

Elektroplan (Zusatz) Electric diagram (addition)

**Telematik TrackUnit HD8-14
telematic TrackUnit HD8-14**

H199-H201
Baureihe /
Series

0001 -
Seriennummer /
Serial No

12.02.2018
Ausgabedatum /
Date of issue

2370446_02
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	ESP	

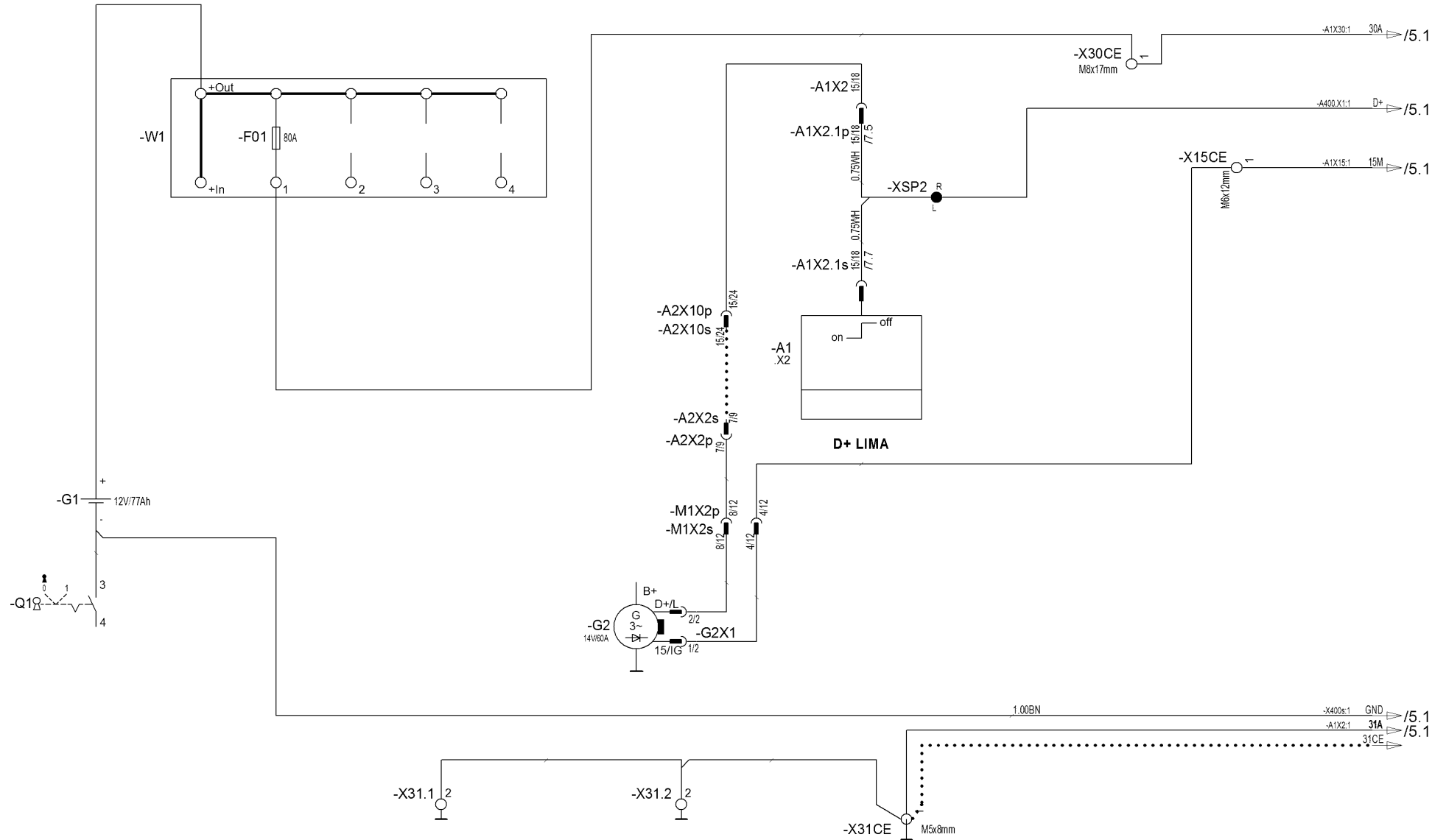
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G1: Batterie
G1: battery
Q1: Batterietrennschalter
Q1: Battery isolating switch

W1: Sicherungshalter
W1: Fuse-holder

G2: Lichtmaschine
G2: Alternator

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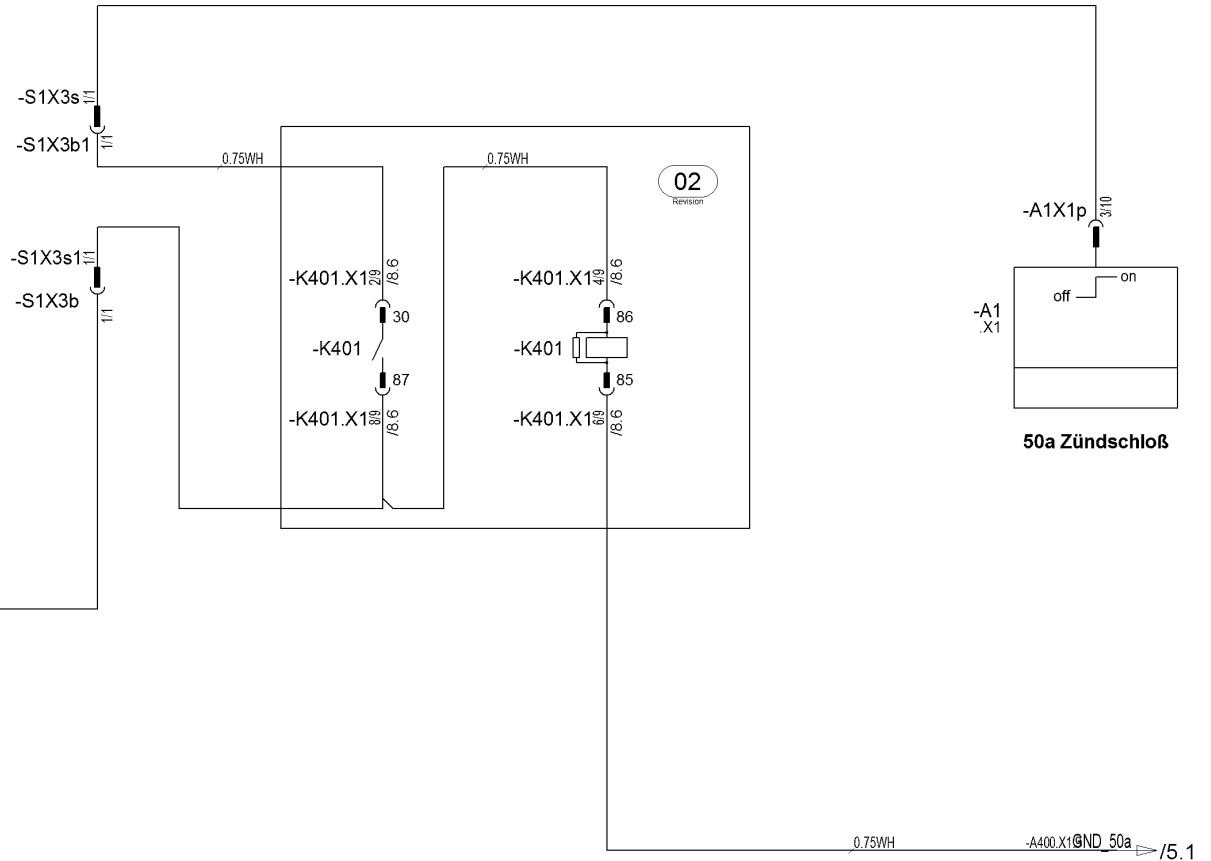
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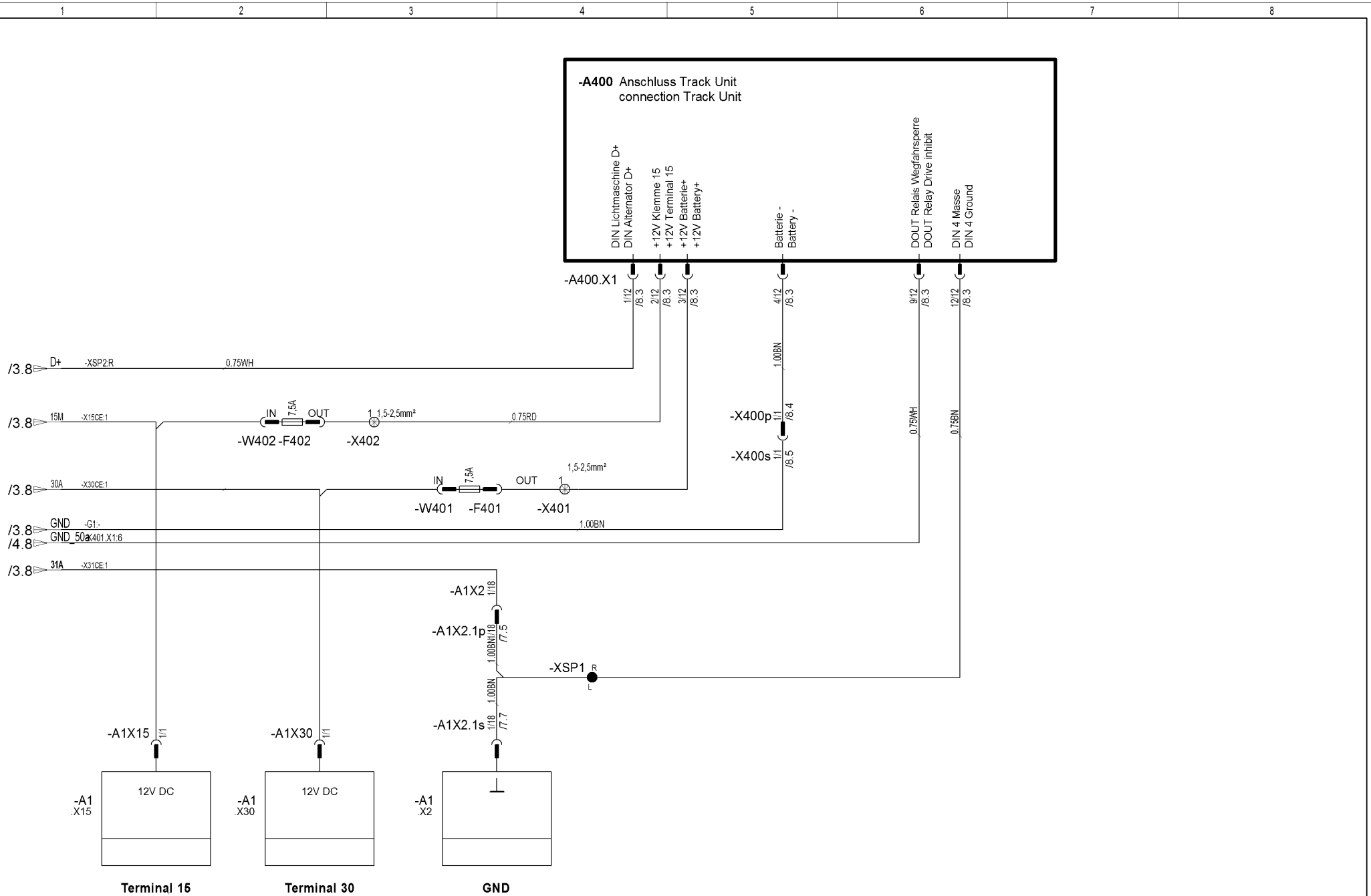
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Hauptsicherungen Spannungsverteilung
Main-fuses power distribution

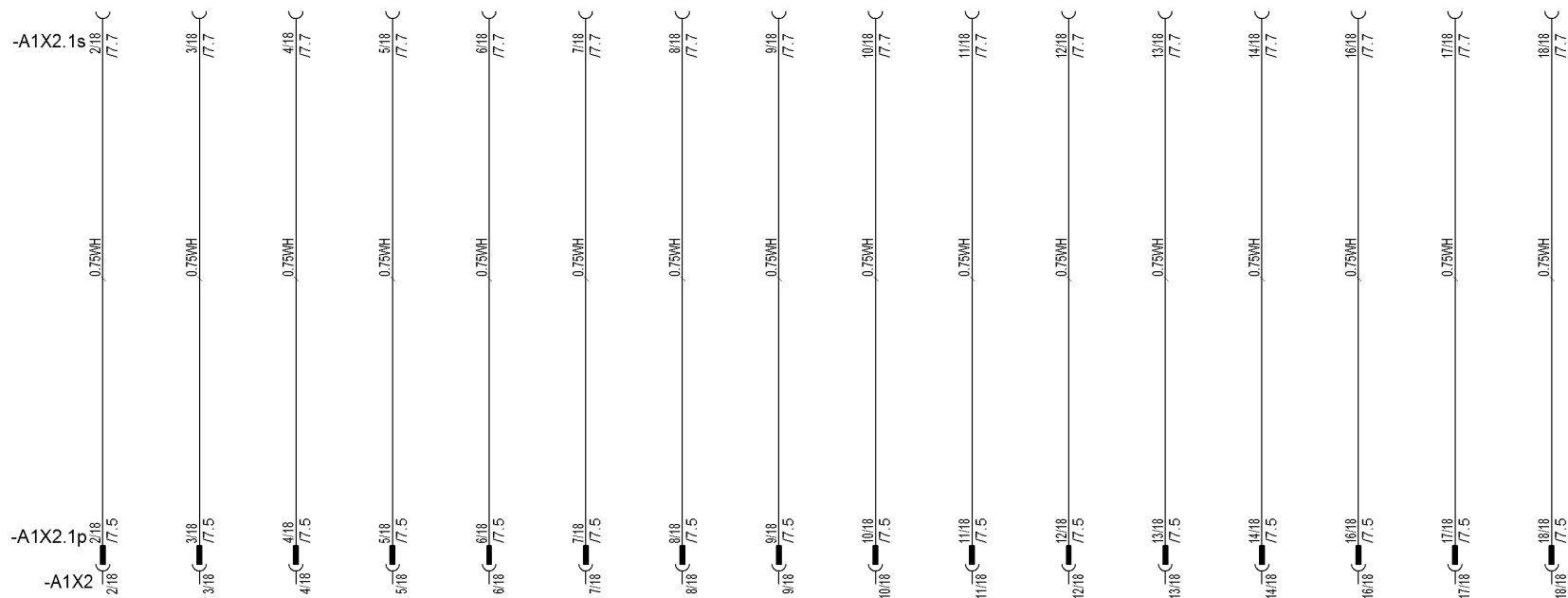
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Option Motor Start Wegfahrsperre TrackUnit
Option start engine Drive inhibit TrackUnit



Drawing by:	Approved by:	Last change:	Status:	Document No.:	Material No.:	Revision No.:	Anschluss TrackUnit connection TrackUnit	Sheet 5 of 14 Sheets
date 03.02.2014	date	date 12.02.2018	AE = changable PF = prototype release SF = serial release	Partial Document No.:	2370446	02		
name Mar. Schedl	name	name Mar. Schedl		Version No.:	Series code: H199-H201	Valid for Serial No.: from 0001 to		
E - CAE	Document type: ESP	Function group No.: 15			Sheet plant: Sheet Location:			



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date 03.02.2014	date	date 12.02.2018	SF AE = changeable			2370446	02		6
name Mar.Schedl	name	name Mar.Schedl	PF = prototype release	Partial Document No.:	 HAMM	Series code:	Valid for Serial No.:	Adapter Kabelbaum A1X2 Adapter wire harness A1X2	of 14 Sheets
E - CAE	Document type: ESP	Function group No.: 15	SF = serial release	Version No.:		H199-H201	from 0001 to		
						Sheet plant:			
						Sheet Location:			

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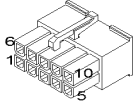
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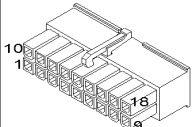
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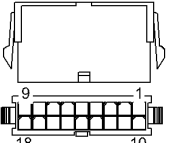
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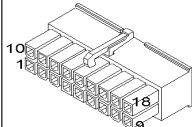
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-A1X1p	
	1: 2: 3: /4.8 4: 5: 6: 7: 8: 9: 10:

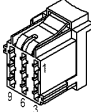
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	1: /5.4 10: /6.5 2: /6.2 11: /6.5 3: /6.2 12: /6.6 4: /6.2 13: /6.6 5: /6.3 14: /6.6 6: /6.3 15: /3.5 7: /6.4 16: /6.7 8: /6.4 17: /6.7 9: /6.4 18: /6.8

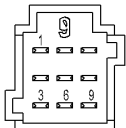
-A1X2.1p	
view cable-side 	1: /5.4 10: /6.5 2: /6.2 11: /6.5 3: /6.2 12: /6.6 4: /6.3 13: /6.7 5: /6.3 14: /6.6 6: /6.3 15: /3.5 7: /6.4 16: /6.7 8: /6.4 17: /6.7 9: /6.5 18: /6.8

-A1X2.1s	
	1: /5.4 10: /6.5 2: /6.2 11: /6.5 3: /6.2 12: /6.6 4: /6.3 13: /6.7 5: /6.3 14: /6.6 6: /6.3 15: /3.5 7: /6.4 16: /6.7 8: /6.4 17: /6.7 9: /6.5 18: /6.8

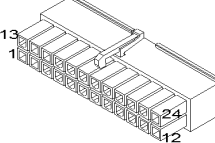
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	1: /5.1

-A1X30	
	1: /5.2

-A2X2p	
	1: 2: 3: 4: 5: 6: 7: /3.5 8: 9:

-A2X2s	
	1: 2: 3: 4: 5: 6: 7: /3.4 8: 9:

-A2X6p	
	1: /4.2 2: /4.2

-A2X10p	
	1: 13: 2: 14: 3: 15: /3.4 4: 16: 5: 17: 6: 18: 7: 19: 8: 20: 9: 21: 10: 22: 11: 23: 12: 24:

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Übersicht Steckerbelegung
General arrangement Plug occupancy

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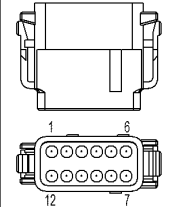
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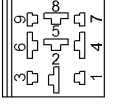
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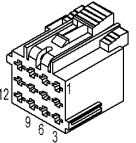
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-A2X10s	
	
1:	13:
2:	14:
3:	15: /3.5
4:	16:
5:	17:
6:	18:
7:	19:
8:	20:
9:	21:
10:	22:
11:	23:
12:	24:

-A400.X1	
	
1: /5.4	
2: /5.5	
3: /5.5	
4: /5.5	
5:	
6:	
7:	
8:	
9: /5.6	
10:	
11:	
12: /5.6	

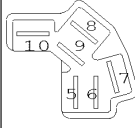
-G2X1	
	
1: /3.4	
2: /3.4	

-K401.X1	
	
1:	
2: /4.5	
3:	
4: /4.6	
5:	
6: /4.6	
7:	
8: /4.5	
9:	

-M1X2p	
	
1:	
2:	
3:	
4: /3.5	
5:	
6:	
7:	
8: /3.4	
9:	
10:	
11:	
12:	

-M1X2s	
	
view contact-side	
1:	7:
2:	8: /3.5
3:	9:
4: /3.5	10:
5:	11:
6:	12:

-S1X1	
	
1: /4.2	
2:	
3: /4.2	
4: /4.2	

-S1X2	
	
5: /4.2	
6:	
7: /4.2	
8: /4.3	
9: /4.3	
10:	

-S1X3b	
	
1: /4.4	

-X400p	
	
1: /5.5	

-X400s	
	
1: /5.5	

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Sheet plant: Sheet Location:			

Übersicht Steckerbelegung
General arrangement Plug occupancy

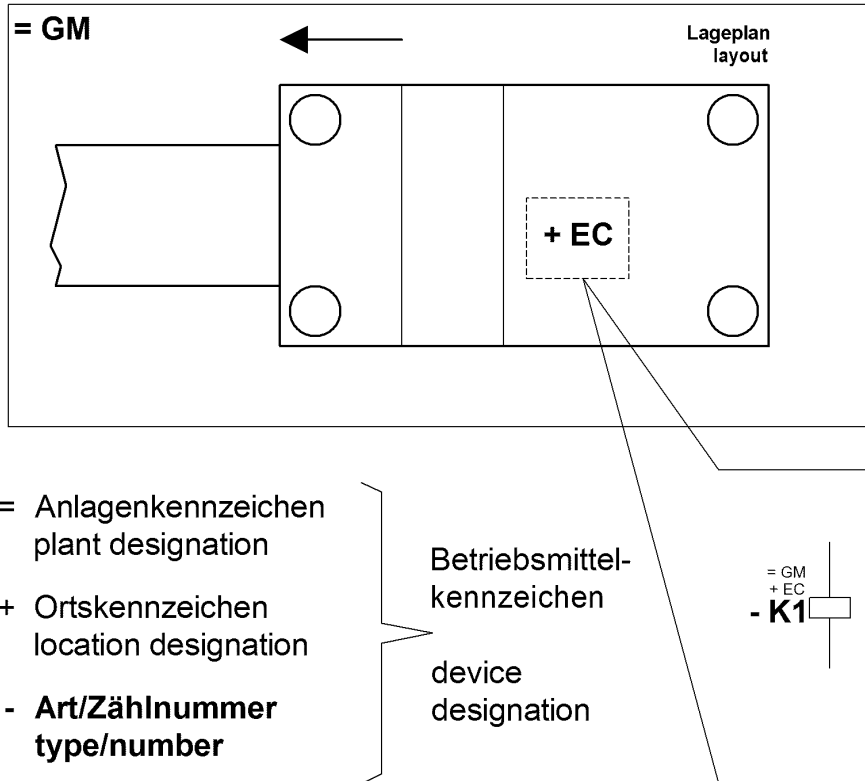
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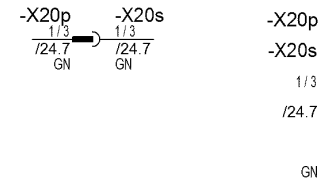
Aufbau Betriebsmittelkennzeichen / device designation configuration



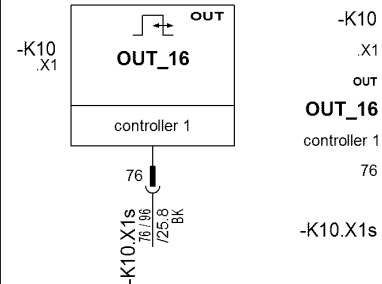
- Minimales Betriebsmittelkennzeichen: Nur Art/Zählnummer
minimal device designation: type/number only
- Maximales Betriebsmittelkennzeichen: Anlagenkennzeichen, Ortskennzeichen und Art/Zählnummer
maximum device designation: plant designation, location designation and type/number
- **Anlagenkennzeichen, Ortskennzeichen und Art/Zählnummer sind nur IN KOMBINATION eindeutig!**
plant designation, location designation and type/number are only explicitly IN COMBINATION!

Bezeichnungserklärungen / designation explanations

Stecker zu Stecker Verbindung / connector to connector connection



Gerät zu Stecker Verbindung / device to connector connection



Deutsch

p = Stiftkontakt
s = Buchsenkontakt
Kontakt 1 von 3 Kontakten
Steckermaster auf Blatt 24,
Strompfad 7
Gehäusefarbe Stecker = Grün

English

p = pin contact
s = socket contact
contact 1 of 3 contacts
connector master on sheet 24,
current path 7
connector housing colour = green

-K10
.X1
OUT
OUT_16
controller 1
76

-K10.X1s
Art/Zählnummer Gerät
Anschlussstecker X1 am Gerät
Schnittstellentyp
Schnittstellenname
Gerätename
Kontakt des Anschlusssteckers
Art/Zählnummer Gegenstecker
(Stecker erbt zusätzlich zur
eigenen Art/Zählnummer, die
Art/Zählnummer des Gerätes
an dem er angeschlossen ist.
Dadurch ist eine eindeutige
Zuordnung von Gerät und
zugehörigem Stecker möglich)

type/number device
connector plug X1 on device
interface type
interface name
device name
contact of connector plug
type/number mating connector
(connector inherits additionally to
its own type/number, the
type/number of the device it is
connected to.
Thus permits a clear allocation of
device and appendant mating
connector)

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Erklärung Aufbau Betriebsmittelkennzeichen
Explanation device designation layout

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Gerätekennbuchstaben, elektrisch (beispielhaft) /
device code letter, electric (exemplified)

<u>Gerätekennbuchstabe / device code letter</u>	<u>Deutsch</u>	<u>English</u>	<u>Gerätekennbuchstabe / device code letter</u>	<u>Deutsch</u>	<u>English</u>
- A	Bauteile mit zwei oder mehr Aufgaben Dieselmotor Radio	devices with two or more tasks diesel engine radio	- P	Hupe Leuchtdiode Signallampe Fahrtenschreiber anzeigendes Messgerät	horn light emitting diode signal lamp tachograph displaying measuring instrument
- B	Sensor Näherungsschalter Messwandler	sensor proximity switch measuring transformer	- R	Diode Widerstand	diode resistor
- C	Kondensator	capacitor	- S	Schalter	switch
- E	Heizung Lampe Leuchte	heating lamp light	- T	Gleichrichter Verstärker Transformator Frequenzwandler	rectifier amplifier transformer frequency converter
- F	Sicherung Leitungsschutzschalter Motorschutzschalter	fuse circuit breaker motor protection switch	- W	Kabel Elektrische Leitung Sammelschiene	cable wire bus bar
- G	Batterie Generator	battery generator	- X	Klemme Klemmenleiste Steckdose	terminal terminal strip outlet
- K	Relais Schütz Regler Prozessrechner SPS-Steuerung	relay contactor controller process computer programmable logic controller (PLC)			
- M	Elektromotor Betätigungsspule	electric motor coil			

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Erklärung Gerätekennbuchstaben, elektrisch
Explanation device code letter, electric

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Gerätekennbuchstaben, hydraulisch (beispielhaft) / device code letter, hydraulic (exemplified)		
Gerätekennbuchstabe / device code letter	Deutsch	English
- HA	Ventilblock	valve-block
- HG	Hydraulikpumpe	hydraulic pump
- HK	Mengenteiler Prioritätsventil Stromregelventil hydraulisch	flow divider priority valve hydraulic flow control valve
- HM	Hydraulikmotor Hydraulikzylinder	hydraulic motor hydraulic cylinder
- HQ	Bremsventil Kugelhahn Lenkeinheit Wegeventil	braking valve ball valve steering unit direction control valve
- HV	Hydraulikfilter	hydraulic filter
- Ma	Ventil Magnetspule a	valve coil a
- Mb	Ventil Magnetspule b	valve coil b

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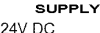
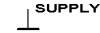
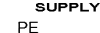
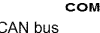
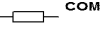
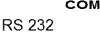
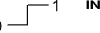
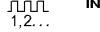
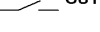
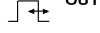
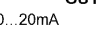
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Erklärung Gerätekennbuchstaben, hydraulisch Explanation device code letter, hydraulic
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Symbolerklärungen * / symbol explanations *			
Symbol / symbol	Bedeutung / standing	Symbol / symbol	Bedeutung / standing
 SUPPLY 24V DC	Spannungsversorgung power supply	 OUT	Rechteckgenerator square-wave generator
 SUPPLY	Masse ground	 ECU	Anschluss Motorsteuergerät connection to engine control unit
 SUPPLY PE	Schutzleiter protection earth	*Standardsymbole sind von DIN EN 60671 abgeleitet Standard symbols are derived from DIN EN 60617	
 COM CAN bus	CAN Busleitung CAN bus line		
 COM	Abschlusswiderstand terminating resistor		
 COM RS 232	RS 232 Schnittstellenleitung RS 232 interface circuit		
 0 1 IN	Digitaleingang (allgemein) digital input (in general)		
 IN	Pulseingang pulse input		
 1,2... IN	Zählereingang counter input		
 IN	Spannungseingang voltage input		
 mA IN	Stromeingang current input		
 Ω IN	Widerstandseingang resistance input		
 Hz IN	Frequenzeingang frequency input		
 OUT	Digitalausgang digital output		
 OUT	Pulsweitenmodulationsausgang pulse width modulation output		
 0...20mA OUT	analoge Stromquelle analogue current supply		

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Symbolerklärung Funktionseinheiten
Symbol explanation of functional units

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Linienformate / line formats			Farbbezeichnungen / colour designations		
<u>Linienart / line type</u>	<u>Linienstärke / Grafik / line thickness / graphic</u>	<u>Bedeutung / standing</u>	<u>Abkürzungen Farbbezeichnungen / colour abbreviations</u>	<u>Deutsch</u>	<u>English</u>
Volllinie / solid line	0,25mm	Standard / standard	BU	blau	blue
			BN	braun	brown
Strichpunktlinie / dash-dotted line	0,25mm	PE (Schutzerde) / PE (protecting earth)	YE	gelb	yellow
			GN	grün	green
Strichlinie / dashed line	0,25mm	Bauteilumrandung, bzw. Zusammengehörigkeit / component border, togetherness	GY	grau	grey
			OG	orange	orange
Strichlinie / dashed line	0,25mm	Optionen / options	PK	rosa	pink
			RD	rot	red
Punktlinie / dotted line	0,75mm	Leiterbahnverbindungen einer Platine (nicht als Drahtleitung ausgeführte Verbindung) / conductor line of a edge board	BK	schwarz	black
			TQ	türkis	turquoise
			VT	violett	violet
			WH	weiss	white

Drawing by:	Approved by:	last change:
date 03.02.2014	date	date 12.02.2018
name Mar. Schedl	name	name Mar. Schedl
E - CAE	Document type: ESP	Function group No.:

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AE = changeable	
PF = prototype release	Partial Document No.:
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Material No.:	Revision No.:
2370446	02
Series code:	Valid for Serial No.:
H199-H201	from 0001 to
Sheet plant:	
Sheet Location:	

Erklärung Linienformate, Farbbezeichnungen
Explanation line formats, colour designations

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Sheets	

1		2		3		4		5		6		7		8	
Betriebsmittelkennzeichen / Device designation		Blatt / Sheet		Betriebsmittelkennzeichen / Device designation		Blatt / Sheet		Betriebsmittelkennzeichen / Device designation		Blatt / Sheet		Betriebsmittelkennzeichen / Device designation		Blatt / Sheet	
-A1		/3.5		-M1X2p :8		/3.5		-XSP1		/5.4					
-A1		/4.8		-M1X2s :4		/3.5		-XSP2		/3.6					
-A1		/5.2		-M1X2s :8		/3.5									
-A1		/5.1		-Q1		/3.1									
-A1		/5.3		-S1		/4.2									
-A1X15		/7.4		-S1X1 :1		/4.2									
-A1X1p		/7.1		-S1X1 :3		/4.2									
-A1X2		/7.3		-S1X1 :4		/4.2									
-A1X2.1p		/7.4		-S1X2 :5		/4.2									
-A1X2.1s		/7.1		-S1X2 :7		/4.2									
-A1X30		/7.5		-S1X2 :8		/4.2									
-A2X10p :15		/3.5		-S1X2 :9		/4.3									
-A2X10s :15		/3.5		-S1X3b :1		/4.3									
-A2X2p :7		/3.5		-S1X3b1		/7.4									
-A2X2s :7		/3.5		-S1X3s :1		/4.3									
-A2X6p		/7.6		-S1X3s1		/7.4									
-A400		/5.1		-W1		/3.2									
-A400.X1		/7.2		-W401		/5.3									
-B400		/5.6		-W402		/5.2									
-F01		/3.2		-X15CE		/3.7									
-G1		/3.1		-X30CE		/3.7									
-G2		/3.4		-X31.1		/3.3									
-G2X1 :1		/3.4		-X31.2		/3.4									
-G2X1 :2		/3.4		-X31CE		/3.5									
-K401		/4.5		-X400p :1		/5.5									
-K401		/5.6		-X400s :1		/5.5									
-K401.X1		/7.1		-X401		/5.4									
-M1X2p :4		/3.5		-X402		/5.3									

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Betriebsmittelliste
device list

Sheet
14
of
14
Sheets