



## POWER SUPPLY PCA:

SCR HEAT SPREADERS, METAL  
AZONIX P/N: P17-102214

CROWBAR FUSE ENDCAPS  
SEALED WITH RTV ADHESIVE  
DOW CORNING 3145 OR SIMILAR  
4 PLACES



## ACTIVE VOLTAGE BARRIER CIRCUITS:

Material	Scale 1:2	Weight kg	This drawing and any information or descriptive material set out on it are the confidential and copyright property of Eaton Electric LTD, and MUST NOT BE DISCLOSED, COPIED, LOANED or Handed ON FOR ANY PURPOSE without the written permission of Eaton Electric LTD.	Title	Drg No.	Iss.
				GENERAL ARRANGEMENT DC-DC PSU(3)	Cl6811-624-3	2.0

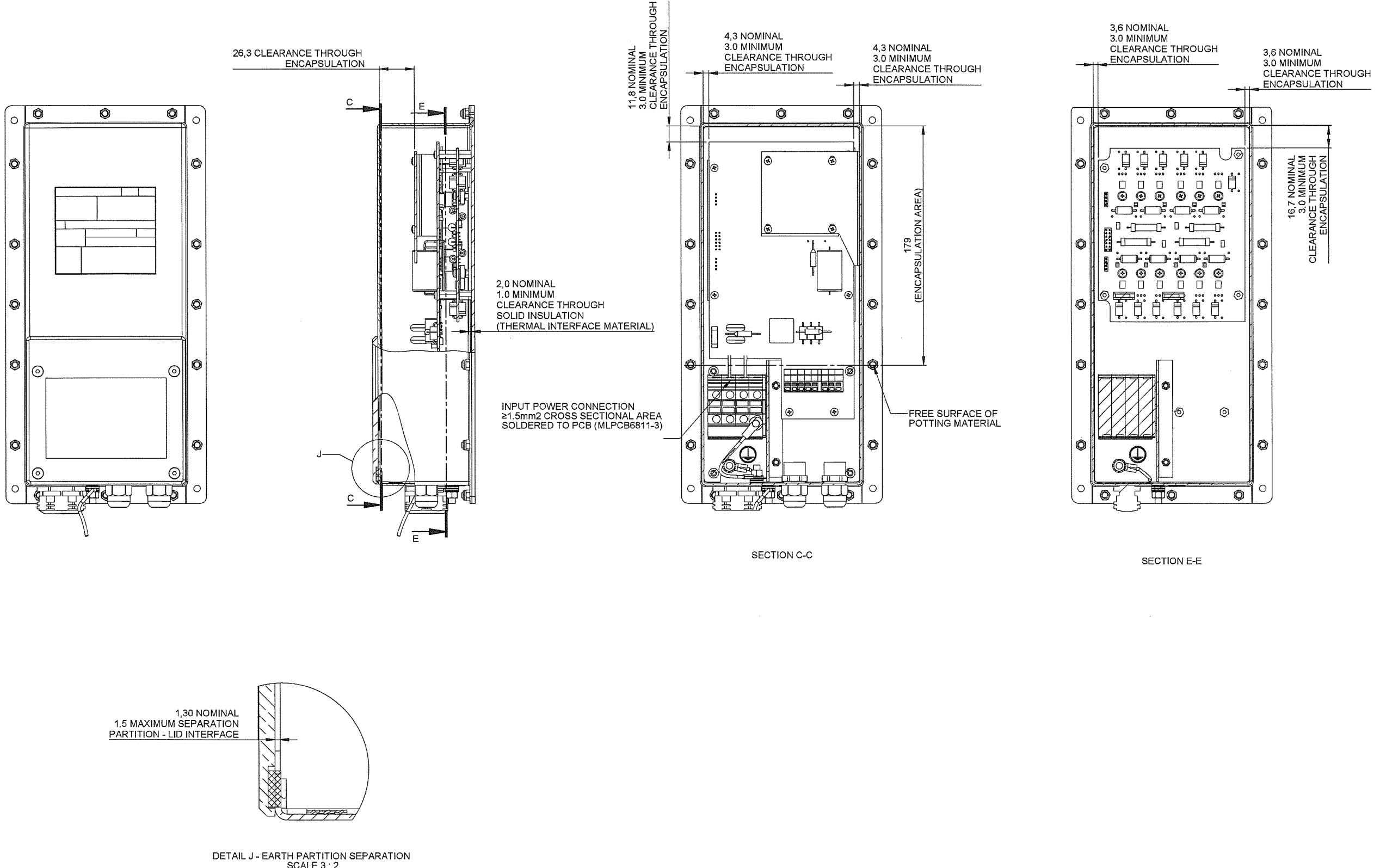
Sheet 3 of 4

**EATON**  
Powering Business Worldwide  
Eaton Electric Ltd.  
Great Marlings, Butterfield, Luton,  
Bedfordshire, LU2 8DL  
Telephone: +44 (0)1582 723533  
Web: www.mtl-inst.com  
Email: mtl.enquiry@eaton.com

Third Angle Projection

Do Not Scale

Dimensions in mm



Material	Scale 1:2	Weight 2.31kg	This drawing and any information or descriptive material set out on it are the confidential and copyright property of Eaton Electric LTD. It must not be DUPLICATED, COPIED, LOANED in whole or part or used for any purpose without the written permission of Eaton Electric LTD.	Eaton Electric Ltd. Great Marlins, Butterfield, Luton, Bedfordshire, England, LU2 8DL Telephone: +44 (0)1582 723633 Web: www.mtl-inst.com Email: mtl.enquiry@eaton.com	Title	GENERAL ARRANGEMENT DC-DC PSU(4)	Drg No.	CI6811-624-4	Iss.
Sheet 4 of 4							SAP-No.		2.0

10	9	8	7	6	↓	5	4	3	2	1
J										J
-										-
H										H
G										G
F										F
E										E
D										D
C										C
B										B
A										A

# A0826 - Pathfinder Crowbar Board

<b>Revision History</b>			
Rev	Description	Date	Engineer
01	Preliminary Release.	7/26/2013	Hai Nguyen

**Table of Contents**

Page 1: Title Page & Revision History  
 Page 2: +24VDC Active Voltage Barrier (Part A)  
 Page 3: +24VDC Active Voltage Barrier (Part B)

**Design Part Numbers**

Schematic	10-500480
PCB Fabrication Drawing	11-500480
Assembly Drawing	12-500480
PCB Outline/Rest Drawing	14-100210
Bill of Materials	20-500480

**Notes:**

- A. See design and layout notes on schematic
- B. Unless Otherwise Specified:
  - 1. Resistance values are in Ohms, 1%
  - 2. Capacitance Values are in uF, X=% Y=V
  - 3. All voltages are DC
  - 4. Reference designators conform to ANSI Y32.2-1975
  - 5. Electronics symbols conform to ANSI/IEEE 91-1984
  - 6. See ANSI Y1.1-1972 for most abbreviations and acronyms

 <small>A member of The MTL Instruments Group</small>	<p>101 Billerica Ave Building 4 Billerica, MA 01862 <a href="http://www.Azonix.com">www.Azonix.com</a></p> <p>Description: +24VDC Active Voltage Barrier Board - Title Page          Project: A0826 - Pathfinder          Document: 10-500480-1          Engineer: Hai Nguyen          Date: 08/21/2013 Rev: 1          Sheet: 1 of 3</p> <p>This drawing and the CAD database that it was generated from, including all subject matter indicated thereon, therein or derived therefrom, comprise proprietary information and are the express property of Azonix Corporation. Reproduction or dissemination of this information, in whole or in part, without the written permission of Azonix, is strictly forbidden.</p>
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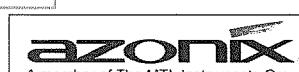
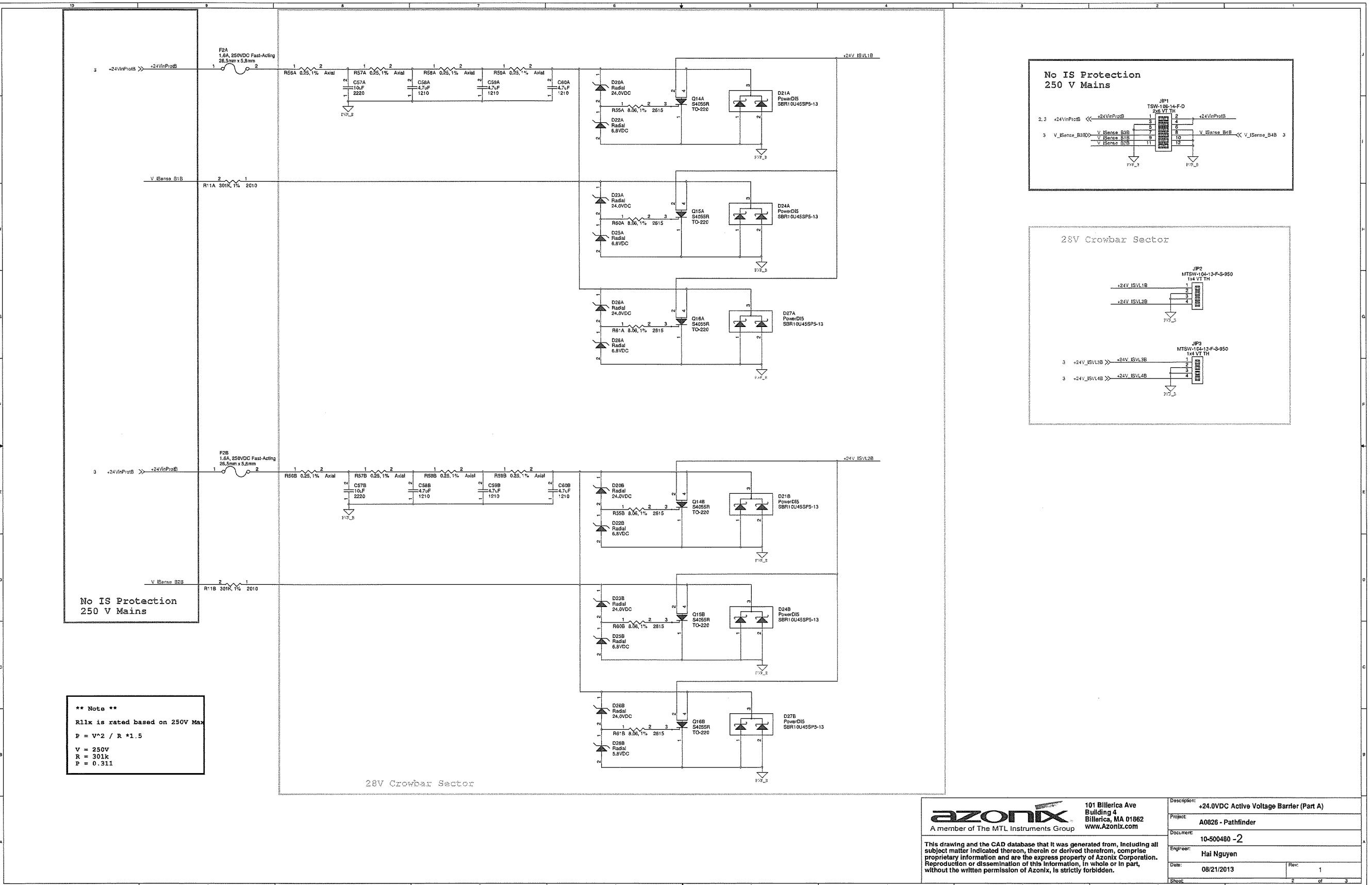
TC22825X\_0 添付書類

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5

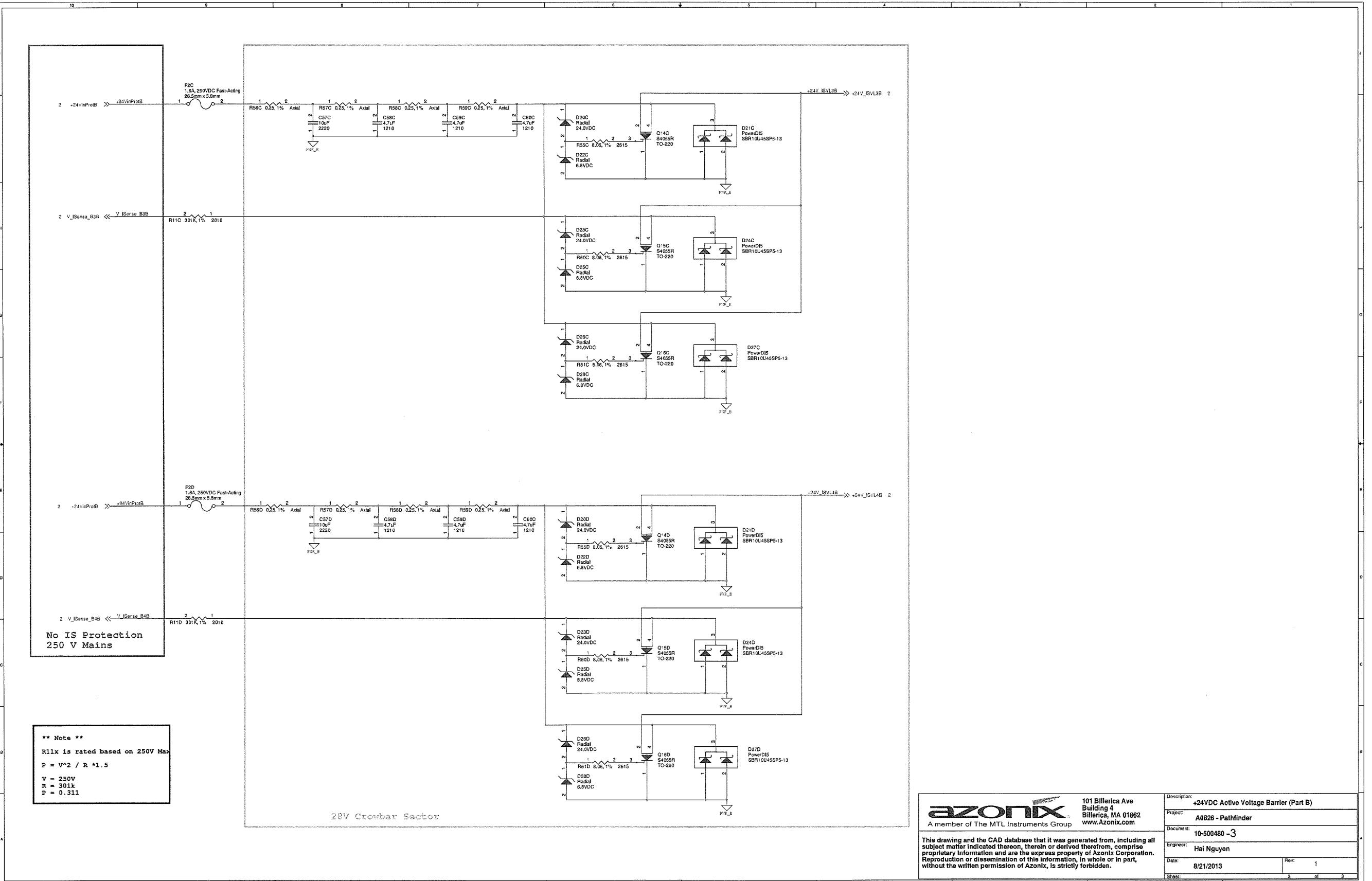
図面5/32

Apr ed on behalf of Sira Certification by D W Holton, 27 Aug 2014



A member of The MTL Instruments Group

Description:	+24.0VDC Active Voltage Barrier (Part A)
Project:	A0826 - Pathfinder
Document:	10-500480 -2
Engineer:	Hai Nguyen
Date:	08/21/2013
Sheet:	2 of 3



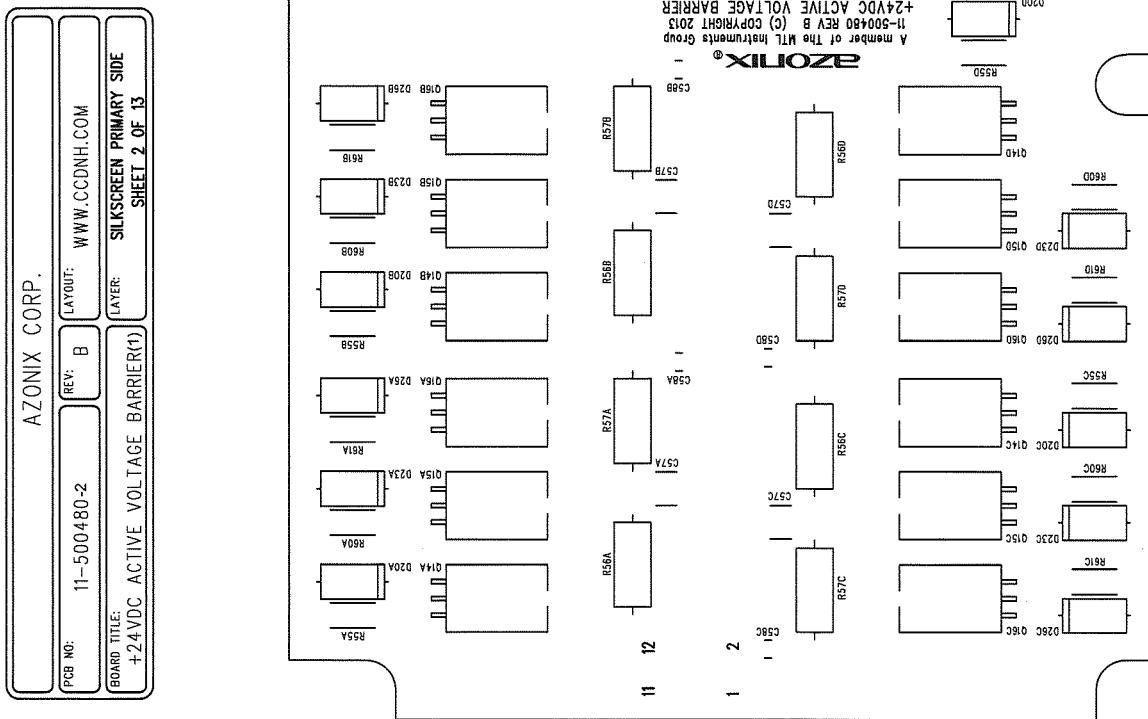
**azonix**  
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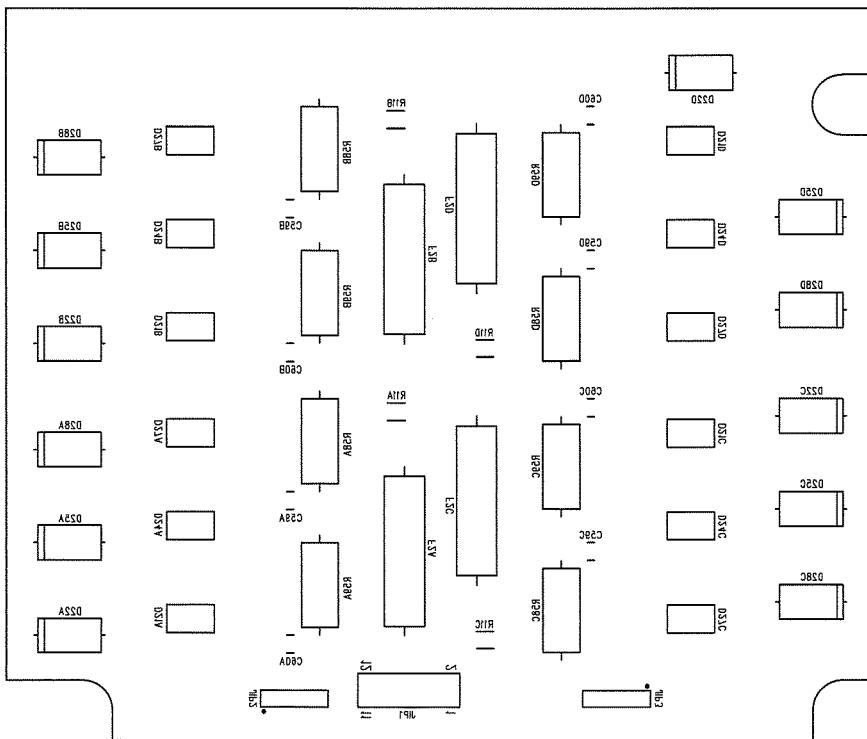
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Project:	A0826 - Pathfinder
Document:	10-500480-3
Engineer:	Hai Nguyen
Date:	8/21/2013
Rev:	1
Sheet:	3 of 3

Eaton Electric Limited

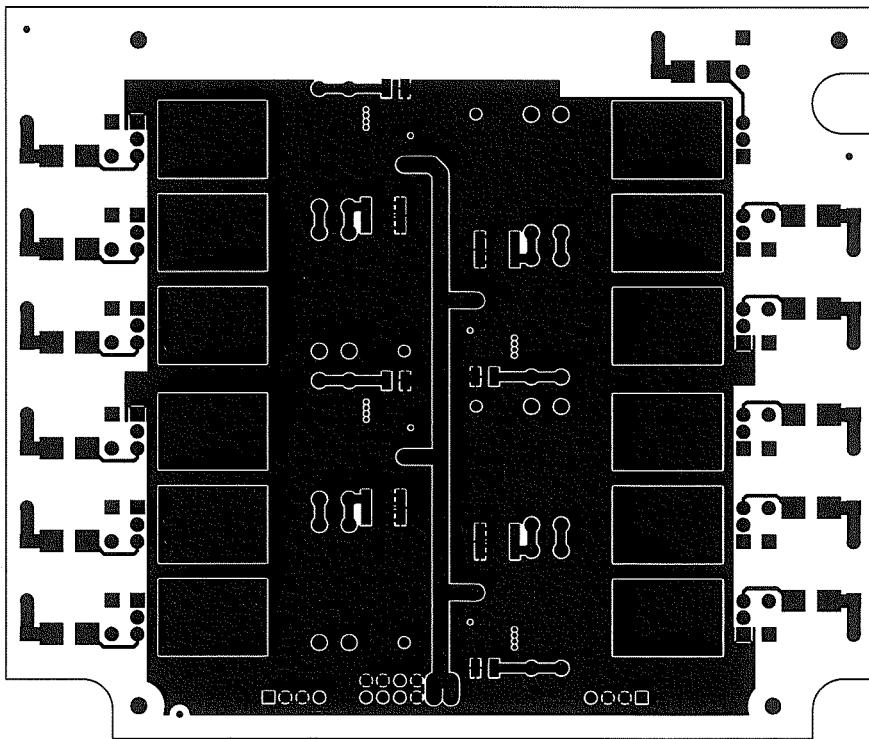
Approved on behalf of Sira Certification by D W Holton, 27 August 2014



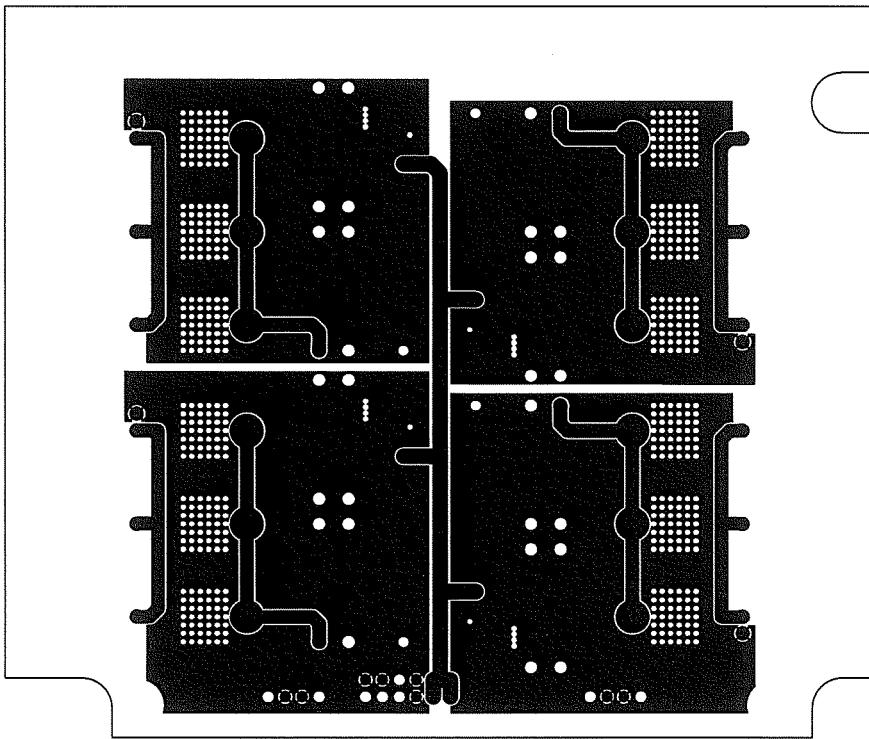
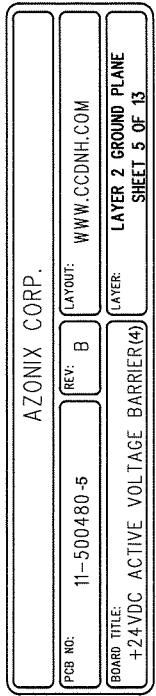
AZONIX CORP.	
PCB NO:	11-500480-3
BOARD TITLE:	+24VDC ACTIVE VOLTAGE BARRIER(2)
REV:	B
LAYOUT:	WWW.CCDDN.COM
LAYER:	SILICON SCREEN SECONDARY SIDE
SHEET 3 OF 13	



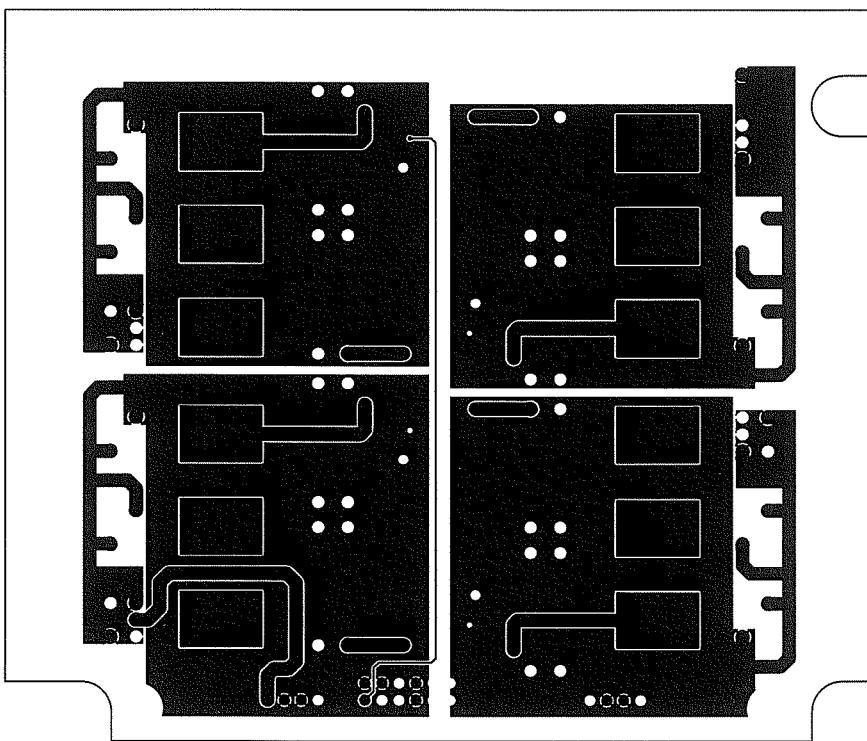
AZONIX CORP.	
PCB NO:	11-500480-4
REV:	B
LAYOUT:	WWW.CCDNH.COM
BOARD TITLE:	+24VDC ACTIVE VOLTAGE BARRIER(3)
LAYER:	LAYER 1 PRIMARY SIDE
	SHEET 4 OF 13



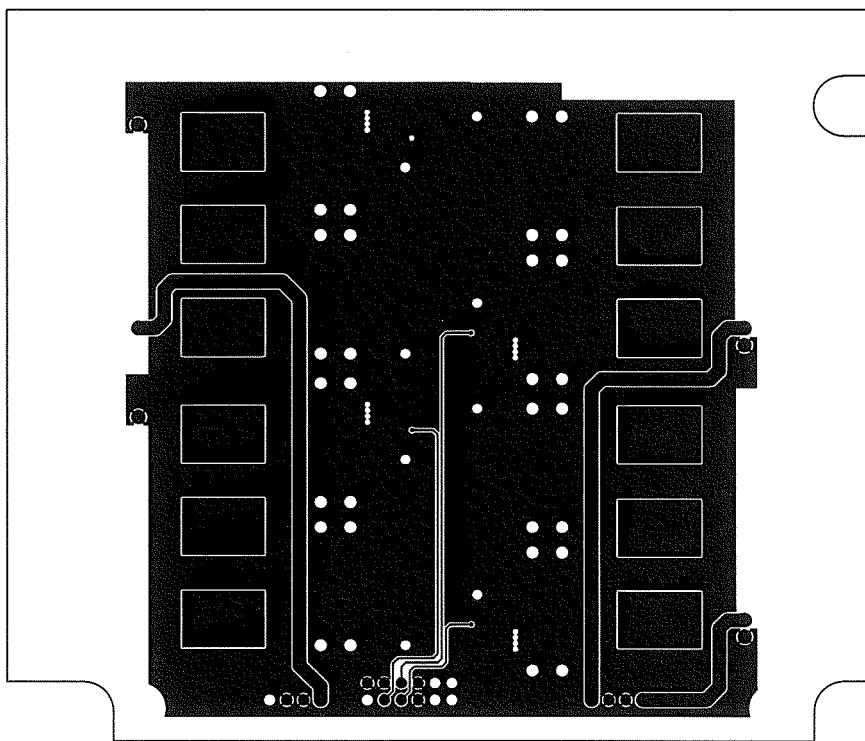
Eaton Electric Limited



AZONIX CORP.	
PCB NO:	11-500480-6
REV:	B
LAYOUT:	WWW.CCDINH.COM
BOARD TITLE:	LAYER 3 +24VDC ACTIVE VOLTAGE BARRIER(5)
LAYER:	SHEET 6 OF 13

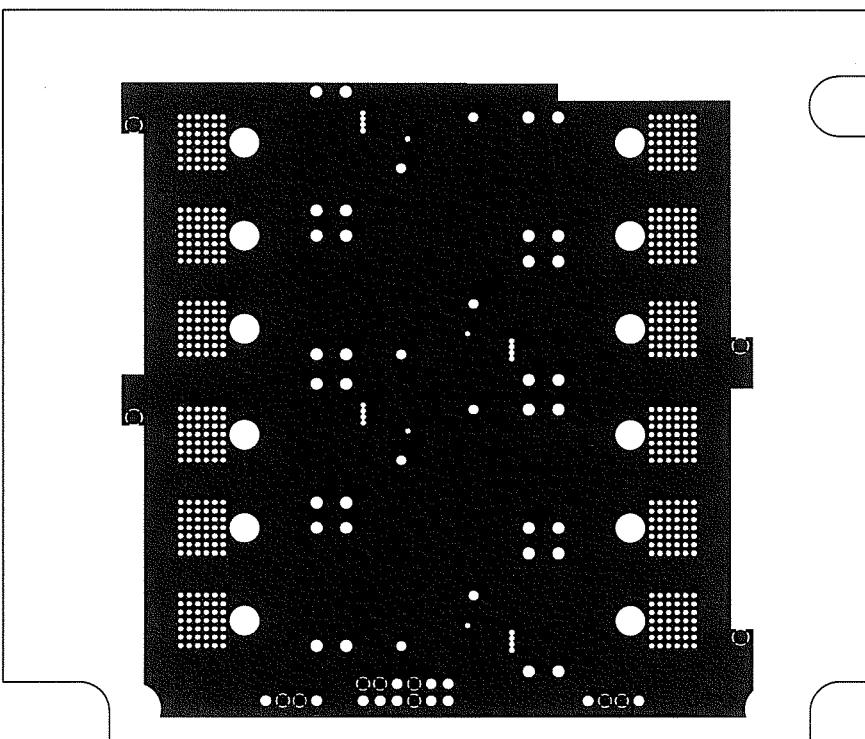


AZONIX CORP.
PCB NO: 11-500480-7
REV: B
LAYOUT: WWW.CCDINH.COM
BOARD TITLE: +24VDC ACTIVE VOLTAGE BARRIER(6)
LAYER: LAYER 4
SHEET 7 OF 13



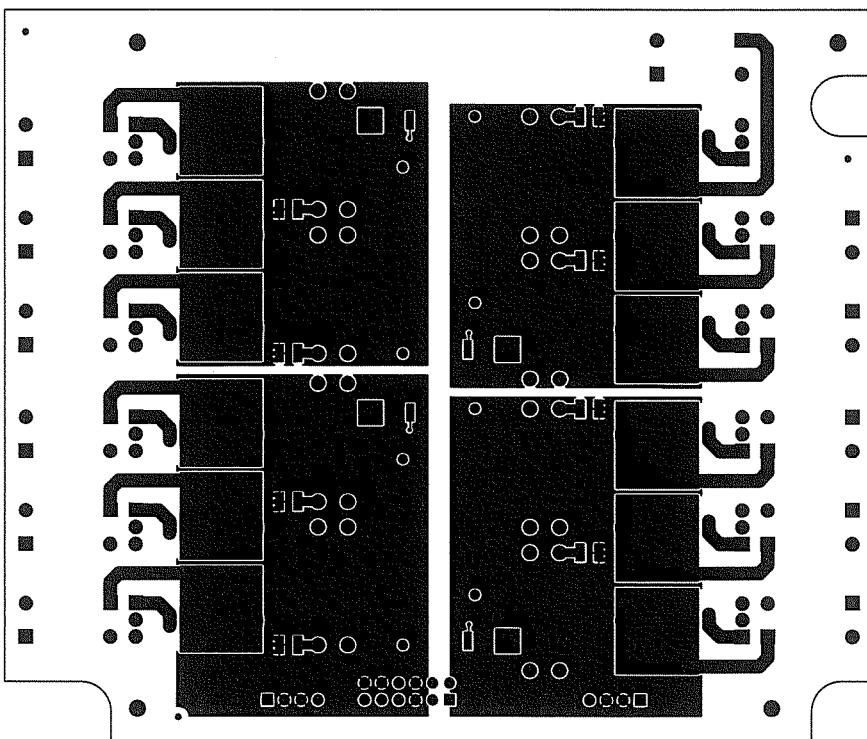
Eaton Electric Limited

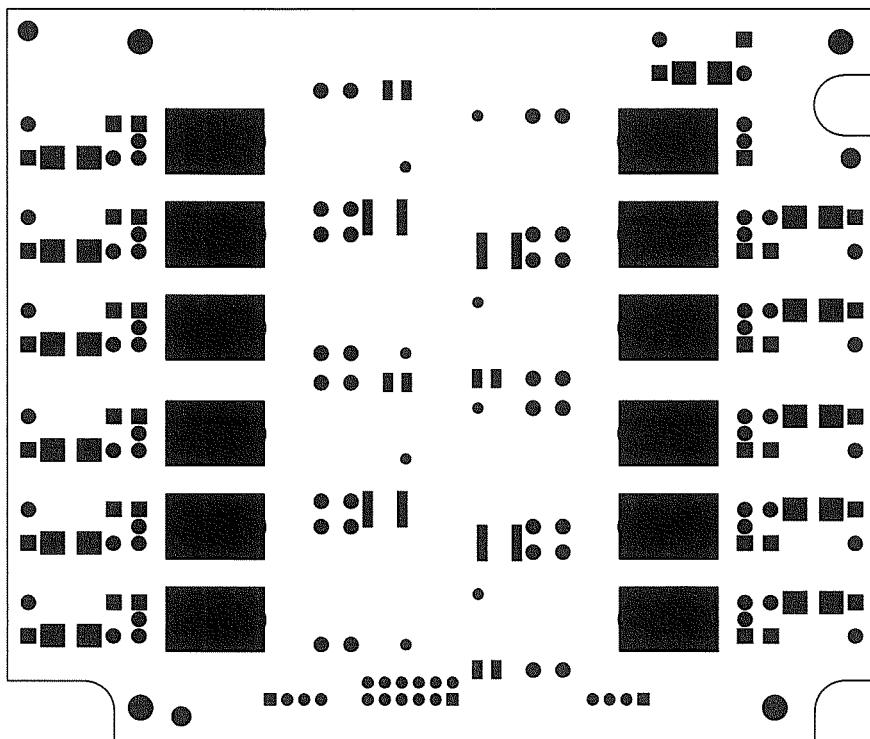
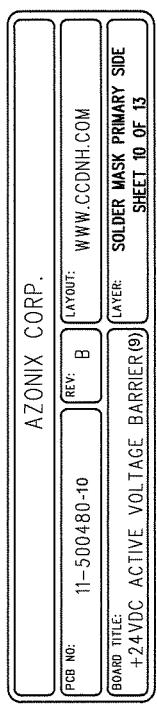
AZONIX CORP.  
PCB NO: 11-500480-8 REV: B LAYOUT: WWW.CCDNH.COM  
BOARD TITLE: +24VDC ACTIVE VOLTAGE BARRIER(L) LAYER: LAYER 5 GROUND PLANE SHEET 8 OF 13



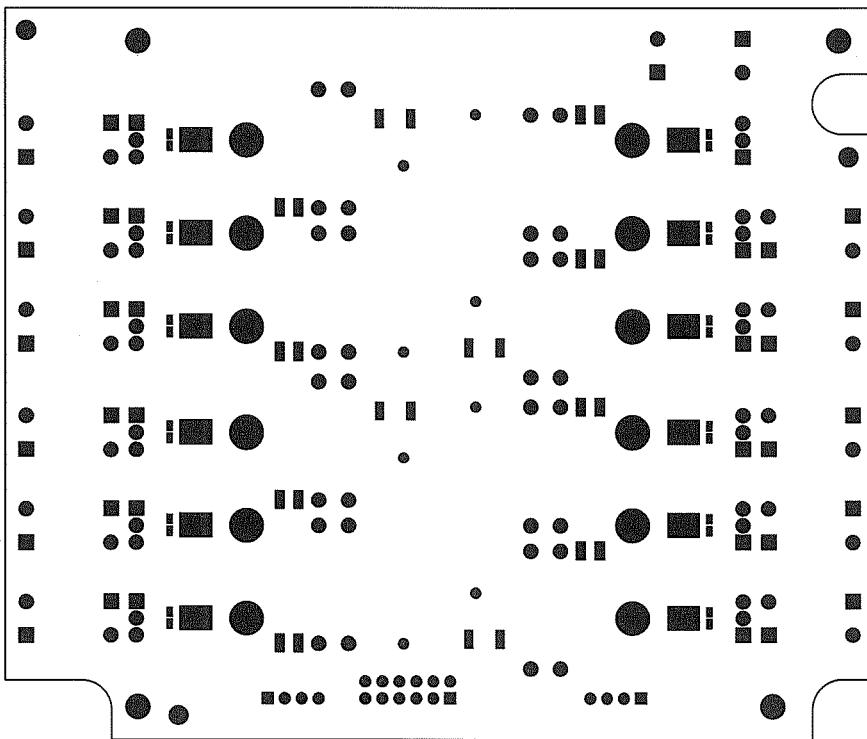
Eaton Electric Limited

AZONIX CORP.
PCB NO: 11-500480-9
REV: B
LAYOUT: WWW.CCDNH.COM
BOARD TITLE: +24VDC ACTIVE VOLTAGE BARRIER(8)
LAYER: LAYER 6 SECONDARY SIDE
SHEET 9 OF 13



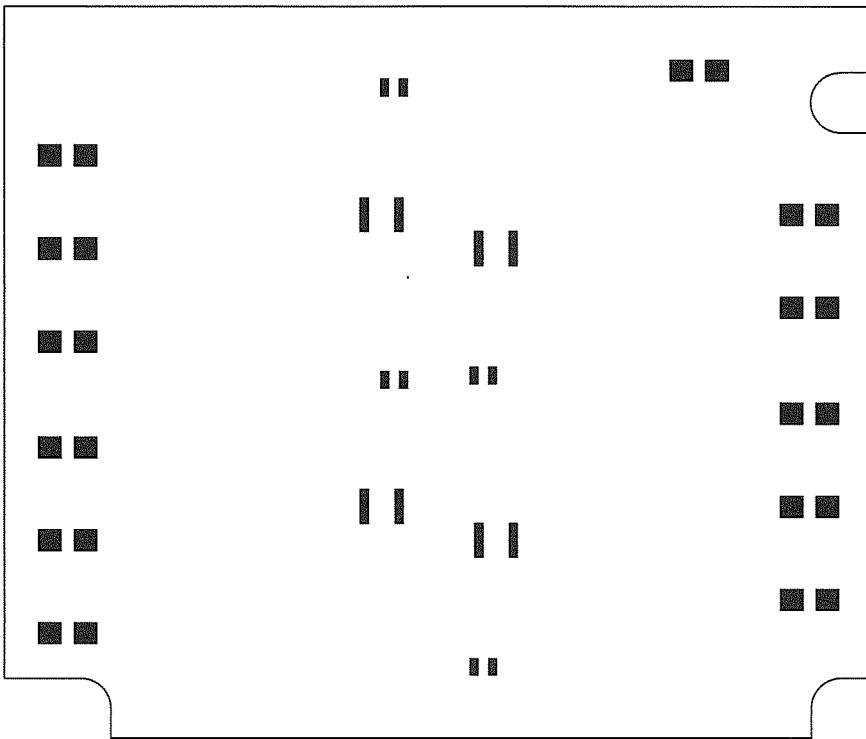


AZONIX CORP.
PCB NO: 11-500480-11
REV: B
LAYOUT: WWW.CCDNH.COM
BOARD TITLE: +24VDC ACTIVE VOLTAGE BARRIER R10
LAYER: SOLDER MASK SECONDARY SIDE
SHEET 11 OF 13



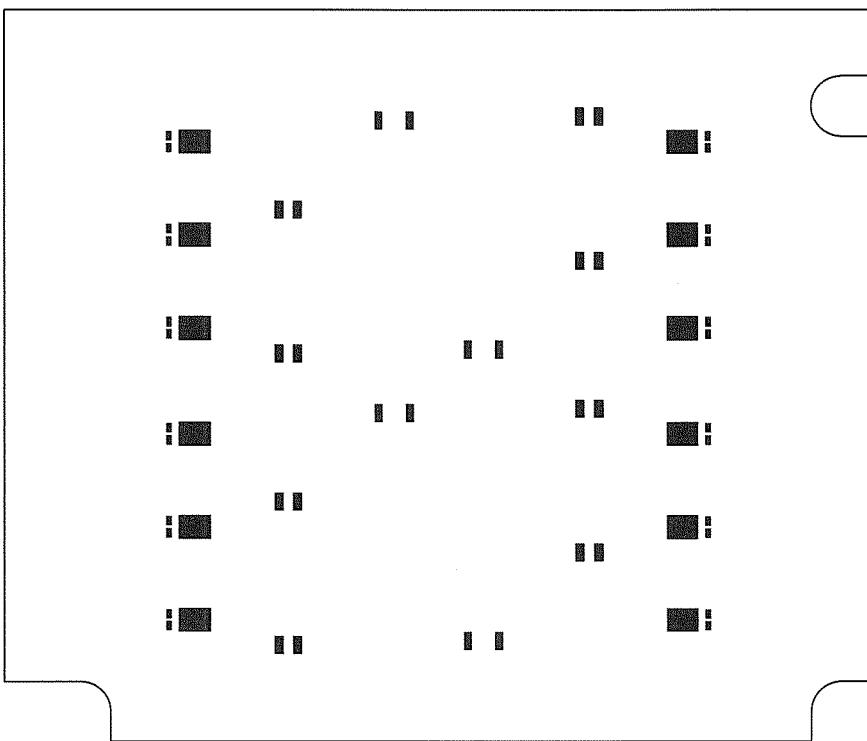
Eaton Electric Limited

AZONIX CORP.	
PCB NO: 11-500480-12	REV: B
LAYOUT: WWW.CCDNHC.COM	
BOARD TITLE: +24VDC ACTIVE VOLTAGE BARRIER R11	LAYER: PASTE MASK PRIMARY SIDE SHEET 12 OF 13



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AZONIX CORP.	
PCB NO:	11-500480-13
REV:	B
LAYOUT:	WWW.CCDNHI.COM
BOARD TITLE:	+24VDC ACTIVE VOLTAGE BARRIER(2)
LAYER:	PASTE MASK SECONDARY SIDE SHEET 13 OF 13



1 2 3 4 5 6 7 8

Third Angle Projection

Do Not Scale

Dimensions in mm

A

B

C

D

E

F

A

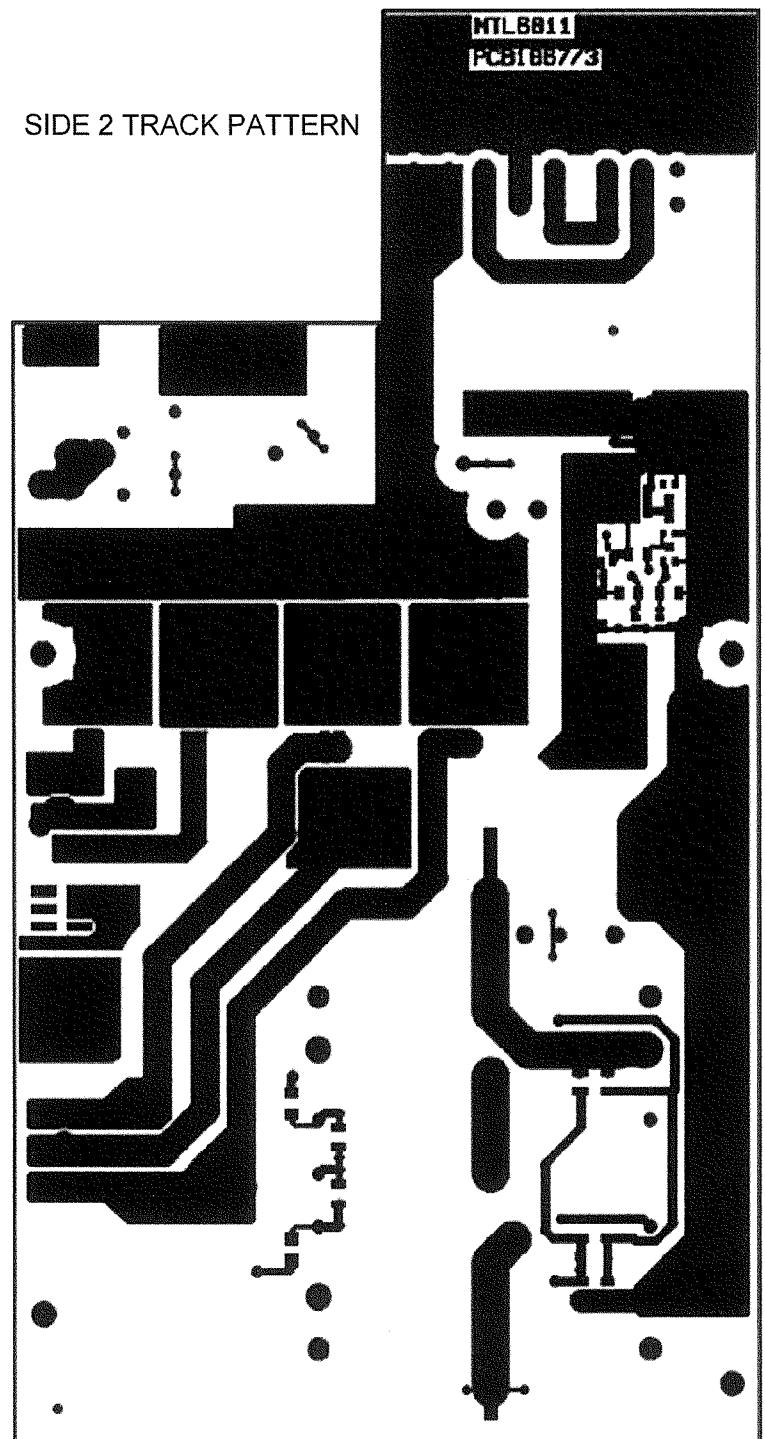
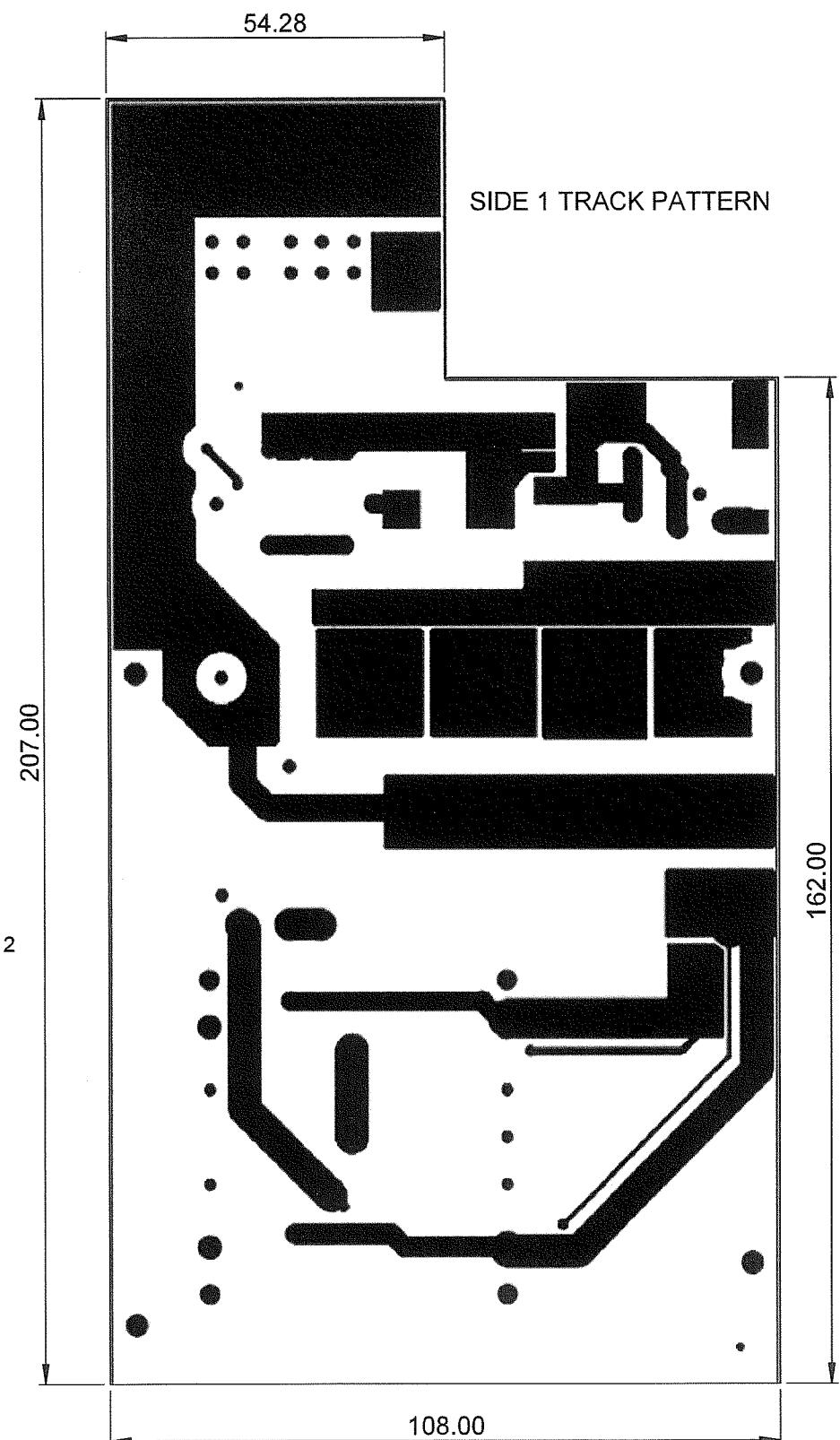
B

C

D

E

F



NOTES

1. PCB MATERIAL - FR4
2. PCB CTI  $\geq$  175 MEASURED ACCORDING TO IEC12
3. PCB THICKNESS  $\geq$  1.4mm

A copy made on behalf of Sira Certification by D W Holton, 17 April 2015

Ex scheduled drawing: DO NOT modify without approval from Sira Certification

Sheet 1 of 1

1	30.03.15	FIRST ISSUE	Scale 1:1	Copyright Reserved Written Permission To Copy Should Be Obtained	Measurement Technology Ltd, Luton, England	Title GECMA RT DC PSU, MTL6811 TRACK LAYOUT	Drg. No CI6811-622	Iss. 1
Iss	Date	Modification	Tolerance $\pm$					

SolidWorks

1

2

3

4

5

6

7

8

A3

21

1 2 3 4 5 6 7 8

Third Angle Projection

Do Not Scale

Dimensions in mm

A

A

B

B

A: Issued on behalf of Sira Certification by D W Holton, 17 April 2015

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NOTES:

1. ORIENTATION OF THE FUSE BODIES (FS2, FS3, FS4 & FS5) MUST BE AS SHOWN. THE FUSE BODY MUST NOT BE SUBJECT TO EXCESSIVE TEMPERATURE.

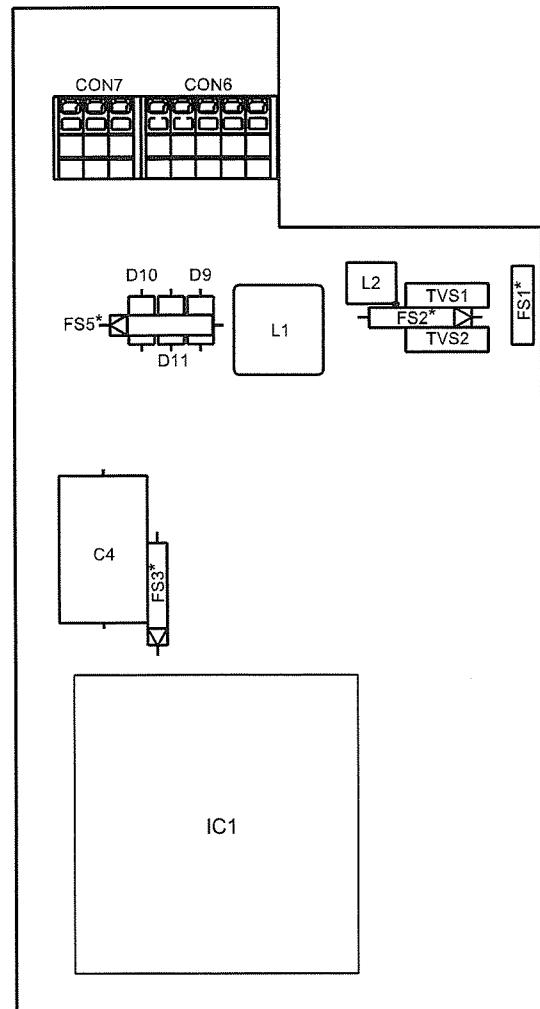
FUSE DISTANCES FROM COMPONENTS TO BE AS FOLLOWS :-

FS2 TO BE MOUNTED MID HEIGHT OF TVS1 & TVS2 WITH GAP BETWEEN BODIES OF 1 - 2mm

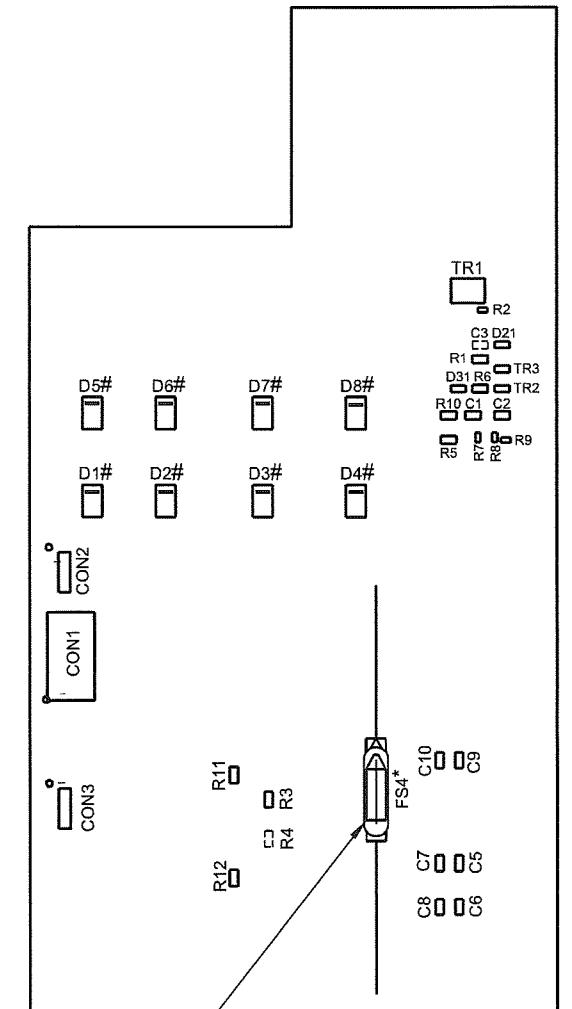
FS3 TO BE MOUNTED MID-HEIGHT OF C4 WITH GAP BETWEEN BODIES OF 1 - 2mm.

FS5 TO BE MOUNTED ACROSS THE BODIES OF D9, D10 & D11, WITH 1 - 2mm GAP BETWEEN FUSE AND DIODE BODIES

2. COMPONENTS RATED ACCORDING TO IEC60079-1, SECTION 7.1  
SHOWN THUS :- #



SIDE 1 COMPONENTS



SIDE 2 COMPONENTS

BODY OF FS4 TO BE SEATED  
INTO OBLIQUE CUTOUT IN PCB

Sheet 1 of 1

1	4.15		Scale 1:1	Copyright Reserved Written Permission To Copy Should Be Obtained	Measurement Technology Ltd, Luton, England	Title GECMA DC PSU, MTL6811 COMP LAYOUT	Drg No CI6811-623	Iss. 1
Iss	Date		Modification	Tolerance ±				

## 24VDC Active Voltage Barrier Board (20-500480) BOM

 A member of The MTL Instruments Group	Project Name:	Pathfinder
	Project Number:	A0826
	Description:	24VDC Active Voltage Barrier Board
	BOM Number:	20-500480
	Revision:	2
	Date:	20/02/2014

PLEASE NOTE: Any changes to the BOM revision will also require to update and up-rev following documents. Revision number of this BOM is called out in the label drawings as Hardware revision.

## Notes:

- 1) Specified parts are primary sources. No substitution without consulting Azonix.
- 2) Mark on the solder side of the board ASSY Part Number (20-500480) and Revision of the BOM (mentioned above) using a permanent marker or an approved label.
- 3) RoHS assembly process is required.
- 4) If changes are made to critical components identified in this document, the corresponding changes need to be made in 19-102xxx after approval from certification agencies.

## Reference Documents:

Item #	Quantity	Reference	Description	Azonix Part Number	MFR Part Number	Mfg	
1	1	FAB Drawings	FAB Drawings	11-500480		Azonix	
2	0	ASSY Drawing	ASSY Drawing	12-500480		Azonix	
3	0	Schematics	Schematics	10-500480		Azonix	
4	0	Critical Component List	Critical Component List	19-100xxx		Azonix	
5	0	Restriction Drawing	Restriction Drawing	14-100210		Azonix	

## Components:

Item #	Quantity	Reference Designator	Description	Azonix Part Number	MFR Part Number	Manufacturer	PCB FootPrint
1	4	C57A, C57B, C57C, C57D	Capacitor Ceramic, 2220 10uF 50V 10% X7R	22-100471	C5750X7R1H106K230KB	TDK	SMD-2220
2	12	C58A, C58B, C58C, C58D, C59A, C59B, C59C, C59D, C60A, C60B, C60C, C60D	Capacitor Ceramic, 1210 47uF 50V 10% X7R	22-100476	C1210C475K5RACTU	Kemet	SMD-1210
3	12	D20A, D20B, D20C, D20D, D23A, D23B, D23C, D23D, D26A, D26B, D26C, D26D	Diode, Transient Voltage Suppressor, 240V 15kW	23-100387	1.5KE24A-T	Diodes Inc.	DO-201
4	12	D22A, D22B, D22C, D22D, D25A, D25B, D25C, D25D, D28A, D28B, D28C, D28D	Diode, Transient Voltage Suppressor, 6kV 15kW	23-100389	1.5KE6V8A-T	Diodes Inc.	DO-201
5	12	D21A, D21B, D21C, D21D, D24A, D24B, D24C, D24D, D27A, D27B, D27C, D27D	Diode, Schottky, Single Cathode Dual Anode, 10A, 45V 0.47Vd	23-100388	SBR10U45SP5-13	Diodes Inc.	SMD POWERD15
6	4	F2A, F2B, F2C, F2D	Fuse, 16A 250V Fast-Acting Fuse	35-100528	021601.6MXEP	Littelfuse	TH
7	1	JIP1	Connector, Header 2x6 Vertical, 0.1" Pitch	29-101380	TSW-106-23-F-D	Samtec	TH
8	2	JIP2, JIP3	Connector, Header 1x4 Vertical, 0.1" Pitch	29-101381	TSW-104-23-F-S	Samtec	TH
9	12	Q14A, Q14B, Q14C, Q14D, Q15A, Q15B, Q15C, Q15D, Q16A, Q16B, Q16C, Q16D	SCR 400VDC 55Amp	23-100393	S4055R	Littelfuse	TO-220-3
10	4	R11A, R11B, R11C, R11D	Resistor, 2010 301K-Ohm 1%	21-030644	ERJ-12SF3013U	Panasonic	SMD-2010
11	16	R56A, R56B, R56C, R56D, R57A, R57B, R57C, R57D, R58A, R58B, R58C, R58D, R59A, R59B, R59C, R59D	Resistor, Axial 0.25-Ohm 1% 5W	21-030645	UB5C-0R25F1	Reidon	Axial
12	12	R55A, R55B, R55C, R55D, R60A, R60B, R60C, R60D, R61A, R61B, R61C, R61D	Resistor, 2615 806-Ohm 1% 1W	21-030643	SM2615FT8R06		SMD-2615

## Key Notes:

Do Not Install (DNI) or layout features/non-parts
Change from previous version
Note that drawing has been provided
SIRA Critical Component

## DNI Components:

Item #	Quantity	Reference Designator	Description	Azonix P/N	MFG P/N	Manufacturer	FootPrint

Eaton Electric Limited



Powering Business Worldwide™

Eaton Electric Ltd,  
Great Marlins, Butterfield, Luton, Bedfordshire, England, LU2 8DL  
Telephone: +44 (0)1582 723633 | Web: [www.mtl-inst.com](http://www.mtl-inst.com) | Email: [mtl.enquiry@eaton.com](mailto:mtl.enquiry@eaton.com)

This drawing and any information or descriptive material set out on it are the confidential and copyright property of Eaton Electric Ltd. and MUST NOT BE DISCLOSED, COPIED, LOANED in whole or part or used for any purpose without the written permission of Eaton Electric Ltd.

Component designation	Rating	Description
D1#, D2#, D3#, D4#, D5#, D6#, D7#, D8#	-	200V 10A Schottky diode, package size POWERDI™ or larger
FS1*	-	6.3A, 1500A @ 305VAC, 4.5 x 16mm time lag fuse, ≥8mm terminal spacing, ≤6 s blow time at 10A, e.g. Siba 160016 series
CON1	-	2X6 SMT 2.54mm pitch DIL socket
CON2, CON3	-	1X4 SMT 2.54mm pitch DIL socket
IC1	-	DC/DC PSU, MTM Power PMD150 24S24 UHB or Cincon CHB150W 24S24
FS2*, FS3*, FS4*, FS5*	-	110°C 250 V 10A thermal fuse, e.g. Dong Yang DF110S
Thermal fuse x 2 located in cable (fitted between TP1 & TP2)	-	110°C 250 V 10A thermal fuse, e.g. Dong Yang DF110S
CON7	-	3-way Ex e ≥32V spacing spring clamp terminal, ≥10A, -40°C to +110°C, Phoenix ZFKDS series
CON6	-	5-way Ex e ≥32V spacing spring clamp terminal, ≥10A, -40°C to +110°C, Phoenix ZFKDS series

## NOTES:

D1-8 are safety components that are important to intrinsic safety compliance and should not be substituted without reference to the Approvals Body

CON6 & CON7 are important to Ex eb compliance

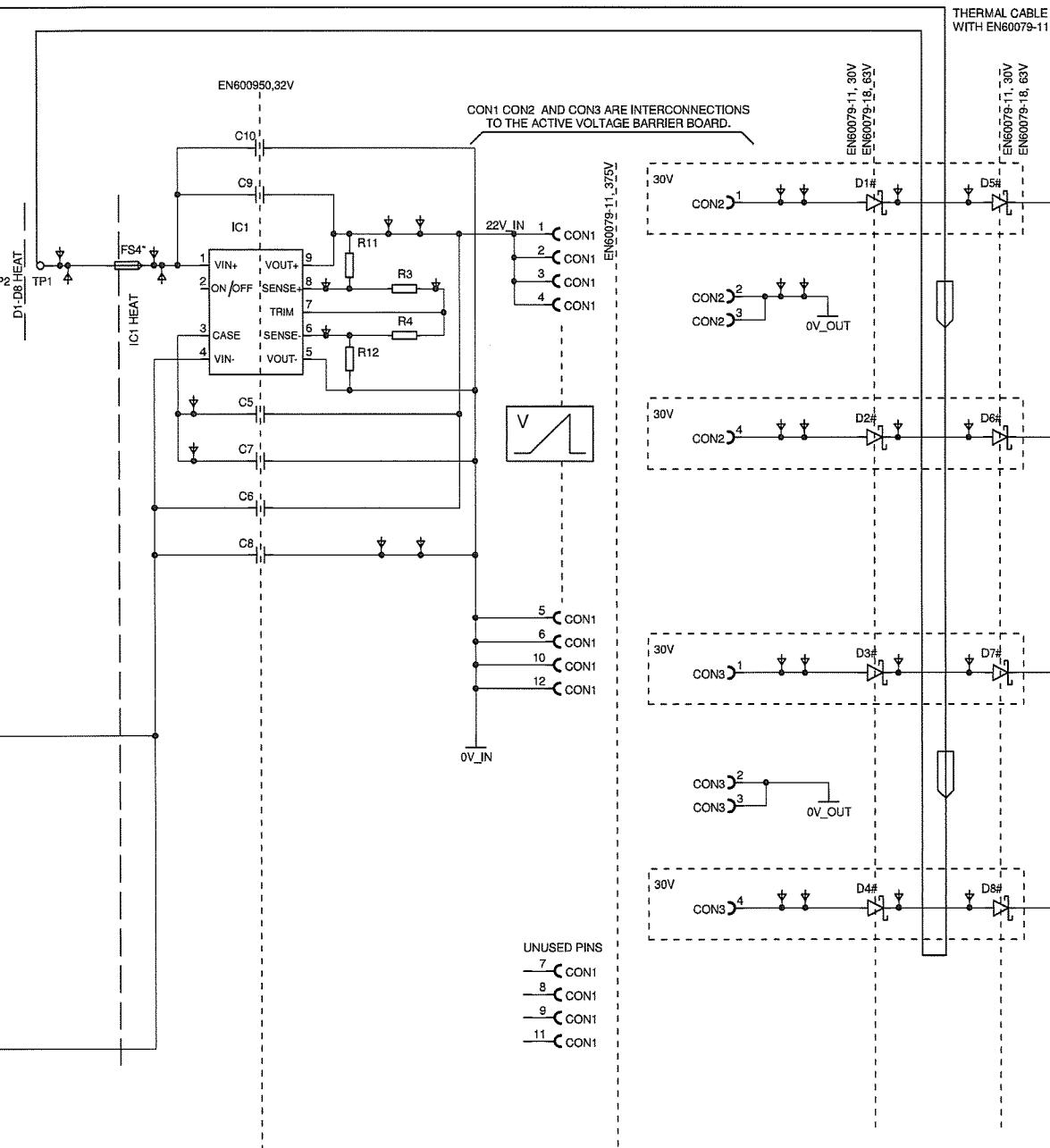
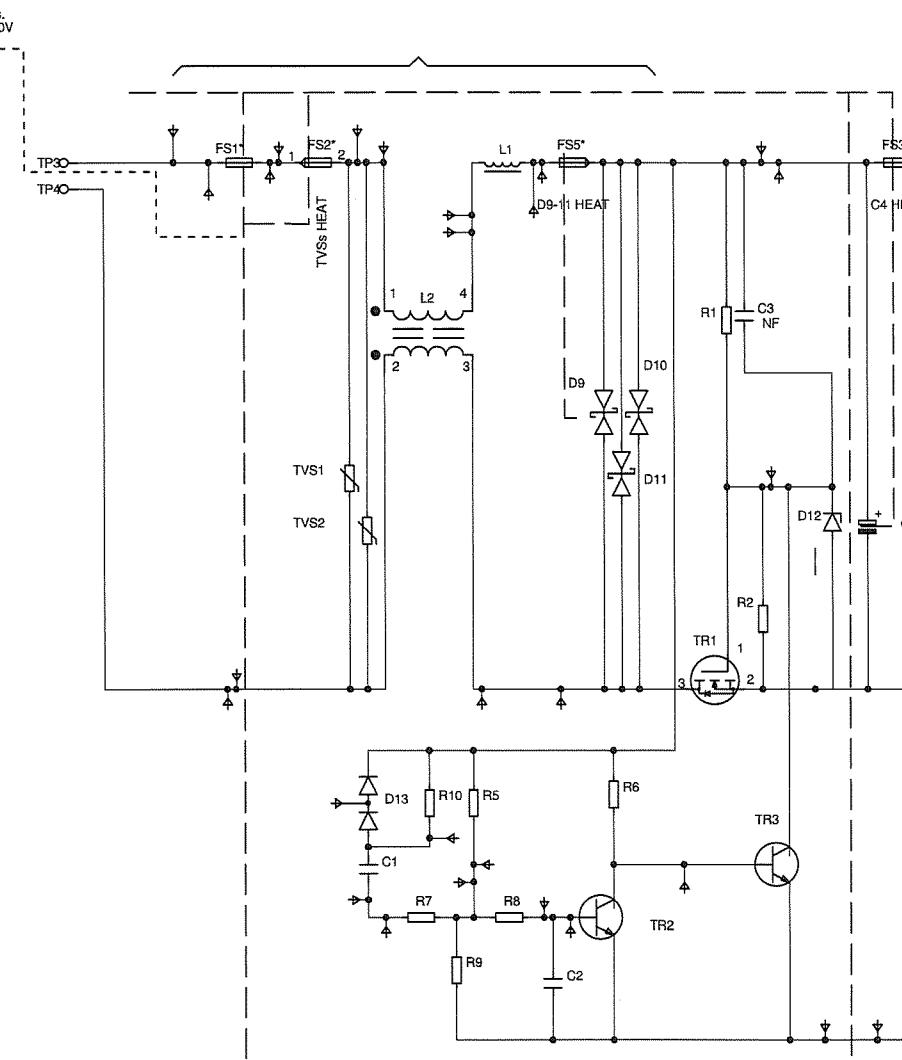
FS1 and all thermal fuses are important to Ex mb compliance

## MODIFICATION DETAILS:

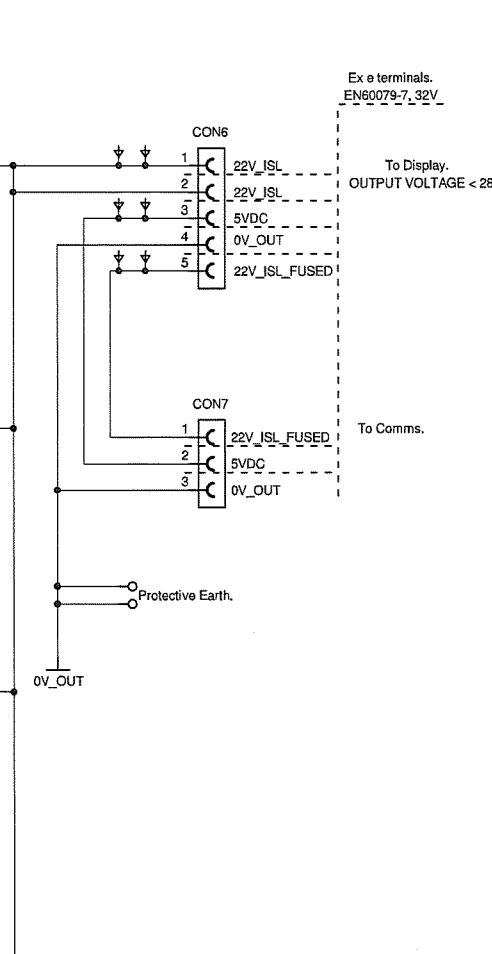
ISSUE: 2	DATE: 1-Dec-16	DRAWN: RDC	CHECKED:	CLASS:	NO.:	SHEET: 1/1
TITLE: 6811 PCB Critical Component List	ADDITIONAL INFORMATION:				DRG. NO.:	CI6811-621

1 2 3 4 5 6 7 8

A



Thermal cable insulated in accordance with EN60079-11, 375V.



Ex scheduled drawing: DO NOT modify without approval from Sira Certification

A: Drawn on behalf of Sira Certification by D W Holton, 17 April 2015

Iss	Date	Drawn	Modification		
			Scale	Tolerance	N/A
1	3.15	SRC	NTS	N/A	

CERTIFYING AUTHORITY - SIRA

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Measurement Technology Ltd  
Luton, England



Title  
**CIRCUIT DIAGRAM FOR MTL6811**

Sht. 1 of 1  
Drg. No  
**CI6811-620**

1 2 3 4 5 6 7 8

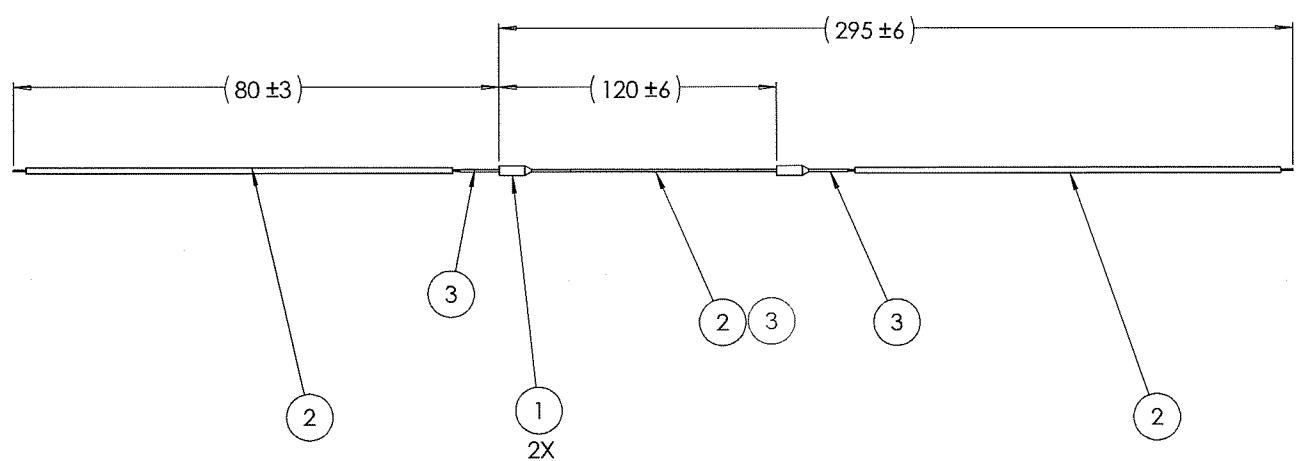
Third Angle Projection

Do Not Scale

Dimensions in mm

Approved on behalf of Sira Certification by D W Holton, 13 October 2014

Ex scheduled drawing. DO NOT modify without approval from Sira Certification

A  
B  
C  
D  
E  
FA  
B  
C  
D  
E  
F

- NOTES:
- ALL WIRES & SHRINK TUBING TO HAVE AN INSULATION THICKNESS OF 0.5mm MINIMUM.
  - NON-CRITICAL DIMENSIONS ARE PROVIDED FOR INFORMATION ONLY AND ARE DENOTED BY (). THESE DIMENSIONS ARE SUBJECT TO CHANGE WITHOUT THE NEED TO NOTIFY THE APPROVAL BODY AS LONG AS THEY DON'T AFFECT THE CRITICAL MINIMUM DIMENSION REQUIREMENTS.
  - RESISTORS & SOLDERED CONNECTIONS TO BE COVERED BY SHRINK TUBING OF APPROPRIATE DIAMETER.
  - SHRINK TUBING TO BE INSTALLED SO THAT IT COMPLETELY INSULATES THE CONDUCTORS OF ITEMS 1 & 2.
  - THERMAL FUSE BODIES TO BE WRAPPED IN POLYIMIDE TAPE.

ITEM	QTY	DESCRIPTION
1	2	THERMAL CIRCUIT, AXIAL, 110 C, 10A
2	A/R	WIRE, PVC JACKET, 24 AWG, UL1431, 19/36 STRANDED
3	A/R	SHRINK TUBING, POLYOLEFIN
4	A/R	POLYIMIDE TAPE, MINIMUM THICKNESS 0.1MM

Sheet 1 of 1						
A.0	13.10.14	Scale 1:5	Copyright Reserved Written Permission To Copy Should Be Obtained	Measurement Technology Ltd, Luton, England	Title CABLE ASSEMBLY, THERMAL FUSE, PSU ASSY, GECMA PSU	Drg No CI6810-626
Iss	Date	Modification	Tolerance $X \pm 0.5$ $XX \pm 0.25$			Iss. A.0

SolidWorks

1

2

3

4

5

6

7

8

A2

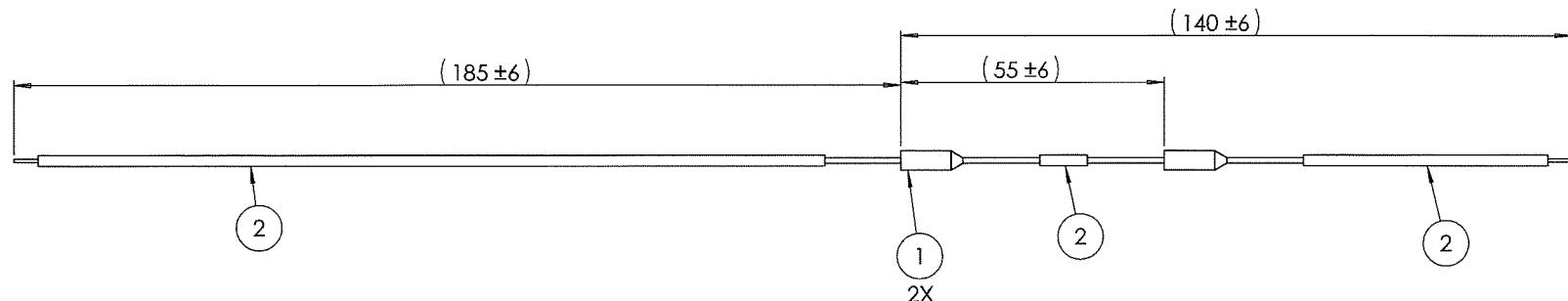
1 2 3 4 5 6 7 8

Third Angle Projection

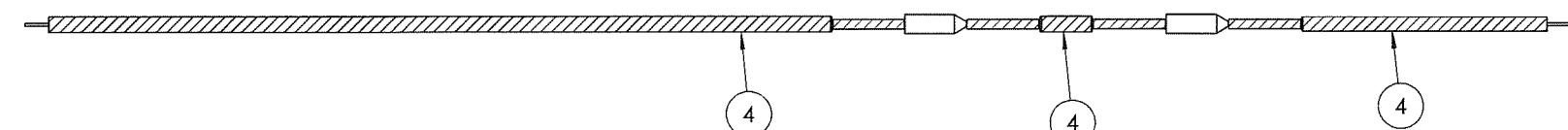
Do Not Scale

Dimensions in mm

A



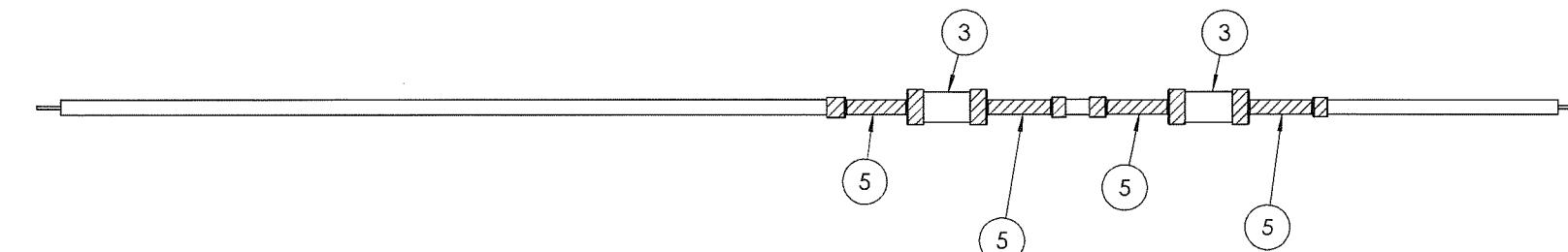
B



Apr

ad on behalf of Sira Certification by D W Holton, 13 October 2014

C



D

E

F

Ex scheduled drawing: DO NOT modify without approval from Sira Certification

ITEM	QTY	DESCRIPTION
1	2	THERMAL CIRCUIT, AXIAL, 110 C, 10A
2	A/R	WIRE, PVC JACKET, 24 AWG, UL1431, 19/36 STRANDED
3	2	SPACER, UNTHREADED, 0.166" ID, 0.25" OD, NYLON
4	A/R	SHRINK TUBING, POLYOLEFIN
5	A/R	SHRINK TUBING, POLYOLEFIN

- NOTES:
- ALL WIRES & SHRINK TUBING TO HAVE A FINAL INSULATION THICKNESS GREATER THAN 1mm.
  - NON-CRITICAL DIMENSIONS ARE PROVIDED FOR INFORMATION ONLY AND ARE DENOTED BY (.). THESE DIMENSIONS ARE SUBJECT TO CHANGE WITHOUT THE NEED TO NOTIFY THE APPROVAL BODY AS LONG AS THEY DON'T AFFECT THE CRITICAL MINIMUM DIMENSION REQUIREMENTS.
  - RESISTORS & SOLDERED CONNECTIONS TO BE COVERED BY SHRINK TUBING OF APPROPRIATE DIAMETER.

Sheet 1 of 1							
A.0	13.10.14	Scale 1:1	Copyright Reserved Written Permission To Copy Should Be Obtained	Measurement Technology Ltd, Luton, England	MTL	Title CABLE ASSEMBLY, THERMAL FUSE, PSU ASSY 2, GECMA PSU	Drg No CI6810-627
Iss	Date	Modification	Tolerance $X \pm 0.5$ $XX \pm 0.25$				Iss. A.0

PHOENIX CONTACT GmbH & Co. KG 様の秘密情報とのため添付図面として詳細が記載できない部品があります。それら使用する部品の情報を以下に示します。

### アイテム1

製造者 : PHOENIX CONTACT GmbH & Co. KG

部品名称 : Terminal Block

型名 : UT 10 及び UT 10-PE

IECEx 認証番号 : IECEx KEM 06. 0027U

参考図面情報 : 該当する図面を参考図面として添付します。その情報は以下の通りです。

順番号	図面名称	図面番号
参考図1	UT 10	00309603
参考図2	UT 10-PE (1)	00309667
参考図3	UT 10-PE (2)	00309668

### アイテム2

製造者 : PHOENIX CONTACT GmbH & Co. KG

部品名称 : PCB Spring-Cage Terminal block

型名 : ZFKDS 2, 5

IECEx 認証番号 : IECEx PTB 06. 0096U

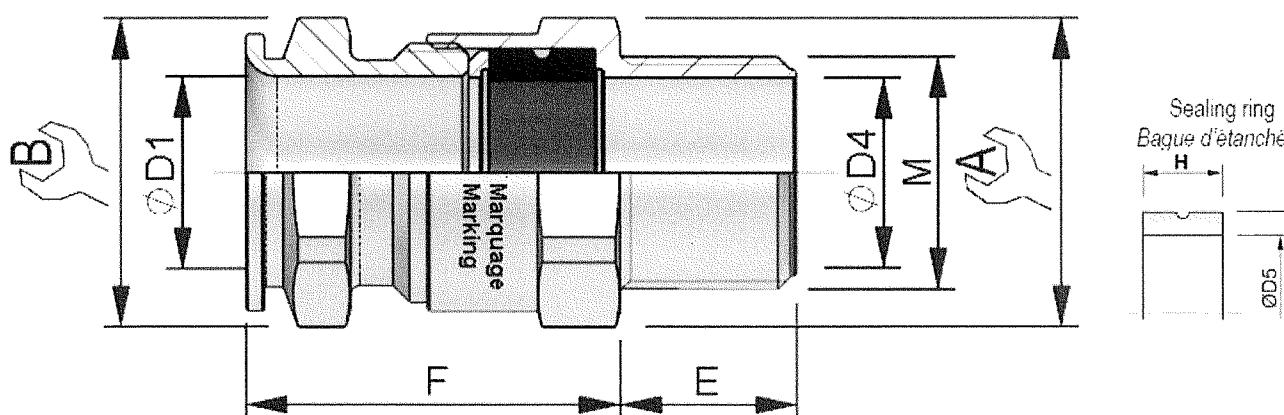
参考図面情報 : 該当する図面を参考図面として添付します。その情報は以下の通りです。

順番号	図面名称	図面番号
参考図4	ZFKDS(A) 2,5...-EX	00387707

Title: UT 10 & ZFKDS	No.: TIIS002
クーパー・インダストリーズ・ジャパン株式会社	

Type : ADE

Version : 1F2 ISO



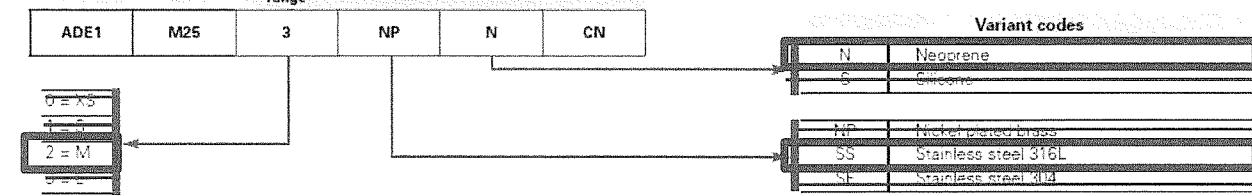
ISO M	E	A min	D4	$\varnothing$ External Cable External $\varnothing$	ADE N°	B min	D1	F max	Seal ring D5	Seal ring D6	Seal ring H
10 x 1.5	13	5.7	2.75 - 5.5								
12 x 1.5	15	5.7	2.75 - 5.5								
16 x 1.5	15	19	5.7	2.75 - 5.5							
20 x 1.5	15	24	5.7	2.75 - 5.5							
25 x 1.5	15	30	12.2	7 - 12							
32 x 1.5	15	36	21.2	13.5 - 20.5							
40 x 1.5	15	48	27.7	18 - 27.5							
40 x 1.5	15	48	34.2	23 - 34							
50 x 1.5	16	55	34.2	23 - 34							
50 x 1.5	16	55	41.2	29 - 41							
63 x 1.5	17	67	41.2	29 - 41							
63 x 1.5	17	67	45.2	35 - 45							
63 x 1.5	17	67	48.2	35 - 48							
63 x 1.5	17	72	56.2	42 - 56							
75 x 1.5	18	85	65.2	50 - 65							
90 x 2	22	95	74.2	58 - 74							
90 x 2	22	110	83.2	66 - 83							
110 x 2	22	120	93.2	75 - 93							
110 x 2	22	135	104.2	85 - 104							

供試品

Toute cotes en mm / All dimensions mm

- Neoprene:  
 a) Manufacture: STANDARD GUM  
 b) Type designation: A6120006  
 Colour: Black  
 c) Surface treatments: N/A  
 d) COT: -30 °C to +100 °C  
 e) Resistance to ultraviolet light: N/A

Series	Thread size	Cable sealing range	Material	Sealing type	Country
ADE1	M25	3	NP	N	CN

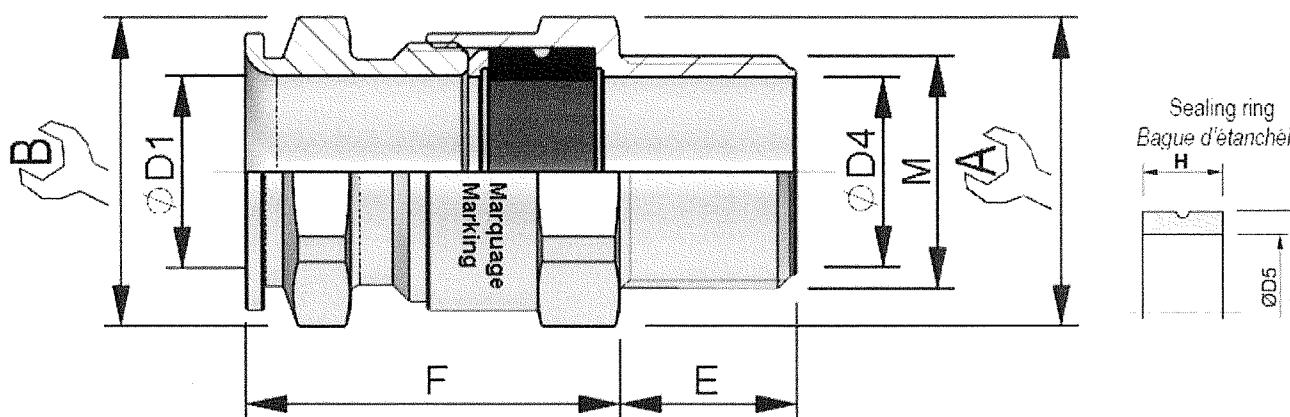


ISO	Code	NPT	Code	Cable sealing range	Gland size	Cable Outer sheath (mm), NPT in the bracket	Hexagon dimension (mm)	Gland length 'L' (mm)	Fiber sealing washer		Nickel-plated brass locknut	
									ISO	NPT	ISO	NPT
16*	CAP806594V1L	3/8"	CAP806594V1L	2	4	4.5 - 8.5	17	19	25.0		CAP221645	CAP239038
16*	CAP806504V1L	3/8"	CAP806504V1L	3	5	7.0 - 12.0	19	19	27.5			
20	CAP806674V1L	1/2"	CAP806674V1L	1	4	4.5 - 8.5	17	24	25.0		CAP222045	CAP239012
20	CAP806694V1L	1/2"	CAP806694V1L	2	5	7.0 - 12.0	19	24	27.5			CAP222094
20	CAP806604V1L	1/2"	CAP806604V1L	3	6	10.0 - 16.0 (15.5)	24	24	32.0			CAP280124
25	CAP806774V1L	3/4"	CAP806774V1L	1	5	7.0 - 12.0	19	30	27.5			
25	CAP806794V1L	3/4"	CAP806794V1L	2	6	10.0 - 16.0	24	30	32.0		CAP222545	CAP239034
25	CAP806704V1L	3/4"	CAP806704V1L	3	7	13.5 - 20.5	30	30	36.5			CAP222594
32	CAP806894V1L	-	CAP806894V1L	2	7	13.5 - 20.5	30	36	36.5		CAP223245	CAP239010
32	CAP806804V1L	1"	CAP806804V1L	3	8	18.0 - 27.5 (26.0)	41	41	46.0			CAP223294
40	CAP806994V1L	-	CAP806994V1L	2	8	18.0 - 27.5 (26.0)	41	44	46.0		CAP224045	CAP239114
40	CAP806904V1L	1-1/4"	CAP806904V1L	3	9	23.0 - 34.0	48	48	50.0			CAP224094
50	CAP807094V1L	-	CAP807094V1L	0	9	23.0 - 34.0	48	55	50.0		CAP225045	CAP239112
50	CAP807004V1L	1-1/2"	CAP807004V1L	1	10	29.0 - 41.0	55	55	52.0			CAP225094
50	CAP807084V1L	-	CAP807084V1L	2	11	35.0 - 45.0 (48.0)	64	64	56.5			CAP280164
63	CAP807234V1L	2"	CAP807234V1L	2	11	35.0 - 45.0 (48.0)	64	67	57.5			CAP226345
63	CAP807204V1L	2"	CAP807204V1L	3	12	42.0 - 56.0 (53.0)	72	72	60.0			CAP239020

プロジェクト名:		クーパー・インダストリーズ・ジャパン 株式会社		名称			
ユーザー名:				ADE1F2-M16			
JOB NAME:		発行日:		1F2 ISO M16			
Ref no.:		承認 T.I 作成者 I.S		縮尺	N/A		シート 1 / 1

Type : ADE

Version : 1F2 ISO



ISO M	E	A min	D4	$\varnothing$ Extreme External Ø	ADE N°	B min	D1	F max	Seal ring D5	Seal ring D6	Seal ring H
10 x 1.5	13	15	5.7	2.75 - 5.5							
12 x 1.5	15	15	5.7	2.75 - 5.5	3	15	5.7	24	5.5	10.2	6
16 x 1.5	15	19	5.7	2.75 - 5.5							
20 x 1.5	15	24	5.7	2.75 - 5.5							
12 x 1.5	15	17	8.2	4.5 - 8							
16 x 1.5	15	19	8.7	4.5 - 8.5	4	17	8.7	25	8.5	12.2	6
20 x 1.5	15	24	8.7	4.5 - 8.5							
16 x 1.5	15	19	12.2	7 - 12							
20 x 1.5	15	24	12.2	7 - 12	5	19	12.2	27.5	12	16.2	7.4
25 x 1.5	15	30	12.2	7 - 12							
20 x 1.5	15	24	16.2	10 - 16	6	24	16.2	32	16	21.2	9
25 x 1.5	15	30	16.2	10 - 16							
25 x 1.5	15	30	20.7	13.5 - 20.5	7	30	21.2	36.5	21	27.2	10.8
32 x 1.5	15	36	21.2	13.5 - 21							
32 x 1.5	15	41	27.7	18 - 27.5	8	41	27.7	46	21.5	35.5	13.8
40 x 1.5	15	48	27.7	18 - 27.5							
40 x 1.5	15	48	34.2	23 - 34	9	48	34.2	50	34	43.5	15.6
50 x 1.5	16	55	34.2	23 - 34							
50 x 1.5	16	55	41.2	29 - 41	10	55	41.2	52	41	50.5	16.8
63 x 1.5	17	67	41.2	29 - 41							
50 x 1.5	16	64	45.2	35 - 45	11	64	48.2	56.5	48	58.5	18
63 x 1.5	17	67	48.2	35 - 48							
63 x 1.5	17	72	56.2	42 - 56	12	72	56.2	60	56	66.5	19.2
75 x 1.5	18	85	65.2	50 - 65	13	85	65.2	67.5	65	78	21.6
90 x 2	22	95	74.2	58 - 74	14	95	74.2	69	74	88	24
90 x 2	22	110	83.2	66 - 83	15	110	83.2	80	83	97	24
110 x 2	22	120	93.2	75 - 93	16	120	93.2	80	93	107	25.2
110 x 2	22	135	104.2	85 - 104	17	135	104.2	90	104	122	26.4

Toute cotes en mm / All dimensions mm

Eaton Electric Limited

- Neoprene:  
 a) Manufacture: STANDARD GUM  
 b) Type designation: A6120006  
 Colour: Black  
 c) Surface treatments: N/A  
 d) COT: -30 °C to +100°C  
 e) Resistance to ultraviolet light: N/A

Series	Thread size	Cable sealing range	Material	Sealing type	Country
ADE1	M25	3	NP	N	CN

2 = M	N	Neoprene
	S	Silicone
	NP	Nickel-plated brass
	SS	Stainless steel 316L
	SL	Stainless steel 304

ISO	Code	NPT	Code	Cable sealing range	Gland size	Cable Outer sheath (mm), NPT in the bracket	Hexagon dimension (mm)	Gland length 'L' (mm)	Fiber sealing washer		Nickel-plated brass locknut	
									ISO	NPT	ISO	NPT
16*	CAP806504V1	3/8"	CAP80594V1L	2	4	4.5 - 8.5	17	19	25.0		CAP221645	CAP223905
16*	CAP806504V1	3/8"	CAP80594V1L	3	5	7.0 - 12.0	19	19	27.5			CAP221694
20	CAP806674V1	1/2"	CAP808674V1L	1	4	4.5 - 8.5	17	24	25.0			
20	CAP806694V1	1/2"	CAP808694V1L	2	5	7.0 - 12.0	19	24	27.5		CAP222045	CAP239012
20	CAP806604V1	1/2"	CAP808604V1L	3	6	10.0 - 16.0 (15.5)	24	24	32.0			CAP222094
25	CAP80774V1	3/4"	CAP805774V1L	1	5	7.0 - 12.0	19	30	27.5			
25	CAP80794V1L	3/4"	CAP808794V1L	2	6	10.0 - 16.0	24	30	32.0		CAP222545	CAP239034
	CAP806704V1L	3/4"	CAP808704V1L	3	7	13.5 - 20.5	30	30	36.5			CAP222594
32	CAP806834V1U	-		2	7	13.5 - 20.5	30	36	36.5		CAP223245	CAP239010
32	CAP806804V1L	1"	CAP808804V1L	3	8	18.0 - 27.5 (26.0)	41	41	46.0			CAP223904
40	CAP806994V1L	-		2	8	18.0 - 27.5 (26.0)	41	44	46.0		CAP224045	CAP239114
40	CAP806904V1L	1-1/4"	CAP808904V1L	3	9	23.0 - 34.0	48	48	50.0			CAP224094
50	CAP807094V1L	-		0	9	23.0 - 34.0	48	55	50.0		CAP225045	CAP239112
50	CAP807004V1L	1-1/2"	CAP8089004V1L	1	10	29.0 - 41.0	55	55	52.0			CAP225094
50	CAP807084V1L	-		2	11	35.0 - 45.0 (48.0)	64	64	56.5			CAP226345
63	CAP807294V1L	2"	CAP809294V1L	2	11	35.0 - 45.0 (48.0)	64	67	57.5			CAP226904
63	CAP807204V1L	2"	CAP809204V1L	3	12	42.0 - 56.0 (63.0)	72	72	60.0			CAP226920

プロジェクト名:	クーパー・インダストリーズ・ジャパン 株式会社			名称	ADE1F2-M25		
ユーザー名:				サイズ	FSCM NO		改訂
JOB NAME:	発行日: 2017/10/18				国面番号		
Ref no.:	承認	T.I.	作成者	I.S.	縮尺	N/A	シート 1 / 1

				Modification
Is	Date	Dm		
1	20-4-15	CMB		
2	9-16	P/T	Legal entity update.	
3	2-19	CMB	Temp spec amended. Note 6 added.	
4	12-21	CMB	CE number was 1180, now 0598.	

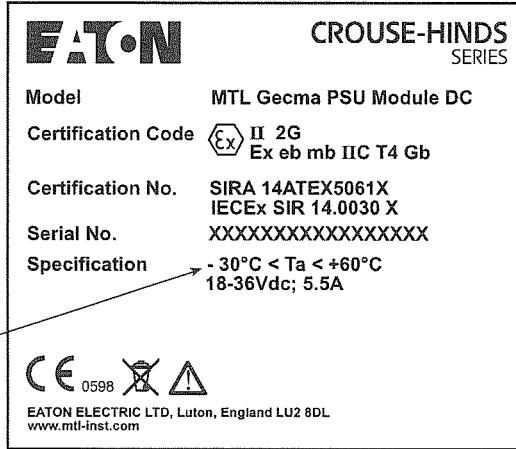
FOR 186  
186 FOR

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SEE NOTE 6



**NOTE:**

1. THIS LABEL IS PRODUCED BY PRINTING ONTO ADHESIVE-BACKED POLYESTER MATERIAL USING A THERMAL TRANSFER PROCESS. LABEL THICKNESS  $\leq 0.2\text{mm}$
2. ADHESIVE USED IS PERMANENT ACRYLIC ADHESIVE.
3. ALL MATERIALS USED MUST HAVE A CTI  $\geq 175\text{V}$  TO IEC60112.
4. THIS LABEL MAY CONTAIN OTHER INFORMATION WHICH IS NOT RATIFIED BY SIRA.
5. SERIAL NUMBER TO INCLUDE YEAR OF MANUFACTURE.
6. -40°C VARIANT POSSIBLE WHEN ASSEMBLED IN ACCORDANCE WITH VARIANT SPECIFIC ASSEMBLY INSTRUCTIONS DETAILED IN CI6811-624.

These drawings form the certification documentation  
and must not be modified without reference to the design authority.

Scale 1:1

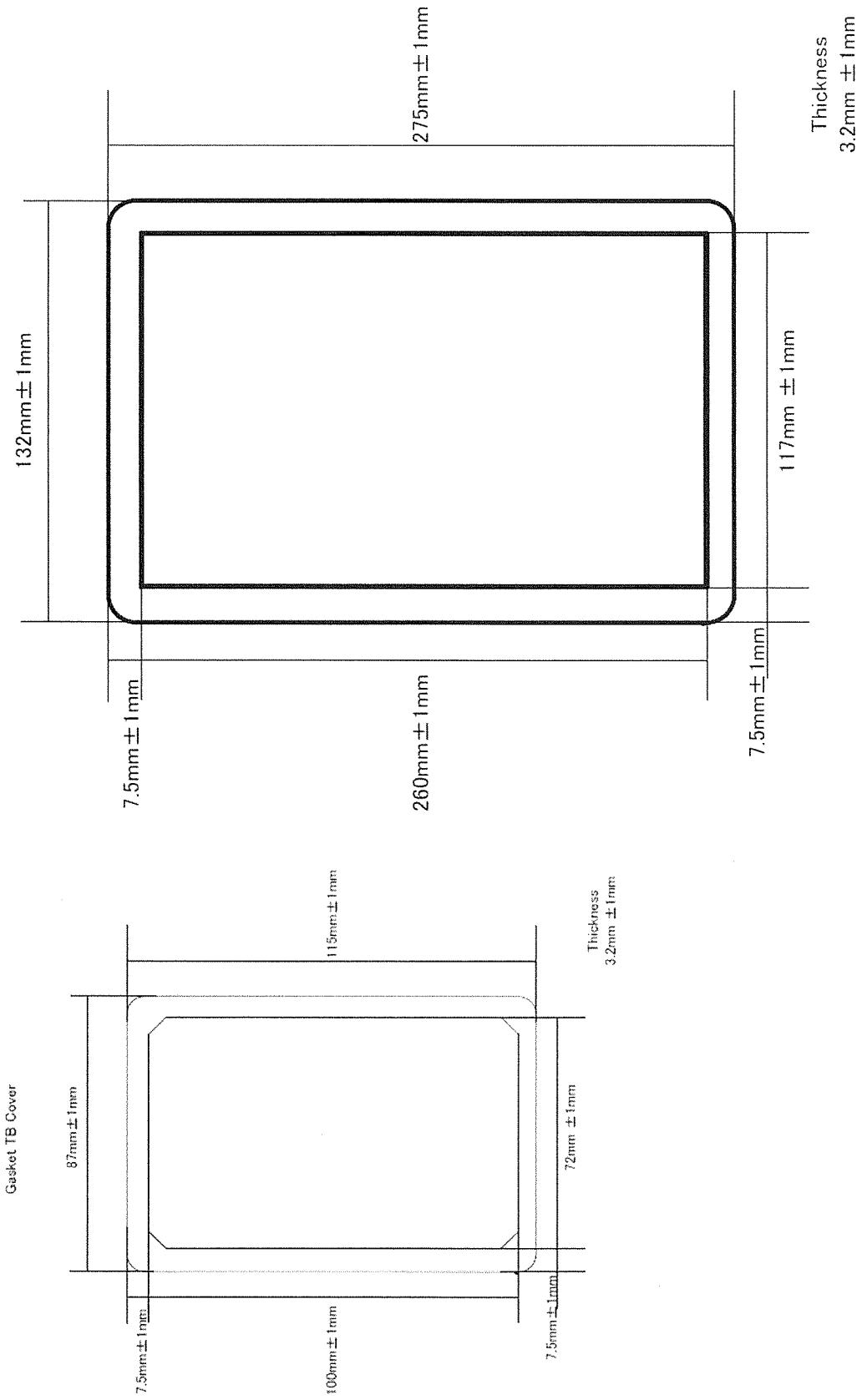
Sheet 1 of 1

Title GECMA PSU MODULE DC  
Certification Label Details - SIRA

Drg. No.  
CI6811-625

CAD A4

Gasket Body Cover



Drawing No. TIS001

Title: Gasket dimensions

ケーカー・インダストリーズ・ジャパン株式会社