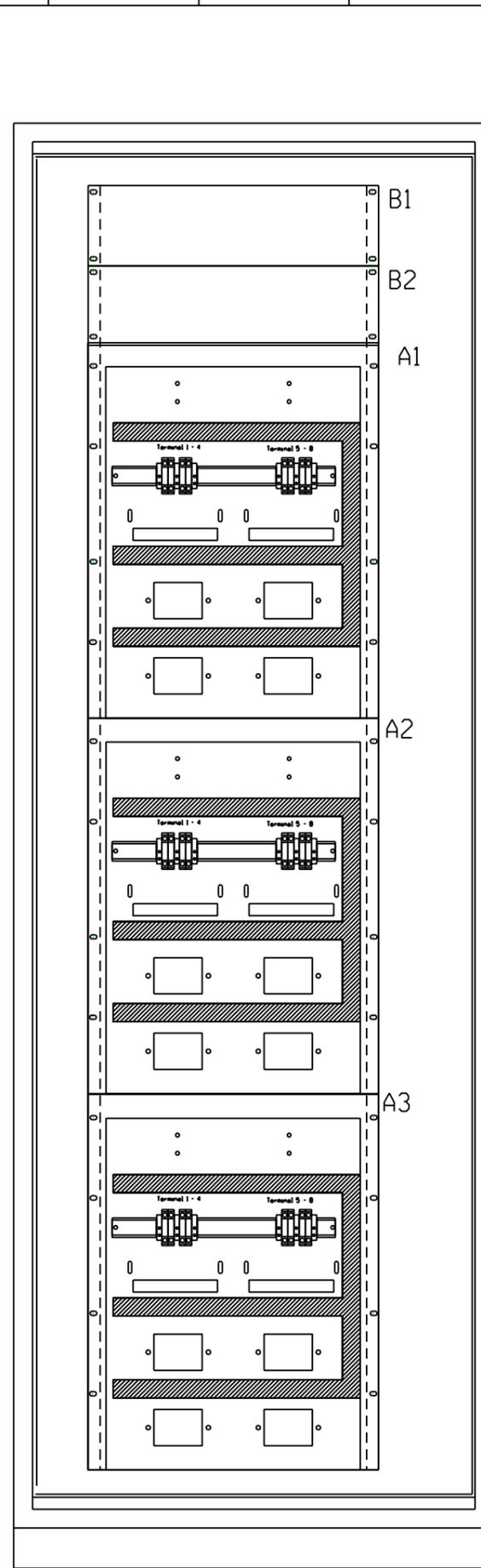
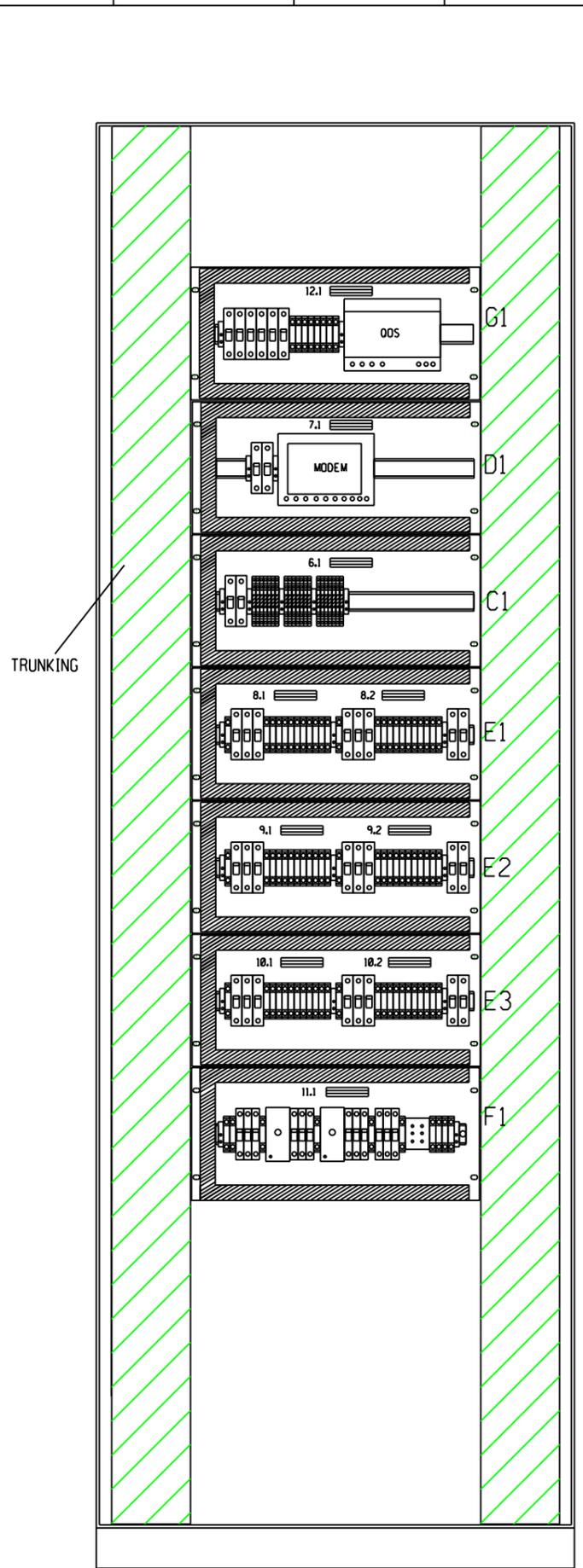


PANEL DOOR FRONT VIEW



PANEL DOOR BACK VIEW



PANEL INSIDE VIEW

PLATE	SIZE	NO	*	LABELS		DESCRIPTION
				SUBSTATION NAME	LABEL	
METER MODULE FRONT PLATE	A1	1	✓			
		2	✓			
		3.1	○	✓	CIRCUIT 1	METER 1
		3.2	○	✓	CIRCUIT 2	METER 2
		3.3	○	✓	CIRCUIT 1 CT TB	PK2 - 4 WAY TEST BLOCK
		3.4	○	✓	CIRCUIT 2 CT TB	PK2 - 4 WAY TEST BLOCK
	A2	3.5	○	✓	CIRCUIT 1 VT TB	PK2 - 4 WAY TEST BLOCK
		3.6	○	✓	CIRCUIT 2 VT TB	PK2 - 4 WAY TEST BLOCK
		3.7	○	✓	CIRCUIT 1	BACK TERMINATION
		3.8	○	✓	CIRCUIT 2	BACK TERMINATION
		4.1	○	✓	CIRCUIT 3	METER 3
		4.2	○	✓	CIRCUIT 4	METER 4
METER MODULE FRONT PLATE	A3	4.3	○	✓	CIRCUIT 3 CT TB	PK2 - 4 WAY TEST BLOCK
		4.4	○	✓	CIRCUIT 4 CT TB	PK2 - 4 WAY TEST BLOCK
		4.5	○	✓	CIRCUIT 3 VT TB	PK2 - 4 WAY TEST BLOCK
		4.6	○	✓	CIRCUIT 4 VT TB	PK2 - 4 WAY TEST BLOCK
		4.7	○	✓	CIRCUIT 3	BACK TERMINATION
		4.8	○	✓	CIRCUIT 4	BACK TERMINATION
	B1/B1	5.1	○	✓	CIRCUIT 5	METER 5
		5.2	○	✓	CIRCUIT 6	METER 6
		5.3	○	✓	CIRCUIT 5 CT TB	PK2 - 4 WAY TEST BLOCK
		5.4	○	✓	CIRCUIT 6 CT TB	PK2 - 4 WAY TEST BLOCK
		5.5	○	✓	CIRCUIT 5 VT TB	PK2 - 4 WAY TEST BLOCK
		5.6	○	✓	CIRCUIT 6 VT TB	PK2 - 4 WAY TEST BLOCK
INTERPOSING MODULE	C1	5.7	○	✓	CIRCUIT 5	BACK TERMINATION
		5.8	○	✓	CIRCUIT 6	BACK TERMINATION
		6.1	□	✓		BLANKING PLATE
		6.2	□	✓		BLANKING PLATE
		6.3	□	✓		BLANKING PLATE
		6.4	□	✓		BLANKING PLATE
	D1	6.1	□	✓	INTERPOSING MODULE	PULSE REPEAT CIRCUIT
		7.1	○	✓	MODEM MODULE	MODEM BRACKET
		8.1	□	✓	CIRCUIT 1 CT & VT INPUTS	METER TERMINAL PLATE
		8.2	□	✓	CIRCUIT 2 CT & VT INPUTS	CIRCUIT 1 & 2
		9.1	□	✓	CIRCUIT 3 CT & VT INPUTS	METER TERMINAL PLATE
		9.2	□	✓	CIRCUIT 4 CT & VT INPUTS	CIRCUIT 3 & 4
E1	10.1	□	✓	CIRCUIT 5 CT & VT INPUTS	METER TERMINAL PLATE	
	10.2	□	✓	CIRCUIT 6 CT & VT INPUTS	CIRCUIT 5 & 6	
	11.1	□	✓	VT SELECTOR	VOLTAGE SELECTION A,B,C or D	
	12.1	□	✓	QUALITY OF SUPPLY	QUALITY OF SUPPLY EQUIPMENT	
	12.2	□	✓			
	12.3	□	✓			

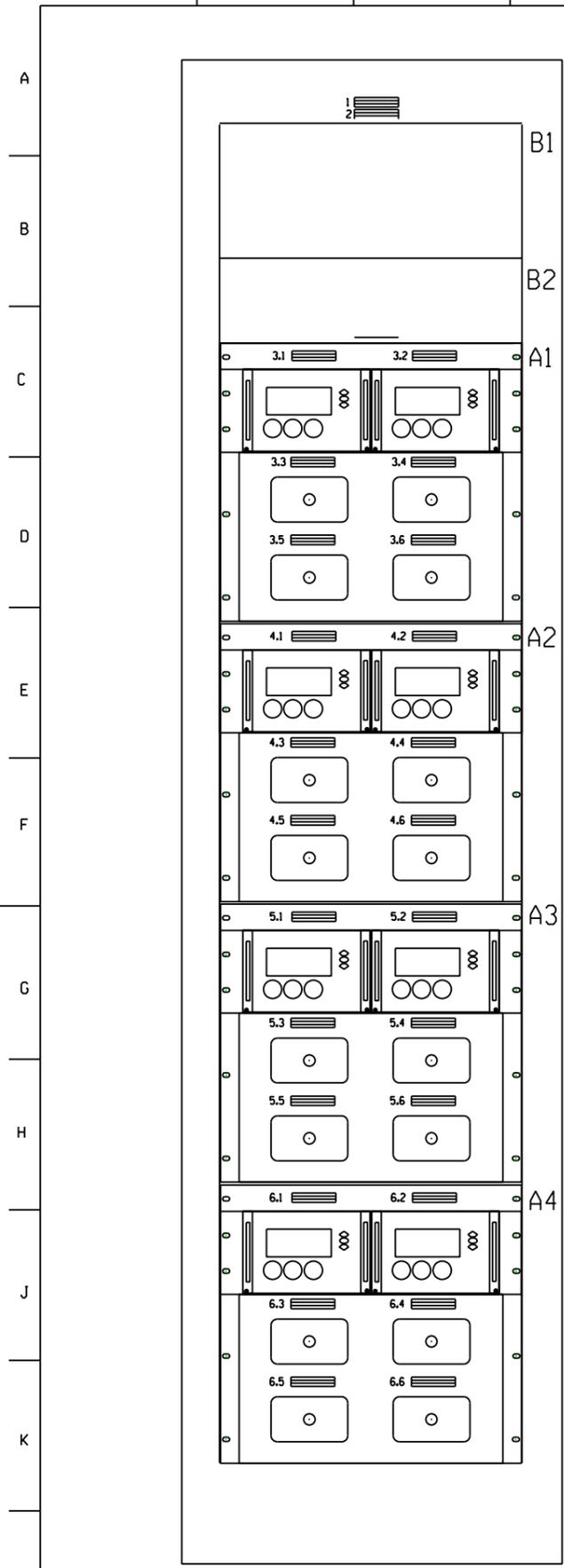
- * SYMBOL EXPLANATION
- SURFACE MOUNT
- CUTOUT & EMPTY CASE
- DIN RAIL MOUNTED
- ▨ TRUNKING

5	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD	21/04/21	
4	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD	10/09/14	
3	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD	12/02/13	
2	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD	28/02/08	
1	SHEETS REDUCED FROM 33 TO 21	VvZ	MG	01/06

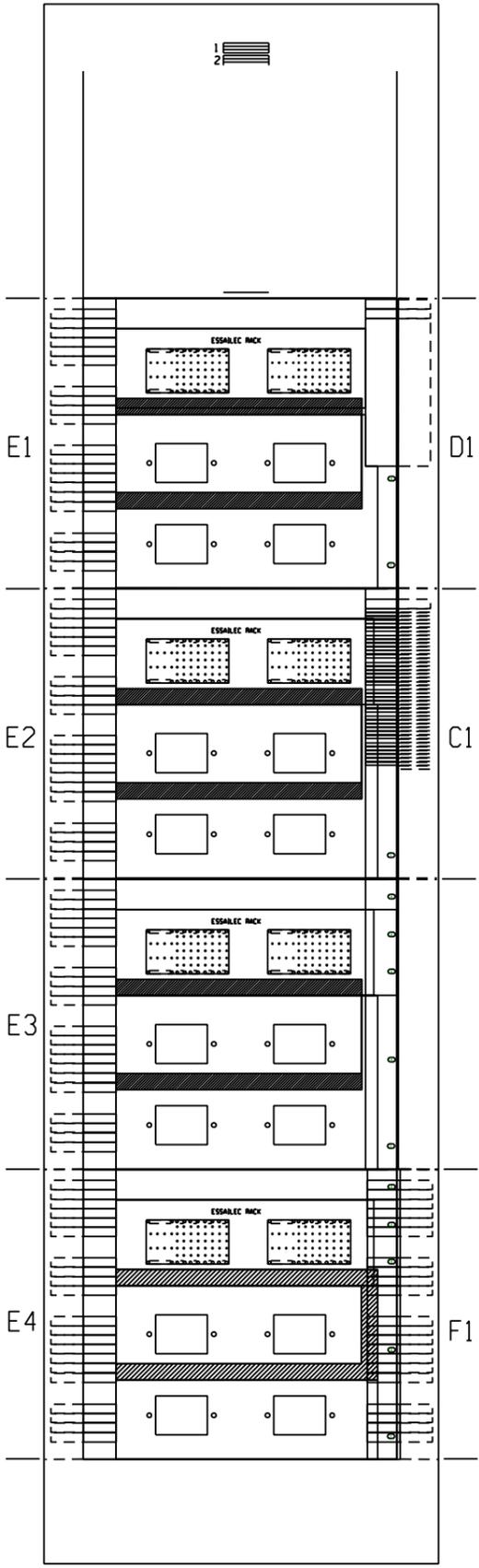
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 AUTH: HENRI GROENEWALD
 SCALE: 1:1 DATE: 04/12/2003
 ORG: HENRI GROENEWALD
 DATE: 04/12/2003
 DRAWN: V. van ZWEL
 DATE: 21/08/2003

STANDARD SUBSTATION METERING PANEL
 SURFACE MOUNT VERSION
 PANEL EQUIPMENT LAYOUT
 D-DT-5804
 SET 39 SHEET 1 REVISION 5

THIS DRAWING HAS BEEN CREATED ON A C.A.D. SYSTEM AND ANY AMENDMENT TO THE DRAWING MUST BE EFFECTED ONLY ON THE SAME C.A.D. SYSTEM



PANEL FRONT VIEW



PANEL BACK VIEW

NOTES:
 1. THE CT/VT INPUT TERMINALS WILL BE MOUNTED ON THE LEFT SIDE OF THE PANEL AT THE EXTREME BACK OF THE PANEL.
 2. THE VOLTAGE SELECTION MODULE, MODEM MODULE & INTERPOSING MODULES WILL BE MOUNTED ON THE RIGHT SIDE OF THE PANEL, ALSO AT THE EXTREME BACK OF THE PANEL.
 3. THE TRUNKING FOR THE INCOMING CABLES SHALL BE MOUNTED NEXT TO THE BACK MODULES (BETWEEN THE BACK MODULES AND FRONT MODULES).

PLATE	SIZE	NO	*	LABELS		DESCRIPTION			
				SUBSTATION NAME	LABEL				
METER MODULE FRONT PLATE	10U	1	✓			LABEL			
		2	✓			METERING PANEL			
		3.1	○	✓			METER 1		
		3.2	○	✓			METER 2		
		3.3	○	✓			PK2 - 4 WAY TEST BLOCK		
		3.4	○	✓			PK2 - 4 WAY TEST BLOCK		
		3.5	○	✓			PK2 - 4 WAY TEST BLOCK		
		3.6	○	✓			PK2 - 4 WAY TEST BLOCK		
METER MODULE FRONT PLATE	10U	3.7	○	✓		BACK TERMINATION			
		3.8	○	✓		BACK TERMINATION			
		4.1	○	✓			METER 3		
		4.2	○	✓			METER 4		
		4.3	○	✓			PK2 - 4 WAY TEST BLOCK		
		4.4	○	✓			PK2 - 4 WAY TEST BLOCK		
		4.5	○	✓			PK2 - 4 WAY TEST BLOCK		
		4.6	○	✓			PK2 - 4 WAY TEST BLOCK		
METER MODULE FRONT PLATE	10U	4.7	○	✓		BACK TERMINATION			
		4.8	○	✓		BACK TERMINATION			
		5.1	○	✓			METER 5		
		5.2	○	✓			METER 6		
		5.3	○	✓			PK2 - 4 WAY TEST BLOCK		
		5.4	○	✓			PK2 - 4 WAY TEST BLOCK		
		5.5	○	✓			PK2 - 4 WAY TEST BLOCK		
		5.6	○	✓			PK2 - 4 WAY TEST BLOCK		
METER MODULE FRONT PLATE	10U	5.7	○	✓		BACK TERMINATION			
		5.8	○	✓		BACK TERMINATION			
		6.1	○	✓			METER 7		
		6.2	○	✓			METER 8		
		6.3	○	✓			PK2 - 4 WAY TEST BLOCK		
		6.4	○	✓			PK2 - 4 WAY TEST BLOCK		
		6.5	○	✓			PK2 - 4 WAY TEST BLOCK		
		6.6	○	✓			PK2 - 4 WAY TEST BLOCK		
METER MODULE FRONT PLATE	10U	6.7	○	✓		BACK TERMINATION			
		6.8	○	✓		BACK TERMINATION			
		B1	○	✓			BLANKING PLATE		
		B1B1	○	✓			BLANKING PLATE		
		INTERPOSING MODULE	C1	4U	II	✓		INTERPOSING MODULE	PULSE REPEAT CIRCUIT
		MODEM PLATE	D1	4U	○	✓		MODEM MODULE	MODEM BRACKET
		BACK PLATE	E1	4U	II	✓		CIRCUIT 1 CT & VT INPUTS	METER TERMINAL PLATE
		BACK PLATE	E2	4U	II	✓		CIRCUIT 2 CT & VT INPUTS	CIRCUIT 1 & 2
BACK PLATE	E3	4U	II	✓		CIRCUIT 3 CT & VT INPUTS	METER TERMINAL PLATE		
BACK PLATE	E3	4U	II	✓		CIRCUIT 4 CT & VT INPUTS	CIRCUIT 3 & 4		
BACK PLATE	E3	4U	II	✓		CIRCUIT 5 CT & VT INPUTS	METER TERMINAL PLATE		
BACK PLATE	E3	4U	II	✓		CIRCUIT 6 CT & VT INPUTS	CIRCUIT 5 & 6		
BACK PLATE	E3	4U	II	✓		CIRCUIT 5 CT & VT INPUTS	METER TERMINAL PLATE		
BACK PLATE	E3	4U	II	✓		CIRCUIT 6 CT & VT INPUTS	CIRCUIT 5 & 6		
VSR MODULE	F1	4U	II	✓		VT SELECTOR	VOLTAGE SELECTION B		

- * SYMBOL EXPLANATION
- SURFACE MOUNT
- CUTOUT & EMPTY CASE
- II DIN RAIL MOUNTED
- ▨ TRUNKING

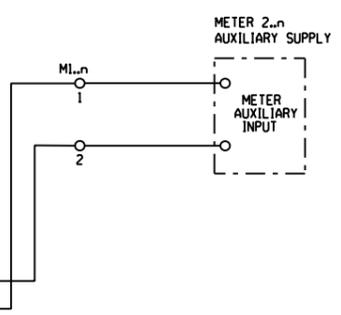
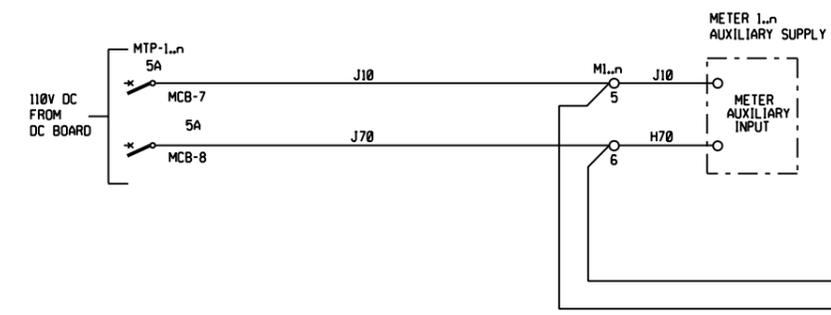
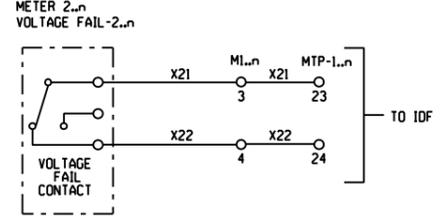
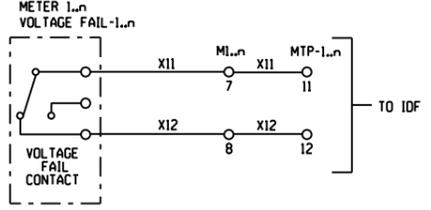
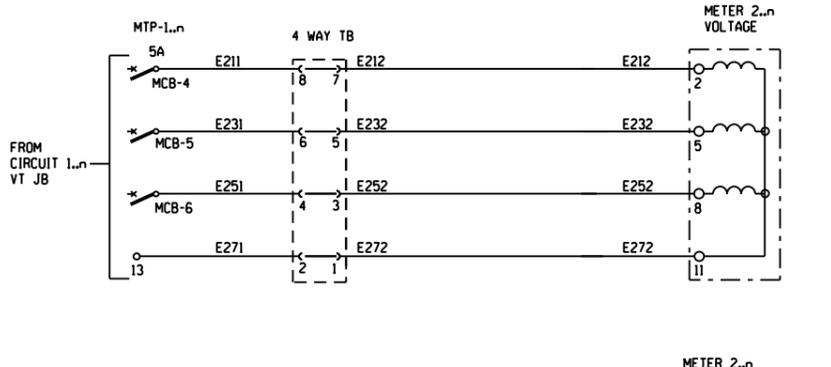
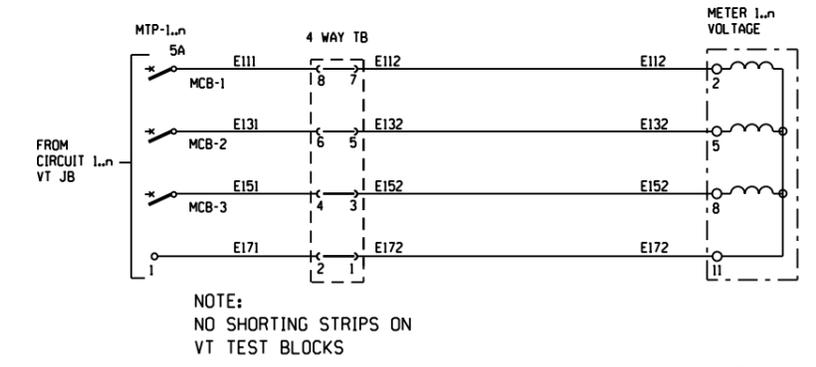
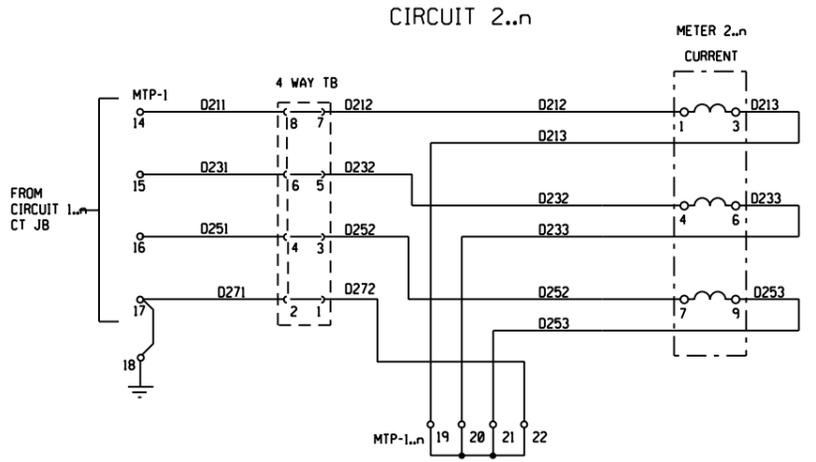
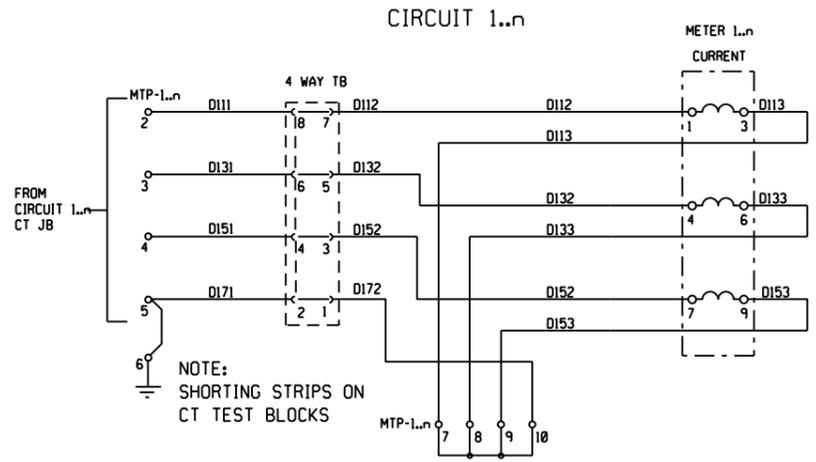
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4	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD	10/09/14	
3	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD	12/02/13	
2	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD	28/02/08	
1	SHEETS REDUCED FROM 33 TO 21	VvZ	MG	01/06

Eskom
 AUTH: HENRI GROENEWALD
 DATE: 04/12/2003
 ORG: HENRI GROENEWALD
 DATE: 04/12/2003
 DRAWN: V. van ZWEL
 DATE: 21/08/2003

STANDARD SUBSTATION METERING PANEL
 19' RACK MOUNT VERSION
 PANEL EQUIPMENT LAYOUT

D-DT-5804
 SET 39 SHEET 2 REVISION 5

THIS DRAWING HAS BEEN CREATED ON A C.A.D. SYSTEM AND ANY AMENDMENT TO THE DRAWING MUST BE EFFECTED ONLY ON THE SAME C.A.D. SYSTEM



LEGEND	
MI	METER MODULE 1
MTP	METER TERMINAL PLATE
CTJB	CURRENT TRANSFORMER JUNCTION BOX
TB	TEST BLOCK
VTJB	VOLTAGE TRANSFORMER JUNCTION BOX
MCB	MINIATURE CIRCUIT BREAKER

- NOTES:
- ONE METERING MODULE CATERES FOR TWO METERING CIRCUITS.
 - THE TWO CIRCUITS NUMBERING ARE DISTINGUISHD BY D1XX AND D2XX OR E1XX AND E2XX.
 - THE INTERNAL NUMBERING OF ALL THE OTHER METERING MODULES WILL BE THE SAME AS FOR THE FIRST ONE - ONLY CABLE NUMBERING AND DESTINATIONS WILL DIFFER

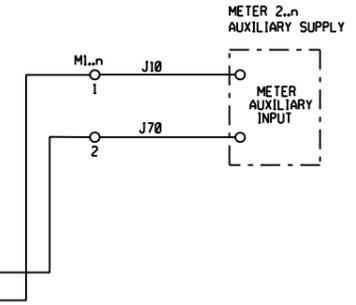
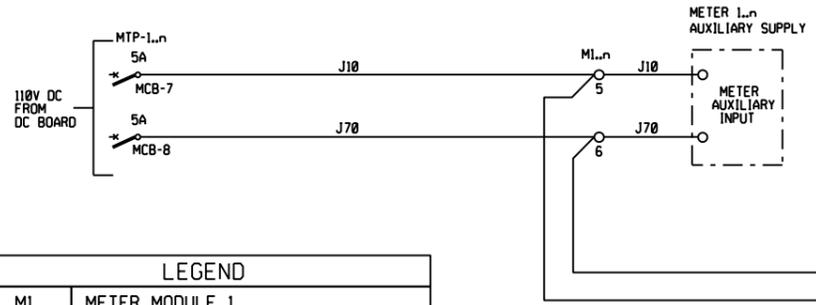
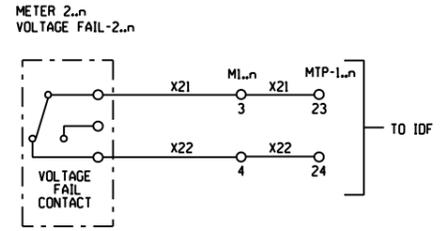
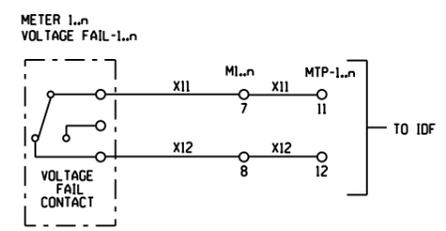
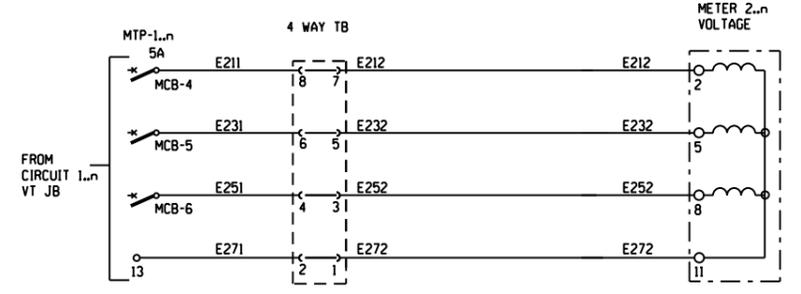
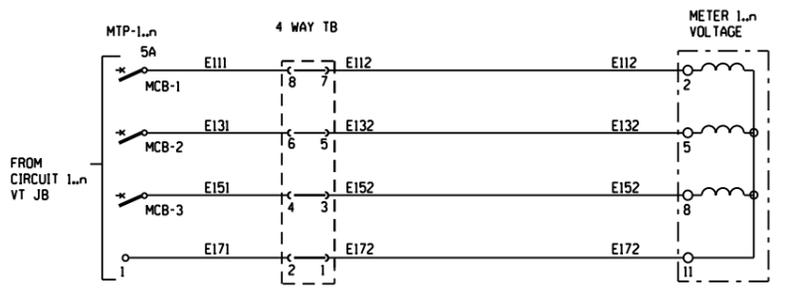
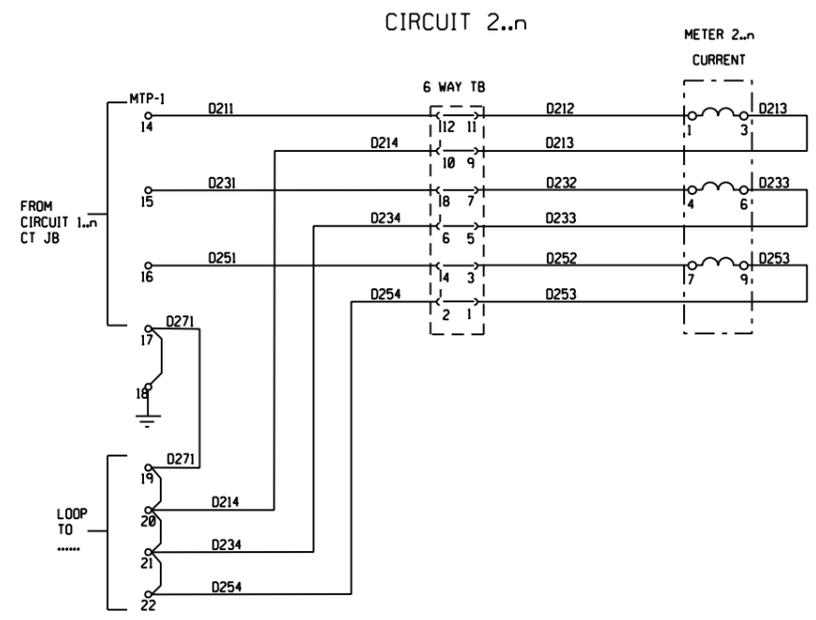
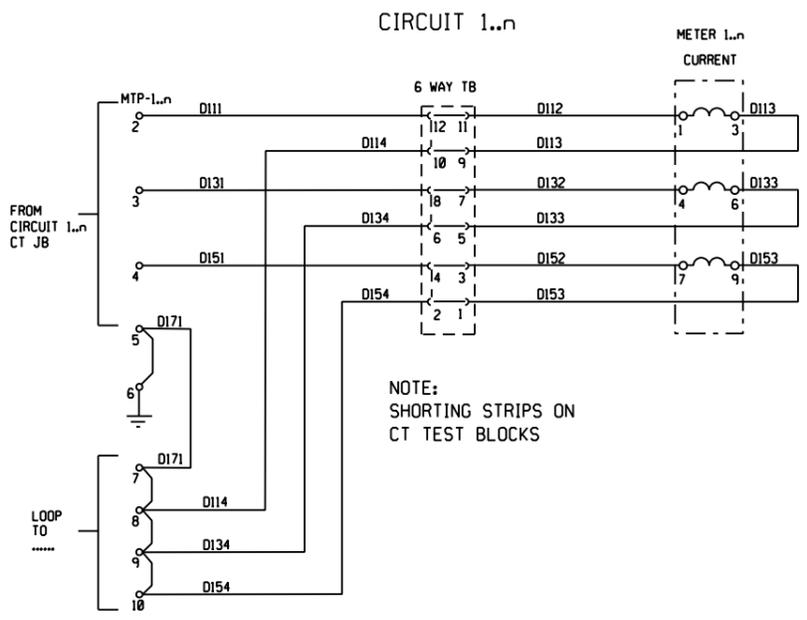
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5	DRAWINGS UPDATED BY H. GROENEWALD				21/04/21	
4	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD			10/09/14	
3	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD			12/02/13	
2	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD			20/02/08	
1	SHEETS REDUCED FROM 33 TO 21	VvZ	MG		01/06	

AUTH: HENRI GROENEWALD
 SCALE: 1:1 DATE: 04/12/2003
 CHKD: HENRI GROENEWALD
 DATE: 04/12/2003
 DRAWN: V. VAN ZWEL
 DATE: 21/00/2003

Escom
 STANDARD SUBSTATION METERING PANEL
 METER MODULE 4 WAY SURFACE MOUNT:
 AC KEY DIAGRAM

D-DT-5804	39	3	5
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THIS DRAWING HAS BEEN CREATED ON A C.A.D. SYSTEM AND ANY AMENDMENT TO THE DRAWING MUST BE EFFECTED ONLY ON THE SAME C.A.D. SYSTEM



LEGEND	
MI	METER MODULE 1
MTP	METER TERMINAL PLATE
CTJB	CURRENT TRANSFORMER JUNCTION BOX
TB	TEST BLOCK
VTJB	VOLTAGE TRANSFORMER JUNCTION BOX
MCB	MINIATURE CIRCUIT BREAKER

- NOTES:
- ONE METERING MODULE CATERES FOR TWO METERING CIRCUITS.
 - THE TWO CIRCUITS NUMBERING ARE DISTINGUISD BY D1XX AND D2XX OR E1XX AND E2XX.
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REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.
5	DRAWINGS UPDATED BY H. GROENEWALD				21/04/21	
4	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD			10/09/14	
3	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD			12/02/13	
2	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD			20/02/08	
1	SHEETS REDUCED FROM 33 TO 21	VvZ	MG		01/06	

Eskom

STANDARD SUBSTATION METERING PANEL

METER MODULE 6 WAY SURFACE MOUNT:
AC KEY DIAGRAM

SCALE: 1:1 DATE: 04/12/2003

AUTH: HENRI GROENEWALD

CHKD: HENRI GROENEWALD

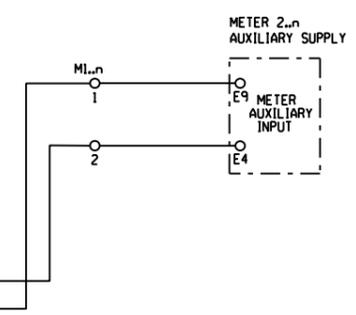
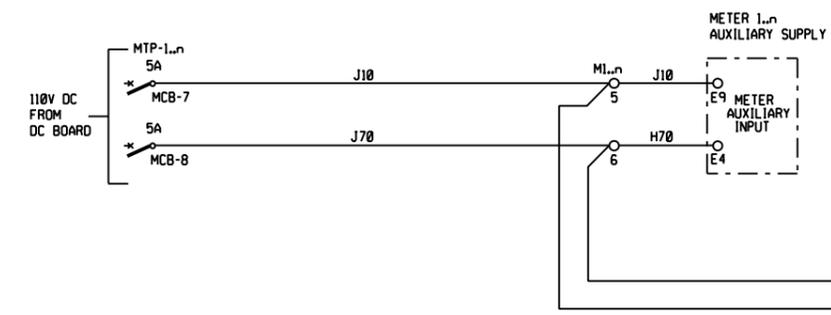
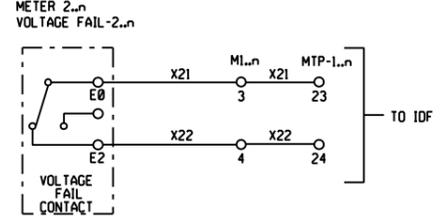
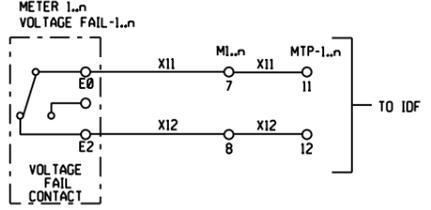
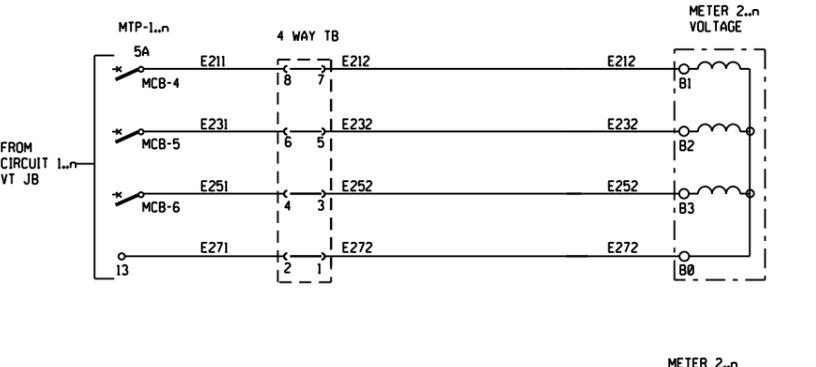
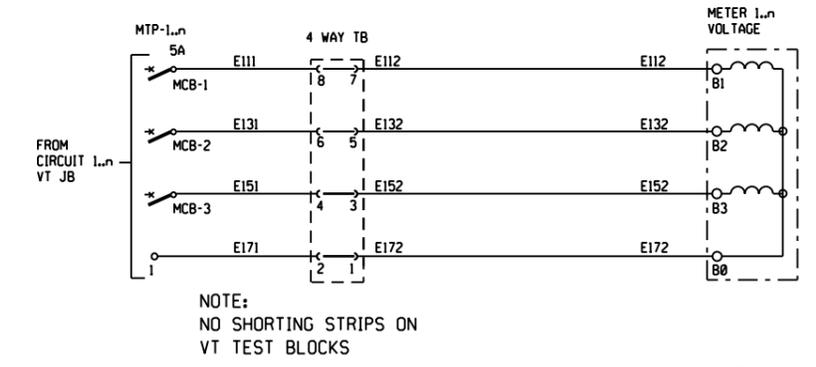
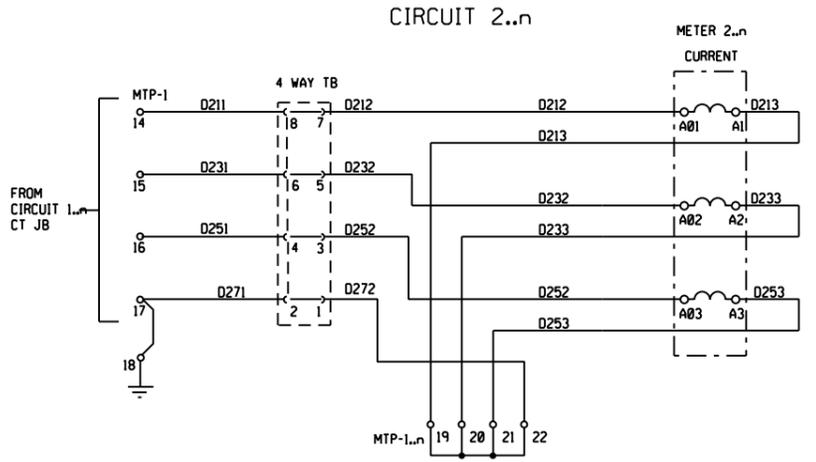
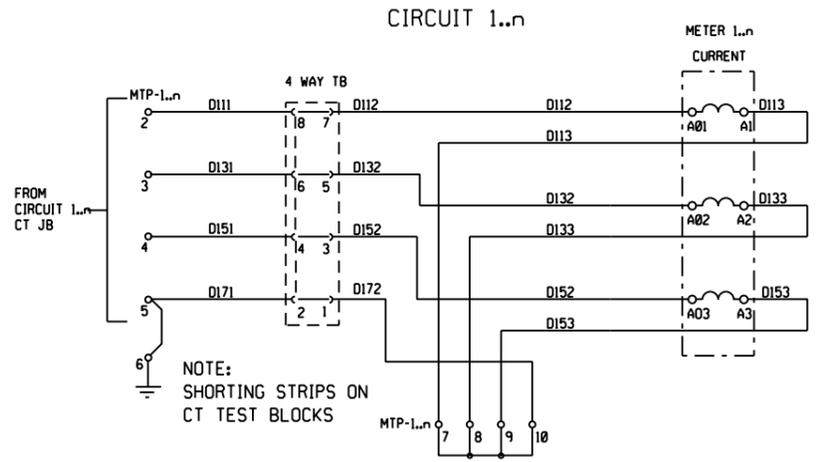
DATE: 04/12/2003

DRAWN: V. van ZWEL

DATE: 21/00/2003

THIS DRAWING HAS BEEN CREATED ON A C.A.D. SYSTEM AND ANY AMENDMENT TO THE DRAWING MUST BE EFFECTED ONLY ON THE SAME C.A.D. SYSTEM

SET	SHEET	REVISION
D-DT-5804	39	4
		5

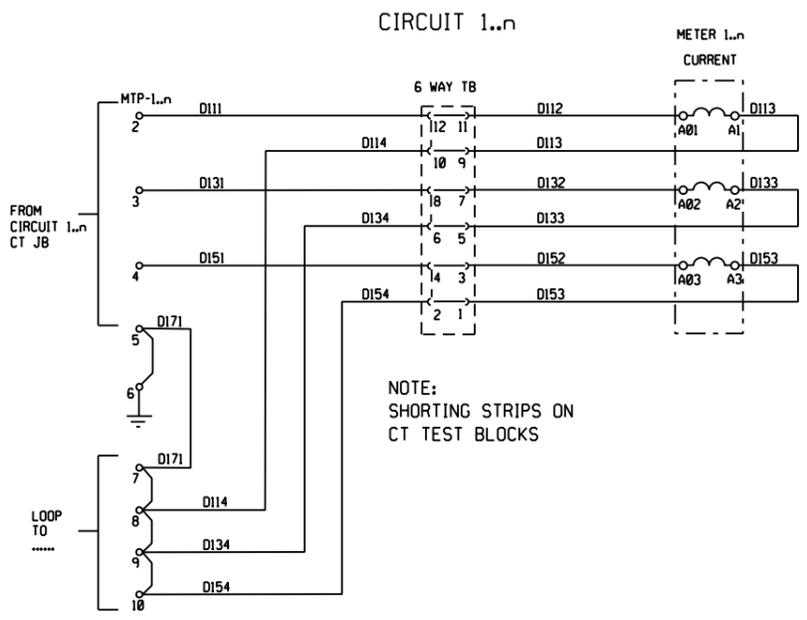


LEGEND	
MI	METER MODULE 1
MTP	METER TERMINAL PLATE
CTJB	CURRENT TRANSFORMER JUNCTION BOX
TB	TEST BLOCK
VTJB	VOLTAGE TRANSFORMER JUNCTION BOX
MCB	MINIATURE CIRCUIT BREAKER

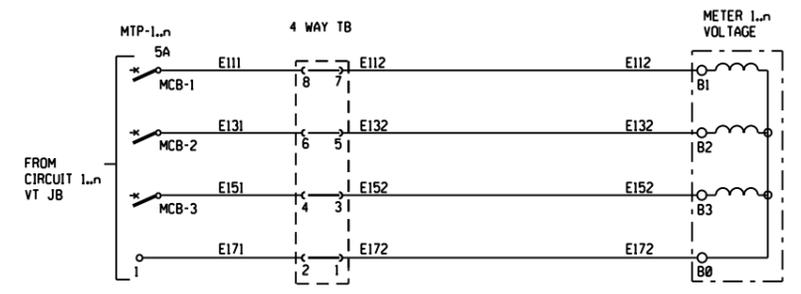
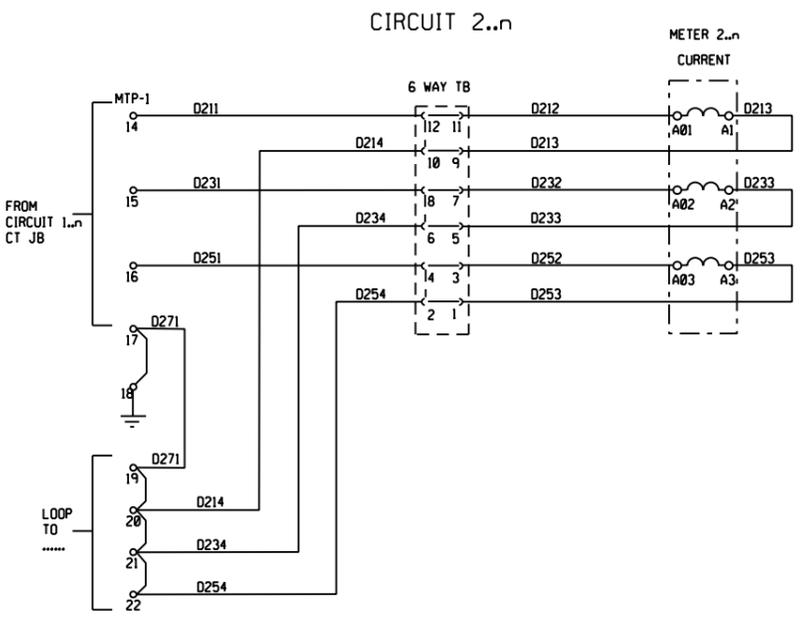
- NOTES:
- ONE METERING MODULE CATERES FOR TWO METERING CIRCUITS.
 - THE TWO CIRCUITS NUMBERING ARE DISTINGUISHED BY D1XX AND D2XX OR E1XX AND E2XX.
 - THE INTERNAL NUMBERING OF ALL THE OTHER METERING MODULES WILL BE THE SAME AS FOR THE FIRST ONE - ONLY CABLE NUMBERING AND DESTINATIONS WILL DIFFER

REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.
5	DRAWINGS UPDATED BY H. GROENEWALD				21/04/21	
4	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD			10/09/14	
3	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD			12/02/13	
2	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD			20/02/08	
1	SHEETS REDUCED FROM 33 TO 21	VvZ	MG		01/06	

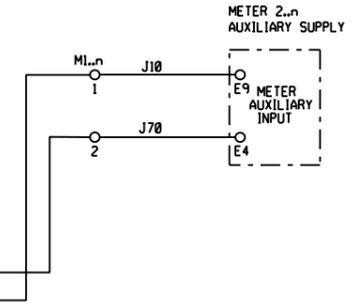
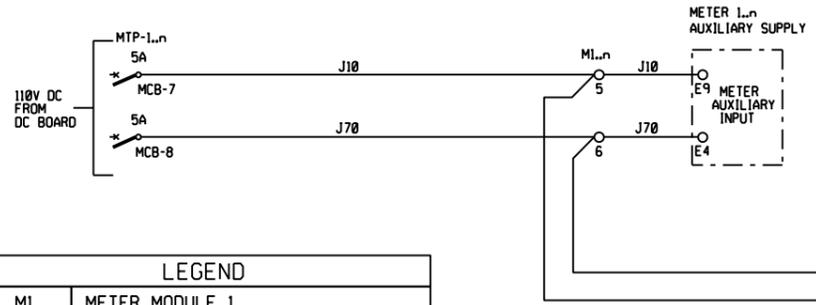
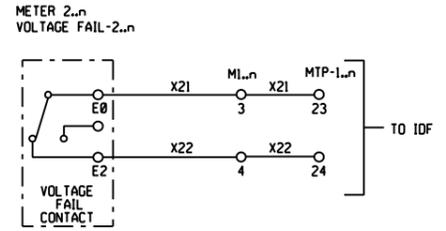
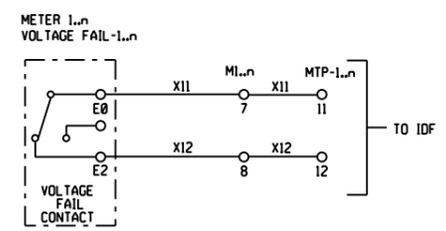
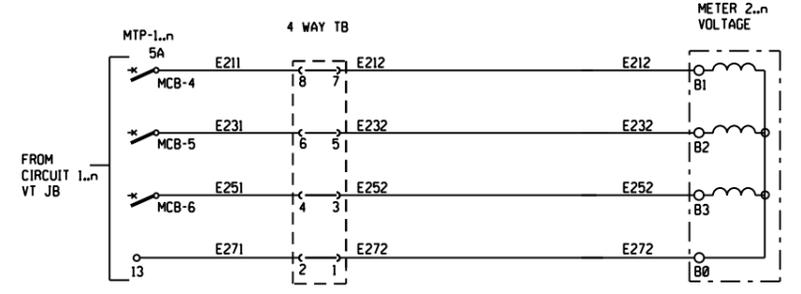
Eskom		STANDARD SUBSTATION METERING PANEL			
AUTH: HENRI GROENEWALD		METER MODULE 4 WAY 19" RACK MOUNT:			
SCALE: N.T.S.		AC KEY DIAGRAM			
DATE: 04/12/2003		SET	SHEET	REVISION	
CHKD: HENRI GROENEWALD		D-DT-5804	39	5	5
DATE: 04/12/2003		THIS DRAWING HAS BEEN CREATED ON A C.A.D. SYSTEM AND ANY AMENDMENT TO THE DRAWING MUST BE EFFECTED ONLY ON THE SAME C.A.D. SYSTEM			
DRAWN: V. van ZWEL					
DATE: 21/00/2003					



NOTE:
SHORTING STRIPS ON
CT TEST BLOCKS



NOTE:
NO SHORTING STRIPS ON
VT TEST BLOCKS



LEGEND	
MI	METER MODULE 1
MTP	METER TERMINAL PLATE
CTJB	CURRENT TRANSFORMER JUNCTION BOX
TB	TEST BLOCK
VTJB	VOLTAGE TRANSFORMER JUNCTION BOX
MCB	MINIATURE CIRCUIT BREAKER

- NOTES:
- ONE METERING MODULE CATERS FOR TWO METERING CIRCUITS.
 - THE TWO CIRCUITS NUMBERING ARE DISTINGUISHED BY D1XX AND D2XX OR E1XX AND E2XX.
 - THE INTERNAL NUMBERING OF ALL THE OTHER METERING MODULES WILL BE THE SAME AS FOR THE FIRST ONE - ONLY CABLE NUMBERING AND DESTINATIONS WILL DIFFER

REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.
5	DRAWINGS UPDATED BY H. GROENEWALD				21/04/21	
4	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD			10/09/14	
3	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD			12/02/13	
2	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD			20/02/08	
1	SHEETS REDUCED FROM 33 TO 21	VvZ	MG		01/06	

Eskom

STANDARD SUBSTATION METERING PANEL

METER MODULE 6 WAY 19' RACK MOUNT:
AC KEY DIAGRAM

THIS DRAWING HAS BEEN CREATED ON A C.A.D. SYSTEM AND ANY AMENDMENT TO THE DRAWING MUST BE EFFECTED ONLY ON THE SAME C.A.D. SYSTEM

SCALE: 1:1 DATE: 04/12/2003

AUTH: HENRI GROENEWALD

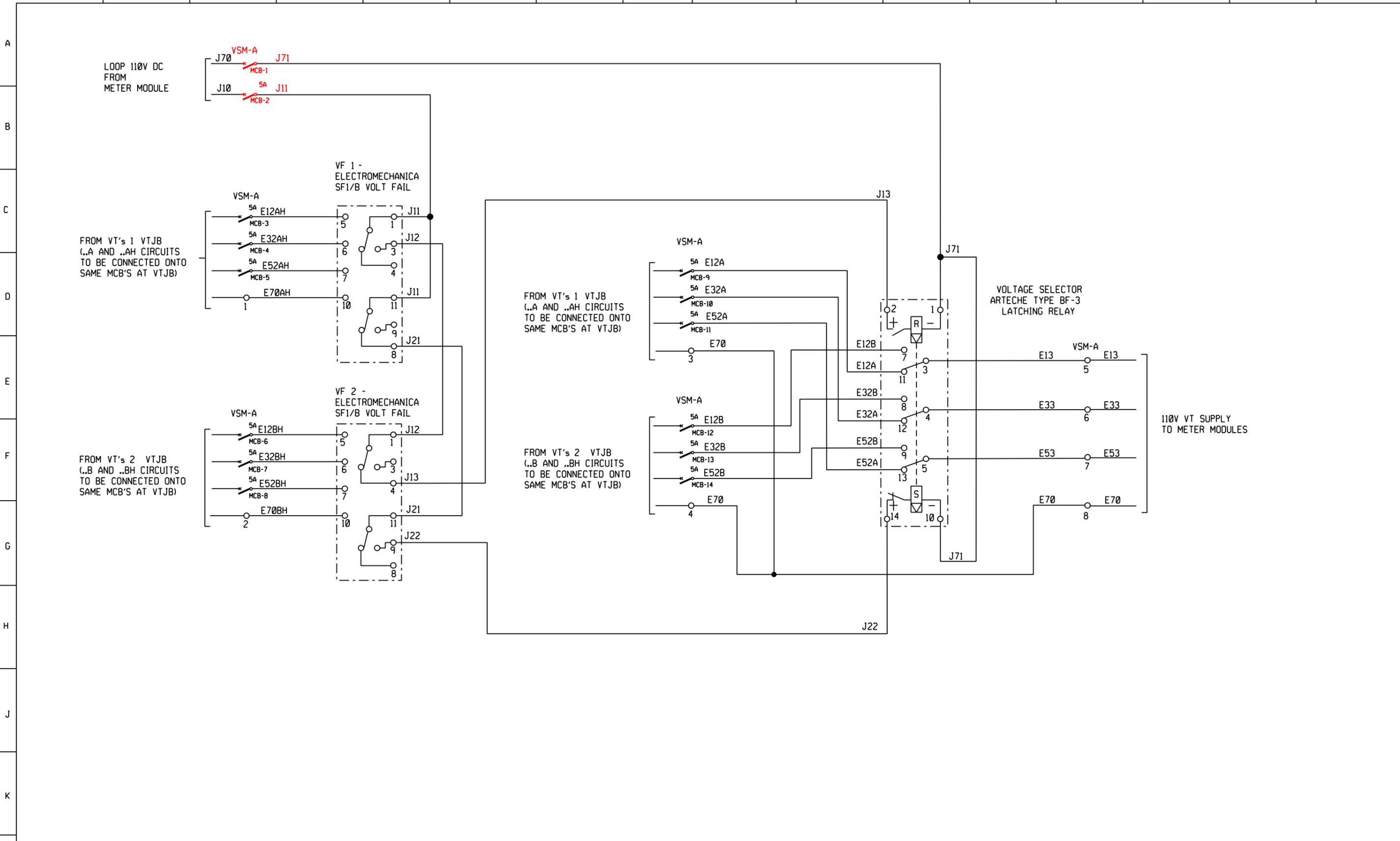
CHKD: HENRI GROENEWALD

DATE: 04/12/2003

DRAWN: V. van ZWEL

DATE: 21/00/2003

D-DT-5804	39	6	5
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LOOP 110V DC
FROM
METER MODULE

FROM VT's 1 VTJB
(..A AND ..AH CIRCUITS
TO BE CONNECTED ONTO
SAME MCB'S AT VTJB)

FROM VT's 2 VTJB
(..B AND ..BH CIRCUITS
TO BE CONNECTED ONTO
SAME MCB'S AT VTJB)

FROM VT's 1 VTJB
(..A AND ..AH CIRCUITS
TO BE CONNECTED ONTO
SAME MCB'S AT VTJB)

FROM VT's 2 VTJB
(..B AND ..BH CIRCUITS
TO BE CONNECTED ONTO
SAME MCB'S AT VTJB)

VOLTAGE SELECTOR
ARTECHE TYPE BF-3
LATCHING RELAY

110V VT SUPPLY
TO METER MODULES

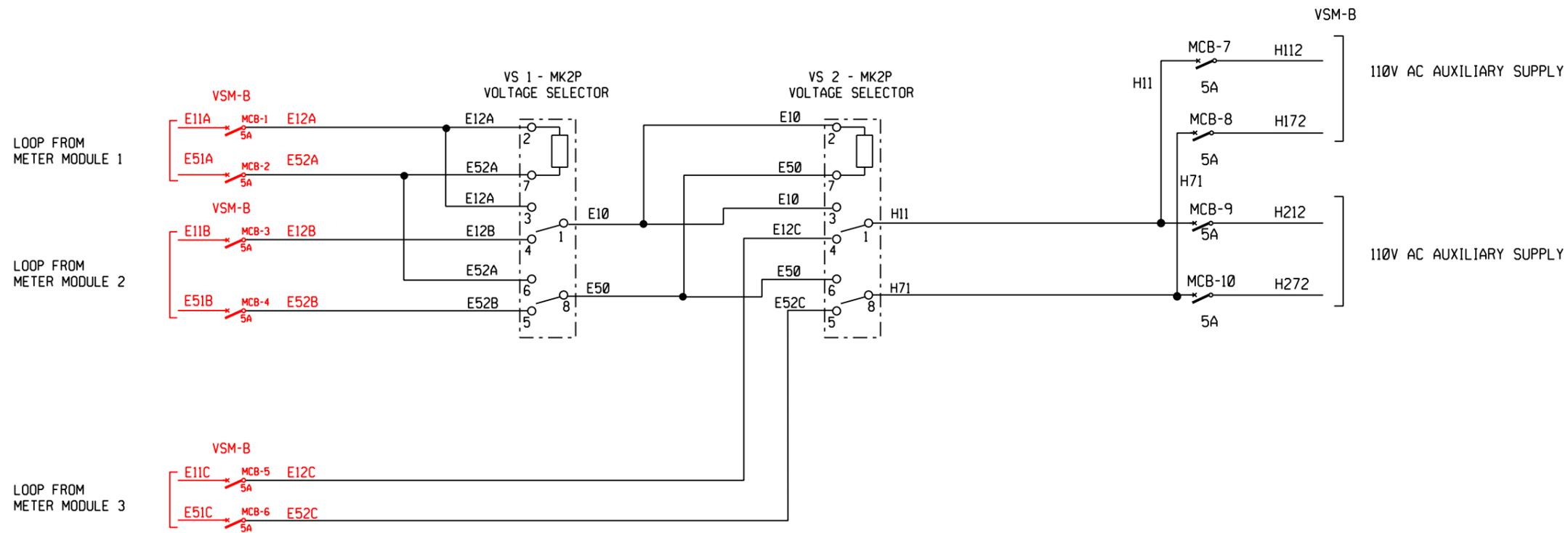
LEGEND	
VSM - A	VOLTAGE SELECTION MODULE A
VF	VOLTAGE FAIL RELAY
VS	VOLTAGE SELECTION RELAY
VTJB	VOLTAGE TRANSFORMER JUNCTION BOX
MCB	MINIATURE CIRCUIT BREAKER

OPERATIONAL MATRIX		
VF - 1	VF - 2	VOLTAGE
CLOSED	OPEN	A
CLOSED	CLOSED	STATUS QUO
OPEN	CLOSED	B
OPEN	OPEN	STATUS QUO

REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.
5	DRAWINGS UPDATED BY H.GROENEWALD				21/04/21	
4	DRAWINGS UPDATED BY H.GROENEWALD	H.GROENEWALD			18/09/14	
3	DRAWINGS UPDATED BY H.GROENEWALD	H.GROENEWALD			12/02/13	
2	DRAWINGS UPDATED BY H.GROENEWALD	H.GROENEWALD			28/02/09	
1	SHEETS REDUCED FROM 33 TO 21	VvZ	MG		01/06	

Eskom		STANDARD SUBSTATION METERING PANEL	
AUTH: HENRI GROENEWALD		VOLTAGE SELECTION MODULE A:	
SCALE: 1:1		AC KEY DIAGRAM	
DATE: 04/12/2003	DATE: 04/12/2003	SET	SHEET
CHKD: HENRI GROENEWALD	DATE: 21/04/2003	D-DT-5804	39 7 5

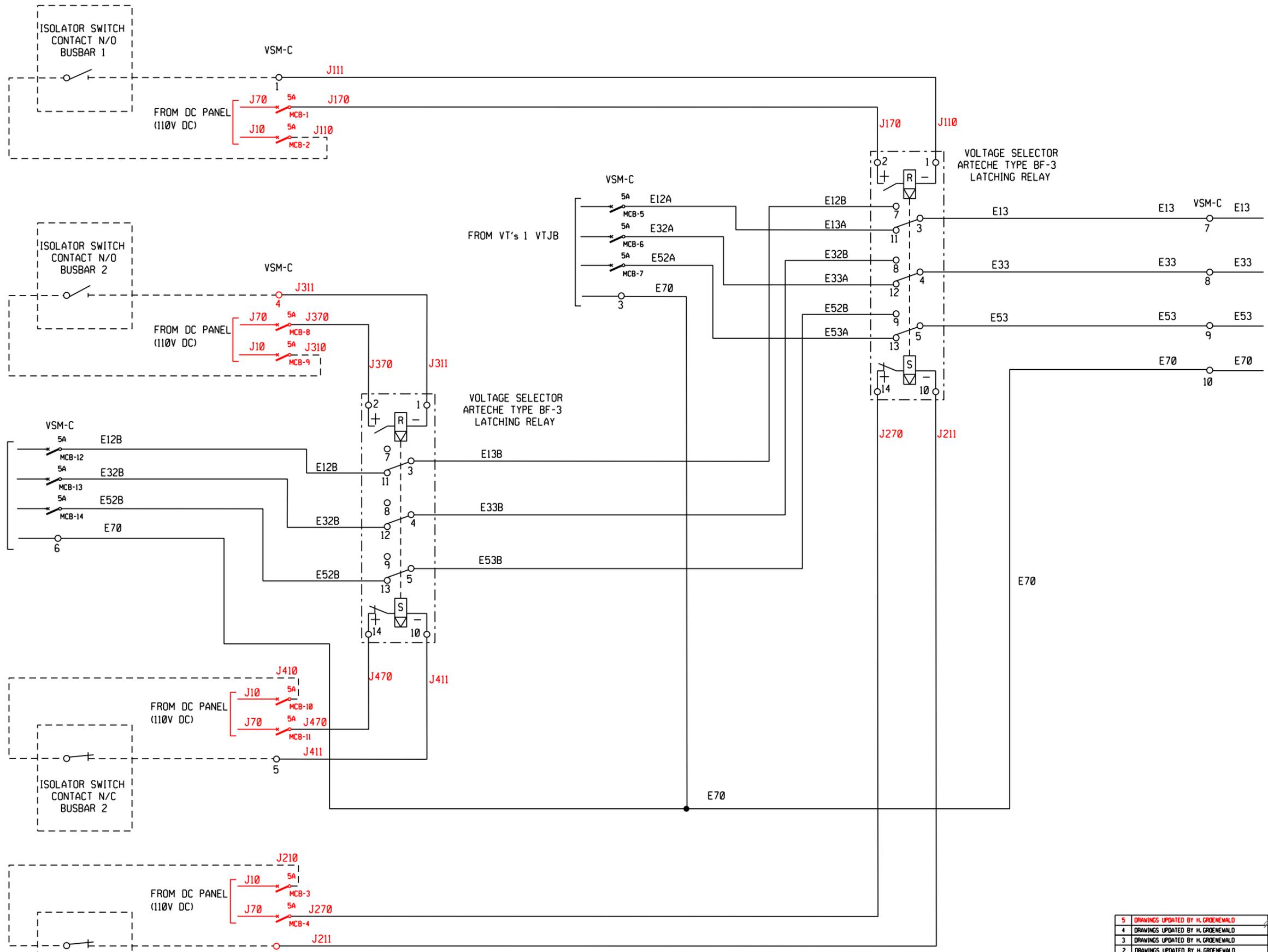
THIS DRAWING HAS BEEN CREATED
ON A C.A.D. SYSTEM AND ANY
AMENDMENT TO THE DRAWING
MUST BE EFFECTED ONLY
ON THE SAME C.A.D. SYSTEM



LEGEND	
VSM-B	VOLTAGE SELECTION MODULE B
MCB	MINIATURE CIRCUIT BREAKER
VS	VOLTAGE SELECTION RELAY

REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.
5	DRAWINGS UPDATED BY H. GROENEWALD				21/04/21	
4	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD			18/09/14	
3	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD			12/02/13	
2	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD			28/02/09	
1	SHEETS REDUCED FROM 33 TO 21	VvZ		HG	01/06	

Eskom		STANDARD SUBSTATION METERING PANEL				
AUTH: HENRI GROENEWALD						
SCALE: 1:1	DATE: 04/12/2003					
DRD: HENRI GROENEWALD						
DATE: 04/12/2003						
DRAWN: Y. van ZWEL						
DATE: 21/09/2003						
THIS DRAWING HAS BEEN CREATED ON A C.A.D. SYSTEM AND ANY AMENDMENT TO THE DRAWING MUST BE EFFECTED ONLY ON THE SAME C.A.D. SYSTEM		VOLTAGE SELECTION MODULE B: AC KEY DIAGRAM		SET	SHEET	REVISION
		D-DT-5804		39	8	5



110VAC VT SUPPLY TO METER MODULES

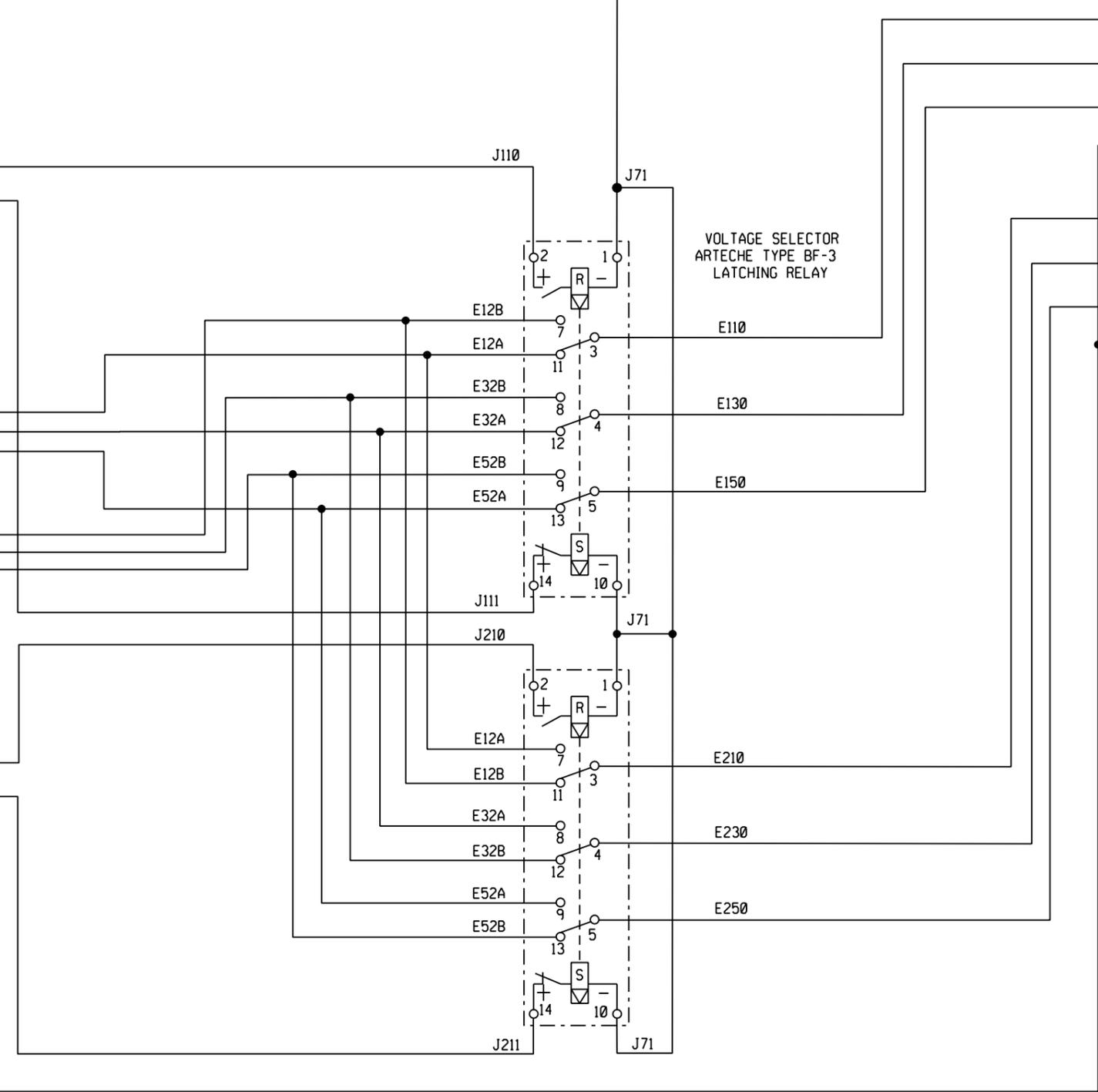
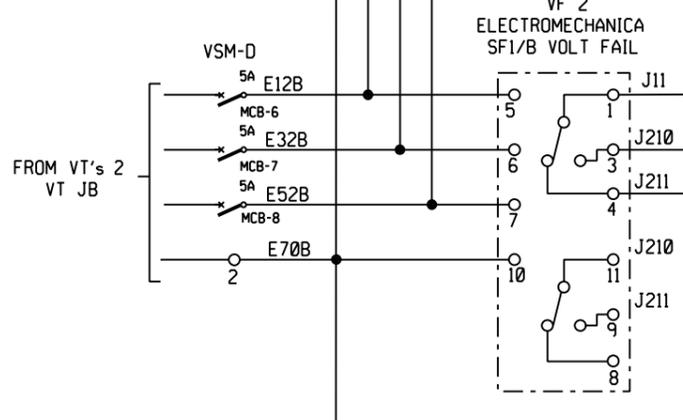
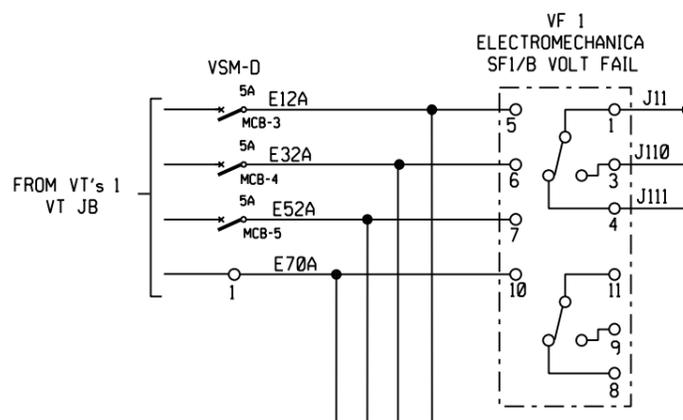
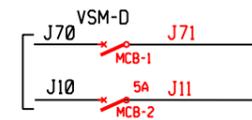
LEGEND	
VSM - C	VOLTAGE SELECTION MODULE C
VS	VOLTAGE SELECTION RELAY
VTJB	VOLTAGE TRANSFORMER JUNCTION BOX
MCB	MINIATURE CIRCUIT BREAKER

OPERATIONAL MATRIX		
ISO 1	ISO 2	VOLTAGE
CLOSED	OPEN	A
CLOSED	CLOSED	STATUS QUO
OPEN	CLOSED	B
OPEN	OPEN	STATUS QUO

5	DRAWINGS UPDATED BY H. GROENEWALD	21/04/21				
4	DRAWINGS UPDATED BY H. GROENEWALD	18/09/14				
3	DRAWINGS UPDATED BY H. GROENEWALD	12/02/13				
2	DRAWINGS UPDATED BY H. GROENEWALD	28/02/08				
1	SHEETS REDUCED FROM 33 TO 21	V-z	HG	01/06		
REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.
STANDARD SUBSTATION METERING PANEL						
VOLTAGE SELECTION MODULE C: AC KEY DIAGRAM						
D-DT-5804		SET	SHEET	REVISION		
		39	9	5		

THIS DRAWING HAS BEEN CREATED ON A C.A.D. SYSTEM AND ANY AMENDMENT TO THE DRAWING MUST BE EFFECTED ONLY ON THE SAME C.A.D. SYSTEM

LOOP 110V DC FROM METER MODULE



110V VT A
PRIORITY SUPPLY
TO METER MODULES:
NORMALLY FED FROM
VT SET1

110V VT B
PRIORITY SUPPLY
TO METER MODULES:
NORMALLY FED FROM VT
SET2

LEGEND

VSM-D	VOLTAGE SELECTION MODULE D
VF	VOLTAGE FAIL RELAY
VS	VOLTAGE SELECTION RELAY
IDF	INTERMEDIATE DISTRIBUTION FRAME
VTJB	VOLTAGE TRANSFORMER JUNCTION BOX
MCB	MINIATURE CIRCUIT BREAKER

OPERATIONAL MATRIX

VF - 1	VF - 2	GROUP 1	GROUP 2
CLOSED	OPEN	A	A
CLOSED	CLOSED	A	B
OPEN	CLOSED	B	B
OPEN	OPEN	B	A

5	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD	21/04/21
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3	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD	12/02/13
2	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD	28/02/09
1	SHEETS REDUCED FROM 33 TO 21	VvZ	HG

Eskom

STANDARD SUBSTATION METERING PANEL

VOLTAGE SELECTION MODULE D:
AC KEY DIAGRAM

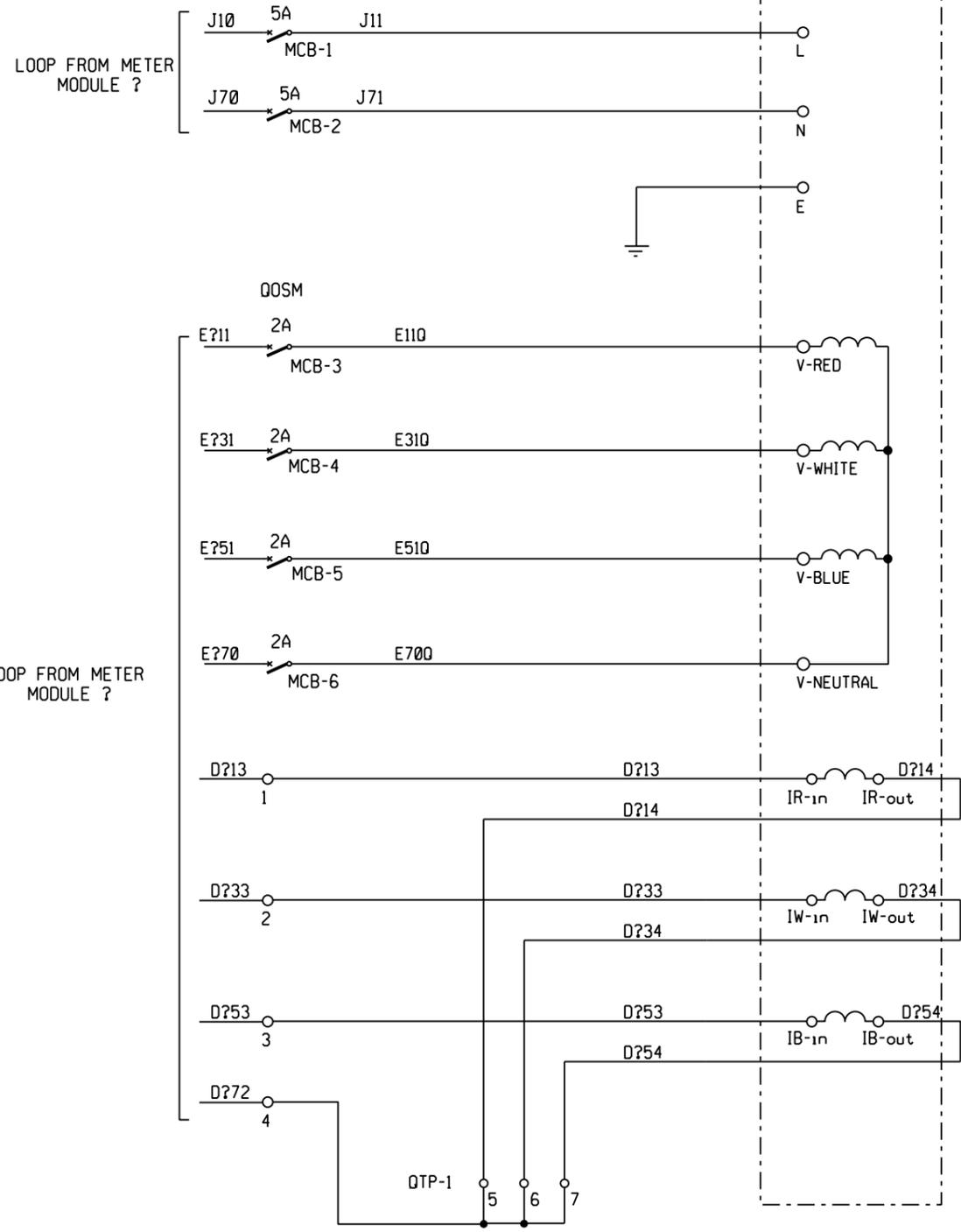
D-DT-5804

SET	SHEET	REVISION
39	10	5

THIS DRAWING HAS BEEN CREATED ON A C.A.D. SYSTEM AND ANY AMENDMENT TO THE DRAWING MUST BE EFFECTED ONLY ON THE SAME C.A.D. SYSTEM

A
B
C
D
E
F
G
H
J
K
L
M

QOSM



LOOP FROM METER MODULE ?

LEGEND	
QOSM	QUALITY OF SUPPLY MODULE
QOSD	QUALITY OF SUPPLY DEVICE
MCB	MINIATURE CIRCUIT BREAKER

REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.
5	DRAWINGS UPDATED BY H. GROENEWALD				21/04/21	
4	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD			10/09/14	
3	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD			12/02/13	
2	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD			20/02/08	
1	SHEETS REDUCED FROM 33 TO 21	VvZ		MG	01/06	

Eskom

STANDARD SUBSTATION METERING PANEL

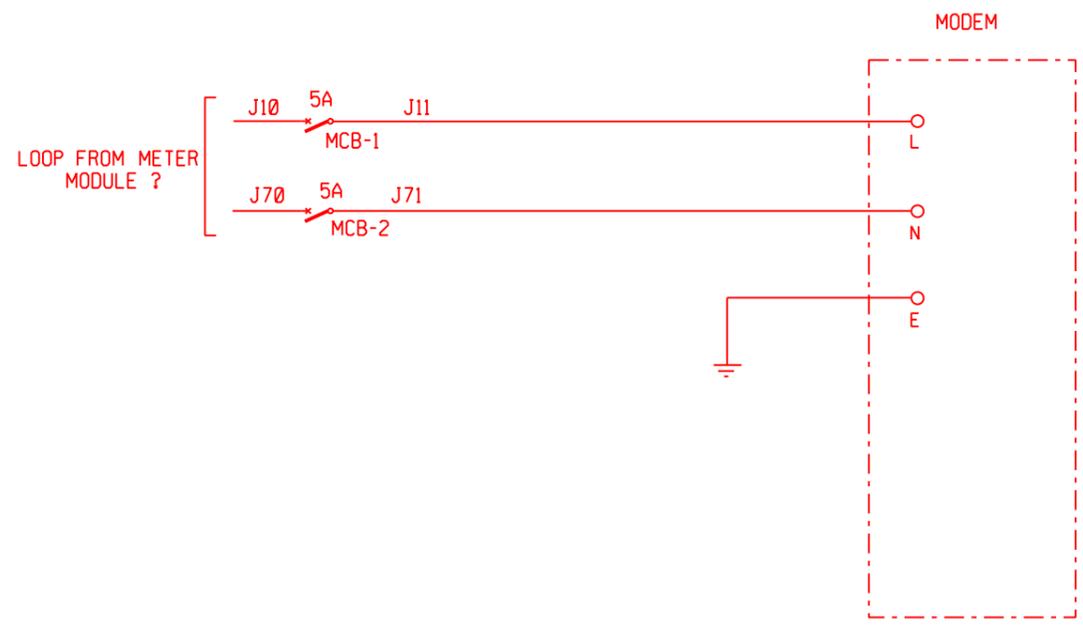
QUALITY OF SUPPLY MODULE:
AC KEY DIAGRAM

SET	SHEET	REVISION
D-DT-5804	39	11
		5

THIS DRAWING HAS BEEN CREATED ON A C.A.D. SYSTEM AND ANY AMENDMENT TO THE DRAWING MUST BE EFFECTED ONLY ON THE SAME C.A.D. SYSTEM

A
B
C
D
E
F
G
H
J
K
L
M

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16



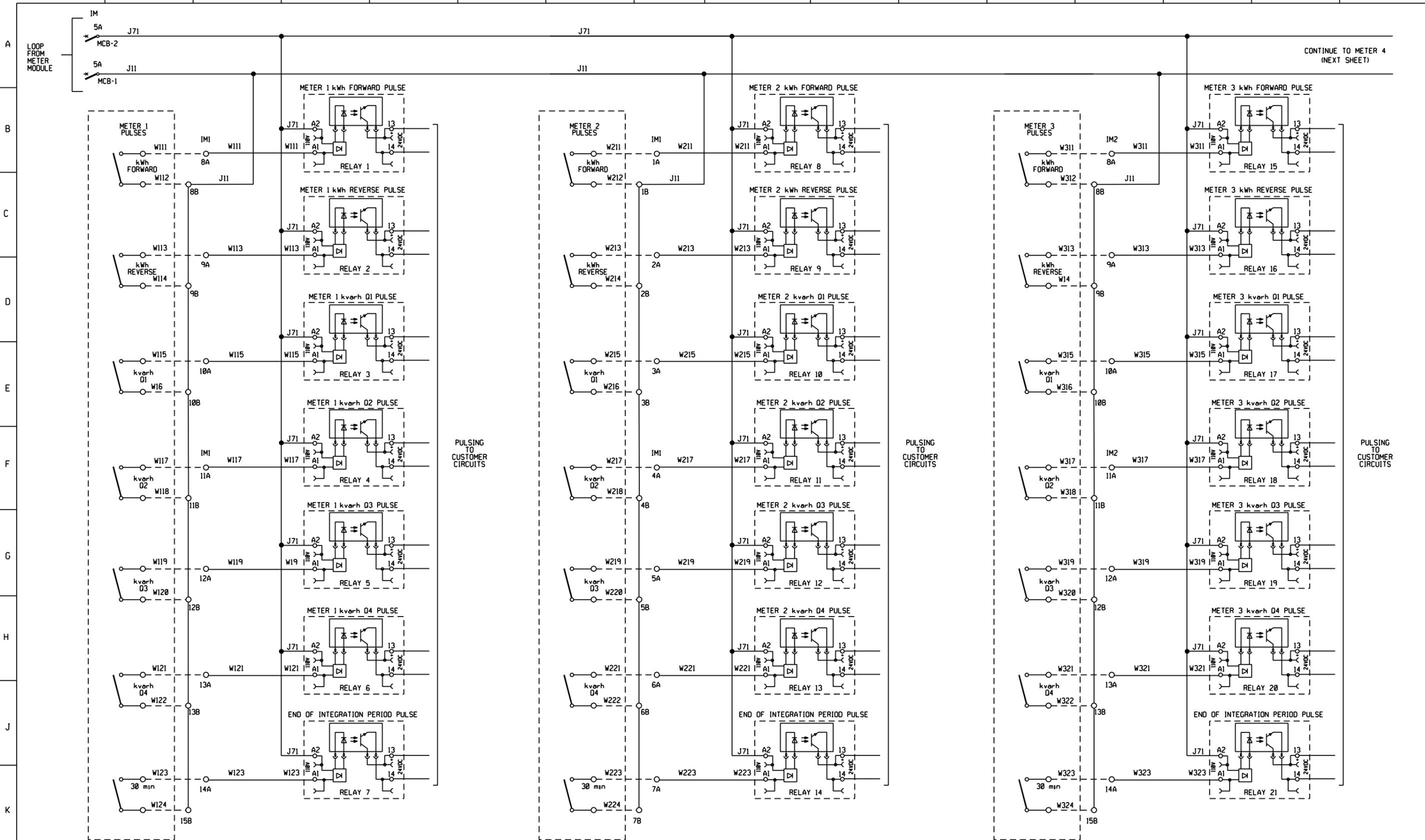
LEGEND	
QOSM	QUALITY OF SUPPLY MODULE
QOSD	QUALITY OF SUPPLY DEVICE
MCB	MINIATURE CIRCUIT BREAKER

5	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD	21/04/21			
4	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD	10/09/14			
3	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD	12/02/13			
2	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD	20/02/08			
1	SHEETS REDUCED FROM 33 TO 21	VvZ	MG	01/06		
REV	REVISION DESCRIPTION	BY	CHK	AUTH	DATE	PROJECT NO.
STANDARD SUBSTATION METERING PANEL						
MODEM MODULE: AC KEY DIAGRAM						
THIS DRAWING HAS BEEN CREATED ON A C.A.D. SYSTEM AND ANY AMENDMENT TO THE DRAWING MUST BE EFFECTED ONLY ON THE SAME C.A.D. SYSTEM		D-DT-5804		SET 39	SHEET 12	REVISION 5
SCALE: 1:1	DATE: 04/12/2003	DATE: 04/12/2003	DATE: 04/12/2003	DATE: 21/00/2003		
AUTH: HENRI GROENEWALD	CHKD: HENRI GROENEWALD	DRAWN: Y. van ZWEL				

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

A
B
C
D
E
F
G
H
J
K
L
M

SIZE A3



CONTINUE TO METER 4
(NEXT SHEET)

PULSING TO
CUSTOMER
CIRCUITS

PULSING TO
CUSTOMER
CIRCUITS

PULSING TO
CUSTOMER
CIRCUITS

LEGEND	
IM	INTERPOSING MODULE BACK PLATE
IM1, IM2, IM3	INTERPOSING MODULE DIN RAILS 1, 2, 3

5	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD	21/04/21
4	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD	10/09/14
3	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD	12/02/13
2	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD	28/02/08
1	SHEETS REDUCED FROM 33 TO 21	VvZ	MG
REV	REVISION DESCRIPTION	BY	CHKD
		DATE	PROJECT NO.

Eskom

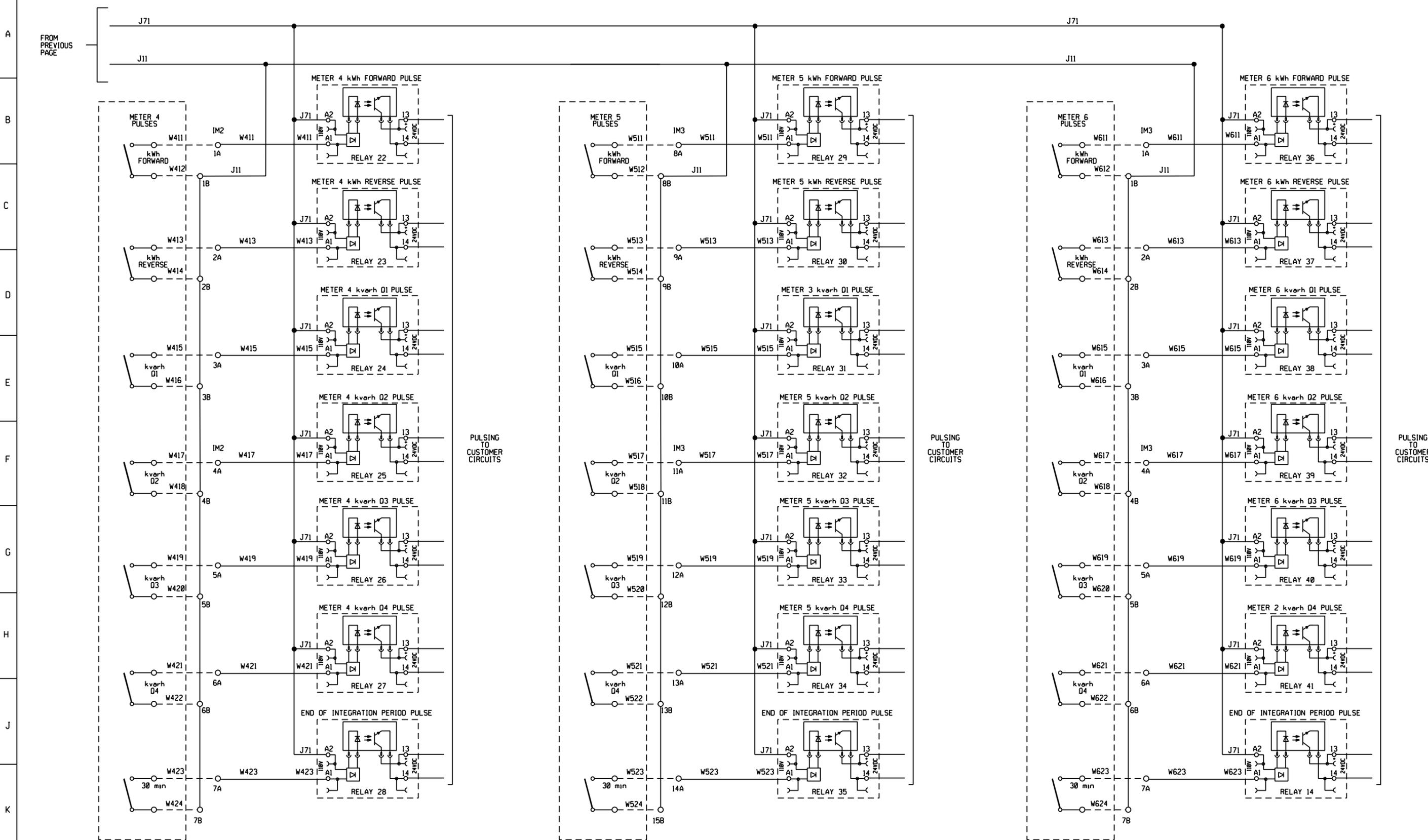
STANDARD SUBSTATION METERING PANEL

INTERPOSING MODULE A2 AC KEY DIAGRAM

D-DT-5804

SET	NO	REVISION
39	13	5

THIS DRAWING HAS BEEN CREATED ON A C.A.D. SYSTEM AND ANY AMENDMENT TO THE DRAWING MUST BE EFFECTED ONLY ON THE SAME C.A.D. SYSTEM



PULSING TO CUSTOMER CIRCUITS

PULSING TO CUSTOMER CIRCUITS

PULSING TO CUSTOMER CIRCUITS

LEGEND	
IM	INTERPOSING MODULE BACK PLATE
IM1, IM2, IM3	INTERPOSING MODULE DIN RAILS 1, 2, 3

5	DRAWINGS UPDATED BY H. GROENEWALD	21/04/21	
4	DRAWINGS UPDATED BY H. GROENEWALD	10/09/14	
3	DRAWINGS UPDATED BY H. GROENEWALD	12/02/13	
2	DRAWINGS UPDATED BY H. GROENEWALD	28/02/08	
1	SHEETS REDUCED FROM 33 TO 21	VvZ	MG 01/06
REV	REVISION DESCRIPTION	BY	DATE

Eskom

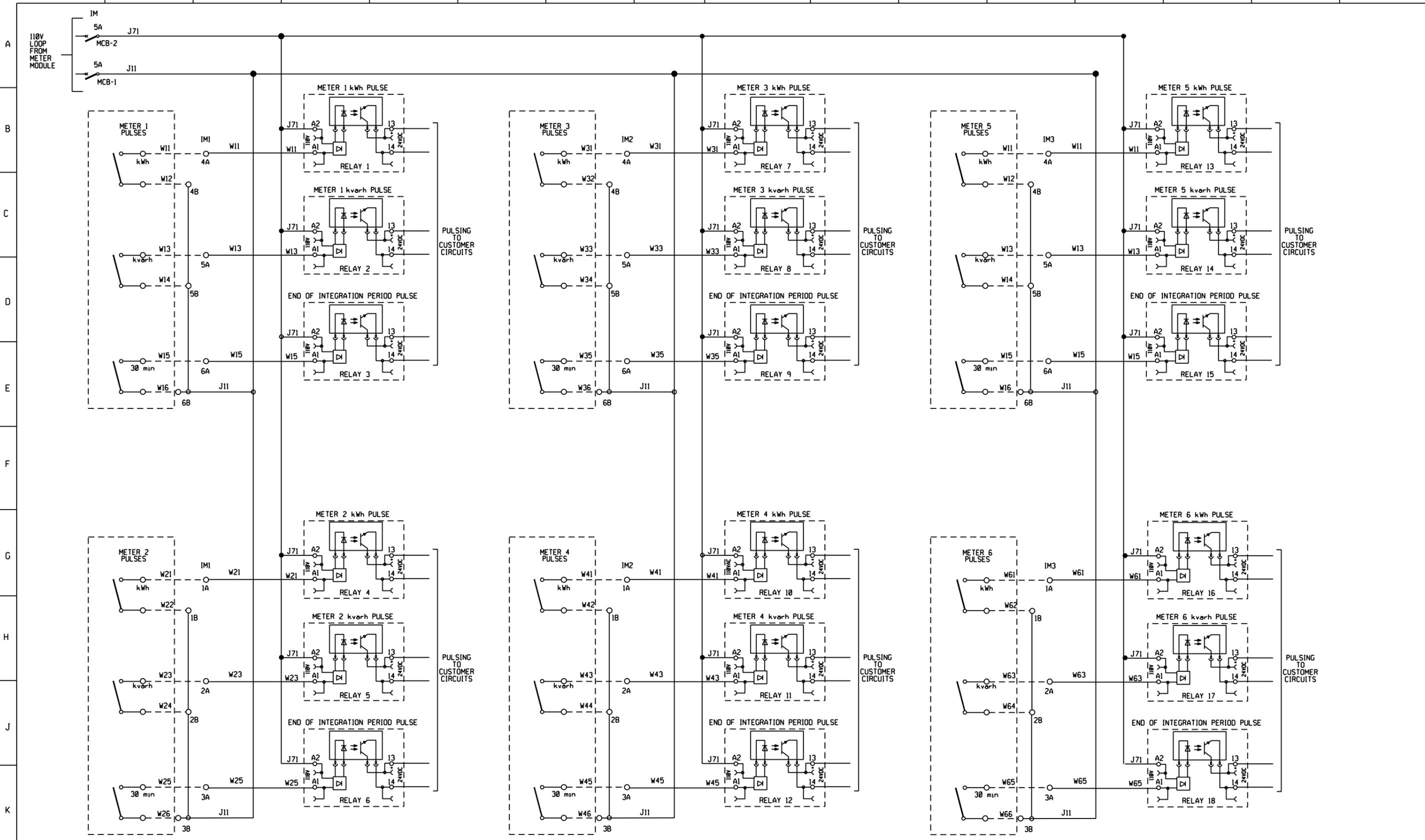
STANDARD SUBSTATION METERING PANEL

INTERPOSING MODULE A2 AC KEY DIAGRAM

D-DT-5804

SET	SHEET	REVISION
	39	14
		5

THIS DRAWING HAS BEEN CREATED ON A C.A.D. SYSTEM AND ANY AMENDMENT TO THE DRAWING MUST BE EFFECTED ONLY ON THE SAME C.A.D. SYSTEM



LEGEND	
IM	INTERPOSING MODULE BACK PLATE
IM1, IM2, IM3	INTERPOSING MODULE DIN RAILS 1, 2, 3

5	DRAWINGS UPDATED BY H. GROENEWALD		21/04/21			
4	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD	10/09/14			
3	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD	12/02/13			
2	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD	20/02/08			
1	SHEETS REDUCED FROM 33 TO 21	VvZ	MG	01/06		
REV	REVISION DESCRIPTION	BY	CHK	AUTH	DATE	PROJECT NO.
AUTH: HENRI GROENEWALD SCALE: 1:1, DATE: 04/12/2003 CHKD: HENRI GROENEWALD DATE: 04/12/2003 DRAWN: V. van ZWEL DATE: 21/08/2003		STANDARD SUBSTATION METERING PANEL INTERPOSING MODULE B; AC KEY DIAGRAM D-DT-5804				
		SET	SHEET	REVISION		
		39	15	5		

THIS DRAWING HAS BEEN CREATED ON A C.A.D. SYSTEM AND ANY AMENDMENT TO THE DRAWING MUST BE EFFECTED ONLY ON THE SAME C.A.D. SYSTEM

	DC BOARD	IDF	CIRCUIT 2 CTJB	CIRCUIT 2 VTJB	CIRCUIT 1 CTJB	CIRCUIT 1 VTJB										
NUMBER OF SPARES	-	8P	-	-	-	-										
NUMBER OF CORES	4	20	4	4	4	4										
CABLE TYPE	4mm	10P	4mm	4mm	4mm	4mm										
CABLE NUMBER	??	??	??	??	??	??										
						??	E11?	MCB-1	E111	8					2	
						??	E31?	MCB-2	E131	6					5	
						??	E51?	MCB-3	E151	4					8	
						??	E70?	1	E171	2					10	
					??		D11?	2	D111		8				1	
					??		D31?	3	D131		6				4	
					??		D51?	4	D151		4				7	
					??		D70?	5	D171		2					
								6								
								7	D113						3	
								8	D133						6	
								9	D153						9	
								10	D172		1					
	??							11	X11						7	
	??							12	X12						8	
				??			E11?	MCB-4	E211		8			2		
				??			E31?	MCB-5	E231		6			5		
				??			E51?	MCB-6	E251		4			8		
				??			E70?	13	E271		2			10		
			??				D11?	14	D211			8		1		
			??				D31?	15	D231			6		4		
			??				D51?	16	D251			4		7		
			??				D70?	17	D271			2				
								18								
								19	D213					3		
								20	D233					6		
								21	D253					9		
								22	D272			1				
	??							23	X21					3		
	??							24	X22					4		
	??					J10		MCB-7	J10					1 & 5		
	??					J70		MCB-8	J70					2 & 6		

LEGEND	
MTP-1	METER MODULE BACK PLATE TERMINAL
MI	METER MODULE FRONT PLATE TERMINAL
VTJB	VOLTAGE TRANSFORMER JUNCTION BOX
CTJB	CURRENT TRANSFORMER JUNCTION BOX
MCB	MINIATURE CIRCUIT BREAKER

REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.
5	DRAWINGS UPDATED BY H. GROENEWALD				21/04/21	
4	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD			10/09/14	
3	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD			12/02/13	
2	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD			20/02/08	
1	SHEETS REDUCED FROM 33 TO 21	VvZ	MG		01/06	

Eskom
 AUTH: HENRI GROENEWALD
 SCALE: 1:1
 DATE: 04/12/2003
 CHKD: HENRI GROENEWALD
 DATE: 04/12/2003
 DRAWN: V. van ZWEL
 DATE: 21/00/2003

STANDARD SUBSTATION METERING PANEL
 METER MODULE 4 WAY SURFACE MOUNT;
 CABLING DIAGRAM

SET	SHEET	REVISION
D-DT-5804	39	16
		5

THIS DRAWING HAS BEEN CREATED ON A C.A.D. SYSTEM AND ANY AMENDMENT TO THE DRAWING MUST BE EFFECTED ONLY ON THE SAME C.A.D. SYSTEM

NUMBER OF SPARES	-	8P	-	-	-	-
NUMBER OF CORES	4	20	4	4	4	4
CABLE TYPE	4mm	10P	4mm	4mm	4mm	4mm
CABLE NUMBER	??	??	??	??	??	??

LEGEND	
MTP-1	METER MODULE BACK PLATE TERMINAL
MI	METER MODULE FRONT PLATE TERMINAL
VTJB	VOLTAGE TRANSFORMER JUNCTION BOX
CTJB	CURRENT TRANSFORMER JUNCTION BOX
MCB	MINIATURE CIRCUIT BREAKER

DC BOARD	IDF	CIRCUIT 2 CTJB	CIRCUIT 2 VTJB	CIRCUIT 1 CTJB	CIRCUIT 1 VTJB	M1..n - METER 1 VT TEST BLOCK	M1..n - METER 1 CT TEST BLOCK	M1..n - METER 2 VT TEST BLOCK	M1..n - METER 2 CT TEST BLOCK	M1..n - METER TERMINALS	M1..n - TERMINAL RAILS
					??	E11?		E111	8		B1
					??	E31?		E131	6		B2
					??	E51?		E151	4		B3
					??	E70?	1	E171	2		B0
				??		D11?	2	D111	8		A01
				??		D31?	3	D131	6		A02
				??		D51?	4	D151	4		A03
				??		D70?	5	D171	2		
							6				
							7	D113			A1
							8	D133			A2
							9	D153			A3
							10	D172	1		
	??						11	X11			7
	??						12	X12			8
			??			E11?		E211	8		B1
			??			E31?		E231	6		B2
			??			E51?		E251	4		B3
			??			E70?	13	E271	2		B0
		??				D11?	14	D211	8		A01
		??				D31?	15	D231	6		A02
		??				D51?	16	D251	4		A03
		??				D70?	17	D271	2		
							18				
							19	D213			A1
							20	D233			A2
							21	D253			A3
							22	D272	1		
	??						23	X21			3
	??						24	X22			4
??					J10			J10			1 & 5
??					J70			J70			2 & 6

THIS DRAWING HAS BEEN CREATED ON A C.A.D. SYSTEM AND ANY AMENDMENT TO THE DRAWING MUST BE EFFECTED ONLY ON THE SAME C.A.D. SYSTEM

REV	REVISION DESCRIPTION	BY	CHK	AUTH	DATE	PROJECT NO.
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2	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD			20/02/08	
1	SHEETS REDUCED FROM 33 TO 21	VvZ		MG	01/06	

Eskom		STANDARD SUBSTATION METERING PANEL			
AUTH: HENRI GROENEWALD		METER MODULE 4 WAY 19" RACK MOUNT:			
SCALE: 1:1		CABLING DIAGRAM			
DATE: 04/12/2003		SET	SHEET	REVISION	
DRAWN: V. van ZWEL		D-DT-5804	39	18	5
DATE: 21/00/2003					

	DC BOARD	IDF	CIRCUIT 4 CTJB	CIRCUIT 4 VTJB	CIRCUIT 3 CTJB	CIRCUIT 3 VTJB
NUMBER OF SPARES	-	8P	-	-	-	-
NUMBER OF CORES	4	20	4	4	4	4
CABLE TYPE	4mm	10P	4mm	4mm	4mm	4mm
CABLE NUMBER	??	??	??	??	??	??

MTP-1..n

LEGEND	
MTP-1	METER MODULE BACK PLATE TERMINAL
MI	METER MODULE FRONT PLATE TERMINAL
VTJB	VOLTAGE TRANSFORMER JUNCTION BOX
CTJB	CURRENT TRANSFORMER JUNCTION BOX
MCB	MINIATURE CIRCUIT BREAKER

	DC BOARD	IDF	CIRCUIT 4 CTJB	CIRCUIT 4 VTJB	CIRCUIT 3 CTJB	CIRCUIT 3 VTJB		MI..n - METER 3 VT TEST BLOCK	MI..n - METER 3 CT TEST BLOCK	MI..n - METER 4 VT TEST BLOCK	MI..n - METER 4 CT TEST BLOCK	MI..n - METER TERMINALS	MI..n - TERMINAL RAILS
						??	E11?	MCB-1	E111	8		B1	
						??	E31?	MCB-2	E131	6		B2	
						??	E51?	MCB-3	E151	4		B3	
						??	E70?	1	E171	2		B0	
					??		D11?	2	D111		12	A01	
					??		D31?	3	D131		8	A02	
					??		D51?	4	D151		4	A03	
					??		D70?	5	D171				
								6					
								7	D171			A1	
								8	D113		10	A2	
								9	D133		6	A3	
								10	D153		2		
	??							11	X11				7
	??							12	X12				8
				??			E11?	MCB-4	E211		8	B1	
				??			E31?	MCB-5	E231		6	B2	
				??			E51?	MCB-6	E251		4	B3	
				??			E70?	13	E271		2	B0	
				??			D11?	14	D211		12	A01	
				??			D31?	15	D231		8	A02	
				??			D51?	16	D251		4	A03	
				??			D70?	17	D271				
								18					
								19	D271			A1	
								20	D213		10	A2	
								21	D233		6	A3	
								22	D253		2		
	??							23	X21				3
	??							24	X22				4
	??						J10	MCB-7	J10				1 & 5
	??						J70	MCB-8	J70				2 & 6

REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.
5	DRAWINGS UPDATED BY H. GROENEWALD				21/04/21	
4	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD			10/09/14	
3	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD			12/02/13	
2	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD			20/02/08	
1	SHEETS REDUCED FROM 33 TO 21	VvZ		MG	01/06	

Eskom		STANDARD SUBSTATION METERING PANEL			
AUTH: HENRI GROENEWALD		METER MODULE 6 WAY 19" RACK MOUNT:			
SCALE: 1:1		CABLING DIAGRAM			
DATE: 04/12/2003		SET	SHEET	REVISION	
DRAWN: V. van ZWEL		D-DT-5804	39	19	5
DATE: 21/00/2003					

THIS DRAWING HAS BEEN CREATED ON A C.A.D. SYSTEM AND ANY AMENDMENT TO THE DRAWING MUST BE EFFECTED ONLY ON THE SAME C.A.D. SYSTEM

DESTINATION	LOOP FROM MTP 1	LOOP FROM MTP 2	LOOP FROM MTP 3	VSM-B			110V AC AUXILIARY SUPPLY 1	110V AC AUXILIARY SUPPLY 2
				NUMBER OF SPARES				
				NUMBER OF CORES				
				CABLE TYPE				
CABLE NUMBER								
	??			E11A	MCB-1 	E12A		
	??			E51A	MCB-2 	E52A		
		??		E11B	MCB-3 	E12B		
		??		E51B	MCB-4 	E52B		
				E11C	MCB-5 	E12C		
				E51C	MCB-6 	E52C		
					MCB-7 	H112	??	
					MCB-8 	H172	??	
					MCB-9 	H212		??
					MCB-10 	H272		??

LEGEND	
MTP•	METER MODULE BACK PLATE TERMINAL
M•	METER MODULE FRONT PLATE TERMINAL
VTJB	VOLTAGE TRANSFORMER JUNCTION BOX
VT	VOLTAGE TRANSFORMER
IDF	INTERMEDIATE DISTRIBUTION FRAME

5	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD	21/04/21			
4	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD				
3	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD	12/02/13			
2	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD	28/02/09			
1	SHEETS REDUCED FROM 33 TO 21	VvZ	MG	01/06		
REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.

Eskom		STANDARD SUBSTATION METERING PANEL					
AUTH: HENRI GROENEWALD		VOLTAGE SELECTION MODULE B: CABLING DIAGRAM					
SCALE: A1:1	DATE: 04/12/2003	DRAWN: V. van ZWEL		SET	SHEET	REVISION	
THIS DRAWING HAS BEEN CREATED ON A C.A.D. SYSTEM AND ANY AMENDMENT TO THE DRAWING MUST BE EFFECTED ONLY ON THE SAME C.A.D. SYSTEM		DATE: 21/00/2003		D-DT-5804	39	21	5

MTP ? TERMINALS	QOSM				QUALITY OF SUPPLY METER
??	J10	MCB-1 	LIVE		
??	J70	MCB-2 	NEUTRAL		
??	E11?	MCB-3 	E110	V-RED	
??	E31?	MCB-4 	E310	V-WHITE	
??	E51?	MCB-5 	E510	V-BLUE	
??	E70?	MCB-6 	E700	V-NEUTRAL	
??	D?13	1	D?13	IR-in	
??	D?33	2	D?33	IW-in	
??	D?53	3	D?53	IB-in	
??	D?72	4	D?72		
		5	D?14	IR-out	
		6	D?34	IW-out	
		7	D?54	IB-out	

LEGEND	
MTP?	METER MODULE ? BACK PLATE TERMINAL
VSM?	VOLTAGE SELECTION ? MODULE
QOSM	QUALITY OF SUPPLY MODULE
MCB	MINIATURE CIRCUIT BREAKER

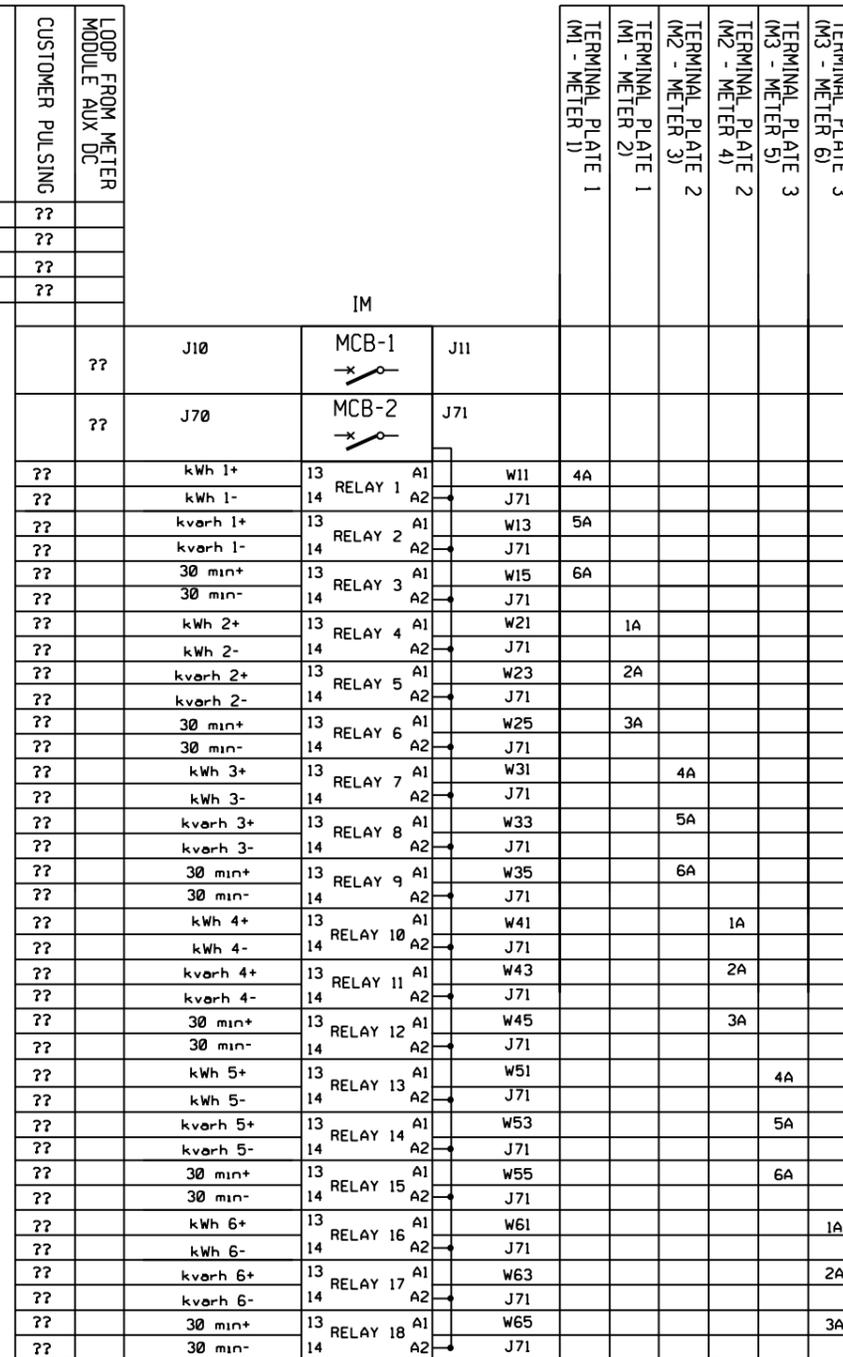
5	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD	21/04/21	
4	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD	18/09/14	
3	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD	12/02/13	
2	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD	28/02/08	
1	SHEETS REDUCED FROM 33 TO 21	VvZ	HG	01/05

		STANDARD SUBSTATION METERING PANEL			
AUTH: HENRI GROENEWALD	SCALE: N.T.S.	DATE: 04/12/2003			
DATE: 04/12/2003	DWD: HENRI GROENEWALD		QUALITY OF SUPPLY MODULE: CABLING DIAGRAM		
DRAWN: V. van ZIEEL	DATE: 21/05/2003		SET	SHEET	REVISION
D-DT-5804			39	24	5

THIS DRAWING HAS BEEN CREATED ON A C.A.D. SYSTEM AND ANY AMENDMENT TO THE DRAWING MUST BE EFFECTED ONLY ON THE SAME C.A.D. SYSTEM

LEGEND	
IM	INTERPOSING MODULE
M•	METER MODULE FRONT PLATE TERMINAL

DESTINATION	CUSTOMER PULSING	LOOP FROM METER MODULE AUX DC
NUMBER OF SPARES	??	
NUMBER OF CORES	??	
CABLE TYPE	??	
CABLE NUMBER	??	



REV	REVISION DESCRIPTION	BY	CHK	AUTH	DATE	PROJECT NO.
5	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD			21/04/21	
4	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD			10/09/14	
3	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD			12/02/13	
2	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD			20/02/08	
1	SHEETS REDUCED FROM 33 TO 21	VvZ	MG		01/06	

Eskom

STANDARD SUBSTATION METERING PANEL

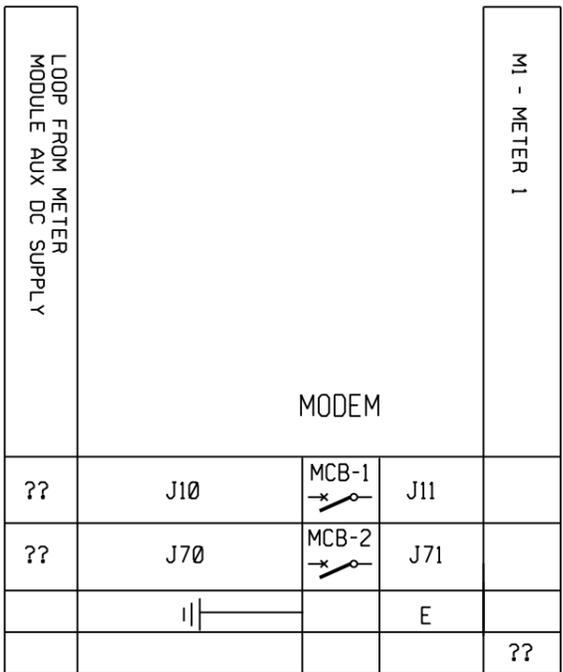
INTERPOSING MODULE B:
CABLING DIAGRAM

D-DT-5804

SET	SHEET	REVISION
39	26	5

THIS DRAWING HAS BEEN CREATED ON A C.A.D. SYSTEM AND ANY AMENDMENT TO THE DRAWING MUST BE EFFECTED ONLY ON THE SAME C.A.D. SYSTEM

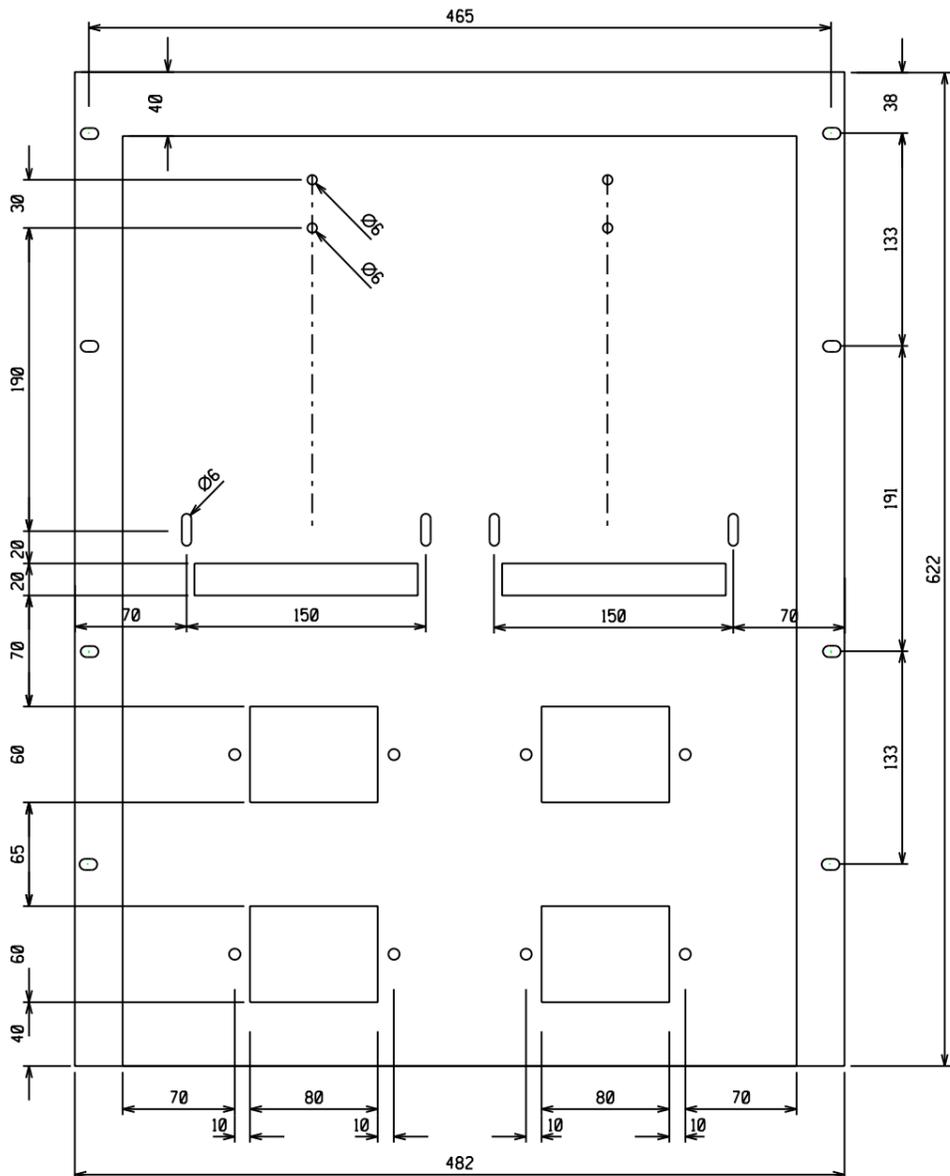
A
B
C
D
E
F
G
H
J
K
L
M



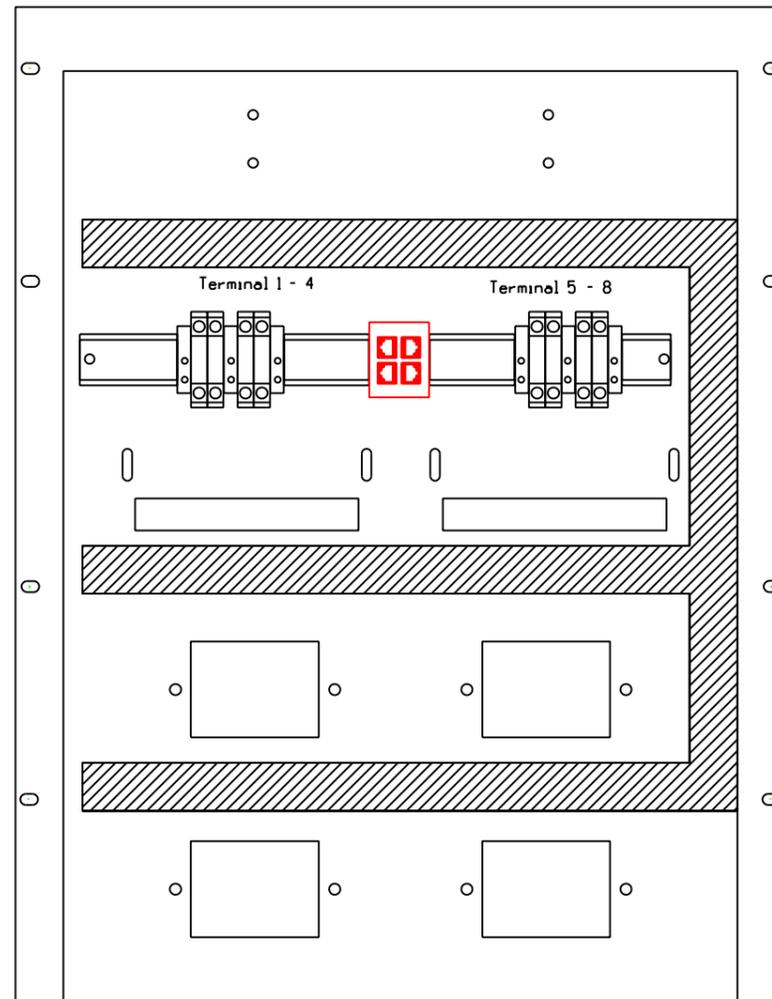
LEGEND	
MI?	METER MODULE ? METER COMMS PORT
VSM?	VOLTAGE SELECTION ? MODULE
MODEM	PSTN / GSM / GPRS MODEM
MCB	MINIATURE CIRCUIT BREAKER

5	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD	21/04/21			
4	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD	10/09/14			
3	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD	12/02/13			
2	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD	20/02/08			
1	SHEETS REDUCED FROM 33 TO 21	VvZ	MG	01/06		
REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.
AUTH: HENRI GROENEWALD		STANDARD SUBSTATION METERING PANEL				
SCALE: N.T.S.		DATE: 04/12/2003				
ORD: HENRI GROENEWALD		DATE: 04/12/2003				
DRAWN: Y. van ZWEL		DATE: 21/00/2003				
THIS DRAWING HAS BEEN CREATED ON A C.A.D. SYSTEM AND ANY AMENDMENT TO THE DRAWING MUST BE EFFECTED ONLY ON THE SAME C.A.D. SYSTEM		MODEM MODULE: CABLING DIAGRAM		SET	SHEET	REVISION
		D-DT-5804		39	27	5

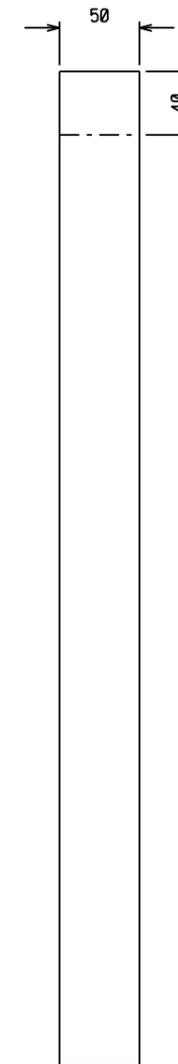
METER MODULE



METER MODULE BACK



SIDE



NOTES:
1. THE PLATE IS RECESSED BY 50MM FROM THE FRONT

LEGEND	DESCRIPTION	APPROVED EQUIPMENT
	MINIATURE CIRCUIT BREAKER 5A, CURVE 2, > 5kA (MCB) IEC 60947-2 APPROVED	CBI: TYPE OF-1-D(13), 5A or SIMILAR
	TERMINALS: SPRING LOADED IEC 60947-7-1 APPROVED	METER TERMINAL PLATE: WEIDMULLER WDU 10 SL or ENTRELEC TYPE M 10/10.RS or ACTOM ELMEX TYPE KULT 1 METER MODULE: WEIDMULLER WDU 6 SL or ENTRELEC TYPE M 6/8.RS or ACTOM ELMEX TYPE KST 6WS
	END STOP	WEIDMULLER EW35/2 or ENTRELEC BAM or ACTOM ELMEX SCUN or SCUDD or SCKN or PHOENIX CONTACT E/UK or CLIPFIX 35 or KLEMSAN KD3 or LEGRAND VIKING 3 39403
	TRUNKING	25 x 60mm TRUNKING
	4-WAY RJ45 COMMUNICATION PATCH BOX	KOCOS ME20 4-WAY RJ45 COMMUNICATION PATCH BOX or SIMILAR
	MINIATURE CIRCUIT BREAKER 5A DC, CURVE C, > 5kA (MCB) IEC 60947-2 APPROVED	SCHNEIDER ELECTRIC; TYPE C60H-DC, 5A or SIMILAR

REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.
5	DRAWINGS UPDATED BY H. GROENEWALD				21/04/21	
4	DRAWINGS UPDATED BY H. GROENEWALD				10/09/14	
3	DRAWINGS UPDATED BY H. GROENEWALD				12/02/13	
2	DRAWINGS UPDATED BY H. GROENEWALD				28/02/09	
1	SHEETS REDUCED FROM 33 TO 21	VvZ	MG		01/06	

Eskom

STANDARD SUBSTATION METERING PANEL

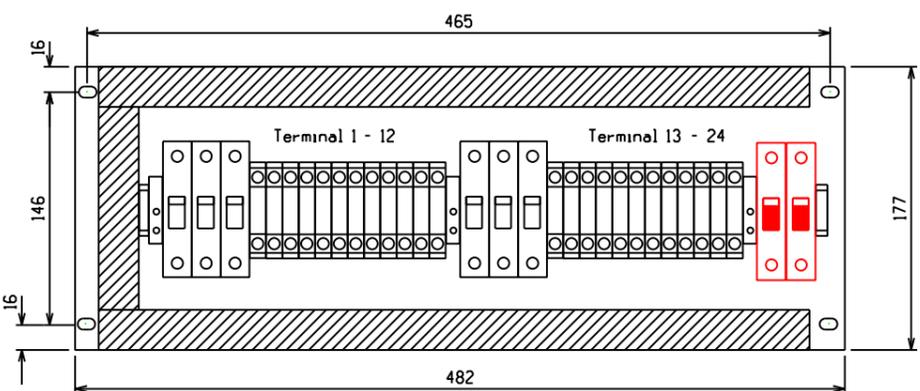
METER MODULE LAYOUT:
SURFACE MOUNT METERS 4-WAY

D-DT-5804

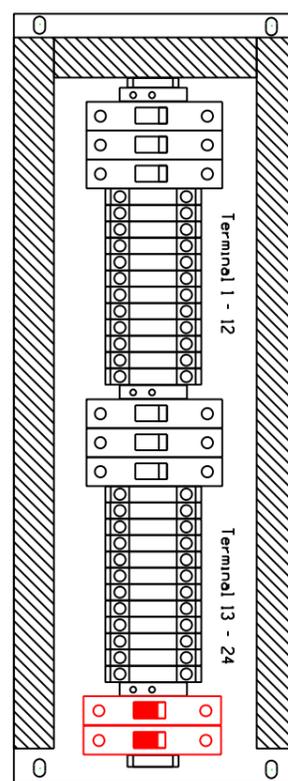
SET	SHEET	REVISION
39	28	5

THIS DRAWING HAS BEEN CREATED ON A C.A.D. SYSTEM AND ANY AMENDMENT TO THE DRAWING MUST BE EFFECTED ONLY ON THE SAME C.A.D. SYSTEM

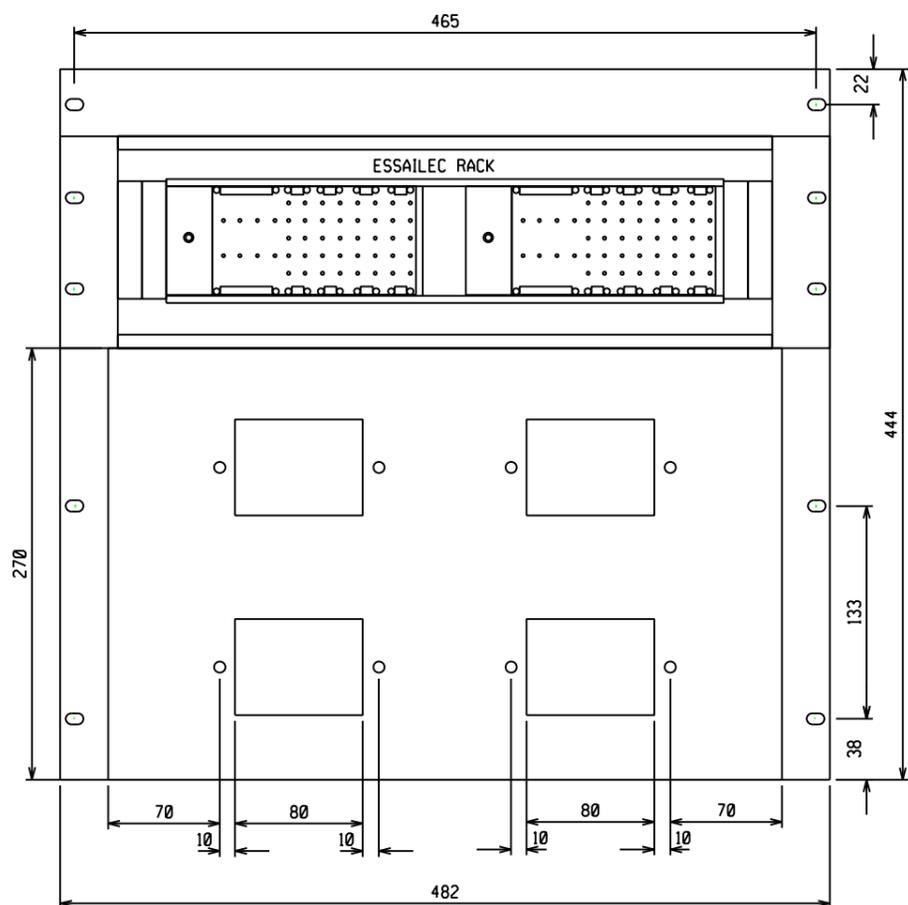
METER TERMINAL PLATE HORIZONTAL MOUNTING



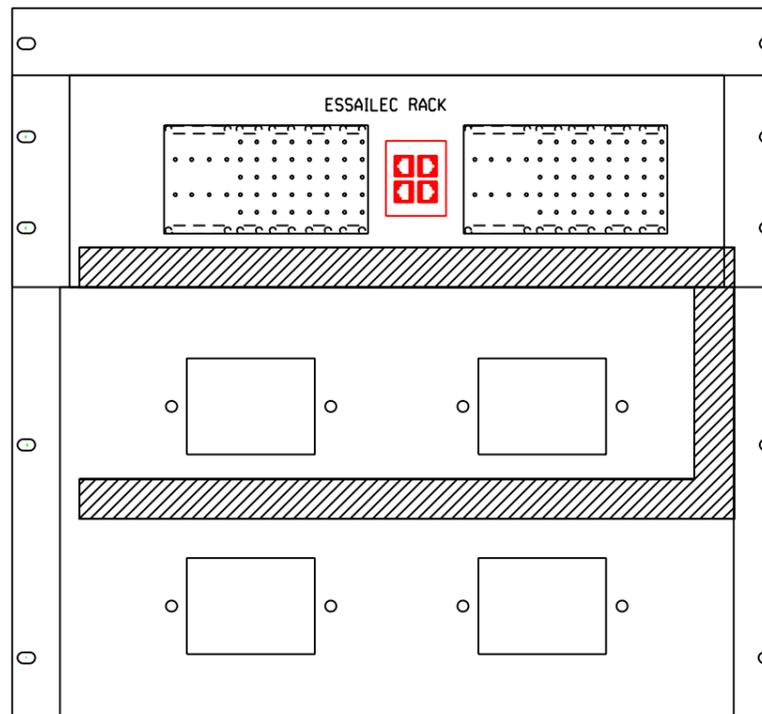
METER TERMINAL PLATE VERTICAL MOUNTING



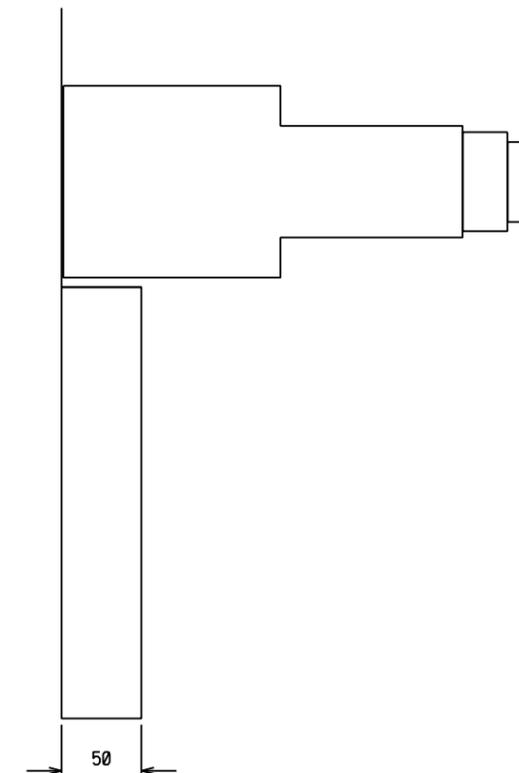
METER MODULE



METER MODULE BACK

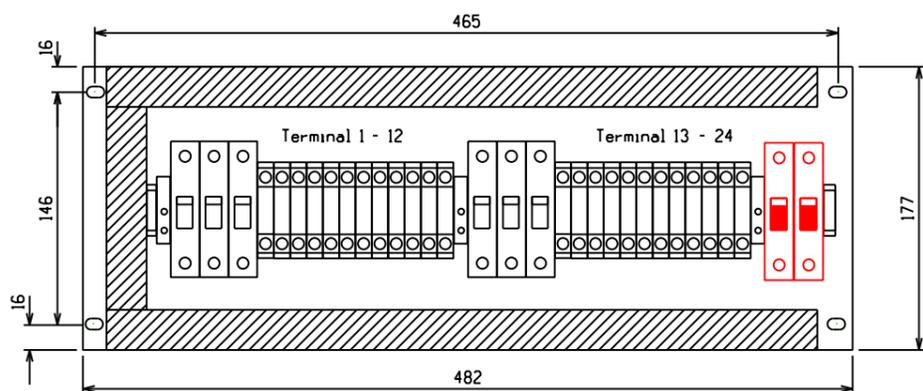


SIDE

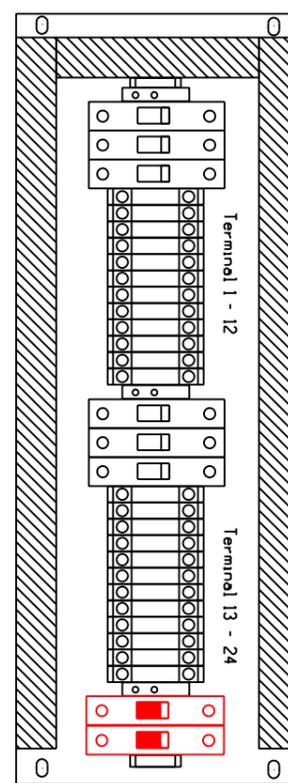


NOTES:
 1. THE CT AND VT TEST BLOCK AREA IS RECESSED BY 50MM FROM THE FRONT
 2. THE PLATE IS A COMPLETE UNIT

METER TERMINAL PLATE HORIZONTAL MOUNTING



METER TERMINAL PLATE VERTICAL MOUNTING



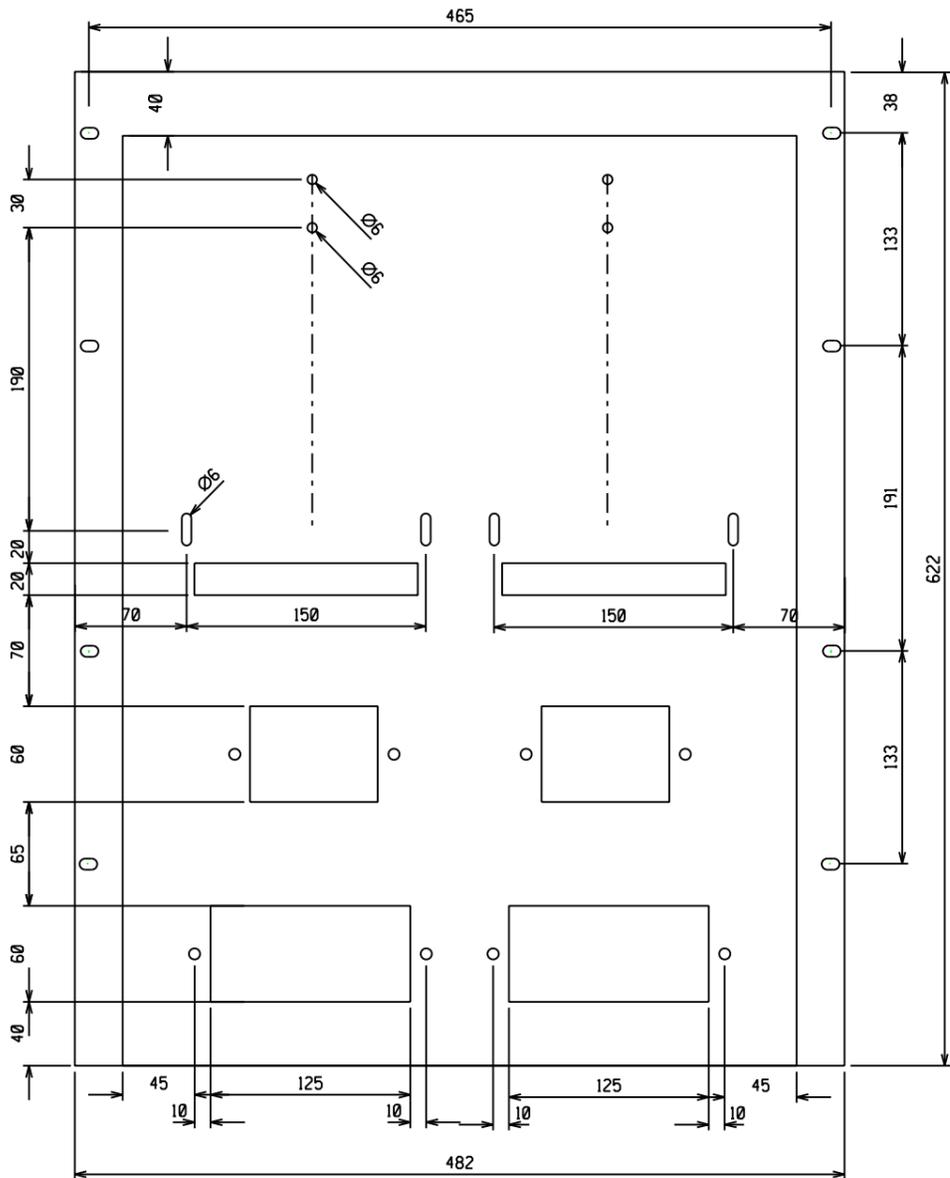
LEGEND	DESCRIPTION	APPROVED EQUIPMENT
	MINIATURE CIRCUIT BREAKER 5A, CURVE 2, > 5kA (MCB) IEC 60947-2 APPROVED	CBI: TYPE OF-1-D(13), 5A or SIMILAR
	TERMINALS: SPRING LOADED IEC 60947-7-1 APPROVED	METER TERMINAL PLATE: WEIDMULLER WDU 10 SL or ENTRELEC TYPE M 10/10.RS or ACTOM ELMEX TYPE KULT 1 METER MODULE: WEIDMULLER WDU 6 SL or ENTRELEC TYPE M 6/8.RS or ACTOM ELMEX TYPE KST 6WS
	END STOP	WEIDMULLER EW35/2 or ENTRELEC BAM or ACTOM ELMEX SCUN or SCUDD or SCKN or PHOENIX CONTACT E/UK or CLIPFIX 35 or KLEMSAN KD3 or LEGRAND VIKING 3 39403
	TRUNKING	25 x 60mm TRUNKING
	4-WAY RJ45 COMMUNICATION PATCH BOX	KOCOS ME20 4-WAY RJ45 COMMUNICATION PATCH BOX or SIMILAR
	MINIATURE CIRCUIT BREAKER 5A DC, CURVE C ₂ , > 5kA (MCB) IEC 60947-2 APPROVED	SCHNEIDER ELECTRIC; TYPE C60H-DC, 5A or SIMILAR

REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.
5	DRAWINGS UPDATED BY H. GROENEWALD				21/04/21	
4	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD			10/09/14	
3	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD			12/02/13	
2	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD			28/02/09	
1	SHEETS REDUCED FROM 33 TO 21	VvZ	MG		01/06	

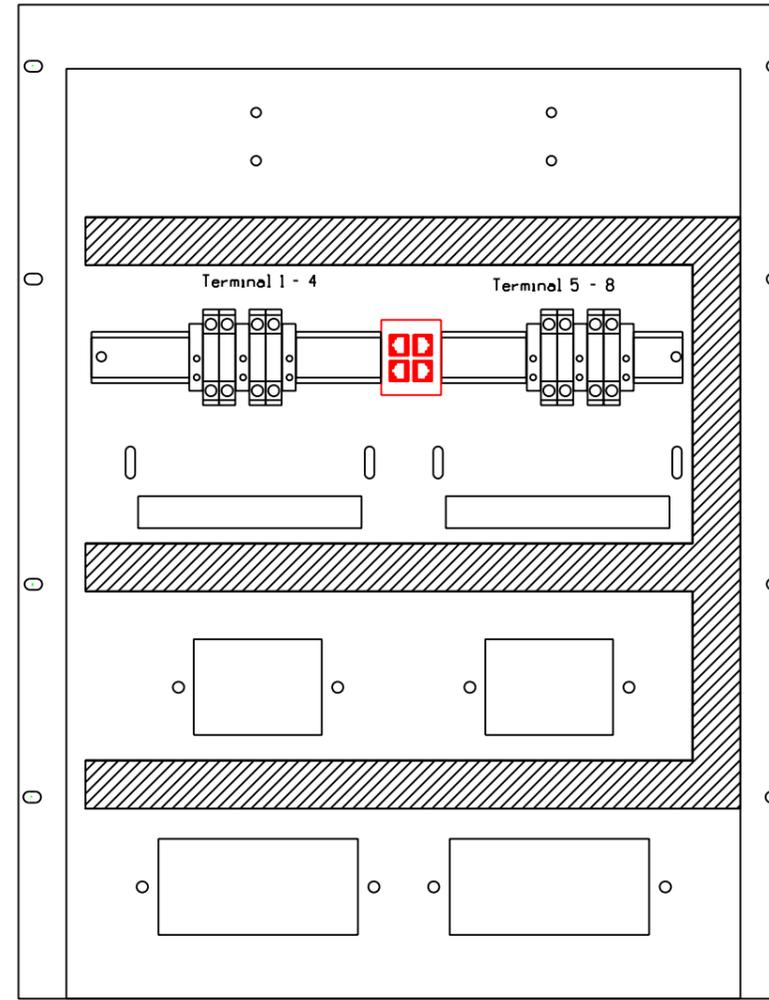
Eskom		STANDARD SUBSTATION METERING PANEL			
AUTH: HENRI GROENEWALD	DATE: 04/12/2003	METER MODULE LAYOUT: 19" RACK METERS 4-WAY			
DRW: HENRI GROENEWALD	DATE: 04/12/2003	D-DT-5804			
DRWA: Y. van ZWEL	DATE: 21/09/2003	SET	SHEET	REVISION	
		39	29	5	

THIS DRAWING HAS BEEN CREATED ON A C.A.D. SYSTEM AND ANY AMENDMENT TO THE DRAWING MUST BE EFFECTED ONLY ON THE SAME C.A.D. SYSTEM

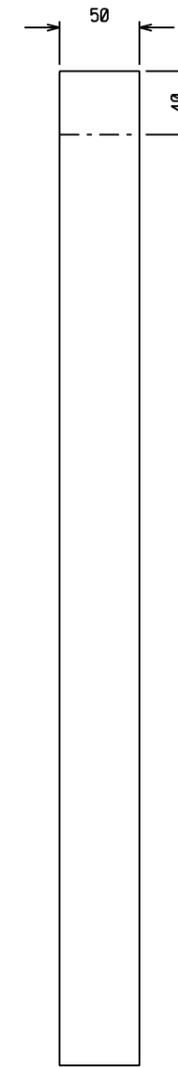
METER MODULE



METER MODULE BACK



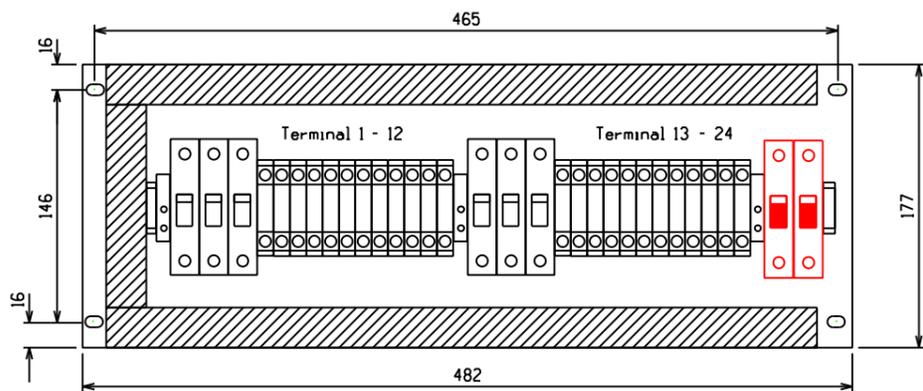
SIDE



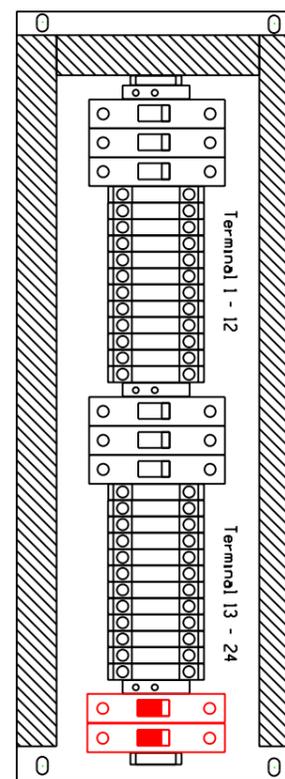
NOTES:
1. THE PLATE IS RECESSED BY 50MM FROM THE FRONT

LEGEND	DESCRIPTION	APPROVED EQUIPMENT
	MINIATURE CIRCUIT BREAKER 5A, CURVE 2, > 5kA (MCB) IEC 60947-2 APPROVED	CBI: TYPE OF-1-D(13), 5A or SIMILAR
	TERMINALS: SPRING LOADED IEC 60947-7-1 APPROVED	METER TERMINAL PLATE: WEIDMULLER WDU 10 SL or ENTRELEC TYPE M 10/10.RS or ACTOM ELMEX TYPE KULT 1 METER MODULE: WEIDMULLER WDU 6 SL or ENTRELEC TYPE M 6/8.RS or ACTOM ELMEX TYPE KST 6WS
	END STOP	WEIDMULLER EW35/2 or ENTRELEC BAM or ACTOM ELMEX SCUN or SCUDD or SCKN or PHOENIX CONTACT E/UK or CLIPFIX 35 or KLEMSAN KD3 or LEGRAND VIKING 3 39403
	TRUNKING	25 x 60mm TRUNKING
	4-WAY RJ45 COMMUNICATION PATCH BOX	KOCOS ME20 4-WAY RJ45 COMMUNICATION PATCH BOX or SIMILAR
	MINIATURE CIRCUIT BREAKER 5A DC, CURVE C, > 5kA (MCB) IEC 60947-2 APPROVED	SCHNEIDER ELECTRIC: TYPE C60H-DC, 5A or SIMILAR

METER TERMINAL PLATE HORIZONTAL MOUNTING



METER TERMINAL PLATE VERTICAL MOUNTING



THIS DRAWING HAS BEEN CREATED
ON A C.A.D. SYSTEM AND ANY
AMENDMENT TO THE DRAWING
MUST BE EFFECTED ONLY
ON THE SAME C.A.D. SYSTEM

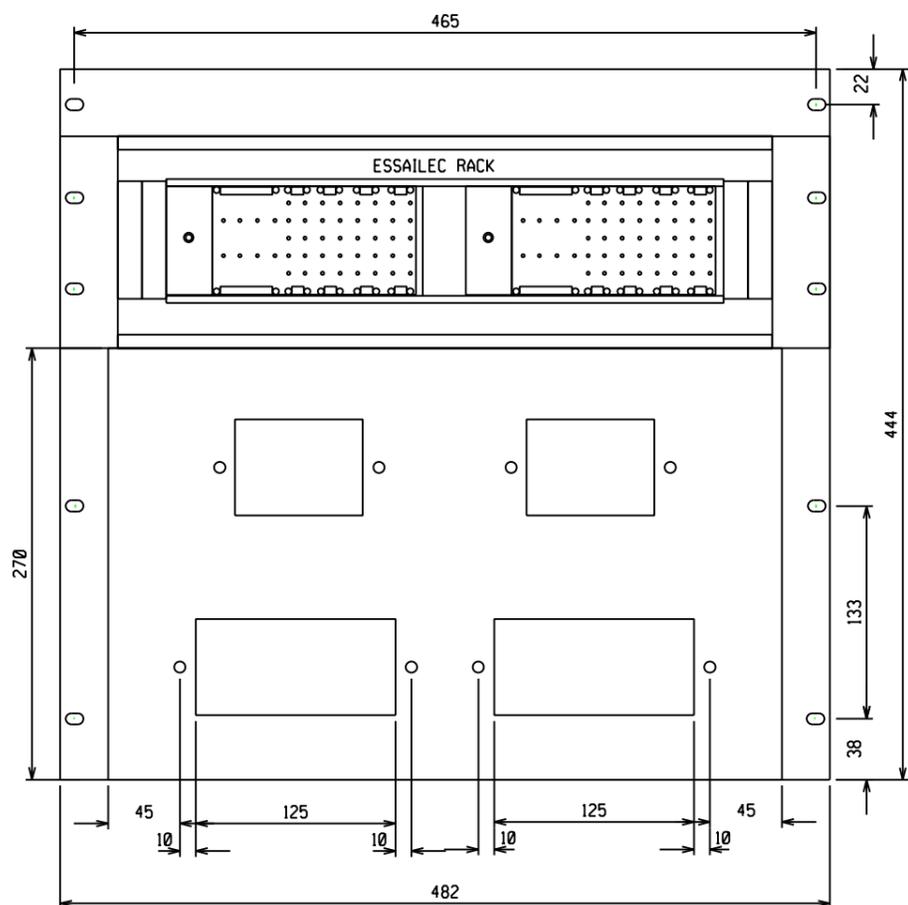
REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.
5	DRAWINGS UPDATED BY H. GROENEWALD				21/04/21	
4	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD			10/09/14	
3	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD			12/02/13	
2	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD			28/02/09	
1	SHEETS REDUCED FROM 33 TO 21	VvZ	MG		01/06	

Eskom
 AUTH: HENRI GROENEWALD
 SCALE: A1:5
 DATE: 04/12/2003
 ORG: HENRI GROENEWALD
 DATE: 04/12/2003
 DRAWN: V. van ZIEEL
 DATE: 21/09/2003

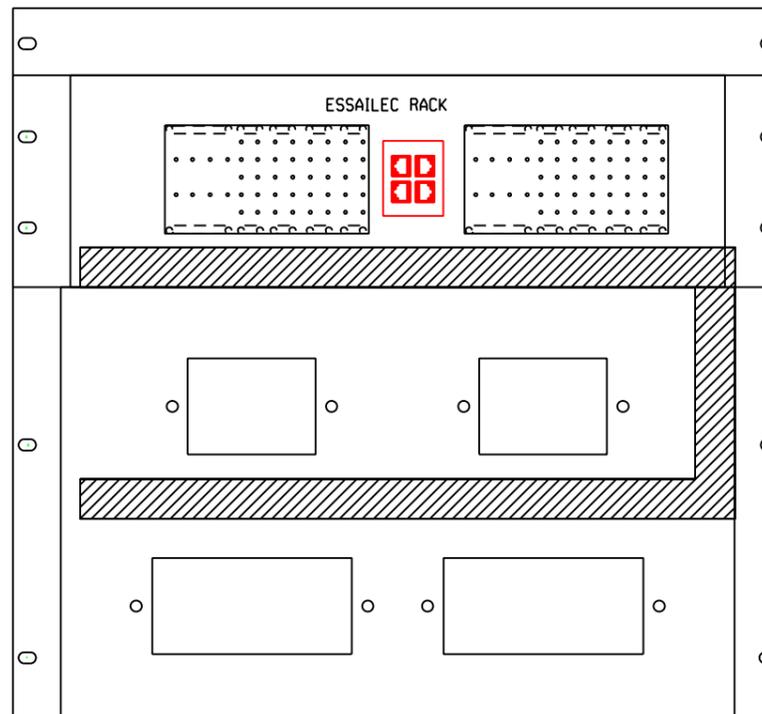
STANDARD SUBSTATION METERING PANEL
 METER MODULE LAYOUT:
 SURFACE MOUNT METERS 6-WAY
 D-DT-5804

SET	SHEET	REVISION
39	30	5

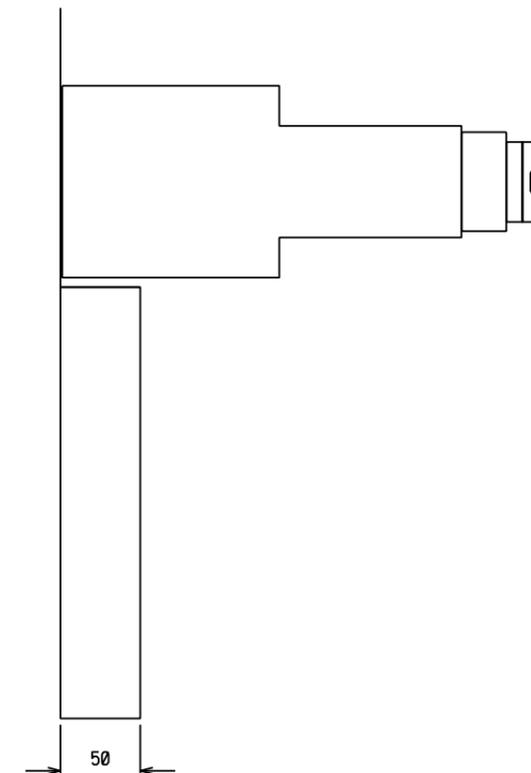
METER MODULE



METER MODULE BACK

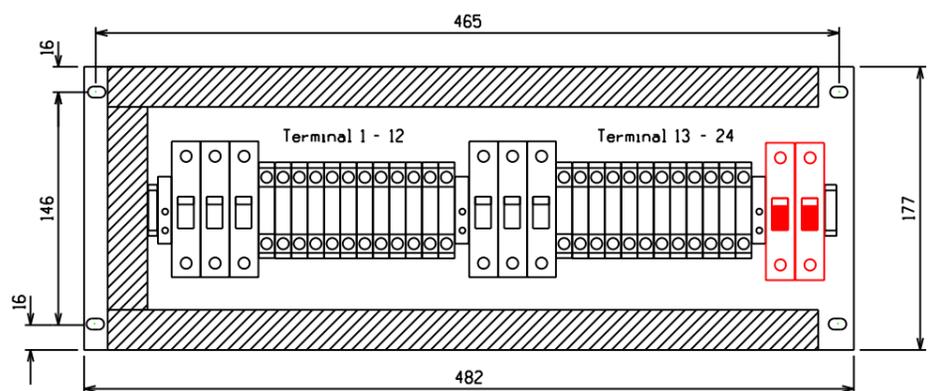


SIDE

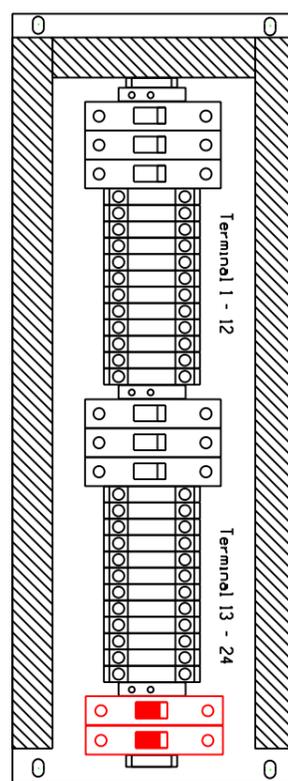


- NOTES:
 1. THE CT AND VT TEST BLOCK AREA IS RECESSED BY 50MM FROM THE FRONT
 2. THE PLATE IS A COMPLETE UNIT

METER TERMINAL PLATE HORIZONTAL MOUNTING



METER TERMINAL PLATE VERTICAL MOUNTING



LEGEND	DESCRIPTION	APPROVED EQUIPMENT
	MINIATURE CIRCUIT BREAKER 5A, CURVE 2, > 5kA (MCB) IEC 60947-2 APPROVED	CBI: TYPE QF-1-D(13), 5A or SIMILAR
	TERMINALS: SPRING LOADED IEC 60947-7-1 APPROVED	METER TERMINAL PLATE: WEIDMULLER WDU 10 SL or ENTRELEC TYPE M 10/10.RS or ACTOM ELMEX TYPE KULT 1 METER MODULE: WEIDMULLER WDU 6 SL or ENTRELEC TYPE M 6/8.RS or ACTOM ELMEX TYPE KST 6WS
	END STOP	WEIDMULLER EW35/2 or ENTRELEC BAM or ACTOM ELMEX SCUN or SCUDD or SCKN or PHOENIX CONTACT E/UK or CLIPFIX 35 or KLEMSAN KD3 or LEGRAND VIKING 3 39403
	TRUNKING	25 x 60mm TRUNKING
	4-WAY RJ45 COMMUNICATION PATCH BOX	KOCOS ME20 4-WAY RJ45 COMMUNICATION PATCH BOX or SIMILAR
	MINIATURE CIRCUIT BREAKER 5A DC, CURVE C, > 5kA (MCB) IEC 60947-2 APPROVED	SCHNEIDER ELECTRIC: TYPE C60H-DC, 5A or SIMILAR

REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.
5	DRAWINGS UPDATED BY H. GROENEWALD				21/04/21	
4	DRAWINGS UPDATED BY H. GROENEWALD				10/09/14	
3	DRAWINGS UPDATED BY H. GROENEWALD				12/02/13	
2	DRAWINGS UPDATED BY H. GROENEWALD				28/02/09	
1	SHEETS REDUCED FROM 33 TO 21	VvZ	MG		01/06	

Eskom

STANDARD SUBSTATION METERING PANEL

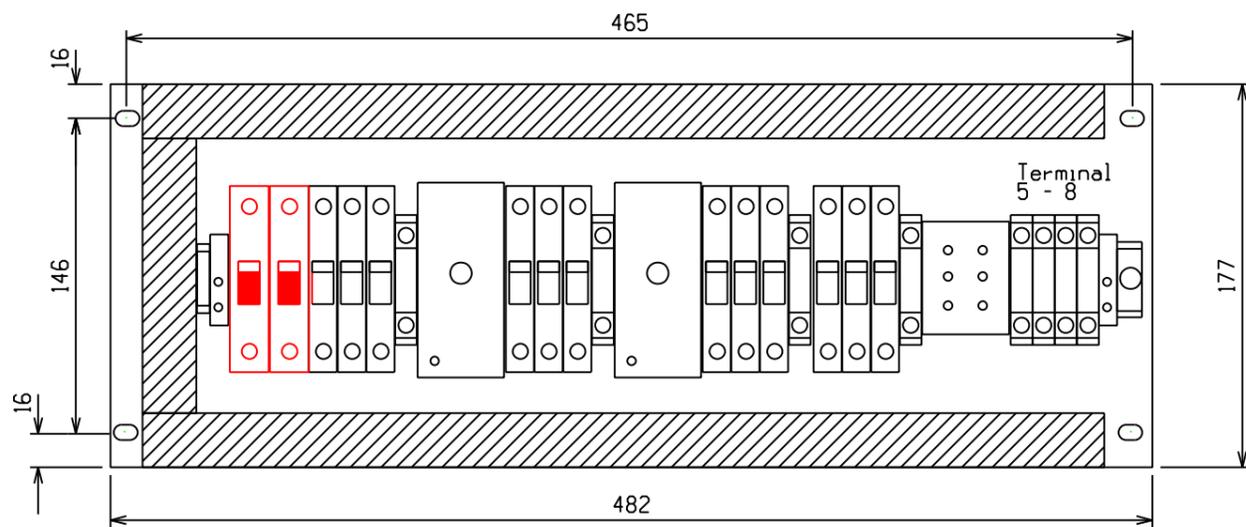
METER MODULE LAYOUT:
19" RACK METERS 6-WAY

D-DT-5804

SET	SHEET	REVISION
39	31	5

THIS DRAWING HAS BEEN CREATED ON A C.A.D. SYSTEM AND ANY AMENDMENT TO THE DRAWING MUST BE EFFECTED ONLY ON THE SAME C.A.D. SYSTEM

SCALE: 1:1 DATE: 04/12/2003
 CHKD: HENRI GROENEWALD DATE: 04/12/2003
 DRAWN: Y. van ZWEL DATE: 21/09/2003

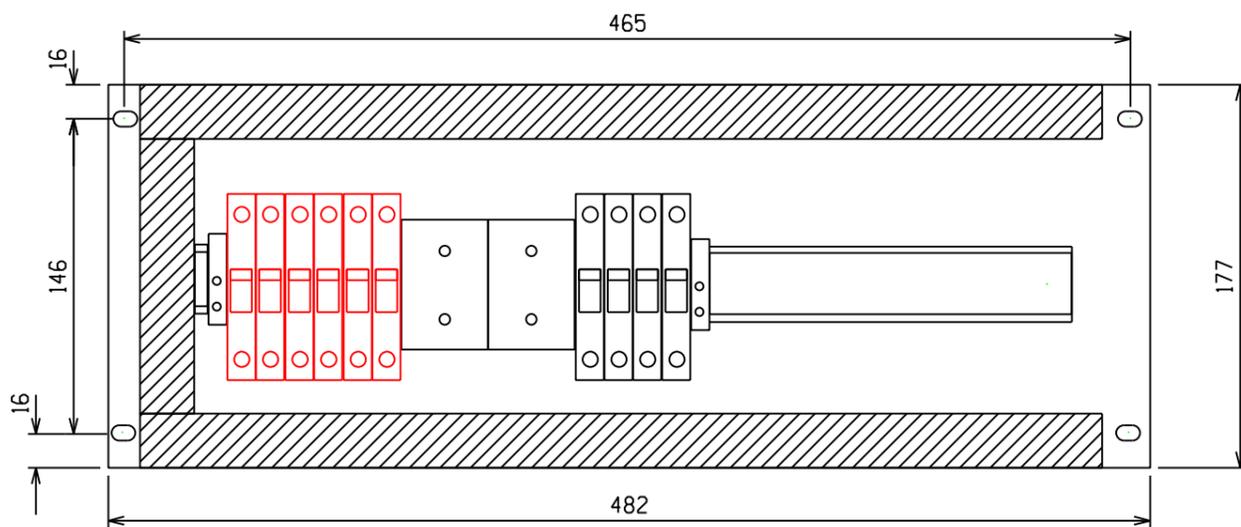


LEGEND	DESCRIPTION	APPROVED EQUIPMENT
	END STOP	WEIDMULLER EW35/2 or ENTRELEC BAM or ALSTOM ELMEX SCUN or SCUDD or SCKN or PHOENIX CONTACT E/UK or CLIPFIX 35 or KLEMSAN KD3 or LEGRAND VIKING 3 39403
	TERMINALS: SPRING LOADED	WEIDMULLER WDU 10 SL or ENTRELEC TYPE M 10/10.RS or ALSTOM ELMEX TYPE KULT 1
	LATCHING RELAY, 10A, 110V DC 3 CHANGEOVER CONTACTS	ARTECHE TYPE BF - 3 110V DC, 10A
	PHASE FAILURE RELAY 110V DUAL CONTACT	ESKOM SPECIFICATION 240-76628623
	TRUNKING	25 x 60mm TRUNKING
	MINIATURE CIRCUIT BREAKER 5A, CURVE 2, > 5kA (MCB) IEC 60947-2 APPROVED	CBI: TYPE QF-1(13), 5A or SIMILAR
	MINIATURE CIRCUIT BREAKER 5A DC, CURVE C, > 5kA (MCB) IEC 60947-2 APPROVED	SCHNEIDER ELECTRIC: TYPE C60H-DC, 5A or SIMILAR

REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.
5	DRAWINGS UPDATED BY H. GROENEWALD				21/04/21	
4	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD			18/09/14	
3	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD			12/02/13	
2	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD			28/02/09	
1	SHEETS REDUCED FROM 33 TO 21	VvZ	MG		01/06	

		STANDARD SUBSTATION METERING PANEL		
AUTH: HENRI GROENEWALD	SCALE: A1:1	DATE: 04/12/2003	VOLTAGE SELECTION MODULE A LAYOUT	
DRW: HENRI GROENEWALD	DATE: 04/12/2003	SET	SHEET	REVISION
DRAWN: V. van ZWEL	DATE: 21/09/2003	D-DT-5804	39	32
				5

THIS DRAWING HAS BEEN CREATED ON A C.A.D. SYSTEM AND ANY AMENDMENT TO THE DRAWING MUST BE EFFECTED ONLY ON THE SAME C.A.D. SYSTEM

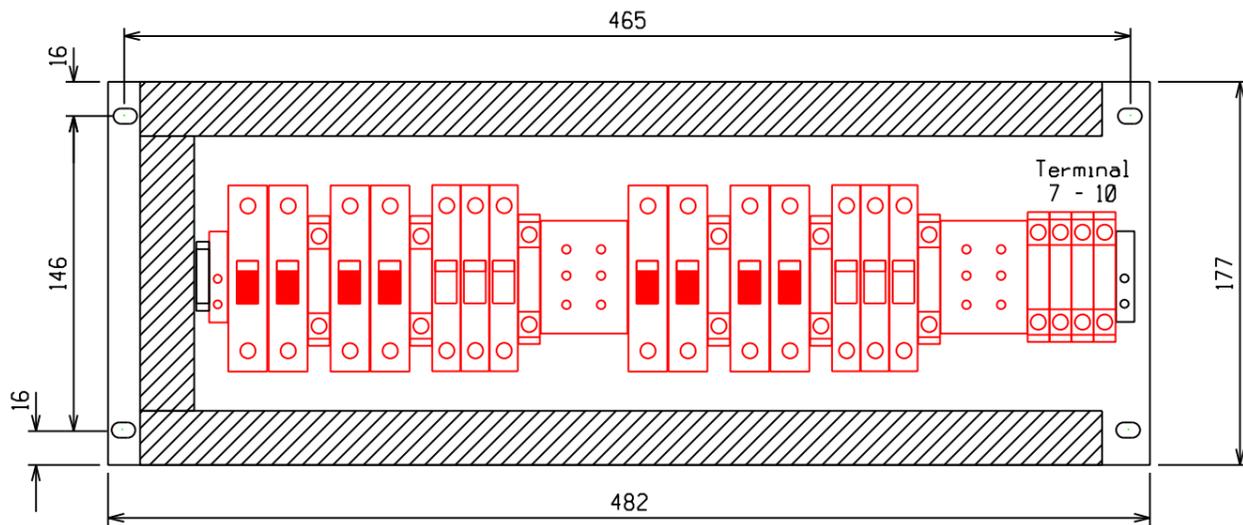


LEGEND	DESCRIPTION	APPROVED EQUIPMENT
	MINIATURE CIRCUIT BREAKER 5A, CURVE 2, > 5kA (MCB) IEC 60947-2 APPROVED	CBI: TYPE QF-1(13), 5A or SIMILAR
	END STOP	WEIDMULLER EW35/2 or ENTRELEC BAM or ALSTOM ELMEX SCUN or SCUDD or SCKN or PHOENIX CONTACT E/UK or CLIPFIX 35 or KLEMSAN KD3 or LEGRAND VIKING 3 39403
	RELAY, 10A, 110VAC 2 CHANGEOVER CONTACTS	OMRON MK2P or FINDER 6012
	TRUNKING	25 x 60mm TRUNKING

5	DRAWINGS UPDATED BY H. GROENEWALD			21/04/21		
4	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD		18/09/14		
3	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD		12/02/13		
2	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD		28/02/09		
1	SHEETS REDUCED FROM 33 TO 21	VvZ	MG	01/06		
REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.

		STANDARD SUBSTATION METERING PANEL		
AUTH: HENRI GROENEWALD				
SCALE: 1:1	DATE: 04/12/2003			
DRW: HENRI GROENEWALD	VOLTAGE SELECTION MODULE B LAYOUT			
DATE: 04/12/2003	SET	SHEET	REVISION	
DRAWN: V. van ZWEL	D-DT-5804	39	33	5
DATE: 21/09/2003				

THIS DRAWING HAS BEEN CREATED ON A C.A.D. SYSTEM AND ANY AMENDMENT TO THE DRAWING MUST BE EFFECTED ONLY ON THE SAME C.A.D. SYSTEM

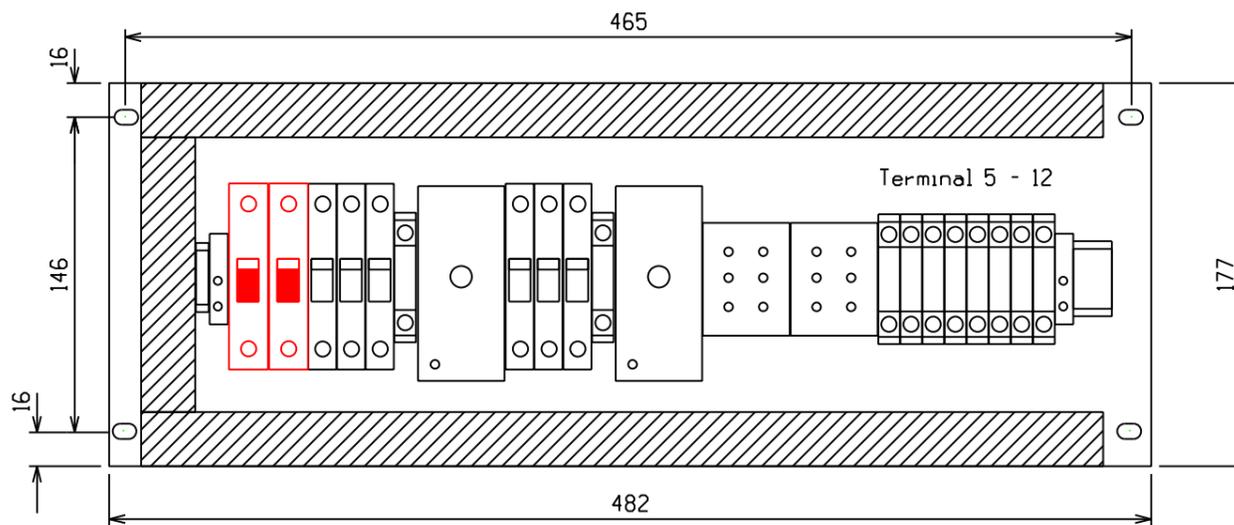


LEGEND	DESCRIPTION	APPROVED EQUIPMENT
	END STOP	WEIDMULLER EW35/2 or ENTRELEC BAM or ALSTOM ELMEX SCUN or SCUDD or SCKN or PHOENIX CONTACT E/UK or CLIPFIX 35 or KLEMSAN KD3 or LEGRAND VIKING 3 39403
	TERMINALS: SPRING LOADED	WEIDMULLER WDU 10 SL or ENTRELEC TYPE M 10/10.RS or ALSTOM ELMEX TYPE KULT 1
	LATCHING RELAY, 10A, 110V DC 3 CHANGEOVER CONTACTS	ARTECHE TYPE BF - 3 110V DC, 10A
	TRUNKING	25 x 60mm TRUNKING
	MINIATURE CIRCUIT BREAKER 5A, CURVE 2, > 5kA (MCB) IEC 60947-2 APPROVED	CBI: TYPE QF-1(13), 5A or SIMILAR
	MINIATURE CIRCUIT BREAKER 5A DC, CURVE C, > 5kA (MCB) IEC 60947-2 APPROVED	SCHNEIDER ELECTRIC: TYPE C60H-DC, 5A or SIMILAR

5	DRAWINGS UPDATED BY H. GROENEWALD		21/04/21			
4	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD	18/09/14			
3	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD	12/02/13			
2	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD	28/02/09			
1	SHEETS REDUCED FROM 33 TO 21	VvZ	HG	01/06		
REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.

		STANDARD SUBSTATION METERING PANEL		
AUTH: HENRI GROENEWALD	SCALE: 1:1	DATE: 04/12/2003	VOLTAGE SELECTION MODULE C LAYOUT	
DRW: HENRI GROENEWALD	DATE: 04/12/2003	SET	SHEET	REVISION
DRAWN: Y. VAN ZWEL	DATE: 21/09/2003	D-DT-5804	39	34
				5

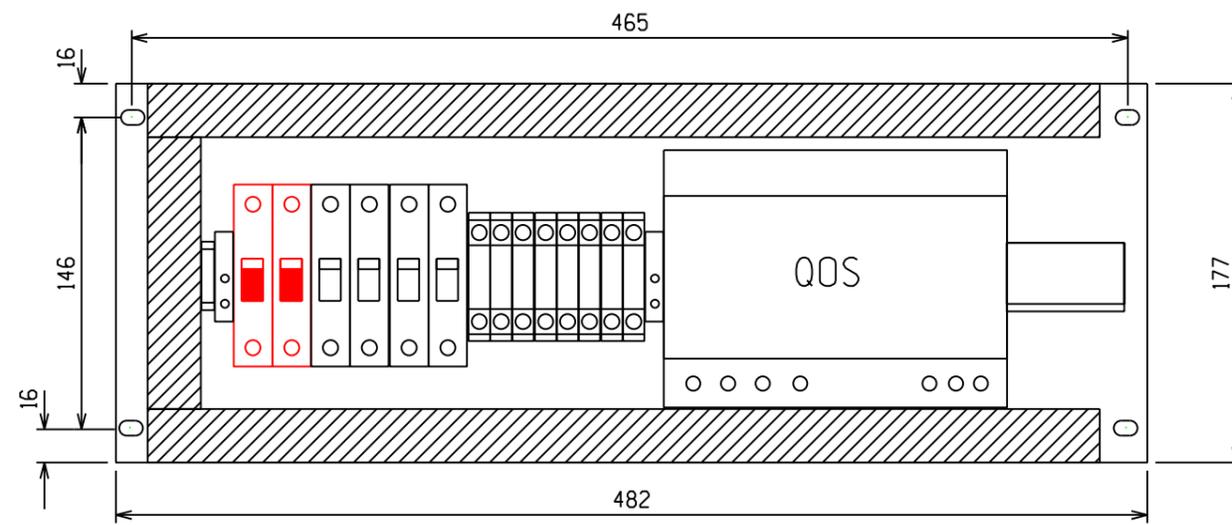
THIS DRAWING HAS BEEN CREATED ON A C.A.D. SYSTEM AND ANY AMENDMENT TO THE DRAWING MUST BE EFFECTED ONLY ON THE SAME C.A.D. SYSTEM



LEGEND	DESCRIPTION	APPROVED EQUIPMENT
	END STOP	WEIDMULLER EW35/2 or ENTRELEC BAM or ALSTOM ELMEX SCUN or SCUDD or SCKN or PHOENIX CONTACT E/UK or CLIPFIX 35 or KLEMSAN KD3 or LEGRAND VIKING 3 39403
	TERMINALS: SPRING LOADED	WEIDMULLER WDU 10 SL or ENTRELEC TYPE M 10/10.RS or ALSTOM ELMEX TYPE KULT 1
	LATCHING RELAY, 10A, 110V DC 3 CHANGEOVER CONTACTS	ARTECHE TYPE BF - 3 110V DC, 10A
	PHASE FAILURE RELAY 110V DUAL CONTACT	ESKOM SPECIFICATION 240-76628623
	TRUNKING	25 x 60mm TRUNKING
	MINIATURE CIRCUIT BREAKER 5A, CURVE 2, > 5kA (MCB) IEC 60947-2 APPROVED	CBI: TYPE OF-1-D(13), 5A or SIMILAR
	MINIATURE CIRCUIT BREAKER 5A DC, CURVE C, > 5kA (MCB) IEC 60947-2 APPROVED	SCHNEIDER ELECTRIC: TYPE C60H-DC, 5A or SIMILAR

REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.
5	DRAWINGS UPDATED BY H. GROENEWALD				21/04/21	
4	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD			18/09/14	
3	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD			12/02/13	
2	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD			28/02/09	
1	SHEETS REDUCED FROM 33 TO 21	VvZ	MG		01/06	

		STANDARD SUBSTATION METERING PANEL		
AUTH: HENRI GROENEWALD		DATE: 04/12/2003		
SCALE: 1:1		DATE: 04/12/2003		
ORD: HENRI GROENEWALD		DATE: 04/12/2003		
DRAWN: V. van ZWEL		DATE: 21/09/2003		
THIS DRAWING HAS BEEN CREATED ON A C.A.D. SYSTEM AND ANY AMENDMENT TO THE DRAWING MUST BE EFFECTED ONLY ON THE SAME C.A.D. SYSTEM		VOLTAGE SELECTION MODULE D LAYOUT		
D-DT-5804		SET	SHEET	REVISION
		39	35	5



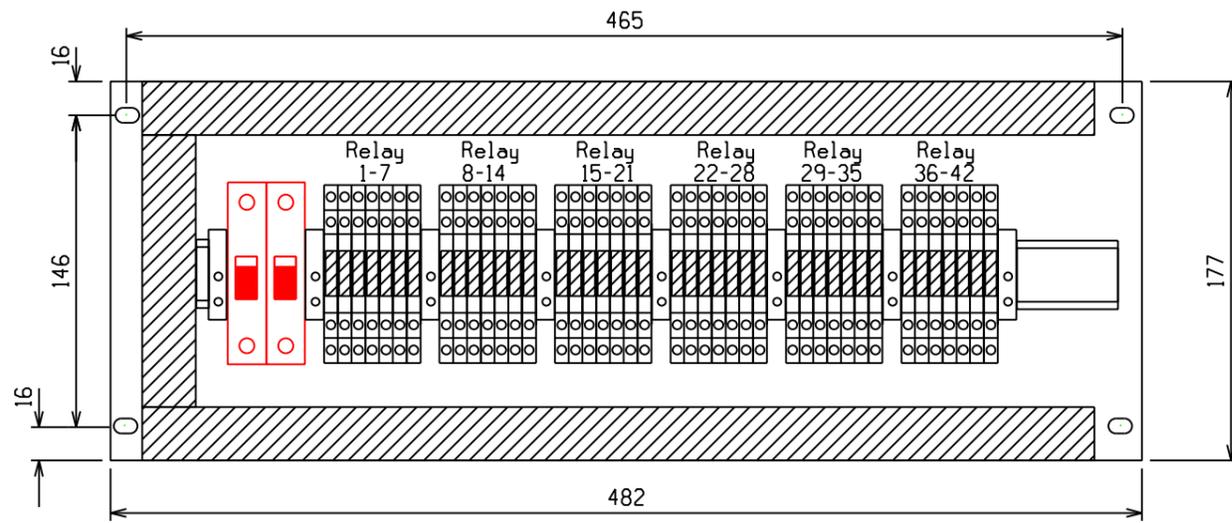
NOTE:
1. THE PLATE SHALL HAVE A HORIZONTAL FLAT SURFACE (300mm) TO ACCOMMODATE THE INSTRUMENTS.

LEGEND	DESCRIPTION	APPROVED EQUIPMENT
	MINIATURE CIRCUIT BREAKER 5A AC, CURVE 2, > 5kA (MCB) IEC 60947-2 APPROVED	CBI: TYPE QF-1(13), 5A or SIMILAR
	MINIATURE CIRCUIT BREAKER 5A DC, CURVE C, > 5kA (MCB) IEC 60947-2 APPROVED	SCHNEIDER ELECTRIC: TYPE C60H-DC, 5A or SIMILAR
	TERMINALS: SPRING LOADED	WEIDMULLER WDU 10 SL or ENTRELEC TYPE M 10/10.RS or ALSTOM ELMEX TYPE KULT 1
	END STOP	WEIDMULLER EW35/2 or ENTRELEC BAM or ALSTOM ELMEX SCUN or SCUDD or SCKN or PHOENIX CONTACT E/UK or CLIPFIX 35 or KLEMSAN KD3 or LEGRAND VIKING 3 39403
	TRUNKING	25 x 60mm TRUNKING
	QUALITY OF SUPPLY DEVICE	NETLOG5 QOS-400 or EQUIVALENT

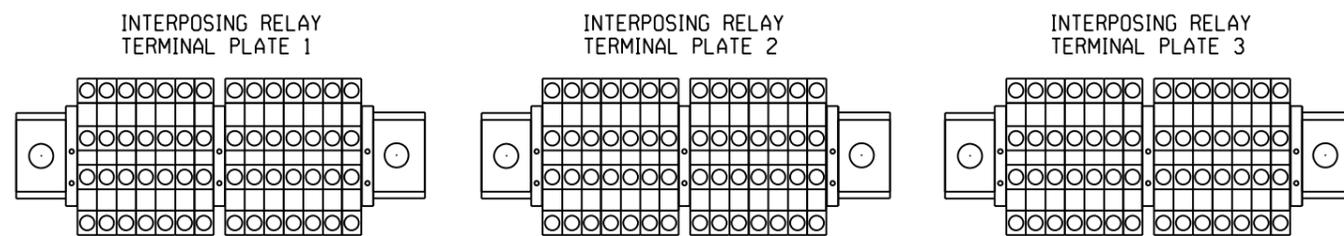
REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.
5	DRAWINGS UPDATED BY H. GROENEWALD				21/04/21	
4	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD			10/09/14	
3	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD			12/02/13	
2	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD			28/02/08	
1	SHEETS REDUCED FROM 33 TO 21	VvZ	MG		01/06	

		STANDARD SUBSTATION METERING PANEL		
AUTH: HENRI GROENEWALD	SCALE: A1:5	DATE: 04/12/2003		
DRW: HENRI GROENEWALD	DATE: 04/12/2003		QUALITY OF SUPPLY MODULE LAYOUT	
DRAWN: V. van ZWEL	DATE: 21/09/2003		SET	SHEET
			D-DT-5804	39
			36	5

THIS DRAWING HAS BEEN CREATED ON A C.A.D. SYSTEM AND ANY AMENDMENT TO THE DRAWING MUST BE EFFECTED ONLY ON THE SAME C.A.D. SYSTEM



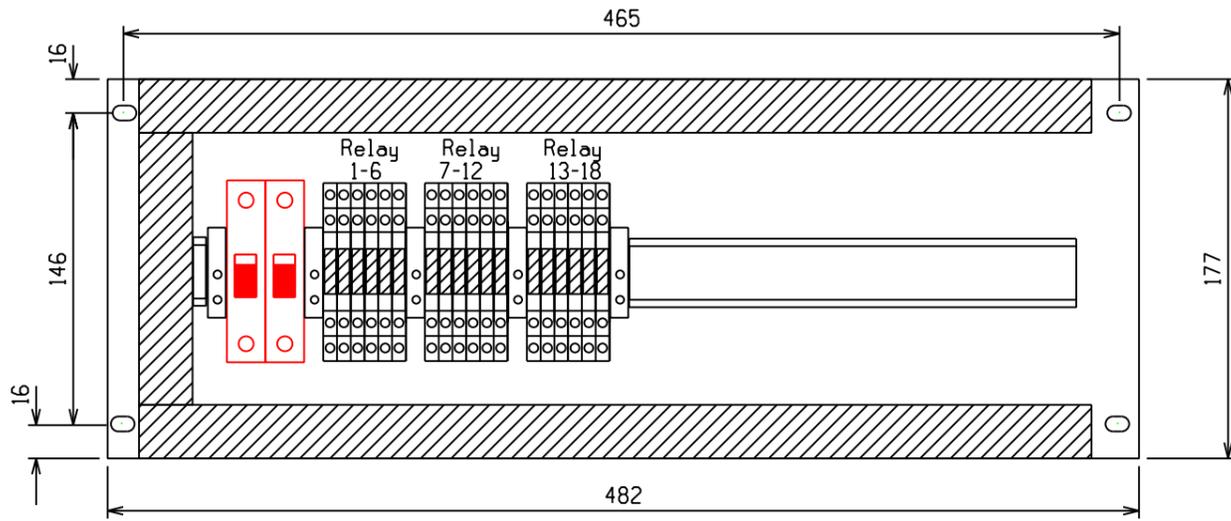
LEGEND	DESCRIPTION	APPROVED EQUIPMENT
	REPEAT RELAY: SOLID STATE 110VUC INPUT, 24VDC OUTPUT	PHOENIX TYPE PLC-OSC-120UC/24DC/2 or WEIDMULLER TYPE MOS 120VUC/24VDC, 2A
	MINIATURE CIRCUIT BREAKER 5A DC, CURVE C, > 5kA (MCB) IEC 60947-2 APPROVED	SCHNEIDER ELECTRIC: TYPE C60H-DC, 5A or SIMILAR
	END STOP	WEIDMULLER EW35/2 or ENTRELEC BAM or ALSTOM ELMEX SCUN or SCUDD or SCKN or PHOENIX CONTACT E/UK or CLIPFIX 35 or KLEMSAN KD3 or LEGRAND VIKING 3 39403
	DOUBLE DECK TERMINAL BLOCK	WEIDMULLER WDK 4N or ENTRELEC M 4/6.D.1 or ALSTOM ELMEX KU2D 4 or PHOENIX CONTACT UKK 5
	TRUNKING	25 x 60mm TRUNKING



REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.
5	DRAWINGS UPDATED BY H. GROENEWALD				21/04/21	
4	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD			10/09/14	
3	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD			12/02/13	
2	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD			20/02/08	
1	SHEETS REDUCED FROM 33 TO 21	VvZ		MG	01/06	

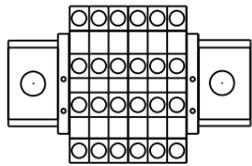
Eskom		STANDARD SUBSTATION METERING PANEL		
AUTH: HENRI GROENEWALD	SCALE: A1:1	DATE: 04/12/2003		
ORD: HENRI GROENEWALD	INTERPOSING MODULE A LAYOUT			
DATE: 04/12/2003	SET	SHEET	REVISION	
DRAWN: V. van ZWEL	D-DT-5804	39	37	5
DATE: 21/00/2003				

THIS DRAWING HAS BEEN CREATED ON A C.A.D. SYSTEM AND ANY AMENDMENT TO THE DRAWING MUST BE EFFECTED ONLY ON THE SAME C.A.D. SYSTEM

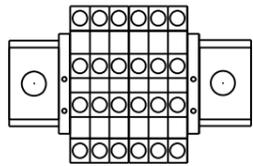


LEGEND	DESCRIPTION	APPROVED EQUIPMENT
	REPEAT RELAY; SOLID STATE 110VUC INPUT, 24VDC OUTPUT	PHOENIX TYPE PLC-OSC-120UC/24DC/2 or WEIDMULLER TYPE MOS 120VUC/24VDC, 2A
	MINIATURE CIRCUIT BREAKER 5A DC, CURVE C, > 5kA (MCB) IEC 60947-2 APPROVED	SCHEIDER ELECTRIC: TYPE C60H-DC, 5A or SIMILAR
	END STOP	WEIDMULLER EW35/2 or ENTRELEC BAM or ALSTOM ELMEX SCUN or SCUDD or SCKN or PHOENIX CONTACT E/UK or CLIPFIX 35 or KLEMSAN KD3 or LEGRAND VIKING 3 39403
	DOUBLE DECK TERMINAL BLOCK	WEIDMULLER WDK 4N or ENTRELEC M 4/6.D.1 or ALSTOM ELMEX KU2D 4 or PHOENIX CONTACT UKK 5
	TRUNKING	25 x 60mm TRUNKING

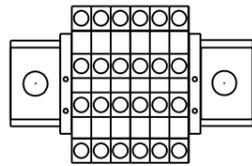
INTERPOSING RELAY
TERMINAL PLATE 1



INTERPOSING RELAY
TERMINAL PLATE 2



INTERPOSING RELAY
TERMINAL PLATE 3



REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.
5	DRAWINGS UPDATED BY H. GROENEWALD				21/04/21	
4	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD			10/09/14	
3	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD			12/02/13	
2	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD			28/02/08	
1	SHEETS REDUCED FROM 33 TO 21	VvZ	MG		01/06	

Eskom

STANDARD SUBSTATION METERING PANEL

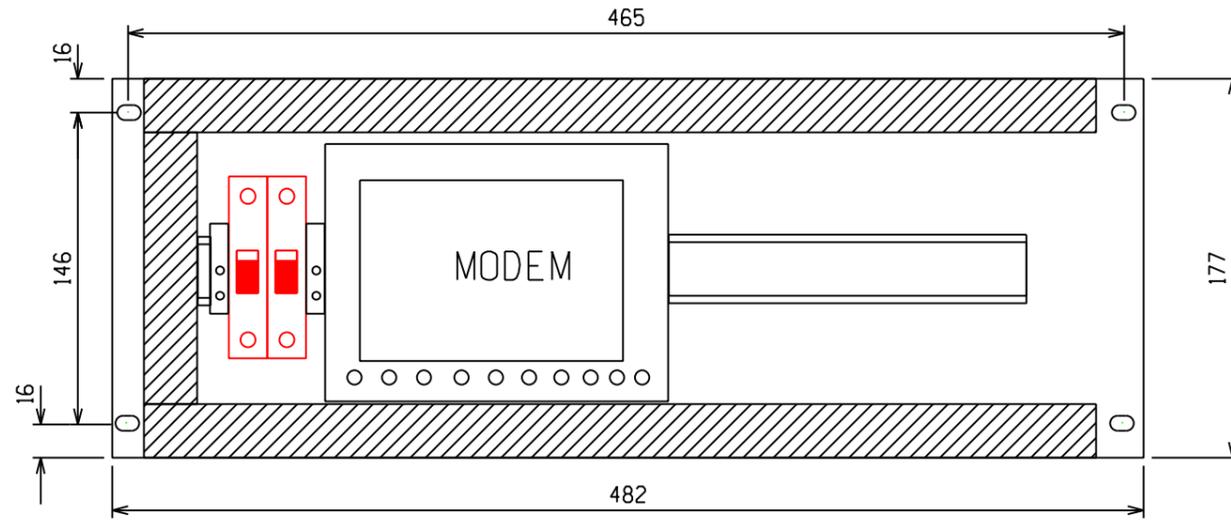
INTERPOSING MODULE B LAYOUT

D-DT-5804

SET	SHEET	REVISION
39	38	5

THIS DRAWING HAS BEEN CREATED
ON A C.A.D. SYSTEM AND ANY
AMENDMENT TO THE DRAWING
MUST BE EFFECTED ONLY
ON THE SAME C.A.D. SYSTEM

SCALE: 1:1
DATE: 04/12/2003
AUTH: HENRI GROENEWALD
DATE: 04/12/2003
DRAWN: V. van ZWEL
DATE: 21/09/2003



PHOENIX TYPE PLC-OSC-120UC/24DC/2 or
WEIDMULLER TYPE MOS 120VUC/24VDC, 2A

LEGEND	DESCRIPTION	APPROVED EQUIPMENT
	MINIATURE CIRCUIT BREAKER 5A DC, CURVE C, > 5kA (MCB) IEC 60947-2 APPROVED	SCHNEIDER ELECTRIC: TYPE C60H-DC, 5A or SIMILAR
	END STOP	WEIDMULLER EW35/2 or ENTRELEC BAM or ALSTOM ELMEX SCUN or SCUDD or SCKN or PHOENIX CONTACT E/UK or CLIPFIX 35 or KLEMSAN KD3 or LEGRAND VIKING 3 39403
	TRUNKING	25 x 60mm TRUNKING

5	DRAWINGS UPDATED BY H. GROENEWALD			21/04/21		
4	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD		10/09/14		
3	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD		12/02/13		
2	DRAWINGS UPDATED BY H. GROENEWALD	H. GROENEWALD		28/02/08		
1	SHEETS REDUCED FROM 33 TO 21	VvZ	MG	01/06		
REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.

		STANDARD SUBSTATION METERING PANEL				
AUTH: HENRI GROENEWALD						
SCALE: 1:1	DATE: 04/12/2003					
DRW: HENRI GROENEWALD						
DATE: 04/12/2003						
DRAWN: V. van ZWEL						
DATE: 21/09/2003						
		MODEM PLATE LAYOUT				
		D-DT-5804		SET	SHEET	REVISION
				39	39	5

THIS DRAWING HAS BEEN CREATED
ON A C.A.D. SYSTEM AND ANY
AMENDMENT TO THE DRAWING
MUST BE EFFECTED ONLY
ON THE SAME C.A.D. SYSTEM