



Fræðsluskrifstofa rafiðnaðarins

Sveinsprófsnefnd sterkstraums

Teikningar, teiknitákn og kort

2. júní 2014 kl. 13:00 - 15:00

Nafn: _____

Kennitala: _____

Heimilisfang: _____

Hjálpargögn: Skrifæri og teikniáhöld.

Skýringar á verkefnum: Prófið inniheldur 39 spurningar, 5 krossaspurningar og 2 verkefni, sem eru mistímafrek. Við einkunnargjöf verður tekið tillit til þessa. Spurningarnar hafa sama vægið eða 10, en í sviga fyrir aftan númerin á verkefnum eru þær einingar sem hver spurning vegur.







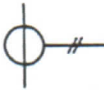




Verkefnum og spurningum skal svara á prófblaðið.

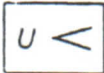
Summa eininga fyrir spurningar og hönnun er 510 einingar

Úrlausnartími: 120 mínútur.


Gangi þér vel !


Teiknitákn


1.  Hvað merkir þetta tákn? _____
2.  Hvað merkir þetta tákn? _____
3.  Hvað merkir þetta tákn? _____
4.  Hvað merkir þetta tákn? _____
5.  Hvað merkir þetta tákn? _____
6.  Hvað merkir þetta tákn? _____
7.  Hvað merkir þetta tákn? _____
8.  Hvað merkir þetta tákn? _____
9.  Hvað merkir þetta tákn? _____
10.  Hvað merkir þetta tákn? _____
11.  Hvað merkir þetta tákn? _____


12.  Hvað merkir þetta tákn? _____

13.  Hvað merkir þetta tákn? _____


14.  Hvað merkir þetta tákn? _____

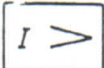
15.  Hvað merkir þetta tákn? _____

16.  Hvað merkir þetta tákn? _____

17.  Hvað merkir þetta tákn? _____

18.  Hvað merkir þetta tákn? _____

19.  Hvað merkir þetta tákn? _____

20.  Hvað merkir þetta tákn? _____

21. Teiknið hér fyrir aftan tákn fyrir sæstreng

22. Teiknið hér fyrir aftan tákn fyrir ampermæli

23. Teiknið hér fyrir aftan tákn fyrir rafmótor.

24. Teiknið hér fyrir aftan tákn fyrir orkumæli

25. Teiknið hér fyrir aftan tákn fyrir spennuspenni

26. Teiknið hér fyrir aftan tákn fyrir Megaohm

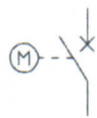
27. Teiknið hér fyrir aftan tákn fyrir ljóskastara

28. Teiknið hér fyrir aftan tákn fyrir jafnstraum

29. Teiknið hér fyrir aftan tákn fyrir langhólk

30. Teiknið hér fyrir aftan tákn fyrir tvípólarofa

31.



Hvað merkir þetta tákn?

32.



Hvað merkir þetta tákn?

33.



Hvað merkir þetta tákn?

34.



Hvað merkir þetta tákn?

35.



Hvað merkir þetta tákn?

36.



Hvað merkir þetta tákn?

37.



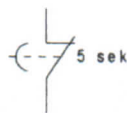
Hvað merkir þetta tákn?

38.



Hvað merkir þetta tákn?

39.



Hvað merkir þetta tákn?

40. Hvað merkir táknið á myndinni hér til hægri?

- a. Jarðblað, almennt tákn.
- b. Skilrofi með mótordrifi.
- c. Jarðskaut, almennt tákn.
- d. Álagsskilrofi.



41. Hvað merkir táknið á myndinni hér til hægri?

- a. Krossrofi, almennt tákn.
- b. Aflrofi með mótordrifi.
- c. Skilrofi með mótordrifi.
- d. Álagsskilrofi.



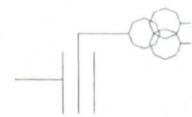
42. Hvað merkir táknið á myndinni hér til hægri?

- a. Samrofi, almennt tákn.
- b. Aflrofi með mótordrifi.
- c. Skilrofi með mótordrifi.
- d. Álagsskilrofi.



43. Hvað merkir táknið á myndinni hér til hægri?

- a. Teinn og aflspennir, almennt tákn.
- b. Skilrofi (opinn) og aflspennir með tvö eftirvöf.
- c. Mælaspennir (straum) með tvö eftirvöf.
- d. Mælaspennir (spennu) með tvö eftirvöf.



44. Hvað merkir táknið á myndinni hér til hægri?

- a. Aflspennir, tenging Yd.
- b. Einvefjuspennir, tenging Yd.
- c. Mælaspennir (straum) með tvö eftirvöf (y-tengt og d-tengt).
- d. Mælaspennir (spennu) með tvö eftirvöf (y-tengt og d-tengt).

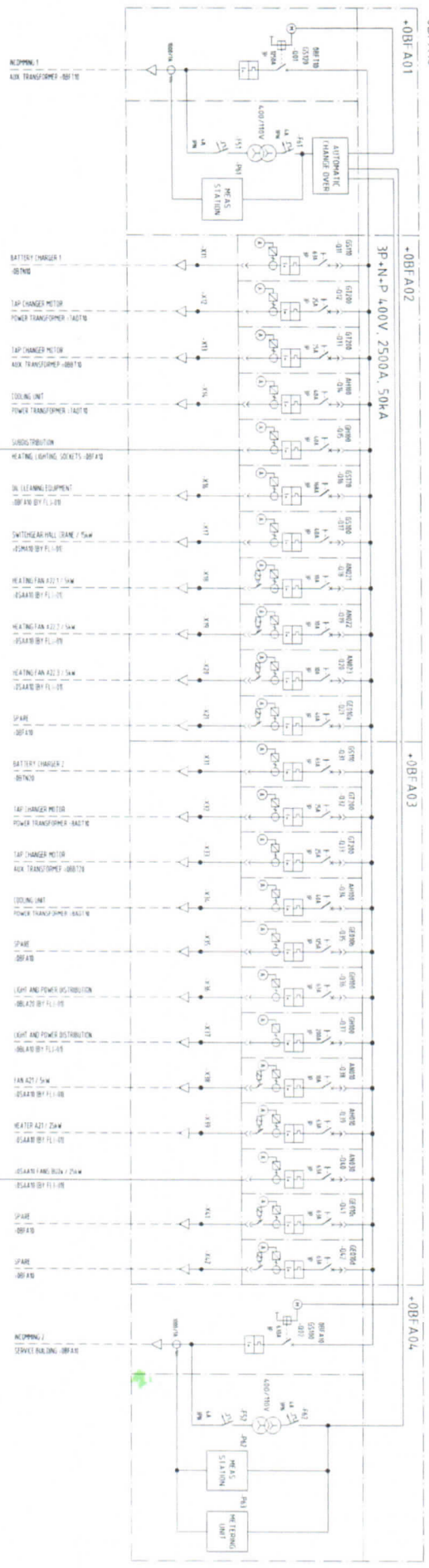
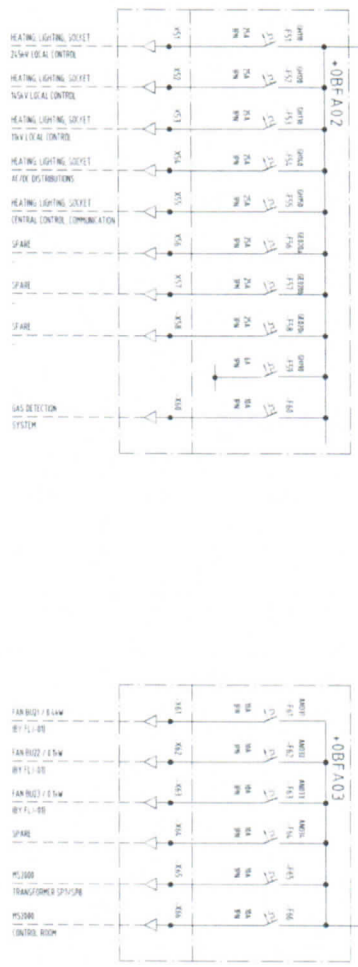


45. (20) Rekið rásina fyrir þeparofa 0BBT10 og merkið alstaðar þar sem -Q13 kemur fram á teikningum, ásamt hjálfarsnertum hans og töflunni sem hann er í.

46. (50) Gera skal efnislista (magnmæling) samkvæmt sérteikningu sem fylgir með.

OPERATION PRINCIPLE
 THE MOTORING MCB'S Q01 AND Q02 ARE MOTOR OPERATED
 AND WILL NOT TRIP AUTOMATICALLY. AFTER THE MCB'S Q01 AND Q02
 AFTER LOSS OF VOL LANE AUTOMATIC SWITCHING
 AFTER VOL LANE RESTORE Q01 AND Q02 ARE INTERLOCKED
 ALL OTHER MCB'S AND MBS ARE MANUALLY OPERATED

preparufi OBBSTIO



1	2	3	4	5	6	7	8	9	10	11	12
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APPROVED DATE: _____ REVISION: _____ SIGN: _____		FINAL AS BUILT DATE: _____ REVISION: _____ SIGN: _____	
REVISIONS			
NO.	DESCRIPTION	DATE	BY
1	ISSUE FOR TENDER	14.11.2018	SO/PLM
2	ISSUE FOR TENDER	14.11.2018	SO/PLM
3	ISSUE FOR TENDER	14.11.2018	SO/PLM
4	ISSUE FOR TENDER	14.11.2018	SO/PLM
5	ISSUE FOR TENDER	14.11.2018	SO/PLM
6	ISSUE FOR TENDER	14.11.2018	SO/PLM
7	ISSUE FOR TENDER	14.11.2018	SO/PLM
8	ISSUE FOR TENDER	14.11.2018	SO/PLM
9	ISSUE FOR TENDER	14.11.2018	SO/PLM
10	ISSUE FOR TENDER	14.11.2018	SO/PLM
11	ISSUE FOR TENDER	14.11.2018	SO/PLM
12	ISSUE FOR TENDER	14.11.2018	SO/PLM

CONTRACT NO. 04-54601-30451 DATE: 14.11.2018		PROJECT MAIN DISTRIBUTION DATE: 14.11.2018	
DESIGNER NAME: _____ DATE: _____		CHECKER NAME: _____ DATE: _____	
APPROVED NAME: _____ DATE: _____		APPROVED NAME: _____ DATE: _____	

Project overview

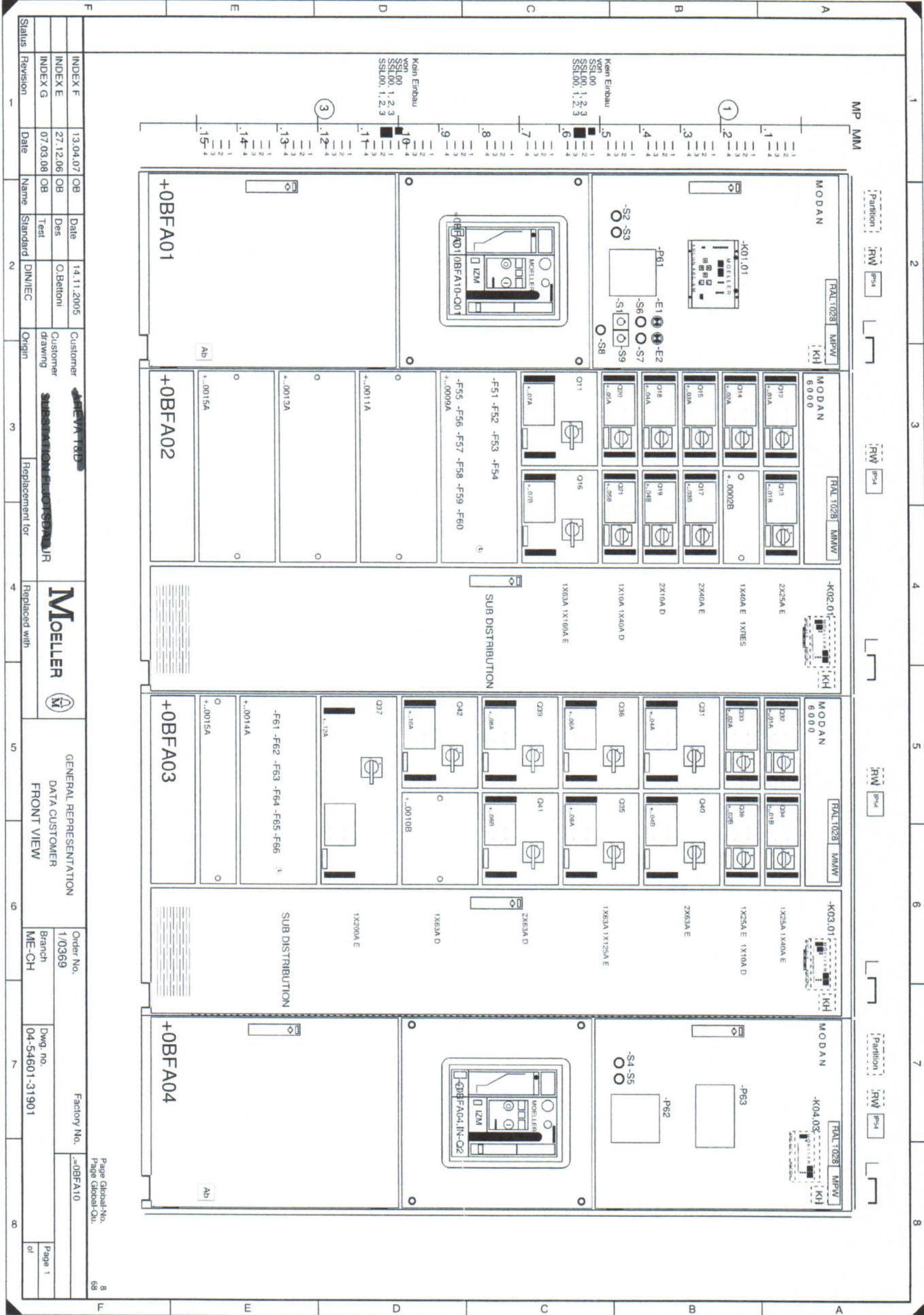
Installation	Installation comment	Funct. group	Function group comment	Sheet	Sheet comment	Location	Rev.	Global sheet no.
=OBFA02	SECTION 2	.S0	LOCAL / REMOTE	9	AUTOMATIC CHANGE OVER	+ OBFA01		22
		=OBTN10 GS110	BATTERY CHARGER	1	110VDC SYSTEM 1	+ OBFA02		23
		= 7ADT10AH100	TAP CHANGER MOTOR	1	POWER TRANSFORMER 7ADT10	+ OBFA02 .07A		24
		=OBBT10 GT200	TAP CHANGER MOTOR	1	POWER TRANSFORMER OBBT10	+ OBFA02 .01A		25
		=/TADT10 AH100	COOLING UNIT	1	POWER TRANSFORMER 7ADT10	+ OBFA02 .02A		26
		=OBFA10 GH100	SUBDISTRIBUTION	1	HEATING,LIGHTING, SOCKETS	+ OBFA02 .03A		27
		=OBFA10 GS170	RECPACLE FOR	1	OIL CLEANNING EQUIPMENT	+ OBFA02 .07B		28
		=OSMAA10 GS100	SWITCHGEAR HALL CRANE / 15KW	1	BY FLJ-01	+ OBFA02 .03B		29
		=OSAA10 AN021	HEATING FAN A221 / 5KW	1	BY FLJ-01	+ OBFA02 .04A		30
		=OSAA10 AN022	HEATING FAN A222 / 5KW	1	BY FLJ-01	+ OBFA02 .04B		31
								33

INDEX C	13.03.06	OB		04.04.2006	Customer																
INDEX B	17.02.06	OB		O Bettoni	Customer drawing																
INDEX D	28.03.06	OB			Customer drawing																
Modification	Date	Name	Stand.	DIN/IEC	Origin	Repl.	Repl.														
										MOELLER											
										Factory no.:		1/0368		Created by:		ME-CH		Drawing no.:		04-54601-30451	
										ProPlan Project:		03693-K-AREVA						Sheet		2	
																		of sheets		5	

Project overview

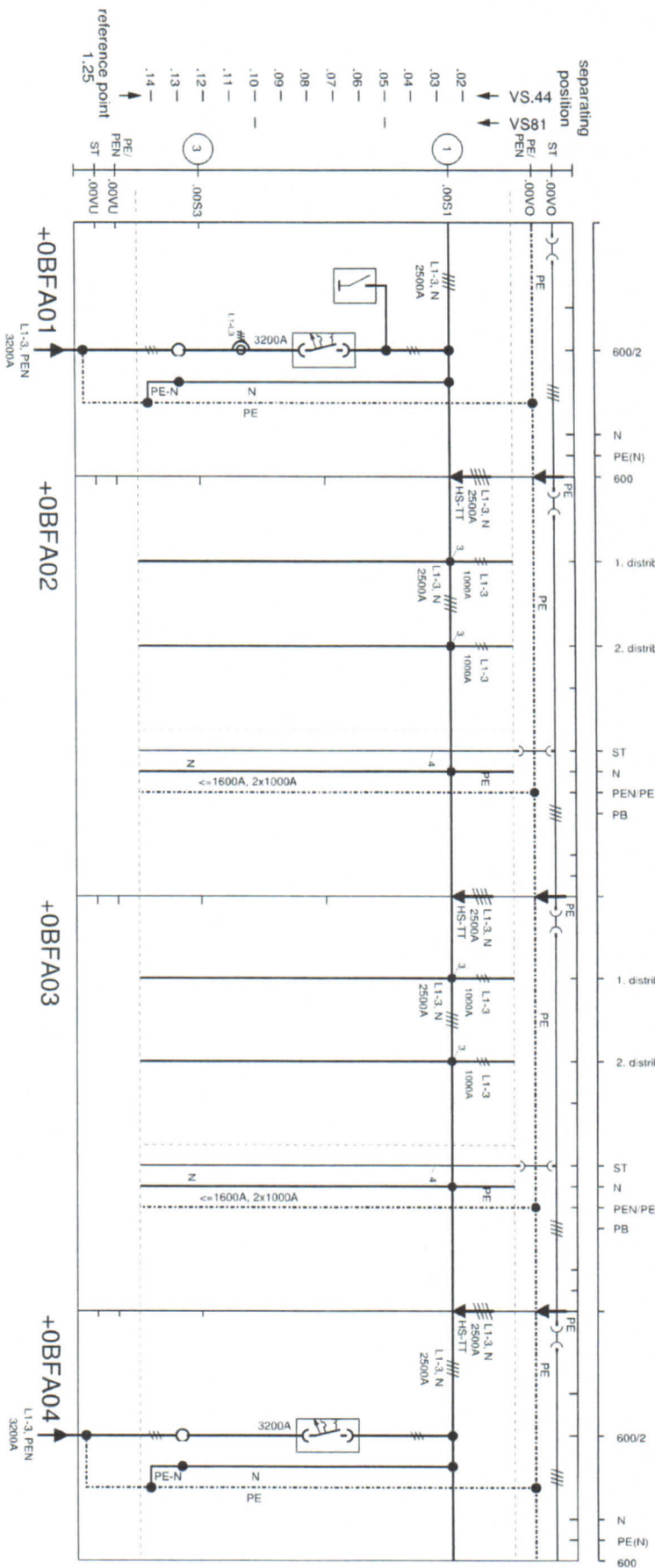
Installation	Installation comment	Funct. group	Function group comment	Sheet	Sheet comment	Location	Rev.	Global sheet no.
		.=0SAA10 AND23	HEATING FAN A223 / 5KW	2	BY FLJ-01	+ OBFA02 .04B		34
		.=0BFA10 GE010a	SPARE	1		+ OBFA02 .05A		35
		.=0BFA10	HEATING LIGHTING SOCKETS	2	BY FLJ-01	+ OBFA02 .05A		36
		.S20	MODBUS CONVERTER	1		+ OBFA02 .05B		37
		.=0BFA10.	LOCAL / REMOTE	2		+ OBFA02		38
		.=0BTN20 GS110	BATTERY CHARGER	3		+ OBFA02		39
		.=8ADT10 GT200	TAP CHANGER MOTOR	4	TERMINAL LIST	+ OBFA02		40
				1		+ OBFA02		41
				1		+ OBFA03		42
				1	110VDC SYSTEM 2	+ OBFA03 .04A		43
				1	POWER TRANSFORMER 8ADT10	+ OBFA03 .01A		44
								45
								46

INDEX C	13.03.06	OB		04.04.2006	Customer: 			1/0369	Factory no.:		Sheet
INDEX B	17.02.06	OB		O Belloni	Customer drawing			Created by:			3
INDEX D	28.03.06	OB	Appr.					ME-CH	Drawing no.	04-54601-30451	of sheets
Modification	Date	Name	Stand.	DIN/IEC	Origin	Repl.:	Repl. by	ProfPlan Project	0369-K-AREVA		5
											

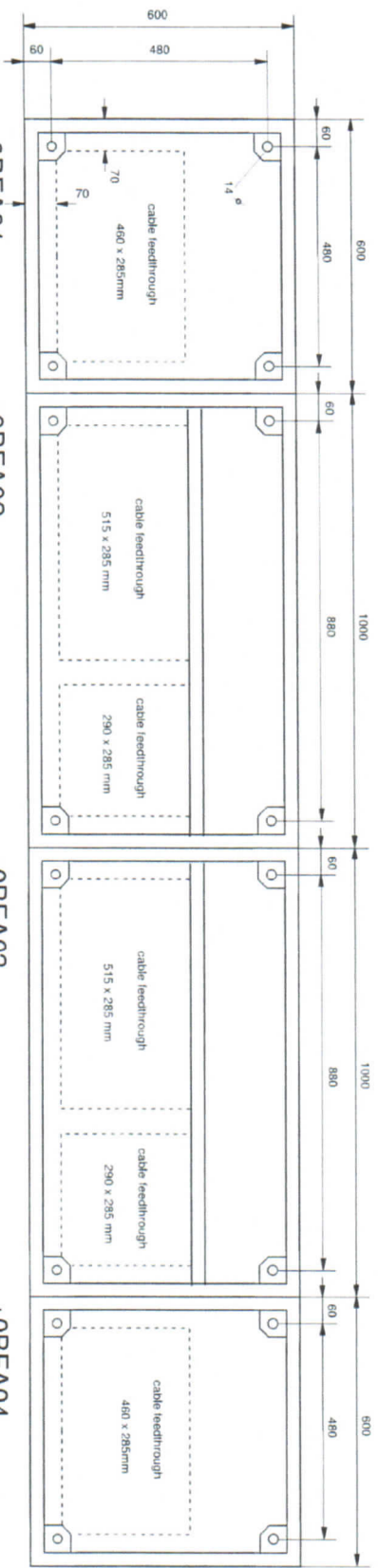


INDEX	OB	Date	Customer	Customer drawing	Replaced with	Order No.	Factory No.
INDEX F	OB	13.04.07	ALFAVIT RD		GENERAL REPRESENTATION	1/0369	-0BFA10
INDEX E	OB	27.12.06			DATA CUSTOMER		
INDEX G	OB	07.03.08			FRONT VIEW	ME-CH	

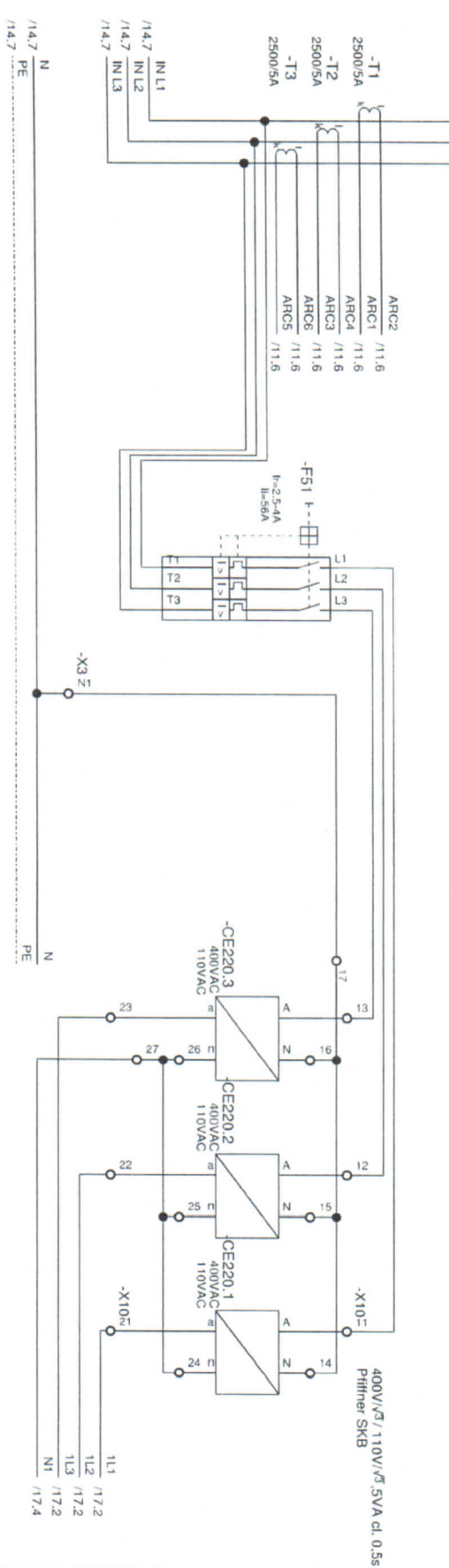
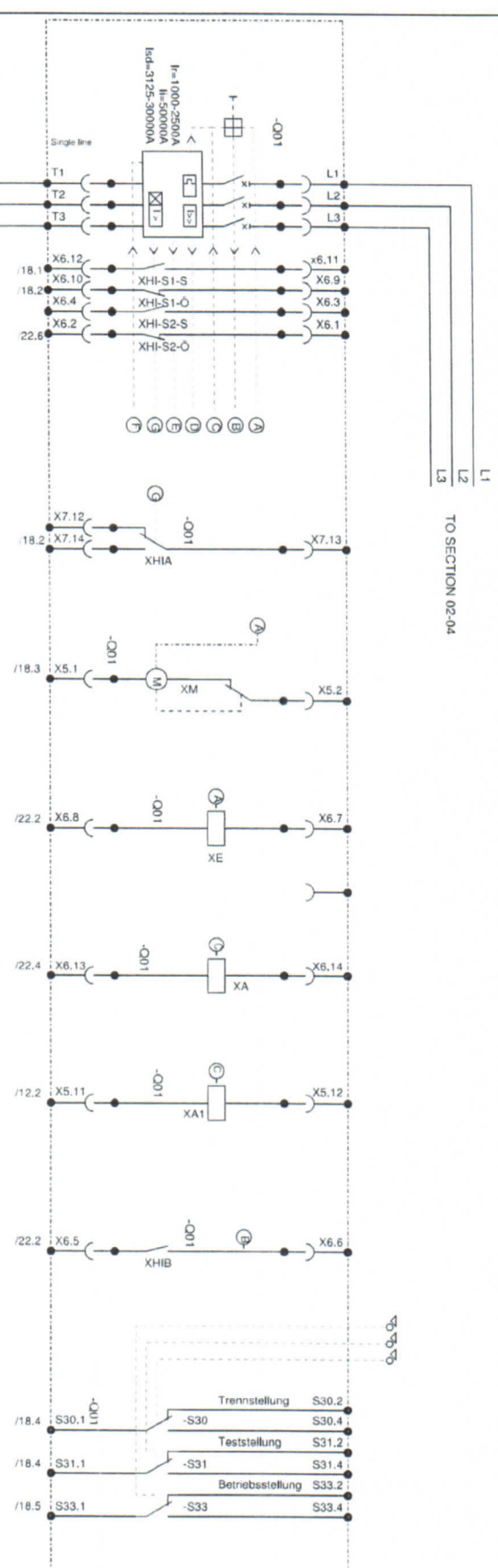
Revision	Date	Name	Standard	DIN/IEC	Origin	Replaced with
1						
2						
3						
4						
5						
6						
7						
8						



INDEX F	13.04.07	OB	14.11.2005	Customer	ADPVA-100		GENERAL REPRESENTATION	Order No.	1/0369	Factory No.	...0BFA10	Page Global-No.	9
INDEX E	27.12.06	OB		Customer	SUBSTATION FROTSBAER			DATA CUSTOMER	Branch	ME-CH			Page Global-Qu.
INDEX G	07.03.08	OB	Test	Customer			BUS VOLTAGE VIEW	Dwg. no.	04-54601-31901				
Status	Revision	Date	Name	Standard	DIN/IEC	Origin	Replaced with						



INDEX F	13.04.07	OB	Date	14.11.2005	Customer	ANNE WILHELM	Customer drawing	Origin	Replacement for	Replaced with	GENERAL REPRESENTATION DATA CUSTOMER BASE MOUNTING	Order No.	1/0369	Branch	ME-CH	Dwg. no.	04-54601-31901	Factory No.	-OBFA10
INDEX E	27.12.06	OB	Des.	O.Belloni															
INDEX G	07.03.08	OB	Test																
Status	Revision	Date	Name	Standard	DIN/IEC	Origin	Replacement for	Replaced with											
	1																		



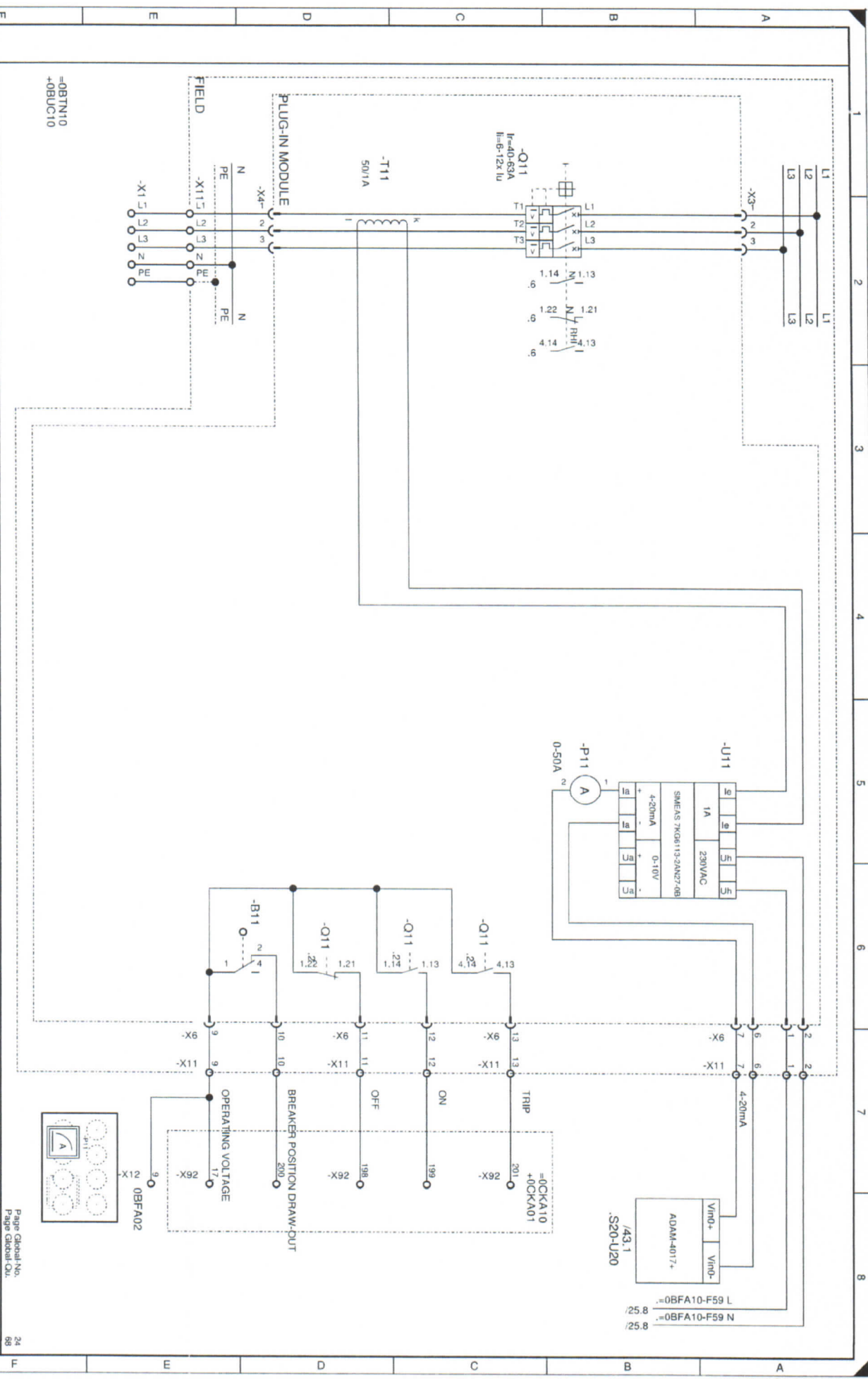
INDEX F	13.04.07	OB	Date	14.11.2005	Customer	Substation
INDEX E	27.12.06	OB	Des	O.Battoni	Customer	drawing
INDEX G	07.03.08	OB	Test		Standard	DIN/IEC
Status	Revision	Date	Name	Standard	Origin	Replacement for
1						
2						
3						
4						
5						
6						
7						
8						



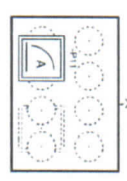
SECTION 1
INCOMING 1
AUX TRANSFORMER 08FT10

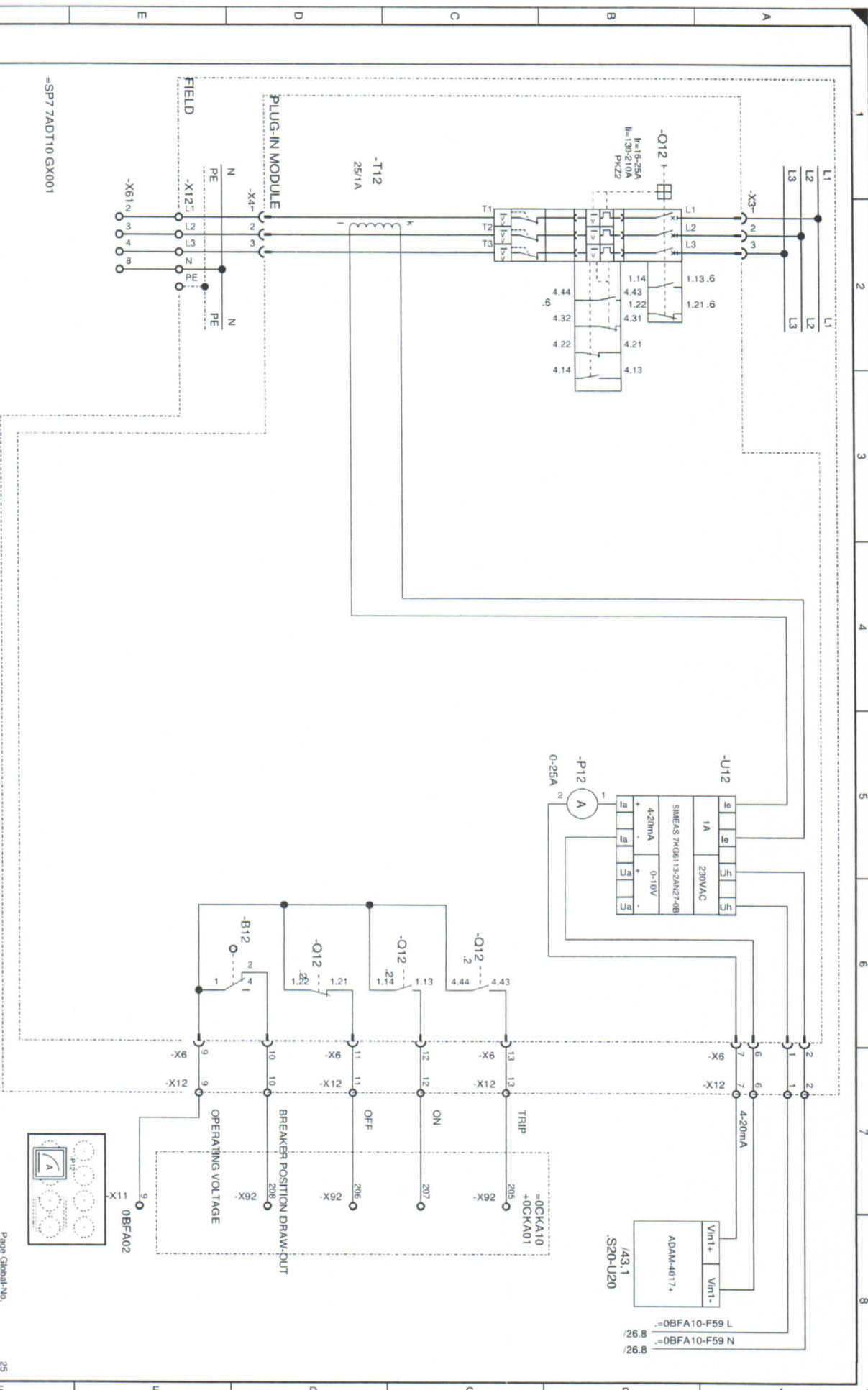
Order No. 08FA10
Branch 1/0369
Dwg. no. 04-54601-31901
ME-CH

Page Global-No. 15
Page Global-Dwg. 08
Page 2 of



INDEX F	13.04.07	08	Date	14.11.2005	Customer	Adipharma
INDEX E	27.12.06	08	Des	O.Bettoni	Customer	Adipharma
INDEX G	07.03.08	08	Test		Customer	Adipharma
Status	Revision	Date	Name	Standard	DIN/IEC	Origin
			Replaced with	MOELLER		
			Replaced for	SECTION 2 BATTERY CHARGER 110VDC SYSTEM 1		
			Order No.	1/0369		
			Branch	ME-CH		
			Dwg. no.	04-54601-31901		
			Factory No.	+0BFAD2 07A		
			Page Global No.	+0BFTN10 GS110		
			Page Global-OU	+0BFAD2 07A		
			Page 1	of 1		





=SP7 ZADT10 GX001

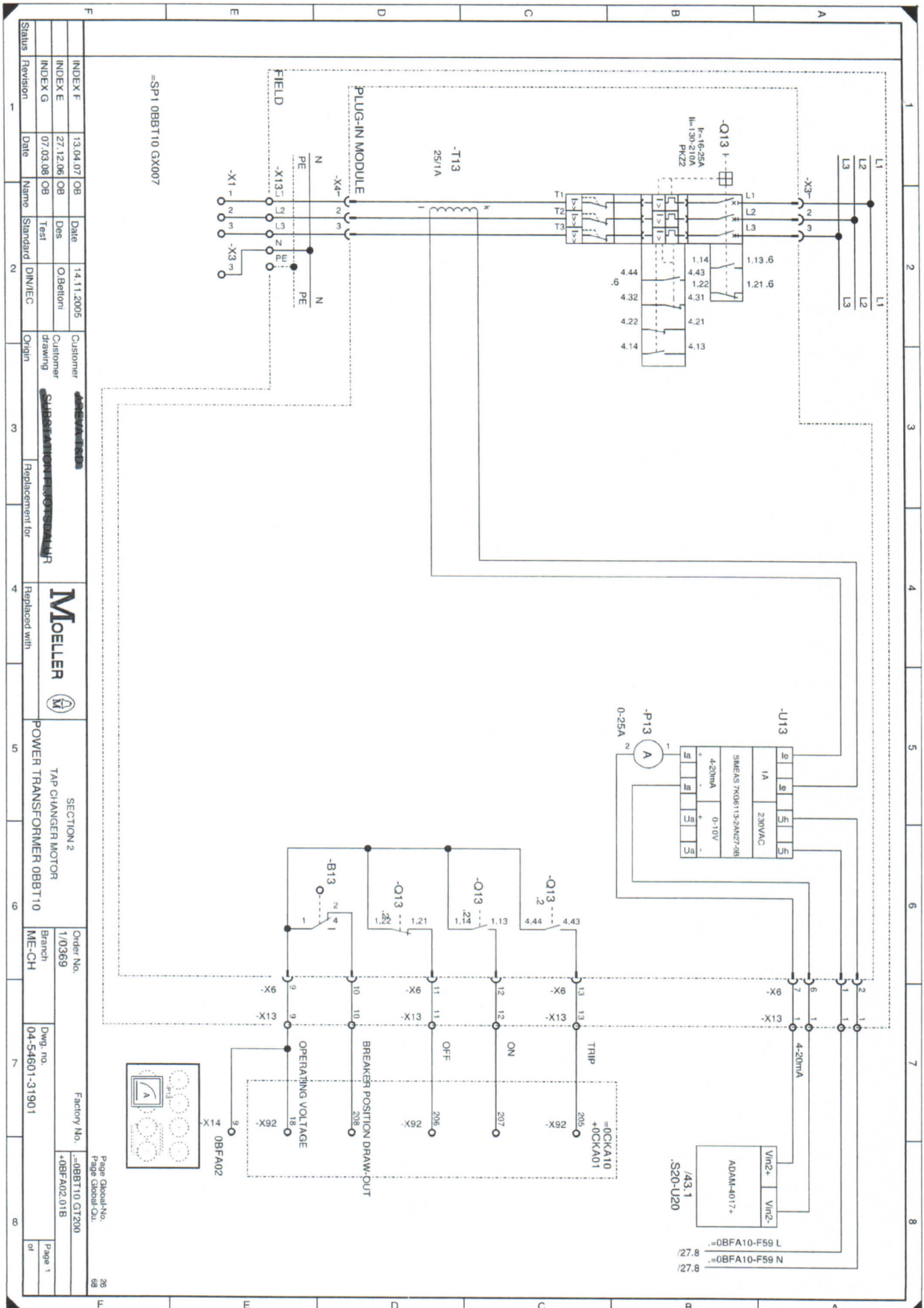
INDEX F	13.04.07	OB	Date	14.11.2005	Customer	Substation Engineering	Customer drawing	Origin
INDEX E	27.12.06	OB	Das	O. Bottoni	Customer	Substation Engineering	Customer drawing	Origin
INDEX G	07.03.08	OB	Test		Customer	Substation Engineering	Customer drawing	Origin
Status	Revision	Date	Name	Standard	DIN/IEC	Origin	Replacement for	Replaced with
1								

SECTION 2		Order No.	1/0369	Factory No.	-7ADT10AH100
TAP CHANGER MOTOR		Branch	ME-CH	Dwg. no.	04-54601-31901
POWER TRANSFORMER ZADT10		Page	1	of	

Page Global-No.	25
Page Global-Cl.	68

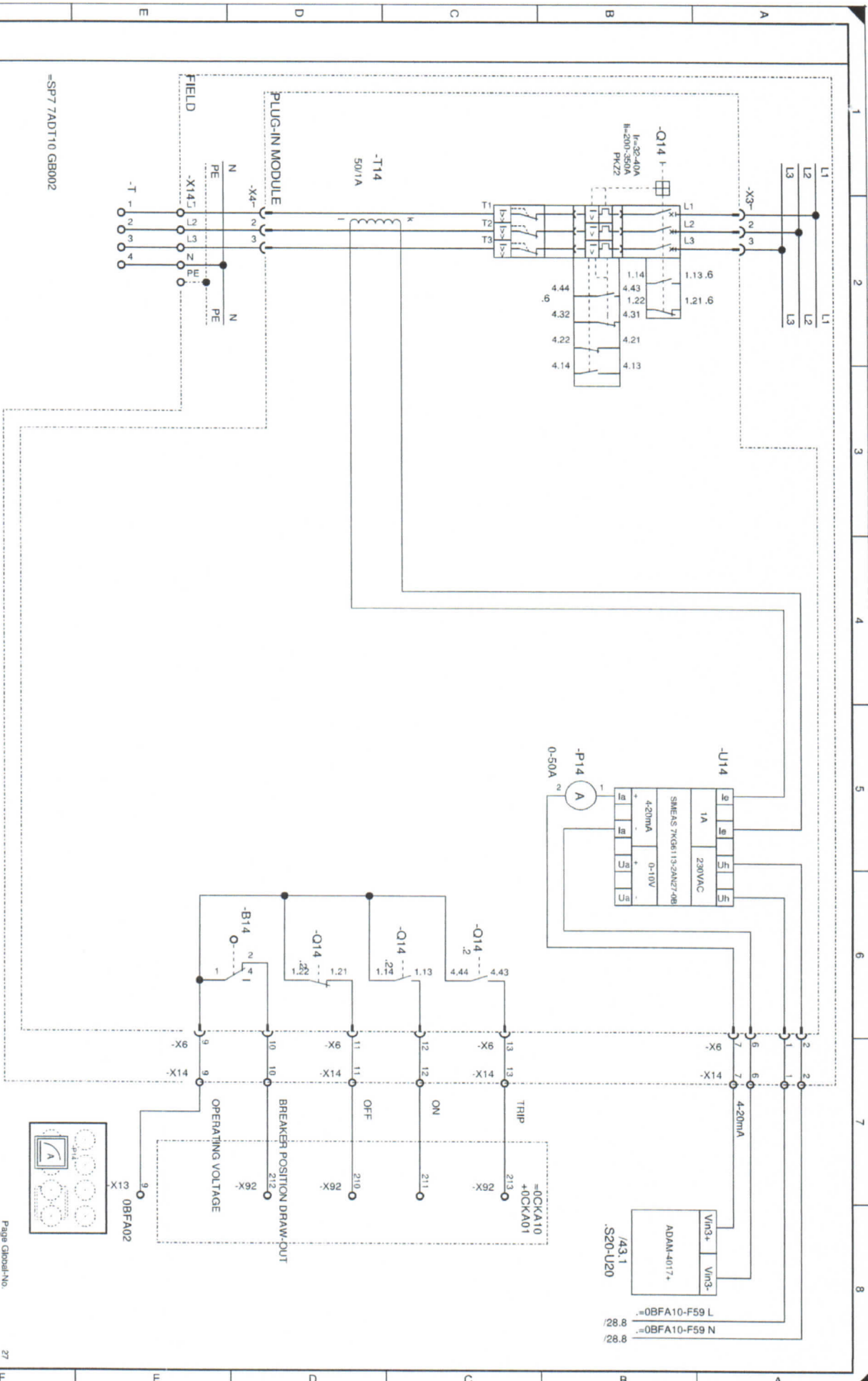


POWER TRANSFORMER ZADT10



=SP1 0BBT10 GX007

INDEX F	13.04.07	OB	Date	14.11.2005	Customer	Supersation
INDEX E	27.12.06	OB	Des	O.Belloni	Customer drawing	
INDEX G	07.03.08	OB	Test			
Status	Revision	Date	Name	Standard	DIN/IEC	Origin
	1					
MOELLER						
SECTION 2 TAP CHANGER MOTOR POWER TRANSFORMER OB8T10						
Order No.	1/0369	Branch	ME-CH	Factory No.	-0BBT10 Q1200	Page 1 of 26
Dwg. no.	04-54601-31901				+0BFA02.01B	Page 1 of 69



=SP7 7ADT10 GB002

INDEX F	13.04.07	OB	Date	14.11.2005	Customer	ABB
INDEX E	27.12.06	OB	Des	O Belloni	Customer drawing	
INDEX G	07.03.08	OB	Test			
Status	Revision	Date	Name	Standard	DN/IEC	Origin
1						
2						
3						
4						
5						
6						
7						
8						

SECTION 2	COOLING UNIT
POWER TRANSFORMER 7ADT10	
Order No.	1/0369
Branch	ME-CH
Dwg. no.	04-54601-31901
Factory No.	=7ADT10 AH100
	+0BFA02 02A
Page 1	of



