

Teil Part	Beschreibung Description	Sachnummer Code no.	Position Sheet Pos.	Ort Loc.
A01	Maschinensteuerung machine controller	92003565	siehe Zusatztable	
A02	Bedienfeld control panel	97135842	4/39	
A04	Fahrsteuerung drive controller	90699422	siehe Zusatztable	
A20	Fleetrecorder fleetrecorder	97131411	8/13	
A101	Chemiepumpensteuerung chemical pump controller	97117816	7/43	
B03	Fahrgeber accelerator	97131882	6/10	
B04	Frischwassersensor fresh water sensor	97139471	5/49	
B05	Schmutzwassertanksensor sewage sensor	92000082	5/42	
B20	I-Button-Reader i-button-reader	97131429	8/39	
B101	Durchflussmesser flow sensor	90596529	7/44	
E01	Arbeitsscheinwerfer working headlight	97132807	7/8	
E02	Warneinrichtung Front warning beacon front	97131023	7/33	
E03	Warneinrichtung Heck warning beacon back	97131023	7/23	
E04	Blitzleuchte am Stab warning beacon on the rod	97084222	7/17	
F02	Sicherung Steuerspannung 7,5A controller fuse 7,5A	19731066	2/21	
F03	Sicherung Leistung 125A power fuse 125A	19731579	2/35	
F04	Sicherung Fahrsteuerung 100A drive controller fuse 100A	19731422	2/41	
F05	Sicherung Hupe 5A horn fuse 5A	19731181	4/55	
F20	Sicherung Fleetrecorder 5A fleetrecorder fuse 5A	19731181	8/4	
G01	Batterie battery	-	2/3	
G02	Batterie battery	-	2/3	
G03	Batterie battery	-	2/3	
G04	Batterie battery	-	2/3	
G10	Einbau-Ladegerät 35A onboard charger 35A	92003284	2/19	
H01	Hupe horn	90422627	4/55	
K02	Relais Fahrsteuerung drive control contactor	90665670	6/2	
K03	Relais Hupe horn contactor	90567777	4/52	
K04	Hauptrelais main contactor	90676180	2/12	
M01	Fahrantrieb drive motor	90698655	6/40	
M02	Saugmotor suction motor	97132562	5/9	
M05	Tellerbürstenmotor rechts brush motor right	90586645	5/26	
	oder or			
M05	Walzenbürstenmotor rechts-vorne cylindrical motor brush right-front	90529371	5/65	
M06	Tellerbürstenmotor links brush motor left	90586645	5/18	
	oder or			
M06	Walzenbürstenmotor links-hinten cylindrical motor brush left-back	90529371	5/57	
M07	Hubelement Saugfuss lifting element for suction element	92011550	5/45	
M08	Wasserpumpe water pump	97116529	5/49	
M09	Hubelement Bürstendeck lifting element for brush deck	92023332	5/34	
P02	Summer buzzer	97047187	5/25	
P20	Summer Fleetrecorder buzzer for fleetrecorder	97134456	8/49	
R102	Vorwiderstand 2k7 resistor 2k7 (cable harness W77)	19245258	8/33	
S01	Schlüsselschalter key switch	90323437	3/23	
S05	Sitzschalter seat contact switch	90690694	4/33	

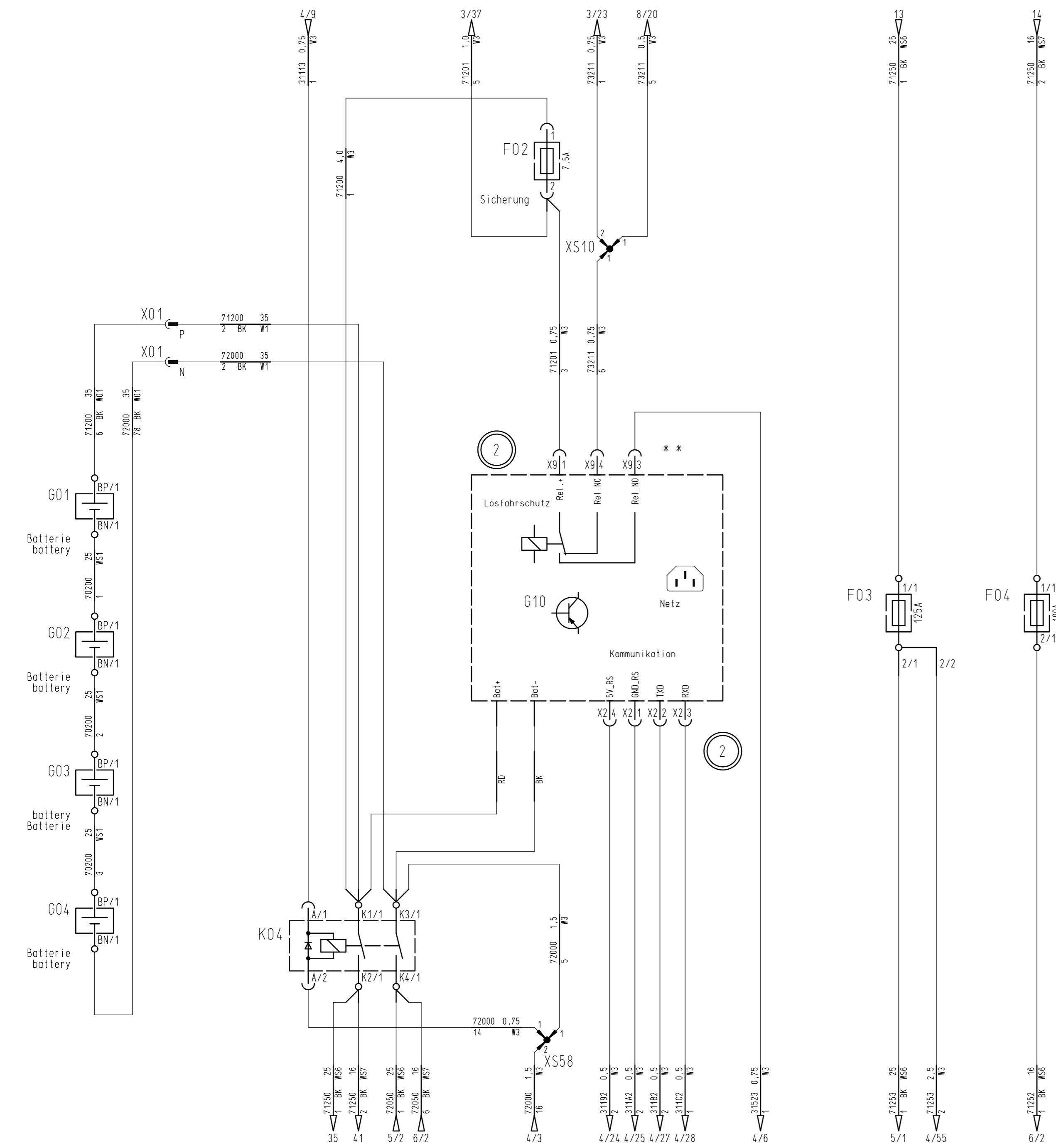
Teil Part	Beschreibung Description	Position Sheet Pos.	Ort Loc.
S10	Bremstaster brake switch	90472176 6/14	
T10	Kombiantenne GPS/GSM Antenna	90672007 8/18	
V01	Freilaufdiode Hupe free-wheeling diode for horn	90194879 4/61	
Y01	Wasserventil water valve	90543562 5/20	
X01	Batteriestecker 160A battery connector 160A	X01/P 2/7 X01/N 2/7	
X41	Steckverbinder 1pol. (W3<->W77) connector 1 pole (W3<->W77)	X41/1 8/25	
X46	Steckverbinder 6pol. (W2<->W10) connector 6 pole (W2<->W10)	X46/1 7/24 X46/2 7/24	X46/3 7/17 X46/4 7/17 5/43 5/45
X47	Steckverbinder 4pol. (W2<->W3) connector 4 pole (W2<->W3)	X47/1 7/33 X47/2 7/33	X47/3 4/46 X47/4 4/61
X48	Steckverbinder 2pol. (W10<->W65) connector 2 pole (W10<->W65)	X48/1 7/17 X48/2 7/17	
X51	Steckverbinder 4pol. (W2<->W4) connector 4 pole (W2<->W4)	X51/1 5/50 X51/2 5/53	X51/3 5/38 X51/4 5/39
X60	OBDDI Diagnosestecker OBDDI diagnostic connector	X60 3/41	
X78	Steckverbinder 4pol. (W3<->W77) connector 4 pole (W3<->W77)	X78/1 8/39 X78/2 8/43	X78/3 8/39 X78/4 8/43
X100	VGND Display VGND connector display	X100 4/38	
X101	VGND MaSt VGND connector machine controller	X101 4/6	
X102	Steckverbinder 1pol. (W2<->W77) connector 1 pole (W2<->W77)	X102/1 8/10	
X103	Steckverbinder 1pol. (W2<->W3) connector 1 pole (W2<->W3)	X103/1 3/20	
X106	Steckverbinder 2pol. (W3<->W77) connector 2 pole (W3<->W77)	X106/1 8/19 X106/2 8/20	
X107	Steckverbinder 2pol. (W77) connector 2 pole (W77)	X107/1 8/19 X107/2 8/20	
X108	Steckverbinder 8pol. (W2<->W42) connector 8 pole (W2<->W42)	X108/1 4/34 X108/2 4/35	X108/3 4/37 X108/4 4/38 X108/5 +/- X108/6 +/- X108/7 +/- X108/8 +/-
XK01A1	VBat Fleetrecorder VBat for fleetrecorder	XK01A1 8/13	

Teil Part	Beschreibung Description	Sachnummer Code no.	Position Sheet Pos.	Ort Loc.
XS01	USSP ussp	-	6/36	
XS02	USSP ussp	-	6/21	
XS03	Stossverbinder butt joint	-	5/17	
XS04	USSP ussp	-	6/27	
XS05	USSP ussp	-	6/29	
XS07	Stossverbinder butt joint	-	2/14	
XS08	USSP ussp	-	3/18	
XS09	USSP ussp	-	3/26	
XS10	USSP ussp	-	2,24	
XS11	USSP ussp	-	6/11	
XS12	USSP ussp	-	5/11	
XS13	USSP ussp	-	5/13	
XS40	USSP ussp	-	4/54	
XS41	USSP ussp	-	4/19	
XS42	USSP ussp	-	4/20	
XS58	USSP ussp	-	2/21	
XS77	USSP ussp	-	8/34	
XS78	USSP ussp	-	8/13	
XS79	USSP ussp	-	8/20	

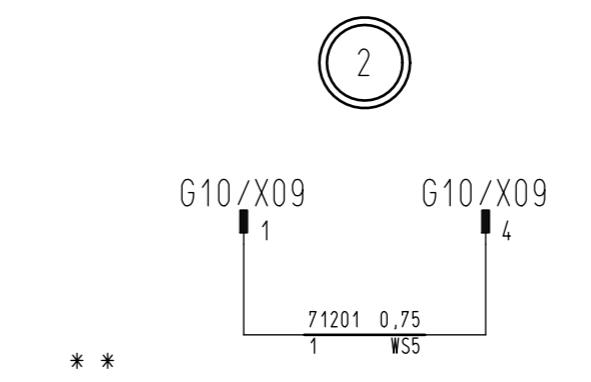
Teil Part	Beschreibung Description	Position Sheet Pos.	Ort Loc.
A01	Maschinensteuerung machine controller	X1 5/1 X2 5/2 X5 5/4 X6 5/14 X7 5/26 X14 5/9 X15 5/24 X22 4/42	
A01/X3	Maschinensteuerung machine controller	X3/1 +/- X3/2 4/32 X3/3 +/- X3/4 4/33 X3/5 4/35 X3/6 +/-	
A01/X4	Maschinensteuerung machine controller	X4/1 4/19 X4/2 +/- X4/3 4/24 X4/4 4/25 X4/5 4/21 X4/6 +/- X4/7 4/27 X4/8 4/28	
A01/X8	Maschinensteuerung machine controller	X8/1 +/- X8/2 4/3 X8/3 4/6 X8/4 +/- X8/5 4/39 X8/6 4/3 X8/7 4/9 X8/8 +/-	
A01/X9	Maschinensteuerung machine controller	X9/1 5/38 X9/2 +/- X9/3 4/34 X9/4 +/- X9/5 +/- X9/6 5/49 X9/7 +/- X9/8 4/33 X9/9 +/- X9/10 5/42 X9/11 5/37 X9/12 +/- X9/13 4/36 X9/14 +/- X9/15 +/- X9/16 5/52 X9/17 +/- X9/18 4/37 X9/19 +/- X9/20 5/44	
A01/X10	Maschinensteuerung machine controller	X10/1 6/22 X10/2 6/25 X10/3 +/- X10/4 6/36 X10/5 6/35 X10/6 +/- X10/7 +/- X10/8 +/- X10/9 4/46 X10/10 4/46 X10/11 +/- X10/12 6/38 X10/13 6/33 X10/14 +/- X10/15 +/- X10/16 +/-	
A01/X11	Maschinensteuerung machine controller	X11/1 5/7 X11/2 5/11 X11/3 5/16 X11/4 5/51 X11/5 5/24 X11/6 5/39 X11/7 5/46 X11/8 5/8 X11/9 5/13 X11/10 5/20 X11/11 5/49 X11/12 5/25 X11/13 5/37 X11/14 5/43	
A01/X13	Maschinensteuerung machine controller	X13 4/6	
A01/X16	Maschinensteuerung machine controller	X16/1 5/4 X16/2 5/5	
A01/X19	Maschinensteuerung machine controller	X19/1 +/- X19/2 5/28 X19/3 5/34 X19/4 +/-	
A04	Fahrsteuerung drive controller	B+ 6/2 B- 6/2 M1 6/36 M2 6/34 M3 6/37	
A04/A	Fahrsteuerung drive controller	A/1 6/26 A/2 6/28 A/3 6/9 A/4 6/25 A/5 +/- A/6 +/- A/7 6/14 A/8 6/12 A/9 6/14 A/10 6/6 A/11 6/39 A/12 6/5 A/13 6/45 A/14 +/- A/15 6/40	A/16 6/15
A04/B	Fahrsteuerung drive controller	B/1 +/- B/2 +/- B/3 +/- B/4 +/- B/5 6/24 B/6 6/22 B/7 +/- B/8 +/-	
A04/C	Fahrsteuerung drive controller	C/1 6/42 C/2 6/41 C/3 +/- C/4 6/45 C/5 6/44 C/6 6/43	

Teil Part	Beschreibung Description	Sachnummer Code no.	Position Sheet Pos.	Ort Loc.
	Flachbandkabel ribbon cable	97146377		
W1	Kabelbaum W1 cable harness W1	97137228		
W2	Kabelbaum W2 cable harness W2	97137244		
W3	Kabelbaum W3 cable harness W3	97137236		
W4	Kabelbaum W4 cable harness W4	97137293		
W10	Kabelbaum W10 cable harness W10	97137251		
W35	Kabelbaum W35 cable harness W35	97148183		
W36	Kabelbaum W36 cable harness W36	97148191		
W42	Kabelbaum W42 cable harness W42	97137269		
W65	Kabelbaum W65 cable harness W65	97147144		
W77	Kabelbaum W77 cable harness W77	97131163		
W102	Kabelbaum W102 cable harness W102	97137277		
WS5	Kabelsatz WS5 cable harness WS5	97130017		
WS6	Kabelsatz WS6 cable harness WS6	97140750		
WS7	Kabelsatz WS7 cable harness WS7	97140768		

2	2x	3655-39	23.10.17	DK	2013	Date	Name	B120R	Name	Schaltplan B120 / Circuit diagram B120	Hako Hako GmbH D-23840 Bad Oldesloe	Drawing Number	
A2	No.	Number appears	Change No.	Date	Name	Standard	JKem	Replacem. for same no.	Change No.			3655-14	KABI 472
For this drawing we reserve all rights (acc. DIN ISO 16016)										No. of Sh. 10		Sheet 1	



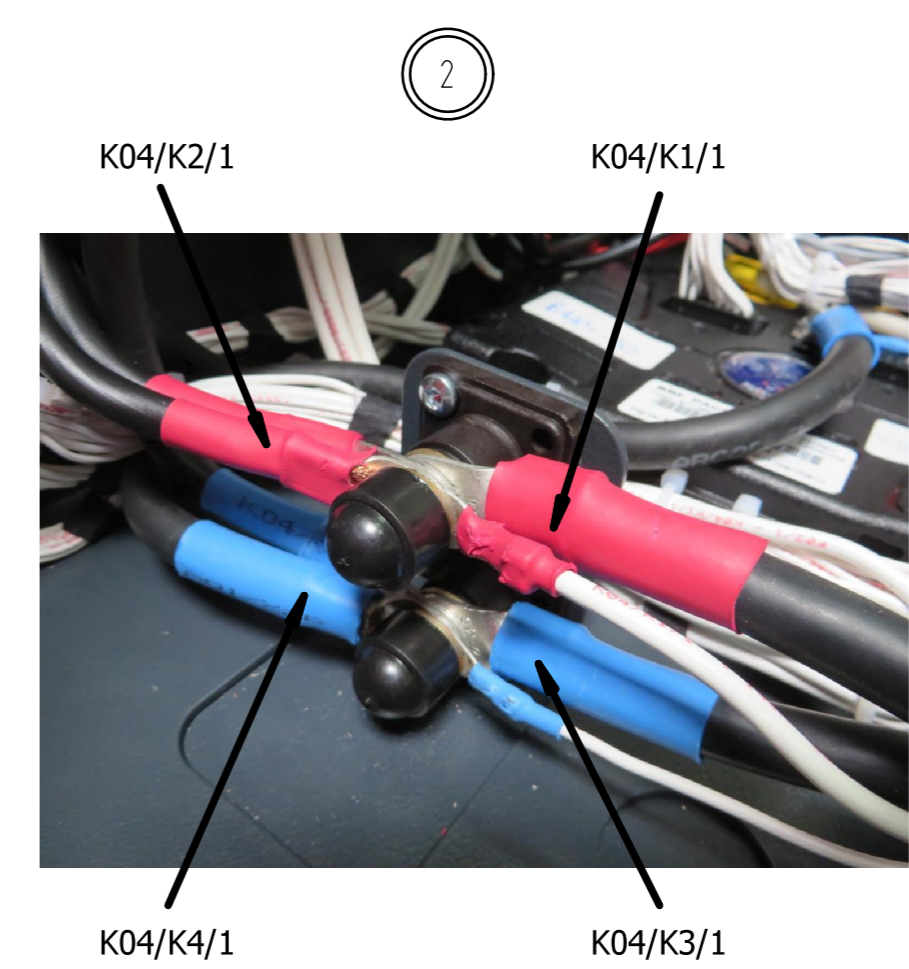
- ### Legende
- F02 Sicherung Steuerspannung 7,5A
controller fuse 7,5A
 - F03 Sicherung Leistung 125A
power fuse 125A
 - F04 Sicherung Fahrsteuerung 100A
drive controller fuse 100A
 - G01 Batterie
battery
 - G02 Batterie
battery
 - G03 Batterie
battery
 - G04 Batterie
battery
 - G10 Einbau-Ladegerät 35A
onboard charger 35A
 - G10/X09 Brückenstecker 4pol.
bridge plug 4 pole
 - K04 Hauptrelais
main contactor
 - X01 Batteriestecker 160A
battery connector 160A
 - XS10 USSP
ussp
 - XS58 USSP
ussp



Bei Variante Übersee Stecker G10.X09 an Stecker für G10.X9 anschließen.
at variant overseas connect G10.X09 at connector for G10.X9.

Bei Variante Übersee entfallen das Einbauladgerät G10 und das Hauptrelais K04. Anstelle des Hauptrelais sind zwei isolierte Bolzen montiert. Anschliessen wie unten dargestellt. Auf Steckverbinder G10/X9 den Brückenstecker (Kabelsatz WS5) aufstecken (Losfahrerschutz).

in the overseas variant, the onboard charger G10 and the main contactor K04 are omitted. Two insulated bolts are mounted instead of the main contactor. Connect as shown below. Attach the bridge plug (cable harness WS5) to the plug connector (start protection)



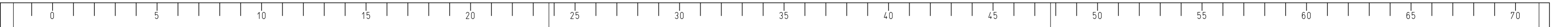
Auf dem oberen Bolzen (+ Potenzial) Adern mit der Beschriftung auflegen:
von links: K04/K2/1
von rechts: K04/K1/1

on the top bolt (+ potential) connect the wires to the label
from left: K04/K2/1
from right: K04/K1/1

Auf dem unterem Bolzen (- Potenzial) Adern mit der Beschriftung auflegen:
von links: K04/K4/1
von rechts: K04/K3/1

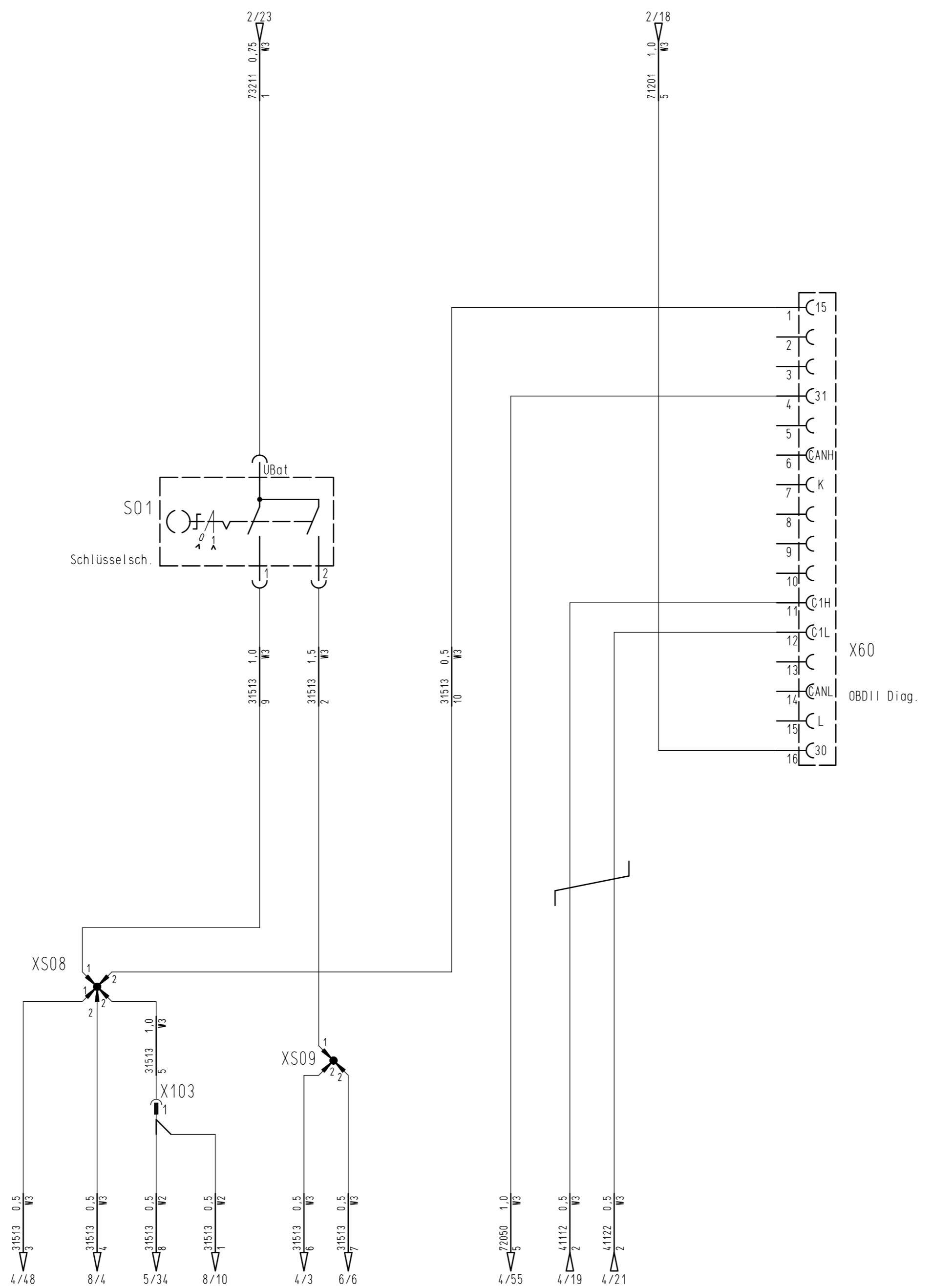
on the lower bolt (- potential) connect the wires to the label
from left: K04/K4/1
from right: K04/K3/1

2	4x	3655-39	23.10.17	DK	2015	Date	Name	B120R	Name	 Hako GmbH D-23840 Bad Oldesloe	Drawing Number		
A2	No.	Number appears	Change No.	Date	Standard	Verified	JKem	Replacem. for same no.	Schaltplan B120 R / Circuit diagram B120 R		91037861		
									For this drawing we reserve all rights (acc. DIN ISO 16016)			Sheet 2	

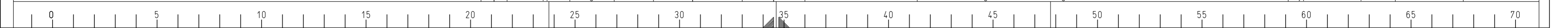


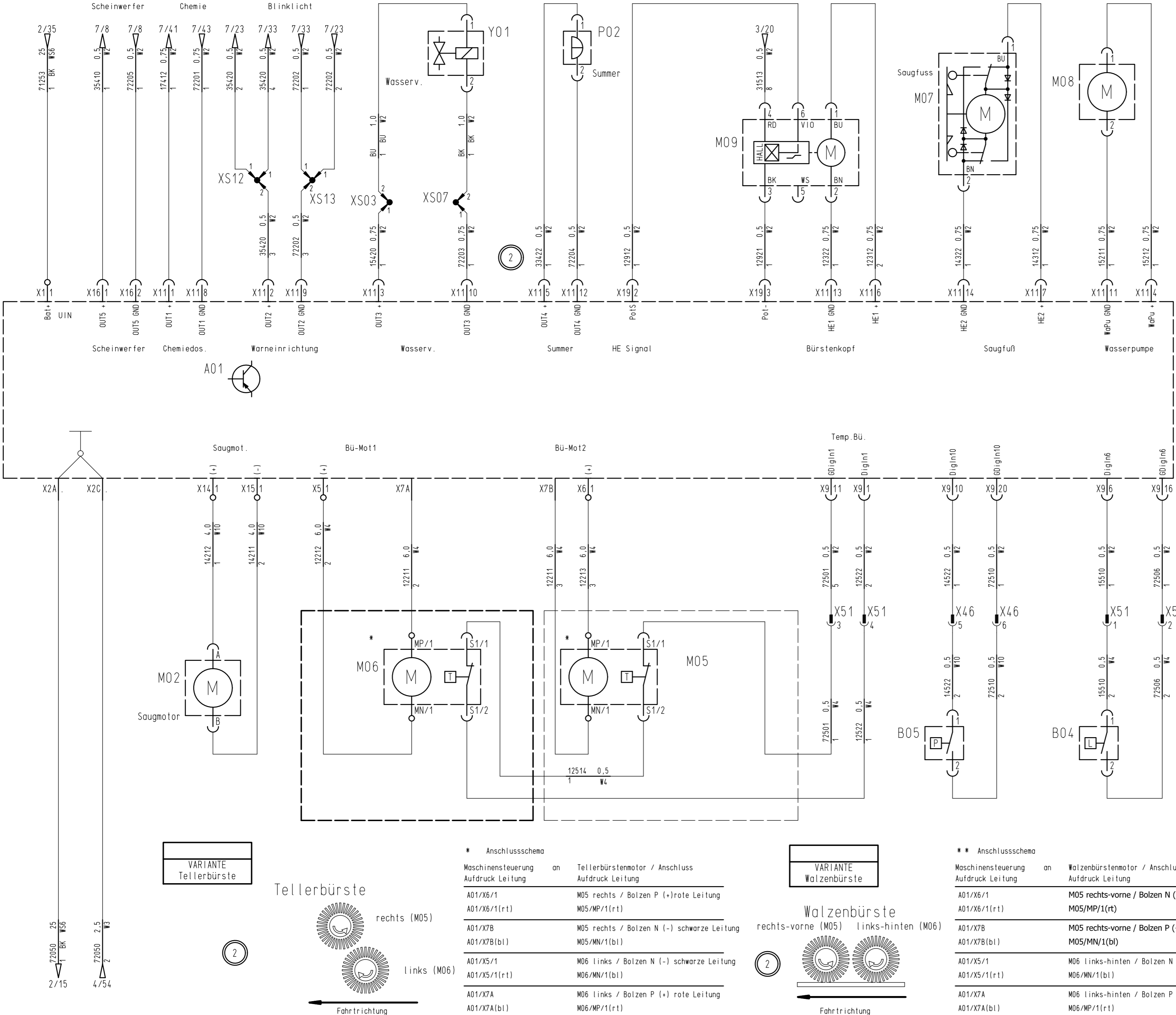
Legende

- S01 Schlüsselschalter
key switch
- X60 OBDII Diagnosestecker
OBDII diagnostic connector
- X103 Steckverbinder 1pol. (W2<->W3)
connector 1 pole (W2<->W3)
- XS08 USSP
ussp
- XS09 USSP
ussp



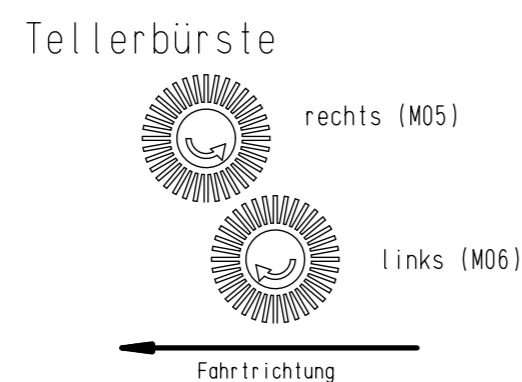
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					Drawn by	02.11.	JKem					Replacem. for same no.	91037861		
A2	No.	Number appears	Change No.	Date	Name	Standard		Change No.	3655-14	For this drawing we reserve all rights (acc. DIN ISO 16016)	KABI 472	Type 7177	Dep. ELK	No. of Sh. 10	Sheet 3





- ### Legende
- A01 Maschinensteuerung
machine controller
 - B04 Frischwassersensor
fresh water sensor
 - B05 Schmutzwassertanksensor
sewage sensor
 - M02 Saugmotor
suction motor
 - M05 Tellerbürstenmotor rechts
brush motor right
 - M05. Walzenbürstenmotor rechts-vorne
cylindrical motor brush right-front
 - M05/S1 Steckverbinder 2pol. (W4<->W36)
connector 2 pole (W4<->W36)
 - M06 Tellerbürstenmotor links
brush motor left
 - M06. Walzenbürstenmotor links-hinten
cylindrical motor brush left-back
 - M06/S1 Steckverbinder 2pol. (W4<->W35)
connector 2 pole (W4<->W35)
 - M07 Hubelement Saugfuss
lifting element for suction element
 - M08 Wasserpumpe
water pump
 - M09 Hubelement Bürstendeck
lifting element for brush deck
 - P02 Summer
buzzer
 - X46 Steckverbinder 6pol. (W2<->W10)
connector 6 pole (W2<->W10)
 - X51 Steckverbinder 4pol. (W2<->W4)
connector 4 pole (W2<->W4)
 - XS03 Stossverbinder
butt joint
 - XS07 Stossverbinder
butt joint
 - XS12 USSP
ussp
 - XS13 USSP
ussp
 - Y01 Wasserventil
water valve

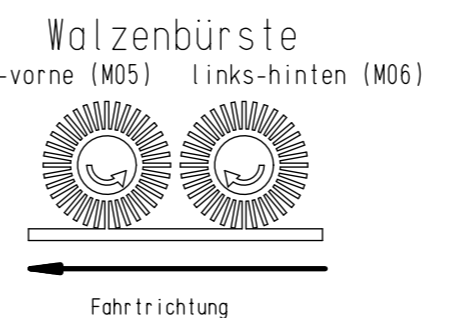
VARIANTE
Tellerbürste



* Anschlusschema

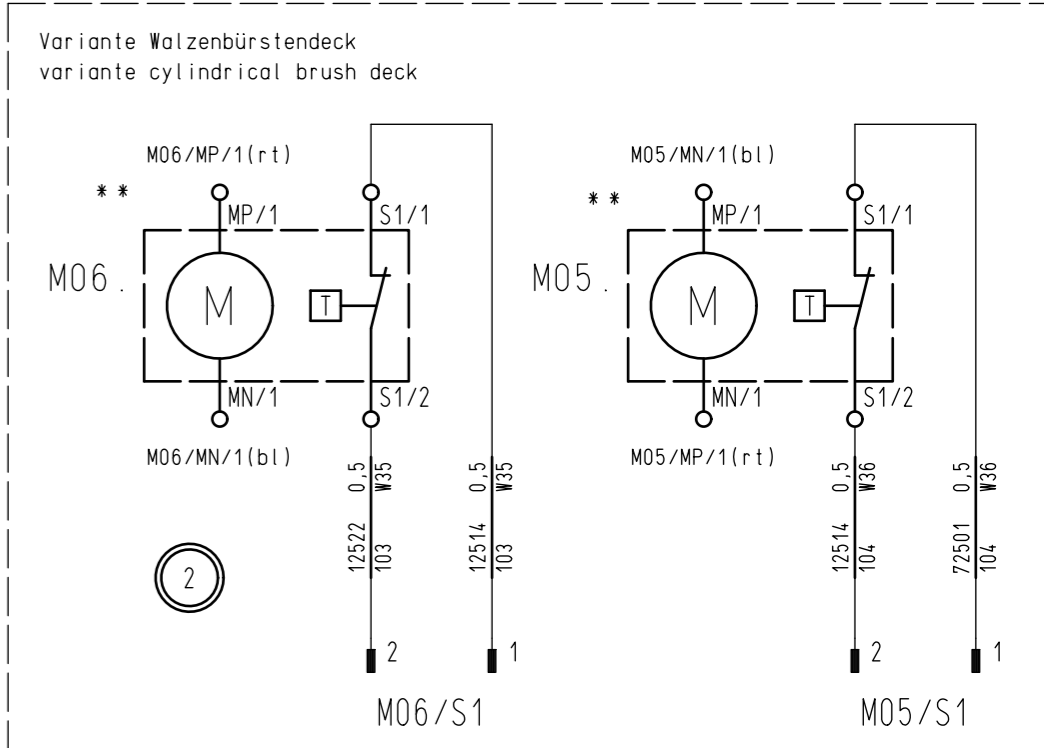
Maschinensteuerung	an	Tellerbürstenmotor / Anschluss
A01/X6/1		M05 rechts / Bolzen P (+)rote Leitung
A01/X6/1(rt)		M05/MP/1(rt)
A01/X7B		M05 rechts / Bolzen N (-) schwarze Leitung
A01/X7B(bl)		M05/MN/1(bl)
A01/X5/1		M06 links / Bolzen N (-) schwarze Leitung
A01/X5/1(rt)		M06/MN/1(bl)
A01/X7A		M06 links / Bolzen P (+) rote Leitung
A01/X7A(bl)		M06/MP/1(rt)

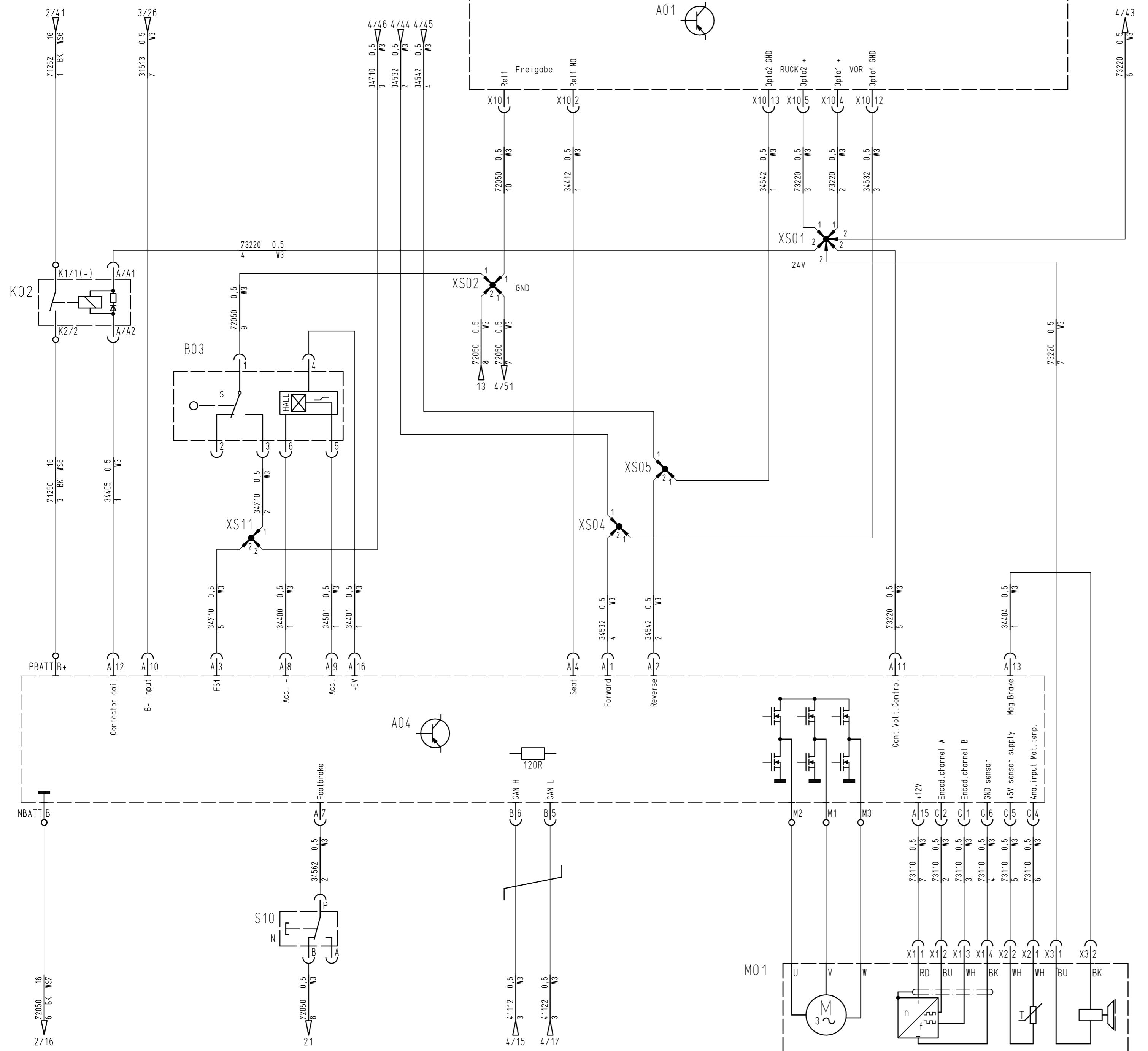
VARIANTE
Walzenbürste



** Anschlusschema

Maschinensteuerung	an	Walzenbürstenmotor / Anschluss
A01/X6/1		M05 rechts-vorne / Bolzen N (-)
A01/X6/1(rt)		M05/MP/1(rt)
A01/X7B		M05 rechts-vorne / Bolzen P (+)
A01/X7B(bl)		M05/MN/1(bl)
A01/X5/1		M06 links-hinten / Bolzen N (-)
A01/X5/1(rt)		M06/MN/1(bl)
A01/X7A		M06 links-hinten / Bolzen P (+)
A01/X7A(bl)		M06/MP/1(rt)

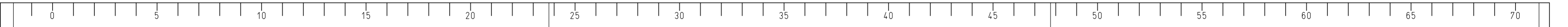




Legende

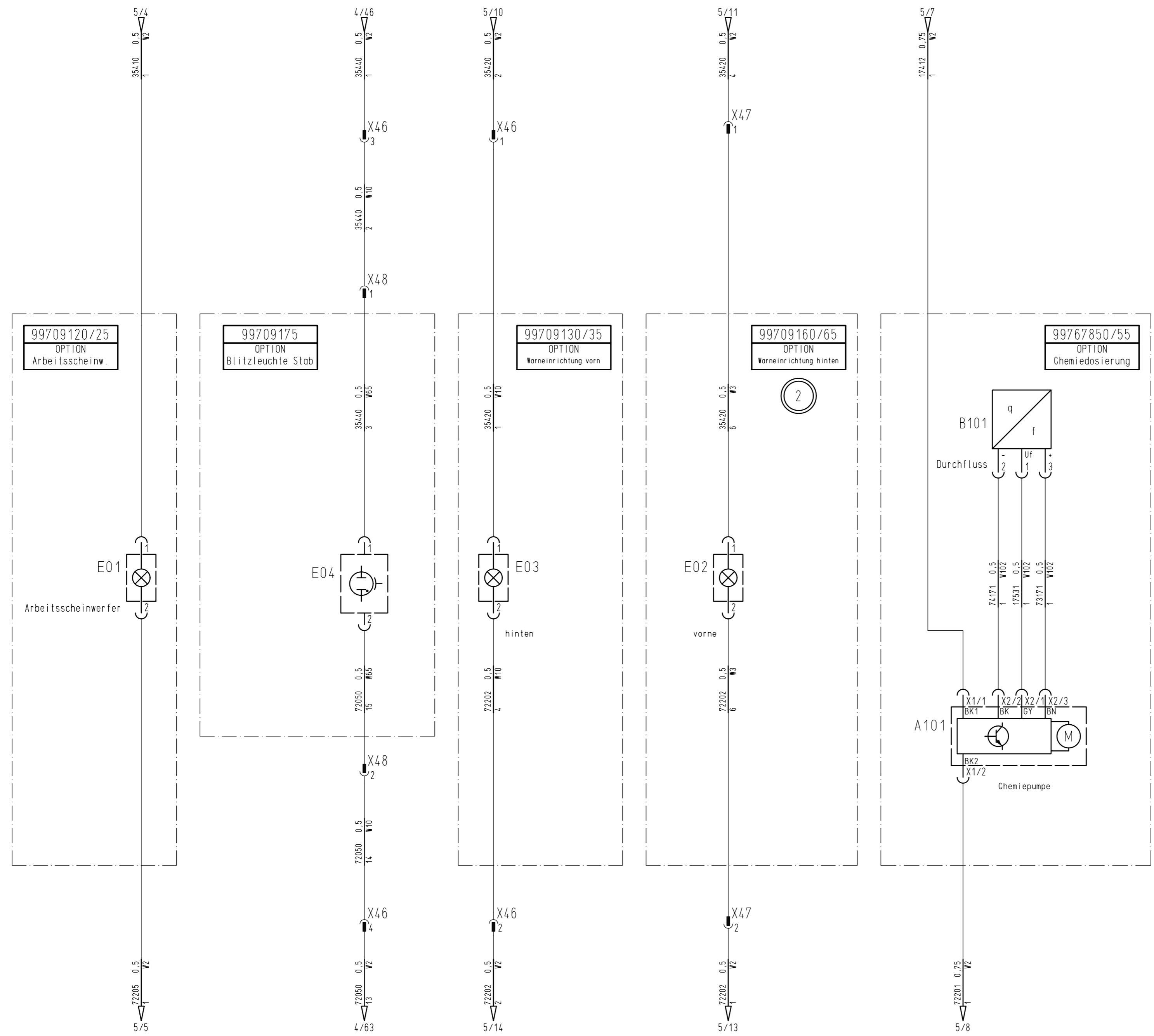
- A01 Maschinensteuerung
machine controller
- A04 Fahrsteuerung
drive controller
- B03 Fahrgeber
accelerator
- K02 Relais Fahrsteuerung
drive control contactor
- M01 Fahrantrieb
drive motor
- S10 Bremsstaster
breake switch
- XS01 USSP
ussp
- XS02 USSP
ussp
- XS04 USSP
ussp
- XS05 USSP
Ussp
- XS11 USSP
ussp

2	./.	3655-39	23.10.17	DK	2016	Date	Name	B120R	Name	Schaltplan B120 R / Circuit diagram B120 R	 <small>Hako GmbH D-23840 Bad Oldesloe</small>	Drawing Number	91037861
					Drawn by		JKem		Replacem. for same no.		For this drawing we reserve all rights (acc. DIN ISO 16016) KABI 472 Type 7177 Dep. ELK No. of Sh. 10 Sheet 6		
					Verified				Change No. 3655-14				

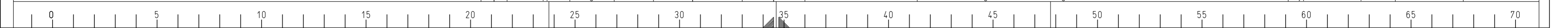


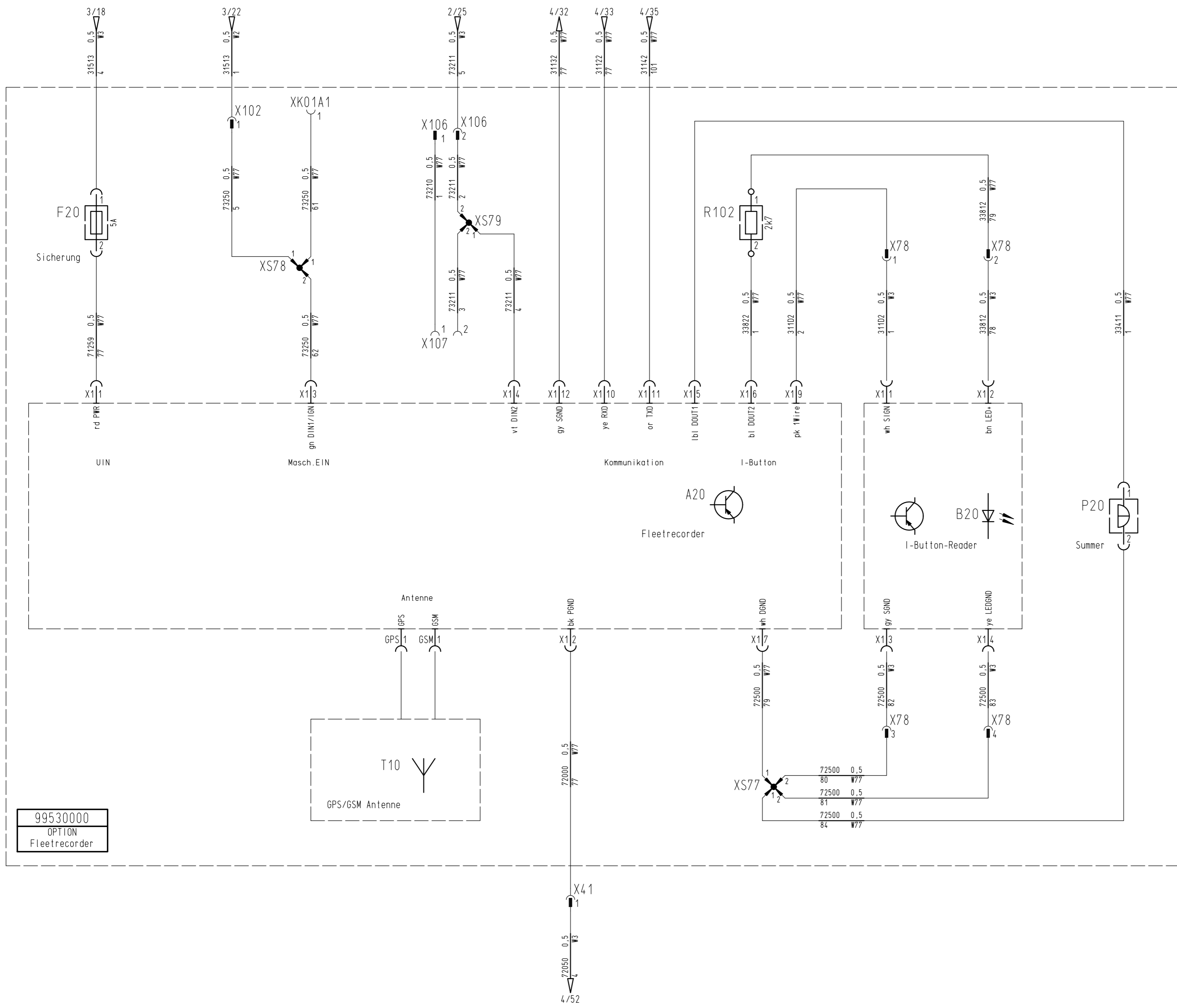
Legende

- A101 Chemiepumpensteuerung
chemical pump controller
- B101 Durchflussmesser
flow sensor
- E01 Arbeitsscheinwerfer
working headlight
- E02 Warneinrichtung Front
warning beacon front
- E03 Warneinrichtung Heck
warning beacon back
- E04 Blitzleuchte am Stab
warning beacon on the rod
- X46 Steckverbinder 6pol. (W2<->W10)
connector 6 pole (W2<->W10)
- X47 Steckverbinder 4pol. (W2<->W3)
connector 4 pole (W2<->W3)
- X48 Steckverbinder 2pol. (W10<->W65)
connector 2 pole (W10<->W65)



2	1x	3655-39	23.10.17	DK	2015	Date	Name	B120R	Name	Schaltplan B120 R / Circuit diagram B120 R	Hako Hako GmbH D-23840 Bad Oldesloe	Drawing Number	91037861
					Drawn by		JKem		Replacem. for same no.				
					Verified				Change No. 3655-14		For this drawing we reserve all rights (acc. DIN ISO 16016)		
					Standard						KABI 472 Type 7177 Dep. ELK No. of Sh. 10 Sheet 7		





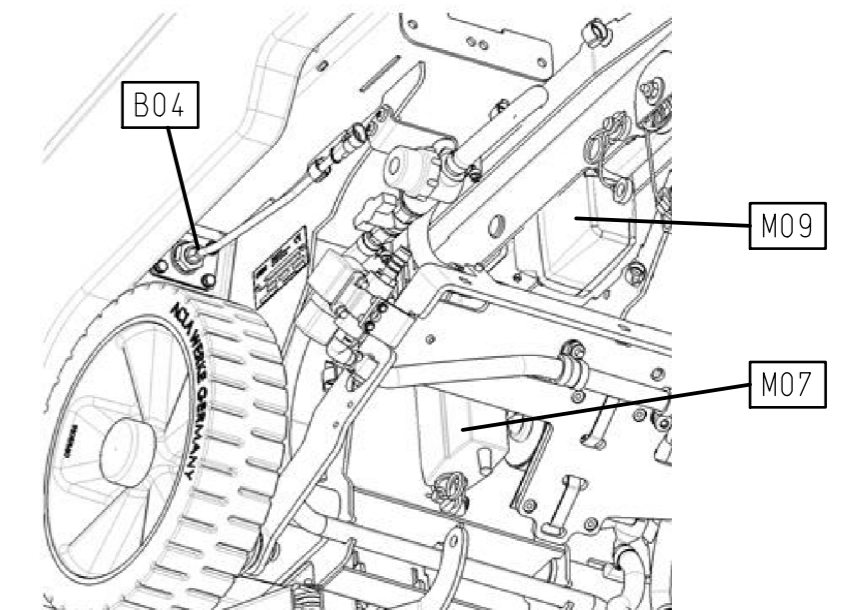
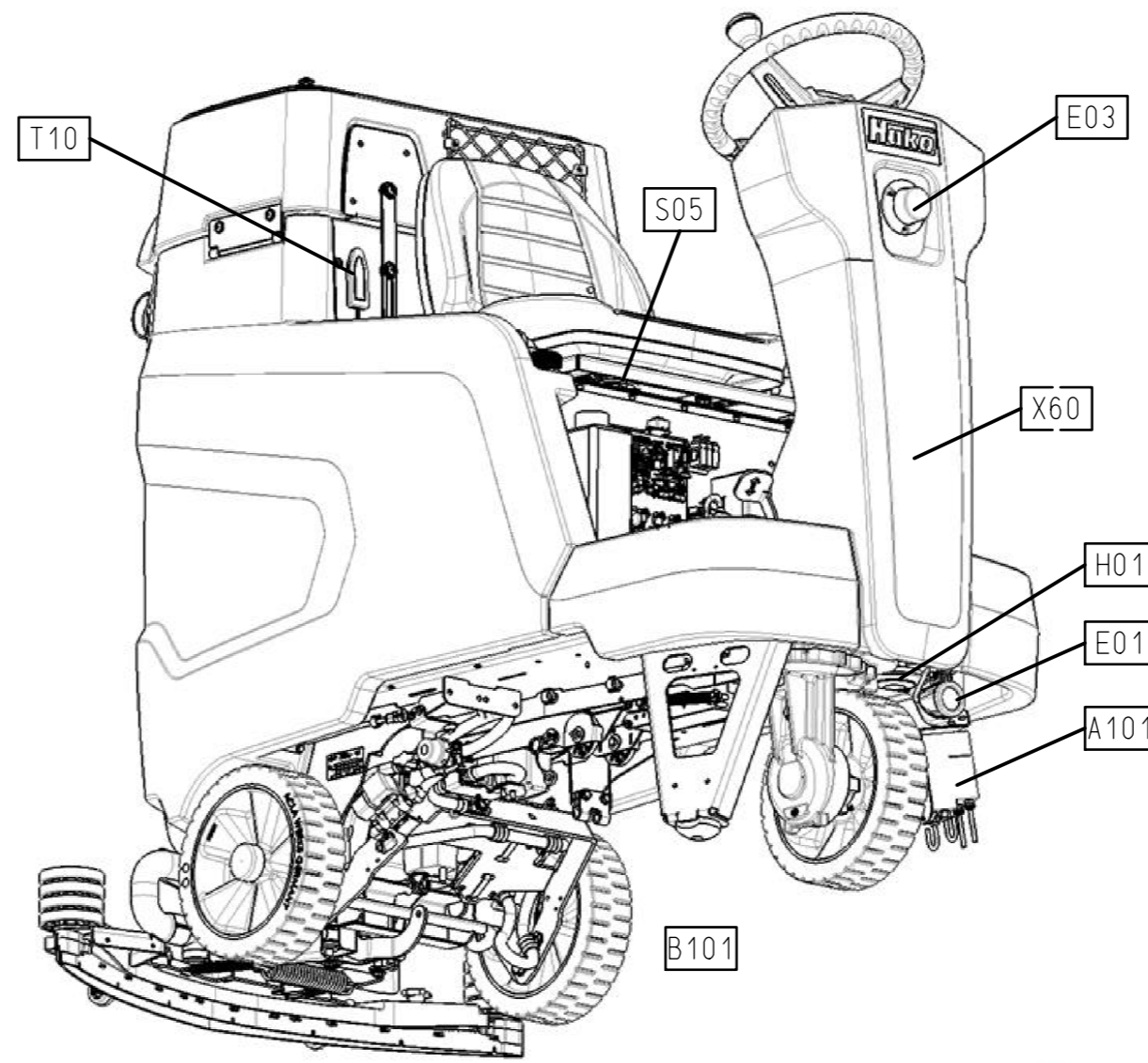
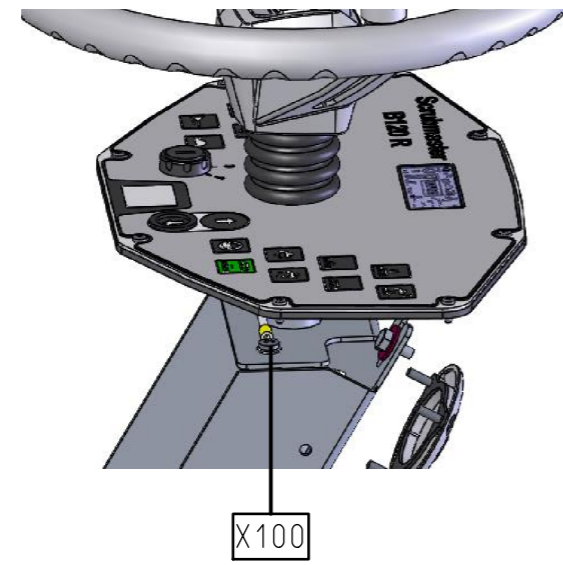
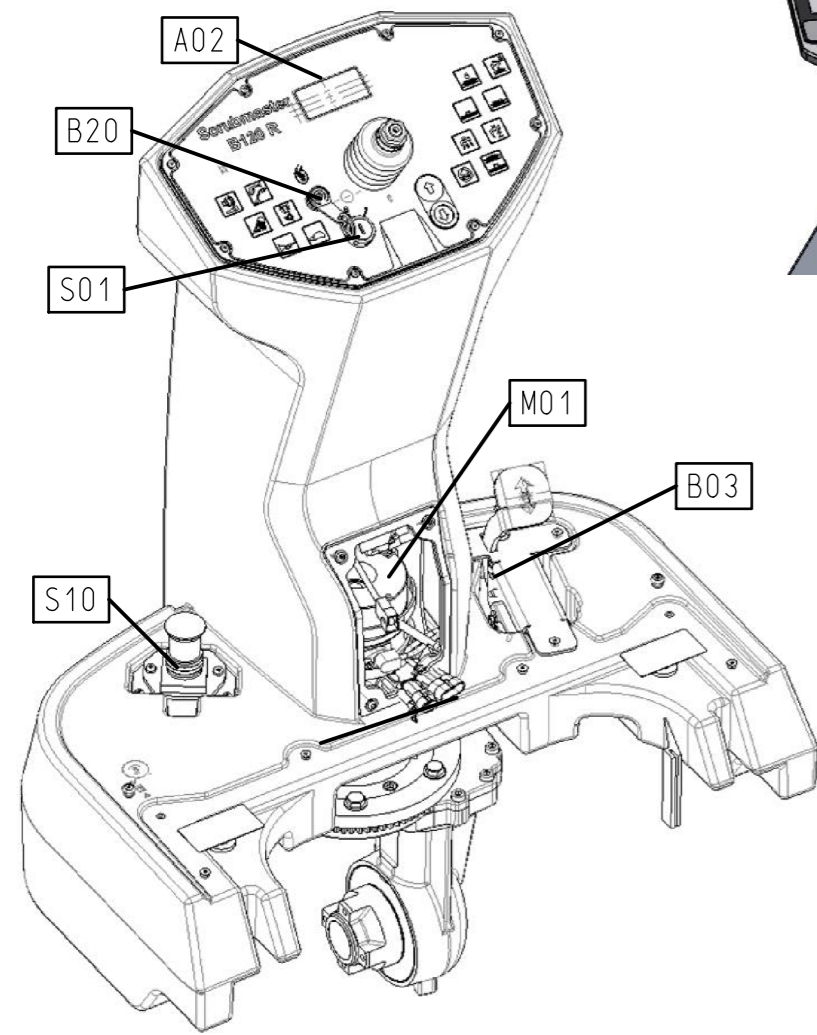
Legende

- A20 Fleetrecorder
fleetrecorder
- B20 I-Button-Reader
i-button-reader
- F20 Sicherung Fleetrecorder 5A
fleetrecorder fuse 5A
- P20 Summer Fleetrecorder
buzzer for fleetrecorder
- R102 Vorwiderstand 2k7
resistor 2k7 (cable harness W77)
- T10 Kombiantenne
GPS/GSM Antenna
- X41 Steckverbinder 1pol. (W3<->W77)
connector 1 pole (W3<->W77)
- X78 Steckverbinder 4pol. (W3<->W77)
connector 4 pole (W3<->W77)
- X102 Steckverbinder 1pol. (W2<->W77)
connector 1 pole (W2<->W77)
- X106 Steckverbinder 2pol. (W3<->W77)
connector 2 pole (W3<->W77)
- X107 Steckverbinder 2pol. (W77)
connector 2 pole (W77)
- XK01A1 VBat Fleetrecorder
VBat for fleetrecorder
- XS77 USSP
ussp
- XS78 USSP
ussp
- XS79 USSP
ussp

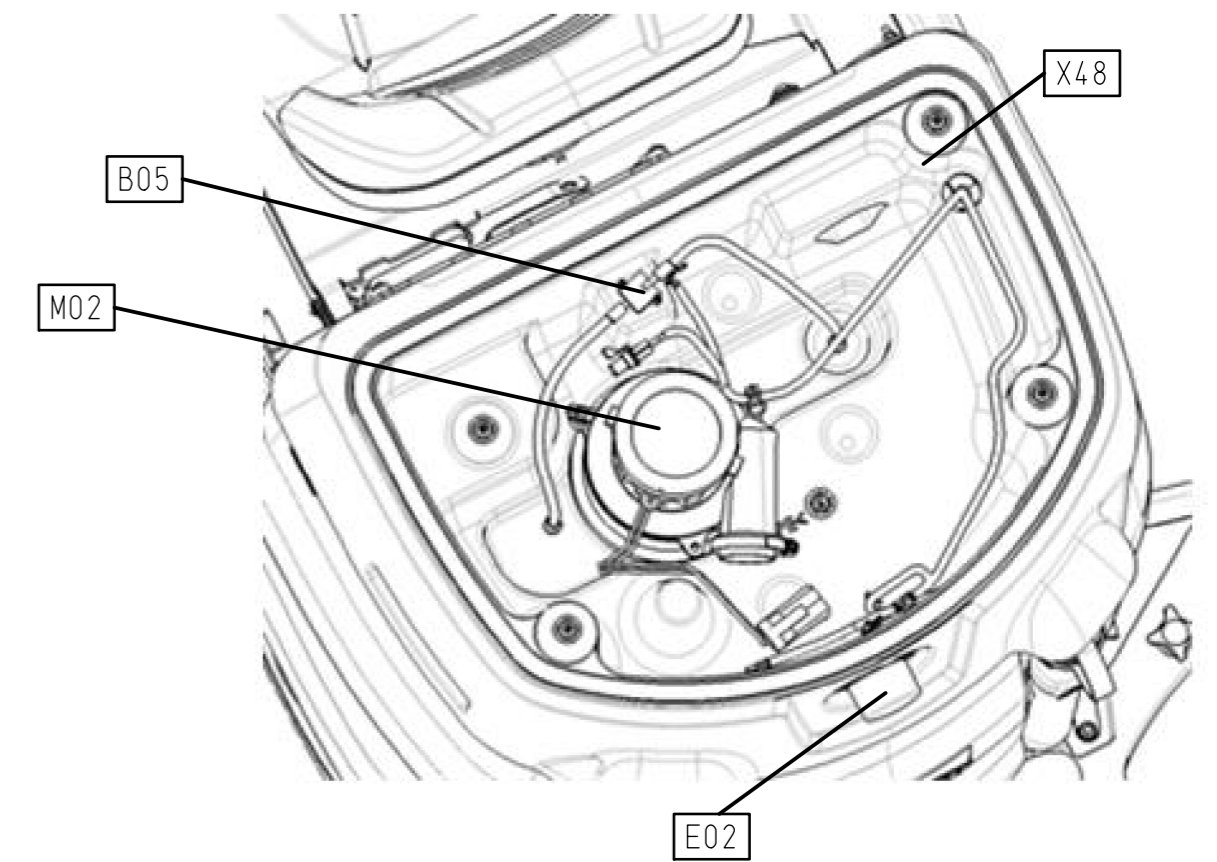
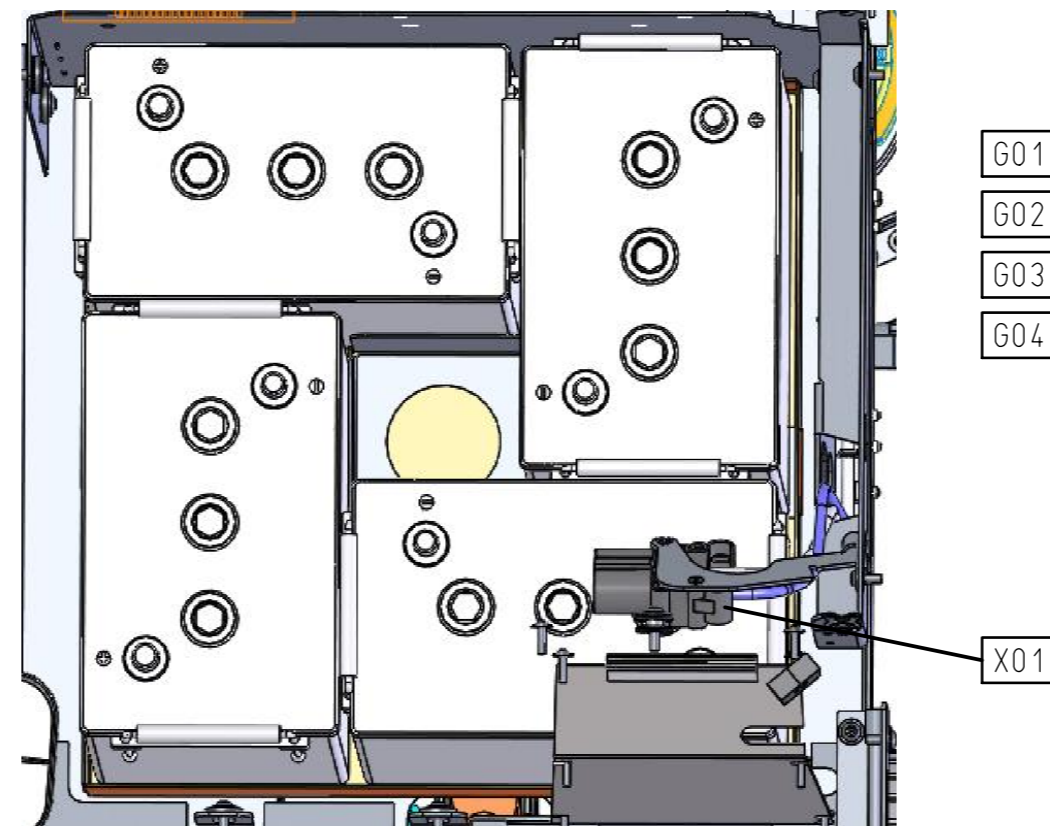
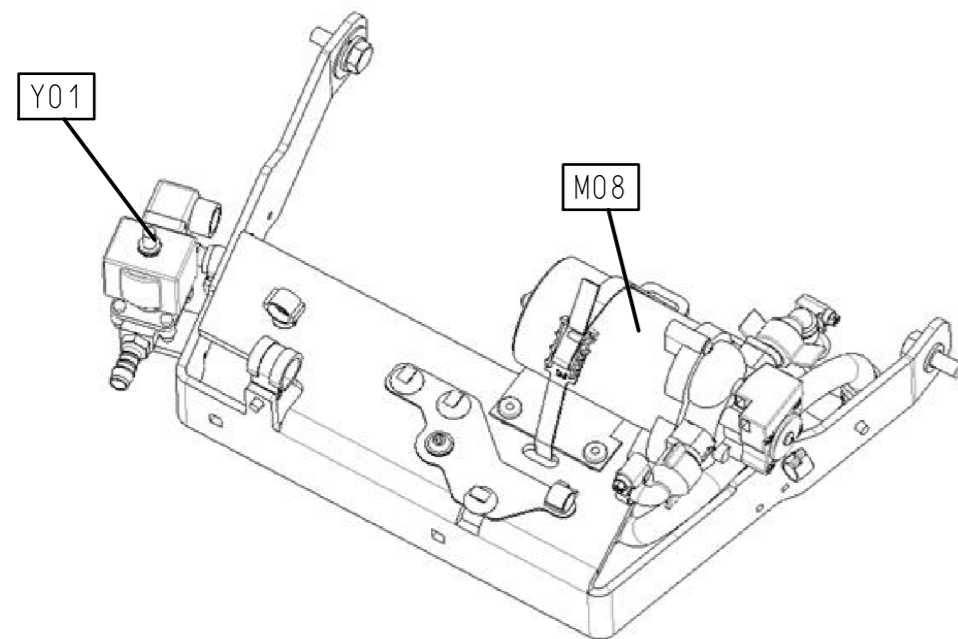
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OPTION
Fleetrecorder

2	/.	3655-39	23.10.17	DK	2015	Date	Name	B120R	Name	Schaltplan B120 R / Circuit diagram B120 R	 Hako GmbH D-23840 Bad Oldesloe	Drawing Number 91037861		
					Drawn by JKem	02.11.	JKem					Replacem. for same no.	For this drawing we reserve all rights (acc. DIN ISO 16016)	
A2	No.	Number appears	Change No.	Date	Name	Standard	Change No.	3655-14	KABI 472	Type 7177	Dep. ELK	No. of Sh. 10	Sheet 8	

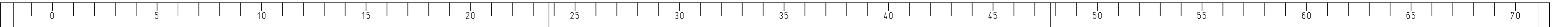
Lenkkonsole
steering console



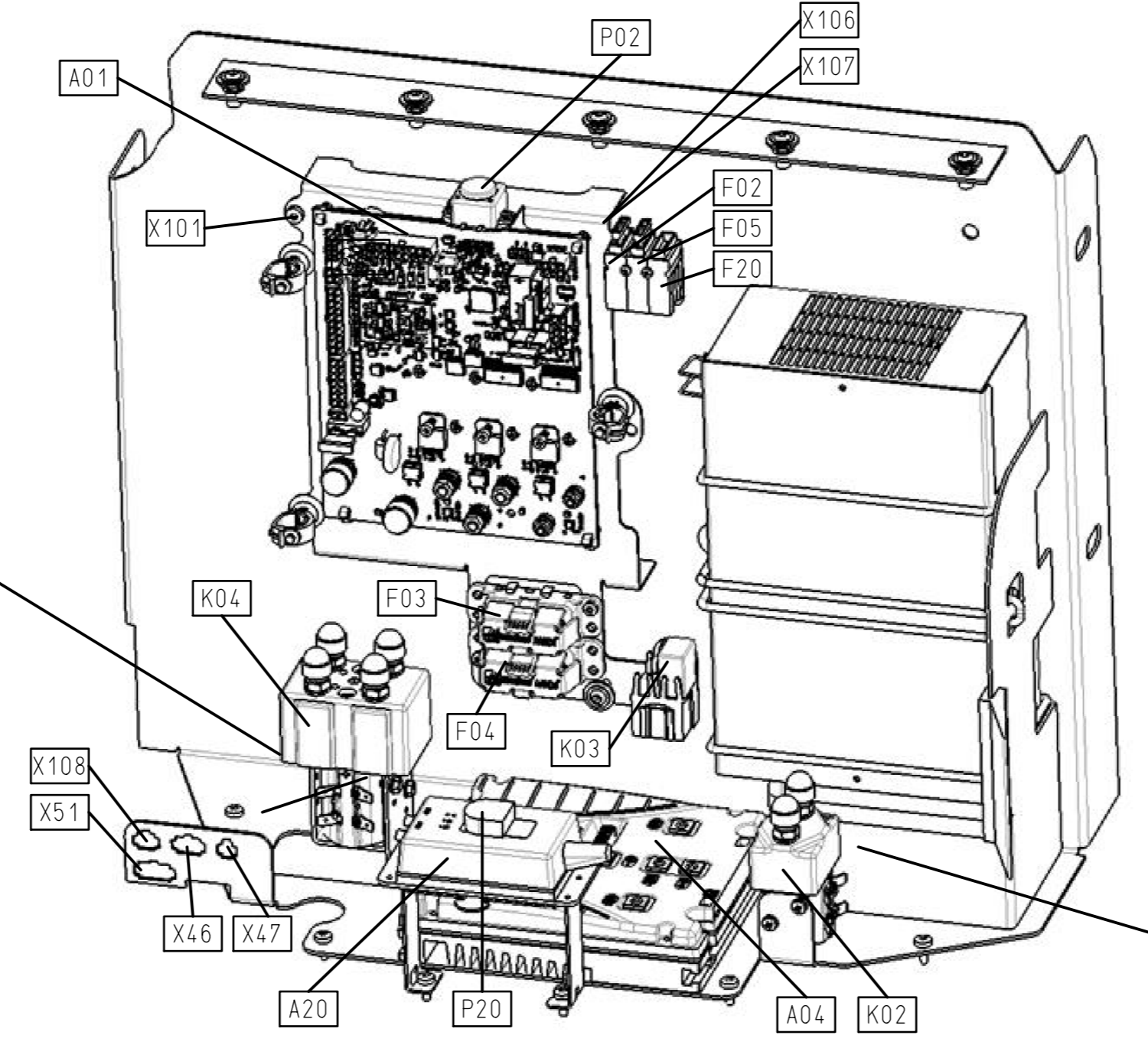
Schwinge
wing



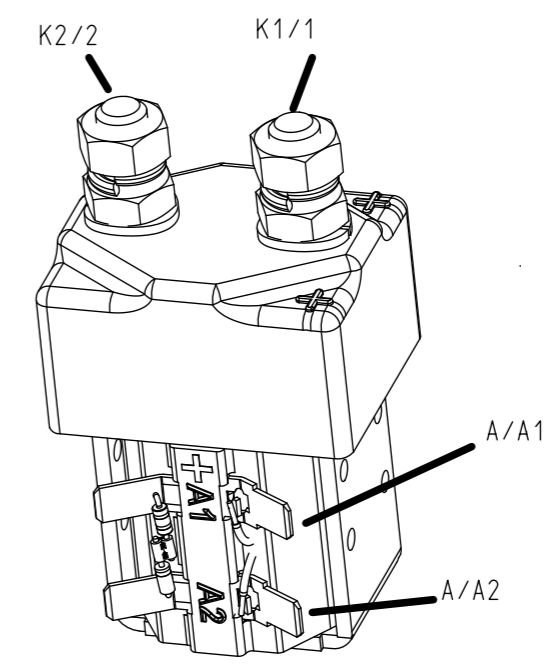
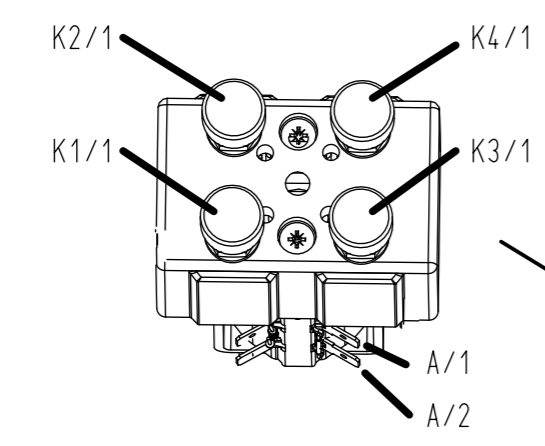
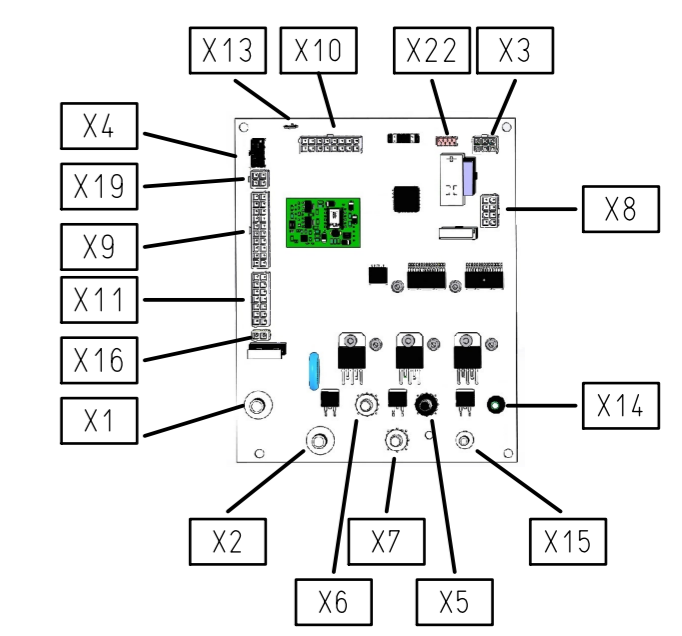
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					Drawn by	02.11.	JKem					Replacem. for same no.	91037861		
A2	No.	Number appears	Change No.	Date	Name	Standard		Change No.	3655-14	For this drawing we reserve all rights (acc. DIN ISO 16016)	KABI 472	Type 7177	Dep. ELK	No. of Sh. 10	Sheet 9



E-Blech
electronic compartment



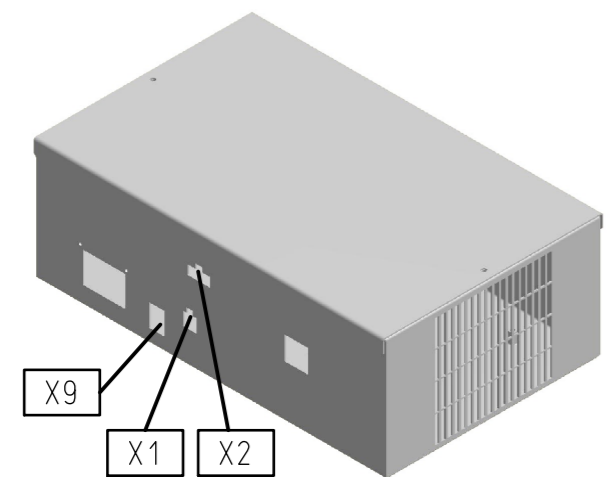
Maschinensteuerung A01
machine control A01



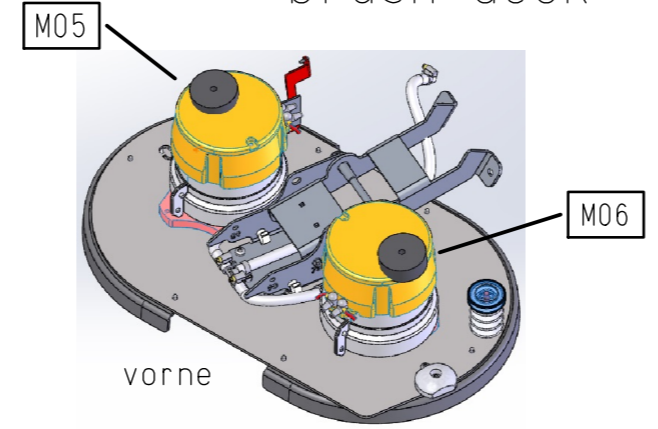
2 Variante Übersee
variant overseas



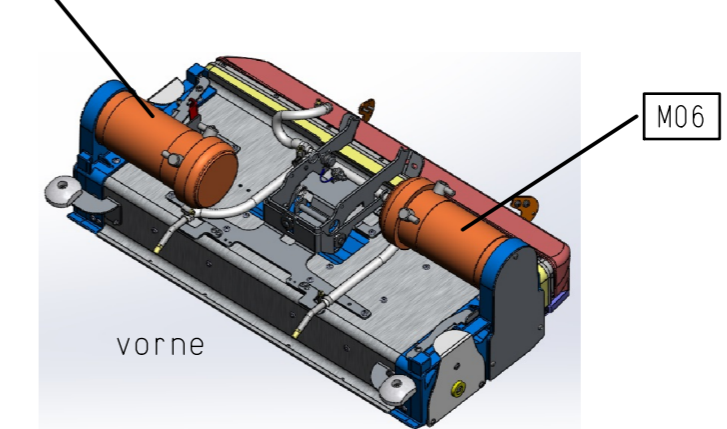
Ladegerät G10
onboard charger G10



Tellerbürstendeck
brush deck



Walzenbürstendeck
brush deck



2

2	2x	3655-39	23.10.17	DK	2015 Drawn by Verified	Date 02.11. JKem	Name B120R Replacem. for same no. Change No. 3655-14	Name Schaltplan B120 R / Circuit diagram B120 R For this drawing we reserve all rights (acc. DIN ISO 16016)	 Hako GmbH D-23840 Bad Oldesloe	Drawing Number 91037861		
A2	No.	Number appears	Change No.	Date	Name	Standard		KABI 472	Type 7177	Dep. ELK	No. of Sh. 10	Sheet 10

