


	1	2	3	4	5	6	7	8	9
A	<h1>Projekt: CAD-Projektions System</h1>								
B									
C									
D									
E									
F									
G									
H									
							<b>Auftrag: CAD-00404</b>		
							<b>Inhalt:</b>		
							000 Deckblatt		
							00 Allgemeine Projektinformationen		
							00 Allgemeine Projektinformationen		
							00 Betriebsmittelkennzeichnung		
							A Systemübersicht		
							B Ansicht Klemmenkasten		
							C Ansicht CAD-Pro		
							2 Netzeinspeisung, Spannungsversorgung, 24V DC		
							4 Connection CAD-Pro		
							6 Ethernet		
							10 Klemmenplan -X0		
							11 Klemmenplan -X1		
							12 Klemmenplan -X2		
							13 Kabelplan -W1		
							14 Kabelplan -W2		
							15 Kabelplan -W3		
							16 Stückliste =CPS+A1		
							18 Stückliste =CPS+A2.1		
							19 Stückliste =CPS+A2.2		

	1	2	3	4	5	6	7	8	9
A	<h1><u>General project informations</u></h1>								
B	<p>When operating electrical installations, certain parts are inevitably under dangerous current. If the following instructions are not observed, severe injuries and material damages may occur.</p>					<h2><u>2. Assembly and commissioning instructions</u></h2>			
C	<h3><u>1. Safety instructions</u></h3>					<p>- Before commissioning, verify that the machine which is connected to the switch cabinet conforms to the requirements of the EC directives.</p>			
D	<p>- Only a qualified electrician, or instructed persons under the guidance and supervision of a qualified electrician, are allowed to work on electrical installations or components in accordance with the national electro technical regulations.</p>					<p>- Do not set up the switch cabinet in rooms in which there is a risk of explosion.</p>			
	<p>- Before starting inspection, maintenance or repairs on machine and system parts, shut the current off and ensure it cannot be switched on again to prevent electrocution. Also protect and cover all the surrounding, connected electrical components to avoid accidental contact.</p>					<p>- After installing and assembling the switch cabinet, check the firmness of all screw fittings on the bus bar</p>			
E	<p>- The installation's electrical equipment is to be inspected/checked regularly. Defects must be immediately notified and removed.</p>					<p>- Once the switch cabinet is connected with the machine, tests according to DIN EN60204/T1 must be carried out before the first start-up and after changes.</p>			
F	<p>- Should work on live parts be necessary, a second person must be called in to turn the main switch off in case of emergency. Working areas must be shut off with a red and white safety chain and a warning sign. Use only electrically insulated tools.</p>					<p>- In case of changes and extensions within the switch cabinet, the wiring color scheme must be observed.</p>			
	<p>- For replacement, only the same type of fuse must be used. In case of disturbance in the main power supply, switch off the installation immediately.</p>					<p>- During assembly, the cables and cable crosscuts must be selected and laid according to DIN EN60204/T1.</p>			
G	<p>- Keep the switch cabinet closed. Water or uncontrolled manipulation could lead to life-threatening situations.</p>					<p>- Cables and wires must be installed through the openings in the floor or subsequently installed cable ducts (depending on the local circumstances).</p>			
H	<p>- In case of fire in electrical installations, no water may be used to extinguish the fire.</p>					<p>- Changes on/in the switch cabinet must be agreed with us.</p>			
						<h3><u>3. Transport and storage</u></h3>			
						<p>- For transport, the switch cabinet must be packed to avoid damage to the housing</p>			
						<p>- During transport, the switch cabinet must be fixed to avoid any shifting or tilting over.</p>			
						<p>- The switch cabinet must be transported appropriately and professionally.</p>			
						<p>- In case of intermediate storage, appropriate measures must be taken to avoid damage due to humidity, vibration and shock.</p>			

1	2	3	4	5	6	7	8	9
A	<h1><u>General project informations</u></h1>							
B	<h2><u>4. Wiring</u></h2>				<h2><u>6. Short descriptions following IEC 757</u></h2>			
C	<u>Coloring of cable cores following DIN EN60204/T1</u>				<u>old</u>			
D	Main circuits; alternating and direct current (>60V)	black	(BK)		Schwarz	Black	sw	BK
E	Control circuits; alternating current	red	(RD)		Braun	Brown	br	BN
F	Control circuits; direct current	blue	(BU)		Rot	Red	rt	RD
G	Potective earth PE resp. PEN	green/yellow	(GNYE)		Orange	Orange	or	OG
H	Neutral conductors N without safty function	light blue	(BU)		Gelb	Yellow	ge	YE
	Locking circuits; powered from external sources which keep voltage also the main switch is off	orange	(OG)		Grün	Green	gn	GN
	Circuits which keep voltage also the main switch is off	yelllow (Oelflex (tm))	(YE)		Blau	Blue	bl	BU
	Measuring conductors	...	...		Violett	Violet	vio	VT
					Grau	Grey	gr	GY
					Weiß	White	ws	WH
					Rosa	Pink	rs	PK
					Gold	Gold	-	GD
					Türkis	Turquoise	tk	TQ
					Silber	Silver	-	SR
					grün-gelb	Green-Yellow	gnge	GNYE
	<h2><u>5. Notes of crossectional areas</u></h2>				<h2><u>7. Potential equation</u></h2>			
	All non discribed conductors in main circuits, 1,5mm² (16AWG)				By removing of the PE connection will be an insulation monitoring according to VDE 0100/60f.2 / IEC 60364 necessary			
	All non discribed conductors in control circuits, 0,75mm² (AWG20)(PLC wiring. 0,5mm² (AWG22)							
	Noted crossectional areas are valid for a length of 10 m (33ft)							

A

B

C

D

E

F

G

H

**Identification letter for parts of system**

- = Anlage
- + Ort
- Betriebsmittelliste
- : Klemme

**Identification letter of electrical devices**

A	Assemblies	PC, Back plan systems
B	Transducers	Sensor, mike
C	Capacitance	Capacitor
D	Binary Elements, Data storage	And-element,Magnet tape, Floppy
E	Miscellaneous	Lights, Heating
F	Protection devices	Fuse
G	Generators, power supply	Engine generator,Oscillator
H	Signal lamps	Signal lamp, Monitor, Display
K	Relays	Relay / Conductor
L	Inductive devices	Coil
M	Motors	DC & AC Motors
N	Amplifier, Regulator	Signal Amplifier
P	Meters	Voltmeter, Oscilloscope
Q	Power switches, Breaker	Main switch, Motor Starter
R	Resistors	Potentiometer, Shunt
S	Switches, Selectors	Button, rotary Switch
T	Transformers	Transformer
U	Modulators, Converters	Frequency converter
V	Semiconductors	Diode, Transistor
W	Conductors	Cable, Antenna
X	Terminals	Terminal Strip, Connector
Y	Electro mechanical	Brake, Valves
Z	Ending, Filter	Filter

cross reference

1st. letter shows device type

last number shows the column

page

grid

first numbers shows the sheet

B

= Anlage  
+ Ort  
- Betriebsmittelliste  
: Klemme

-K007  
/00.G7

cross reference

12, 14  
11

12 14  
-K007  
/00.G7  
cross reference

A	Assemblies	PC, Back plan systems
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W	Conductors	Cable, Antenna
X	Terminals	Terminal Strip, Connector
Y	Electro mechanical	Brake, Valves
Z	Ending, Filter	Filter

1st. letter shows device type

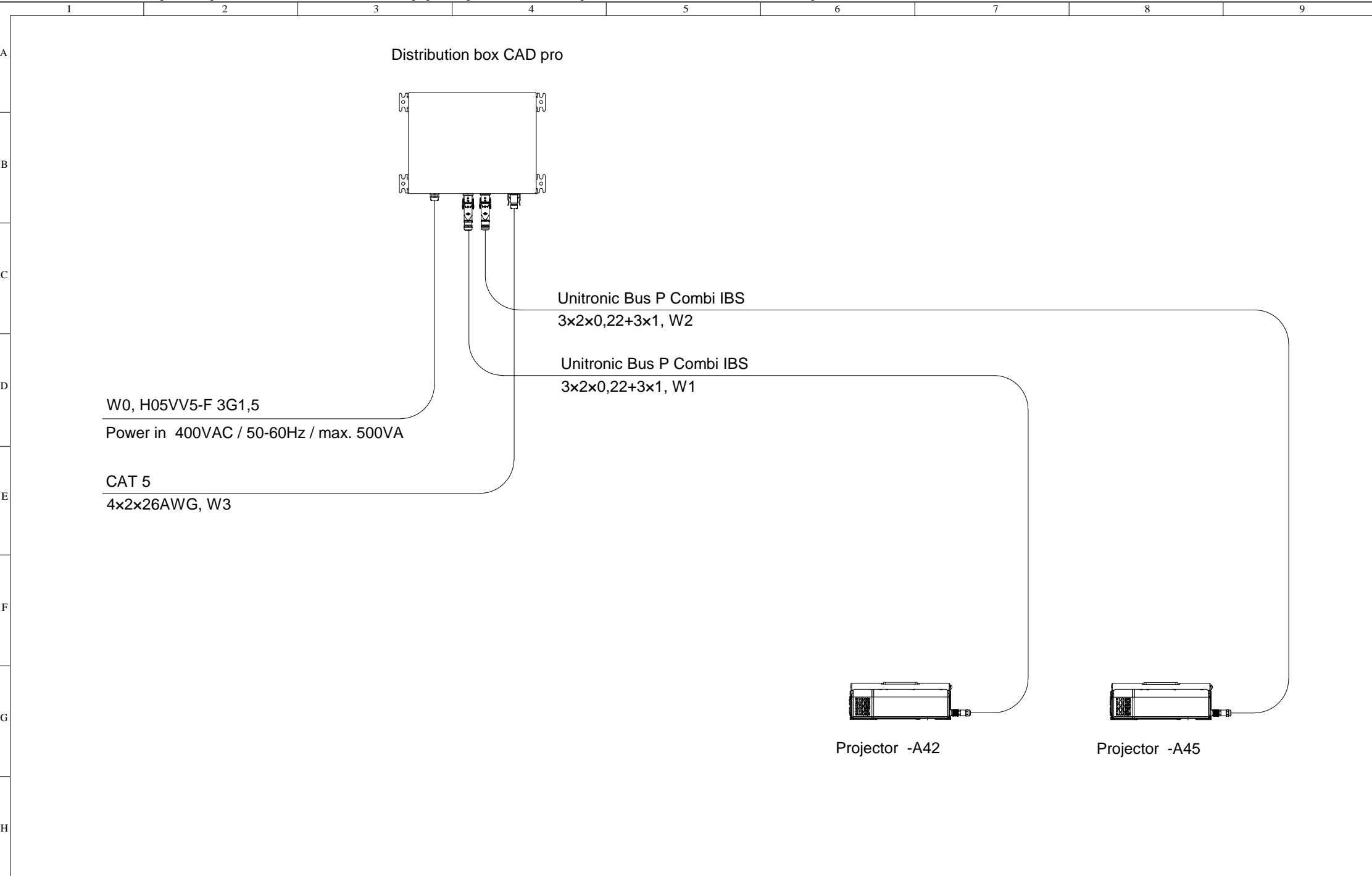
page grid

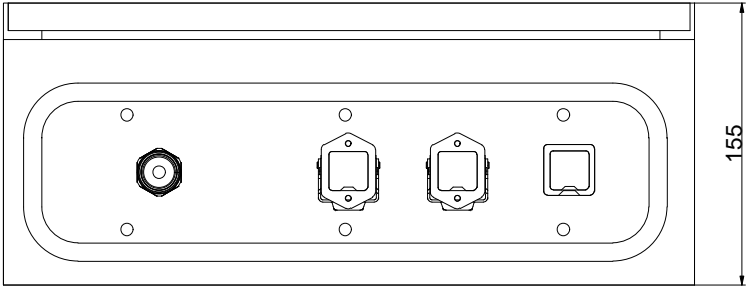
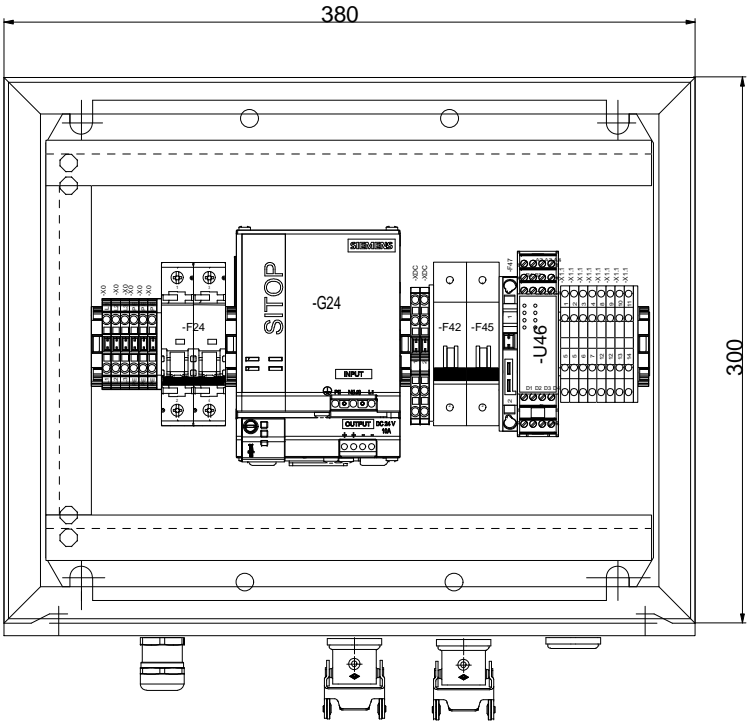
first numbers shows the sheet

1st. letter shows device type

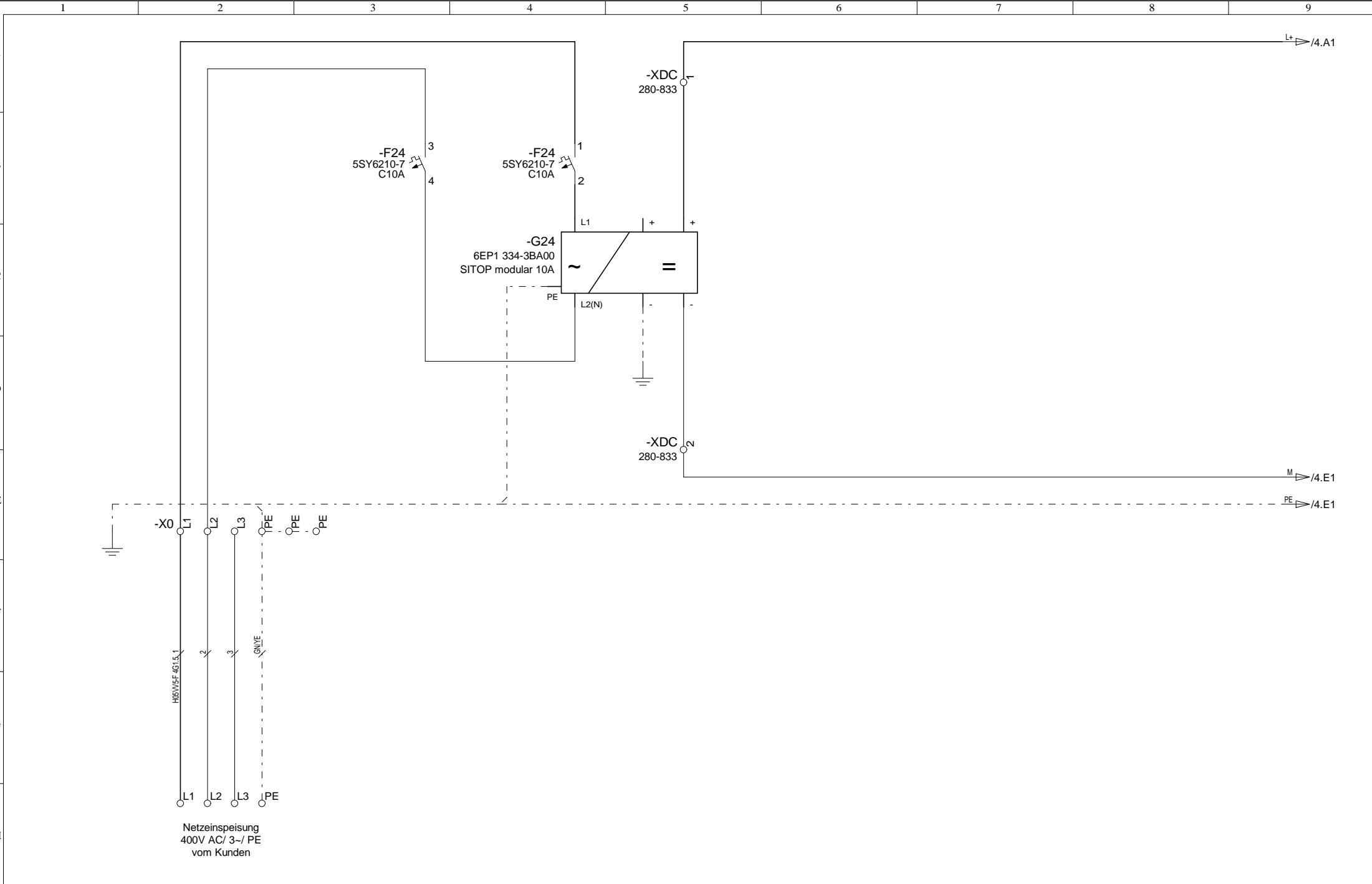
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 © LAP GmbH Zeppelinstr. 23 D-21337 Lueneburg Fon: +49 (0)4131 951195 Fax: +49 (0)4131 951196	2011	Datum	Name	Kunde	Projekt	CPS Betriebsmittelkennzeichnung	Anlage	REV.: 1.1	Blatt	0	
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	Gepr.							Ort		letzte	2
	Norm							+A	16.12.2011 09:32	gesamt	1
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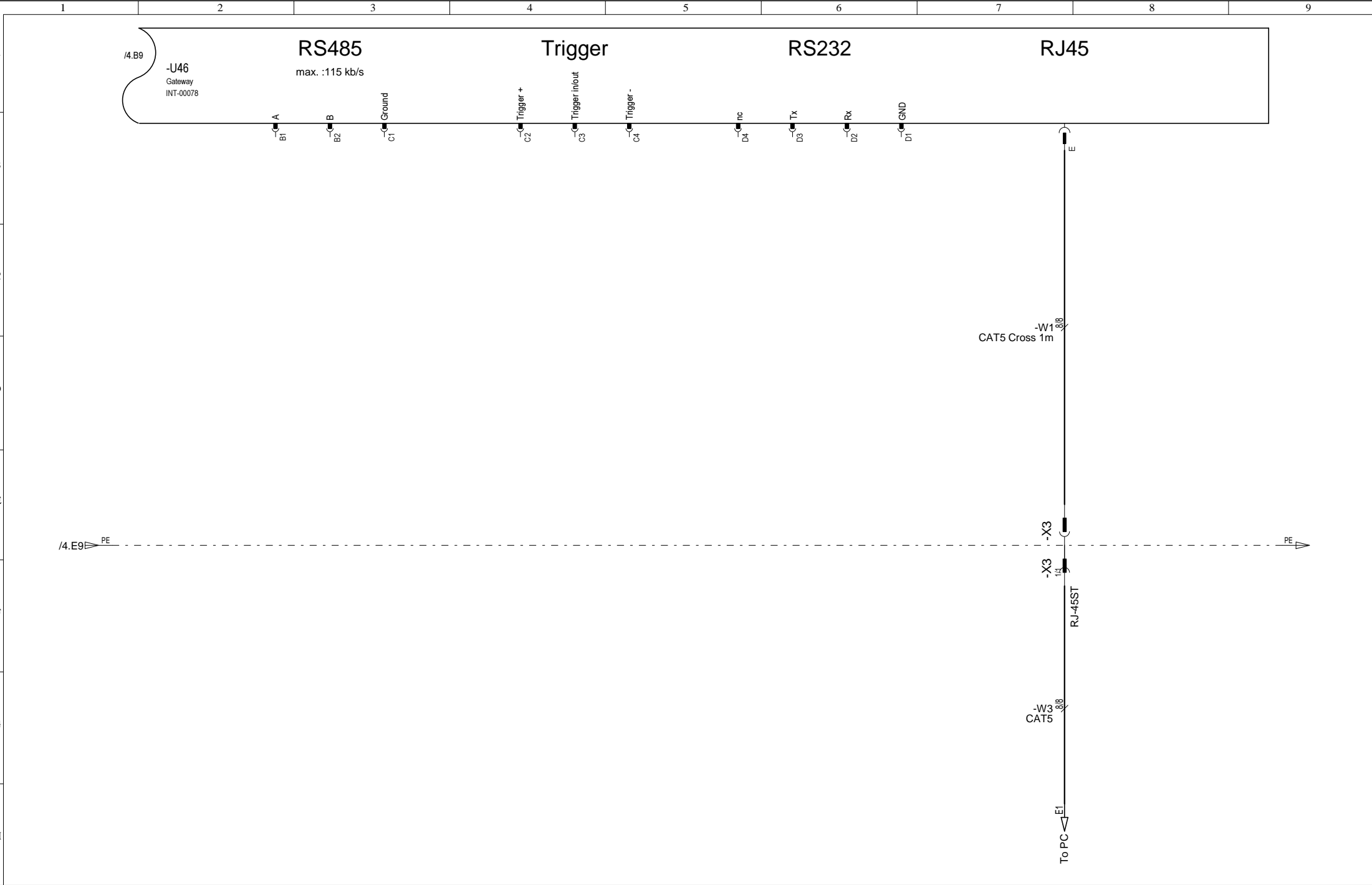












	1	2				3		4	5	6	7	8	9
A	<div>Klemmleiste</div>												
B	<div>-X0</div>												
C													

Klemme

280-601 [ L1 - L3 ]

Klemme

280-607 [ PE - PE ]

Klemme

Klemmentyp

[illegible]



	1	2	3	4	5	6	7	8	9
A	Kabelblatt								
	Kabel: =CPS -W2								
B	Kabeltyp: Unitronic Bus P Combi IBS 3x2x0.22+3x1								
	Betriebsmittelkennzeichen	Anschluss	Anschlagteil	Ader	Betriebsmittelkennzeichen	Anschluss	Anschlagteil	Länge (mm)	
	=CPS+A2.2-xa45	2		wh	=CPS+A1-X2	1	CK1.6ED0.37STAG		
	=CPS+A2.2-xa45	4		bn	=CPS+A1-X2	2	CK1.6ED0.37STAG		
C	=CPS+A2.2-xa45	2		gn	=CPS+A1-X2	3	CK1.6ED0.37STAG		
	=CPS+A2.2-xa45	4		ye	=CPS+A1-X2	4	CK1.6ED0.37STAG		
	=CPS+A2.2-xa45	5		gy	=CPS+A1-X2	5	CK1.6ED0.37STAG		
				pk					
D	=CPS+A2.2-xa45	3		bu	=CPS+A1-X2	6	CK1.6ED1.00STAG		
	=CPS+A2.2-xa45	1		rt	=CPS+A1-X2	7	CK1.6ED1.00STAG		
				gn/ye					
	=CPS+A1			SH1					
E									
F									
G									
H									

	1	2	3	4	5	6	7	8	9
A	Kabelblatt								
	Kabel: =CPS -W3								
B	Kabeltyp: CAT5								
	Betriebsmittelkennzeichen	Anschluss	Anschlagteil	Ader	Betriebsmittelkennzeichen	Anschluss	Anschlagteil	Länge (mm)	
C				8/8	=CPS+A1-X3	1			
D									
E									
F									
G									
H									

	1	2	3	4	5	6	7	8	9
A	Anlagenkennzeichen		=CPS		Ortskennzeichen		+A1		
	BMK	Menge	Bauteil	Artikelbezeichnung		Hersteller	Artikelnummer		
B	-F24	1	5SY6210-7	Leitungsschutzschalter, Charakteristik C10A		Siemens AG	5SY6210-7		
	-F42	1	5SY6104-7	Leitungsschutzschalter, Charakteristik C		Siemens AG	5SY6104-7		
	-F45	1	5SY6104-7	Leitungsschutzschalter, Charakteristik C		Siemens AG	5SY6104-7		
C	-F47	1	282-696	Sicherungsklemme		Wago	282-696		
	-G24	1	6EP1 334-3BA00	Stromversorgung, SITOP 24V/10A		Siemens AG	6EP1 334-3BA00		
	-U46	1	Gateway	Gateway		LAP GmbH	INT-00078		
	-X0	3	280-601	2-Leiter-Durchgangsklemme; Seitliche Beschriftung; Frontverdraht		WAGO GmbH	280-601		
D	-X0	3	280-607	2-Leiter-Schutzleiterklemme; Seitliche Beschriftung; Frontverdra		WAGO GmbH	280-607		
	-X1	1	HC-D-7-EBCU	Socket 7pin		Phoenix Contact	17 72 23 0		
	-X1	1	HC-D-7ESTC	Plug 7pin		Phoenix Contact	17 72 24 3		
	-X1.1	8	280-519	Doppelstockklemme; Durchgang / Durchgang; Mittenbeschriftung; gr		WAGO GmbH	280-519		
E	-X2	1	HC-D-7-EBCU	Socket 7pin		Phoenix Contact	17 72 23 0		
	-X2	1	HC-D-7ESTC	Plug 7pin		Phoenix Contact	17 72 24 3		
	-X3	1	RJ-45ST	RJ45 Stecker		xx	xxx		
	-X3	1	VS-08-BU-RJ45/BU	Buchseneinsatz-RJ45		Phoenix Contact	1689064		
F	-XDC	2	280-833	4-Leiter-Durchgangsklemme; Mittenbeschriftung (asymmetrisch link		WAGO GmbH	280-833		
	-za1	1	280-330	Abschluss- und Zwischenplatte; 2,5 mm dick; grau		WAGO GmbH	280-330		
	-za13	3	249-116	Schraubenlose Endklammer; 6 mm breit; TS 35; grau		WAGO GmbH	249-116		
	-za2	1	280-314	Abschluss- und Zwischenplatte; 2,5 mm dick; grau		WAGO GmbH	280-314		
G	-za4	1	282-334	Abschluss- und Zwischenplatte; 2 mm dick; grau		WAGO GmbH	282-334		
	-za7	2	249-116	Schraubenlose Endklammer; 6 mm breit; TS 35; grau		WAGO GmbH	249-116		
H									



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	Bearbeiter	09.11	Simon	Kunde			CAD-00404				Ort		folgt
	Gepr.												letzte
	Norm			Zeichnungsnummer	1111CAD100	LAP Auftragsnummer	CAD-00404	Kunde Auftragsnummer	File : Y:\40.Projektor- Produkte\Schem\CAD-00404\CPS2-400-AE+NT-PC.e3s			+A2.1	gesamt

