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Customer	End customer
Street	Street
ZIP code / City	ZIP code / City
Phone.	Phone.
Fax	Fax
E-mail	E-mail

Project name	CDI_EN_1078980_PA-CONTROL_Steuer_LV-servoTEC_S2_302_305
Drawing number	1078980
Type	
	E.Grieshaber
Creator	Andreas Meßmer
Created on	2008
Version	V0.01
Edit date	03.02.2009
by (short name)	Messmer
Number of pages	110

Power supply	400 V AC / 3Ph / 50Hz
Input lead	5x2,5mm²
Rated current	???A
	3x16A gl
Control voltage	24 V

Structure identifier overview

F24_001

Full designation	labeling	Structure description	Full designation	labeling	Structure description
=ALG	Anlage	General data			
=302	Anlage	LV servoTEC_S2_302			
=305	Anlage	LV servoTEC_S2_305			
+ALG	Einbauort	General project data			
+CC1	Einbauort	Switch cabinet 1			
+CP1	Einbauort	Operation panel			
+MW	Einbauort	General machine wiring			

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Page	Page description	supplementary page field	Date	Edited by	X
=ALG+ALG/1	Cover page		09.12.2008	Messmer	X
=ALG+ALG/2	Structure identifier overview		09.12.2008	Messmer	
=ALG+ALG/3	Table of contents : =ALG+ALG/1 - =302+CC1/27		09.12.2008	Messmer	
=ALG+ALG/3.a	Table of contents : =302+CC1/28 - =305+CC1/8		09.12.2008	Messmer	
=ALG+ALG/3.b	Table of contents : =305+CC1/9 - =305+CC1/41		09.12.2008	Messmer	
=ALG+ALG/3.c	Table of contents : =305+CC1/42 - =305+CC1/52		09.12.2008	Messmer	
=302+CC1/1	Power supply		09.12.2008	Messmer	
=302+CC1/2	PE-arrangement		09.12.2008	Messmer	
=302+CC1/3	Arrangement 400V		09.12.2008	Messmer	
=302+CC1/4	Service-outlet / 24V Power supply		21.02.2008	Messmer	
=302+CC1/5	Supply voltage LV servoTEC		09.12.2008	Messmer	
=302+CC1/6	Fuse protection 24V		09.12.2008	Messmer	
=302+CC1/7	Protective circuit Signal ON		14.11.2008	Messmer	
=302+CC1/8	Emergency stop chain		09.12.2008	Messmer	
=302+CC1/9	Safety module Emergency stop		09.12.2008	Messmer	
=302+CC1/10	Door cycle chain		09.12.2008	Messmer	
=302+CC1/11	Safety module protective door circuit chain		09.12.2008	Messmer	
=302+CC1/12	Safety module door protective circuit adjust mode button / acceptance button		09.12.2008	Messmer	
=302+CC1/13	PA-CONTROL Steuer Overview		14.11.2008	Messmer	X
=302+CC1/14	PA-CONTROL Steuer Power supply		14.11.2008	Messmer	X
=302+CC1/15	PA-CONTROL Steuer Supply I/O-board 1		14.11.2008	Messmer	X
=302+CC1/16	PA-CONTROL Steuer Panel / Diag		14.11.2008	Messmer	X
=302+CC1/17	PA-CONTROL Steuer CPU 4 / CAN bus		09.12.2008	Messmer	X
=302+CC1/18	Inputs overview I1-I16		09.12.2008	Messmer	X
=302+CC1/19	Outputs overview O1-O16		09.12.2008	Messmer	X
=302+CC1/20	PA-CONTROL I/O-board-1 I1-I8		14.11.2008	Messmer	
=302+CC1/21	PA-CONTROL I/O-board-1 I9-I16		14.11.2008	Messmer	
=302+CC1/22	PA-CONTROL I/O-board 1 O1-O8		14.11.2008	Messmer	
=302+CC1/23	PA-CONTROL I/O-board 1 O9-O16		14.11.2008	Messmer	
=302+CC1/24	Beckhoff BK5120 bus connection		14.11.2008	Messmer	
=302+CC1/25	Overview Beckhoff bus connection		14.11.2008	Messmer	X
=302+CC1/26	Inputs overview I1025-1052		09.12.2008	Messmer	X
=302+CC1/27	Inputs overview I1053-1056		09.12.2008	Messmer	X

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Page	Page description	supplementary page field	Date	Edited by	X
=302+CC1/28	Outputs overview O1025-1048		01.12.2008	Messmer	X
=302+CC1/29	Beckhoff BK5120 Supply voltage		14.11.2008	Messmer	
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=302+CC1/31	Inputs connection I1032-1039		09.12.2008	Messmer	
=302+CC1/32	Inputs connection I1040-1047		09.12.2008	Messmer	
=302+CC1/33	Inputs connection I1048-1055		09.12.2008	Messmer	
=302+CC1/34	Outputs connection O1025-1032		09.12.2008	Messmer	
=302+CC1/35	Outputs connection O1033-1040		09.12.2008	Messmer	
=302+CC1/36	Supply clamp		14.11.2008	Messmer	
=302+CC1/37	Outputs connection O1041-1048		09.12.2008	Messmer	
=302+CC1/38	A1 LV servoTEC S2 IO-adapter		09.12.2008	Messmer	X
=302+CC1/39	A1 LV servoTEC_S2_302 Overview		09.12.2008	Messmer	X
=302+CC1/40	A1 LV servoTEC S2 Supply voltage		09.12.2008	Messmer	
=302+CC1/41	A1 LV servoTEC S2 Incremental encoder		09.12.2008	Messmer	
=302+CC1/42	A1 LV servoTEC S2 CAN / RS232		09.12.2008	Messmer	
=302+CC1/43	A1 LV servoTEC S2 Motor connection		09.12.2008	Messmer	
=302+CC1/44	A1 LV servoTEC S2 Axis limit switch		09.12.2008	Messmer	
=302+CC1/45	A2 LV servoTEC S2 IO-adapter		09.12.2008	Messmer	X
=302+CC1/46	A2 LV servoTEC_S2_302 Overview		09.12.2008	Messmer	X
=302+CC1/47	A2 LV servoTEC S2 Supply voltage		09.12.2008	Messmer	
=302+CC1/48	A2 LV servoTEC S2 Incremental encoder		09.12.2008	Messmer	
=302+CC1/49	A2 LV servoTEC S2 CAN / RS232		09.12.2008	Messmer	
=302+CC1/50	A2 LV servoTEC S2 Motor connection		09.12.2008	Messmer	
=302+CC1/51	A2 LV servoTEC S2 Axis limit switch		09.12.2008	Messmer	
=302+CC1/52	Spare clamps		14.11.2008	Messmer	
=305+CC1/1	Power supply		09.12.2008	Messmer	
=305+CC1/2	PE-arrangement		09.12.2008	Messmer	
=305+CC1/3	Arrangement 400V		09.12.2008	Messmer	
=305+CC1/4	Service-outlet / 24V Power supply		21.02.2008	Messmer	
=305+CC1/5	Supply voltage LV servoTEC		09.12.2008	Messmer	
=305+CC1/6	Fuse protection 24V		09.12.2008	Messmer	
=305+CC1/7	Protective circuit Signal ON		14.11.2008	Messmer	
=305+CC1/8	Emergency stop chain		09.12.2008	Messmer	

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Page	Page description	supplementary page field	Date	Edited by	X
=305+CC1/9	Safety module Emergency stop		09.12.2008	Messmer	
=305+CC1/10	Door cycle chain		09.12.2008	Messmer	
=305+CC1/11	Safety module protective door circuit chain		09.12.2008	Messmer	
=305+CC1/12	Safety module door protective circuit adjust mode button / acceptance button		09.12.2008	Messmer	
=305+CC1/13	PA-CONTROL Steuer Overview		18.11.2008	Messmer	X
=305+CC1/14	PA-CONTROL Steuer Power supply		18.11.2008	Messmer	X
=305+CC1/15	PA-CONTROL Steuer Supply I/O-board 1		18.11.2008	Messmer	X
=305+CC1/16	PA-CONTROL Steuer Panel / Diag		18.11.2008	Messmer	X
=305+CC1/17	PA-CONTROL Steuer CPU 4 / CAN bus		09.12.2008	Messmer	X
=305+CC1/18	Inputs overview I1-I16		09.12.2008	Messmer	X
=305+CC1/19	Outputs overview O1-O16		09.12.2008	Messmer	X
=305+CC1/20	PA-CONTROL I/O-board-1 I1-I8		18.11.2008	Messmer	
=305+CC1/21	PA-CONTROL I/O-board-1 I9-I16		18.11.2008	Messmer	
=305+CC1/22	PA-CONTROL I/O-board 1 O1-O8		18.11.2008	Messmer	
=305+CC1/23	PA-CONTROL I/O-board 1 O9-O16		18.11.2008	Messmer	
=305+CC1/24	Beckhoff BK5120 bus connection		18.11.2008	Messmer	
=305+CC1/25	Overview Beckhoff bus connection		18.11.2008	Messmer	X
=305+CC1/26	Inputs overview I1025-1052		09.12.2008	Messmer	X
=305+CC1/27	Inputs overview I1053-1056		09.12.2008	Messmer	X
=305+CC1/28	Outputs overview O1025-1048		01.12.2008	Messmer	X
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=305+CC1/30	Inputs connection I1025-1031		09.12.2008	Messmer	
=305+CC1/31	Inputs connection I1032-1039		09.12.2008	Messmer	
=305+CC1/32	Inputs connection I1040-1047		09.12.2008	Messmer	
=305+CC1/33	Inputs connection I1048-1055		09.12.2008	Messmer	
=305+CC1/34	Outputs connection O1025-1032		09.12.2008	Messmer	
=305+CC1/35	Outputs connection O1033-1040		09.12.2008	Messmer	
=305+CC1/36	Supply clamp		18.11.2008	Messmer	
=305+CC1/37	Outputs connection O1041-1048		09.12.2008	Messmer	
=305+CC1/38	A1 LV servoTEC S2 IO-adapter		09.12.2008	Messmer	X
=305+CC1/39	A1 LV servoTEC_S2_305 Overview		09.12.2008	Messmer	X
=305+CC1/40	A1 LV servoTEC S2 Supply voltage		09.12.2008	Messmer	
=305+CC1/41	A1 LV servoTEC S2 Incremental encoder		09.12.2008	Messmer	

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Page	Page description	supplementary page field	Date	Edited by	X
=305+CC1/42	A1 LV servoTEC S2 CAN / RS232		09.12.2008	Messmer	
=305+CC1/43	A1 LV servoTEC S2 Motor connection		09.12.2008	Messmer	
=305+CC1/44	A1 LV servoTEC S2 Axis limit switch		09.12.2008	Messmer	
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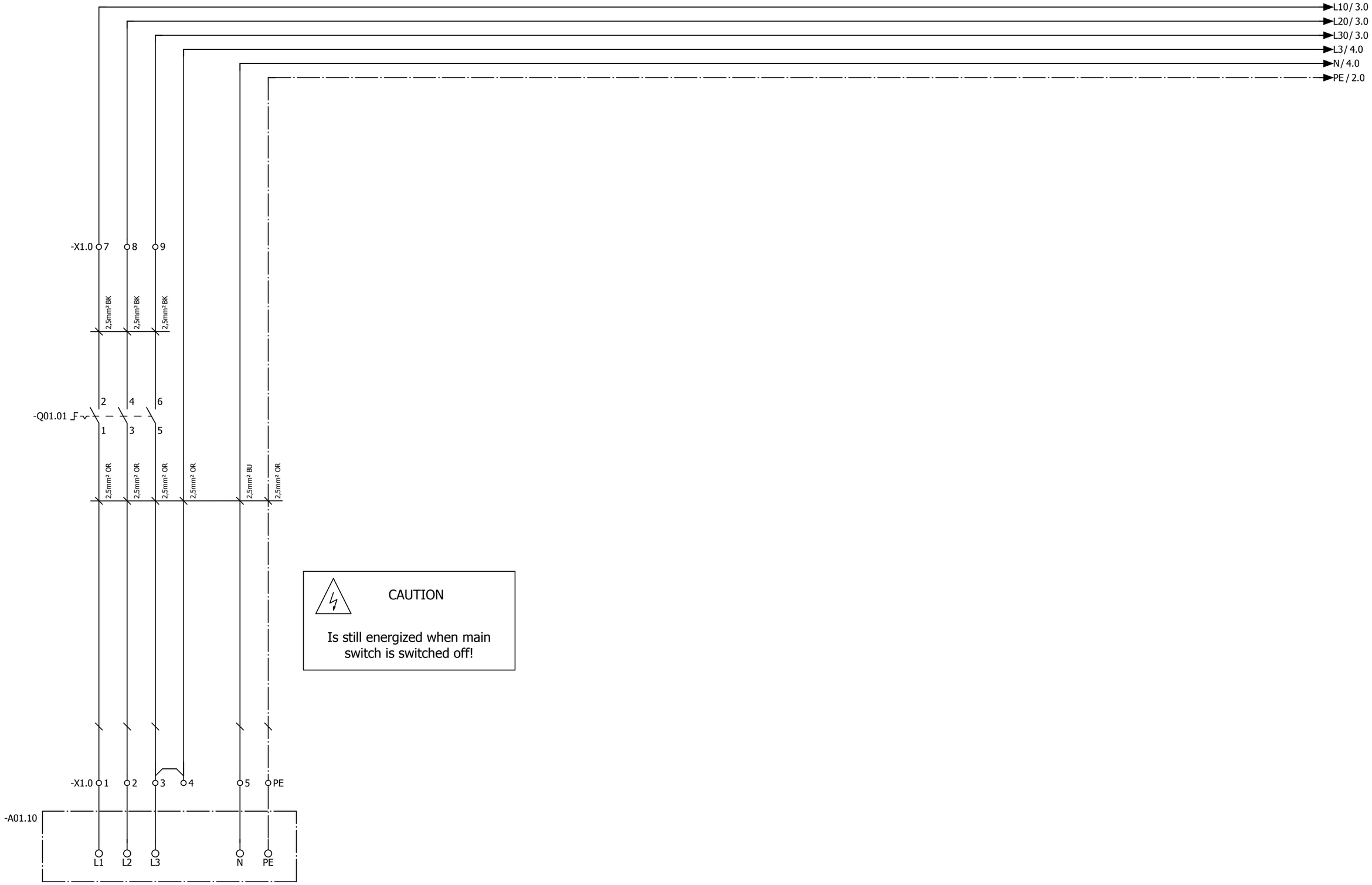
=305+CC1/46	A2 LV servoTEC_S2_305 Overview		09.12.2008	Messmer	X
=305+CC1/47	A2 LV servoTEC S2 Supply voltage		09.12.2008	Messmer	
=305+CC1/48	A2 LV servoTEC S2 Incremental encoder		09.12.2008	Messmer	
=305+CC1/49	A2 LV servoTEC S2 CAN / RS232		09.12.2008	Messmer	
=305+CC1/50	A2 LV servoTEC S2 Motor connection		09.12.2008	Messmer	
=305+CC1/51	A2 LV servoTEC S2 Axis limit switch		09.12.2008	Messmer	
=305+CC1/52	Spare clamps		14.11.2008	Messmer	



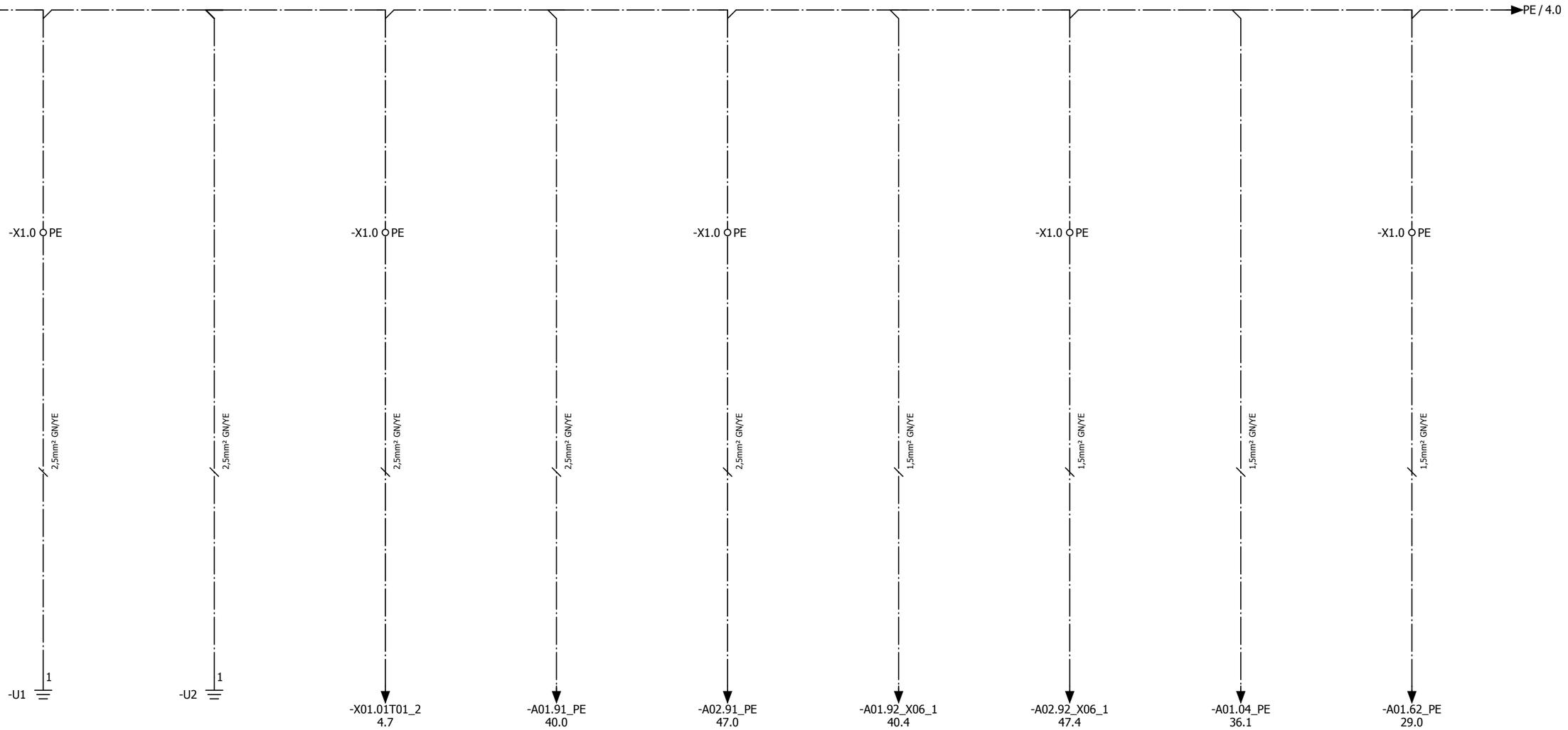
CAUTION

Is still energized when main switch is switched off!

=ALG+ALG/3.c

2

			Date	03.02.2009	PA-CONTROL_Steuer_LV-servoTEC_S2_3XX	Power supply	= 302	
			Ed. by	Messmer			+ CC1	
			Appr				1078980	Page 1
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		Pg 110



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			Ed. by	Messmer			+ CC1	
			Appr		PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		1078980	Page 2
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		Pg 110

1.9 / -L10
1.9 / -L20
1.9 / -L30

L10 / 4.0
L20 / 4.0
L30 / 4.0

2,5mm² BK
2,5mm² BK
2,5mm² BK

-F03.91
C13A
1 3 5
2 4 6

-Q01.04K01
/9.7
1 3 5
2 4 6

-Q02.04K01
/9.7
1 3 5
2 4 6

5.0 / -L12
5.0 / -L22
5.0 / -L32

400V
Switch off after
emergency
stop situation time-delayed

			Date	03.02.2009	PA-CONTROL_Steuer_LV-servoTEC_S2_3XX	Arrangement 400V	= 302	
			Ed. by	Messmer			+ CC1	
			Appr				1078980	Page 3
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		Pg 110

3.9 / L10
3.9 / L20
3.9 / L30
1.9 / L3
1.9 / N
2.9 / PE

L10 / 52.0
L20 / 52.0
L30 / 52.0
N / 52.0
PE / 5.0

-F01.01
C10A
1
2

1,5mm² OR
2,5mm² GN/YE
2,5mm² BU
1,5mm² GN/YE
1,5mm² BU

-X2.0 1 1PE 1N 2 2PE 2N

L PE N
-X01.10

-F01.02
C10A
1
2

1,5mm² BK
1,5mm² GN/YE
1,5mm² BU
1,5mm² BU
1,5mm² GN/YE

3 3PE 3N 4 4PE 4N

-T01.01
24V Power supply
L PE N
+ + - - -

DK/BU 1,5mm²
DK/BU 1,5mm²
1L+ 6.0
1L- 6.0

2.2
-X01.01T01_2

-X01.01T01
4 - 3 +
PE
2

Service-outlet
Switch cabinet

Spare

24V Power supply

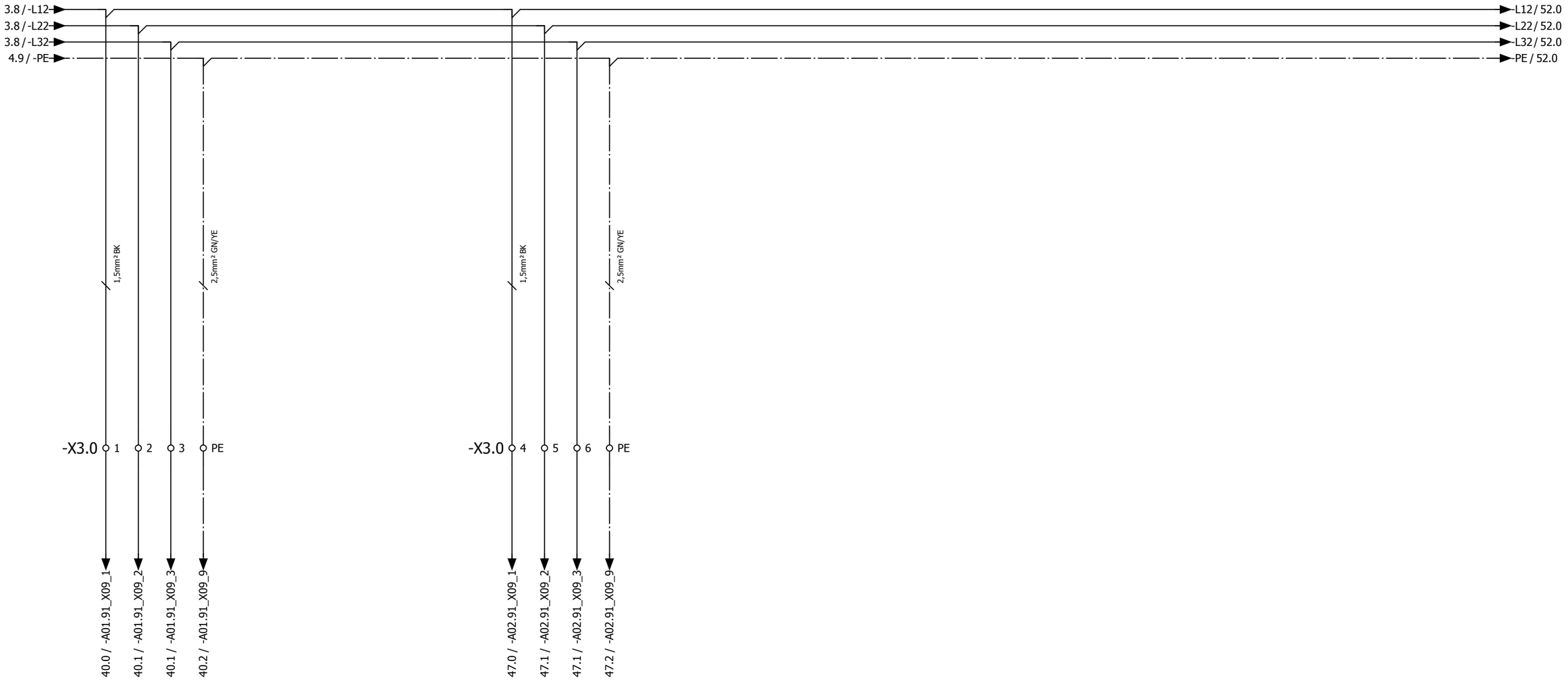
Earthed disconnect terminal

Spare

			Date	03.02.2009	PA-CONTROL_Steuer_LV-servoTEC_S2_3XX	
			Ed. by	Messmer		
			Appr			
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by

WERNER
Service-outlet / 24V Power supply

= 302
+ CC1
1078980
Page 4
Pg 110



Supply voltage
LV servoTEC 1

Supply voltage
LV servoTEC 2

			Date	03.02.2009		Supply voltage LV servoTEC		= 302
			Ed. by	Messmer				+ CC1
			Appr		PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		1078980	Page 5
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4.5 / 1L+ → DK/BU 2,5mm²

-F01.00

+24V

13 / 14 /32.4

+24V

+24V ○ ○ +24V

-F02.00

13 / 14 /32.4

+24V

DK/BU 2,5mm² → 1L+ / 52.0

MICO 4.6 Power control

MICO 4.10 Power control

-F01.04 2A	-F02.04 6A	-F01.05 4A	-F01.06 4A				-F01.07 4A	-F01.08 4A	-F01.91 6A	-F02.91 8A									
0V ○ ○ 0V																			
GND	1	2	3	4	GND		GND	1	2	3	4	GND							
0,75mm² DK/BU	0,75mm² DK/BU	0,75mm² DK/BU	0,75mm² DK/BU	0,75mm² DK/BU			0,75mm² DK/BU	0,75mm² DK/BU	0,75mm² DK/BU	0,75mm² DK/BU									
				53															
				-Q01.04K03 /12.5															
				54															
				53															
				-Q02.04K03 /12.6															
				54															
							1												
							-Q03.04K03 /12.7												
							2												
							1												
							-Q04.04K03 /12.8												
							2												
									53										
									-Q01.04K02 /11.7										
									54										
									53										
									-Q02.04K02 /11.7										
									54										
										73									
										-Q01.04K02 /11.7									
										74									
										73									
										-Q02.04K02 /11.7									
										74									
Clamp 1-8	Clamp 9-13	Clamp 14-19	Clamp 20-21				Clamp 22-25	Clamp 26-29	Clamp 30-35	Clamp 36-49									
-L01.04+ 9.0	-L02.04+ 7.0	-L01.05+ 7.0	-L01.06+ 7.0				-L01.07+ 52.0	-L01.08+ 52.0	-L01.91+ 40.0	-L02.91+ 40.0									
24V Emergency stop	24V General supply	24V Inputs	24V Outputs category A adjust mode without acceptance button				24V Outputs category B adjust mode only with acceptance button	24V Outputs category C adjust mode only with protective doors closed	24V Switch off after emergency stop, door open, time-delayed	24V Supply LVservoTEC									

-X1.1 ○ -1

4.5 / -1L- → -1L- / 7.0

5 7

			Date	03.02.2009	PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		= 302	
			Ed. by	Messmer			+ CC1	
			Appr				1078980	Page 6
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		Pg 110

IEF WERNER — Fuse protection 24V

6.2 / L02.04+
6.4 / L01.06+
6.3 / L01.05+

L02.04+ / 14.0
-L01.06+ / 40.0
L01.05+ / 29.0

-X1.1 +19
-X1.1 +20
-X1.1 +9
-X1.1 +10
-X1.1 +14
+15

+CP1-W01.11A01
KAWEFLEX 3130
18x0,75
1
/7.0
/8.1
/8.1
/9.2
/9.2
/12.1

+CP1
-A01.11
/30.0

+CP1
-P01.03K01
/9.2
gn
X1
X2

+CP1-W01.11A01
KAWEFLEX 3130
18x0,75
2

-X1.1 -2
-X1.1 -3
-X1.1 -4
-X1.1 -5

6.9 / 1L-

1L- / 9.0

Protection
cycle ON

6

8

			Date	03.02.2009	PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		= 302	
			Ed. by	Messmer		Protective circuit Signal ON	+ CC1	
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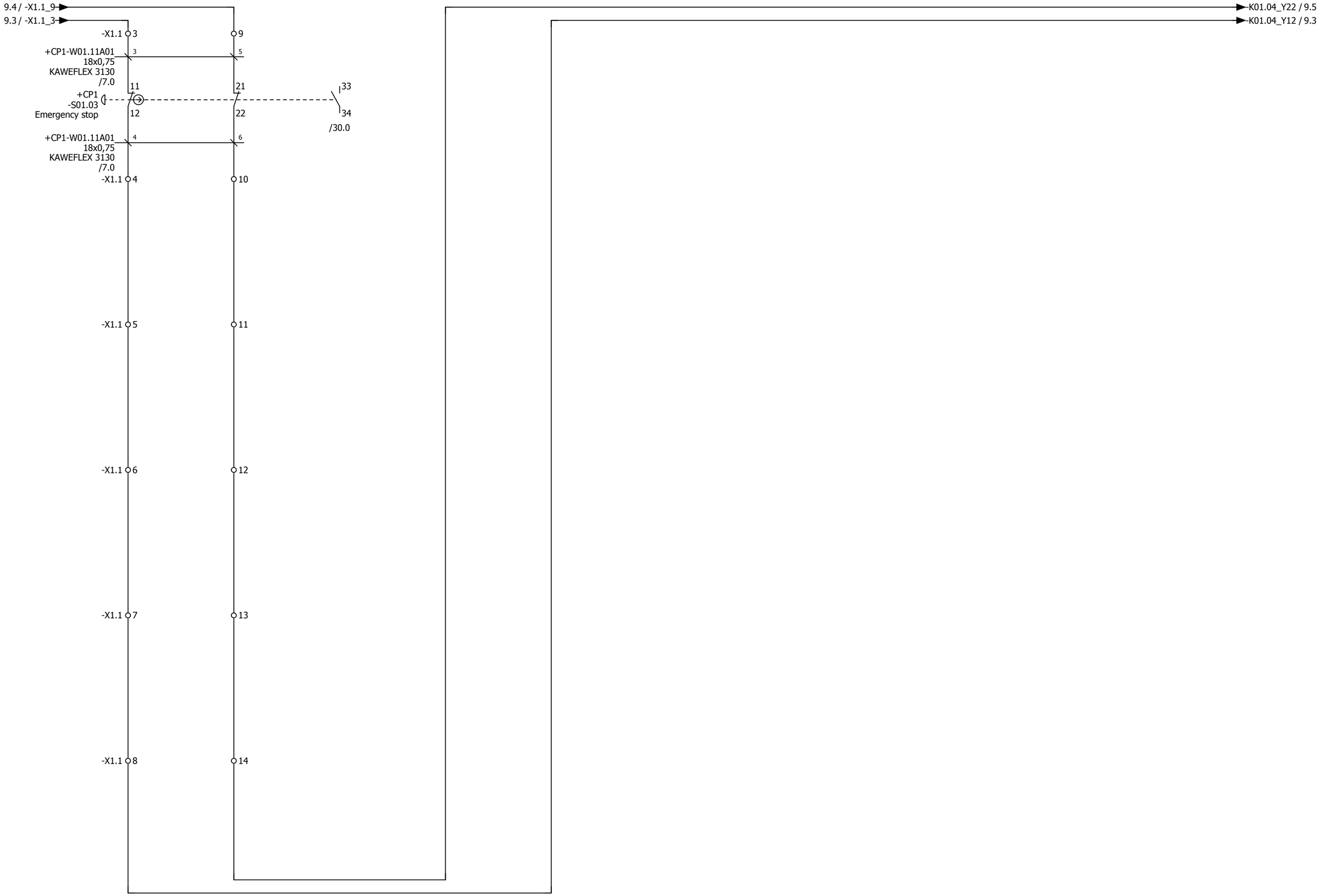
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		Pg 110



			Date	03.02.2009			= 302	
			Ed. by	Messmer			+ CC1	
			Appr		PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		1078980	Page 8
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		Pg 110

Emergency stop chain

6.1 / -L01.04+

-X1.1 +1

-X1.1 +2

L01.04+ / 11.0

+CP1-W01.11A01 7
18x0,75
KAWEFLEX 3130
/7.0

-Q02.04K01 -Q01.04K01 /9.7
21
22
21
22

+CP1
-S01.03K01
ON
13
14
X1
X2
/7.1

+CP1-W01.11A01 8
18x0,75
KAWEFLEX 3130
/7.0

8.0
-X1.1_3

8.9
-K01.04_Y12

8.0
-X1.1_9

8.9
-K01.04_Y22

-X1.1 1

-X1.1 2

-K01.04
3TK2828-2BB41

A1(+) Y33 Y34 Y10 Y11 Y12 Y21 Y22 13 23 47 57 31

SIEMENS

1,5 2,1 1,2 0,6 2,7 0,05 3,0s

13 14
23 24
47 48
57 58
31 32

A2(-) PE 14 24 48 58 32

12.1 / -K03.04_1

32.0 / -A04.02_1E1

-Q01.04K01 A1 A2 -R01.04K01 x1 U x2

-Q02.04K01 A1 A2 -R02.04K01 x1 U x2

-X1.1 -6

-X1.1 -7

7.9 / -1L+

-1L- / 11.0

1 2 /3.8
3 4 /3.8
5 6 /3.8
21 22 /9.1

1 2 /3.8
3 4 /3.8
5 6 /3.8
21 22 /9.1

Safety module time-delayed
emergency-stop

8

10

			Date	03.02.2009	PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		= 302	
			Ed. by	Messmer		Safety module Emergency stop	+ CC1	
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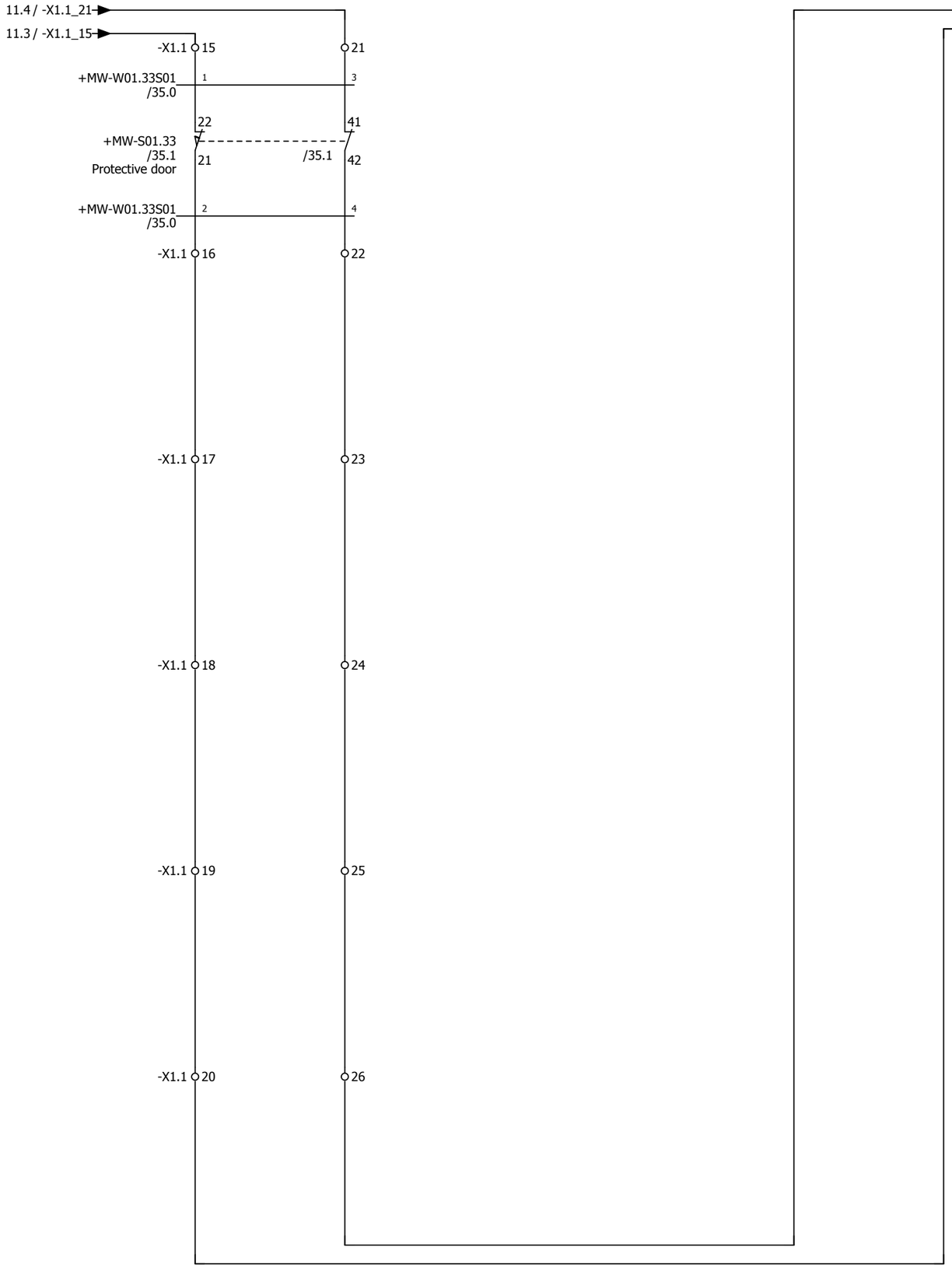
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		Pg 110



			Date	03.02.2009			= 302	
			Ed. by	Messmer			+ CC1	
			Appr		PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		1078980	Page 10
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		Pg 110

WERNER Door cycle chain

9.9 / -L01.04+

L01.04+ / 12.0

-X1.1 +3

-Q01.04K02 /11.7
21
22

-Q02.04K02 /11.7
21
22

-A01.91_X03_5
40.9

47.9
-K02.04_Y34

10.0
-X1.1_15

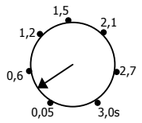
10.9
-K02.04_Y12

10.0
-X1.1_21

10.9
-K02.04_Y22

-K02.04
3TK2828-2BB41

A1(+) Y33 Y34 Y10 Y11 Y12 Y21 Y22 13 23 47 57 31



13
14
/12.3

23
24
/12.4

47
48

57
58

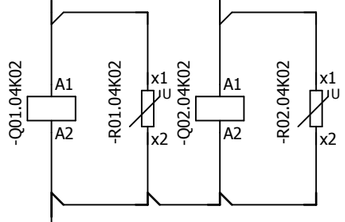
31
32

A2(-) PE 14 24 48 58 32

-X1.1 -8

9.9 / -1L

-1L- / 12.0



1 2
3 4
5 6
21 22 /11.2
53 54 /6.6
61 62
73 74 /6.7
83 84

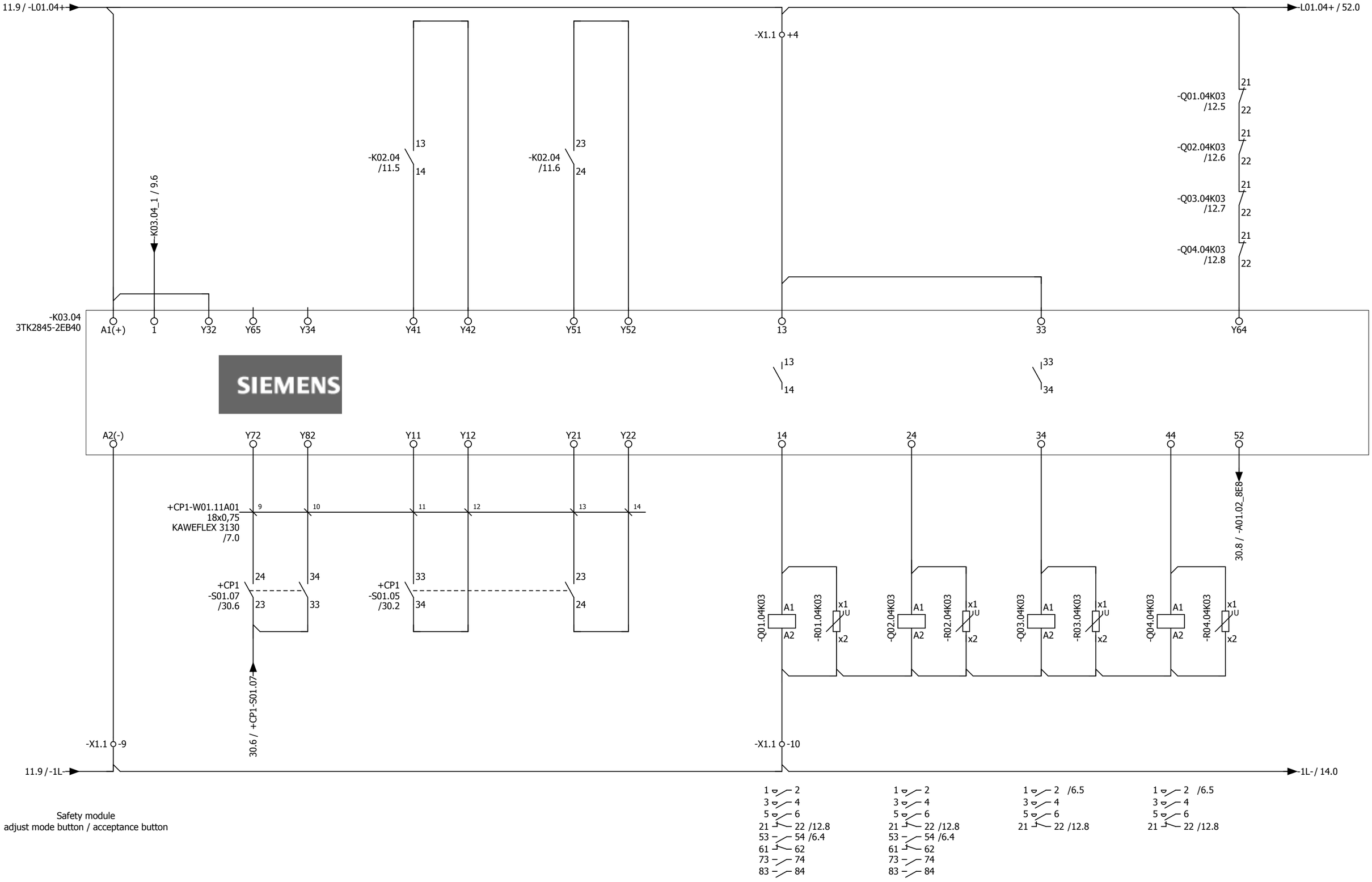
1 2
3 4
5 6
21 22 /11.2
53 54 /6.6
61 62
73 74 /6.7
83 84

Safety module
protective door circuit chain

10

12

			Date	03.02.2009	PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		= 302	
			Ed. by	Messmer		Safety module protective door circuit chain	+ CC1	
			Appr				1078980	Page 11
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		Pg 110



Safety module
adjust mode button / acceptance button

11

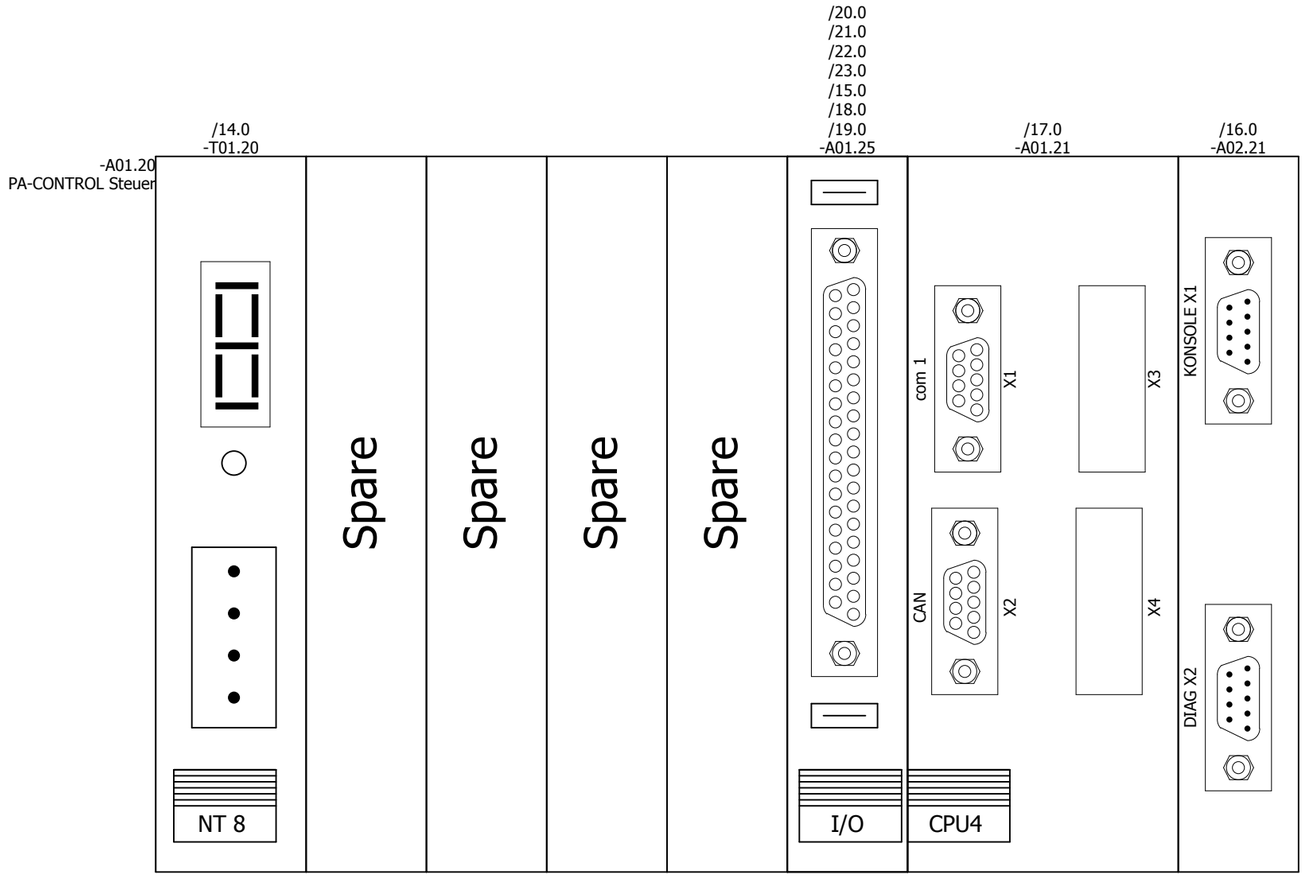
13

			Date	03.02.2009	PA-CONTROL_Steuer_LV-servoTEC_S2_3XX	
			Ed. by	Messmer		
			Appr			
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by

WERNER

Safety module door
protective circuit adjust mode button / acceptance button

= 302
+ CC1
1078980
Page 12
Pg 110

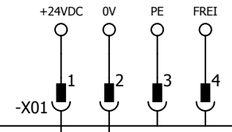


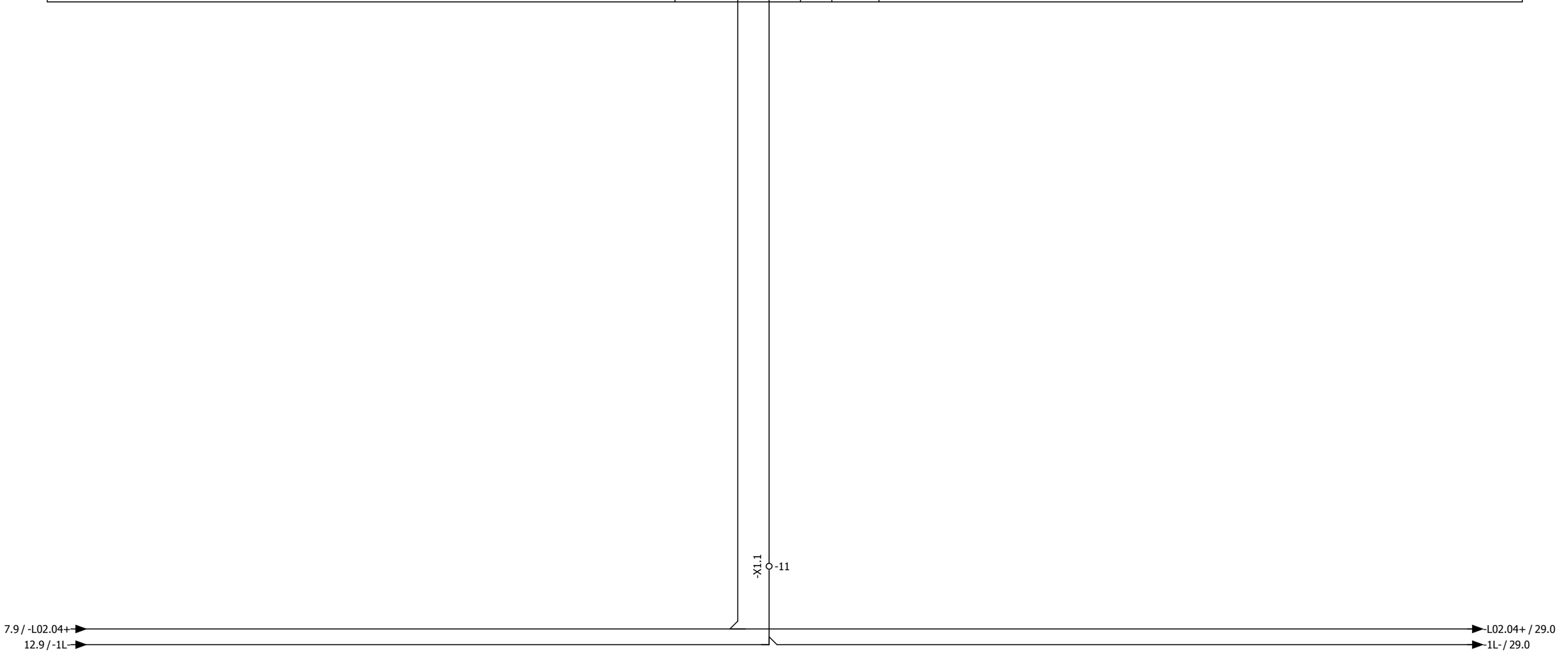
			Date	03.02.2009			= 302	
			Ed. by	Messmer			+ CC1	
			Appr		PA-CONTROL_Steuer_LV-servoTEC_S2_3XX	PA-CONTROL Steuer Overview	1078980	Page 13
Modification	Date	Name	Version	V0.01	Replacement for / Replaced by	WERNER		Pg 110

-T01.20
/13.2

NT 8

Supply Voltage



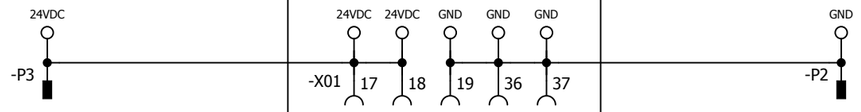


			Date	03.02.2009	PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		PA-CONTROL Steuer Power supply	= 302	
			Ed. by	Messmer				+ CC1	
			Appr					1078980	Page 14
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by			Pg 110

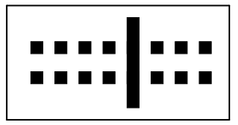
-A01.25
/13.5

I/O-board 1

Supply Voltage



JP1



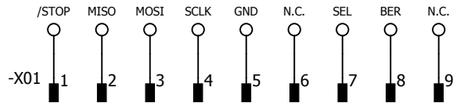
1. I/O-board

			Date	03.02.2009	PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		PA-CONTROL Steuer Supply I/O-board 1	= 302
			Ed. by	Messmer				+ CC1
			Appr				1078980	Page 15
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		Pg 110

-A02.21
/13.6

KONSOLE / DIAG

KONSOLE



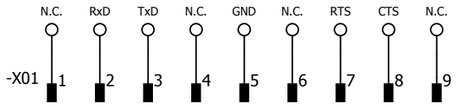
DIAG

			Date	03.02.2009	PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		PA-CONTROL Steuer Panel / Diag	= 302
			Ed. by	Messmer				+ CC1
			Appr				1078980	Page 16
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		Pg 110

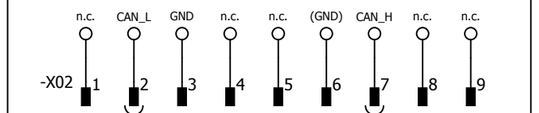
-A01.21
/13.5

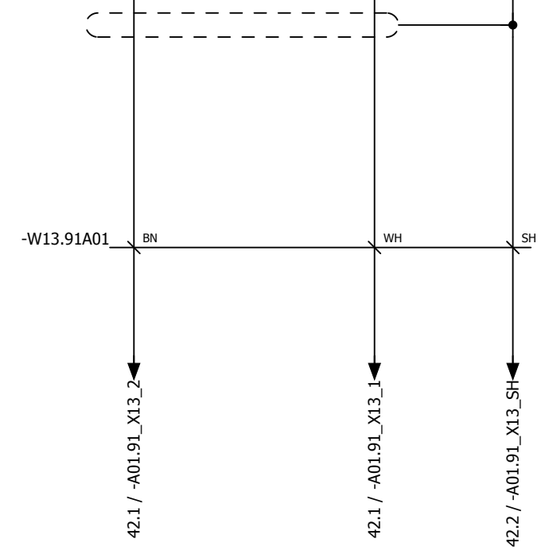
CPU 4

COM 1



CAN Bus





			Date	03.02.2009	PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		= 302	
			Ed. by	Messmer		PA-CONTROL Steuer CPU 4 / CAN bus	+ CC1	
			Appr				1078980	Page 17
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		Pg 110

0	1	2	3	4	5	6	7	8	9

-A01.25
/13.5

I1	/20.0	-A01.25-X01:1	Spare
I2	/20.2	-A01.25-X01:2	Spare
I3	/20.3	-A01.25-X01:3	Spare
I4	/20.4	-A01.25-X01:4	Spare
I5	/20.5	-A01.25-X01:5	Spare
I6	/20.6	-A01.25-X01:6	Spare
I7	/20.7	-A01.25-X01:7	Spare
I8	/20.8	-A01.25-X01:8	Spare
I9	/21.0	-A01.25-X01:9	Spare
I10	/21.2	-A01.25-X01:10	Spare
I11	/21.3	-A01.25-X01:11	Spare
I12	/21.4	-A01.25-X01:12	Spare
I13	/21.5	-A01.25-X01:13	Spare
I14	/21.6	-A01.25-X01:14	Spare
I15	/21.7	-A01.25-X01:15	Spare
I16	/21.8	-A01.25-X01:16	Spare

			Date	03.02.2009				= 302	
			Ed. by	Messmer				+ CC1	
			Appr		PA-CONTROL_Steuer_LV-servoTEC_S2_3XX	Inputs overview I1-I16		1078980	Page 18
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by			Pg 110

0	1	2	3	4	5	6	7	8	9

-A01.25
/13.5

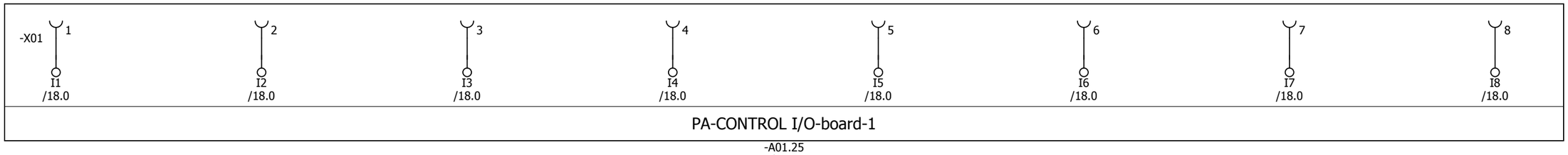
O1	/22.0	-A01.25-X01:20	Spare
O2	/22.2	-A01.25-X01:21	Spare
O3	/22.3	-A01.25-X01:22	Spare
O4	/22.4	-A01.25-X01:23	Spare
O5	/22.5	-A01.25-X01:24	Spare
O6	/22.6	-A01.25-X01:25	Spare
O7	/22.7	-A01.25-X01:26	Spare
O8	/22.8	-A01.25-X01:27	Spare
O9	/23.0	-A01.25-X01:28	Spare
O10	/23.2	-A01.25-X01:29	Spare
O11	/23.3	-A01.25-X01:30	Spare
O12	/23.4	-A01.25-X01:31	Spare
O13	/23.5	-A01.25-X01:32	Spare
O14	/23.6	-A01.25-X01:33	Spare
O15	/23.7	-A01.25-X01:34	Spare
O16	/23.8	-A01.25-X01:35	Spare

			Date	03.02.2009				= 302	
			Ed. by	Messmer				+ CC1	
			Appr		PA-CONTROL_Steuer_LV-servoTEC_S2_3XX			1078980	Page 19
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by			Pg 110

WERNER

Outputs overview
O1-O16

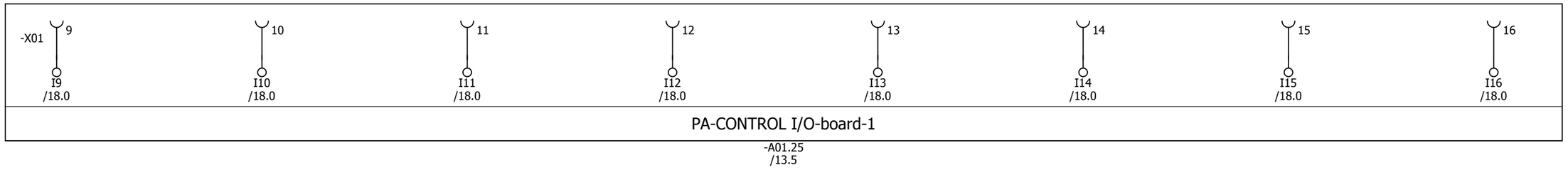
0	1	2	3	4	5	6	7	8	9



Spare	Spare	Spare	Spare	Spare	Spare	Spare	Spare	Spare	

			Date	03.02.2009	PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		PA-CONTROL I/O-board-1 I1-I8	= 302
			Ed. by	Messmer				+ CC1
			Appr				1078980	Page 20
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		Pg 110

0	1	2	3	4	5	6	7	8	9



Spare | Spare | Spare | Spare | Spare | Spare | Spare | Spare

			Date	03.02.2009	PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		PA-CONTROL I/O-board-1 I9-I16	= 302	
			Ed. by	Messmer				+ CC1	
			Appr					1078980	Page 21
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by			Pg 110

0	1	2	3	4	5	6	7	8	9

/13.5
-A01.25

PA-CONTROL I/O-board-1

/19.0 O1	/19.0 O2	/19.0 O3	/19.0 O4	/19.0 O5	/19.0 O6	/19.0 O7	/19.0 O8
-X01 /15.4 20	21	22	23	24	25	26	27
Spare	Spare	Spare	Spare	Spare	Spare	Spare	Spare

			Date	03.02.2009	PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		PA-CONTROL I/O-board 1 O1-O8	= 302
			Ed. by	Messmer				+ CC1
			Appr				1078980	Page 22
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		Pg 110

/13.5
-A01.25

PA-CONTROL I/O-board-1

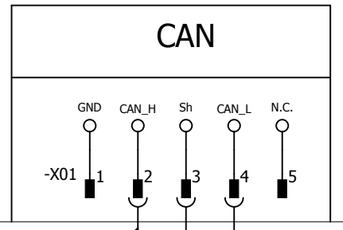
/19.0 O9	/19.0 O10	/19.0 O11	/19.0 O12	/19.0 O13	/19.0 O14	/19.0 O15	/19.0 O16
-X01 /15.4 28	29	30	31	32	33	34	35
Spare	Spare	Spare	Spare	Spare	Spare	Spare	Spare

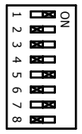
			Date	03.02.2009	PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		PA-CONTROL I/O-board 1 O9-O16	= 302
			Ed. by	Messmer				+ CC1
			Appr				1078980	Page 23
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		Pg 110

-A01.62
/29.0

BK5120

Bus address:17





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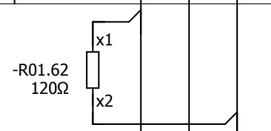

0,64mm² WH

0,64mm² BN

49.3 / -A01.62_X01_2

49.5 / -A01.62_X01_3

49.4 / -A01.62_X01_4

			Date	03.02.2009			= 302	
			Ed. by	Messmer			+ CC1	
			Appr		PA-CONTROL_Steuer_LV-servoTEC_S2_3XX	Beckhoff BK5120 bus connection	1078980	Page 24
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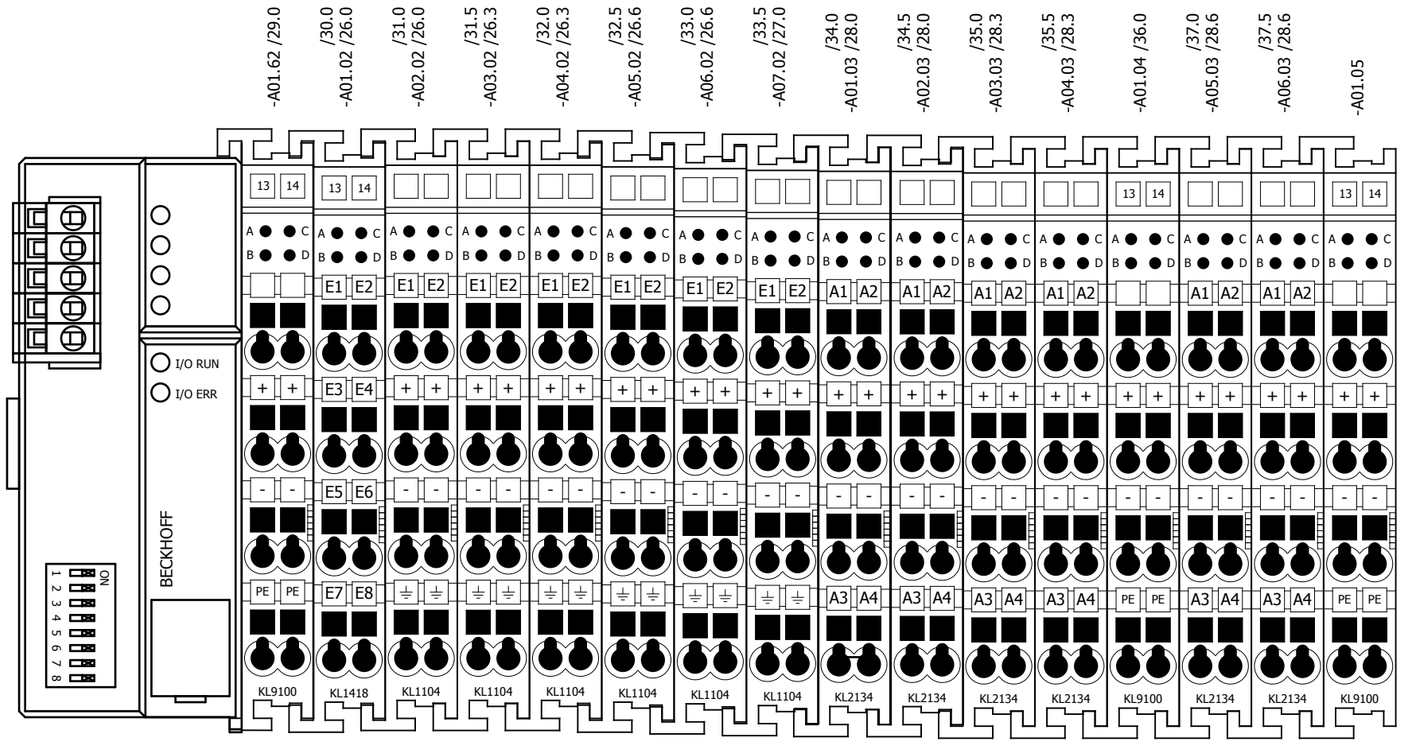

			Date	03.02.2009				= 302	
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			Appr		PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		1078980	Page	25
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IEF WERNER

Overview
Beckhoff bus connection

0	1	2	3	4	5	6	7	8	9

-A01.02
/30.0

I1025	IN 1E1	/30.0	+CP1-S01.03	Emergency halt pressed operator panel	
I1026	IN 5E2	/30.2	+CP1-S01.05	Confirmation button	
I1027	IN 2E3	/30.3	+CP1-S01.04	Automatic Mode (I)	
I1028	IN 6E4	/30.4	+CP1-S01.04	Adjust mode (0)	
I1029	IN 3E5	/30.5	+CP1-S01.04	Step Mode (II)	
I1030	IN 7E6	/30.6	+CP1-S01.07	Bridge protective doors	
I1031	IN 4E7	/30.7		Spare	
I1032	IN 8E8	/30.8	-K03.04:52	Safety module adjust mode-/acceptance button	

-A02.02
/31.0
KL1104

I1033	1E1	/31.0	+MW-S01.33	Protective door open	
	2+	/31.1		Protective door open	
	3-	/31.1		Protective door open	
I1034	5E2	/31.2		Spare	
I1035	4E3	/31.3		Spare	
	6+	/31.3		Spare	
	7-	/31.4		Spare	
I1036	8E4	/31.4		Spare	

-A03.02
/31.5
KL1104

I1037	1E1	/31.5		Spare	
	2+	/31.5		Spare	
	3-	/31.6		Spare	
I1038	5E2	/31.6		Spare	
I1039	4E3	/31.8		Spare	
	6+	/31.8		Spare	
	7-	/31.8		Spare	
I1040	8E4	/31.9		Spare	

-A04.02
/32.0
KL1104

I1041	IN 1E1	/32.0	-K01.04:24	Safety module emergency-stop ON	
	DC24V 2+	/32.1		Safety module emergency-stop ON	
	M 3-	/32.1		Safety module emergency-stop ON	
I1042	IN 5E2	/32.2		Spare	
I1043	IN 4E3	/32.3	-F02.00	Spare	
	DC24V 6+	/32.3		Spare	
	M 7-	/32.4		Spare	
I1044	IN 8E4	/32.4	-F01.00	Fuse protection 24V I.O.	

-A05.02
/32.5
KL1104

I1045	IN 1E1	/32.5	+HGE-S01.10	Spare	
	DC24V 2+	/32.5		Spare	
	M 3-	/32.6		Spare	
I1046	IN 5E2	/32.6	+HGA-S01.10	Spare	
I1047	IN 4E3	/32.8	+TIS-S01.10	Spare	
	DC24V 6+	/32.8		Spare	
	M 7-	/32.8		Spare	
I1048	IN 8E4	/32.9	+TIS-S02.10	Spare	

-A06.02
/33.0
KL1104

I1049	IN 1E1	/33.0		Spare	
	DC24V 2+	/33.1		Spare	
	M 3-	/33.1		Spare	
I1050	IN 5E2	/33.2		Spare	
I1051	IN 4E3	/33.3		Spare	
	DC24V 6+	/33.3		Spare	
	M 7-	/33.4		Spare	
I1052	IN 8E4	/33.4		Spare	

			Date	03.02.2009				= 302	
			Ed. by	Messmer				+ CC1	
			Appr		PA-CONTROL_Steuer_LV-servoTEC_S2_3XX			1078980	Page 26
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Inputs overview
I1025-1052

0	1	2	3	4	5	6	7	8	9

-A07.02
/33.5

IN 1E1 I1053	/33.5	+PWE-S01.10	Spare
DC24V 2+	/33.5		Spare
M 3-	/33.6		Spare
IN 5E2 I1054	/33.6	+PWA-S01.10	Spare
IN 4E3 I1055	/33.8		Spare
DC24V 6+	/33.8		Spare
M 7-	/33.8		Spare
IN 8E4 I1056	/33.9		Spare

			Date	03.02.2009				= 302		
			Ed. by	Messmer				+ CC1		
			Appr		PA-CONTROL_Steuer_LV-servoTEC_S2_3XX			1078980	Page	27
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WERNER

Inputs overview
I1053-1056

0	1	2	3	4	5	6	7	8	9

-A01.03
/34.0

OUT 1A1 O1025	/34.0	-H01.00	Operation Mode (Signal lights)	
DC24V 2+	/34.1		Operation Mode (Signal lights)	
M 3-	/34.1		Operation Mode (Signal lights)	
OUT 5A2 O1026	/34.2	-H02.00	Level (Signal lights)	
OUT 4A3 O1027	/34.3	-H03.00	Error (Signal lights)	
DC24V 6+	/34.3		Error (Signal lights)	
M 7-	/34.4		Error (Signal lights)	
OUT 8A4 O1028	/34.4		Spare	

-A02.03
/34.5

OUT 1A1 O1029	/34.5		Spare	
DC24V 2+	/34.5		Spare	
M 3-	/34.6		Spare	
OUT 5A2 O1030	/34.6		Spare	
OUT 4A3 O1031	/34.8		Spare	
DC24V 6+	/34.8		Spare	
M 7-	/34.8		Spare	
OUT 8A4 O1032	/34.9		Spare	

-A03.03
/35.0

OUT 1A1 O1033	/35.0	+MW-S01.33	Close Protective door	
DC24V 2+	/35.1		Close Protective door	
M 3-	/35.1		Close Protective door	
OUT 5A2 O1034	/35.2		Spare	
OUT 4A3 O1035	/35.3		Spare	
DC24V 6+	/35.3		Spare	
M 7-	/35.4		Spare	
OUT 8A4 O1036	/35.4		Spare	

-A04.03
/35.5

OUT 1A1 O1037	/35.5		Spare	
DC24V 2+	/35.5		Spare	
M 3-	/35.6		Spare	
OUT 5A2 O1038	/35.6		Spare	
OUT 4A3 O1039	/35.8		Spare	
DC24V 6+	/35.8		Spare	
M 7-	/35.8		Spare	
OUT 8A4 O1040	/35.9		Spare	

-A05.03
/37.0

OUT 1A1 O1041	/37.0		Spare	
DC24V 2+	/37.1		Spare	
M 3-	/37.1		Spare	
OUT 5A2 O1042	/37.2		Spare	
OUT 4A3 O1043	/37.3		Spare	
DC24V 6+	/37.3		Spare	
M 7-	/37.4		Spare	
OUT 8A4 O1044	/37.4		Spare	

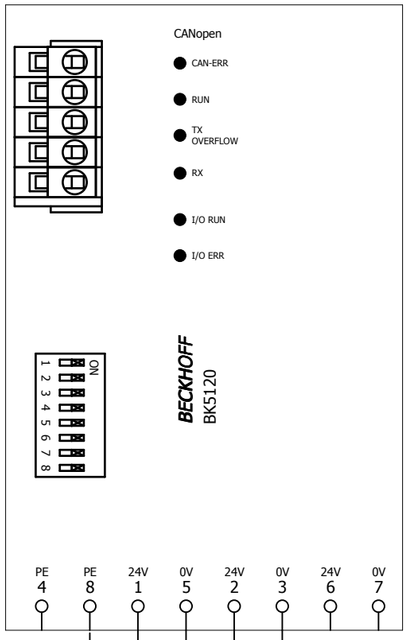
-A06.03
/37.5

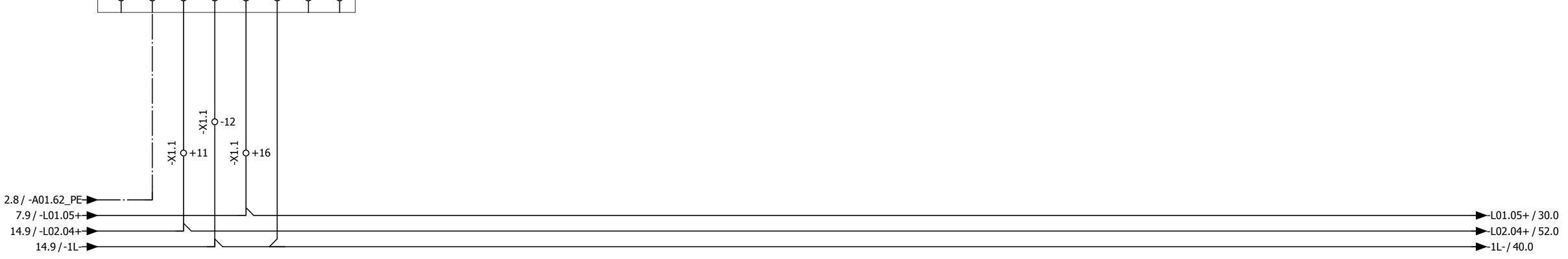
OUT 1A1 O1045	/37.5		Spare	
DC24V 2+	/37.5		Spare	
M 3-	/37.6		Spare	
OUT 5A2 O1046	/37.6		Spare	
OUT 4A3 O1047	/37.8		Spare	
DC24V 6+	/37.8		Spare	
M 7-	/37.8		Spare	
OUT 8A4 O1048	/37.9		Spare	

			Date	03.02.2009	PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		Outputs overview O1025-1048	= 302	
			Ed. by	Messmer				+ CC1	
			Appr					1078980	Page 28
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by			Pg 110

0	1	2	3	4	5	6	7	8	9

-A01.62
/24.0
/25.1

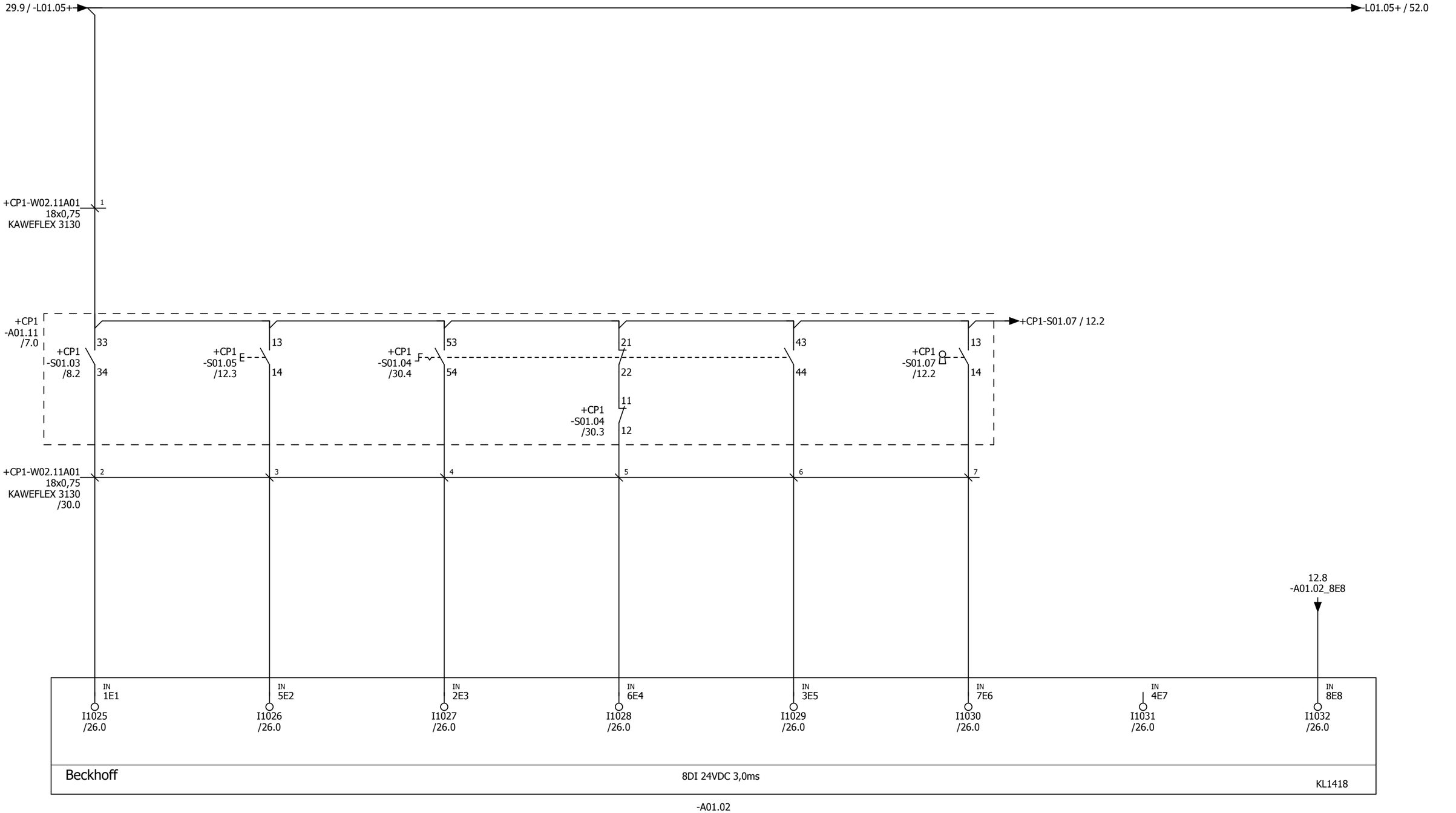




28

30

			Date	03.02.2009	PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		Beckhoff BK5120 Supply voltage	= 302	
			Ed. by	Messmer				+ CC1	
			Appr					1078980	Page 29
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by			Pg 110



			Date	03.02.2009			= 302	
			Ed. by	Messmer			+ CC1	
			Appr		PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		1078980	Page 30
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		Pg 110

WERNER

Inputs connection
I1025-1031

0	1	2	3	4	5	6	7	8	9

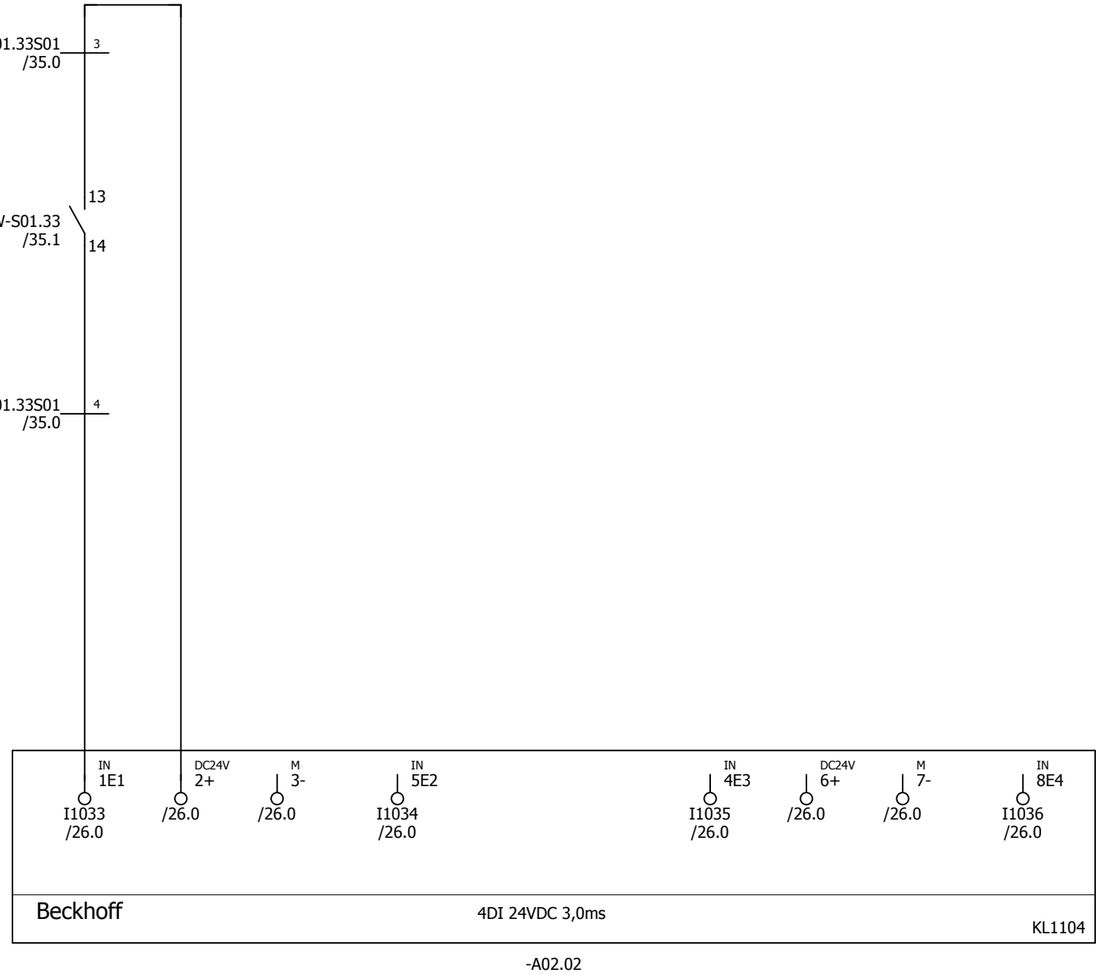
+MW-W01.33S01 /35.0 — 3

13

+MW-S01.33 /35.1

14

+MW-W01.33S01 /35.0 — 4



-A02.02
/25.2
/26.0

Protective door open

Spare

Spare

Spare

-A03.02
/25.2
/26.3

Spare

Spare

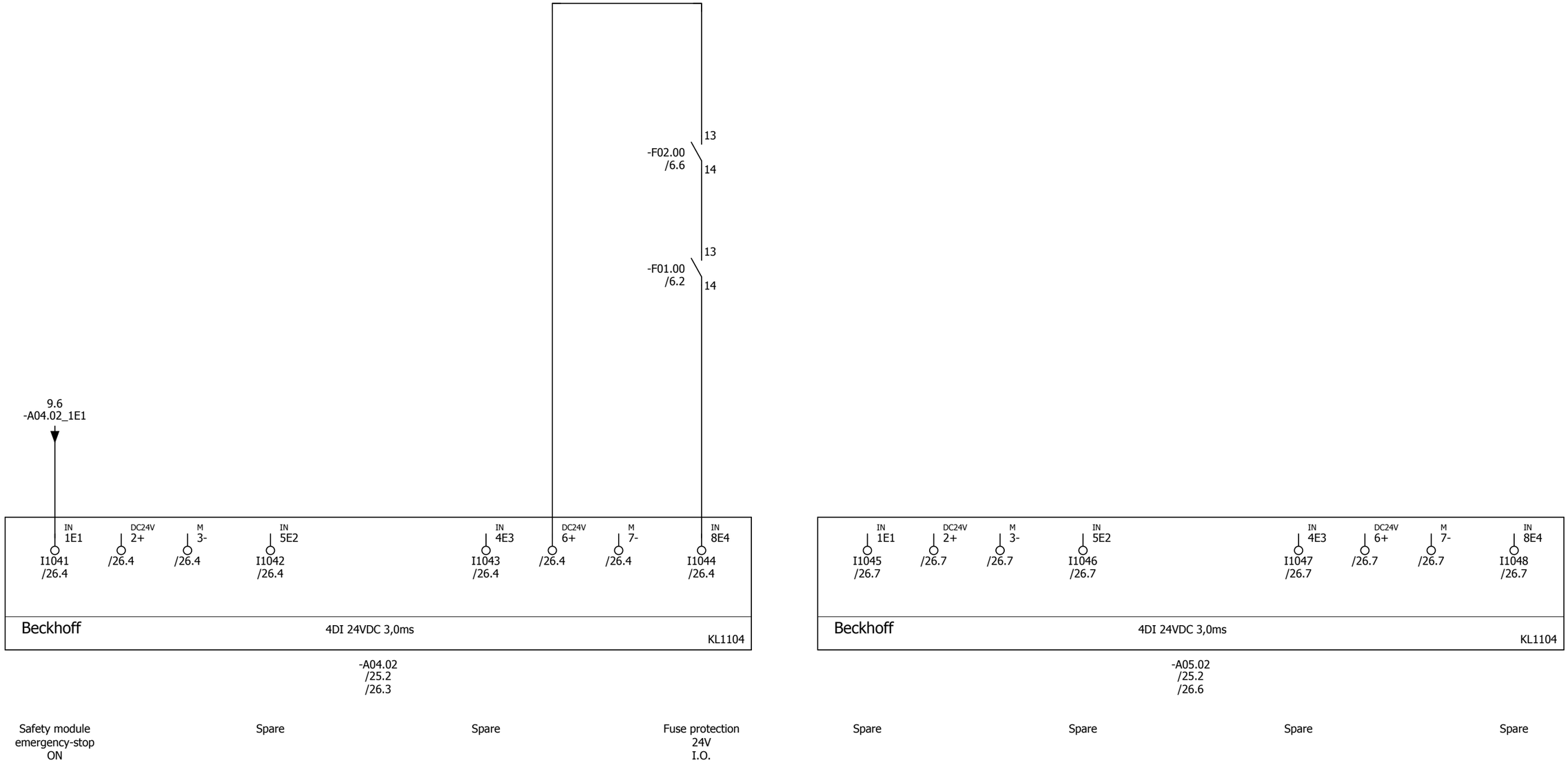
Spare

Spare

			Date	03.02.2009			= 302	
			Ed. by	Messmer			+ CC1	
			Appr		PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		1078980	Page 31
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		Pg 110

WERNER

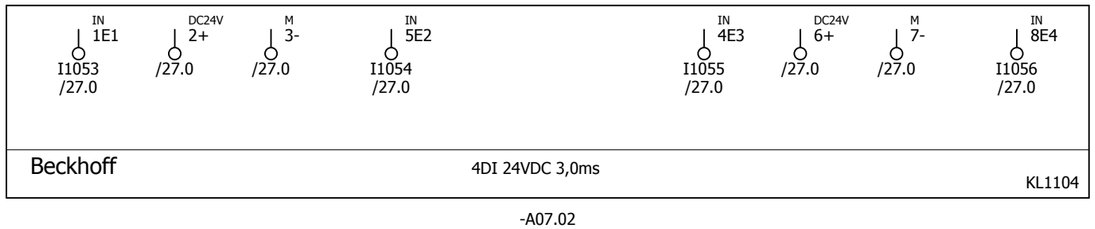
Inputs connection
I1032-1039


13
-F02.00
/6.6
14
13
-F01.00
/6.2
14
9.6
-A04.02_1E1
IN 1E1
I1041
/26.4
DC24V 2+
/26.4
M 3-
/26.4
IN 5E2
I1042
/26.4
IN 4E3
I1043
/26.4
DC24V 6+
/26.4
M 7-
/26.4
IN 8E4
I1044
/26.4
Beckhoff
4DI 24VDC 3,0ms
KL1104
-A04.02
/25.2
/26.3
Safety module
emergency-stop
ON
Spare
Spare
Fuse protection
24V
I.O.
IN 1E1
I1045
/26.7
DC24V 2+
/26.7
M 3-
/26.7
IN 5E2
I1046
/26.7
IN 4E3
I1047
/26.7
DC24V 6+
/26.7
M 7-
/26.7
IN 8E4
I1048
/26.7
Beckhoff
4DI 24VDC 3,0ms
KL1104
-A05.02
/25.2
/26.6
Spare
Spare
Spare
Spare

0	1	2	3	4	5	6	7	8	9

-A06.02
/25.3
/26.6

Spare | Spare | Spare | Spare



-A07.02
/25.3
/27.0

Spare | Spare | Spare | Spare

			Date	03.02.2009		Inputs connection I1048-1055	= 302	
			Ed. by	Messmer			+ CC1	
			Appr		PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		1078980	Page 33
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		Pg 110

/25.3
/28.0
-A01.03

Beckhoff 4DO 24VDC 0,5A KL2134

/28.0 O1025	/28.0	/28.0	/28.0 O1026	/28.0 O1027	/28.0	/28.0	/28.0 O1028
1A1 OUT	2+ DC24V	3- M	5A2 OUT	4A3 OUT	6+ DC24V	7- M	8A4 OUT

-W00.00
ÖLFLEX CLASSIC 110
7x0,75 — 1 — 6 — 2 — 3

-H01.00 white: 1 / 0
-H02.00 blue: 2 / 0
-H03.00 orange: 3 / 0
0
-H00.00

/25.4
/28.0
-A02.03

Beckhoff 4DO 24VDC 0,5A KL2134

/28.0 O1029	/28.0	/28.0	/28.0 O1030	/28.0 O1031	/28.0	/28.0	/28.0 O1032
1A1 OUT	2+ DC24V	3- M	5A2 OUT	4A3 OUT	6+ DC24V	7- M	8A4 OUT

Operation Mode (Signal lights)	Level (Signal lights)	Error (Signal lights)	Spare	Spare	Spare	Spare	Spare

			Date	03.02.2009	PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		= 302
			Ed. by	Messmer		Outputs connection O1025-1032	+ CC1
			Appr				1078980 Page 34
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by	Pg 110

/25.4
/28.3
-A03.03

Beckhoff 4DO 24VDC 0,5A KL2134

/28.4 O1033	/28.4	/28.4	/28.4 O1034	/28.4 O1035	/28.4	/28.4	/28.4 O1036
1A1 OUT	2+ DC24V	3- M	5A2 OUT	4A3 OUT	6+ DC24V	7- M	8A4 OUT

/25.4
/28.3
-A04.03

Beckhoff 4DO 24VDC 0,5A KL2134

/28.4 O1037	/28.4	/28.4	/28.4 O1038	/28.4 O1039	/28.4	/28.4	/28.4 O1040
1A1 OUT	2+ DC24V	3- M	5A2 OUT	4A3 OUT	6+ DC24V	7- M	8A4 OUT

+MW-W01.33S01 7
12x0,75
ÖLFLEX CLASSIC 110

+MW-S01.33

11	22	42	51	71	13	63
12	21	41	52	72	14	64

/10.1 /10.2 /31.0

+MW-W01.33S01 8
12x0,75
ÖLFLEX CLASSIC 110
/35.0

Close Protective door	Spare	Spare	Spare	Spare	Spare	Spare	Spare

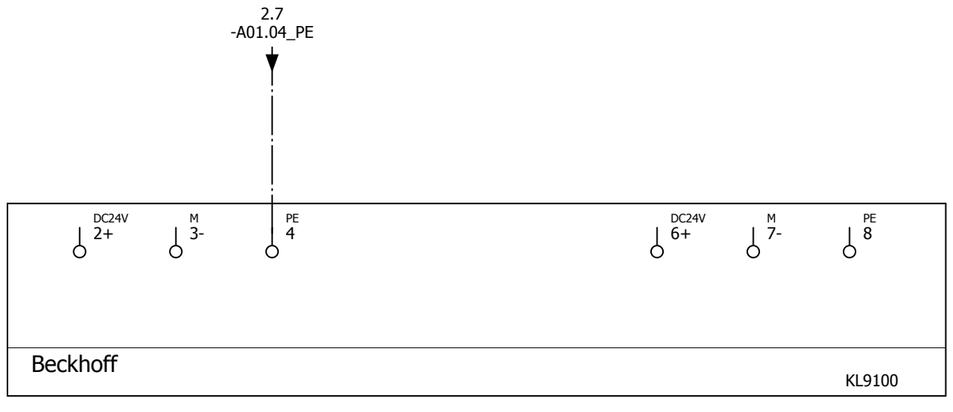
			Date	03.02.2009		
			Ed. by	Messmer		
			Appr		PA-CONTROL_Steuer_LV-servoTEC_S2_3XX	
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by

IEF WERNER

Outputs connection
O1033-1040

= 302
+ CC1
1078980
Page 35
Pg 110

0	1	2	3	4	5	6	7	8	9



-A01.04
/25.4

			Date	03.02.2009				= 302	
			Ed. by	Messmer				+ CC1	
			Appr		PA-CONTROL_Steuer_LV-servoTEC_S2_3XX			1078980	Page 36
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by			Pg 110

Supply clamp

/25.5
/28.6
-A05.03

Beckhoff — 4DO 24VDC 0,5A — KL2134

/28.7 O1041	/28.7	/28.7	/28.7 O1042	/28.7 O1043	/28.7	/28.7	/28.7 O1044
1A1 OUT	2+ DC24V	3- M	5A2 OUT	4A3 OUT	6+ DC24V	7- M	8A4 OUT

/25.5
/28.6
-A06.03

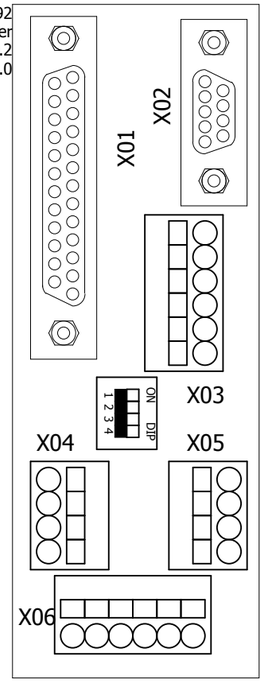
Beckhoff — 4DO 24VDC 0,5A — KL2134

/28.7 O1045	/28.7	/28.7	/28.7 O1046	/28.7 O1047	/28.7	/28.7	/28.7 O1048
1A1 OUT	2+ DC24V	3- M	5A2 OUT	4A3 OUT	6+ DC24V	7- M	8A4 OUT

Spare	Spare	Spare	Spare	Spare	Spare	Spare	Spare

			Date	03.02.2009	PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		Outputs connection O1041-1048	= 302
			Ed. by	Messmer				+ CC1
			Appr				1078980	Page 37
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		Pg 110

-A01.92
LV servoTEC S2 IO-adapter
/40.2
/44.0



Offset-address			
	0		8
	1		9
	2		10
	3		11
	4		12
	5		13
	6		14
	7		15

Fieldbus	Base address (is set withS2 Commander)
CAN Open	Base Node number
Profibus	Slave-address
SERCOS	Drive-address

Bus address calculation: Bus-address = Base address + Offset-address

front

-A01.91
LV servoTEC_S2_302
/39.4
/39.7
/41.0
/42.0
/40.0
/43.0

RESET
READY
CAN ON

STATE

(X3) SAFE STANDSTILL
24V
REL
0V
ERR
NC1
NC2

(X5) RS232/COM

(X4) CAN

TECH 1 TECH 2

-A01.32
/42.0
Rx
ON
OFF

X13

X14

LV servoTEC S2

on top

-A01.91
LV servoTEC_S2_302
/39.2

X9
L1
L2
L3
ZK+
Zk-
BR-EXT
BR-CH
BR-INT
PE
+24V
GND24

(X11) OUT

(X10) IN

(X1) I/O

below

-A01.91
LV servoTEC_S2_302
/39.2

(X2B) ENCODER

(X2A) RESOLVER

X6
BR-
BR+
PE
-MTdig
+MTdig
PE
W
V
U

			Date	03.02.2009			= 302	
			Ed. by	Messmer			+ CC1	
			Appr		PA-CONTROL_Steuer_LV-servoTEC_S2_3XX	A1 LV servoTEC_S2_302 Overview	1078980	Page 39
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		Pg 110

-A01.91
/39.2

LV servoTEC S2

Supply voltage [X09]

Schutzerdung

-X09: L 1 | L2 2 | L3 3 | ZK+ 4 | ZK- 5 | BR-EXT 6 | BR-CH 7 | BR-INT 8 | PE 9 | +24V 10 | GND24V 11

2.3 / -A01.91_PE

5.1 / -A01.91_X09_1

5.1 / -A01.91_X09_2

5.1 / -A01.91_X09_3

5.1 / -A01.91_X09_9

I/O-communication [X01]

-X01: AGND 1 | AGND 14 | AINO 2 | #AINO 15 | AIN1 3 | AIN2 16 | +VREF 4 | AMON0 17 | AMON1 5 | +24V 18 | GND24 6 | DIN0 19 | DIN1 7 | DIN2 20 | DIN3 8 | Power supply Release DIN4 21 | Regulator Release DIN5 9 | END. NEG. DIN6 22 | END. POS. DIN7 10 | REF. DIN8 23 | DIN9 11 | READY DOUT0 24 | DOUT1 12 | DOUT2 25 | DOUT3 13

-W01.92A01: VT 0,14 | BK 0,14 | GY 0,14 | BN 0,14 | WH 0,14 | RD 0,14 | WH BK 0,14 | RD 0,14 | WH BN 0,14 | OG 0,14 | WH RD 0,14 | YE 0,14 | WH OG 0,14 | GN 0,14 | WH YE 0,14 | BU 0,14

-A01.92
/38.2

-X01: 1 | 14 | 2 | 15 | 3 | 16 | 4 | 17 | 5 | 18 | 6 | 19 | 7 | 20 | 8 | 21 | 9 | 22 | 10 | 23 | 11 | 24 | 12 | 25 | 13

n.c. | n.c. | n.c. | n.c. | n.c. | n.c. | n.c. | n.c. | n.c. | +24V | GND24 | DIN0 | DIN1 | DIN2 | DIN3 | DIN4 | DIN5 | DIN6 | DIN7 | DIN8 | DIN9 | DOUT0 | DOUT1 | DOUT2 | DOUT3

I/O-communication

Safe Standstill [X03]

-X03: 24V 1 | REL 2 | 0V 3 | ERR 4 | NC1 5 | NC2 6

11.2 / -A01.91_X03_5

47.9 / -A02.91_X03_5

LV servoTEC S2 IO-Adapter

Supply / release IN

-X04: +24V + | GND 0 | Endstufen Freigabe EF | Regler Freigabe RF

-X1.1 +36

-X1.1 -13

-X1.1 +37

-X1.1 +30

-X1.1 +21

I/O

-X06: PE | DIN9 I9 | DOUT0 O0 | DOUT1 O1 | DOUT2 O2 | DOUT3 O3

2.5 / -A01.92_X06_1

Supply / release OUT

-X05: Regulator Release RF | Power supply Release EF | GND 0 | +24V +

47.3 / -A02.92_X04_4

47.3 / -A02.92_X04_3

47.3 / -A02.92_X04_2

47.3 / -A02.92_X04_1

-X1.1 +31

7.9 / -L01.06+ → L01.06+ / 52.0

6.7 / -L01.91+ → L01.91+ / 47.0

6.8 / -L02.91+ → L02.91+ / 47.0

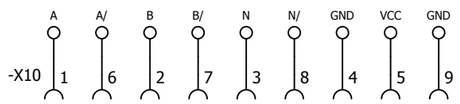
29.9 / -1L- → 1L- / 47.0

			Date	03.02.2009	PA-CONTROL_Steuer_LV-servoTEC_S2_3XX	A1 LV servoTEC S2 Supply voltage	= 302 + CC1
			Ed. by	Messmer			
			Appr			1078980	Page 40 Pg 110
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by	

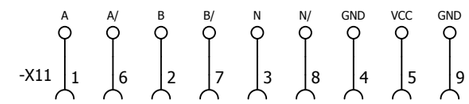
-A01.91
/39.2

LV servoTEC S2

Incremental encoder Input [X10]



Incremental encoder Output [X11]



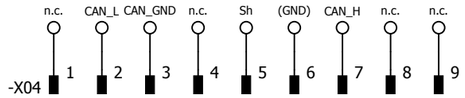
			Date	03.02.2009		A1 LV servoTEC S2 Incremental encoder	= 302	
			Ed. by	Messmer			+ CC1	
			Appr		PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		1078980	Page 41
Modification	Date	Name	Version	V0.01	Replacement for / Replaced by			Pg 110

-A01.91
/39.2

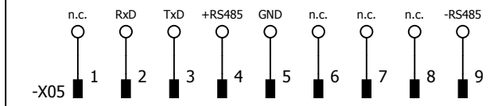
LV servoTEC S2

Bus address DP:17

CAN [X04]



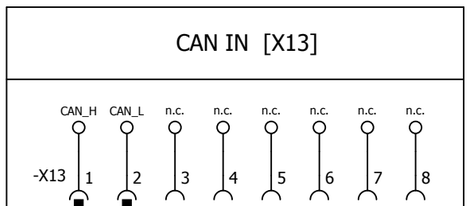
RS232/COM [X05]



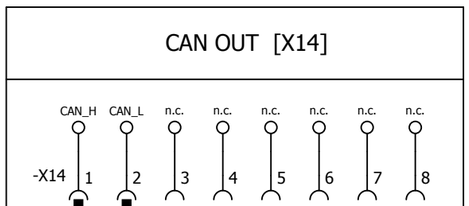
-A01.91-A01.32
/39.2

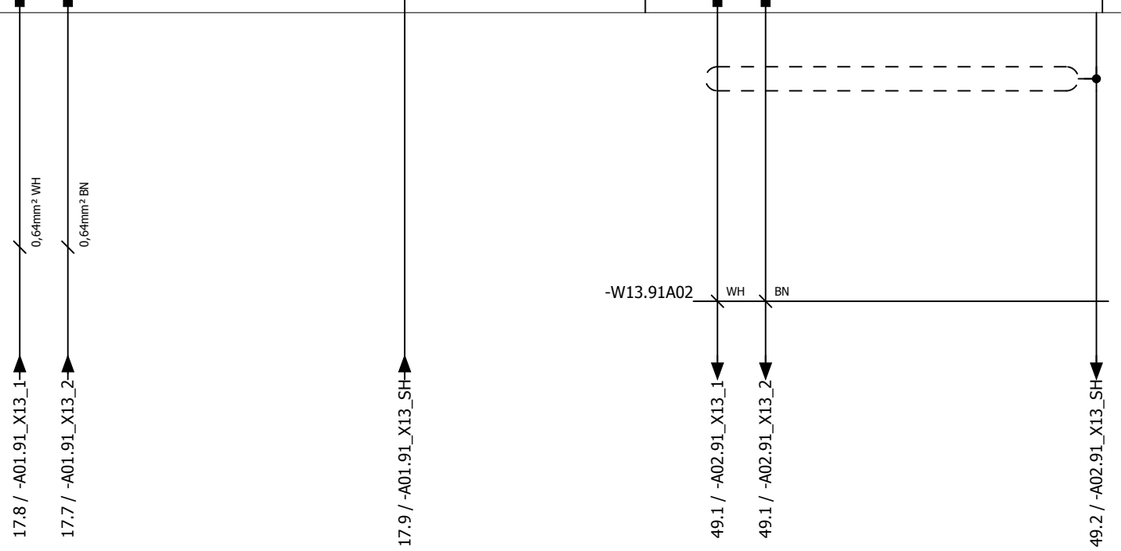
Terminating resistor

CAN IN [X13]



CAN OUT [X14]





			Date	03.02.2009		A1 LV servoTEC S2 CAN / RS232	= 302	
			Ed. by	Messmer			+ CC1	
			Appr		PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		1078980	Page 42
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		Pg 110

-A01.91
/39.2

LV servoTEC S2

Motor connection [X06]

-X06: PE 6 | U2 9 | V2 8 | W2 7 | BR- 1 | BR+ 2 | -MTdig 4 | +Mtdig 5 | PE 3

PE

SH1

SH

-W01.51M01 /43.0 9 m

-W01.51M01: GNYE U | V | W | BN2 | BN1

-M01.51

-X01: PE PE | U U | V V | W W | B B | A A

Motor

Resolver connection [X02A]

-X02A: Mt+ 5 | Mt- 8 | R1 4 | R2 9 | SINUS- 6 | SINUS+ 1 | COS- 7 | COS+ 2 | AGND 3

Encoder connection [X02B]

-X02B: #COS 7 | COS 14 | #SIN 8 | SIN 15 | DATA 12 | #DATA 5 | SCLK 13 | #SCLK 6 | U_SENS+ 9 | U_SENS- 2 | US 10 | GND 3 | MT+ 1 | n.c. 11 | n.c. 4

SH

-W02.51M01 /43.6

-W02.51M01: WH 0,25 | BN 0,25 | GN 0,25 | YE 0,25 | GY 0,25 | PK 0,25 | BU 0,25 | RD 0,25 | BK 0,25 | VT 0,25 | GYPK 0,25 | RDBU 0,25 | WHGN 0,25 | BNGN 0,25

-X02: 9 COS B+ | 1 COS B- | 11 SIN A+ | 3 SIN A- | 13 #DATA | 5 DATA | 15 #CLOCK | 8 CLOCK | 10 0V | 12 Up | 2 0V | 4 Up | 7 Thermo | 14 Thermo

Sinus-Cosinus Encoder

42

44

			Date	03.02.2009	PA-CONTROL_Steuer_LV-servoTEC_S2_3XX	A1 LV servoTEC S2 Motor connection	= 302 + CC1
			Ed. by	Messmer			
			Appr				1078980 Page 43
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by	Pg 110

-A01.92
/38.2

LV servoTEC S2 IO-Adapter

Limit switch [X03]

LIM- LIM+ GND +24VDC PE REF

-X03 L- L+ 0 + PE R

Limit switch [X02]

LIM+ LIM- REF n.c. n.c. n.c. +24VDC n.c. GND

-X02 1 2 3 4 5 6 7 8 9

-W01.51A01
5x0,25
/44.2
/51.2

GN 0,25 | YE 0,25 | WH 0,25 | BN 0,25 | SH

-X01 2 4 3 1

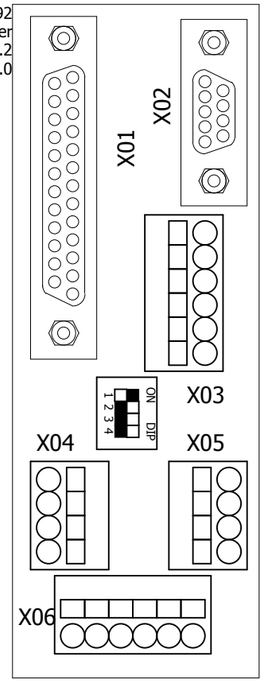
-B01.51A01: BK, BN, BU

-B02.51A01: BK, BN, BU

-A01.51

			Date	03.02.2009	PA-CONTROL_Steuer_LV-servoTEC_S2_3XX	A1 LV servoTEC S2 Axis limit switch	= 302 + CC1
			Ed. by	Messmer			
			Appr			1078980	Page 44
Modification	Date	Name	Version	V0.01	Replacement for / Replaced by		Pg 110

-A02.92
LV servoTEC S2 IO-adapter
/47.2
/51.0



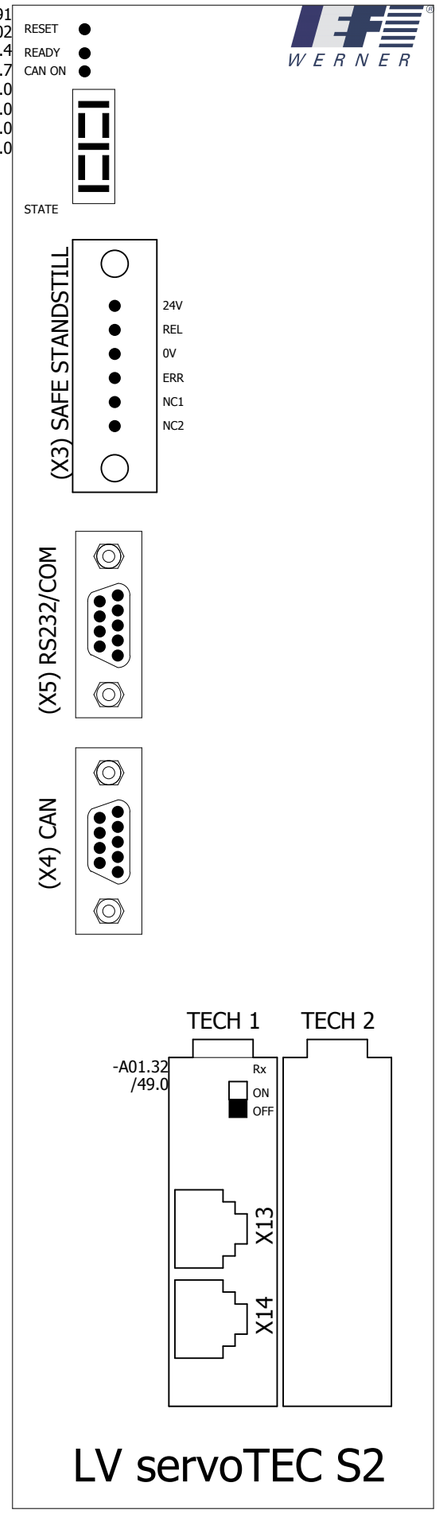
Offset-address			
	0		8
	1		9
	2		10
	3		11
	4		12
	5		13
	6		14
	7		15

Fieldbus	Base address (is set withS2 Commander)
CAN Open	Base Node number
Profibus	Slave-address
SERCOS	Drive-address

Bus address calculation: Bus-address = Base address + Offset-address

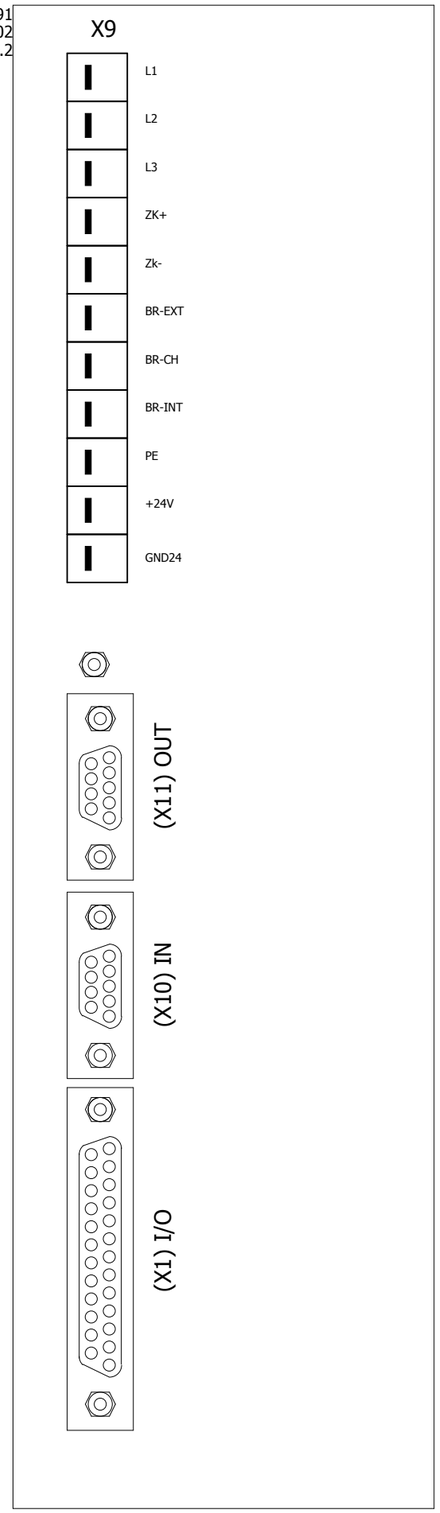
front

-A02.91
LV servoTEC_S2_302
/46.4
/46.7
/48.0
/49.0
/47.0
/50.0



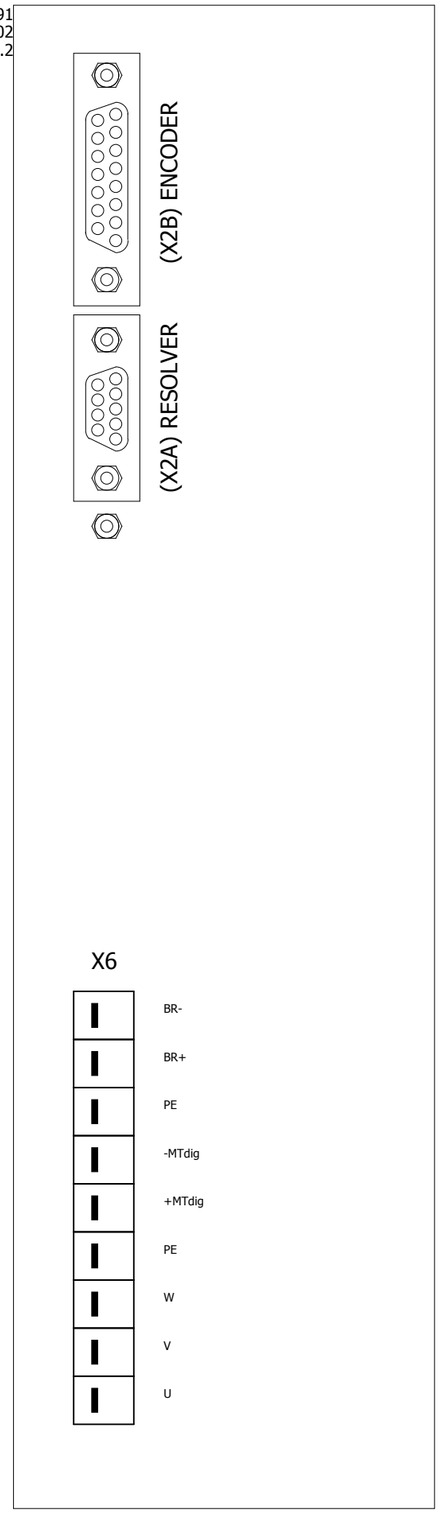
on top

-A02.91
LV servoTEC_S2_302
/46.2



below

-A02.91
LV servoTEC_S2_302
/46.2



			Date	03.02.2009		A2 LV servoTEC_S2_302 Overview	= 302	
			Ed. by	Messmer			+ CC1	
			Appr		PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		1078980	Page 46
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		Pg 110

-A02.91
/46.2

LV servoTEC S2

Supply voltage [X09]

Schutzerdung

-X09: 1 L | 2 L2 | 3 L3 | 4 ZK+ | 5 ZK- | 6 BR-EXT | 7 BR-CH | 8 BR-INT | 9 PE | 10 +24V | 11 GND24V

2.4 / -A02.91_PE
5.3 / -A02.91_X09_1
5.3 / -A02.91_X09_2
5.3 / -A02.91_X09_3
5.4 / -A02.91_X09_9

I/O-communication [X01]

-X01: 1 AGND | 14 AGND | 2 AINO | 15 #AINO | 3 AIN1 | 16 AIN2 | 4 +VREF | 17 AMON0 | 5 AMON1 | 18 +24V | 6 GND24 | 19 DIN0 | 7 DIN1 | 20 DIN2 | 8 DIN3 | 21 DIN4 (Power supply Release) | 9 DIN5 (Regulator Release) | 22 DIN6 (END. NEG.) | 10 DIN7 (END. POS.) | 23 DIN8 (REF.) | 11 DIN9 | 24 DOUT0 (READY) | 12 DOUT1 | 25 DOUT2 | 13 DOUT3

-W01.92A02: VT 0,14 | BK 0,14 | GY 0,14 | BN 0,14 | WH 0,14 | RD 0,14 | WH BK 0,14 | RD 0,14 | WH BN 0,14 | OG 0,14 | WH RD 0,14 | YE 0,14 | WH OG 0,14 | GN 0,14 | WH YE 0,14 | BU 0,14

Safe Standstill [X03]

-X03: 1 24V | 2 REL | 3 0V | 4 ERR | 5 NC1 | 6 NC2

40.9 / -A02.91_X03_5
11.2 / -K02.04_Y34

-A02.92
/45.2

-X01: 1 n.c. | 14 n.c. | 2 n.c. | 15 n.c. | 3 n.c. | 16 n.c. | 4 n.c. | 17 n.c. | 5 n.c. | 18 +24V | 6 GND24 | 19 DIN0 | 7 DIN1 | 20 DIN2 | 8 DIN3 | 21 DIN4 | 9 DIN5 | 22 DIN6 | 10 DIN7 | 23 DIN8 | 11 DIN9 | 24 DOUT0 | 12 DOUT1 | 25 DOUT2 | 13 DOUT3

I/O-communication

LV servoTEC S2 IO-Adapter

Supply / release IN

-X04: +24V + | GND 0 | Endstufen Freigabe EF | Regler Freigabe RF

40.7 / -A02.92_X04_1
40.7 / -A02.92_X04_2
40.7 / -A02.92_X04_3
40.6 / -A02.92_X04_4

I/O

-X06: PE PE | DIN9 I9 | DOUT0 O0 | DOUT1 O1 | DOUT2 O2 | DOUT3 O3

2.6 / -A02.92_X06_1

Supply / release OUT

-X05: Regulator Release RF | Power supply Release EF | GND 0 | +24V +

-X1.1 +38
-X1.1 -14

40.9 / -L01.91+
40.9 / -L02.91+
40.9 / -1L-

-L01.91+ / 52.0
-L02.91+ / 52.0
-1L- / 52.0

			Date	03.02.2009	PA-CONTROL_Steuer_LV-servoTEC_S2_3XX	
			Ed. by	Messmer		
			Appr			
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by

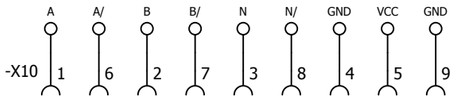
A2 LV servoTEC S2
Supply voltage

= 302
+ CC1
1078980
Page 47
Pg 110

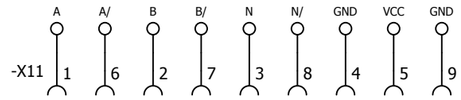
-A02.91
/46.2

LV servoTEC S2

Incremental encoder Input [X10]



Incremental encoder Output [X11]



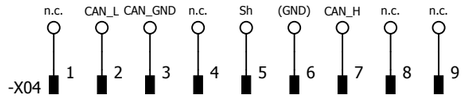
			Date	03.02.2009		A2 LV servoTEC S2 Incremental encoder	= 302	
			Ed. by	Messmer			+ CC1	
			Appr		PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		1078980	Page 48
Modification	Date	Name	Version	V0.01	Replacement for / Replaced by			Pg 110

-A02.91
/46.2

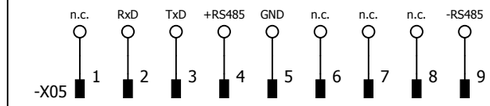
LV servoTEC S2

Bus address:2

CAN [X04]



RS232/COM [X05]

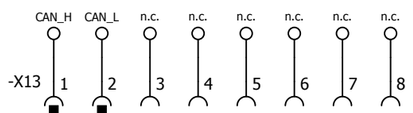


-A02.91-A01.32
/46.2

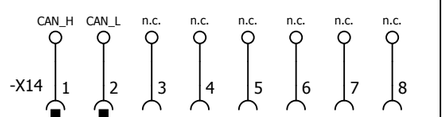
Terminating resistor

ON
OFF

CAN IN [X13]



CAN OUT [X14]



0,64mm² WH

0,64mm² BN

-W01.62A01 WH BN

42.3 / -A02.91_X13_1

42.4 / -A02.91_X13_2

42.5 / -A02.91_X13_SH

24.1 / -A01.62_X01_2

24.1 / -A01.62_X01_4

24.1 / -A01.62_X01_3

			Date	03.02.2009		A2 LV servoTEC S2 CAN / RS232	= 302	
			Ed. by	Messmer			+ CC1	
			Appr		PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		1078980	Page 49
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		Pg 110

-A02.91
/46.2

LV servoTEC S2

Motor connection [X06]

-X06: PE 6 | U2 9 | V2 8 | W2 7 | BR- 1 | BR+ 2 | -MTdig 4 | +Mtdig 5 | PE 3

PE

SH1

SH

-W01.51M02 /50.0 9 m

-W01.51M02: GNYE | U | V | W | BN2 | BN1

Resolver connection [X02A]

-X02A: Mt+ 5 | Mt- 8 | R1 4 | R2 9 | SINUS- 6 | SINUS+ 1 | COS- 7 | COS+ 2 | AGND 3

SH | SH5 | SH6 | SH2 | SH3 | SH4

-W02.51M02 /50.3

-W02.51M02: BN | WH | RD | BU | YE | GN | GY | PK

Encoder connection [X02B]

-X02B: #COS 7 | COS 14 | #SIN 8 | SIN 15 | DATA 12 | #DATA 5 | SCLK 13 | #SCLK 6 | U_SENS+ 9 | U_SENS- 2 | US 10 | GND 3 | MT+ 1 | n.c. 11 | n.c. 4

-M02.51

-X01: PE | U | V | W | B | A

-X02: 2 THERMO | 6 THERMO | 5 REF+ | 9 REF- | 4 SINUS- | 8 SINUS+ | 7 COS- | 3 COS+

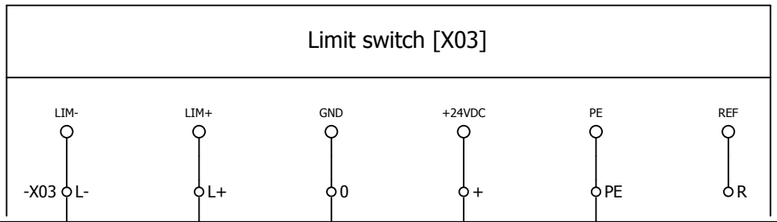
Motor

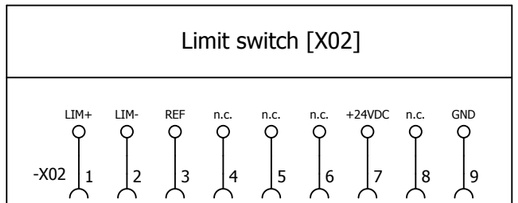
Resolver

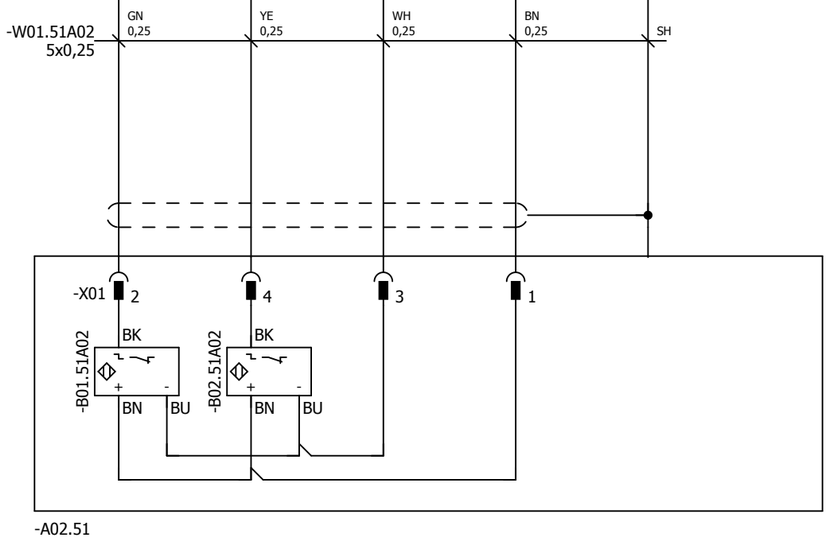
			Date	03.02.2009	PA-CONTROL_Steuer_LV-servoTEC_S2_3XX	A2 LV servoTEC S2 Motor connection	= 302 + CC1
			Ed. by	Messmer			
			Appr				1078980 Page 50 Pg 110
Modification	Date	Name	Version	V0.01	Replacement for / Replaced by		

-A02.92
/45.2

LV servoTEC S2 IO-Adapter

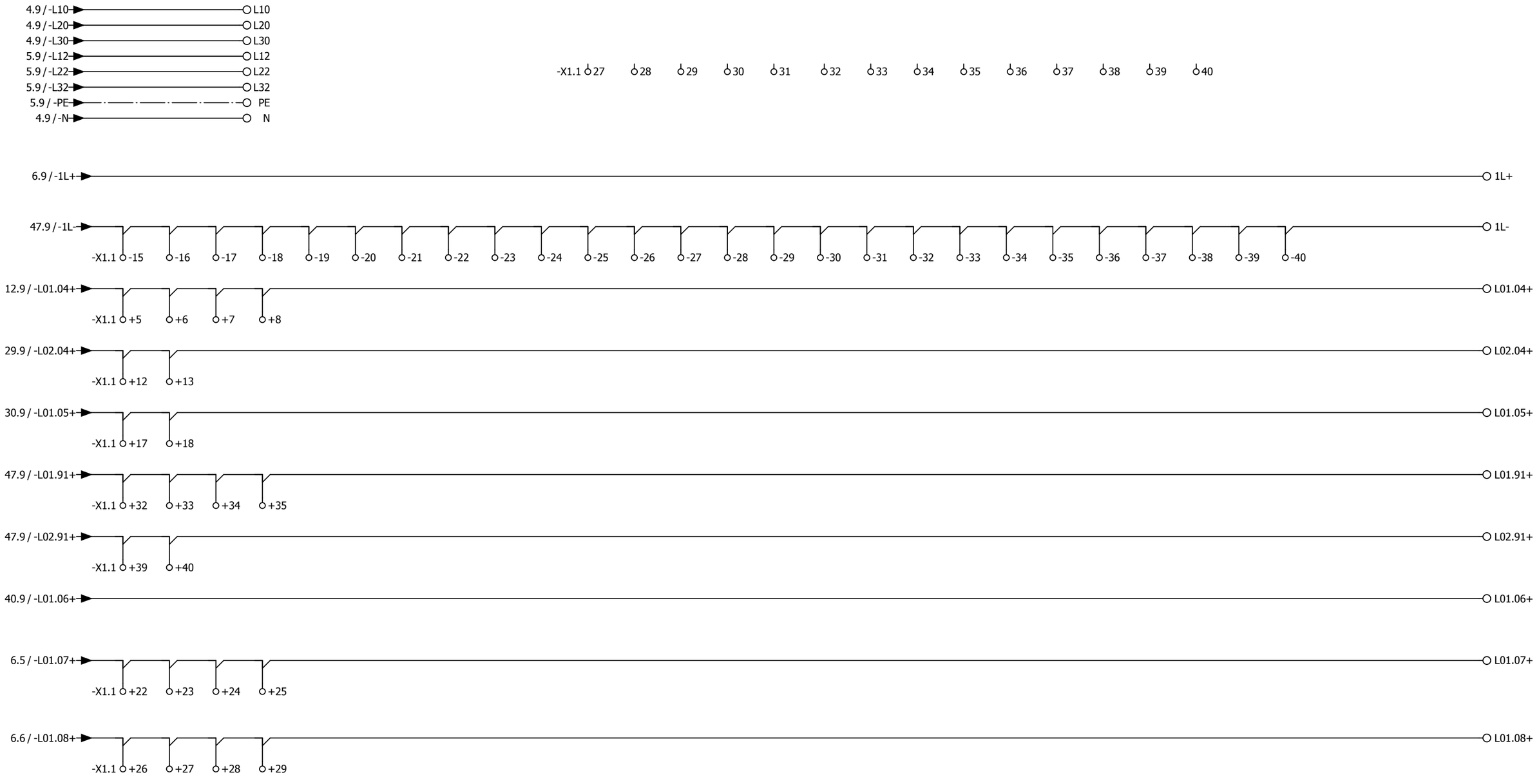




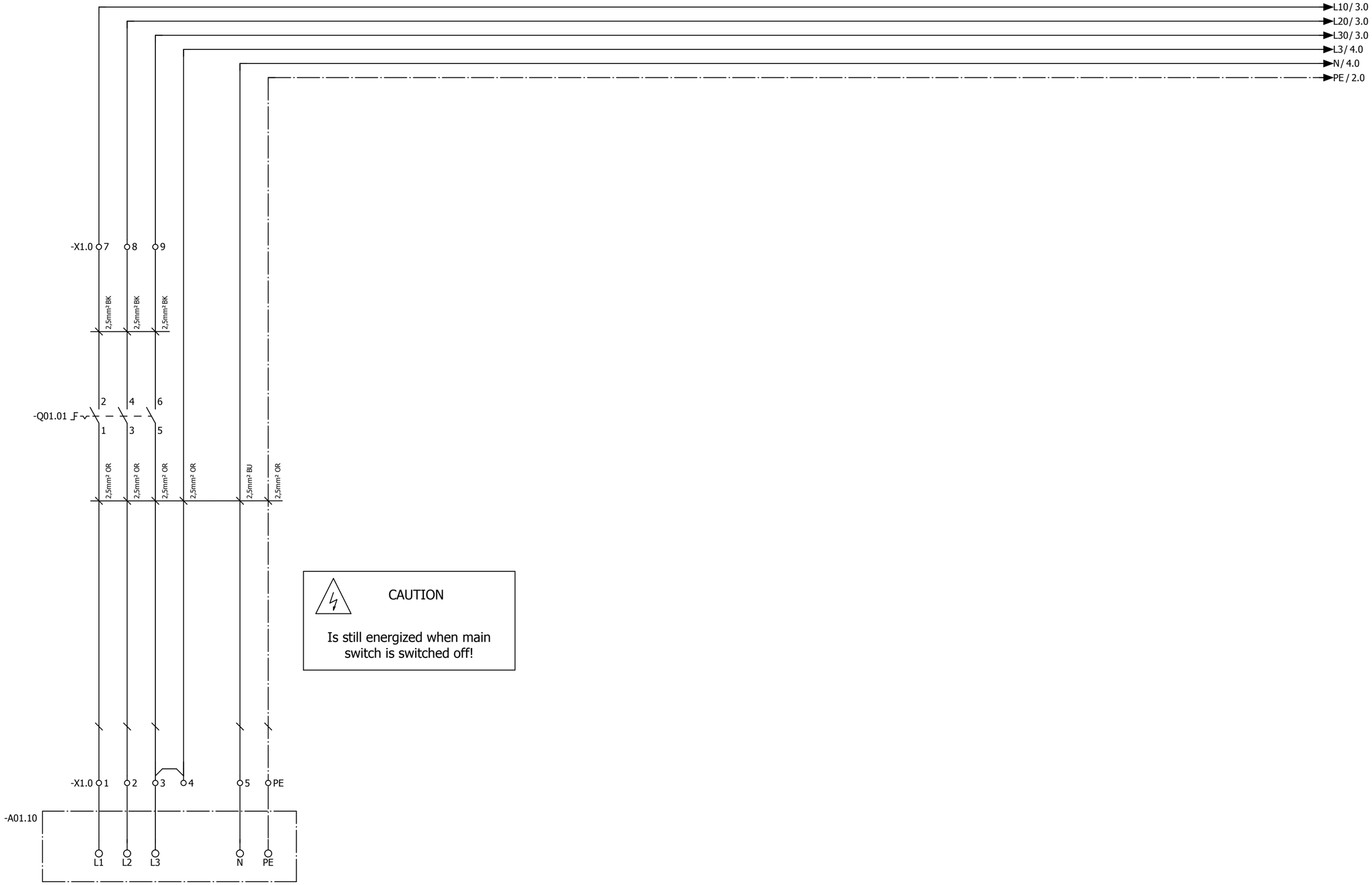


-A02.51

			Date	03.02.2009	PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		A2 LV servoTEC S2 Axis limit switch	= 302 + CC1
			Ed. by	Messmer				
			Appr				1078980	Page 51
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		Pg 110



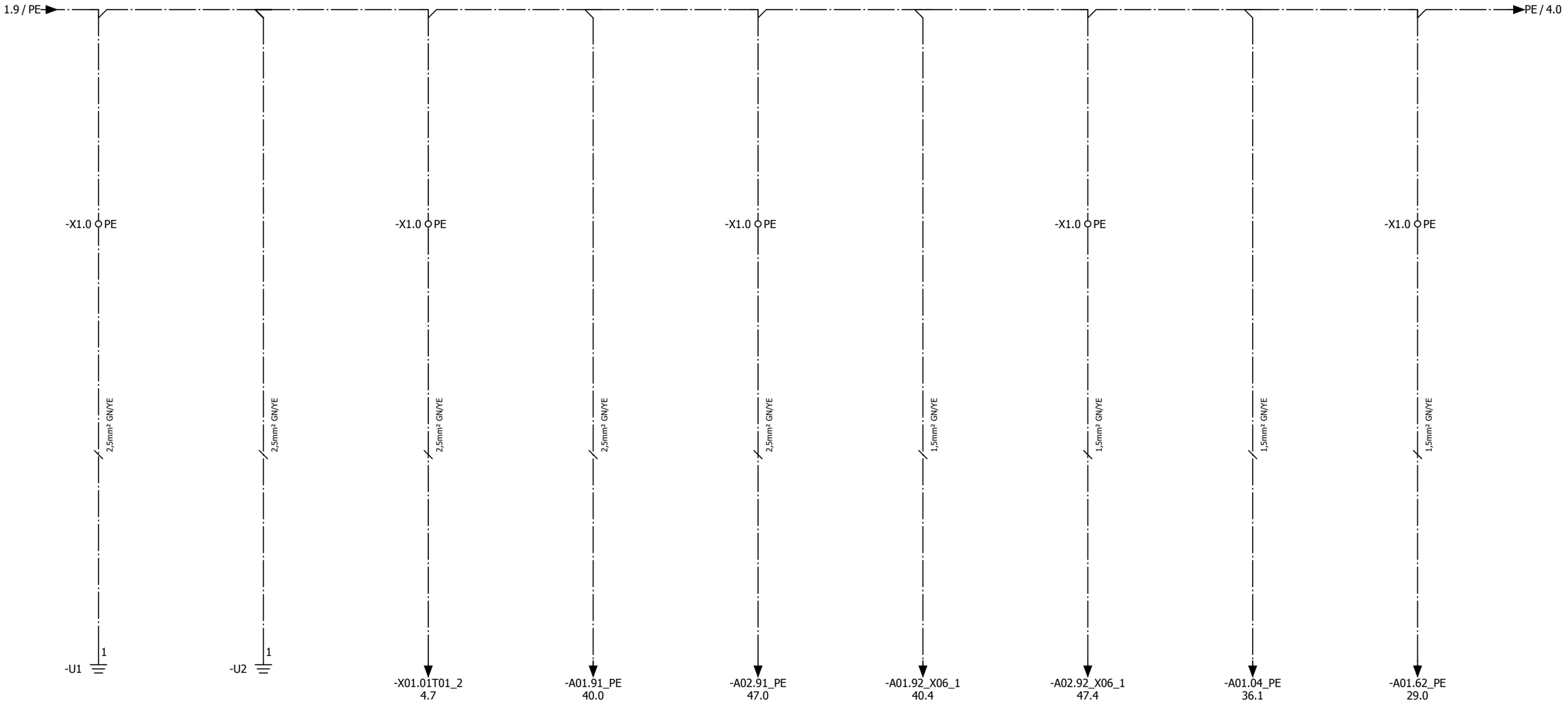
			Date	03.02.2009	PA-CONTROL_Steuer_LV-servoTEC_S2_3XX	Spare clamps	= 302	
			Ed. by	Messmer			+ CC1	
			Appr				1078980	Page 52
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		Pg 110



CAUTION

Is still energized when main switch is switched off!

			Date	03.02.2009		Power supply	= 305	
			Ed. by	Messmer			+ CC1	
			Appr		PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		1078980	Page 1
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		Pg 110



			Date	03.02.2009	PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		= 305	
			Ed. by	Messmer		PE-arrangement	+ CC1	
			Appr				1078980	Page 2
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		Pg 110

1.9 / -L10
1.9 / -L20
1.9 / -L30

L10 / 4.0
L20 / 4.0
L30 / 4.0

2,5mm² BK
2,5mm² BK
2,5mm² BK

-F03.91
C13A
1 3 5
2 4 6

-Q01.04K01
/9.7
1 3 5
2 4 6

-Q02.04K01
/9.7
1 3 5
2 4 6

5.0 / -L12
5.0 / -L22
5.0 / -L32

400V
Switch off after
emergency
stop situation time-delayed

			Date	03.02.2009		Arrangement 400V	= 305	
			Ed. by	Messmer			+ CC1	
			Appr		PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		1078980	Page 3
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		Pg 110

3.9 / L10
3.9 / L20
3.9 / L30
1.9 / L3
1.9 / N
2.9 / PE

L10 / 52.0
L20 / 52.0
L30 / 52.0
N / 52.0
PE / 5.0

-F01.01
C10A
1
2

1,5mm² OR
2,5mm² GN/YE
2,5mm² BU
1,5mm² GN/YE
1,5mm² BU

-X2.0 1 1PE 1N 2 2PE 2N

L PE N
-X01.10

-F01.02
C10A
1
2

1,5mm² BK
1,5mm² GN/YE
1,5mm² BU
1,5mm² BU
1,5mm² GN/YE

3 3PE 3N 4 4PE 4N

-T01.01
24V Power supply
L PE N
+ + - - -

DK/BU 1,5mm²
DK/BU 1,5mm²
1L+ 6.0
1L- 6.0

2.2
-X01.01T01_2

-X01.01T01
4 - 3 +
PE
2

Service-outlet
Switch cabinet

Spare

24V Power supply

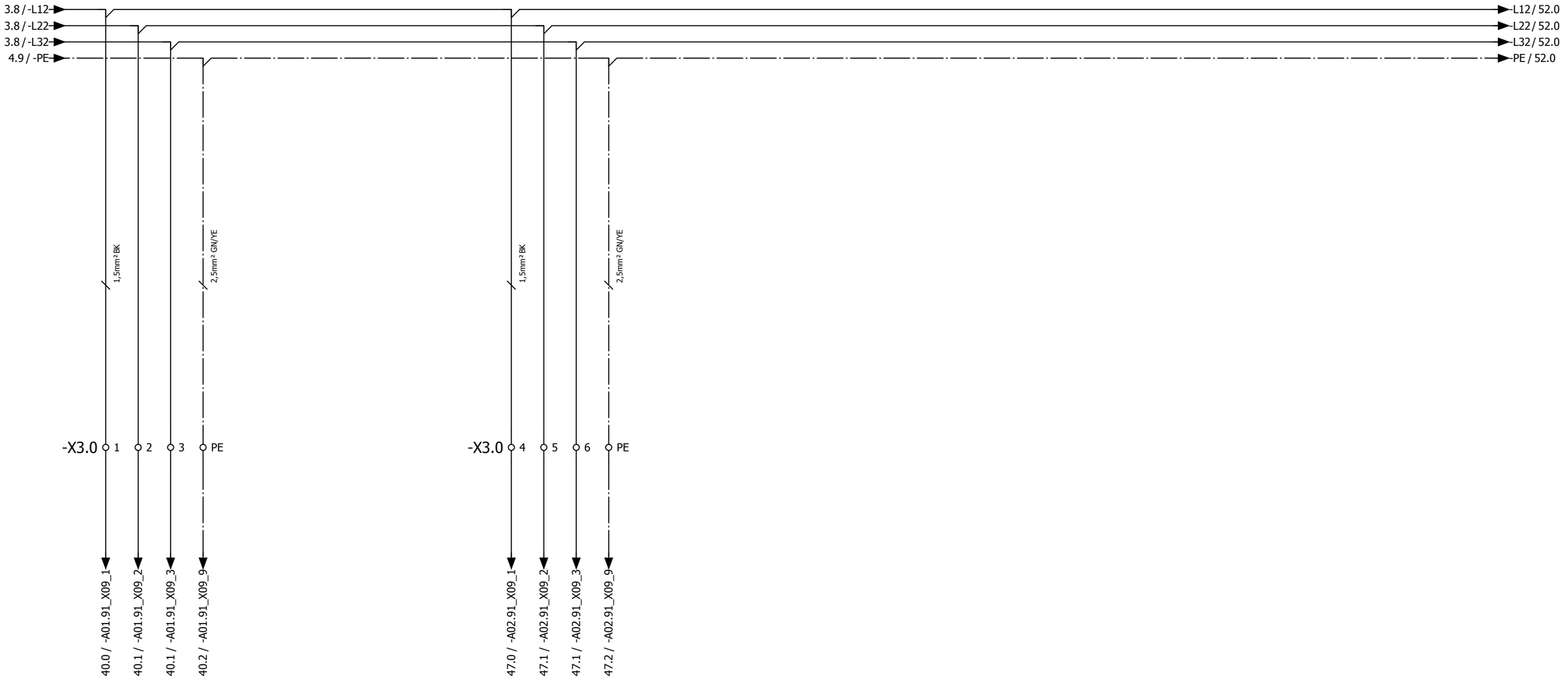
Earthed disconnect terminal

Spare

			Date	03.02.2009	PA-CONTROL_Steuer_LV-servoTEC_S2_3XX	
			Ed. by	Messmer		
			Appr			
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by

Service-outlet / 24V Power supply

= 305
+ CC1
1078980
Page 4
Pg 110



Supply voltage
LV servoTEC 1

Supply voltage
LV servoTEC 2

			Date	03.02.2009		Supply voltage LV servoTEC		= 305
			Ed. by	Messmer				+ CC1
			Appr		PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		1078980	Page 5
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		Pg 110

4.5 / 1L+

DK/BU 2,5mm²

-F01.00

+24V

13
14
/32.4

+24V

+24V

+24V ○—○ +24V

-F02.00

13
14
/32.4

+24V

DK/BU 2,5mm²

1L+ / 52.0

MICO 4.6 Power control

MICO 4.10 Power control

-F01.04 2A	-F02.04 6A	-F01.05 4A	-F01.06 4A				-F01.07 4A	-F01.08 4A	-F01.91 6A	-F02.91 8A									
				0V ○—○ 0V															
GND	1	2	3	4	GND		GND	1	2	3	4	GND							
0,75mm² DK/BU	0,75mm² DK/BU	0,75mm² DK/BU	0,75mm² DK/BU	0,75mm² DK/BU				0,75mm² DK/BU	0,75mm² DK/BU	0,75mm² DK/BU	0,75mm² DK/BU								
				53				1	53	73									
				-Q01.04K03 /12.5				-Q03.04K03 /12.7	-Q01.04K02 /11.7	-Q01.04K02 /11.7									
				54				2	54	74									
				53				1	53	73									
				-Q02.04K03 /12.6				-Q04.04K03 /12.8	-Q02.04K02 /11.7	-Q02.04K02 /11.7									
				54				2	54	74									
Clamp 1-8	Clamp 9-13	Clamp 14-19	Clamp 20-21				Clamp 22-25	Clamp 26-29	Clamp 30-35	Clamp 36-49									
-L01.04+ 9.0	-L02.04+ 7.0	-L01.05+ 7.0	-L01.06+ 7.0				-L01.07+ 52.0	-L01.08+ 52.0	-L01.91+ 40.0	-L02.91+ 40.0									
24V Emergency stop	24V General supply	24V Inputs	24V Outputs category A adjust mode without acceptance button				24V Outputs category B adjust mode only with acceptance button	24V Outputs category C adjust mode only with protective doors closed	24V Switch off after emergency stop, door open, time-delayed	24V Supply LVservoTEC									

-X1.1 ○ -1

4.5 / -1L-

-1L- / 7.0

5 7

			Date	03.02.2009			= 305	
			Ed. by	Messmer			+ CC1	
			Appr		PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		1078980	Page 6
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		Pg 110

WERNER

Fuse protection 24V

6.2 / L02.04+
6.4 / L01.06+
6.3 / L01.05+

L02.04+ / 14.0
-L01.06+ / 40.0
L01.05+ / 29.0

-X1.1 +19
-X1.1 +20
-X1.1 +9
-X1.1 +10
-X1.1 +14
+15

+CP1-W01.11A01
KAWEFLEX 3130
18x0,75
1
/7.0
/8.1
/8.1
/9.2
/9.2
/12.1

+CP1
-A01.11
/30.0

+CP1
-P01.03K01
/9.2
gn
X1
X2

+CP1-W01.11A01
KAWEFLEX 3130
18x0,75
2

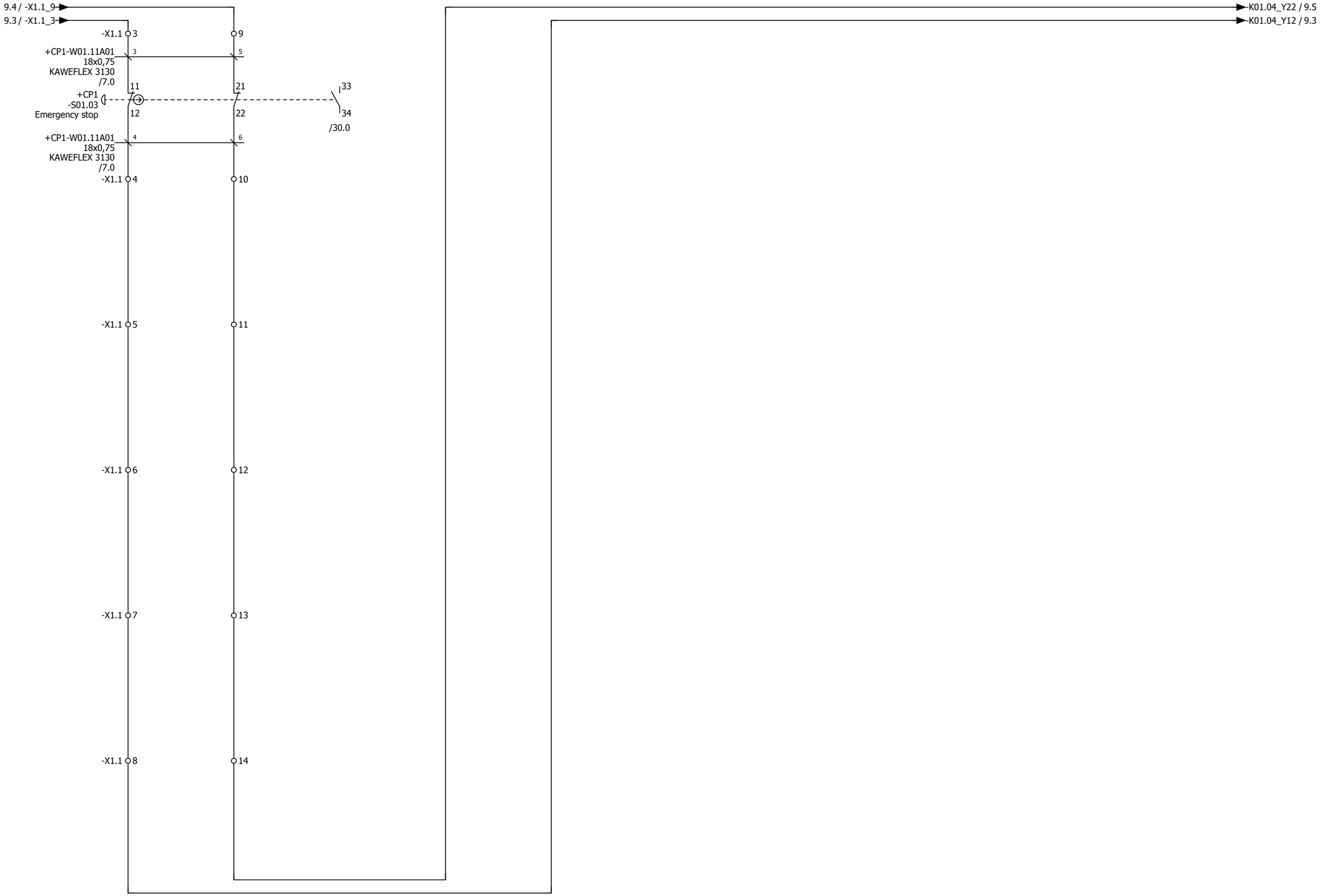
-X1.1 -2
-X1.1 -3
-X1.1 -4
-X1.1 -5

6.9 / 1L-
1L- / 9.0

Protection
cycle ON

6 8

			Date	03.02.2009	PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		= 305	
			Ed. by	Messmer		Protective circuit Signal ON	+ CC1	
			Appr				1078980	Page 7
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		Pg 110



			Date	03.02.2009			= 305	
			Ed. by	Messmer			+ CC1	
			Appr		PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		1078980	Page 8
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		Pg 110

WERNER

Emergency stop chain

6.1 / -L01.04+

-X1.1 +1

-X1.1 +2

L01.04+ / 11.0

+CP1-W01.11A01 7
18x0,75
KAWEFLEX 3130
/7.0

-Q02.04K01 -Q01.04K01 /9.7
21
22
21
22

+CP1
-S01.03K01
ON
13
14
X1
X2
/7.1

+CP1-W01.11A01 8
18x0,75
KAWEFLEX 3130
/7.0

-X1.1 1

-X1.1 2

8.0
-X1.1_3

8.9
-K01.04_Y12

8.0
-X1.1_9

8.9
-K01.04_Y22

-K01.04
3TK2828-2BB41

A1(+) Y33 Y34 Y10 Y11 Y12 Y21 Y22 13 23 47 57 31

SIEMENS

1,5 2,1 1,2 0,6 2,7 0,05 3,0s

13 14 23 24 47 48 57 58 31 32

A2(-) PE 14 24 48 58 32

12.1 / -K03.04_1

32.0 / -A04.02_1E1

-Q01.04K01 A1 A2 -R01.04K01 x1 U x2

-Q02.04K01 A1 A2 -R02.04K01 x1 U x2

-X1.1 -6

-X1.1 -7

7.9 / -1L+

-1L- / 11.0

1 2 /3.8
3 4 /3.8
5 6 /3.8
21 22 /9.1

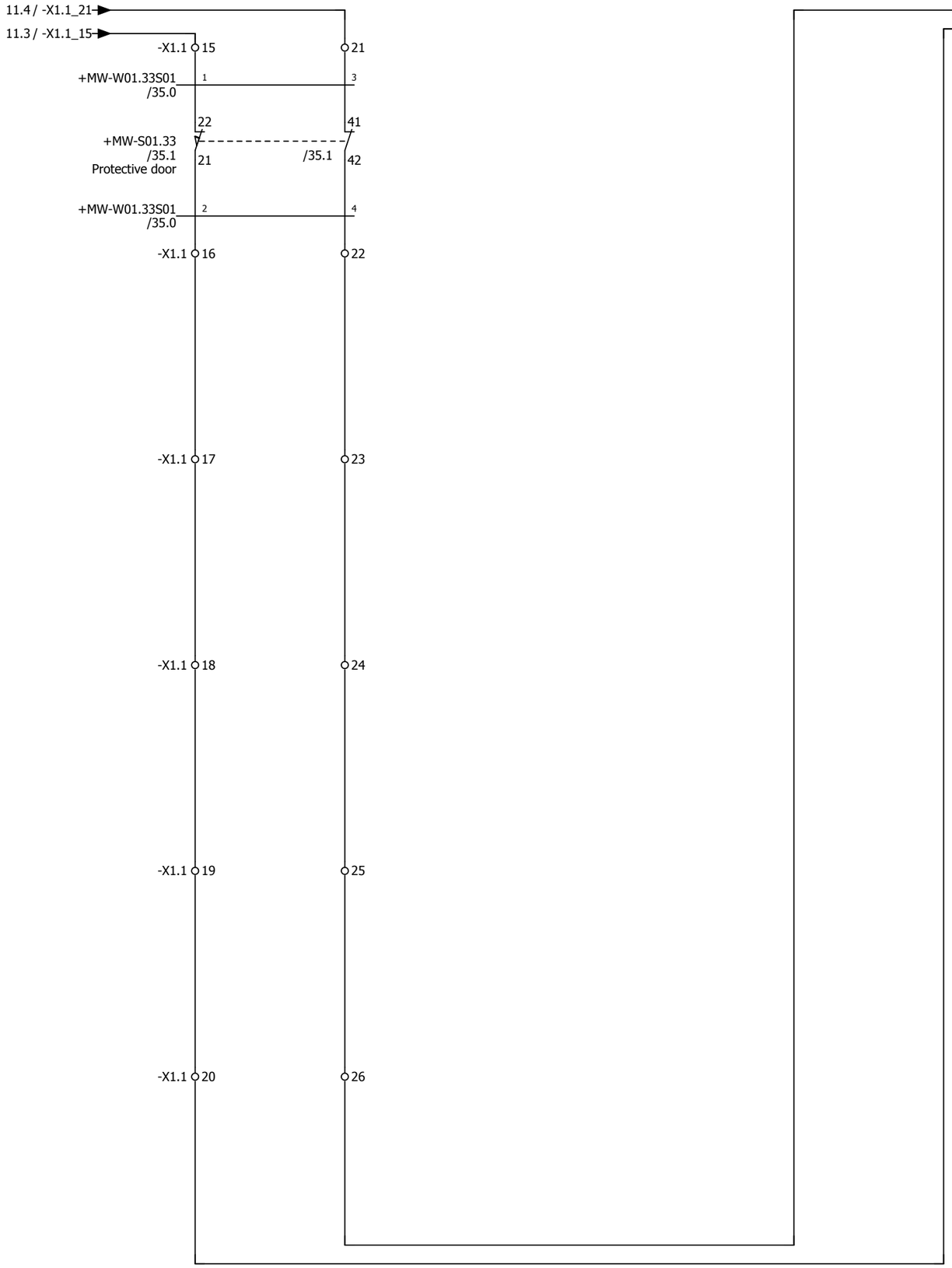
1 2 /3.8
3 4 /3.8
5 6 /3.8
21 22 /9.1

Safety module time-delayed
emergency-stop

8

10

			Date	03.02.2009	PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		= 305	
			Ed. by	Messmer		Safety module Emergency stop	+ CC1	
			Appr				1078980	Page 9
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		Pg 110



			Date	03.02.2009		Door cycle chain	= 305	
			Ed. by	Messmer			+ CC1	
			Appr		PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		1078980	Page 10
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		Pg 110

9.9 / -L01.04+

L01.04+ / 12.0

-X1.1 +3

-Q01.04K02 /11.7
21
22

-Q02.04K02 /11.7
21
22

-A01.91_X03_5
40.9

47.9
-K02.04_Y34

10.0
-X1.1_15

10.9
-K02.04_Y12

10.0
-X1.1_21

10.9
-K02.04_Y22

-K02.04
3TK2828-2BB41

A1(+) Y33 Y34 Y10 Y11 Y12 Y21 Y22 13 23 47 57 31

SIEMENS

1,5 2,1 1,2 0,6 2,7 0,05 3,0s

13 14 /12.3

23 24 /12.4

47 48

57 58

31 32

A2(-) PE 14 24 48 58 32

-Q01.04K02 A1 A2 -R01.04K02 x1 U x2

-Q02.04K02 A1 A2 -R02.04K02 x1 U x2

-X1.1 -8

9.9 / -1L

-1L- / 12.0

Safety module
protective door circuit chain

1	2	
3	4	
5	6	
21	22 /11.2	
53	54 /6.6	
61	62	
73	74 /6.7	
83	84	

1	2	
3	4	
5	6	
21	22 /11.2	
53	54 /6.6	
61	62	
73	74 /6.7	
83	84	

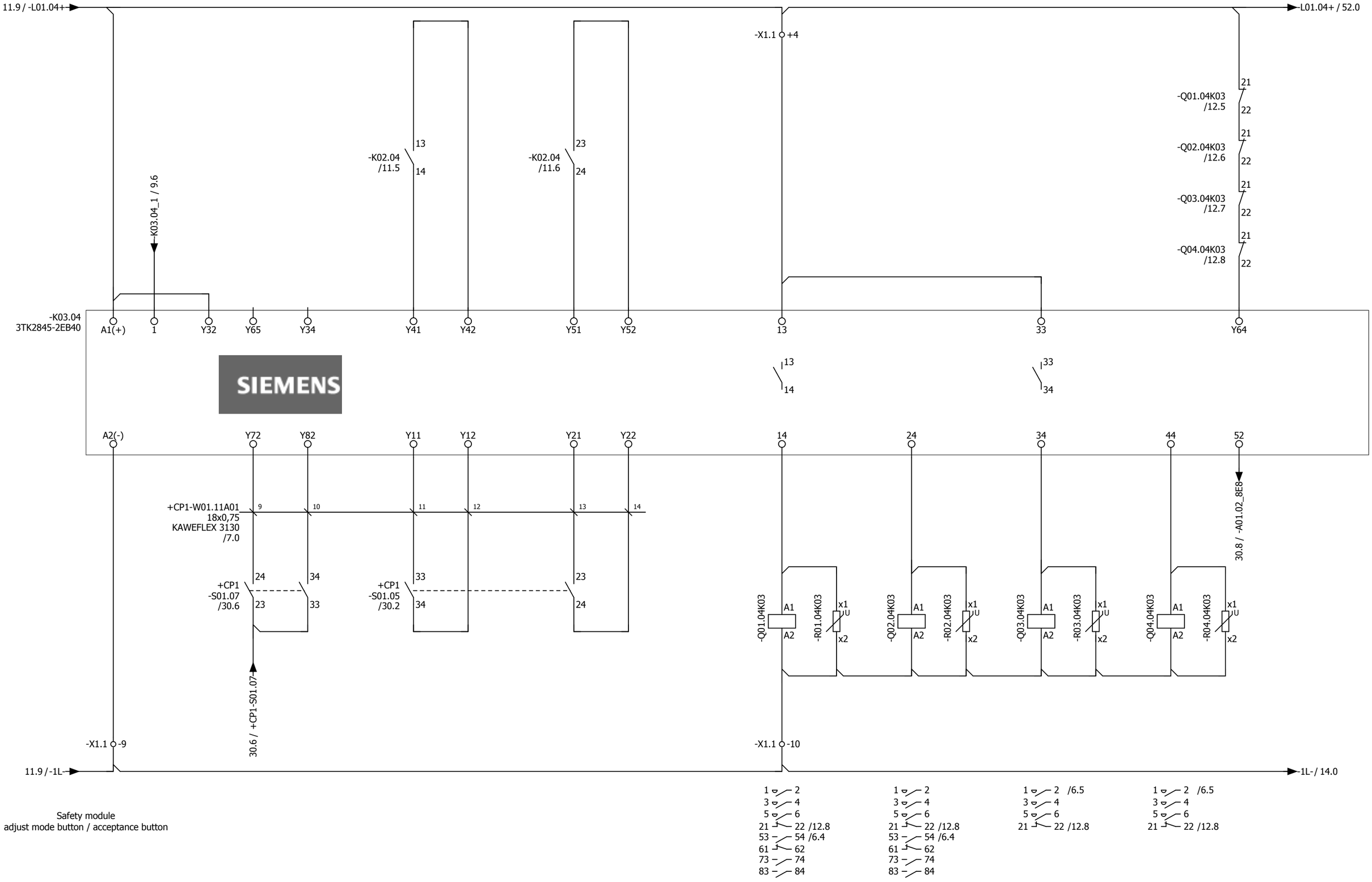
10

12

			Date	03.02.2009			= 305	
			Ed. by	Messmer			+ CC1	
			Appr		PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		1078980	Page 11
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		Pg 110

WERNER

Safety module
protective door circuit chain



Safety module
adjust mode button / acceptance button

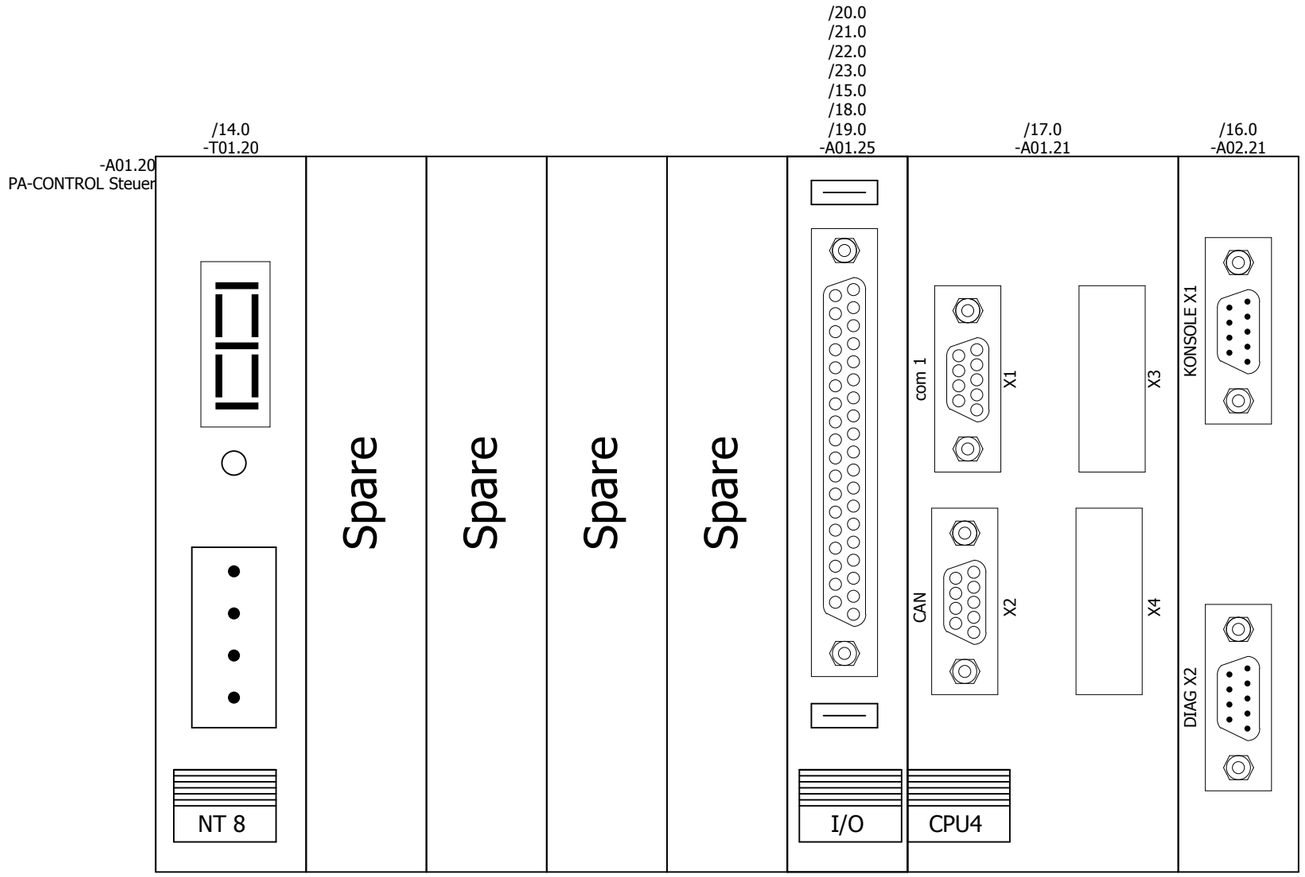
11

13

			Date	03.02.2009	PA-CONTROL_Steuer_LV-servoTEC_S2_3XX	
			Ed. by	Messmer		
			Appr			
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by

Safety module door
protective circuit adjust mode button / acceptance button

= 305
+ CC1
1078980
Page 12
Pg 110

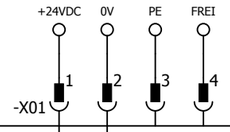


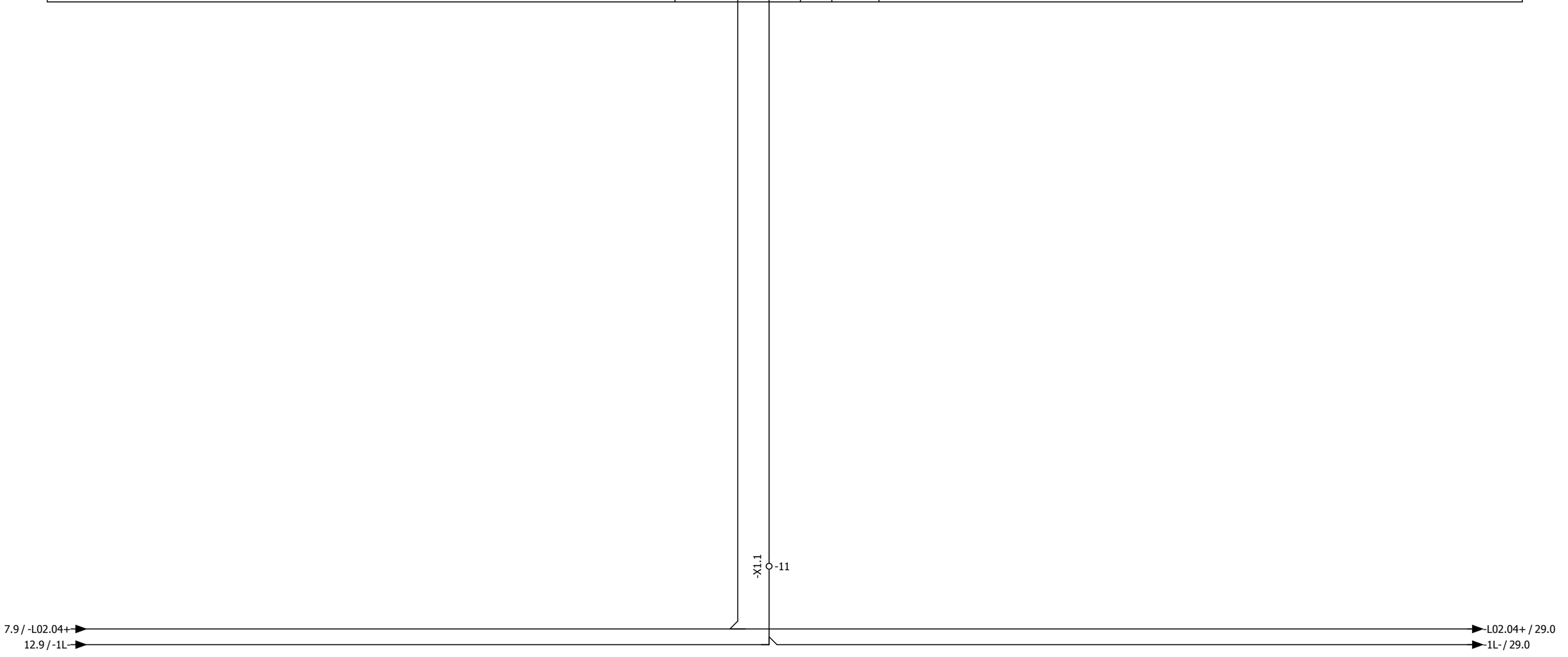
			Date	03.02.2009			= 305	
			Ed. by	Messmer			+ CC1	
			Appr		PA-CONTROL_Steuer_LV-servoTEC_S2_3XX	PA-CONTROL Steuer Overview	1078980	Page 13
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		Pg 110

-T01.20
/13.2

NT 8

Supply Voltage



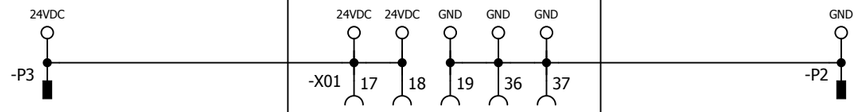


			Date	03.02.2009	PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		PA-CONTROL Steuer Power supply	= 305
			Ed. by	Messmer				+ CC1
			Appr					1078980 Page 14
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		Pg 110

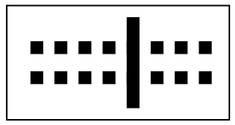
-A01.25
/13.5

I/O-board 1

Supply Voltage



JP1



1. I/O-board

			Date	03.02.2009	PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		PA-CONTROL Steuer Supply I/O-board 1	= 305
			Ed. by	Messmer				+ CC1
			Appr				1078980	Page 15
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		Pg 110

-A02.21
/13.6

KONSOLE / DIAG

KONSOLE

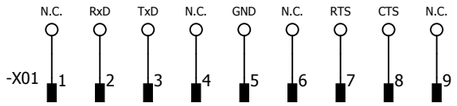
DIAG

			Date	03.02.2009	PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		PA-CONTROL Steuer Panel / Diag	= 305 + CC1
			Ed. by	Messmer				
			Appr				1078980	Page 16
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		Pg 110

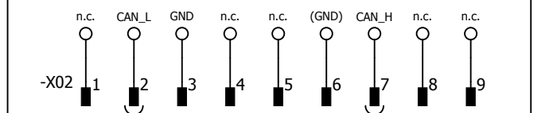
-A01.21
/13.5

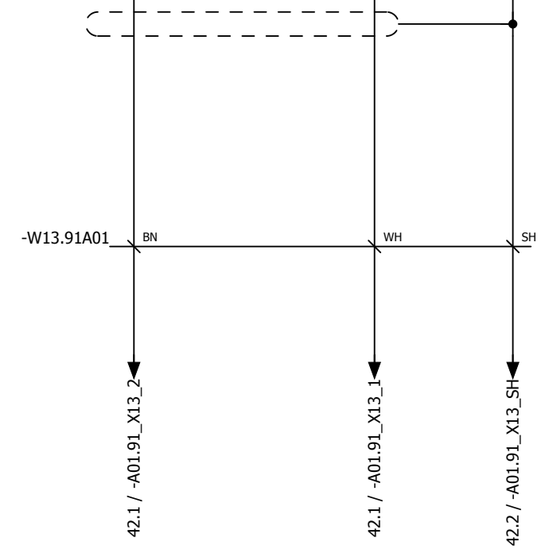
CPU 4

COM 1



CAN Bus





			Date	03.02.2009	PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		= 305	
			Ed. by	Messmer		PA-CONTROL Steuer CPU 4 / CAN bus	+ CC1	
			Appr				1078980	Page 17
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		Pg 110

0	1	2	3	4	5	6	7	8	9

-A01.25
/13.5

I1	/20.0	-A01.25-X01:1	Spare
I2	/20.2	-A01.25-X01:2	Spare
I3	/20.3	-A01.25-X01:3	Spare
I4	/20.4	-A01.25-X01:4	Spare
I5	/20.5	-A01.25-X01:5	Spare
I6	/20.6	-A01.25-X01:6	Spare
I7	/20.7	-A01.25-X01:7	Spare
I8	/20.8	-A01.25-X01:8	Spare
I9	/21.0	-A01.25-X01:9	Spare
I10	/21.2	-A01.25-X01:10	Spare
I11	/21.3	-A01.25-X01:11	Spare
I12	/21.4	-A01.25-X01:12	Spare
I13	/21.5	-A01.25-X01:13	Spare
I14	/21.6	-A01.25-X01:14	Spare
I15	/21.7	-A01.25-X01:15	Spare
I16	/21.8	-A01.25-X01:16	Spare

			Date	03.02.2009				= 305	
			Ed. by	Messmer				+ CC1	
			Appr		PA-CONTROL_Steuer_LV-servoTEC_S2_3XX			1078980	Page 18
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by			Pg 110

WERNER

Inputs overview
I1-I16

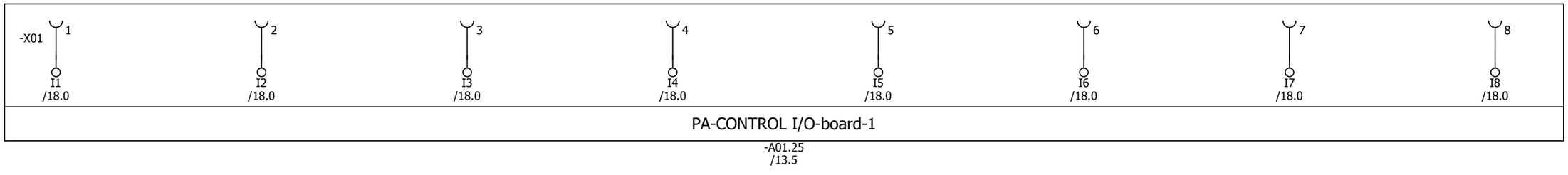
0	1	2	3	4	5	6	7	8	9

-A01.25
/13.5

O1	/22.0	-A01.25-X01:20	Spare
O2	/22.2	-A01.25-X01:21	Spare
O3	/22.3	-A01.25-X01:22	Spare
O4	/22.4	-A01.25-X01:23	Spare
O5	/22.5	-A01.25-X01:24	Spare
O6	/22.6	-A01.25-X01:25	Spare
O7	/22.7	-A01.25-X01:26	Spare
O8	/22.8	-A01.25-X01:27	Spare
O9	/23.0	-A01.25-X01:28	Spare
O10	/23.2	-A01.25-X01:29	Spare
O11	/23.3	-A01.25-X01:30	Spare
O12	/23.4	-A01.25-X01:31	Spare
O13	/23.5	-A01.25-X01:32	Spare
O14	/23.6	-A01.25-X01:33	Spare
O15	/23.7	-A01.25-X01:34	Spare
O16	/23.8	-A01.25-X01:35	Spare

			Date	03.02.2009					= 305	
			Ed. by	Messmer					+ CC1	
			Appr		PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		Outputs overview O1-O16			
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		1078980	Page	19
									Pg	110

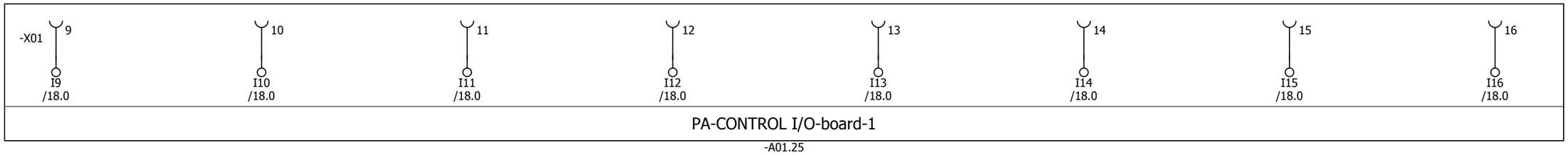
0	1	2	3	4	5	6	7	8	9



Spare	Spare	Spare	Spare	Spare	Spare	Spare	Spare

			Date	03.02.2009	PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		PA-CONTROL I/O-board-1 I1-I8	= 305 + CC1
			Ed. by	Messmer				
			Appr				1078980	Page 20
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		Pg 110

0	1	2	3	4	5	6	7	8	9



Spare	Spare	Spare	Spare	Spare	Spare	Spare	Spare	Spare	Spare

0	1	2	3	4	5	6	7	8	9

/13.5
-A01.25

PA-CONTROL I/O-board-1

/19.0 O1	/19.0 O2	/19.0 O3	/19.0 O4	/19.0 O5	/19.0 O6	/19.0 O7	/19.0 O8
-X01 /15.4 20	21	22	23	24	25	26	27
Spare	Spare	Spare	Spare	Spare	Spare	Spare	Spare

			Date	03.02.2009	PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		PA-CONTROL I/O-board 1 O1-O8	= 305
			Ed. by	Messmer				+ CC1
			Appr				1078980	Page 22
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		Pg 110

0	1	2	3	4	5	6	7	8	9

/13.5
-A01.25

PA-CONTROL I/O-board-1

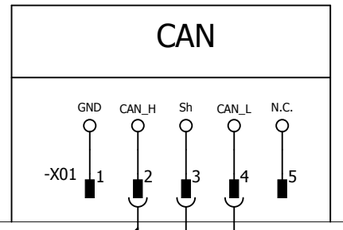
/19.0 O9	/19.0 O10	/19.0 O11	/19.0 O12	/19.0 O13	/19.0 O14	/19.0 O15	/19.0 O16
-X01 /15.4 28	29	30	31	32	33	34	35
Spare	Spare	Spare	Spare	Spare	Spare	Spare	Spare

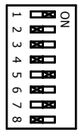
			Date	03.02.2009		PA-CONTROL I/O-board 1 O9-O16	= 305	
			Ed. by	Messmer			+ CC1	
			Appr		PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		1078980	Page 23
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		Pg 110

-A01.62
/29.0

BK5120

Bus address:17





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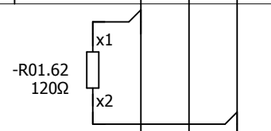


0,64mm² WH

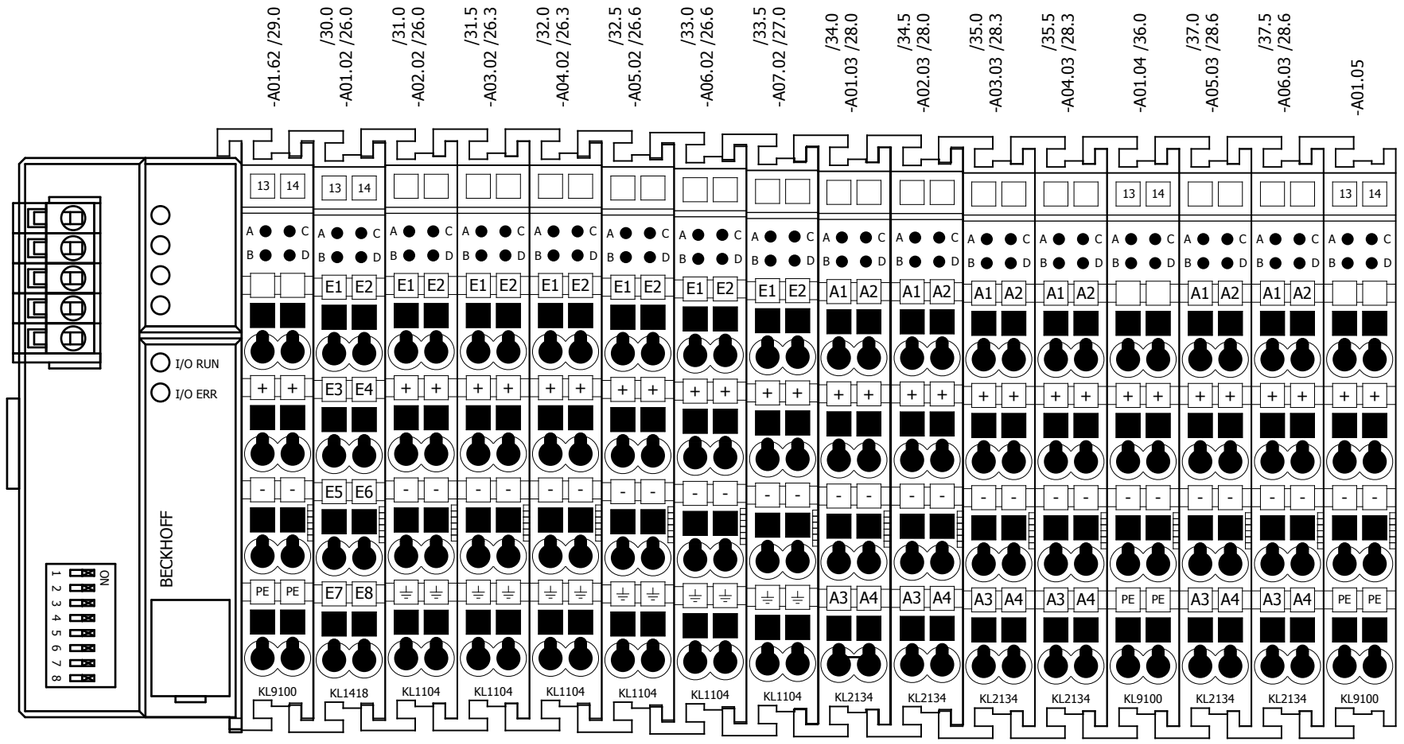
0,64mm² BN

49.3 / -A01.62_X01_2

49.5 / -A01.62_X01_3

49.4 / -A01.62_X01_4

			Date	03.02.2009			= 305	
			Ed. by	Messmer			+ CC1	
			Appr		PA-CONTROL_Steuer_LV-servoTEC_S2_3XX	Beckhoff BK5120 bus connection	1078980	Page 24
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		Pg 110



			Date	03.02.2009				= 305	
			Ed. by	Messmer				+ CC1	
			Appr		PA-CONTROL_Steuer_LV-servoTEC_S2_3XX				
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by	1078980	Page	25
								Pg	110

IEF WERNER

Overview
Beckhoff bus connection

0	1	2	3	4	5	6	7	8	9

-A01.02
/30.0

I1025	IN 1E1	/30.0	+CP1-S01.03	Emergency halt pressed operator panel	
I1026	IN 5E2	/30.2	+CP1-S01.05	Confirmation button	
I1027	IN 2E3	/30.3	+CP1-S01.04	Automatic Mode (I)	
I1028	IN 6E4	/30.4	+CP1-S01.04	Adjust mode (0)	
I1029	IN 3E5	/30.5	+CP1-S01.04	Step Mode (II)	
I1030	IN 7E6	/30.6	+CP1-S01.07	Bridge protective doors	
I1031	IN 4E7	/30.7		Spare	
I1032	IN 8E8	/30.8	-K03.04:52	Safety module adjust mode-/acceptance button	

-A02.02
/31.0
KL1104

I1033	1E1	/31.0	+MW-S01.33	Protective door open	
	2+	/31.1		Protective door open	
	3-	/31.1		Protective door open	
I1034	5E2	/31.2		Spare	
I1035	4E3	/31.3		Spare	
	6+	/31.3		Spare	
	7-	/31.4		Spare	
I1036	8E4	/31.4		Spare	

-A03.02
/31.5
KL1104

I1037	1E1	/31.5		Spare	
	2+	/31.5		Spare	
	3-	/31.6		Spare	
I1038	5E2	/31.6		Spare	
I1039	4E3	/31.8		Spare	
	6+	/31.8		Spare	
	7-	/31.8		Spare	
I1040	8E4	/31.9		Spare	

-A04.02
/32.0
KL1104

I1041	IN 1E1	/32.0	-K01.04:24	Safety module emergency-stop ON	
	DC24V 2+	/32.1		Safety module emergency-stop ON	
	M 3-	/32.1		Safety module emergency-stop ON	
I1042	IN 5E2	/32.2		Spare	
I1043	IN 4E3	/32.3	-F02.00	Spare	
	DC24V 6+	/32.3		Spare	
	M 7-	/32.4		Spare	
I1044	IN 8E4	/32.4	-F01.00	Fuse protection 24V I.O.	

-A05.02
/32.5
KL1104

I1045	IN 1E1	/32.5	+HGE-S01.10	Spare	
	DC24V 2+	/32.5		Spare	
	M 3-	/32.6		Spare	
I1046	IN 5E2	/32.6	+HGA-S01.10	Spare	
I1047	IN 4E3	/32.8	+TIS-S01.10	Spare	
	DC24V 6+	/32.8		Spare	
	M 7-	/32.8		Spare	
I1048	IN 8E4	/32.9	+TIS-S02.10	Spare	

-A06.02
/33.0
KL1104

I1049	IN 1E1	/33.0		Spare
	DC24V 2+	/33.1		Spare
	M 3-	/33.1		Spare
I1050	IN 5E2	/33.2		Spare
I1051	IN 4E3	/33.3		Spare
	DC24V 6+	/33.3		Spare
	M 7-	/33.4		Spare
I1052	IN 8E4	/33.4		Spare

			Date	03.02.2009				= 305	
			Ed. by	Messmer				+ CC1	
			Appr		PA-CONTROL_Steuer_LV-servoTEC_S2_3XX			1078980	Page 26
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by			Pg 110

WERNER

Inputs overview
I1025-1052

0	1	2	3	4	5	6	7	8	9

-A07.02
/33.5

IN 1E1 I1053	/33.5	+PWE-S01.10	Spare	
DC24V 2+	/33.5		Spare	
M 3-	/33.6		Spare	
IN 5E2 I1054	/33.6	+PWA-S01.10	Spare	
IN 4E3 I1055	/33.8		Spare	
DC24V 6+	/33.8		Spare	
M 7-	/33.8		Spare	
IN 8E4 I1056	/33.9		Spare	

			Date	03.02.2009		Inputs overview I1053-1056		= 305	
			Ed. by	Messmer				+ CC1	
			Appr		PA-CONTROL_Steuer_LV-servoTEC_S2_3XX			1078980	Page 27
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by			Pg 110

0	1	2	3	4	5	6	7	8	9

-A01.03
/34.0

OUT O1025 1A1	/34.0	-H01.00	Operation Mode (Signal lights)	
DC24V 2+	/34.1		Operation Mode (Signal lights)	
M 3-	/34.1		Operation Mode (Signal lights)	
OUT O1026 5A2	/34.2	-H02.00	Level (Signal lights)	
OUT O1027 4A3	/34.3	-H03.00	Error (Signal lights)	
DC24V 6+	/34.3		Error (Signal lights)	
M 7-	/34.4		Error (Signal lights)	
OUT O1028 8A4	/34.4		Spare	

-A02.03
/34.5

OUT O1029 1A1	/34.5		Spare	
DC24V 2+	/34.5		Spare	
M 3-	/34.6		Spare	
OUT O1030 5A2	/34.6		Spare	
OUT O1031 4A3	/34.8		Spare	
DC24V 6+	/34.8		Spare	
M 7-	/34.8		Spare	
OUT O1032 8A4	/34.9		Spare	

-A03.03
/35.0

OUT O1033 1A1	/35.0	+MW-S01.33	Close Protective door	
DC24V 2+	/35.1		Close Protective door	
M 3-	/35.1		Close Protective door	
OUT O1034 5A2	/35.2		Spare	
OUT O1035 4A3	/35.3		Spare	
DC24V 6+	/35.3		Spare	
M 7-	/35.4		Spare	
OUT O1036 8A4	/35.4		Spare	

-A04.03
/35.5

OUT O1037 1A1	/35.5		Spare	
DC24V 2+	/35.5		Spare	
M 3-	/35.6		Spare	
OUT O1038 5A2	/35.6		Spare	
OUT O1039 4A3	/35.8		Spare	
DC24V 6+	/35.8		Spare	
M 7-	/35.8		Spare	
OUT O1040 8A4	/35.9		Spare	

-A05.03
/37.0

OUT O1041 1A1	/37.0		Spare	
DC24V 2+	/37.1		Spare	
M 3-	/37.1		Spare	
OUT O1042 5A2	/37.2		Spare	
OUT O1043 4A3	/37.3		Spare	
DC24V 6+	/37.3		Spare	
M 7-	/37.4		Spare	
OUT O1044 8A4	/37.4		Spare	

-A06.03
/37.5

OUT O1045 1A1	/37.5		Spare	
DC24V 2+	/37.5		Spare	
M 3-	/37.6		Spare	
OUT O1046 5A2	/37.6		Spare	
OUT O1047 4A3	/37.8		Spare	
DC24V 6+	/37.8		Spare	
M 7-	/37.8		Spare	
OUT O1048 8A4	/37.9		Spare	

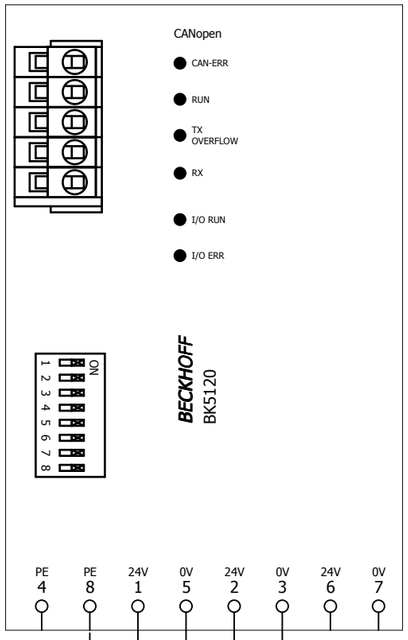
			Date	03.02.2009				= 305	
			Ed. by	Messmer				+ CC1	
			Appr		PA-CONTROL_Steuer_LV-servoTEC_S2_3XX			1078980	Page 28
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by			Pg 110

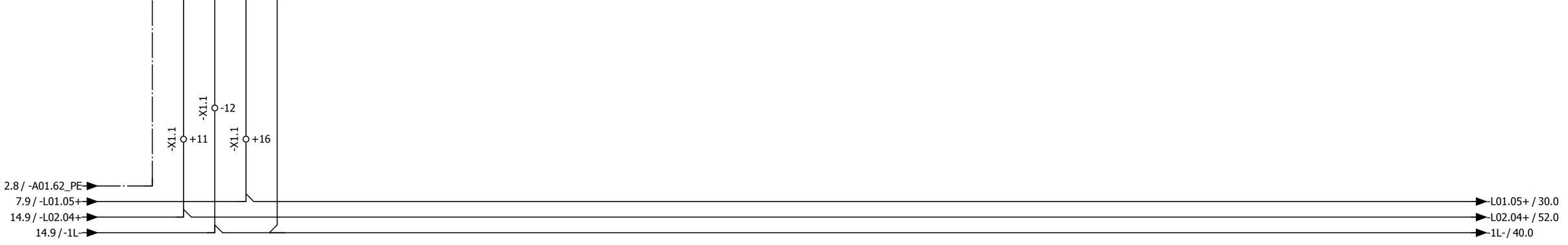
WERNER

Outputs overview
O1025-1048

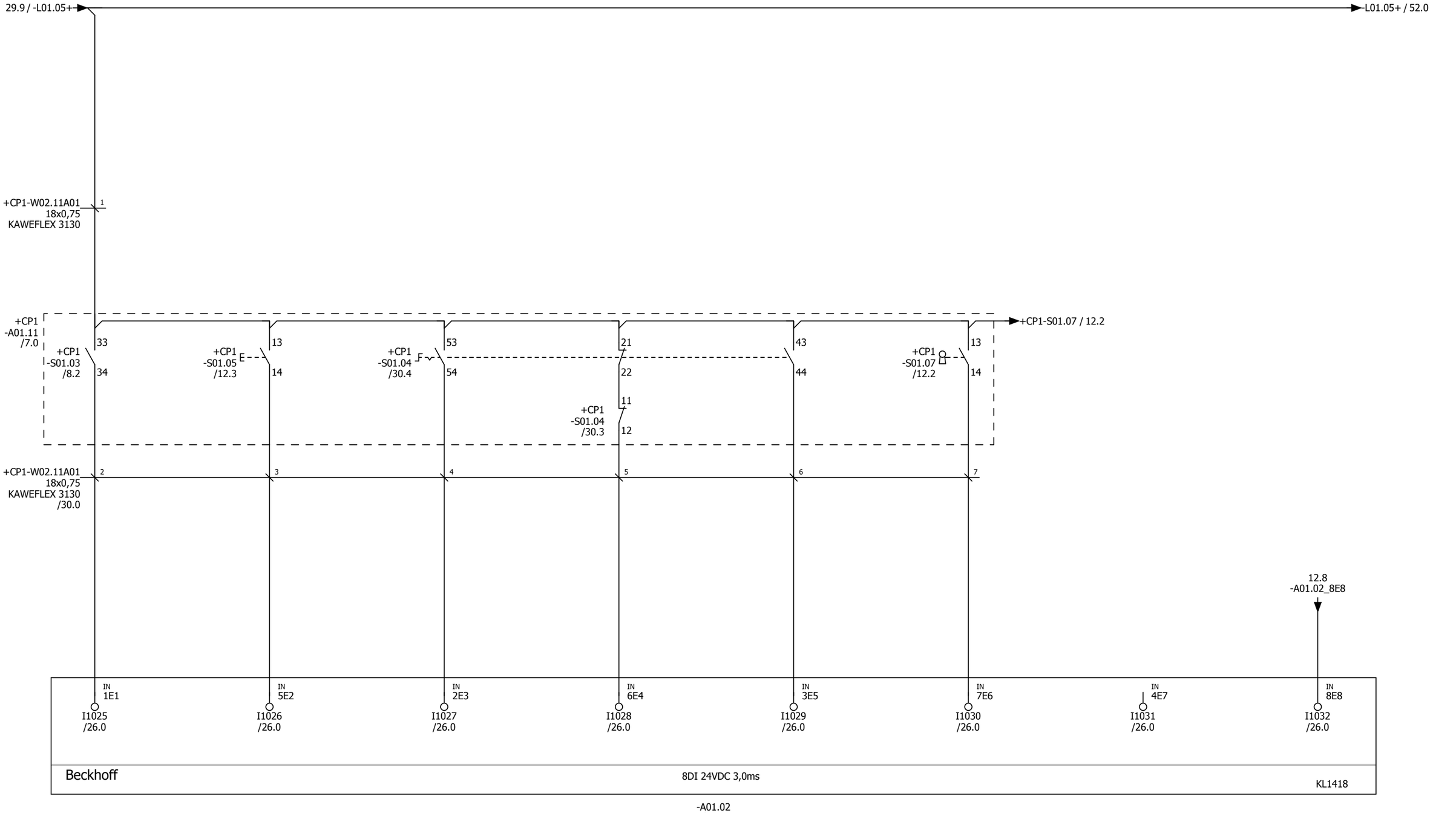
0	1	2	3	4	5	6	7	8	9

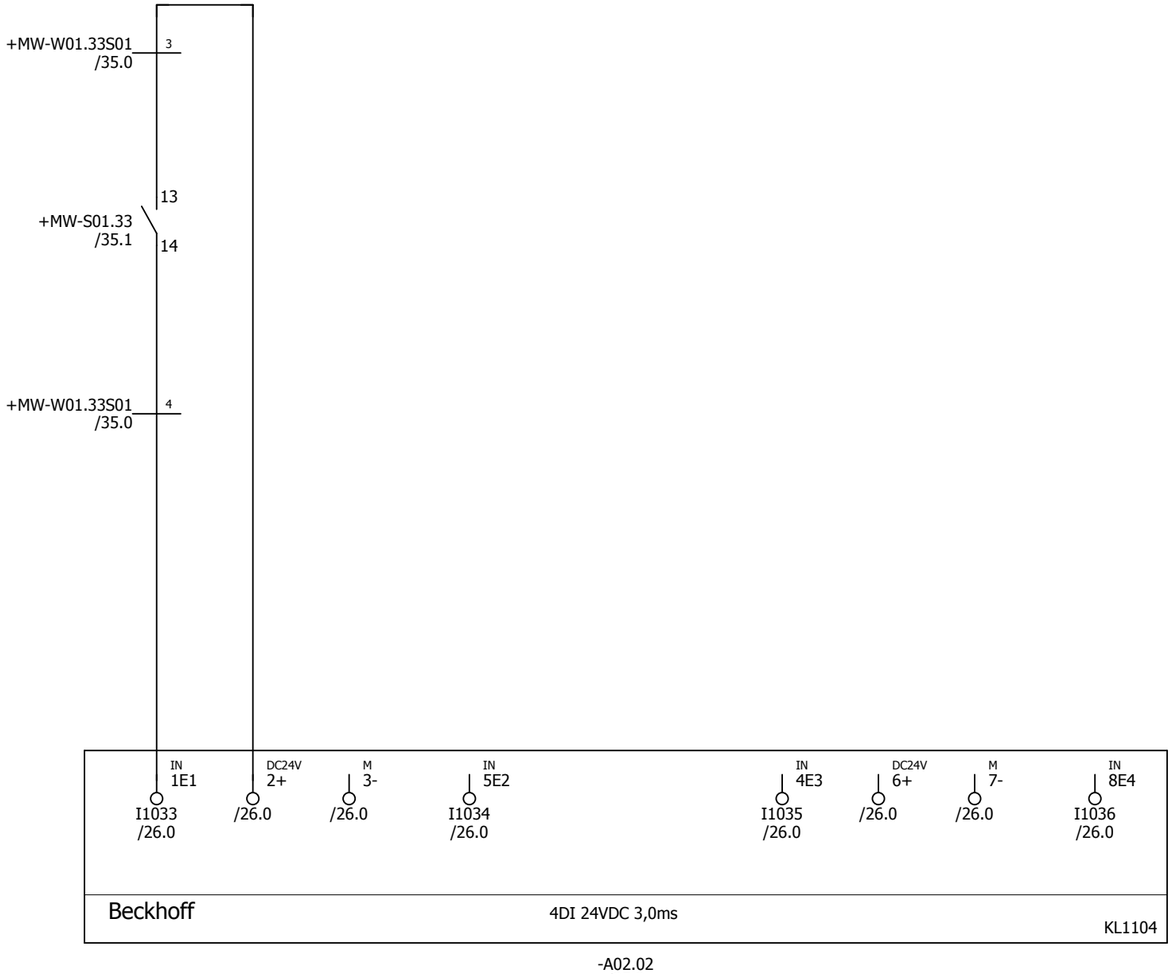
-A01.62
/24.0
/25.1



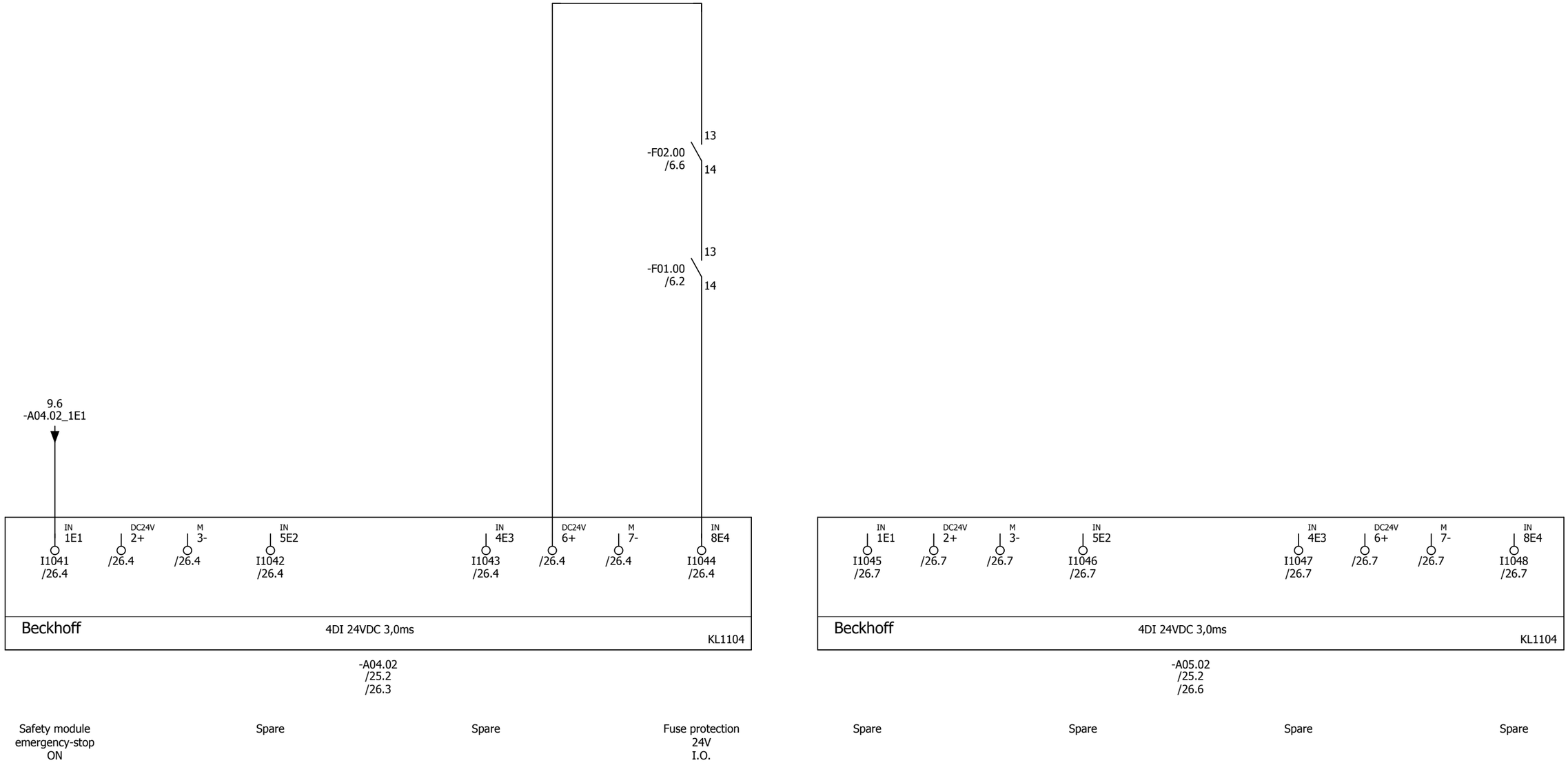


			Date	03.02.2009	PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		Beckhoff BK5120 Supply voltage	= 305	
			Ed. by	Messmer				+ CC1	
			Appr					1078980	Page 29
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by			Pg 110


29.9 / -L01.05+
L01.05+ / 52.0
+CP1-W02.11A01
18x0,75
KAWEFLEX 3130
1
+CP1
-A01.11
/7.0
+CP1-S01.07 / 12.2
+CP1
-S01.03
/8.2
33
34
+CP1
-S01.05
/12.3
E
13
14
+CP1
-S01.04
/30.4
F
53
54
21
22
+CP1
-S01.04
/30.3
11
12
43
44
+CP1
-S01.07
/12.2
13
14
+CP1-W02.11A01
18x0,75
KAWEFLEX 3130
/30.0
2
3
4
5
6
7
12.8
-A01.02_8E8
IN
1E1
I1025
/26.0
IN
5E2
I1026
/26.0
IN
2E3
I1027
/26.0
IN
6E4
I1028
/26.0
IN
3E5
I1029
/26.0
IN
7E6
I1030
/26.0
IN
4E7
I1031
/26.0
IN
8E8
I1032
/26.0
Beckhoff
8DI 24VDC 3,0ms
KL1418
-A01.02
/25.1
/26.0
Emergency
halt pressed
operator panel
Confirmation
button
Automatic Mode (I)
Adjust mode (0)
Step Mode
(II)
Bridge protective
doors
Spare
Safety module
adjust
mode-/acceptance button



			Date	03.02.2009			= 305	
			Ed. by	Messmer			+ CC1	
			Appr		PA-CONTROL_Steuer_LV-servoTEC_S2_3XX	Inputs connection I1032-1039	1078980	Page 31
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		Pg 110

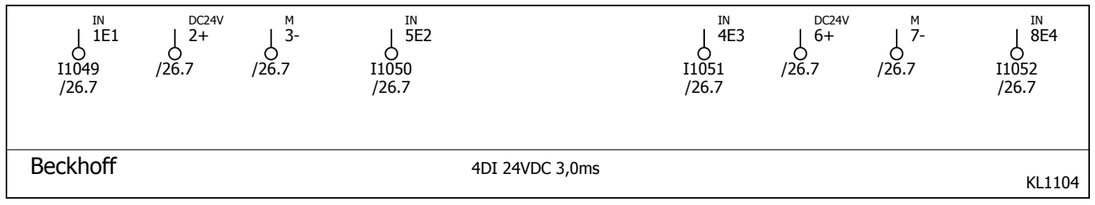


			Date	03.02.2009			= 305	
			Ed. by	Messmer			+ CC1	
			Appr		PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		1078980	Page 32
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		Pg 110

WERNER

Inputs connection
I1040-1047

0	1	2	3	4	5	6	7	8	9



-A06.02
/25.3
/26.6

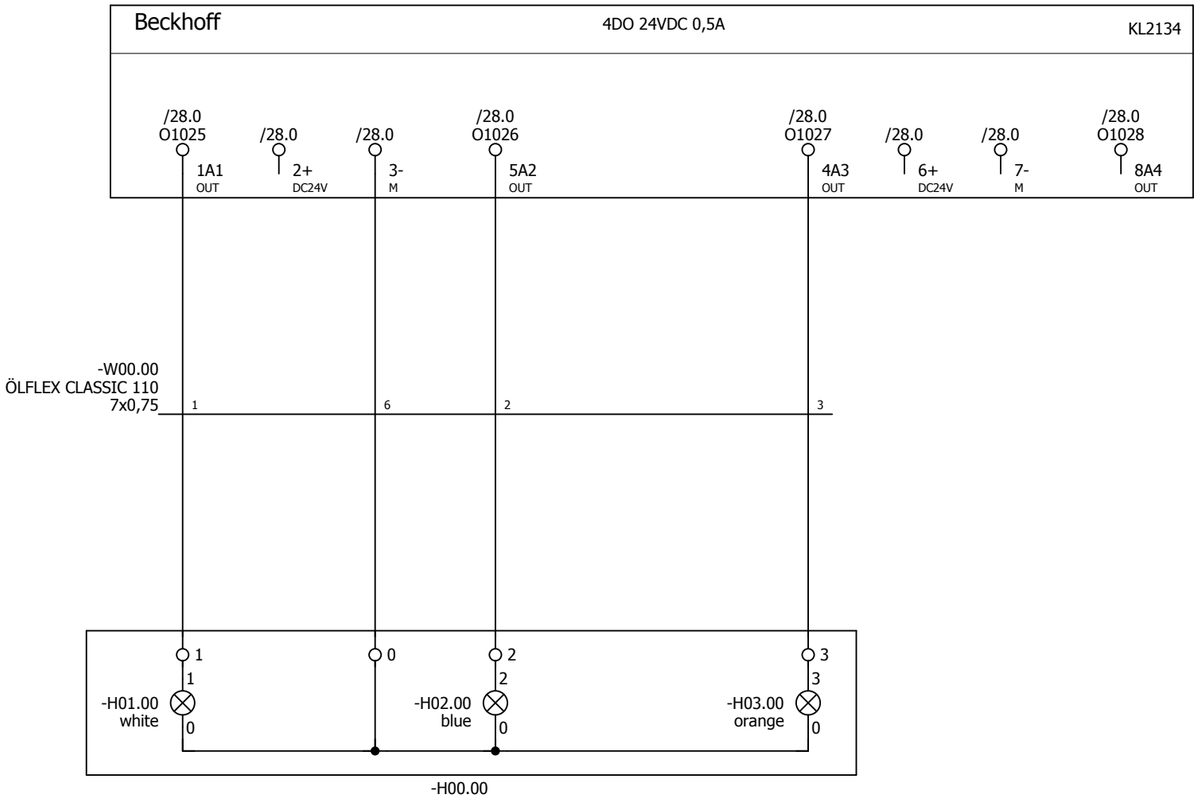
Spare | Spare | Spare | Spare

-A07.02
/25.3
/27.0

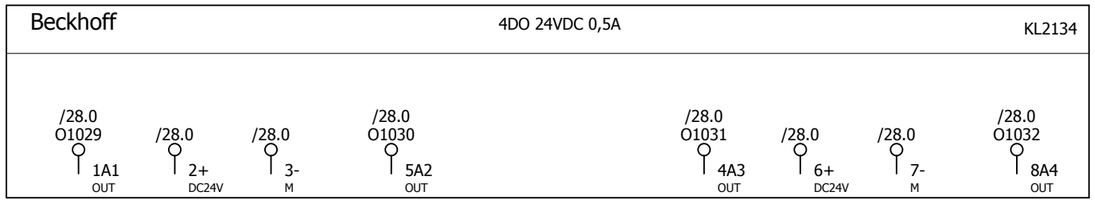
Spare | Spare | Spare | Spare

			Date	03.02.2009		Inputs connection I1048-1055	= 305	
			Ed. by	Messmer			+ CC1	
			Appr		PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		1078980	Page 33
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		Pg 110

/25.3
/28.0
-A01.03



/25.4
/28.0
-A02.03



Operation Mode (Signal lights)	Level (Signal lights)	Error (Signal lights)	Spare	Spare	Spare	Spare	Spare

			Date	03.02.2009	PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		= 305
			Ed. by	Messmer		Outputs connection O1025-1032	+ CC1
			Appr				1078980 Page 34
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by	Pg 110

/25.4
/28.3
-A03.03

Beckhoff — 4DO 24VDC 0,5A — KL2134

/28.4 O1033	/28.4	/28.4	/28.4 O1034	/28.4 O1035	/28.4	/28.4	/28.4 O1036
1A1 OUT	2+ DC24V	3- M	5A2 OUT	4A3 OUT	6+ DC24V	7- M	8A4 OUT

/25.4
/28.3
-A04.03

Beckhoff — 4DO 24VDC 0,5A — KL2134

/28.4 O1037	/28.4	/28.4	/28.4 O1038	/28.4 O1039	/28.4	/28.4	/28.4 O1040
1A1 OUT	2+ DC24V	3- M	5A2 OUT	4A3 OUT	6+ DC24V	7- M	8A4 OUT

+MW-W01.33S01 7
12x0,75
ÖLFLEX CLASSIC 110

+MW-S01.33

11	22	42	51	71	13	63
12	21	41	52	72	14	64

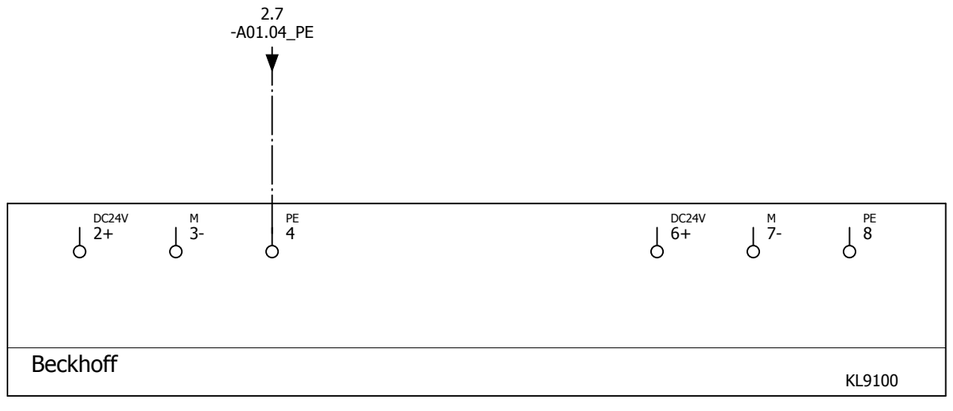
/10.1 /10.2 /31.0

+MW-W01.33S01 8
12x0,75
ÖLFLEX CLASSIC 110
/35.0

Close Protective door	Spare	Spare	Spare	Spare	Spare	Spare	Spare

			Date	03.02.2009			Outputs connection O1033-1040		= 305	
			Ed. by	Messmer					+ CC1	
			Appr		PA-CONTROL_Steuer_LV-servoTEC_S2_3XX			1078980	Page	35
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by			Pg	110

0	1	2	3	4	5	6	7	8	9



-A01.04
/25.4

			Date	03.02.2009	PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		Supply clamp		= 305
			Ed. by	Messmer					+ CC1
			Appr					1078980	Page 36
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by			Pg 110

/25.5
/28.6
-A05.03

Beckhoff — 4DO 24VDC 0,5A — KL2134

/28.7 O1041	/28.7	/28.7	/28.7 O1042	/28.7 O1043	/28.7	/28.7	/28.7 O1044
1A1 OUT	2+ DC24V	3- M	5A2 OUT	4A3 OUT	6+ DC24V	7- M	8A4 OUT

/25.5
/28.6
-A06.03

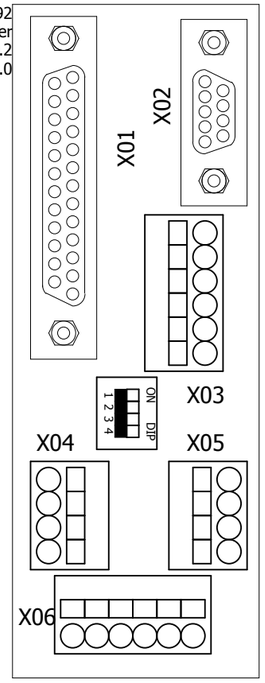
Beckhoff — 4DO 24VDC 0,5A — KL2134

/28.7 O1045	/28.7	/28.7	/28.7 O1046	/28.7 O1047	/28.7	/28.7	/28.7 O1048
1A1 OUT	2+ DC24V	3- M	5A2 OUT	4A3 OUT	6+ DC24V	7- M	8A4 OUT

Spare	Spare	Spare	Spare	Spare	Spare	Spare	Spare	Spare	Spare

			Date	03.02.2009	PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		Outputs connection O1041-1048	= 305	
			Ed. by	Messmer				+ CC1	
			Appr					1078980	Page 37
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by			Pg 110

-A01.92
LV servoTEC S2 IO-adapter
/40.2
/44.0



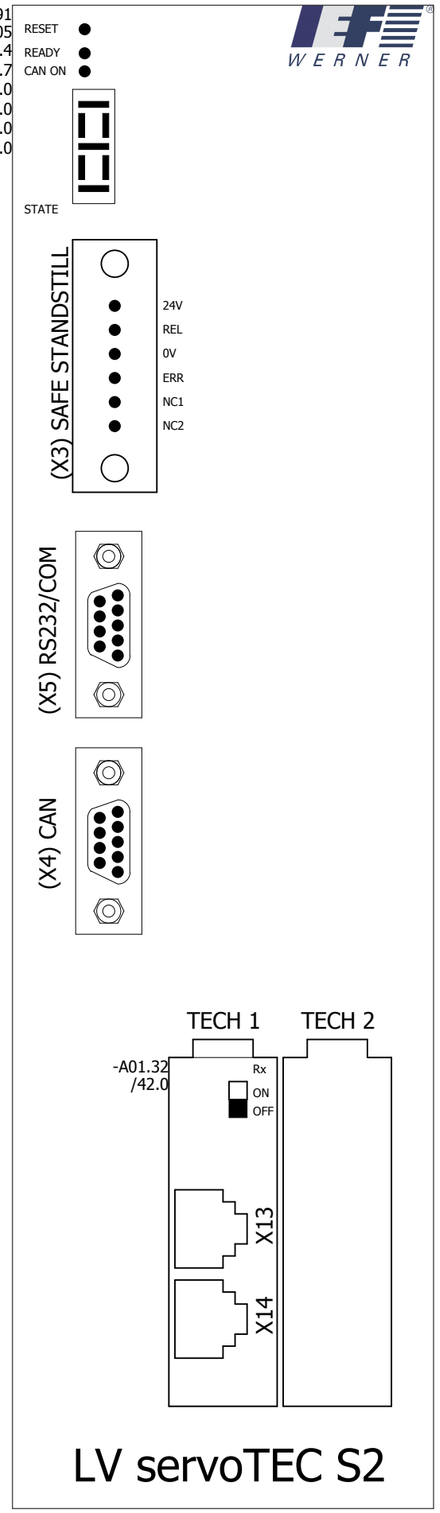
Offset-address			
DIP 1234	0	DIP 1234	8
DIP 1234	1	DIP 1234	9
DIP 1234	2	DIP 1234	10
DIP 1234	3	DIP 1234	11
DIP 1234	4	DIP 1234	12
DIP 1234	5	DIP 1234	13
DIP 1234	6	DIP 1234	14
DIP 1234	7	DIP 1234	15

Fieldbus	Base address (is set withS2 Commander)
CAN Open	Base Node number
Profibus	Slave-address
SERCOS	Drive-address

Bus address calculation: Bus-address = Base address + Offset-address

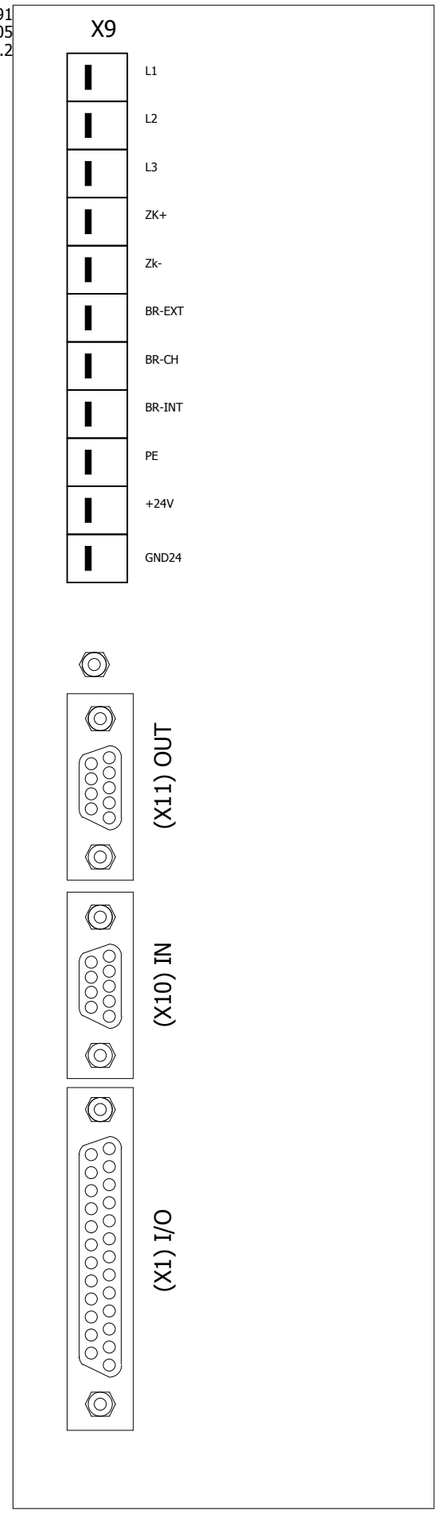
front

-A01.91
LV servoTEC_S2_305
/39.4
/39.7
/41.0
/42.0
/40.0
/43.0



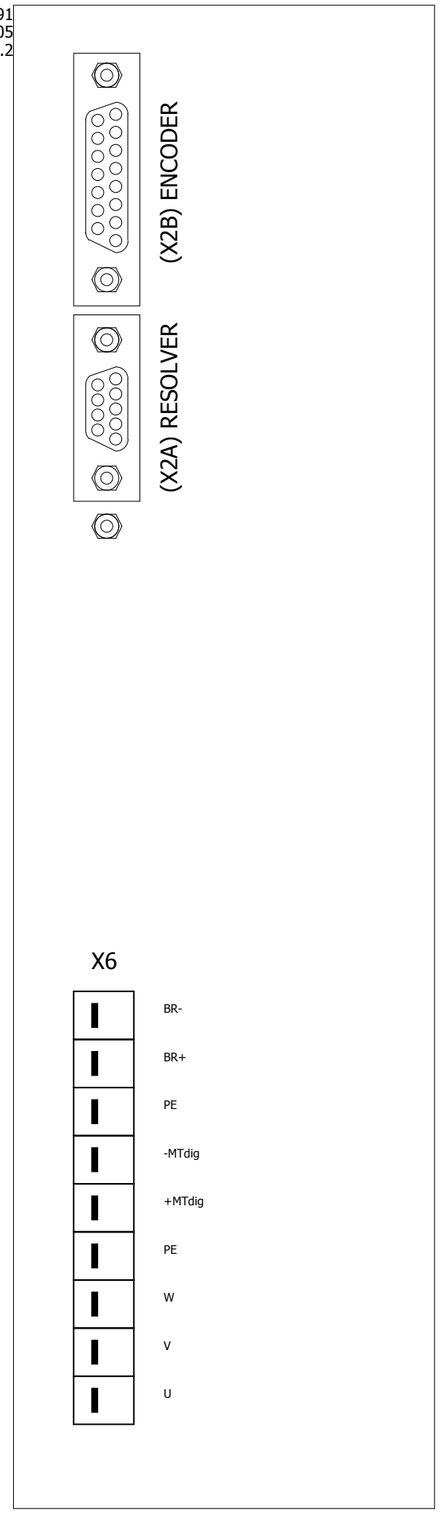
on top

-A01.91
LV servoTEC_S2_305
/39.2



below

-A01.91
LV servoTEC_S2_305
/39.2



			Date	03.02.2009		A1 LV servoTEC_S2_305 Overview		= 305
			Ed. by	Messmer				+ CC1
			Appr		PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		1078980	Page 39
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		Pg 110

-A01.91
/39.2

LV servoTEC S2

Supply voltage [X09]

Schutzerdung

-X09: L 1 | L2 2 | L3 3 | ZK+ 4 | ZK- 5 | BR-EXT 6 | BR-CH 7 | BR-INT 8 | PE 9 | +24V 10 | GND24V 11

2.3 / -A01.91_PE

5.1 / -A01.91_X09_1

5.1 / -A01.91_X09_2

5.1 / -A01.91_X09_3

5.1 / -A01.91_X09_9

I/O-communication [X01]

-X01: AGND 1 | AGND 14 | AINO 2 | #AINO 15 | AIN1 3 | AIN2 16 | +VREF 4 | AMON0 17 | AMON1 5 | +24V 18 | GND24 6 | DIN0 19 | DIN1 7 | DIN2 20 | DIN3 8 | Power supply Release DIN4 21 | Regulator Release DIN5 9 | END. NEG. DIN6 22 | END. POS. DIN7 10 | REF. DIN8 23 | DIN9 11 | READY DOUT0 24 | DOUT1 12 | DOUT2 25 | DOUT3 13

-W01.92A01: VT 0,14 | BK 0,14 | GY 0,14 | BN 0,14 | WH 0,14 | RD 0,14 | WH BK 0,14 | RD 0,14 | WH BN 0,14 | OG 0,14 | WH RD 0,14 | YE 0,14 | WH OG 0,14 | GN 0,14 | WH YE 0,14 | BU 0,14

-A01.92
/38.2

-X01: 1 | 14 | 2 | 15 | 3 | 16 | 4 | 17 | 5 | 18 | 6 | 19 | 7 | 20 | 8 | 21 | 9 | 22 | 10 | 23 | 11 | 24 | 12 | 25 | 13

n.c. | n.c. | n.c. | n.c. | n.c. | n.c. | n.c. | n.c. | n.c. | +24V | GND24 | DIN0 | DIN1 | DIN2 | DIN3 | DIN4 | DIN5 | DIN6 | DIN7 | DIN8 | DIN9 | DOUT0 | DOUT1 | DOUT2 | DOUT3

I/O-communication

Safe Standstill [X03]

-X03: 24V 1 | REL 2 | 0V 3 | ERR 4 | NC1 5 | NC2 6

11.2 / -A01.91_X03_5

47.9 / -A02.91_X03_5

LV servoTEC S2 IO-Adapter

Supply / release IN

-X04: +24V + | GND 0 | Endstufen Freigabe EF | Regler Freigabe RF

I/O

-X06: PE | DIN9 I9 | DOUT0 O0 | DOUT1 O1 | DOUT2 O2 | DOUT3 O3

2.5 / -A01.92_X06_1

Supply / release OUT

-X05: Regulator Release RF | Power supply Release EF | GND 0 | +24V +

47.3 / -A02.92_X04_4

47.3 / -A02.92_X04_3

47.3 / -A02.92_X04_2

47.3 / -A02.92_X04_1

-X1.1 +36

-X1.1 -13

-X1.1 +37

-X1.1 +30

-X1.1 +21

-X1.1 +31

7.9 / -L01.06+ → L01.06+ / 52.0

6.7 / -L01.91+ → L01.91+ / 47.0

6.8 / -L02.91+ → L02.91+ / 47.0

29.9 / -1L- → 1L- / 47.0

			Date	03.02.2009		
			Ed. by	Messmer		
			Appr		PA-CONTROL_Steuer_LV-servoTEC_S2_3XX	
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by

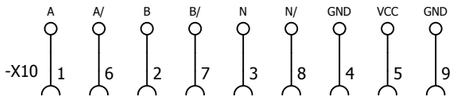
A1 LV servoTEC S2
Supply voltage

= 305
+ CC1
1078980
Page 40
Pg 110

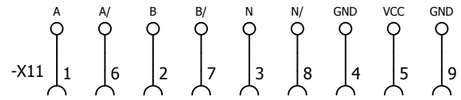
-A01.91
/39.2

LV servoTEC S2

Incremental encoder Input [X10]



Incremental encoder Output [X11]



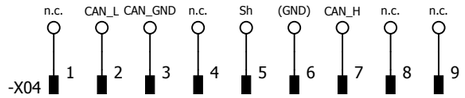
			Date	03.02.2009		A1 LV servoTEC S2 Incremental encoder	= 305	
			Ed. by	Messmer			+ CC1	
			Appr		PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		1078980	Page 41
Modification	Date	Name	Version	V0.01	Replacement for / Replaced by			Pg 110

-A01.91
/39.2

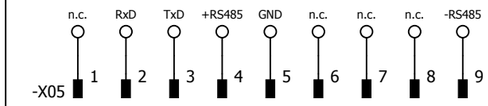
LV servoTEC S2

Bus address DP:17

CAN [X04]



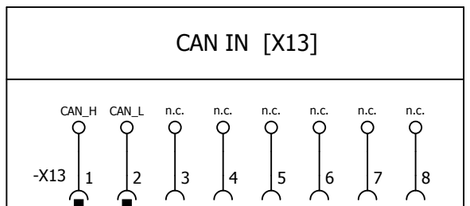
RS232/COM [X05]



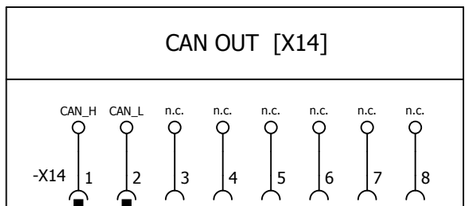
-A01.91-A01.32
/39.2

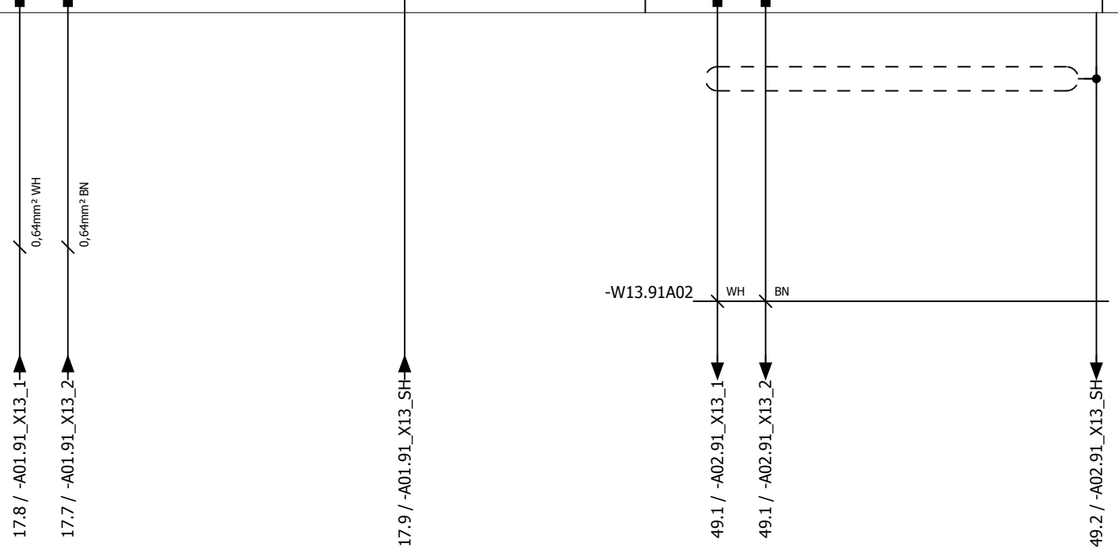
Terminating resistor

CAN IN [X13]



CAN OUT [X14]





			Date	03.02.2009		A1 LV servoTEC S2 CAN / RS232	= 305	
			Ed. by	Messmer			+ CC1	
			Appr		PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		1078980	Page 42
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		Pg 110

-A01.91
/39.2

LV servoTEC S2

Motor connection [X06]

-X06: PE 6 | U2 9 | V2 8 | W2 7 | BR- 1 | BR+ 2 | -MTdig 4 | +Mtdig 5 | PE 3

PE

SH1

SH

-W01.51M01 /43.0 9 m

-W01.51M01: GNYE U | V | W | BN2 | BN1

-M01.51

-X01: PE PE | U U | V V | W W | B B | A A

Motor

Resolver connection [X02A]

-X02A: Mt+ 5 | Mt- 8 | R1 4 | R2 9 | SINUS- 6 | SINUS+ 1 | COS- 7 | COS+ 2 | AGND 3

Encoder connection [X02B]

-X02B: #COS 7 | COS 14 | #SIN 8 | SIN 15 | DATA 12 | #DATA 5 | SCLK 13 | #SCLK 6 | U_SENS+ 9 | U_SENS- 2 | US 10 | GND 3 | MT+ 1 | n.c. 11 | n.c. 4

SH

-W02.51M01 /43.6

-W02.51M01: WH 0,25 | BN 0,25 | GN 0,25 | YE 0,25 | GY 0,25 | PK 0,25 | BU 0,25 | RD 0,25 | BK 0,25 | VT 0,25 | GYPK 0,25 | RDBU 0,25 | WHGN 0,25 | BNGN 0,25

-X02: 9 COS B+ | 1 COS B- | 11 SIN A+ | 3 SIN A- | 13 #DATA | 5 DATA | 15 #CLOCK | 8 CLOCK | 10 0V | 12 Up | 2 0V | 4 Up | 7 Thermo | 14 Thermo

Sinus-Cosinus Encoder

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			Date	03.02.2009	PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		A1 LV servoTEC S2 Motor connection	= 305 + CC1
			Ed. by	Messmer				
			Appr				1078980	Page 43
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		Pg 110

-A01.92
/38.2

LV servoTEC S2 IO-Adapter

Limit switch [X03]

LIM- LIM+ GND +24VDC PE REF

-X03 L- L+ 0 + PE R

Limit switch [X02]

LIM+ LIM- REF n.c. n.c. n.c. +24VDC n.c. GND

-X02 1 2 3 4 5 6 7 8 9

-W01.51A01
5x0,25
/44.2
/51.2

GN 0,25 | YE 0,25 | WH 0,25 | BN 0,25 | SH

-X01 2 4 3 1

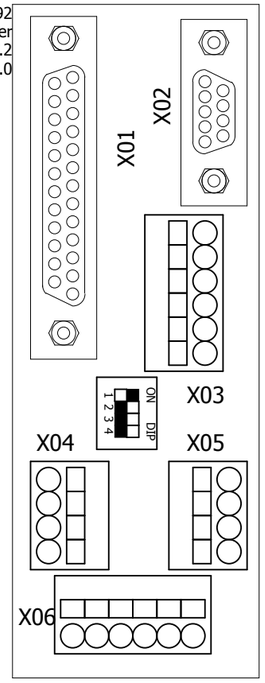
-B01.51A01: BK, BN, BU

-B02.51A01: BK, BN, BU

-A01.51

			Date	03.02.2009	PA-CONTROL_Steuer_LV-servoTEC_S2_3XX	A1 LV servoTEC S2 Axis limit switch	= 305 + CC1
			Ed. by	Messmer			
			Appr			1078980	Page 44
Modification	Date	Name	Version	V0.01	Replacement for / Replaced by		Pg 110

-A02.92
LV servoTEC S2 IO-adapter
/47.2
/51.0



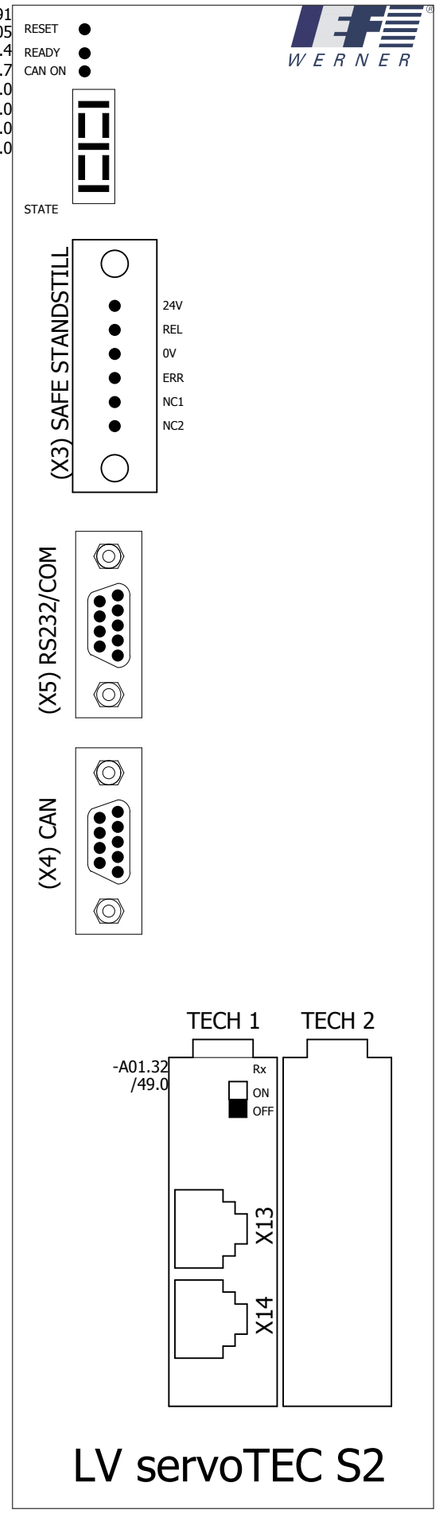
Offset-address			
DIP 1234	0	DIP 1234	8
DIP 1234	1	DIP 1234	9
DIP 1234	2	DIP 1234	10
DIP 1234	3	DIP 1234	11
DIP 1234	4	DIP 1234	12
DIP 1234	5	DIP 1234	13
DIP 1234	6	DIP 1234	14
DIP 1234	7	DIP 1234	15

Fieldbus	Base address (is set withS2 Commander)
CAN Open	Base Node number
Profibus	Slave-address
SERCOS	Drive-address

Bus address calculation: Bus-address = Base address + Offset-address

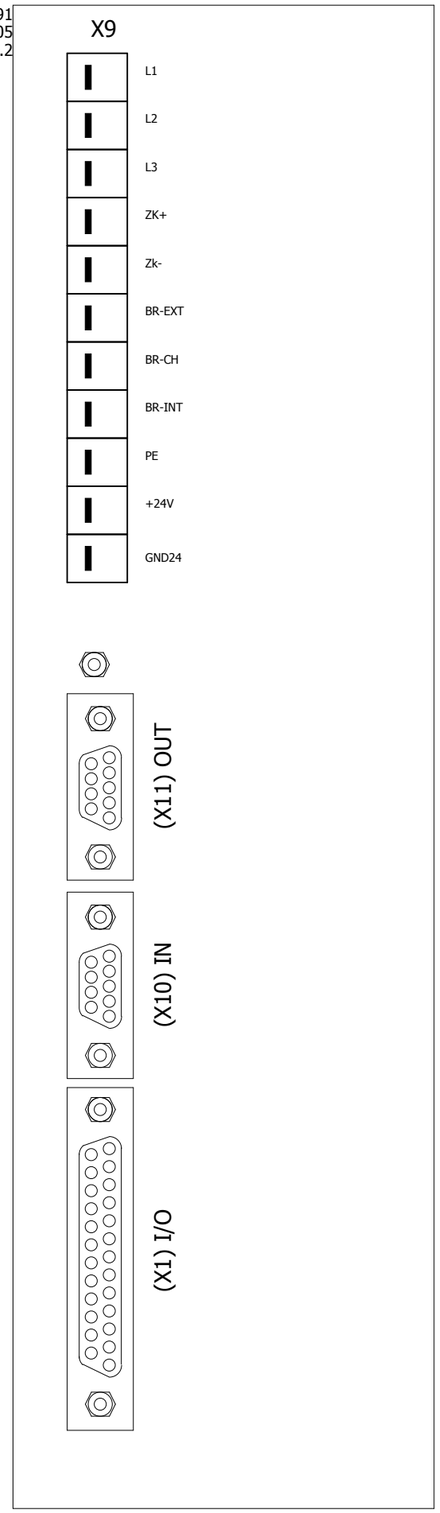
front

-A02.91
LV servoTEC_S2_305
/46.4
/46.7
/48.0
/49.0
/47.0
/50.0



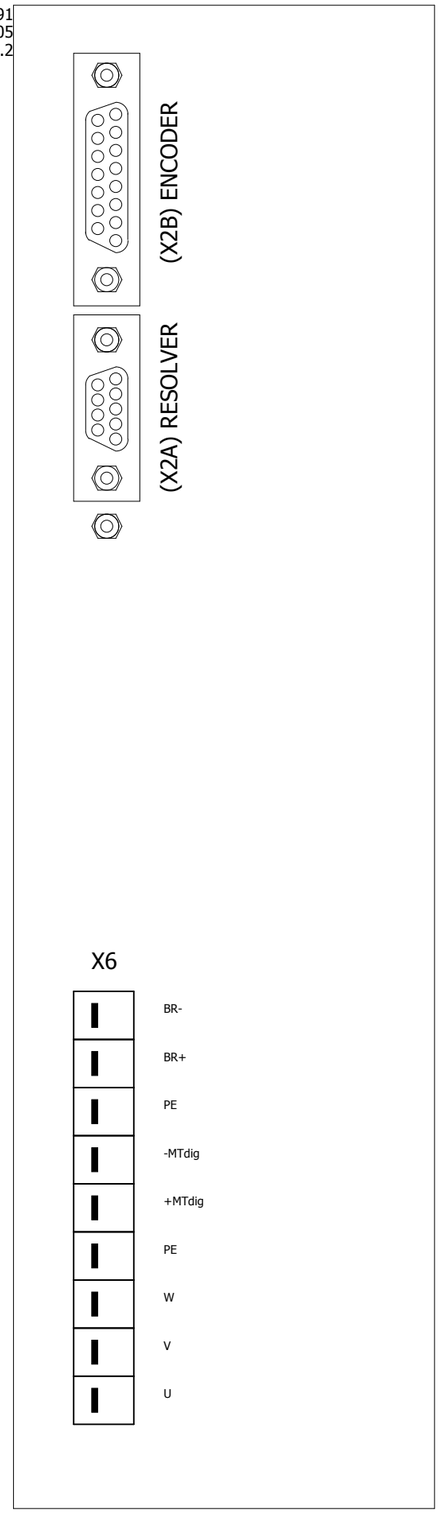
on top

-A02.91
LV servoTEC_S2_305
/46.2



below

-A02.91
LV servoTEC_S2_305
/46.2



			Date	03.02.2009		A2 LV servoTEC_S2_305 Overview	= 305	
			Ed. by	Messmer			+ CC1	
			Appr		PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		1078980	Page 46
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		Pg 110

-A02.91
/46.2

LV servoTEC S2

Supply voltage [X09]

Schutzerdung

-X09: 1 L | 2 L2 | 3 L3 | 4 ZK+ | 5 ZK- | 6 BR-EXT | 7 BR-CH | 8 BR-INT | 9 PE | 10 +24V | 11 GND24V

2.4 / -A02.91_PE

5.3 / -A02.91_X09_1

5.3 / -A02.91_X09_2

5.3 / -A02.91_X09_3

5.4 / -A02.91_X09_9

I/O-communication [X01]

-X01: 1 AGND | 14 AGND | 2 AINO | 15 #AINO | 3 AIN1 | 16 AIN2 | 4 +VREF | 17 AMON0 | 5 AMON1 | 18 +24V | 6 GND24 | 19 DIN0 | 7 DIN1 | 20 DIN2 | 8 DIN3 | 21 DIN4 (Power supply Release) | 9 DIN5 (Regulator Release) | 22 DIN6 (END. NEG.) | 10 DIN7 (END. POS.) | 23 DIN8 (REF.) | 11 DIN9 | 24 DOUT0 (READY) | 12 DOUT1 | 25 DOUT2 | 13 DOUT3

-W01.92A02: VT 0,14 | BK 0,14 | GY 0,14 | BN 0,14 | WH 0,14 | RD 0,14 | WH BK 0,14 | RD 0,14 | WH BN 0,14 | OG 0,14 | WH RD 0,14 | YE 0,14 | WH OG 0,14 | GN 0,14 | WH YE 0,14 | BU 0,14

-A02.92
/45.2

Safe Standstill [X03]

-X03: 1 24V | 2 REL | 3 0V | 4 ERR | 5 NC1 | 6 NC2

40.9 / -A02.91_X03_5

11.2 / -K02.04_Y34

-X01: 1 n.c. | 14 n.c. | 2 n.c. | 15 n.c. | 3 n.c. | 16 n.c. | 4 n.c. | 17 n.c. | 5 n.c. | 18 +24V | 6 GND24 | 19 DIN0 | 7 DIN1 | 20 DIN2 | 8 DIN3 | 21 DIN4 | 9 DIN5 | 22 DIN6 | 10 DIN7 | 23 DIN8 | 11 DIN9 | 24 DOUT0 | 12 DOUT1 | 25 DOUT2 | 13 DOUT3

I/O-communication

LV servoTEC S2 IO-Adapter

Supply / release IN

-X04: +24V + | GND 0 | Endstufen Freigabe EF | Regler Freigabe RF

40.7 / -A02.92_X04_1

40.7 / -A02.92_X04_2

40.7 / -A02.92_X04_3

40.6 / -A02.92_X04_4

I/O

-X06: PE | DIN9 I9 | DOUT0 O0 | DOUT1 O1 | DOUT2 O2 | DOUT3 O3

2.6 / -A02.92_X06_1

Supply / release OUT

-X05: Regulator Release RF | Power supply Release EF | GND 0 | +24V +

-X1.1 +38

-X1.1 -14

40.9 / -L01.91+

40.9 / -L02.91+

40.9 / -1L-

-L01.91+ / 52.0

-L02.91+ / 52.0

-1L- / 52.0

			Date	03.02.2009	PA-CONTROL_Steuer_LV-servoTEC_S2_3XX	
			Ed. by	Messmer		
			Appr			
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by

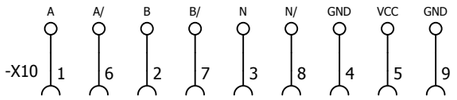
A2 LV servoTEC S2
Supply voltage

= 305
+ CC1
1078980
Page 47
Pg 110

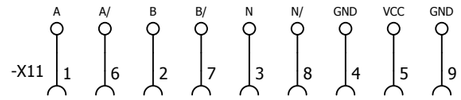
-A02.91
/46.2

LV servoTEC S2

Incremental encoder Input [X10]



Incremental encoder Output [X11]



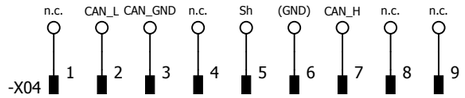
			Date	03.02.2009		A2 LV servoTEC S2 Incremental encoder	= 305	
			Ed. by	Messmer			+ CC1	
			Appr		PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		1078980	Page 48
Modification	Date	Name	Version	V0.01	Replacement for / Replaced by			Pg 110

-A02.91
/46.2

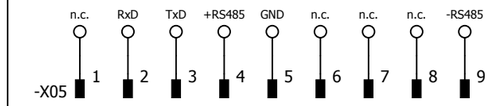
LV servoTEC S2

Bus address:2

CAN [X04]



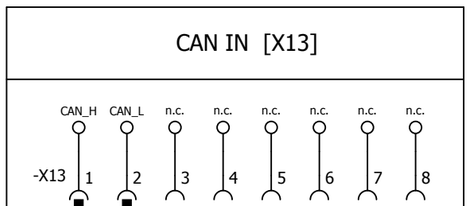
RS232/COM [X05]



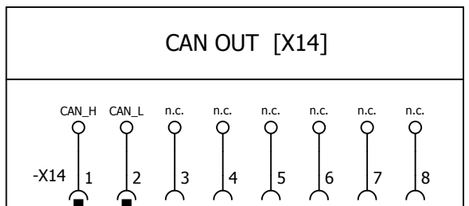
-A02.91-A01.32
/46.2

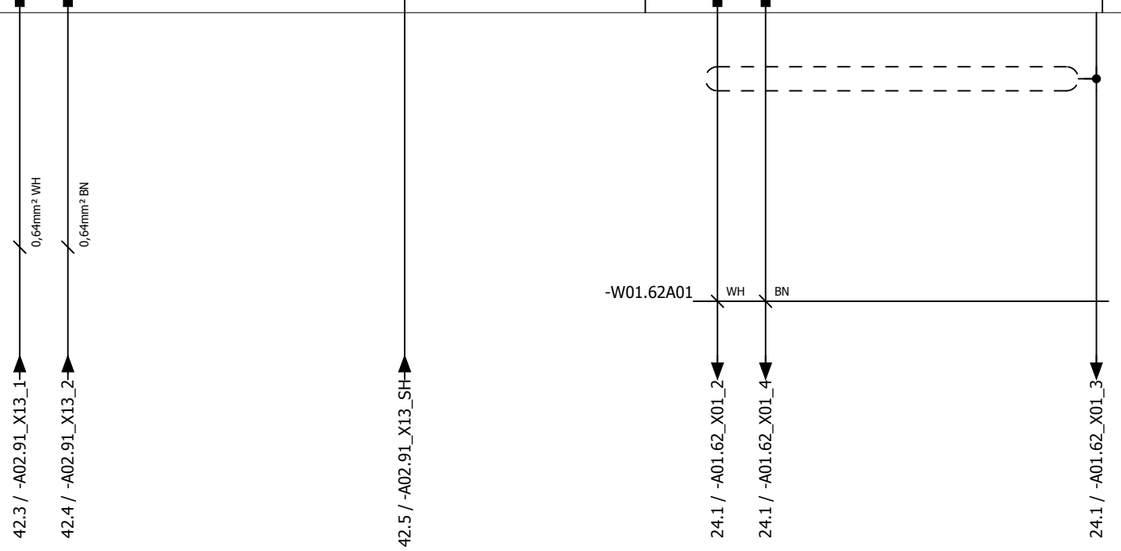
Terminating resistor

CAN IN [X13]



CAN OUT [X14]





			Date	03.02.2009		A2 LV servoTEC S2 CAN / RS232	= 305	
			Ed. by	Messmer			+ CC1	
			Appr		PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		1078980	Page 49
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-A02.91
/46.2

LV servoTEC S2

Motor connection [X06]

-X06: PE 6 | U2 9 | V2 8 | W2 7 | BR- 1 | BR+ 2 | -MTdig 4 | +Mtdig 5 | PE 3

PE

SH1

SH

-W01.51M02 /50.0 9 m

-W01.51M02: GNYE | U | V | W | BN2 | BN1

Resolver connection [X02A]

-X02A: Mt+ 5 | Mt- 8 | R1 4 | R2 9 | SINUS- 6 | SINUS+ 1 | COS- 7 | COS+ 2 | AGND 3

SH | SH5 | SH6 | SH2 | SH3 | SH4

-W02.51M02 /50.3

-W02.51M02: BN | WH | RD | BU | YE | GN | GY | PK

Encoder connection [X02B]

-X02B: #COS 7 | COS 14 | #SIN 8 | SIN 15 | DATA 12 | #DATA 5 | SCLK 13 | #SCLK 6 | U_SENS+ 9 | U_SENS- 2 | US 10 | GND 3 | MT+ 1 | n.c. 11 | n.c. 4

-M02.51

-X01: PE | U | V | W | B | A

-X02: 2 THERMO | 6 THERMO | 5 REF+ | 9 REF- | 4 SINUS- | 8 SINUS+ | 7 COS- | 3 COS+

Motor

Resolver

			Date	03.02.2009	PA-CONTROL_Steuer_LV-servoTEC_S2_3XX	A2 LV servoTEC S2 Motor connection
			Ed. by	Messmer		
			Appr			
Modification	Date	Name	Version	V0.01	Replacement for / Replaced by	

= 305
+ CC1
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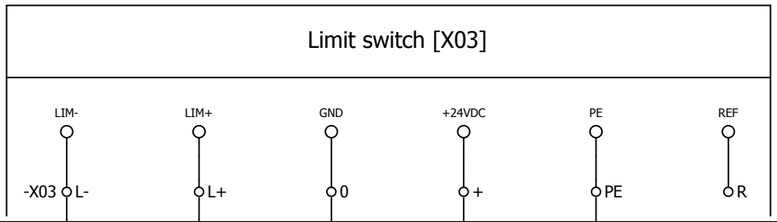
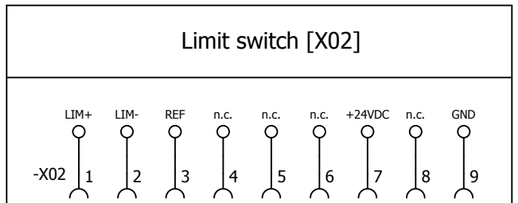
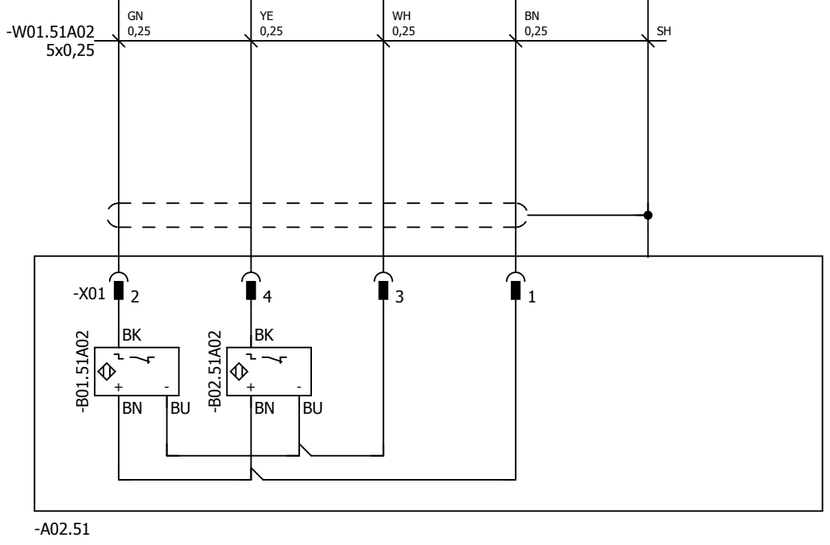
Page 50
Pg 110

-A02.92
/45.2

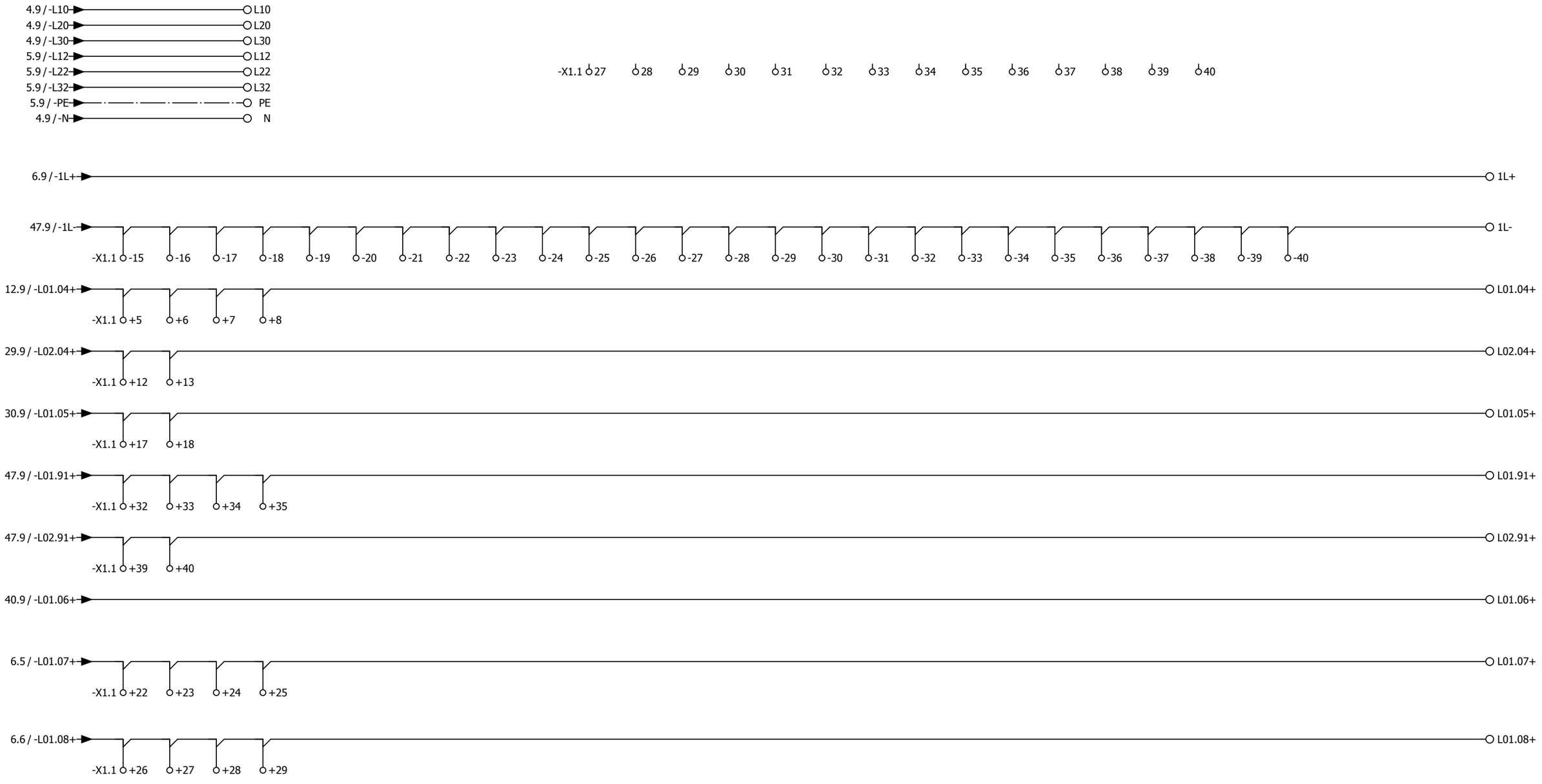
LV servoTEC S2 IO-Adapter







			Date	03.02.2009	PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		A2 LV servoTEC S2 Axis limit switch	= 305	
			Ed. by	Messmer				+ CC1	
			Appr					1078980	Page 51
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by			Pg 110



			Date	03.02.2009			= 305	
			Ed. by	Messmer			+ CC1	
			Appr		PA-CONTROL_Steuer_LV-servoTEC_S2_3XX		1078980	Page 52
Modification	Date	Name	Version	V0.01	Replacement for	Replaced by		Pg 110

Spare clamps