

FOSTER WHEELER		LOTUS ENERJİ
CLIENT	:	LOTUS ENERJİ A.S.
PLANT	:	TURKMENBASHI REFINERY
LOCATION	:	TURKMENISTAN
* FW CONTRACT	:	1-BD-0399B
* FW MAT. REQ. N°	:	BD0399B
* FW DWG. N°	:	
* P.O. N°	:	
* ITEM N°	:	5
UNIT	:	
VENDOR REF. N°	:	BD399B-EL-DW-EPC-0005
VENDOR CAD FILE N°	:	

1	10.02.2015	For Approval			
REV.	DATE	REASON FOR ISSUE	PREPARED	CHECKED	APPROVED

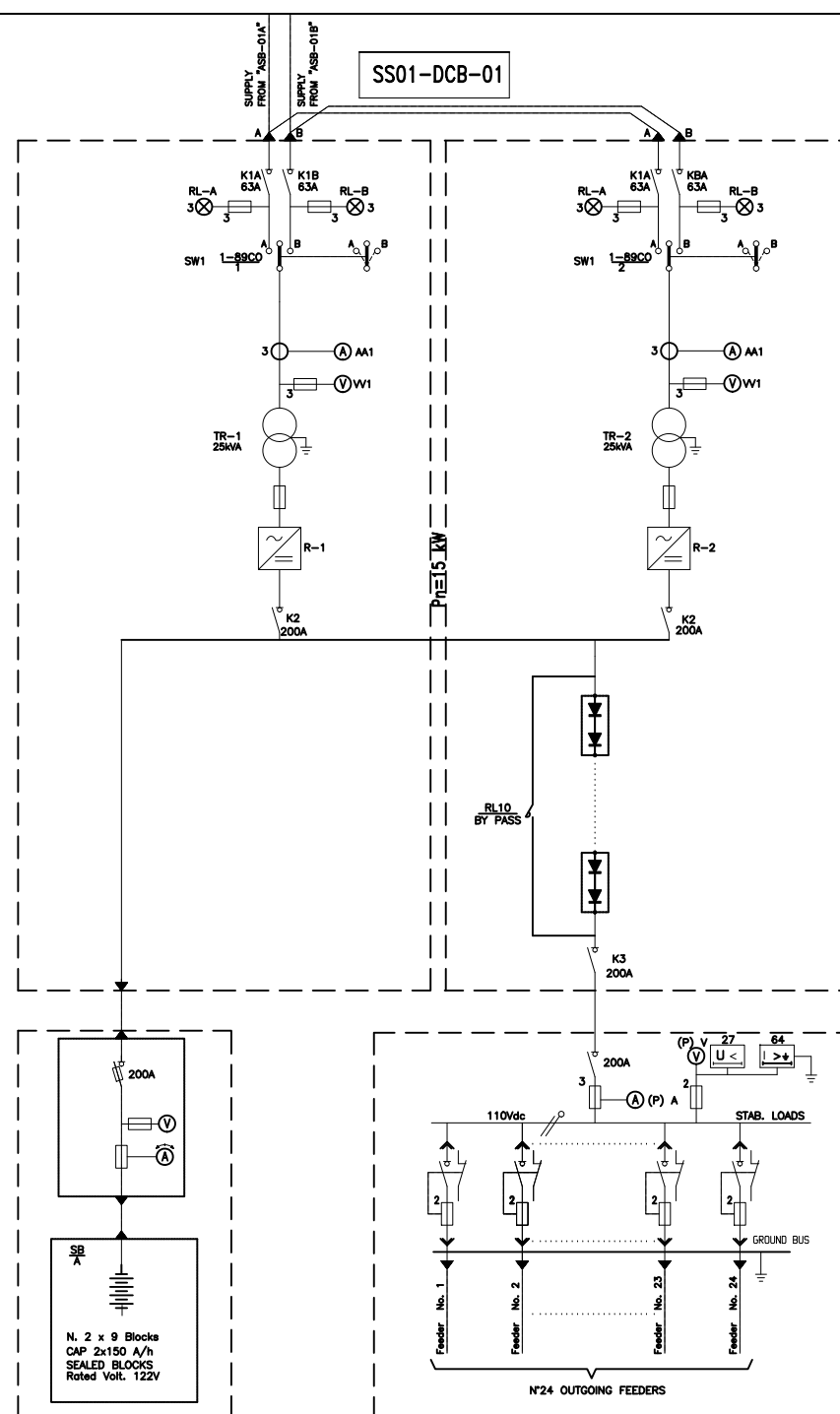
SS01-DCB-01

CUSTOMER

LOTUS ENERJI

PROJECT

DCU-SDA PROJECT / TURKMENBASHI REFINERY / TURKMENISTAN



PAGE	TITLE
00	SUMMARY
01	INPUT SUPPLY
02	INPUT MAGNETICS
03	AC/DC CONV #1
04	AC/DC CONV #2
05	DC OUTPUT
10	CONTROL
11	IO EXPANSIONS
20	SINGLE LINE

## CUSTOMER

# LOTUS

## PROJECT

DCU-SDA / TURKMENBASHI REFINERY / TURKMENISTAN

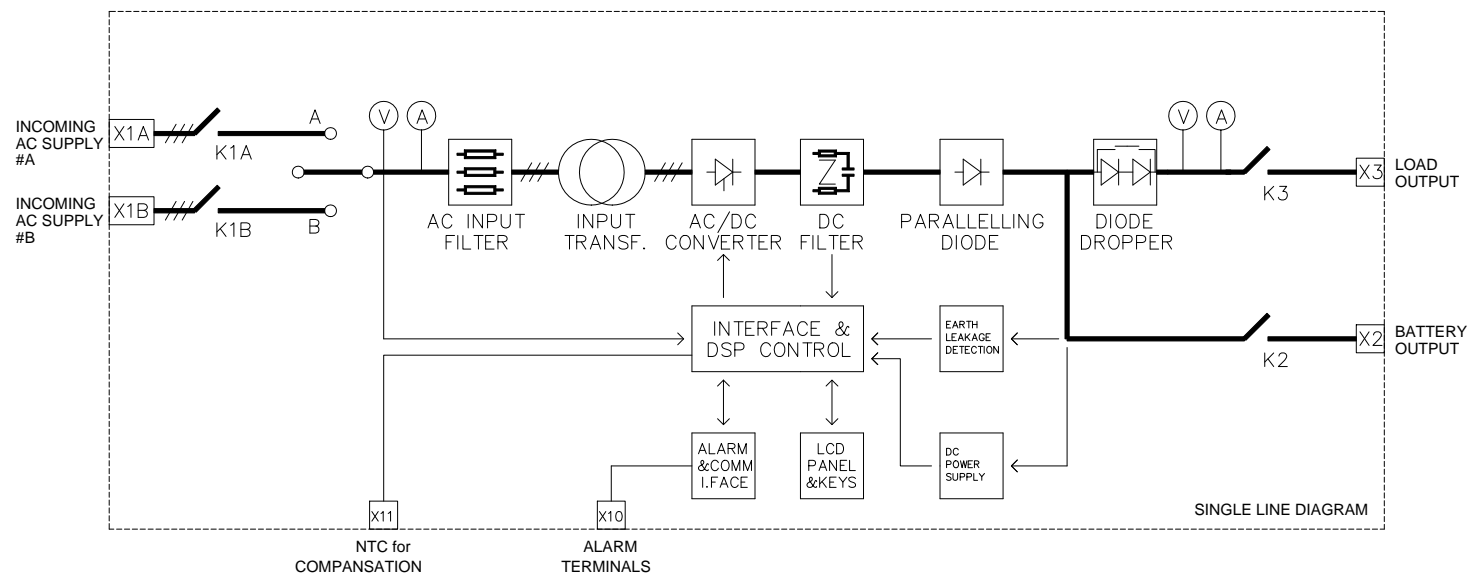
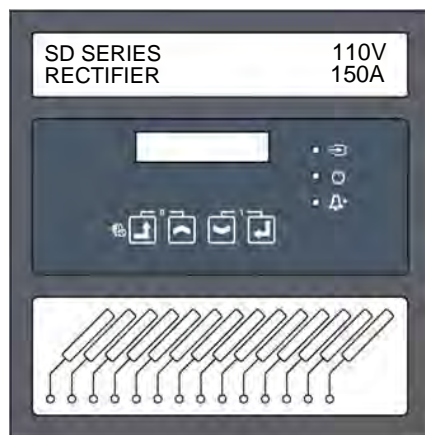
## SYSTEM DESCRIPTION

## 3x400VAC / 110V 150A DC RECTIFIER

TERMINAL NO	PIN	DESCRIPTION	TERMINAL SIZE
X1	01	AC INPUT - L1	35mm2
X1	02	AC INPUT - L2	35mm2
X1	03	AC INPUT - L3	35mm2
X2	01	BATTERY OUTPUT +	95mm2
X2	02	BATTERY OUTPUT -	95mm2
X3	01	LOAD OUTPUT +	95mm2
X3	02	LOAD OUTPUT -	95mm2
X8	BUSBAR	PROTECTIVE GROUND	35mm2

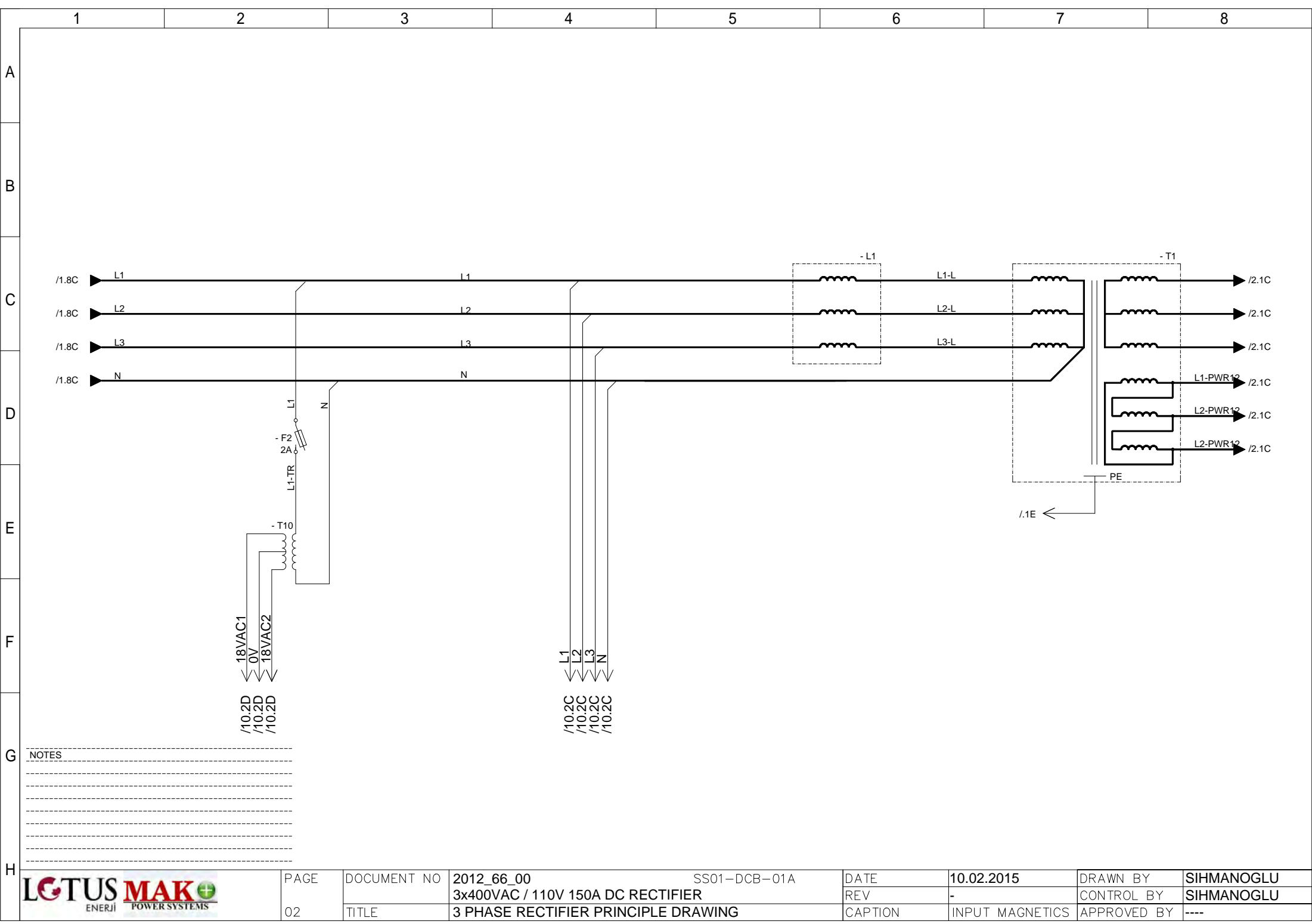
TERMINAL NO	PIN	DESCRIPTION	TERMINAL SIZE
X10	01	ALARM RELAY K1 - NC	2.5mm2
X10	02	ALARM RELAY K1 - C	2.5mm2
X10	03	ALARM RELAY K1 - NO	2.5mm2
X10	04	ALARM RELAY K2 - NC	2.5mm2
X10	05	ALARM RELAY K2 - C	2.5mm2
X10	06	ALARM RELAY K2 - NO	2.5mm2
X10	07	ALARM RELAY K3 - NC	2.5mm2
X10	08	ALARM RELAY K3 - C	2.5mm2
X10	09	ALARM RELAY K3 - NO	2.5mm2
X10	10	ALARM RELAY K4 - NC	2.5mm2
X10	11	ALARM RELAY K4 - C	2.5mm2
X10	12	ALARM RELAY K4 - NO	2.5mm2
X11	01	NTC	2.5mm2
X11	02	NTC	2.5mm2

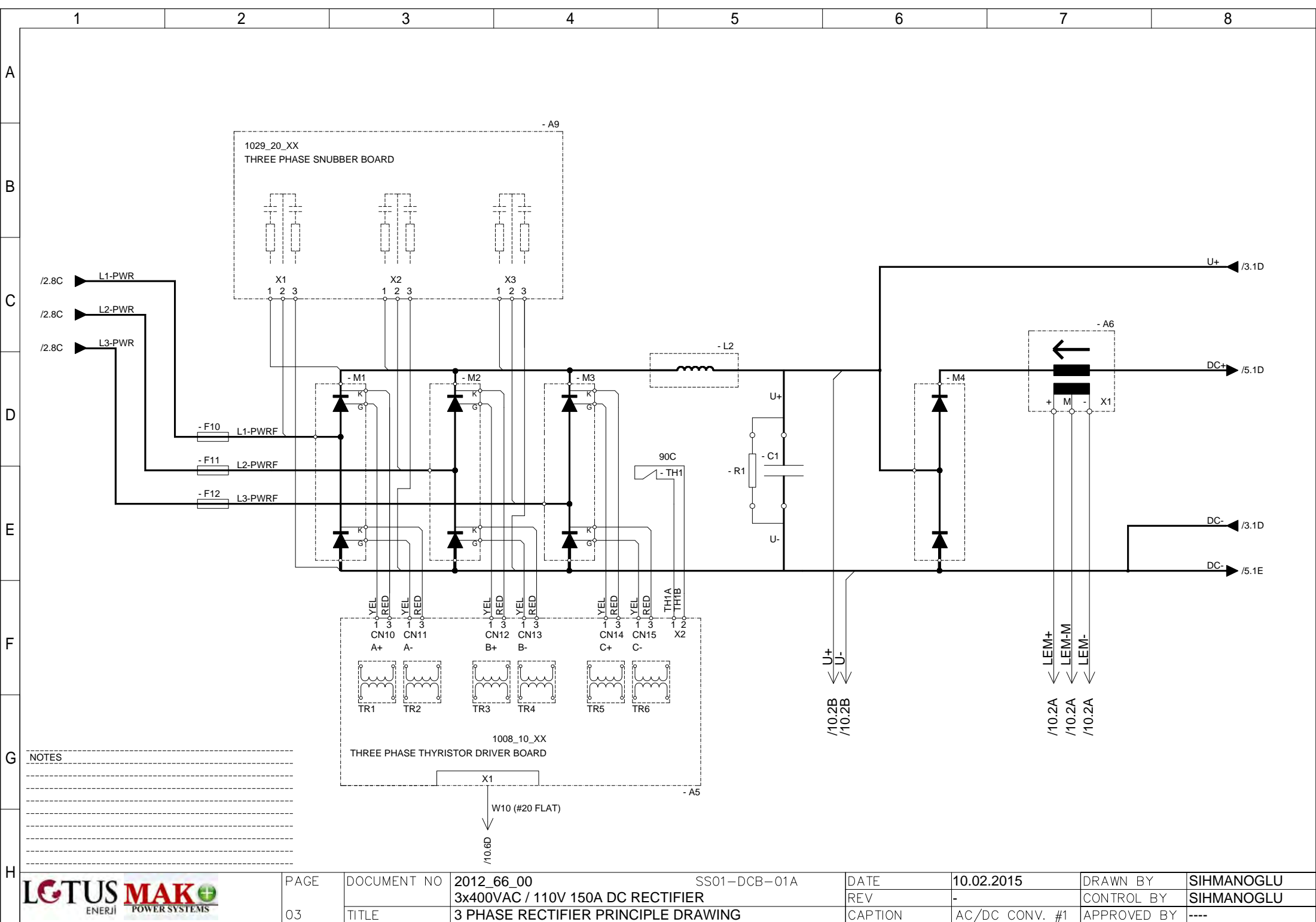
TERMINAL NO	PIN	TERMINAL SIZE	CROSS SECTION (MAX)
X13	01	TRANSDUCER CH0 4-20mA	2.5mm <sup>2</sup>
X13	02	TRANSDUCER CH0 0-10mV	2.5mm <sup>2</sup>
X13	03	TRANSDUCER CH0 COMM.	2.5mm <sup>2</sup>
X13	04	TRANSDUCER CH1 4-20mA	2.5mm <sup>2</sup>
X13	05	TRANSDUCER CH1 0-10mV	2.5mm <sup>2</sup>
X13	06	TRANSDUCER CH1 COMM.	2.5mm <sup>2</sup>
X13	07	TRANSDUCER CH2 4-20mA	2.5mm <sup>2</sup>
X13	08	TRANSDUCER CH0 2-10mV	2.5mm <sup>2</sup>
X13	09	TRANSDUCER CH2 COMM.	2.5mm <sup>2</sup>
X13	10	TRANSDUCER CH3 4-20mA	2.5mm <sup>2</sup>
X13	11	TRANSDUCER CH3 0-10mV	2.5mm <sup>2</sup>
X13	12	TRANSDUCER CH3 COMM.	2.5mm <sup>2</sup>



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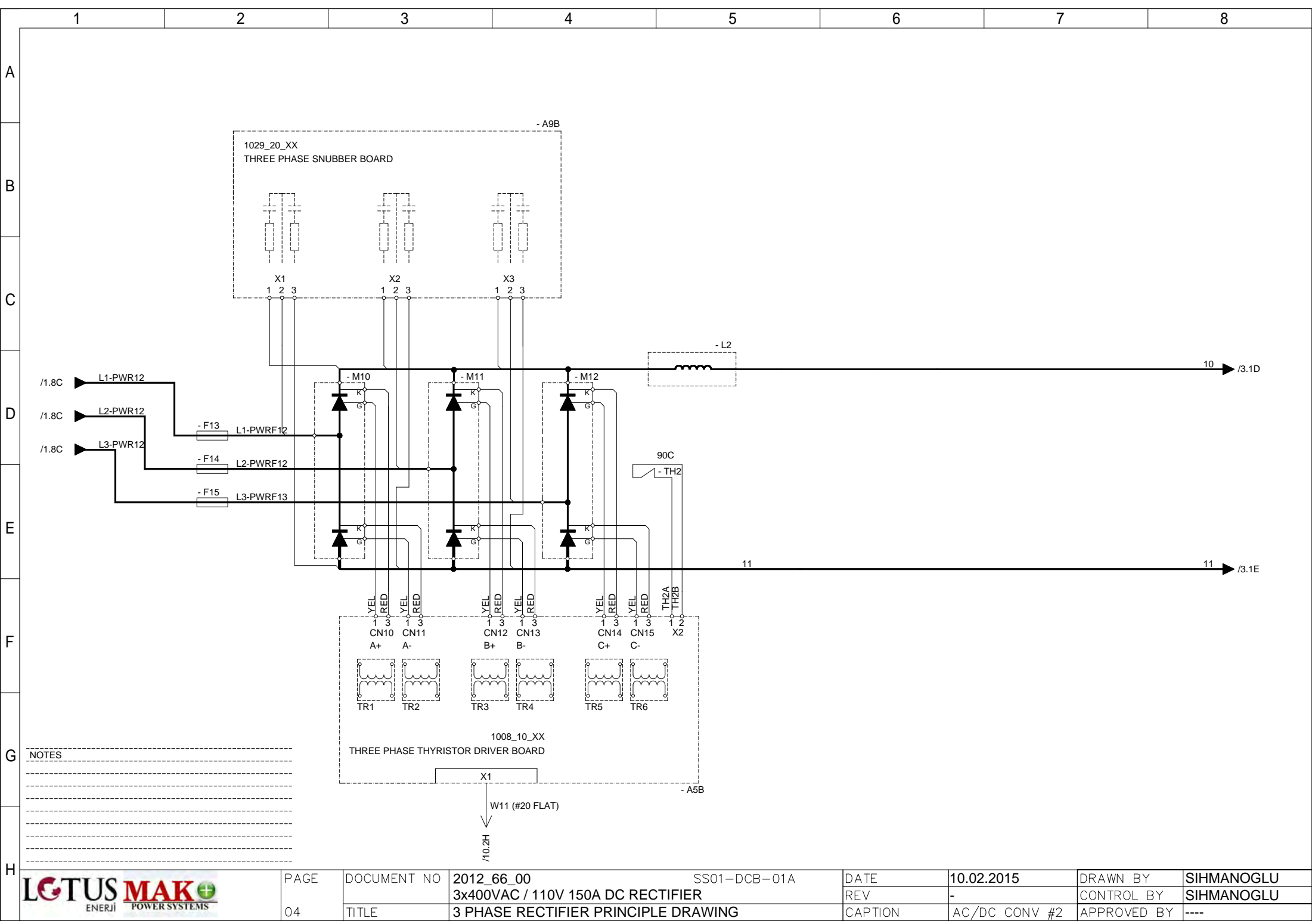
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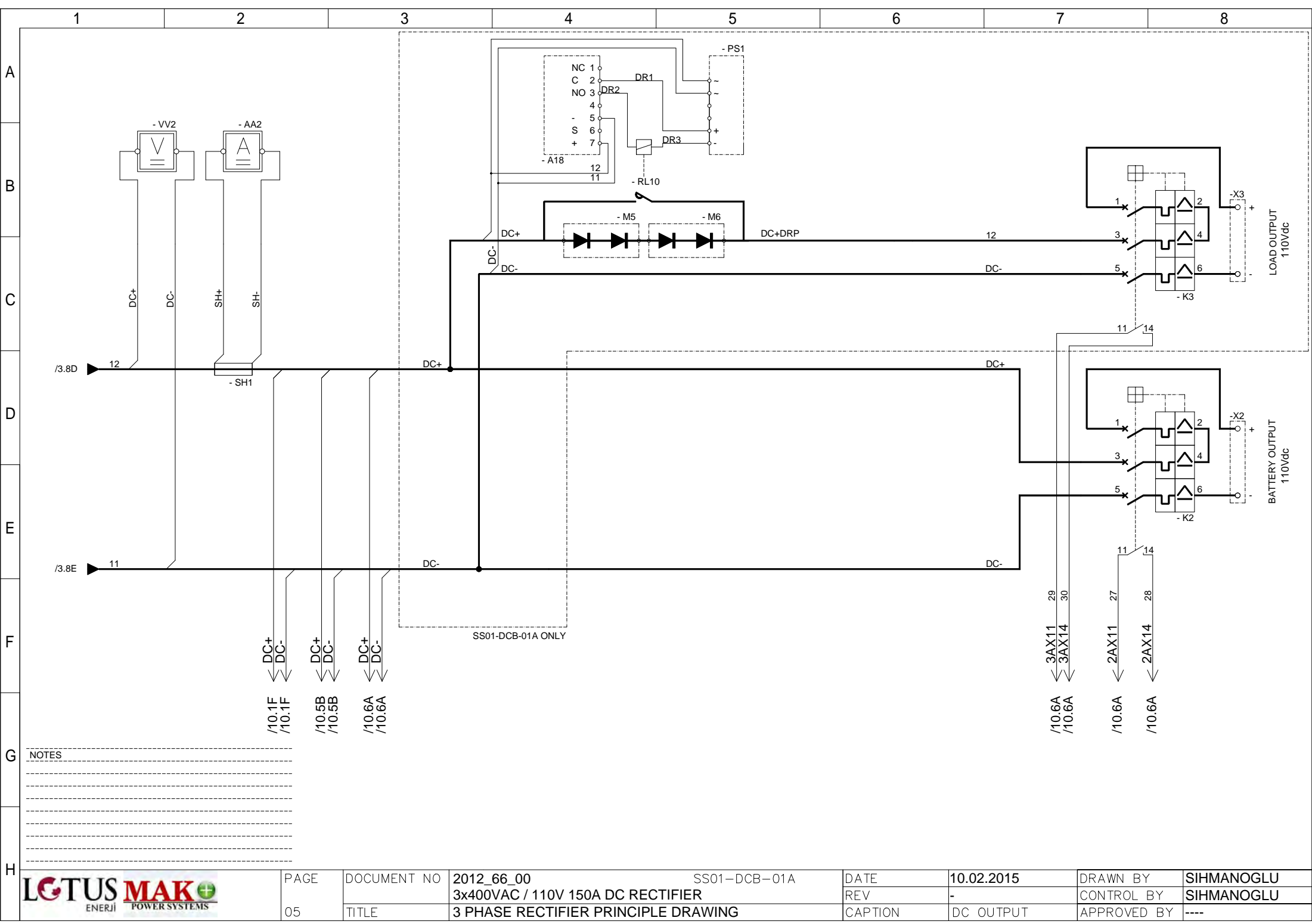
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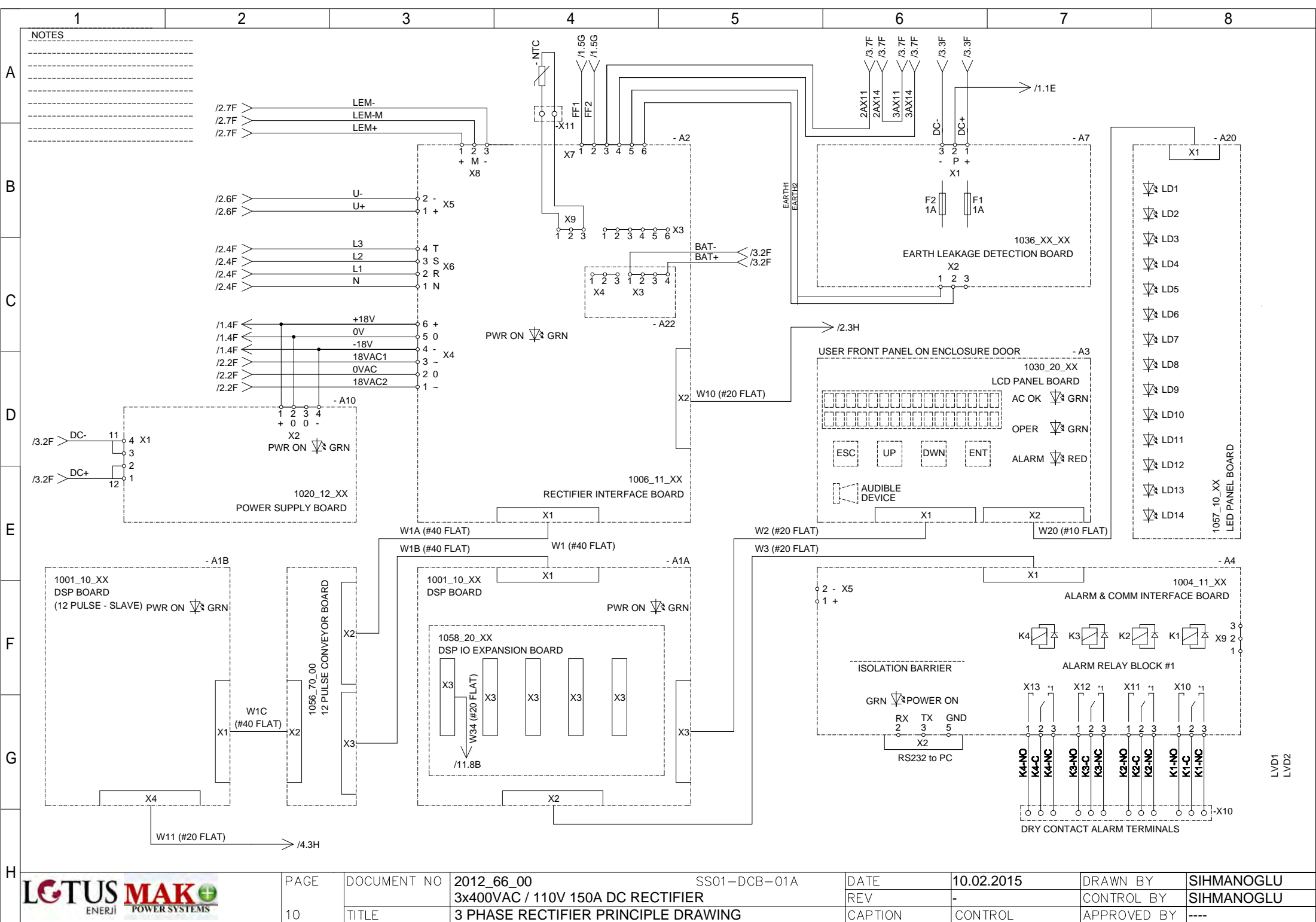
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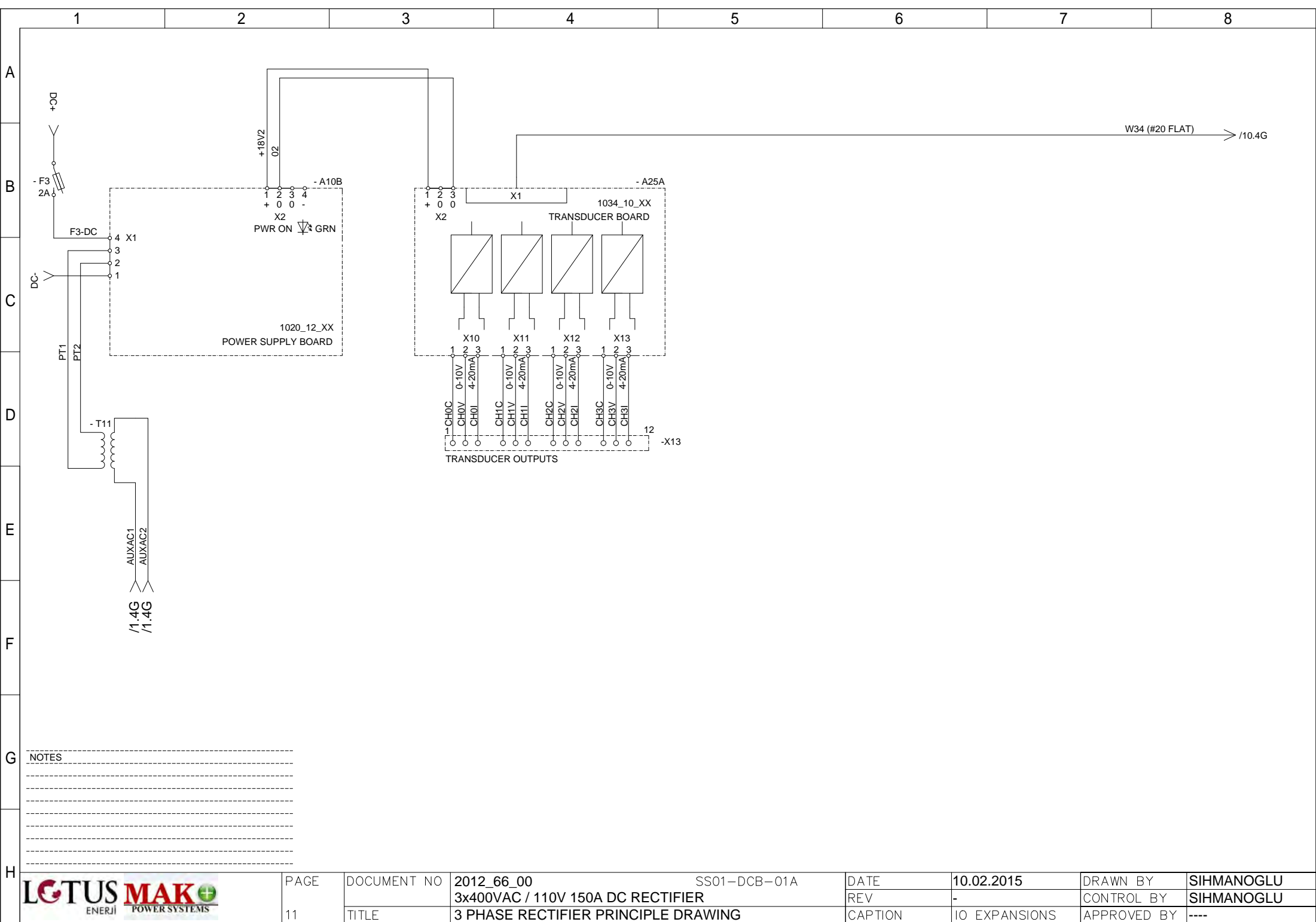
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A

B

C

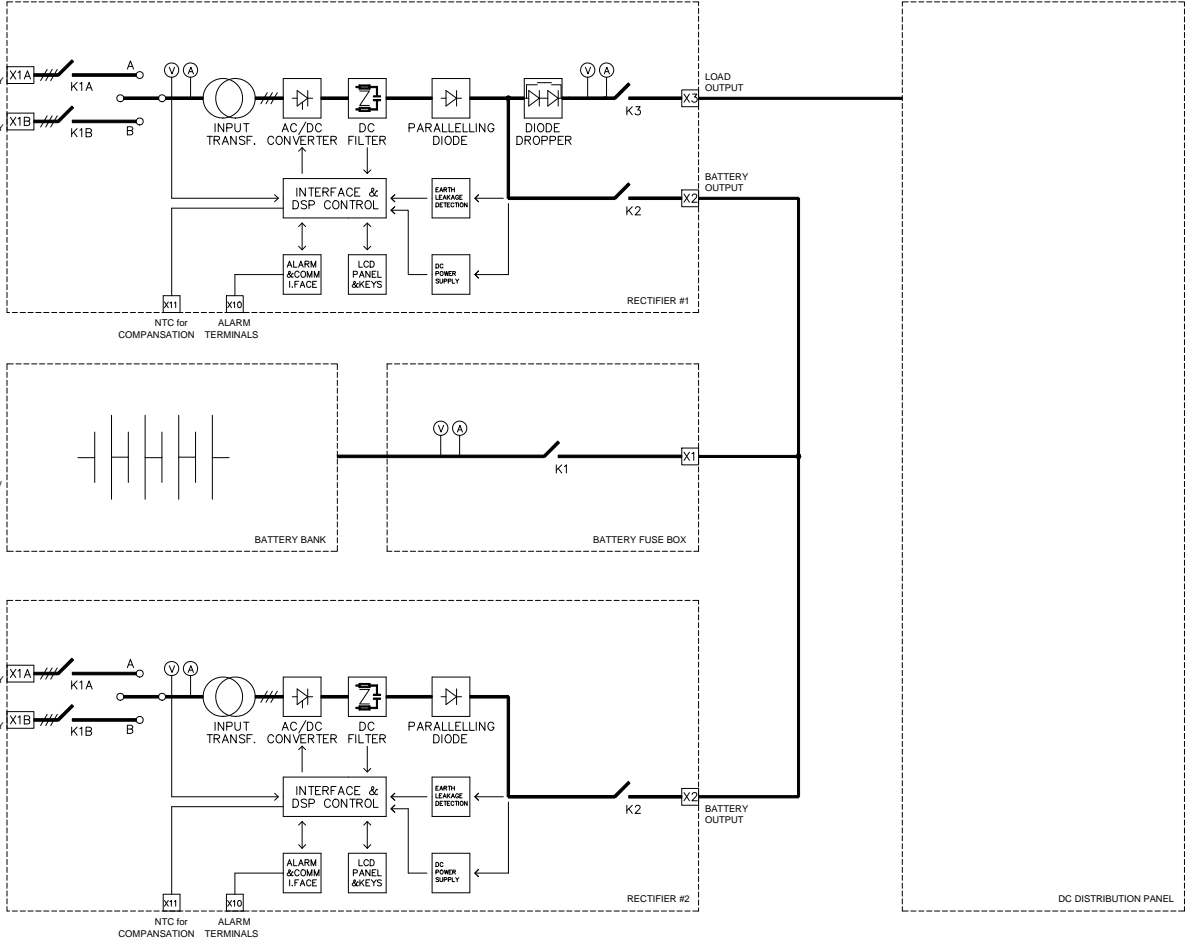
D

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F

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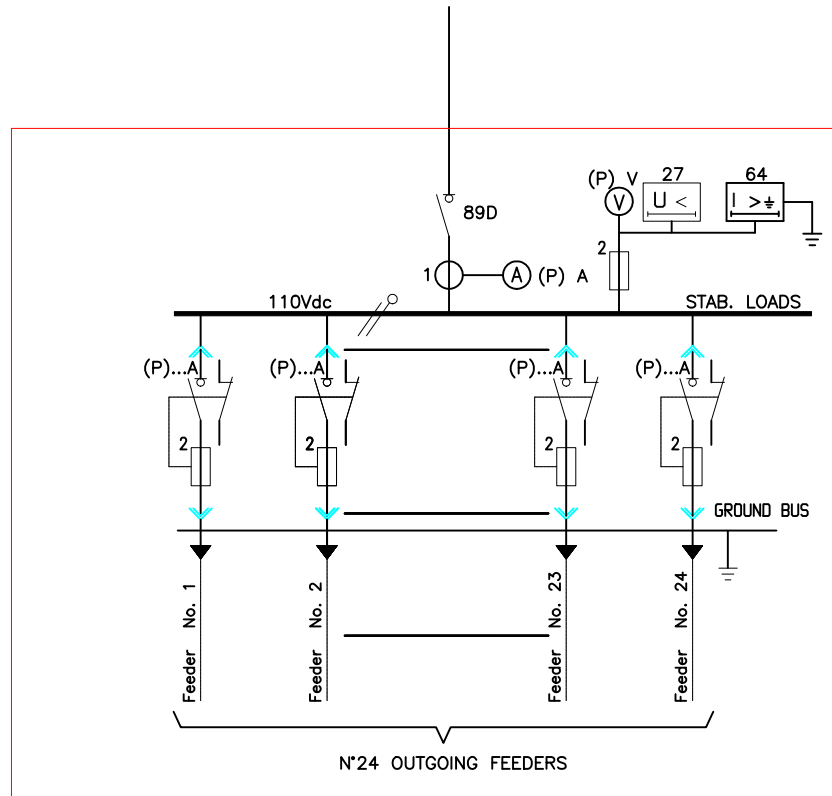
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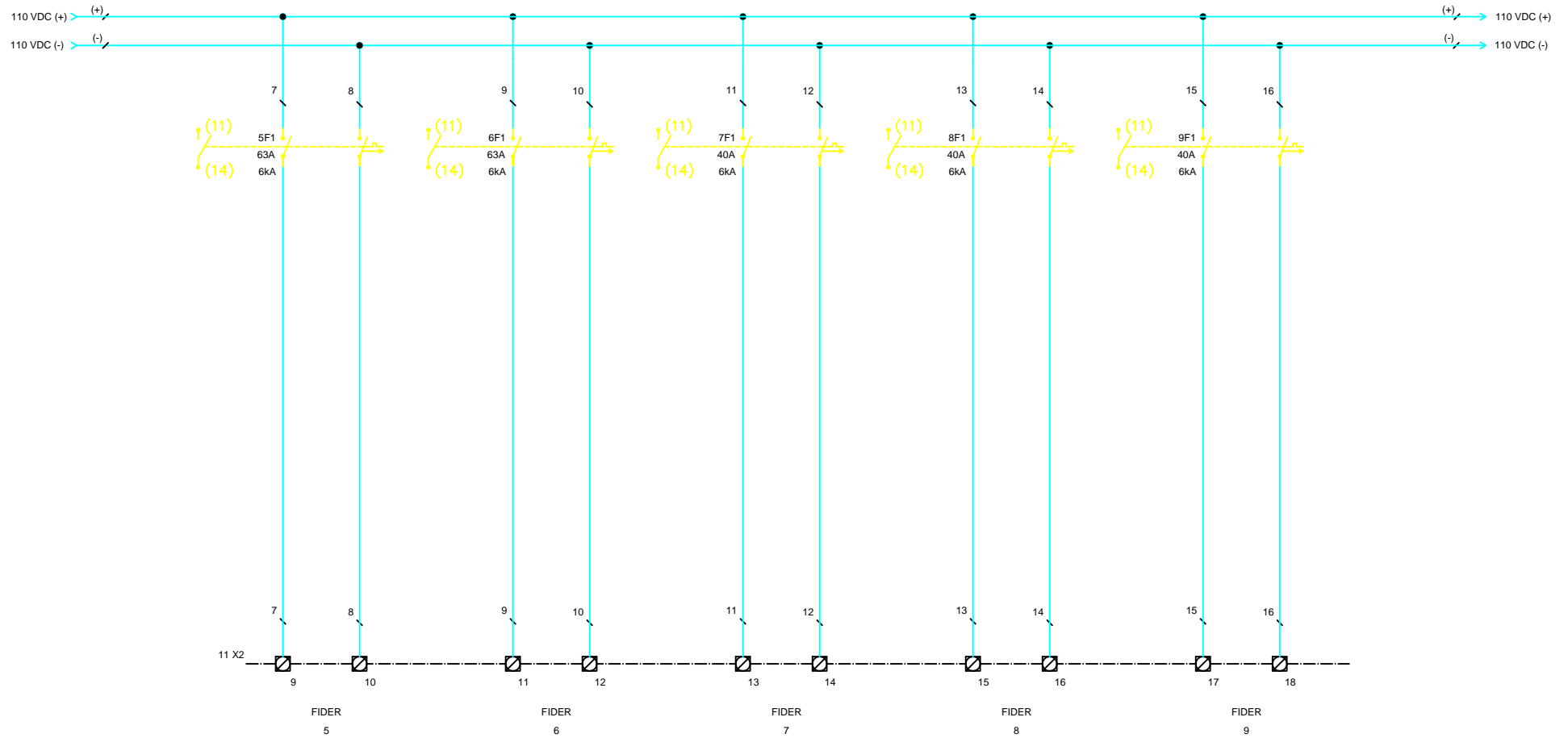
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NOTES  
1. ALL DIMENSIONS ARE IN MILIMETERS.

		PAGE	DOCUMENT NO	SS01-DCB-01	DATE	03.02.2015	DRAWN BY	OZTEKIN
		01	TITLE	DC DISTRIBUTION BOARD SINGLE LINE DIAGRAM	REV		CONTROL BY	SIHMANOGLU
					CAPTION	SINGLE LINE DIAGRAM	APPROVED BY	

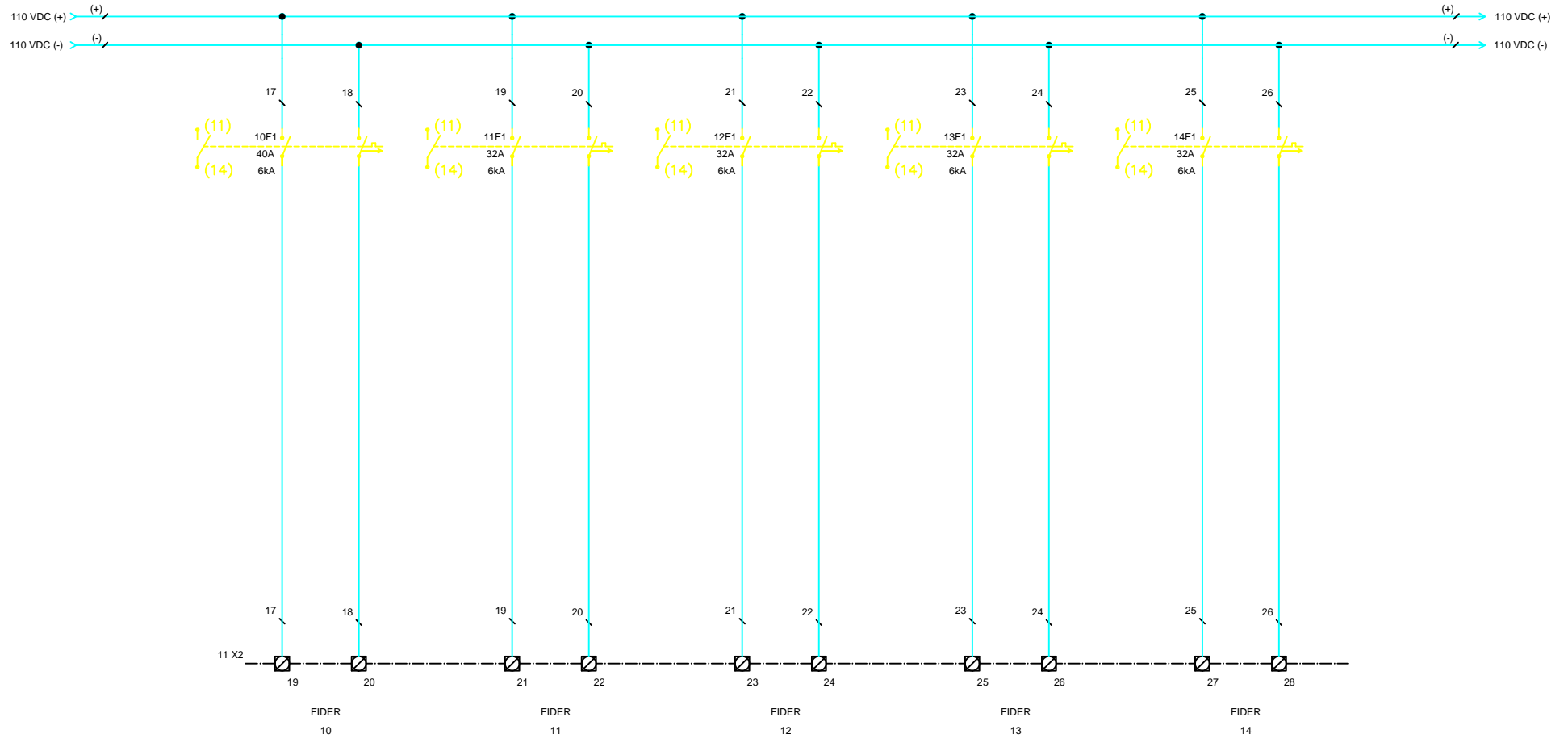




# NOTES

1. ALL DIMENSIONS ARE IN MILIMETERS.

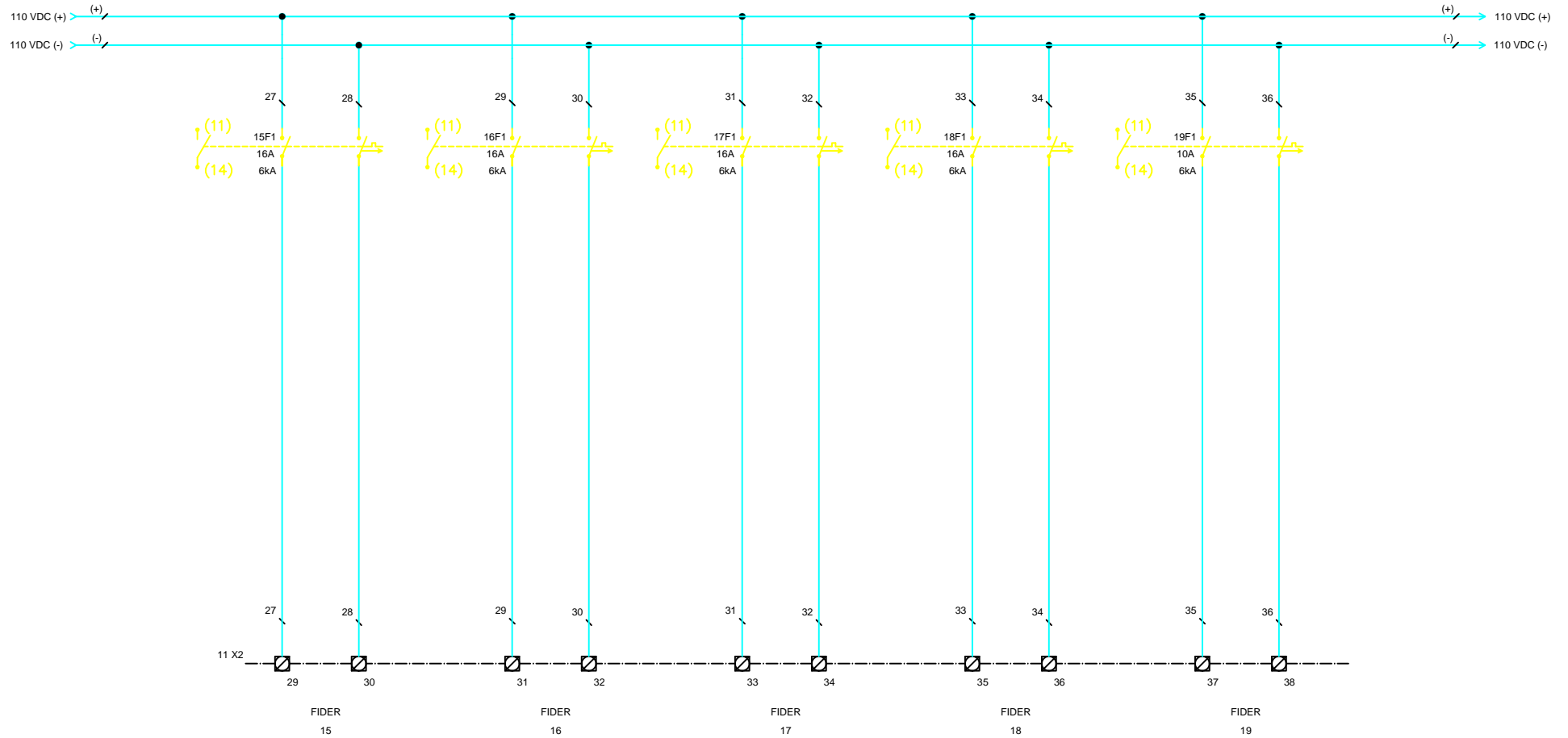
<b>LGTUS</b> ENERJİ	<b>MAK</b> POWER SYSTEMS	PAGE	DOCUMENT NO	SS01-DCB-01	DATE	03.02.2015	DRAWN BY	OZTEKIN
		03	TITLE	DC DISTRIBUTION BOARD SINGLE LINE DIAGRAM	REV		CONTROL BY	SIHMANOGLU
					CAPTION	OUTGOING FIDERS	APPROVED BY	



# NOTES

1. ALL DIMENSIONS ARE IN MILIMETERS.

		PAGE	DOCUMENT NO	SS01-DCB-01	DATE	03.02.2015	DRAWN BY	OZTEKIN
		04	TITLE	DC DISTRIBUTION BOARD SINGLE LINE DIAGRAM	REV		CONTROL BY	SIHMANOGLU
					CAPTION	OUTGOING FIDERS	APPROVED BY	

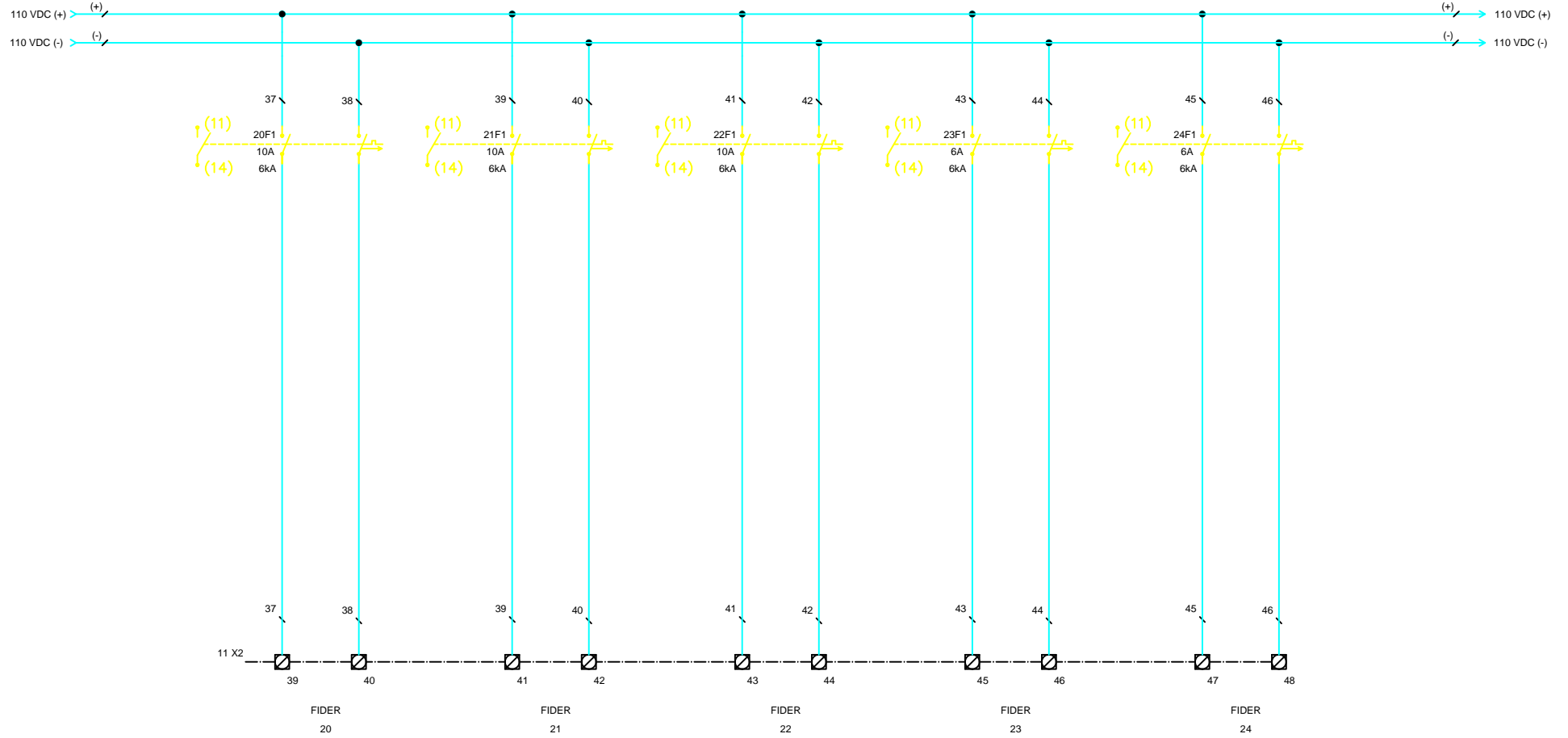


# NOTES

1. ALL DIMENSIONS ARE IN MILIMETERS.

<b>LGTUS</b> ENERJİ	<b>MAK</b> POWER SYSTEMS	PAGE	DOCUMENT NO	SS01-DCB-01	DATE	03.02.2015	DRAWN BY	OZTEKIN
		05	TITLE	DC DISTRIBUTION BOARD SINGLE LINE DIAGRAM	REV		CONTROL BY	SIHMANOGLU
					CAPTION	OUTGOING FIDERS	APPROVED BY	



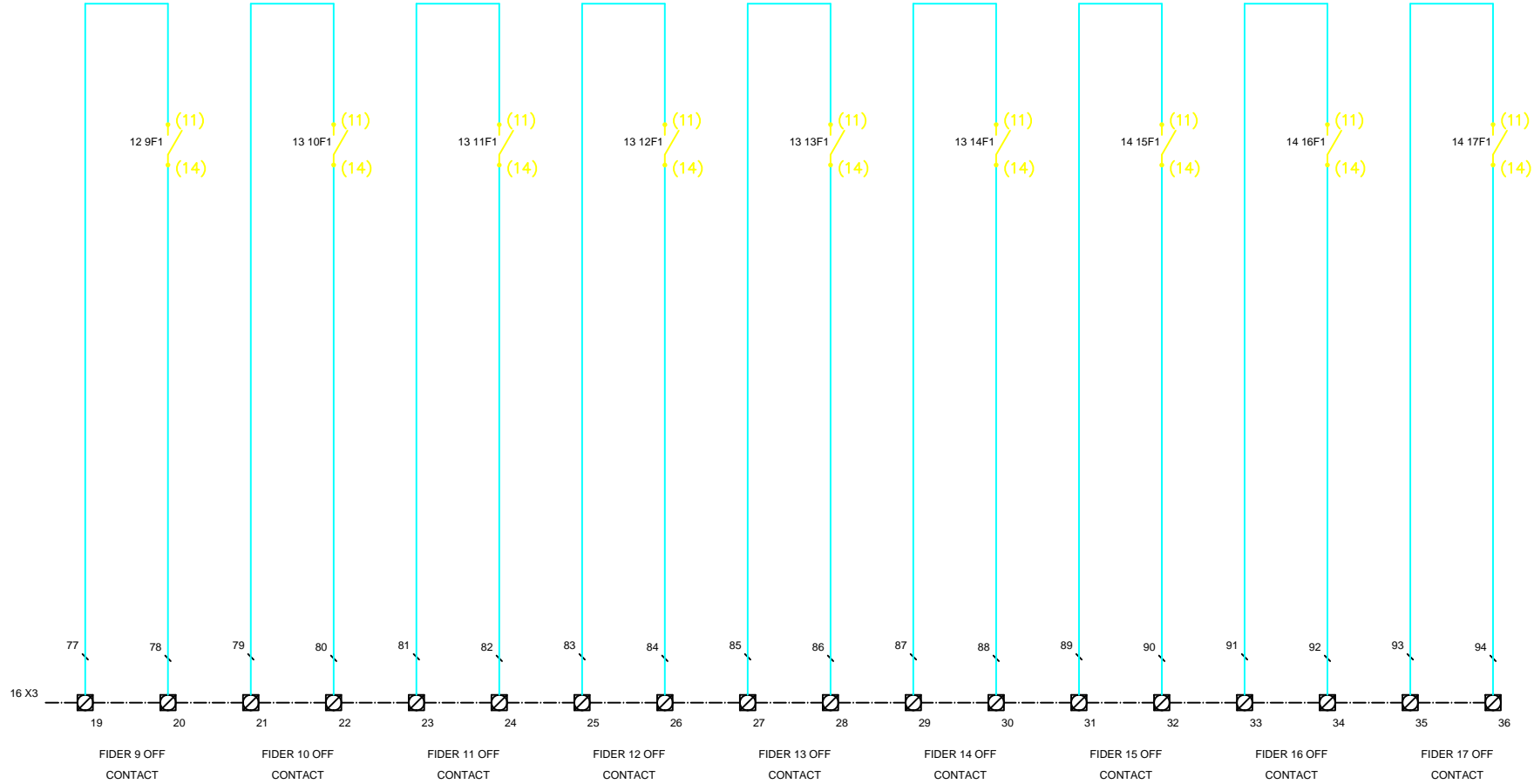


# NOTES

1. ALL DIMENSIONS ARE IN MILIMETERS.

<div> <div>LGTUS</div> <div>ENERJİ</div> </div>	<div> <div>MAK</div> <div>POWER SYSTEMS</div> </div>	PAGE	DOCUMENT NO	SS01-DCB-01	DATE	03.02.2015	DRAWN BY	OZTEKIN
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					CAPTION	OUTGOING FIDERS	APPROVED BY	



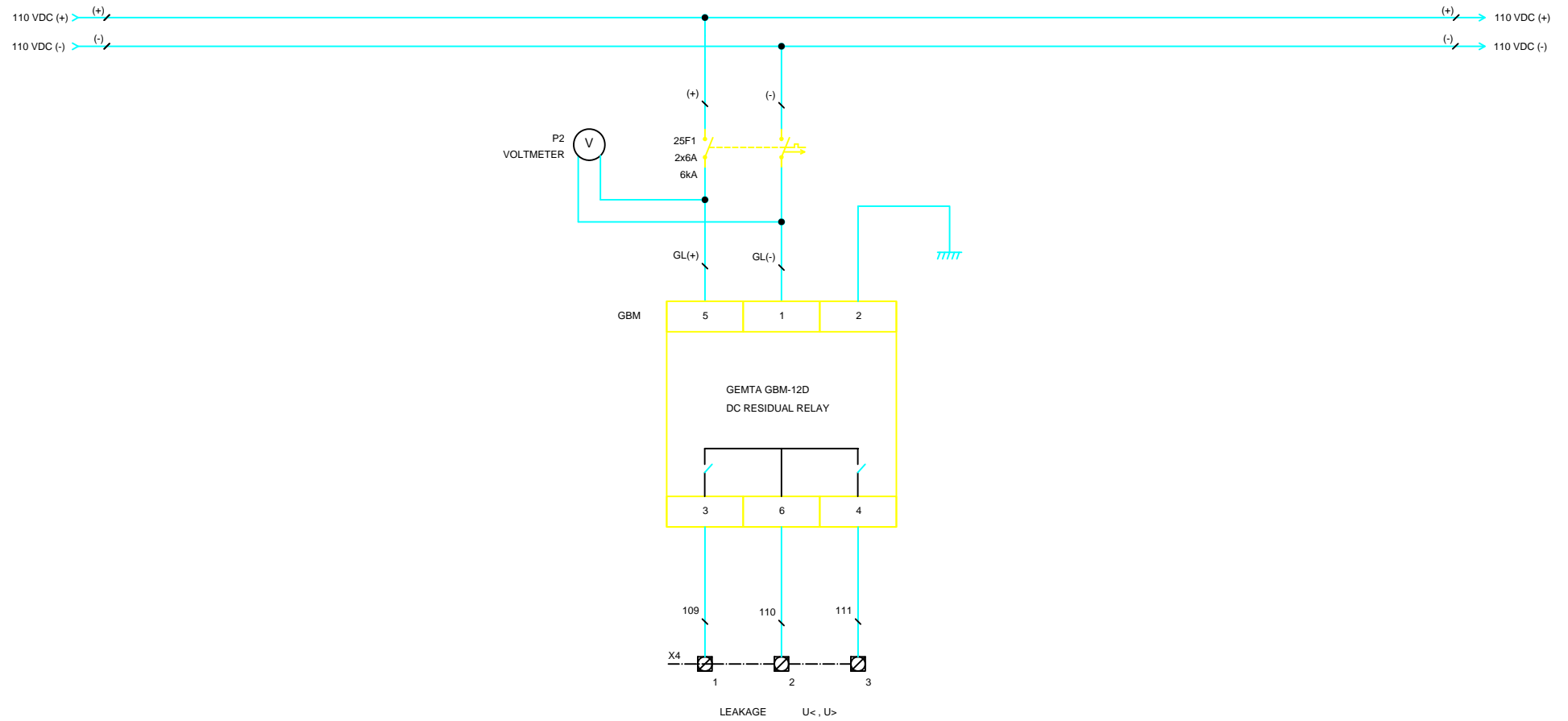


# NOTES

1. ALL DIMENSIONS ARE IN MILIMETERS.



<div> <div>LGTUS</div> <div>ENERJI</div> </div>	<div> <div>MAK</div> <div>POWER SYSTEMS</div> </div>	PAGE	DOCUMENT NO	SS01-DCB-01	DATE	03.02.2015	DRAWN BY	OZTEKIN
		08	TITLE	DC DISTRIBUTION BOARD SINGLE LINE DIAGRAM	REV		CONTROL BY	SIHMANOGLU
					CAPTION	BREAKER OFF CONTACT	APPROVED BY	

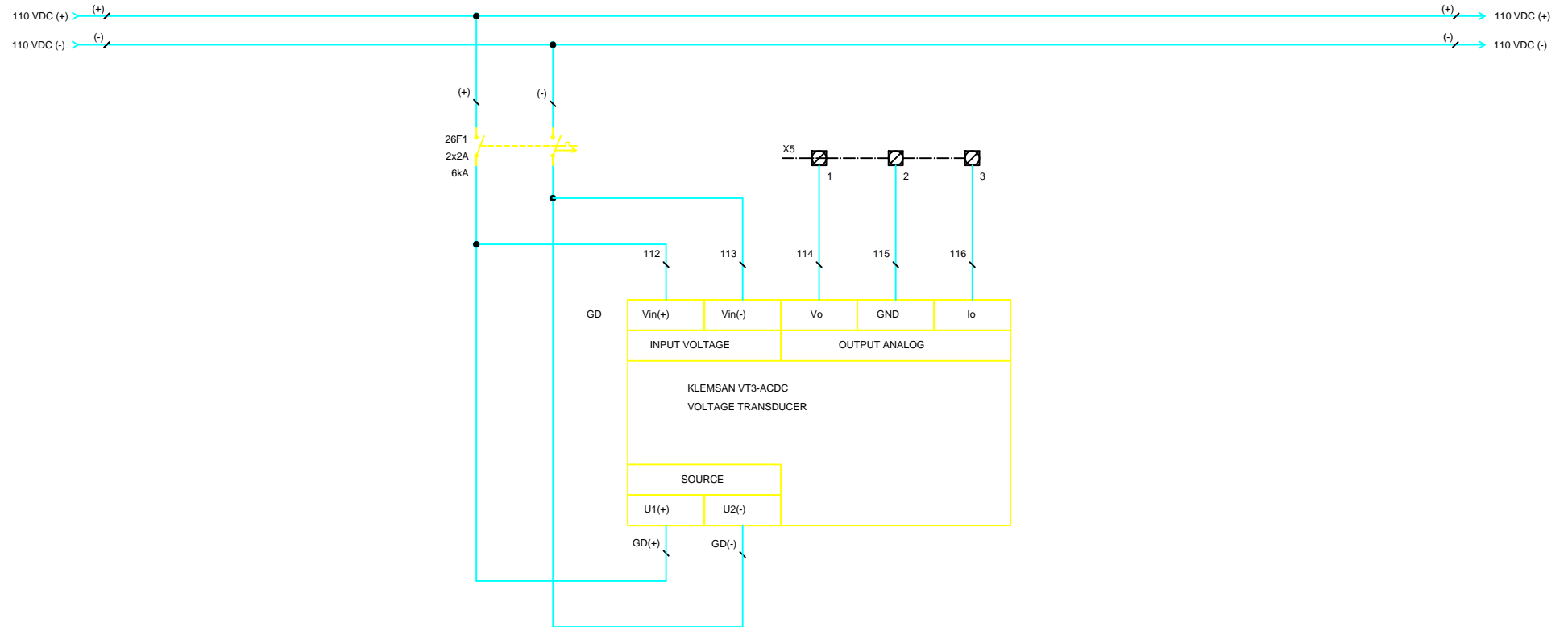




# NOTES



1. ALL DIMENSIONS ARE IN MILIMETERS.

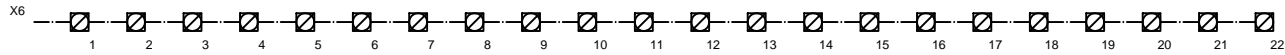
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					REV		CONTROL BY	SIHMANOGLU
			TITLE	DC DISTRIBUTION BOARD SINGLE LINE DIAGRAM	CAPTION	PROTECTIONS (27,64)	APPROVED BY	



# NOTES

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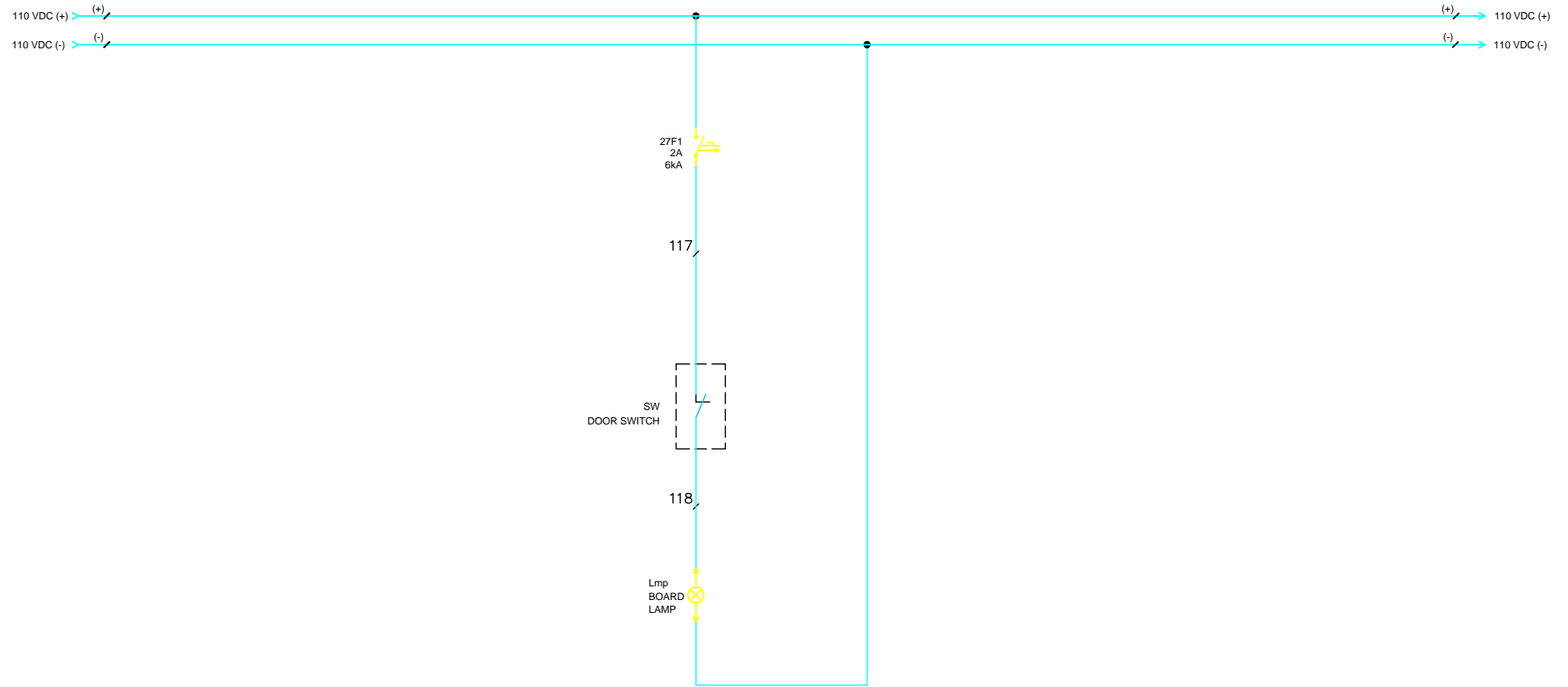
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					REV		CONTROL BY	SIHMANOGLU
			TITLE	DC DISTRIBUTION BOARD SINGLE LINE DIAGRAM	CAPTION	VOLTAGE TRANSDUCER	APPROVED BY	



NOTES



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		PAGE	DOCUMENT NO	SS01-DCB-01	DATE	03.02.2015	DRAWN BY	OZTEKIN
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			12	TITLE	DC DISTRIBUTION BOARD SINGLE LINE DIAGRAM	CAPTION	SPARE TERMINALS	APPROVED BY



# NOTES

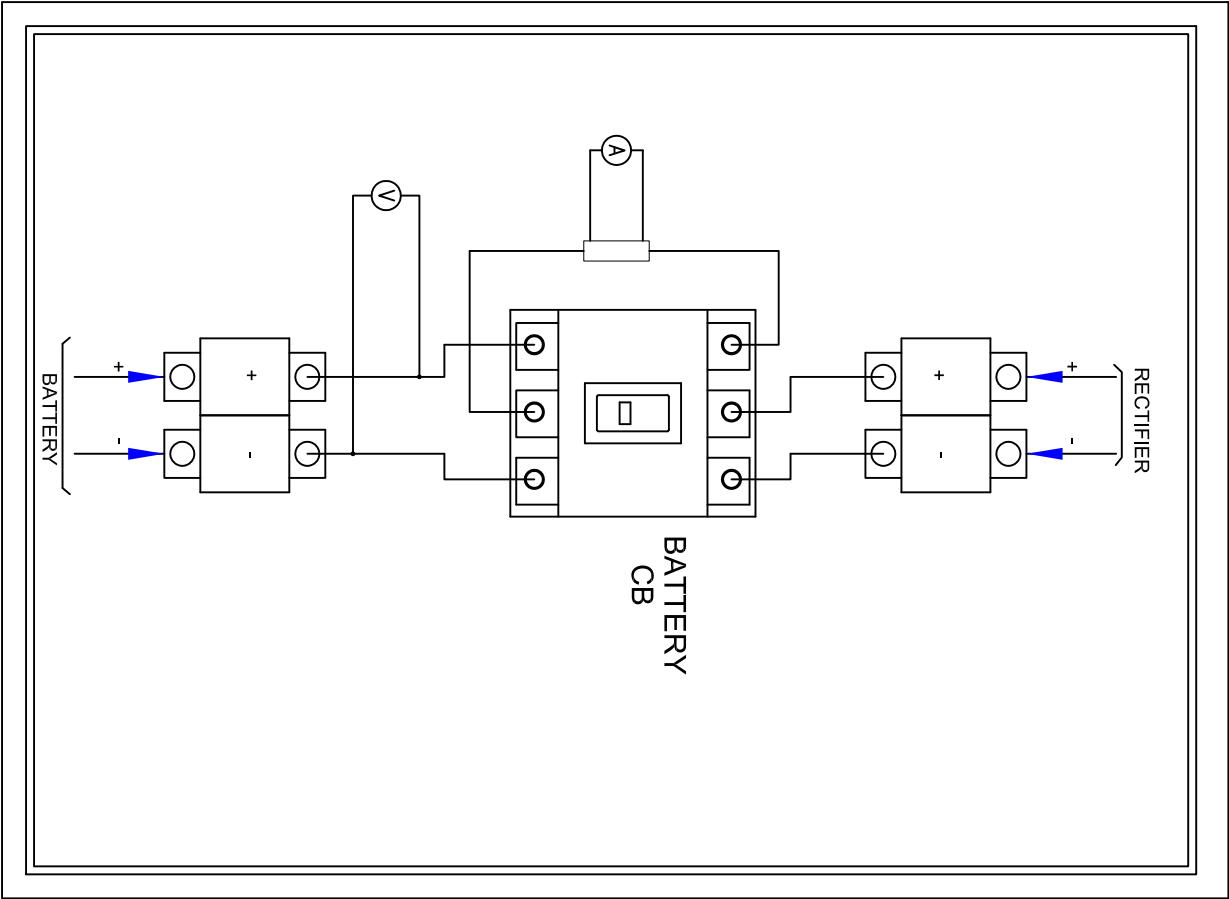
1. ALL DIMENSIONS ARE IN MILIMETERS.

		PAGE	DOCUMENT NO	SS01-DCB-01	DATE	03.02.2015	DRAWN BY	OZTEKIN
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		13	TITLE	DC DISTRIBUTION BOARD SINGLE LINE DIAGRAM	CAPTION	LIGHTING AND SOCKET	APPROVED BY	



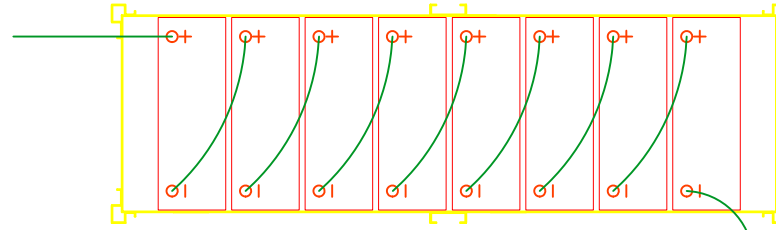
BATTERY FUSE BOX

TERMINAL LIST			
#	DESCRIPTION	CROSS SECTION (recommended)	
X1	DC INPUT&OUTPUT	70mm <sup>2</sup>	NYAF

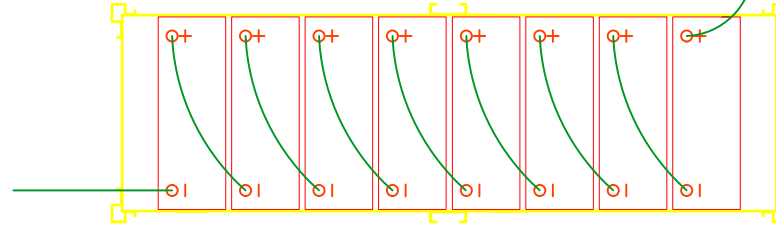


NOTES  
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1. SHELF



2. SHELF

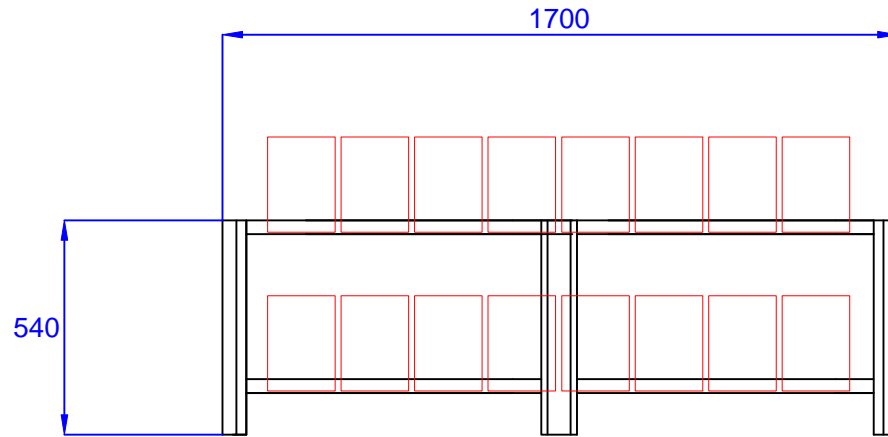


SYSTEM CONTAINS TWO UNITS

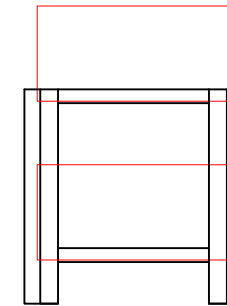
NOTES

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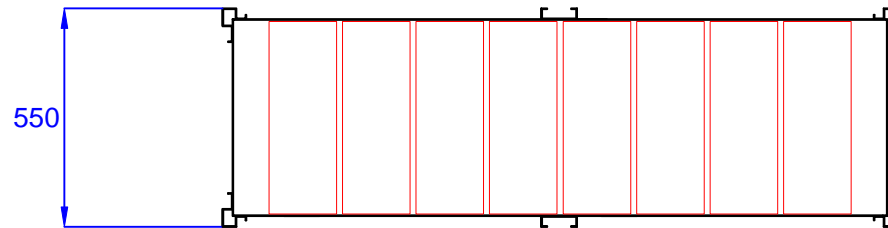
 	PAGE	DOCUMENT NO	SS01-SB-01	DATE	05.02.2015	DRAWN BY	OZTEKIN
	03	TITLE	BATTERY UNIT - RACK - RECTIFIER	REV		CONTROL BY	-
				CAPTION	CONNECTIONS-1 (UPPER VIEW)	APPROVED BY	



FRONT



SIDE



UPPER

NOTES

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SYSTEM CONTAINS TWO UNITS

		PAGE	DOCUMENT NO	SS01-SB-01	DATE	05.02.2015	DRAWN BY	OZTEKIN
					REV		CONTROL BY	-
		05	TITLE	BATTERY UNIT – RACK – RECTIFIER	CAPTION	DIMENTIONS	APPROVED BY	