HAMM

Elektroplan
Electric diagram

HD13-14

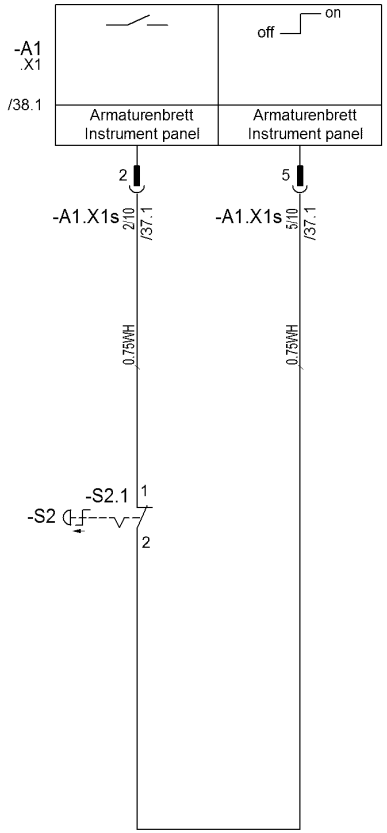
H201 Baureihe / Series
0001 - 4029 Seriennummer / Serial No
12.09.2017 Ausgabedatum / Date of issue
2174533_02 Katalog Bestellnummer / Catalogue order No

Drawing by:	Approved by:	last change:	Status:	Document No.:		Material No.:	Revision No.:		Sheet:
date 29.01.2016	date	date	SF AE = changable PF = prototype release SF = serial release		HAMM	2174533	02	Inhaltsverzeichnis contents	2 of 59 Sheets
name Mar.Schedl	name	name		Partial Document No.:		Series code: H201	Valid for Serial No.: from 0001 to 4029		
E - CAE	Document type: ESP	Function group No.:		Version No.:		Sheet plant: Sheet Location:			

Drawing by:	Approved by:	last change:	Status:	Document No.:		Material No.: 2174533	Revision No.: 02	Inhaltsverzeichnis contents	Sheet: 3 of 59 Sheets
date 29.01.2016	date	date	SF AE = changable PF = prototype release SF = serial release	Partial Document No.:	HAMM	Series code: H201	Valid for Serial No.: from 0001 to 4029		
name Mar.Schedl	name	name		Version No.:		Sheet plant: Sheet Location:			
E - CAE	Document type: ESP	Function group No.:							

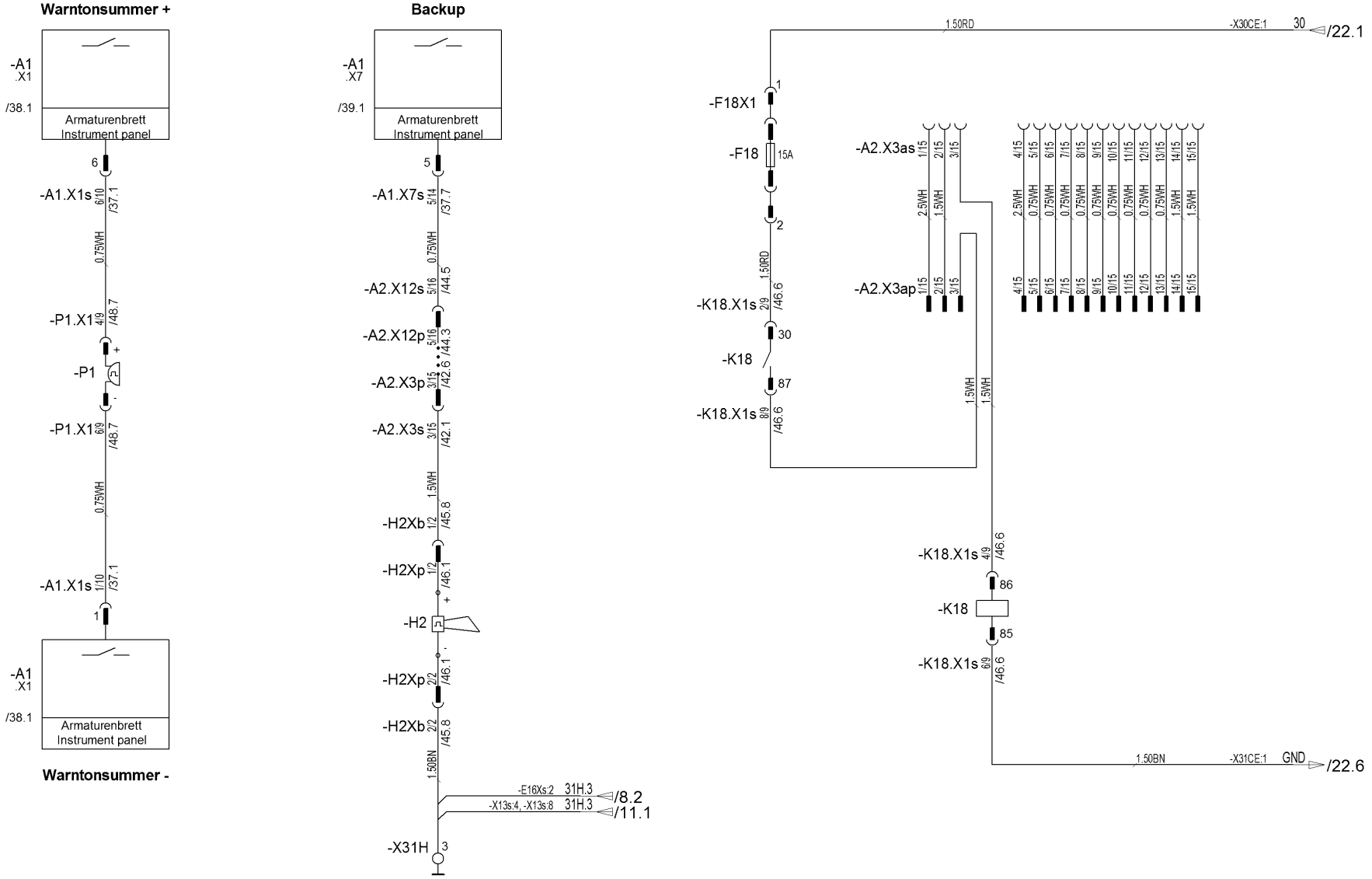
Electric

Not-Aus out Not-Aus in



S2: Not-Aus
S2: emergency-off

Drawing by:	Approved by:	last change:	Status:	Document No.:		Material No.: 2174533	Revision No.: 02	Not-Stop Emergency stop	Sheet: 4 of 59 Sheets
date 29.01.2016	date	date	SF AE = changable PF = prototype release SF = serial release	Partial Document No.:	HAMM	Series code: H201	Valid for Serial No.: from 0001 to 4029		
name Mar.Schedl	name	name		Version No.:		Sheet plant: Sheet Location:			
E - CAE	Document type: ESP	Function group No.: 01							

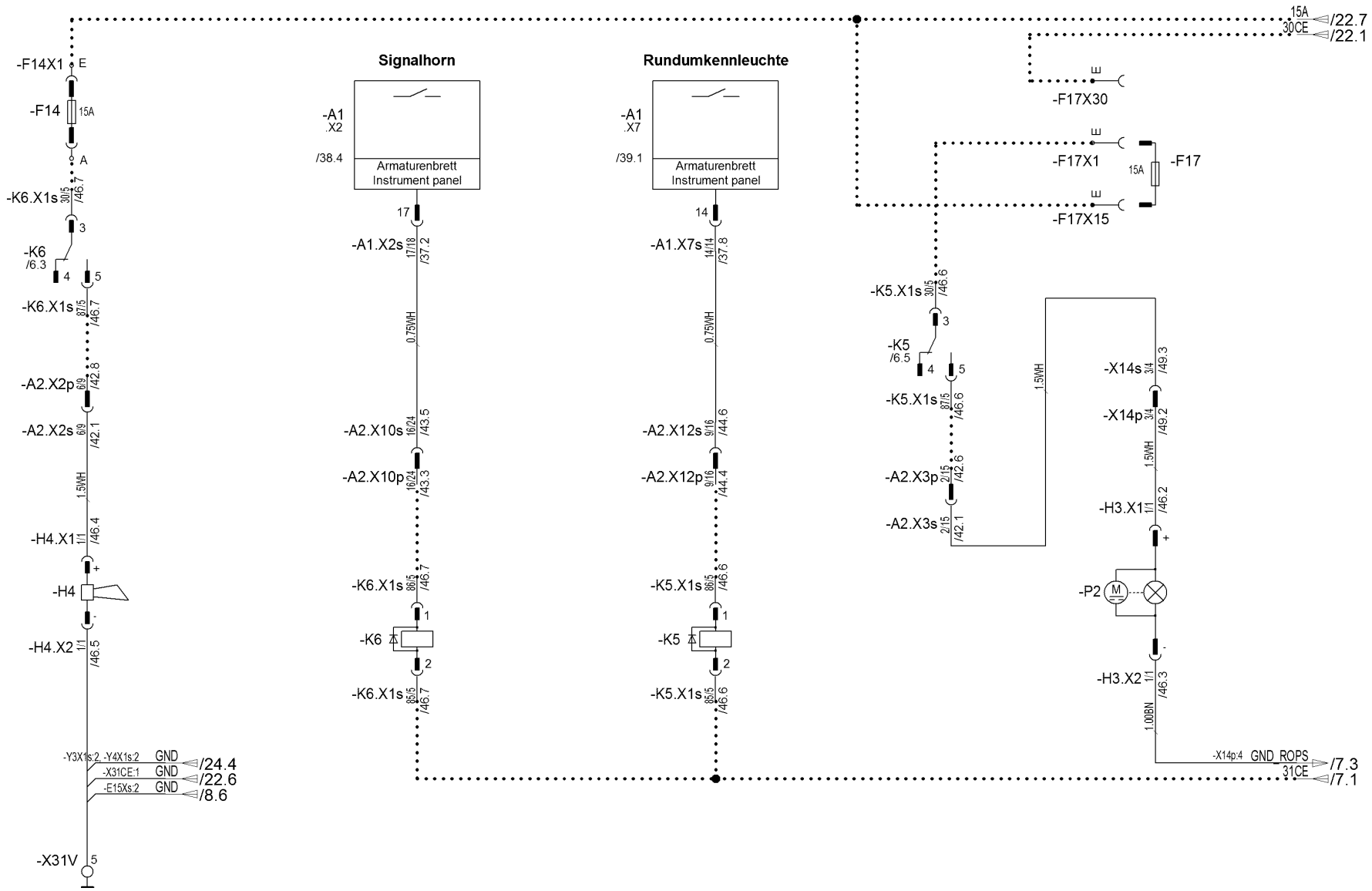


P1: Warntonsummer
P1: Warning buzzer

H2: Rückfahrwarneinrichtung
H2: Back-up alarm

H2: Rückfahrwarneinrichtung Option
H2: Back-up alarm optional

Drawing by:	Approved by:	last change:	Status:	Document No.:		Material No.: 2174533	Revision No.: 02	Rückfahrwarneinrichtung, Warntonsummer Back-up alarm, Warning buzzer	Sheet: 5 of 59 Sheets
date 29.01.2016	date	date	SF AE = changable PF = prototype release SF = serial release	Partial Document No.:	HAMM	Series code: H201	Valid for Serial No.: from 0001 to 4029		
name Mar.Schedl	name	name		Version No.:		Sheet plant: Sheet Location:			
E - CAE	Document type: ESP	Function group No.: 01							

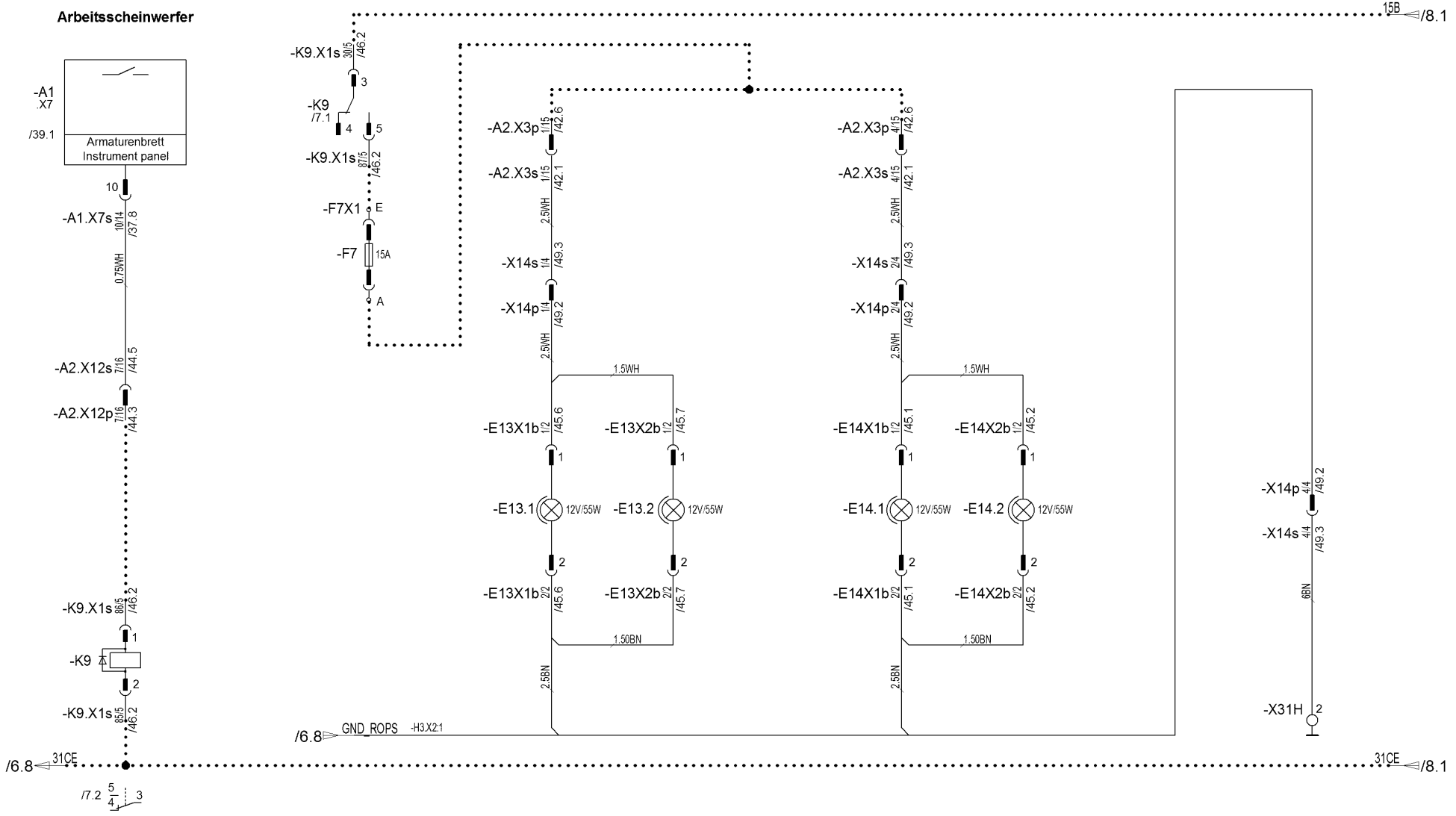


H4: Signalhorn
H4: Signal horn

P2: Rundumkennleuchte
P2: Rotating-beam light

Drawing by:	Approved by:	last change:	Status:	Document No.:		Material No.: 2174533	Revision No.: 02	Signalhorn, Rundumkennleuchte Signal horn, Rotating-beam light	Sheet: 6 of 59 Sheets
date 29.01.2016	date	date	SF AE = changable PF = prototype release SF = serial release	Partial Document No.:	HAMM	Series code: H201	Valid for Serial No.: from 0001 to 4029		
name Mar.Schedl	name	name		Version No.:		Sheet plant: Sheet Location:			
E - CAE	Document type: ESP	Function group No.: 01							

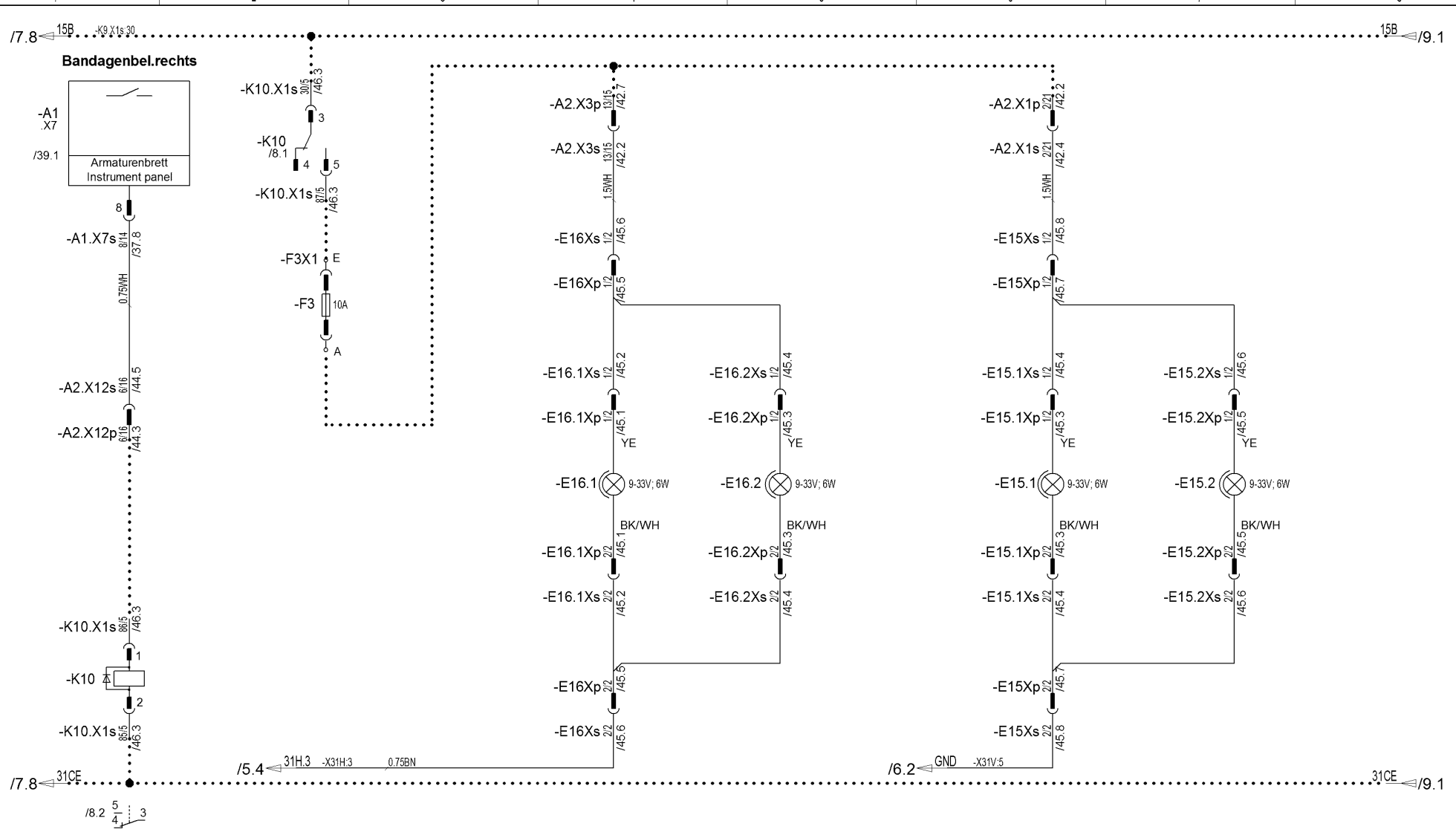
Arbeitsscheinwerfer



E13: Arbeitsscheinwerfer Überrollbügel
E13: Working spotlights Roll over protection

E14: Arbeitsscheinwerfer Überrollbügel
E14: Working spotlights Roll over protection

Drawing by:	Approved by:	last change:	Status:	Document No.:		Material No.: 2174533	Revision No.: 02	Arbeitsscheinwerfer Working spotlights	Sheet: 7 of 59 Sheets
date 29.01.2016	date	date	SF AE = changable PF = prototype release SF = serial release	Partial Document No.:	HAMM	Series code: H201	Valid for Serial No.: from 0001 to 4029		
name Mar.Schedl	name	name		Version No.:		Sheet plant: Sheet Location:			
E - CAE	Document type: ESP	Function group No.: 01							



E16: Bandagenbeleuchtung
E16: Drum lighting

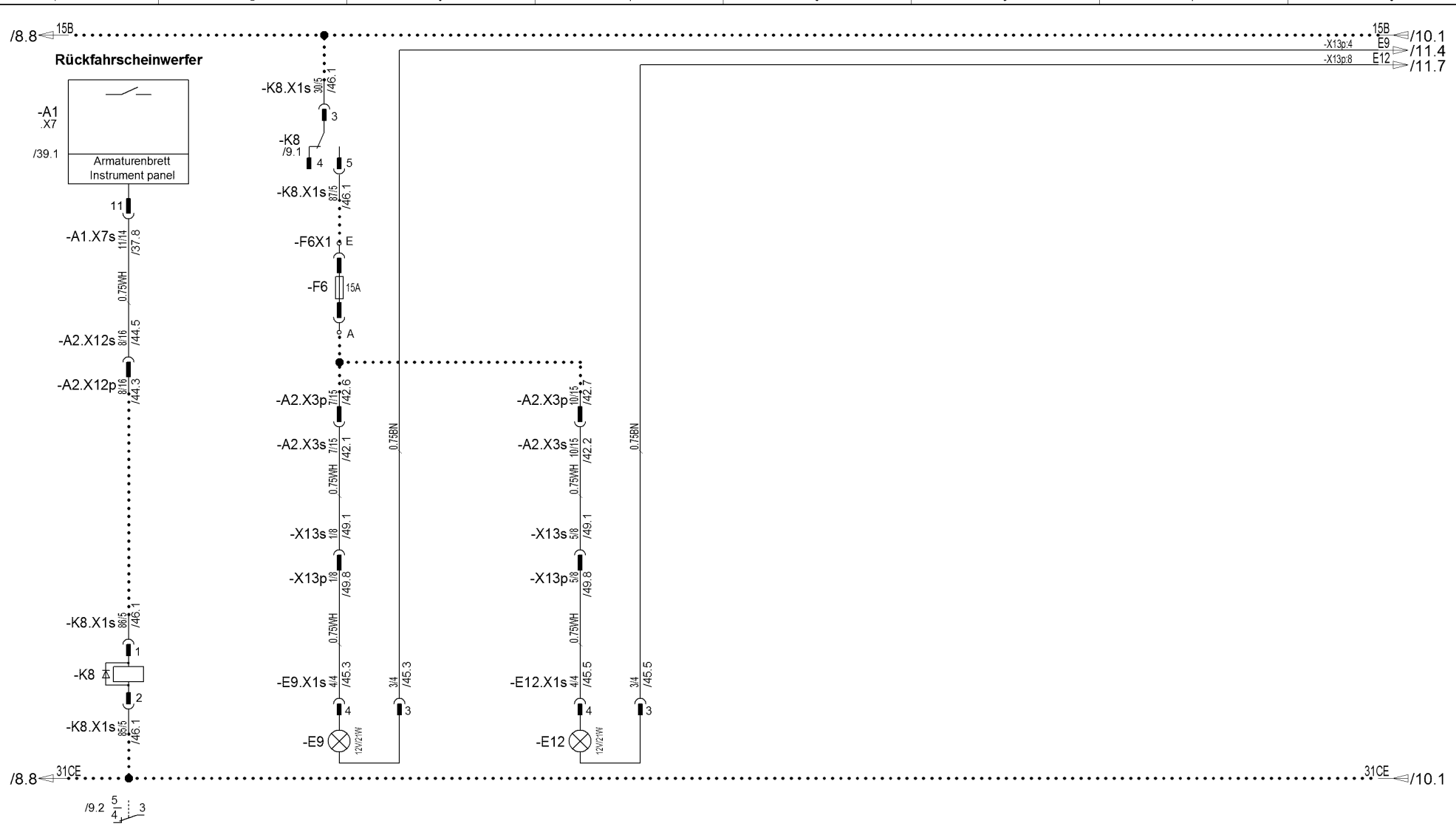
E15: Bandagenbeleuchtung
E15: Drum lighting

Drawing by:	Approved by:	last change:	Status:	Document No.:		Material No.: 2174533	Revision No.: 02	Bandagenbeleuchtung Drum lighting	Sheet: 8 of 59 Sheets
date 29.01.2016	date	date	SF AE = changable PF = prototype release SF = serial release	Partial Document No.:	HAMM	Series code: H201	Valid for Serial No.: from 0001 to 4029		
name Mar.Schedl	name	name		Version No.:		Sheet plant: Sheet Location:			
E - CAE	Document type: ESP	Function group No.: 01							

Electric

Schutzvermerk nach ISO 16016 beachten

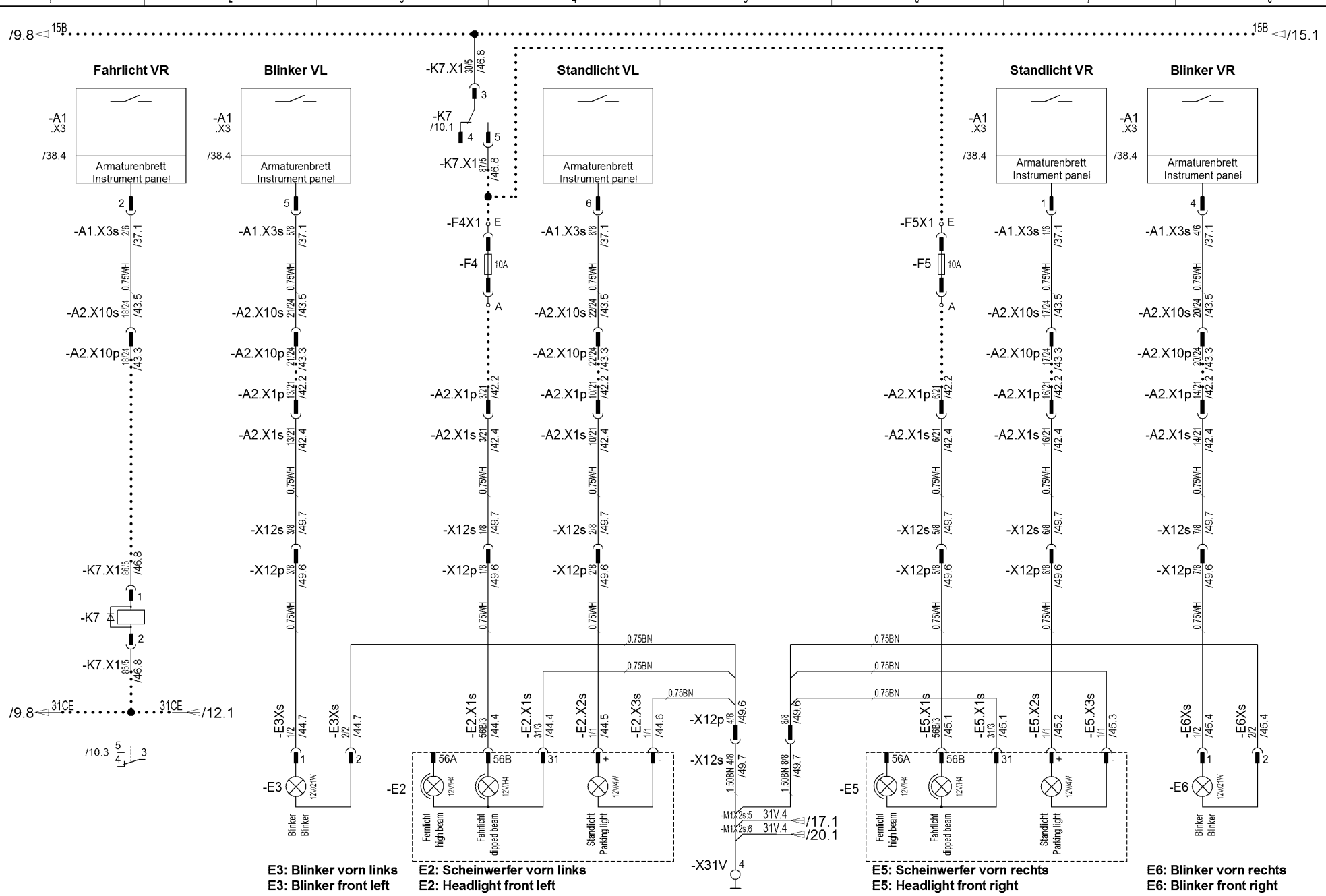
Refer to protection notice ISO 16016



E9: Rückfahrscheinwerfer
E9: Back-up light

E12: Rückfahrscheinwerfer
E12: Back-up light

Drawing by:	Approved by:	last change:	Status:	Document No.:		Material No.: 2174533	Revision No.: 02	Rückfahrscheinwerfer Back-up light	Sheet: 9 of 59 Sheets
date 29.01.2016	date	date	SF AE = changable PF = prototype release SF = serial release	Partial Document No.:	HAMM	Series code: H201	Valid for Serial No.: from 0001 to 4029		
name Mar.Schedl	name	name		Version No.:		Sheet plant: Sheet Location:			
E - CAE	Document type: ESP	Function group No.: 01							



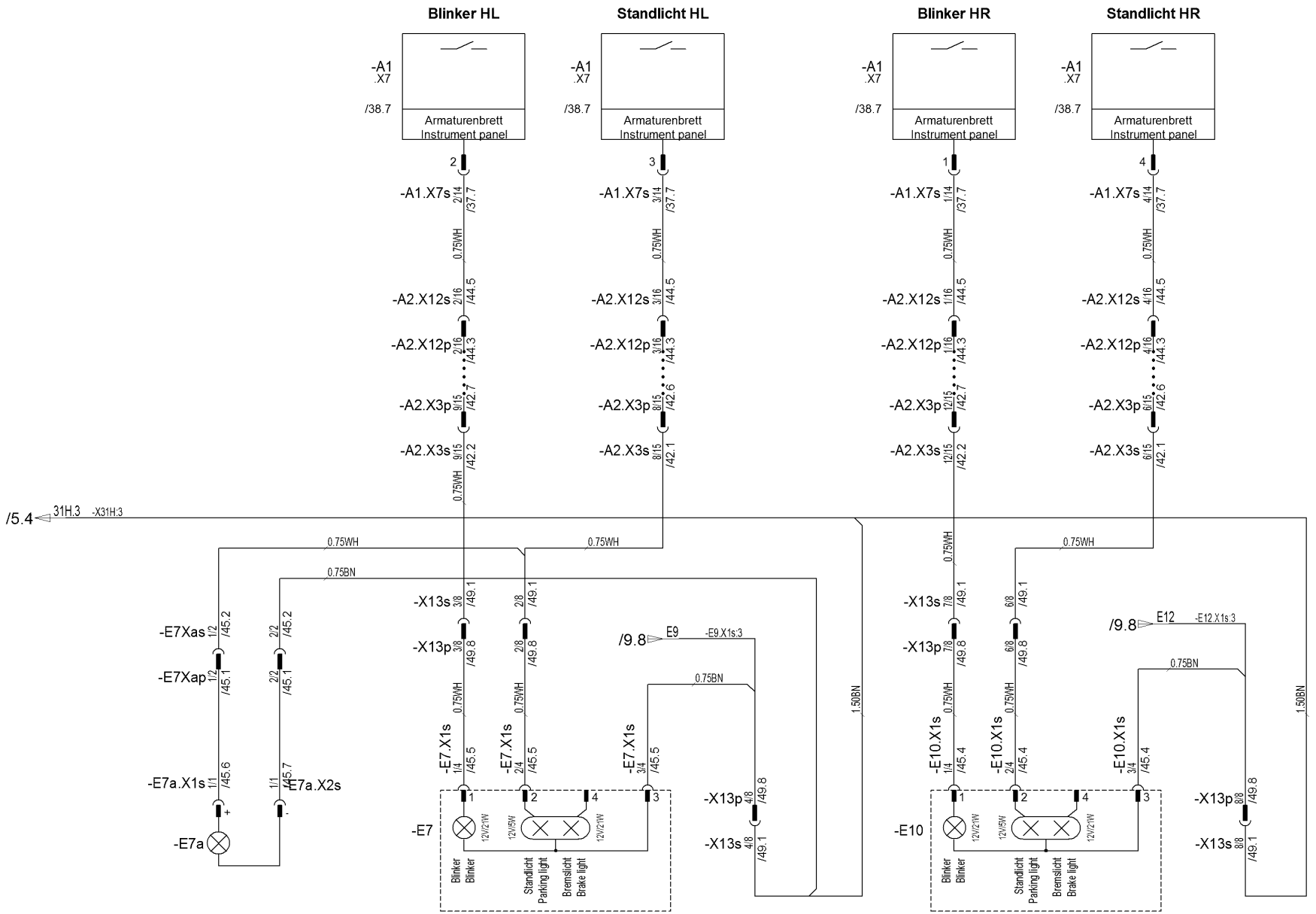
E3: Blinker vorn links
E3: Blinker front left

E2: Scheinwerfer vorn links
E2: Headlight front left

E5: Scheinwerfer vorn rechts
E5: Headlight front right

E6: Blinker vorn rechts
E6: Blinker front right

Drawing by:	Approved by:	last change:	Status:	Document No.:	Material No.: 2174533	Revision No.: 02	Beleuchtung STVZO vorne Lighting STVZO front	Sheet: 10 of 59 Sheets
date 29.01.2016	date	date	SF AE = changable PF = prototype release SF = serial release	Partial Document No.:	Series code: H201	Valid for Serial No.: from 0001 to 4029		
name Mar.Schedl	name	name		Version No.:	Sheet plant: Sheet Location:			
E - CAE	Document type: ESP	Function group No.: 01			HAMM			



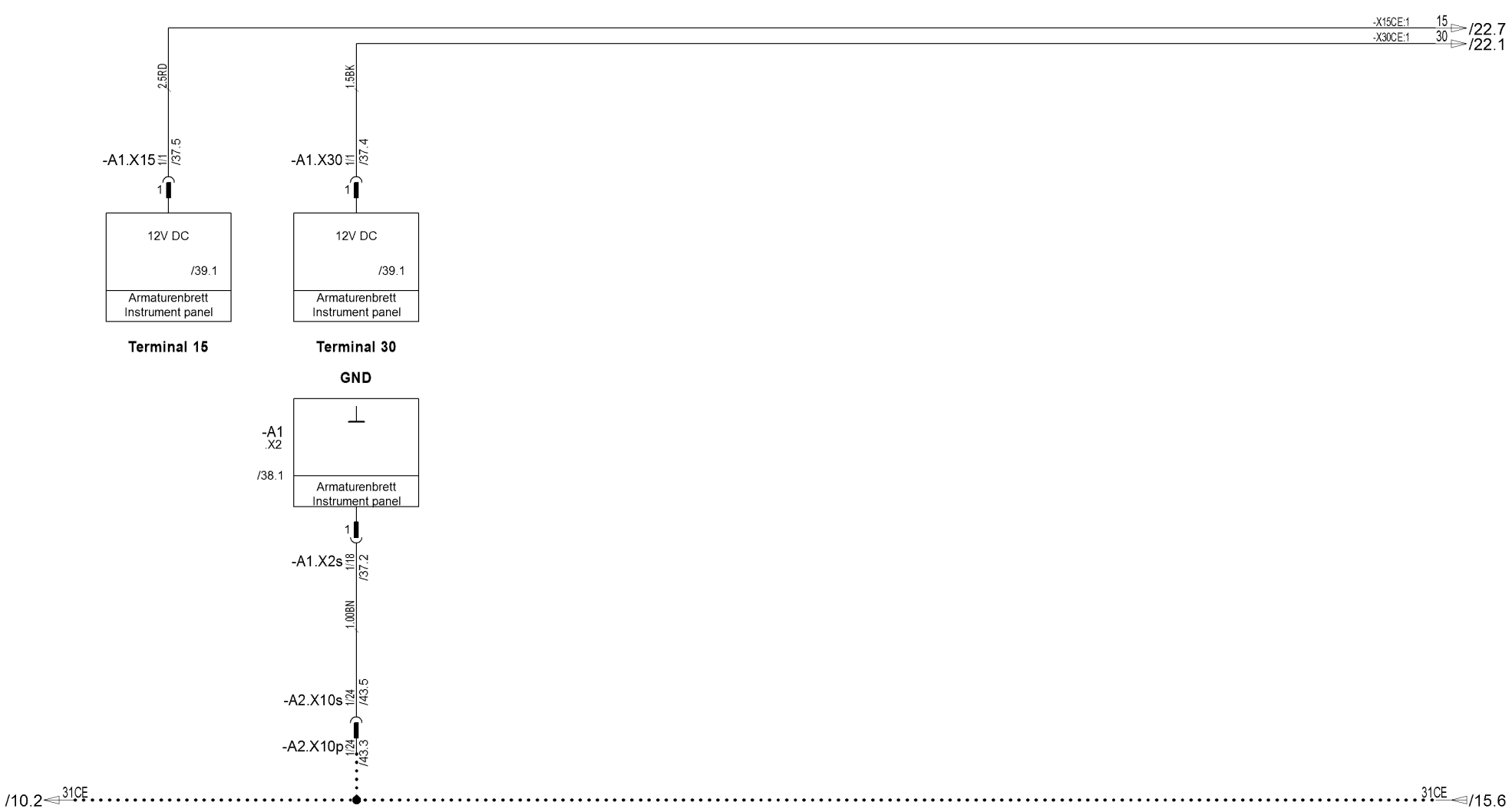
E7a: Homologation Italien (Option)
E7a: homologation italy (option)

E7: Scheinwerfer hinten links
E7: Headlight rear left

E10: Scheinwerfer hinten rechts
E10: Headlight rear right

Drawing by:	Approved by:	last change:	Status:	Document No.:	Material No.: 2174533	Revision No.: 02	Beleuchtung STVZO hinten Lighting STVZO rear	Sheet: 11 of 59 Sheets
date 29.01.2016	date	date	SF AE = changable PF = prototype release SF = serial release	Partial Document No.:	Series code: H201	Valid for Serial No.: from 0001 to 4029		
name Mar.Schedl	name	name		Version No.:	Sheet plant: Sheet Location:			
E - CAE	Document type: ESP	Function group No.: 01			HAMM			

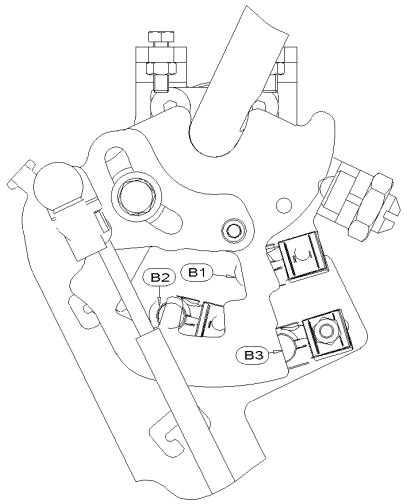
Electric



Schutzvermerk nach ISO 16016 beachten

Refer to protection notice ISO 16016

Drawing by:	Approved by:	last change:	Status:	Document No.:	HAMM	Material No.: 2174533	Revision No.: 02	Armaturenbrett Instrument panel	Sheet: 12 of 59 Sheets
date 29.01.2016	date	date	SF AE = changable PF = prototype release SF = serial release	Partial Document No.:		Series code: H201	Valid for Serial No.: from 0001 to 4029		
name Mar.Schedl	name	name		Version No.:		Sheet plant: Sheet Location:			
E - CAE	Document type: ESP	Function group No.: 02							



S12L: Vibrotaster links
S12L: Vibration push button switch left

S13L: Schalter Kantenandrückgerät links
S13L: Switch Edge pressing assembly left

S12R: Vibrotaster rechts
S12R: Vibration push button switch right

S13R: Schalter Kantenandrückgerät rechts
S13R: Switch Edge pressing assembly right

B1: Näherungsschalter 1 Fahrhebel
B1: Proximity switch 1 Drive lever

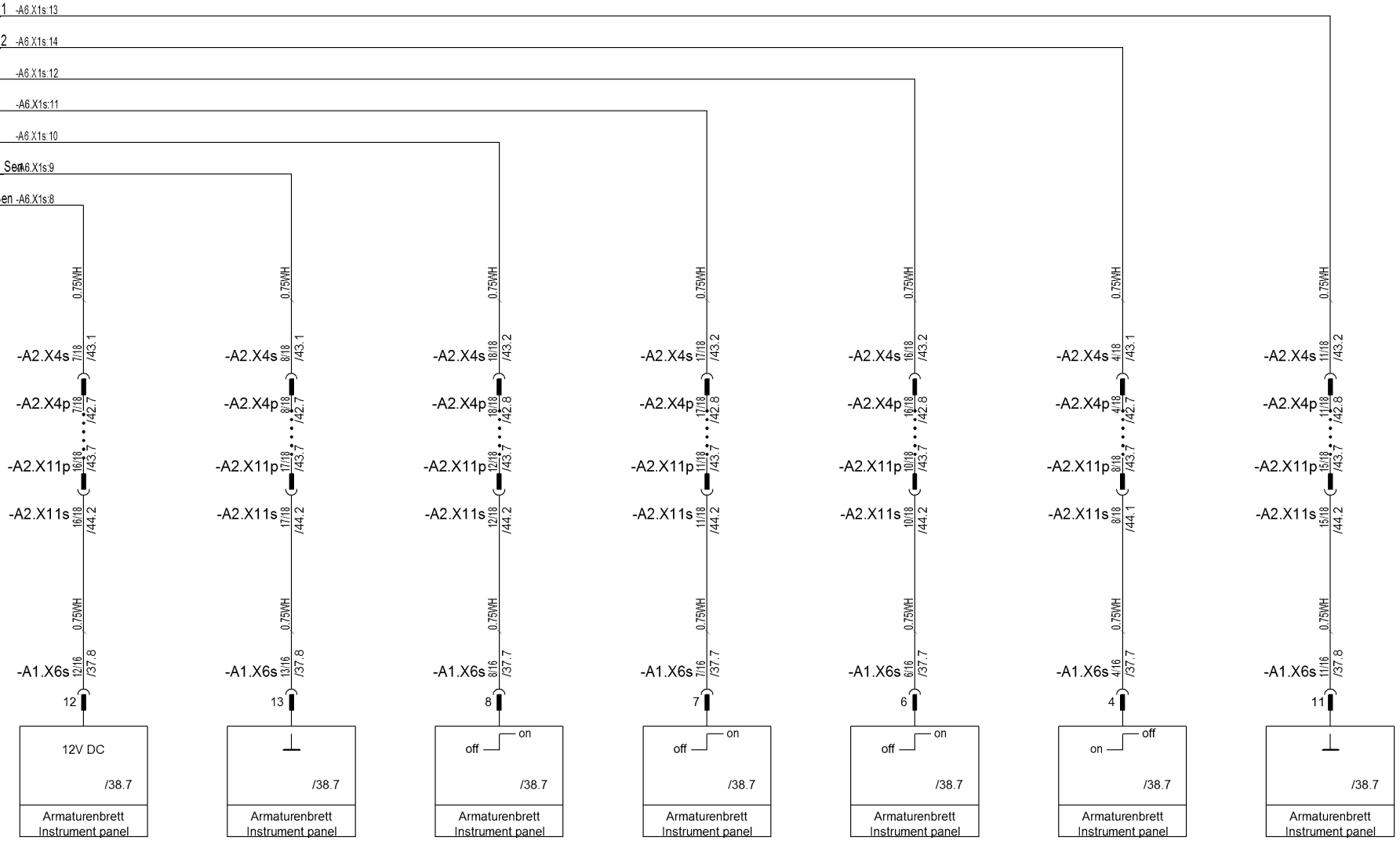
B2: Näherungsschalter 2 Fahrhebel
B2: Proximity switch 2 Drive lever

B3: Näherungsschalter Rückfahrwarneinrichtung
B3: Proximity switch Back-up alarm

Drawing by:	Approved by:	last change:	Status:	Document No.:		Material No.: 2174533	Revision No.: 02
date 29.01.2016	date	date	SF AE = changable PF = prototype release SF = serial release	Partial Document No.:	HAMM	Series code: H201	Valid for Serial No.: from 0001 to 4029
name Mar.Schedl	name	name		Version No.:		Sheet plant: Sheet Location:	
E - CAE	Document type: ESP	Function group No.: 02				Fahrhebel travel drive lever	Sheet 13 of 59 Sheets

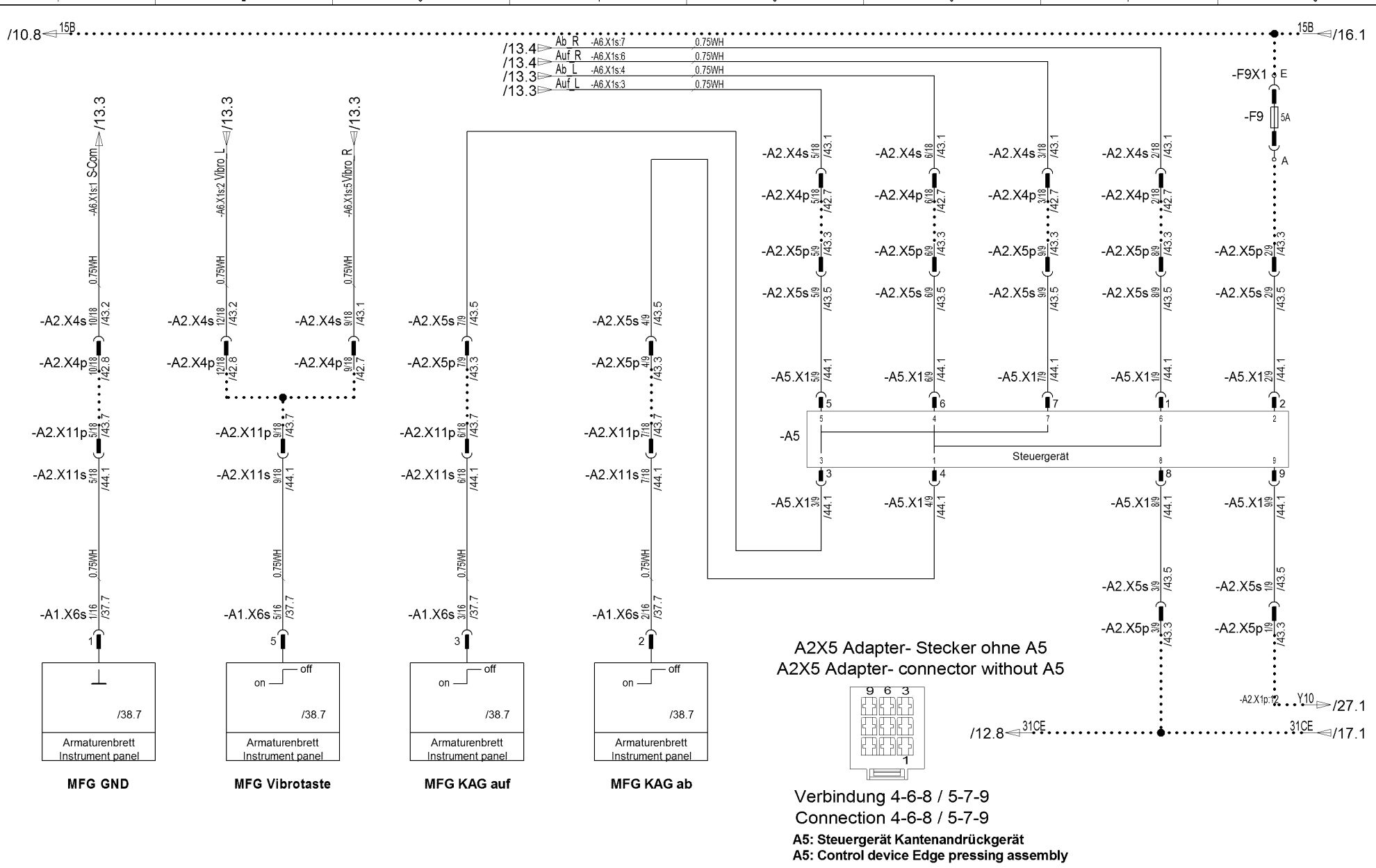
Electric

/13.5 seat_1 -A6.X1s:13
/13.5 seat_2 -A6.X1s:14
/13.5 B3 -A6.X1s:12
/13.4 B2 -A6.X1s:11
/13.4 B1 -A6.X1s:10
/13.4 GND_Sen -A6.X1s:9
/13.4 U+_Sen -A6.X1s:8

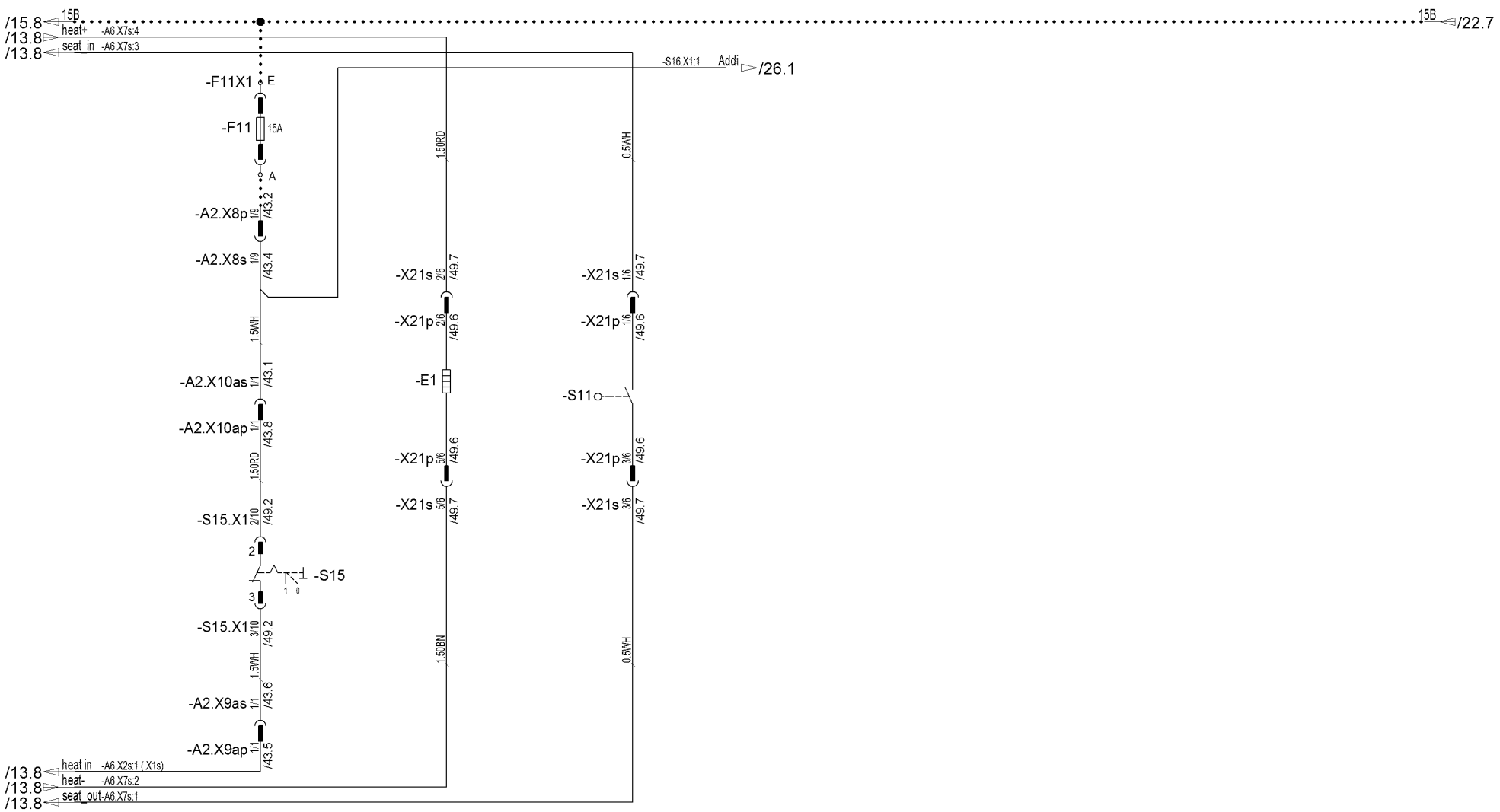


Refer to protection notice ISO 16016 Schutzvermerk nach ISO 16016 beachten

Drawing by:	Approved by:	last change:	Status:	Document No.:	HAMM	Material No.: 2174533	Revision No.: 02	Fahrhebel travel drive lever	Sheet: 14 of 59 Sheets
date 29.01.2016	date	date	SF AE = changable PF = prototype release SF = serial release	Partial Document No.:		Series code: H201	Valid for Serial No.: from 0001 to 4029		
name Mar.Schedl	name	name		Version No.:		Sheet plant: Sheet Location:			
E - CAE	Document type: ESP	Function group No.: 02							



Drawing by:	Approved by:	last change:	Status:	Document No.:		Material No.: 2174533	Revision No.: 02	Fahrhebel travel drive lever	Sheet: 15 of 59 Sheets
date 29.01.2016	date	date	SF AE = changable PF = prototype release SF = serial release	Partial Document No.:	HAMM	Series code: H201	Valid for Serial No.: from 0001 to 4029		
name Mar.Schedl	name	name		Version No.:		Sheet plant: Sheet Location:			
E - CAE	Document type: ESP	Function group No.: 02							

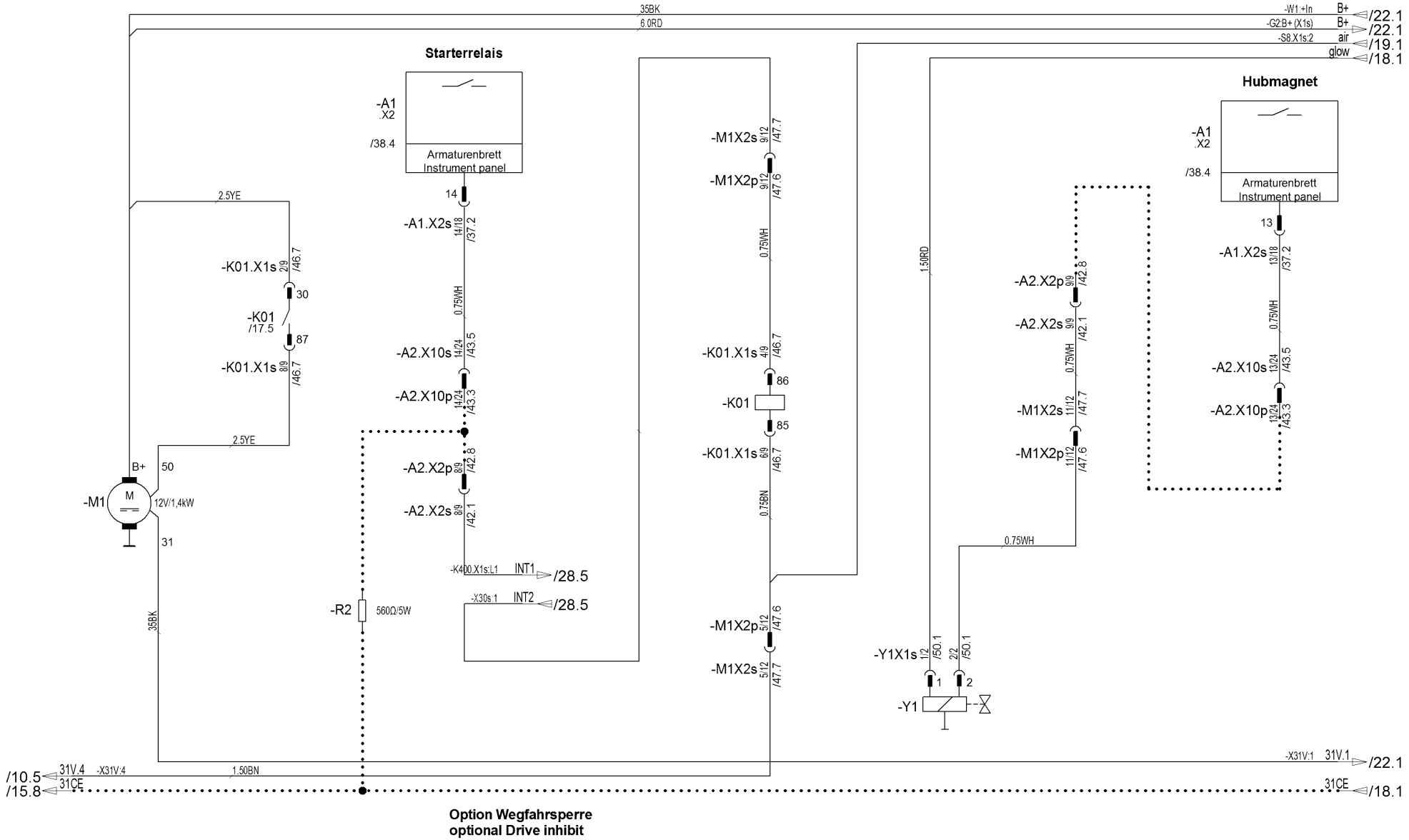


S15: Schalter Heizung Fahrersitz
S15: switch Heating Operator's seat

E1: Heizung Fahrersitz
E1: Heating Operator's seat

S11: Sitzkontaktschalter
S11: Seat contact switch

Drawing by:	Approved by:	last change:	Status:	Document No.:		Material No.:	Revision No.:	Heizung Sitzkontaktschalter Heating Seat contact switch	Sheet:
date 29.01.2016	date	date	SF AE = changable PF = prototype release SF = serial release	Partial Document No.:	HAMM	2174533	02		16 of 59 Sheets
name Mar.Schedl	name	name		Version No.:		Series code: H201	Valid for Serial No.: from 0001 to 4029		
E - CAE	Document type: ESP	Function group No.: 02				Sheet plant: Sheet Location:			



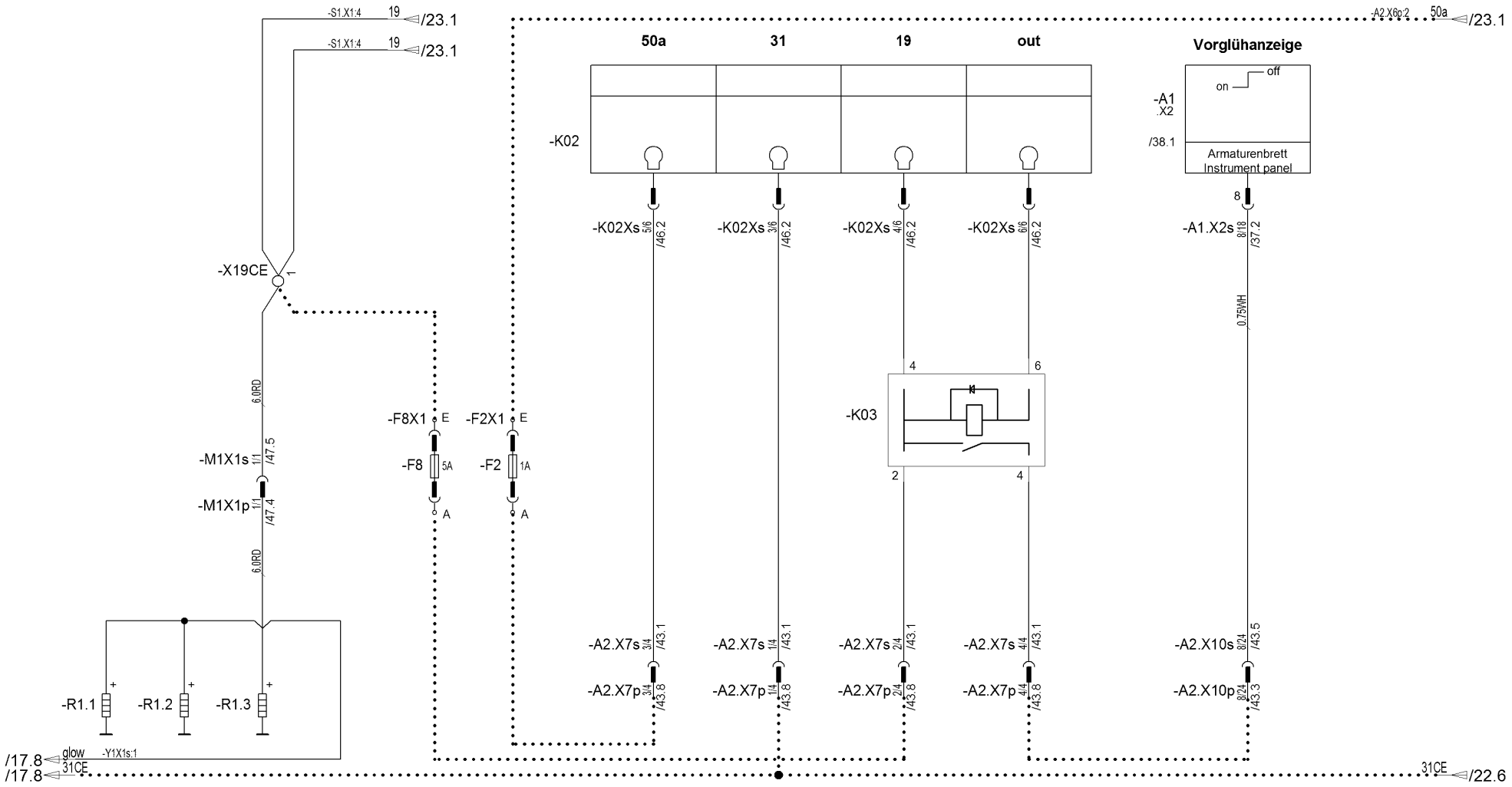
Option Wegfahrsperre
optional Drive inhibit

/17.2 87 30

M1: Anlasser
M1: starter

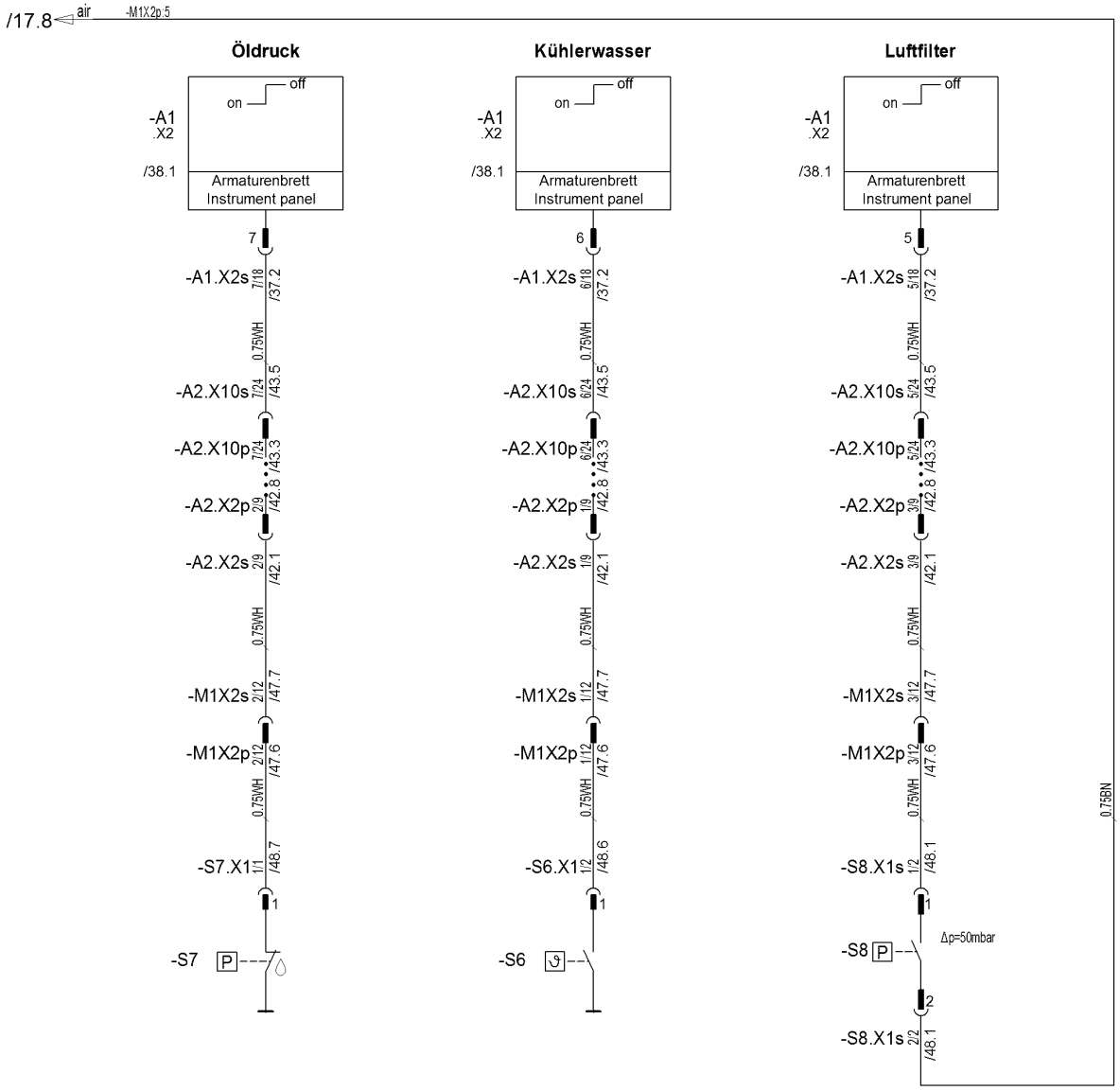
Y1: Hubabstellmagnet
Y1: stop solenoid

Drawing by:	Approved by:	last change:	Status:	Document No.:	HAMM	Material No.: 2174533	Revision No.: 02
date 29.01.2016	date	date	SF AE = changable PF = prototype release SF = serial release	Partial Document No.:		Series code: H201	Valid for Serial No.: from 0001 to 4029
name Mar.Schedl	name	name		Version No.:		Sheet plant: Sheet Location:	
E - CAE	Document type: ESP	Function group No.: 04				Anlasser Hubabstellmagnet starter stop solenoid	Sheet: 17 of 59 Sheets



R1: Glühkerze
R1: Heater plug

Drawing by:	Approved by:	last change:	Status:	Document No.:		Material No.: 2174533	Revision No.: 02	Vorglühanlage Preheat equipment	Sheet: 18 of 59 Sheets
date 29.01.2016	date	date	SF AE = changable PF = prototype release SF = serial release	Partial Document No.:	HAMM	Series code: H201	Valid for Serial No.: from 0001 to 4029		
name Mar.Schedl	name	name		Version No.:		Sheet plant: Sheet Location:			
E - CAE	Document type: ESP	Function group No.: 04							

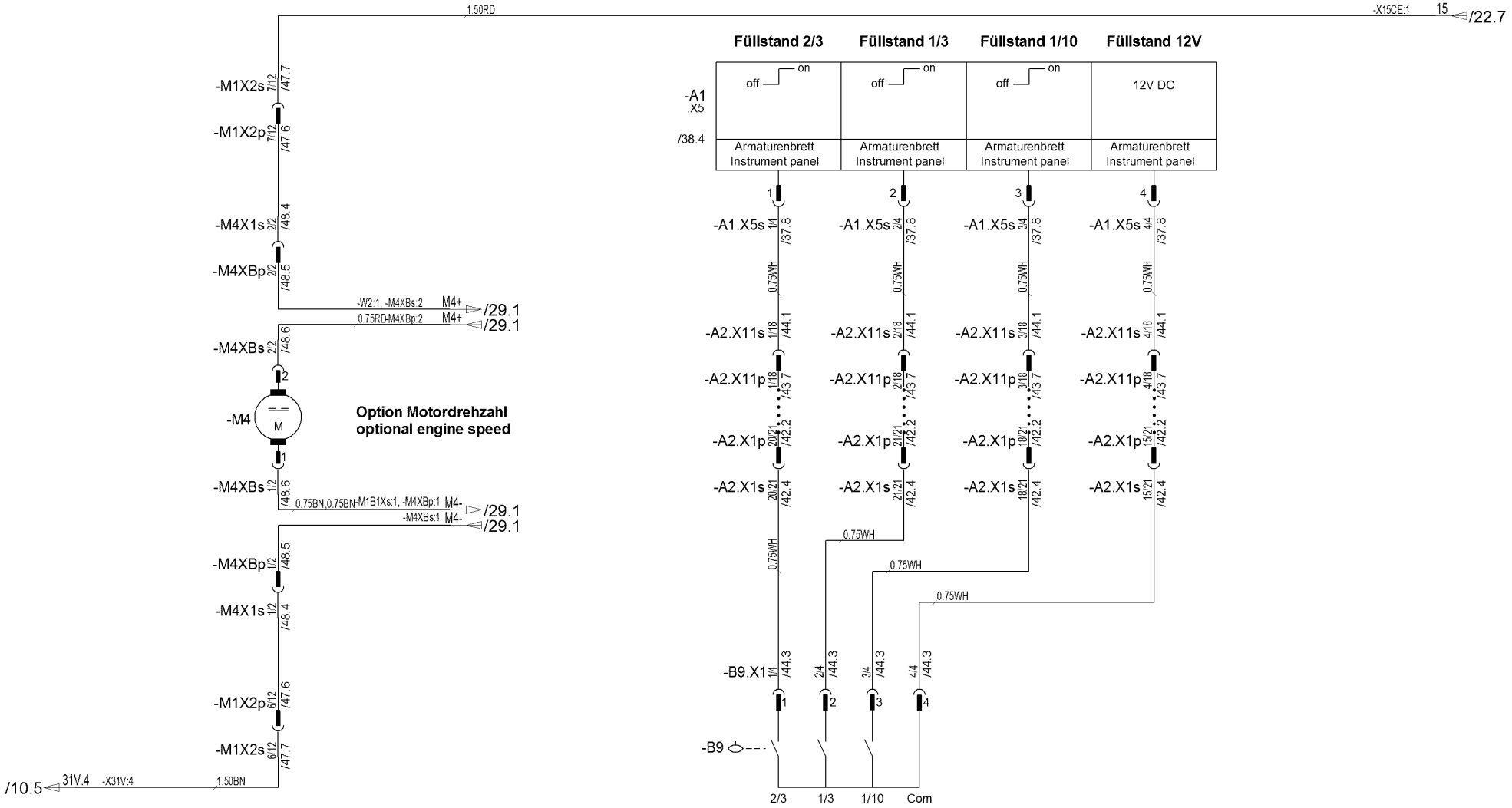


S6: Temperaturschalter Motorkühlflüssigkeit
S6: Temperature switch Engine cooling fluid

S7: Motoröldruck
S7: Engine oil pressure

S8: Unterdruckschalter, Luftfilter
S8: Pressure switch, air filter

Drawing by:	Approved by:	last change:	Status:	Document No.:		Material No.: 2174533	Revision No.: 02	Überwachung Dieselmotor monitoring diesel engine	Sheet: 19 of 59 Sheets
date 29.01.2016	date	date	SF AE = changable PF = prototype release SF = serial release	Partial Document No.:	HAMM	Series code: H201	Valid for Serial No.: from 0001 to 4029		
name Mar.Schedl	name	name		Version No.:		Sheet plant: Sheet Location:			
E - CAE	Document type: ESP	Function group No.: 04							



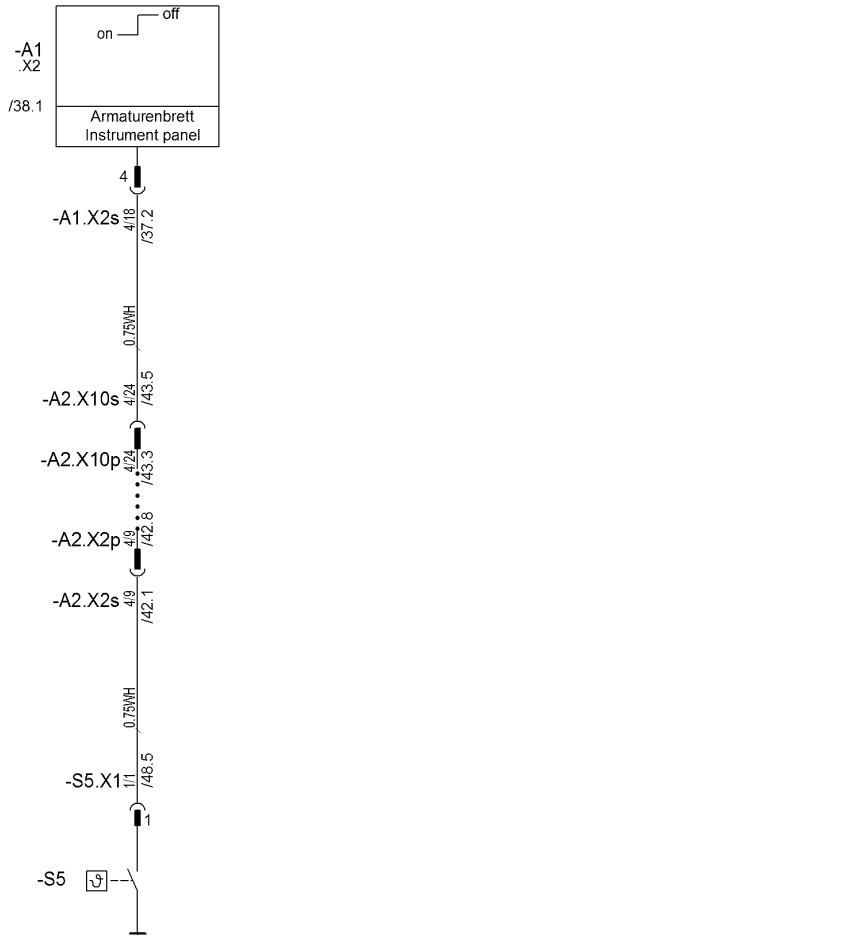
M4: Kraftstofförderpumpe
M4: Fuel pump

B9: Füllstandsgeber, Kraftstoff
B9: Level transmitter, fuel

Drawing by:	Approved by:	last change:	Status:	Document No.:		Material No.:	Revision No.:		Sheet:
date 29.01.2016	date	date	SF AE = changable PF = prototype release SF = serial release		HAMM	2174533	02	Kraftstoff fuel	20 of 59 Sheets
name Mar.Schedl	name	name		Partial Document No.:		Series code: H201	Valid for Serial No.: from 0001 to 4029		
E - CAE	Document type: ESP	Function group No.: 04		Version No.:		Sheet plant: Sheet Location:			

Electric

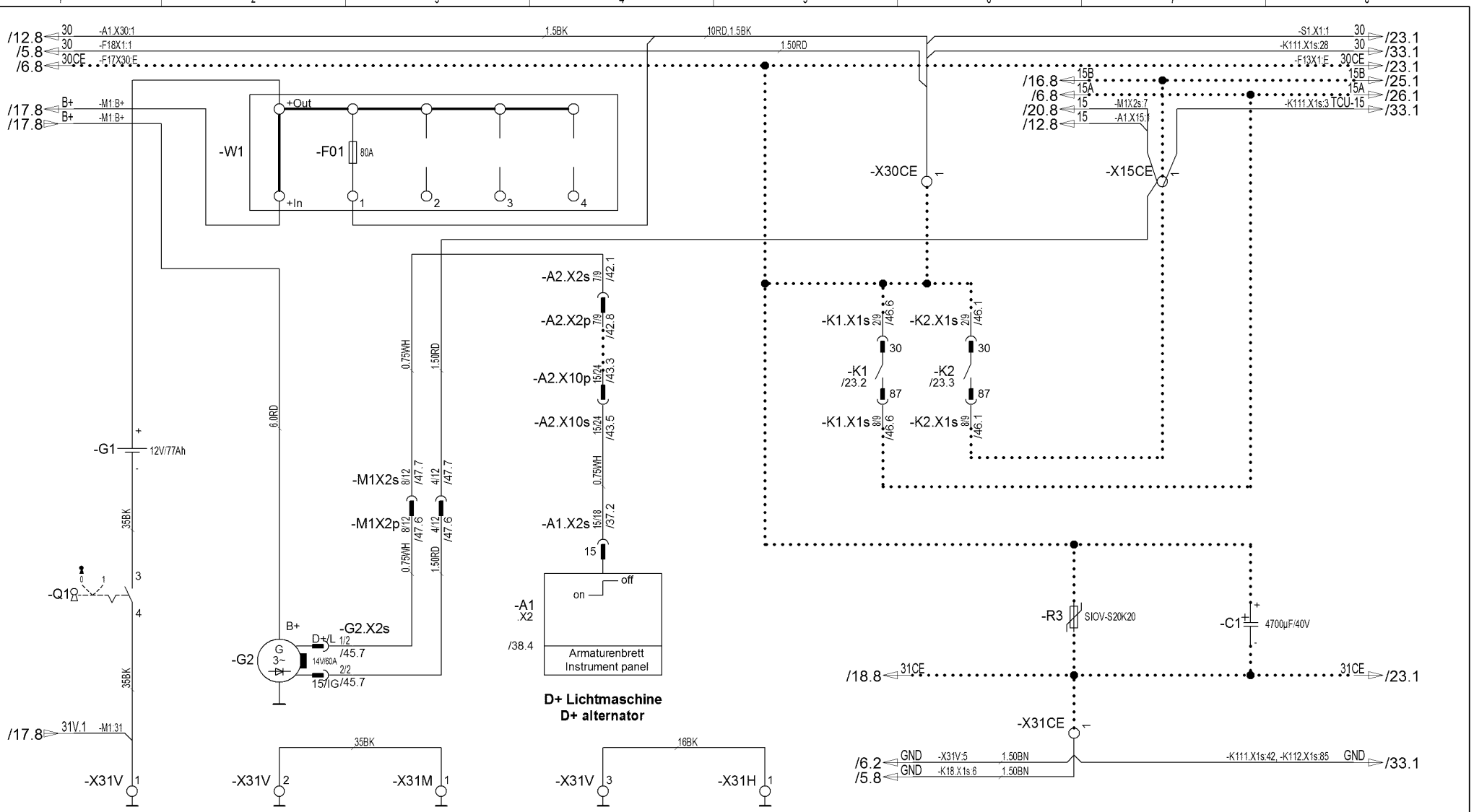
Hydrauliköl



S5: Temperaturgeber, Hydrauliköl
S5: Temperature sensor, hydraulic oil

Refer to protection notice ISO 16016 Schutzvermerk nach ISO 16016 beachten

Drawing by:	Approved by:	last change:	Status:	Document No.:		Material No.: 2174533	Revision No.: 02	Temperaturgeber, Hydrauliköl Temperature sensor, hydraulic oil	Sheet: 21 of 59 Sheets
date 29.01.2016	date	date	SF AE = changable PF = prototype release SF = serial release	Partial Document No.:	HAMM	Series code: H201	Valid for Serial No.: from 0001 to 4029		
name Mar.Schedl	name	name		Version No.:		Sheet plant: Sheet Location:			
E - CAE	Document type: ESP	Function group No.: 05							



Q1: Batterietrennschalter
Q1: Battery isolating switch

G2: Drehstromlichtmaschine
G2: Alternator

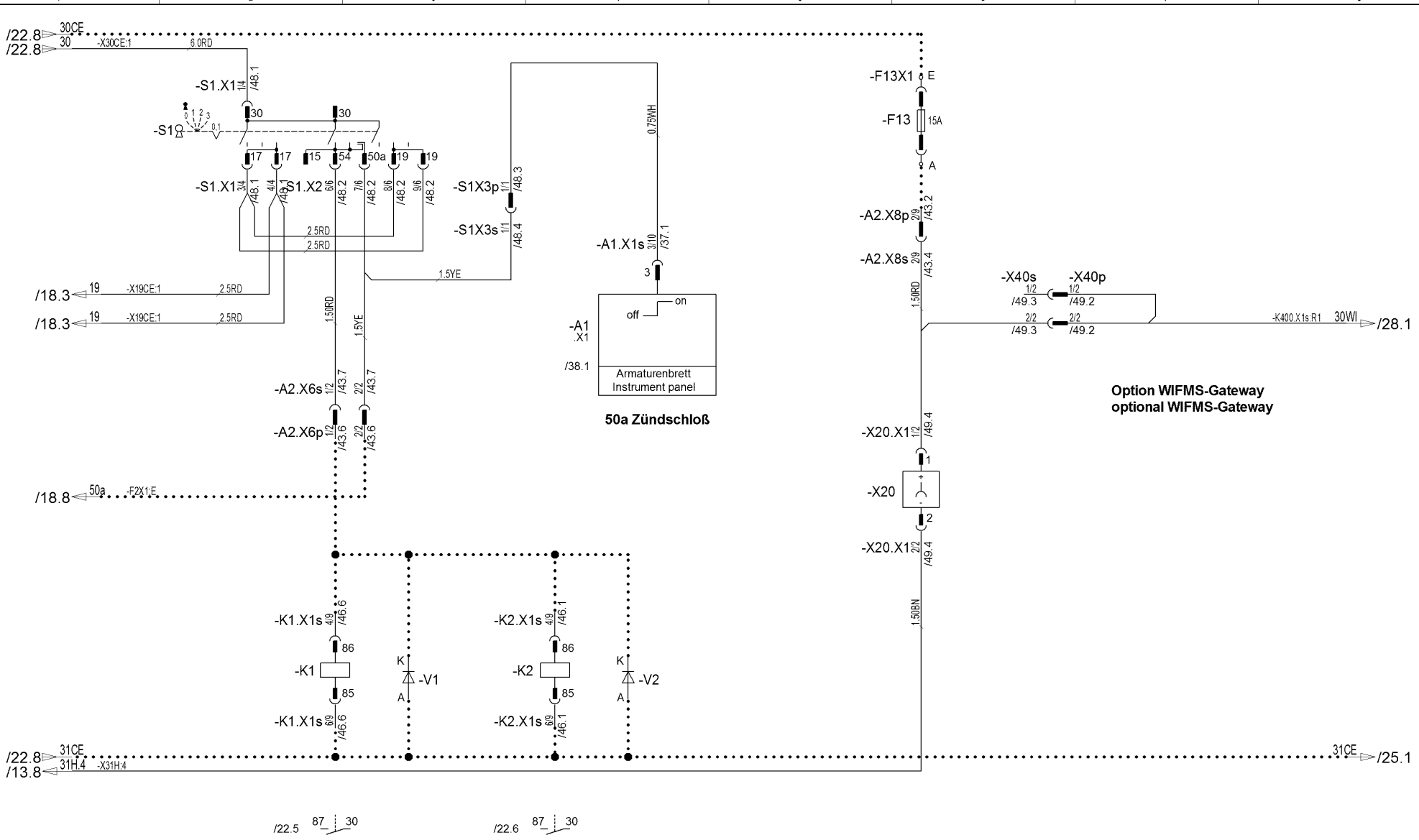
W1: Hauptsicherungen
W1: Main-fuses

X31V: Masseklemme Vorderwalze
X31V: Earth terminal Front roller

X31M: Gehäuse Dieselmotor
X31M: Housing diesel engine

X31H: Masseklemme Hinterwalze
X31H: Earth terminal rear roller

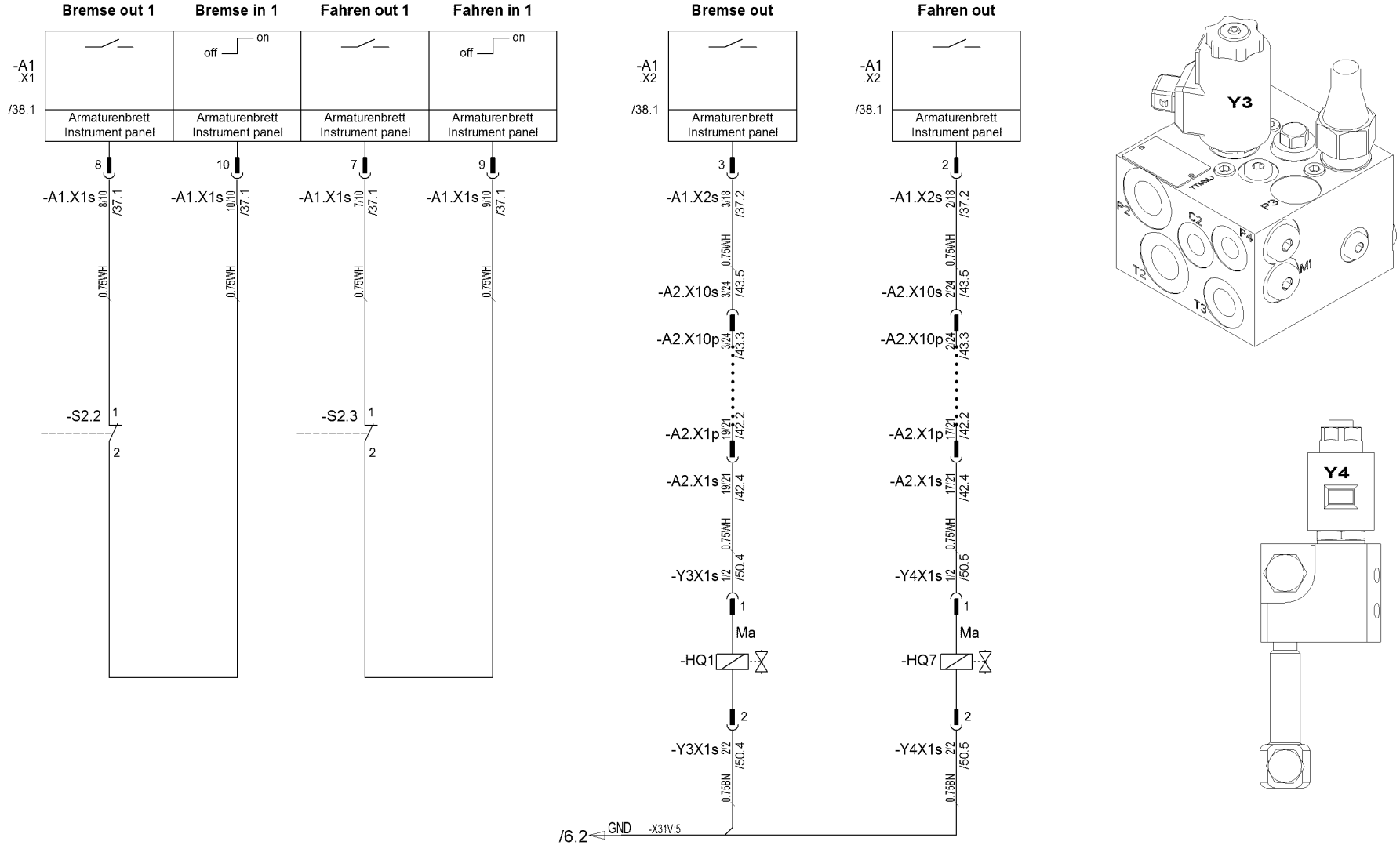
Drawing by:	Approved by:	last change:	Status:	Document No.:		Material No.: 2174533	Revision No.: 02	Bordnetz Supply system	Sheet: 22 of 59 Sheets
date 29.01.2016	date	date	SF AE = changable PF = prototype release SF = serial release	Partial Document No.:	HAMM	Series code: H201	Valid for Serial No.: from 0001 to 4029		
name Mar.Schedl	name	name		Version No.:		Sheet plant: Sheet Location:			
E - CAE	Document type: ESP	Function group No.: 06							



S1: Zünd-Startschalter
S1: Ignition switch

X20: Einbausteckdose
X20: Built-in socket

Drawing by:	Approved by:	last change:	Status:	Document No.:	HAMM	Material No.: 2174533	Revision No.: 02
date 29.01.2016	date	date	SF AE = changable PF = prototype release SF = serial release	Partial Document No.:		Series code: H201	Valid for Serial No.: from 0001 to 4029
name Mar.Schedl	name	name		Version No.:		Sheet plant: Sheet Location:	
E - CAE	Document type: ESP	Function group No.: 06				Zündschalter Ignition switch	Sheet: 23 of 59 Sheets



S2: Not-Aus
S2: emergency-off

HQ1: Bremsventil
HQ1: Brake valve

HQ7: Magnet, Fahrpumpe
HQ7: Magnet, drive pump

Drawing by:	Approved by:	last change:	Status:	Document No.:		Material No.: 2174533	Revision No.: 02	Steuerung Fahrantrieb controller advance drive	Sheet: 24 of 59 Sheets
date 29.01.2016	date	date	SF AE = changable PF = prototype release SF = serial release	Partial Document No.:	HAMM	Series code: H201	Valid for Serial No.: from 0001 to 4029		
name Mar.Schedl	name	name		Version No.:		Sheet plant: Sheet Location:			
E - CAE	Document type: ESP	Function group No.: 08							

Electric

Schutzvermerk nach ISO 16016 beachten

Refer to protection notice ISO 16016

/22.8 15B

-F10X1:E 15B /26.1

Allradsperre

-A1 .X6 /38.7 Armaturenbrett Instrument panel

-A1.X6s 9/16 /37.8

0.75WH

-A2.X11s 13/18 /44.2

-A2.X11p 13/18 /43.7

-A2.X4p 13/18 /42.8

-A2.X4s 13/18 /43.2

0.75WH

-S10.X1a 1/1 /48.4

-S10

-S10.X1b 1/1 /48.5

Allradsperre

off on

-A1 .X6 /38.7 Armaturenbrett Instrument panel

-A1.X6s 10/16 /37.8

0.75WH

-A2.X11s 14/18 /44.2

-A2.X11p 14/18 /43.7

-A2.X4p 14/18 /42.8

-A2.X4s 14/18 /43.2

0.75WH

Ventil Allradsperre

-A1 .X2 /38.1 Armaturenbrett Instrument panel

-A1.X2s 9/18 /37.2

0.75WH

-A2.X10s 9/24 /43.5

-A2.X10p 9/24 /43.3

-F1X_A

-F1X_Com

5A -F1_B

-F1X_B

-K11.X1s 86/5 /46.5

-K11

-K11.X1s 85/5 /46.5

-K11.X1s 30/5 /46.5

-K11 /25.4

-K11.X1s 87/5 /46.5

-A2.X1p 1/21 /42.2

-A2.X1s 1/21 /42.4

0.75WH

-Y2X1s 1/2 /50.3

-HA1

-Y2X1s 2/2 /50.3

0.75BN

-A2.X1p 4/21 /42.2

-A2.X1s 4/21 /42.4

0.75WH

-Y2b.X1s 1/2 /50.2

-HA1.HQ2

-Y2b.X1s 2/2 /50.2

0.75BN

-Y5X1s:2, -Y6X1s:2, -Y7X1s:2 31V.6 /36.1

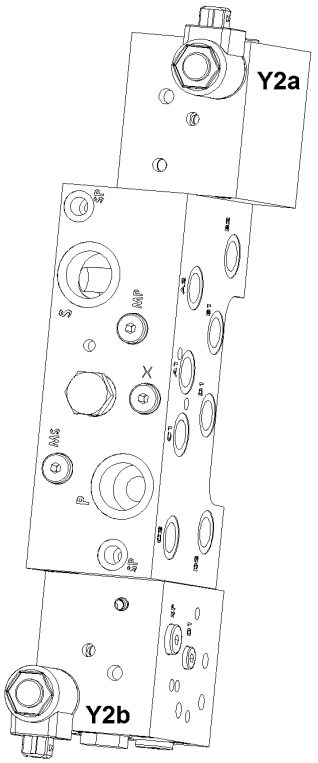
-Y8X1s:2, -Y10X1s:2, -Y9X1s:2 31V.6 /27.1

/23.8 31CE

31CE /26.1

-X31V 6

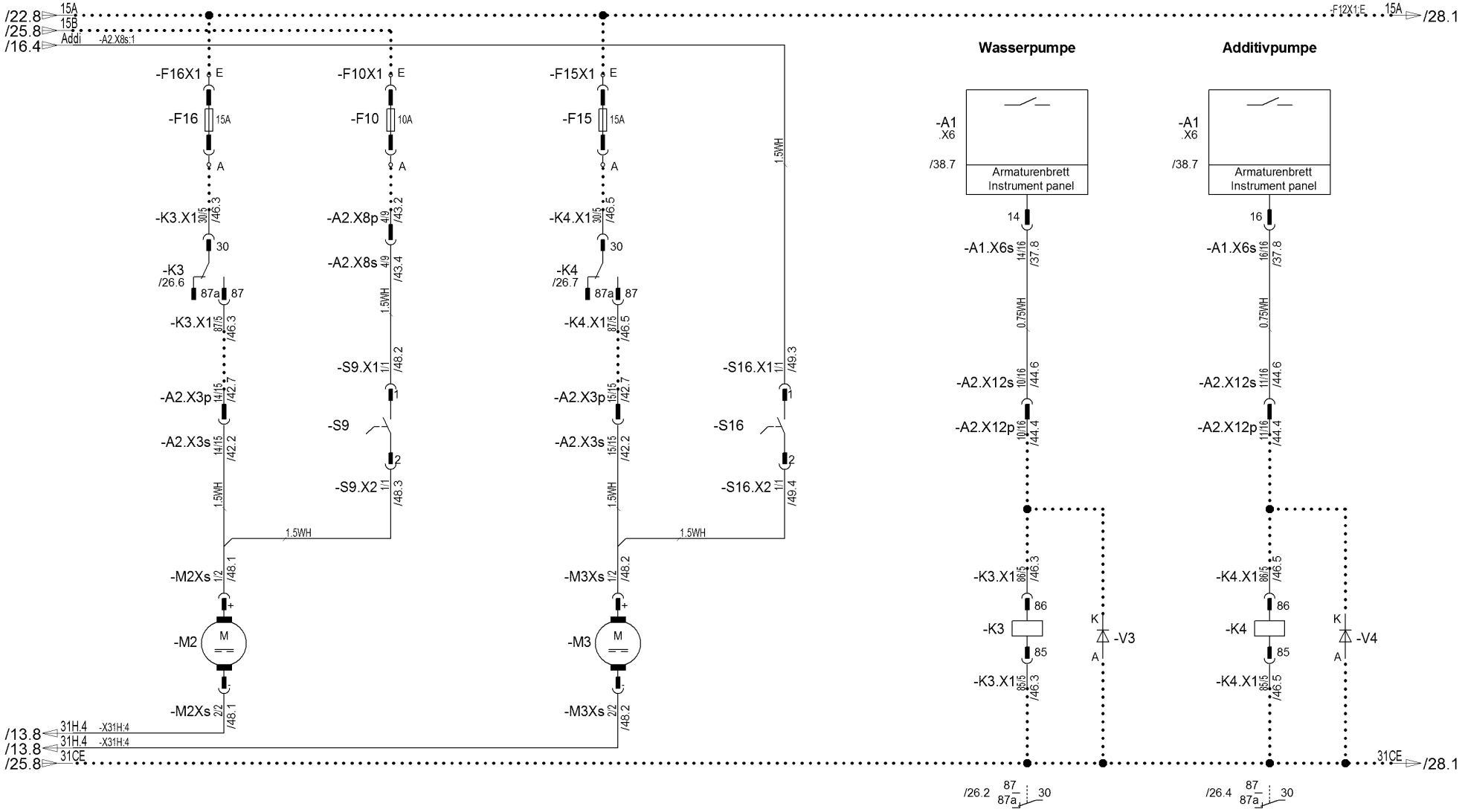
/25.5



S10: Fußtaster Allradsperre
S10: Foot push button switch All-wheel lock

HA1: Allradsperre
HA1: All-wheel lock

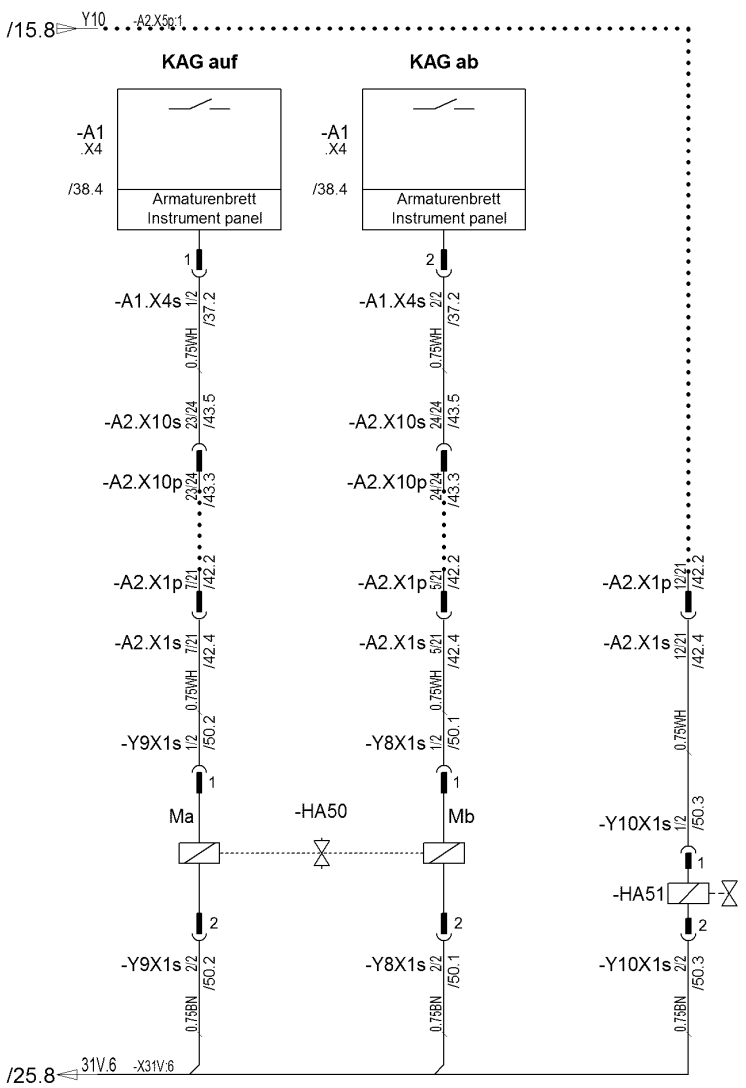
Drawing by:	Approved by:	last change:	Status:	Document No.:		Material No.: 2174533	Revision No.: 02	Mengenteiler Flow divider	Sheet: 25 of 59 Sheets
date 29.01.2016	date	date	SF AE = changable PF = prototype release SF = serial release	Partial Document No.:	HAMM	Series code: H201	Valid for Serial No.: from 0001 to 4029		
name Mar.Schedl	name	name		Version No.:		Sheet plant: Sheet Location:			
E - CAE	Document type: ESP	Function group No.: 08							

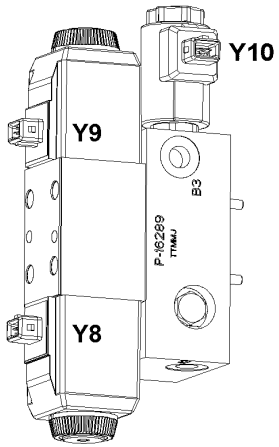


M2: Pumpe Wasserberieselung
M2: Pump Sprinkling

M3: Pumpe Additivberieselung
M3: Pump Additive sprinkling

Drawing by:	Approved by:	last change:	Status:	Document No.:		Material No.: 2174533	Revision No.: 02	Wasserberieselung Additivberieselung Sprinkling Additive sprinkling	Sheet: 26 of 59 Sheets
date 29.01.2016	date	date	SF AE = changable PF = prototype release SF = serial release	Partial Document No.:	HAMM	Series code: H201	Valid for Serial No.: from 0001 to 4029		
name Mar.Schedl	name	name		Version No.:		Sheet plant: Sheet Location:			
E - CAE	Document type: ESP	Function group No.: 12							





Y10: nur bei Kantenandrückgerät links und rechts
Y10: only on Edge pressing assembly left and right

Y9: Kantenandrückgerät senken
Y9: Edge pressing assembly lower

Y10: Umschaltventil Kantenandrückgerät
Y10: Reversing valve Edge pressing assembly

Y8: Kantenandrückgerät heben
Y8: Edge pressing assembly lift

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date 29.01.2016	date	date	SF AE = changable PF = prototype release SF = serial release	Partial Document No.:	HAMM	Series code: H201	Valid for Serial No.: from 0001 to 4029		
name Mar.Schedl	name	name		Version No.:		Sheet plant: Sheet Location:			
E - CAE	Document type: ESP	Function group No.: 15							

Electric

/26.8 15A
/26.8 31CE
/23.8 30WI -X40p:2

-F12X1 E
-F12 25A
A

-A2.X8p 3/9 /43.2
-A2.X8p 6/9 /43.2
-A2.X8s 6/9 /43.4
-K400.X1s R2/30 /47.7
R2

-K400 .X1 /40.1
Supply
12V DC
+U (15)
WIFMS-Gateway

+U Klemme 15
+U Terminal 15

-K400.X1s R1/30 /47.7
R1

-K400 .X1 /40.1
Supply
12V DC
+U (30)
WIFMS-Gateway

+U Klemme 30
+U Terminal 30

-A2.X8p 8/9 /43.2
-A2.X8p 9/9 /43.2
-A2.X8s 8/9 /43.4
-K400.X1s R3/30 /47.7
R3

-K400 .X1 /40.1
Supply
GND
WIFMS-Gateway

Masse
Ground

/17.3 INT1
/17.3 INT2

-X30s 1/2 /49.1
-X30p 1/2 /49.8
-K400.X1s L2/30 /47.6
L2

-K400 .X1 /40.1
Relay IN
WIFMS-Gateway

Wegfahrsperre
Drive inhibit

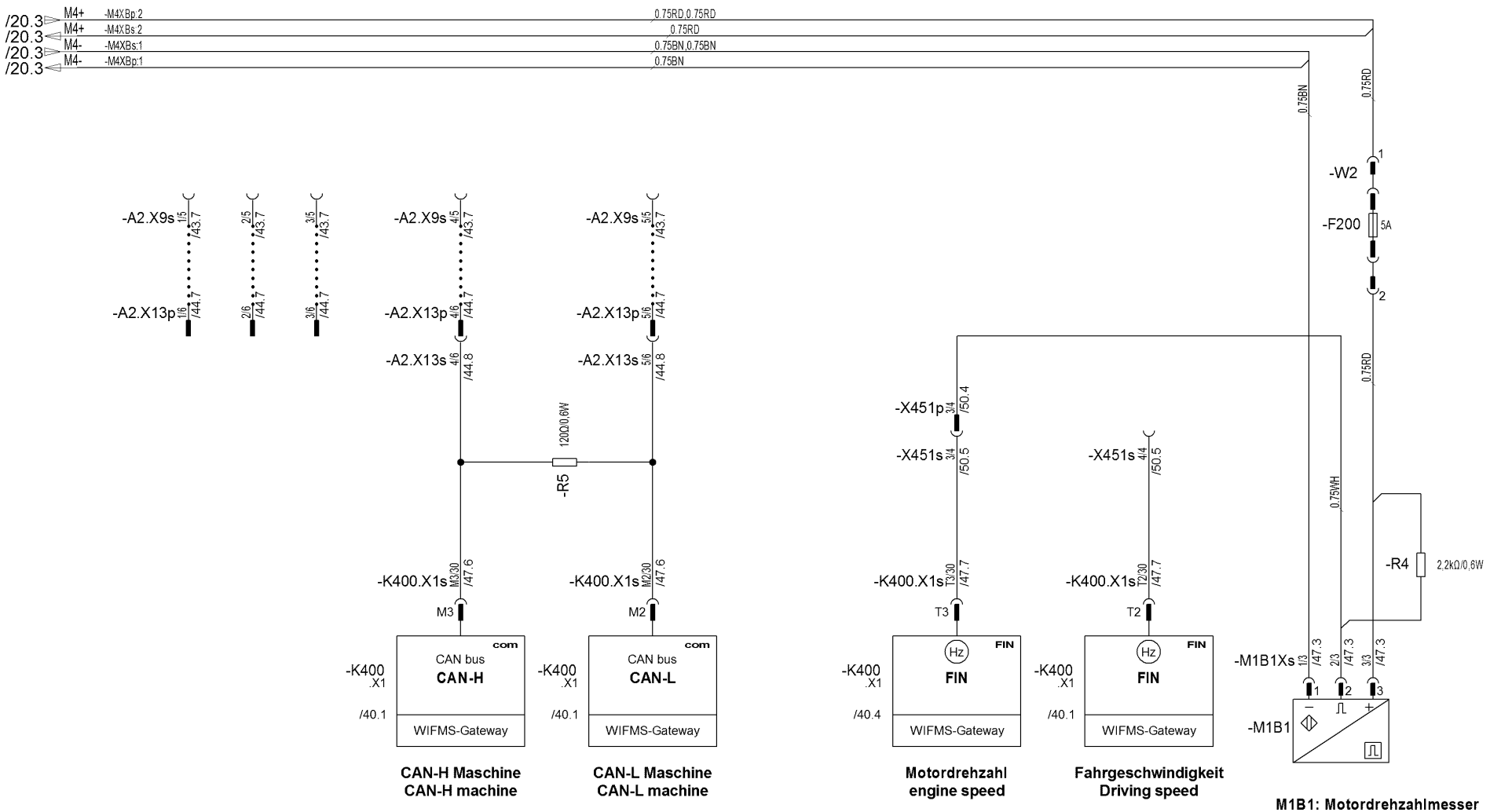
-K400.X1s L1/30 /47.6
L1

-K400 .X1 /40.1
Relay OUT
WIFMS-Gateway

Wegfahrsperre
Drive inhibit

Refer to protection notice ISO 16016 Schutzvermerk nach ISO 16016 beachten

Drawing by:	Approved by:	last change:	Status:	Document No.:	HAMM	Material No.: 2174533	Revision No.: 02	Option WIFMS Schnittstelle Option WIFMS Interface	Sheet: 28 of 59 Sheets
date 29.01.2016	date	date	SF AE = changable PF = prototype release SF = serial release	Partial Document No.:		Series code: H201	Valid for Serial No.: from 0001 to 4029		
name Mar.Schedl	name	name		Version No.:		Sheet plant: Sheet Location:			
E - CAE	Document type: ESP	Function group No.: 15							



CAN-H Maschine
CAN-H machine

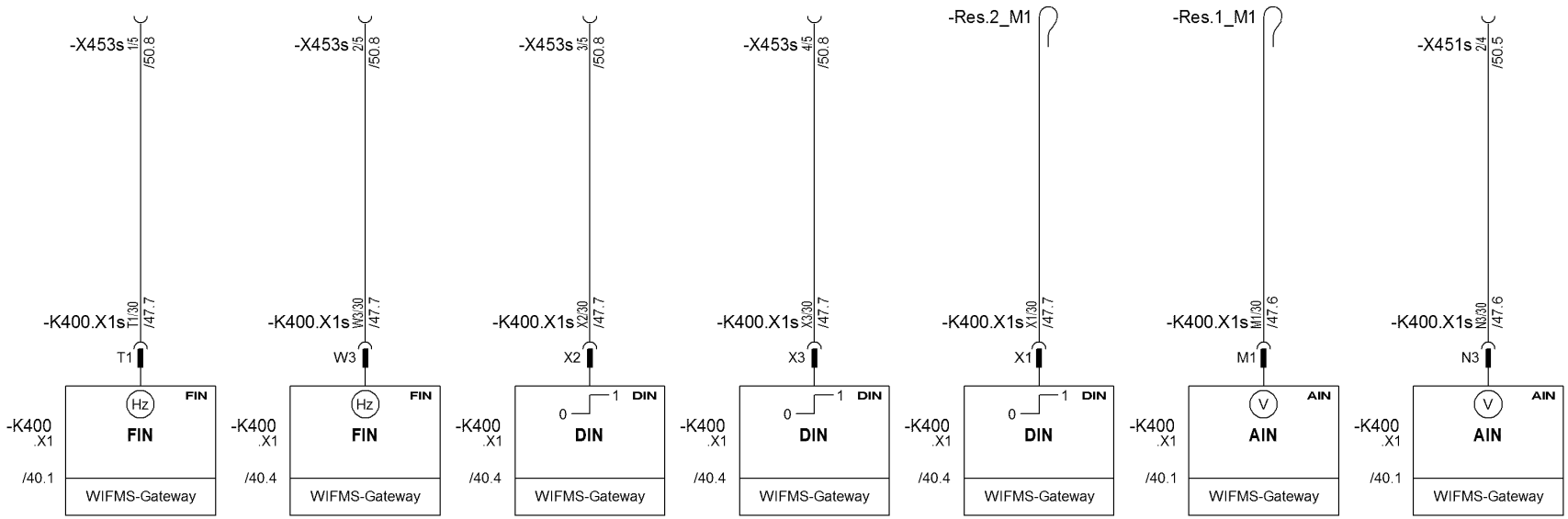
CAN-L Maschine
CAN-L machine

Motordrehzahl
engine speed

Fahrgeschwindigkeit
Driving speed

M1B1: Motordrehzahlmesser
M1B1: Engine revolution counter

Drawing by:	Approved by:	last change:	Status:	Document No.:		Material No.: 2174533	Revision No.: 02	Option WIFMS Schnittstelle Option WIFMS Interface	Sheet: 29 of 59 Sheets
date 29.01.2016	date	date	SF AE = changable PF = prototype release SF = serial release	Partial Document No.:	HAMM	Series code: H201	Valid for Serial No.: from 0001 to 4029		
name Mar.Schedl	name	name		Version No.:		Sheet plant: Sheet Location:			
E - CAE	Document type: ESP	Function group No.: 15							



Vibrationsfrequenz vorn
Vibration frequency front

Vibrationsfrequenz hinten
Vibration frequency rear

Amplitude, groß
Amplitude, large

Amplitude, klein
Amplitude, small

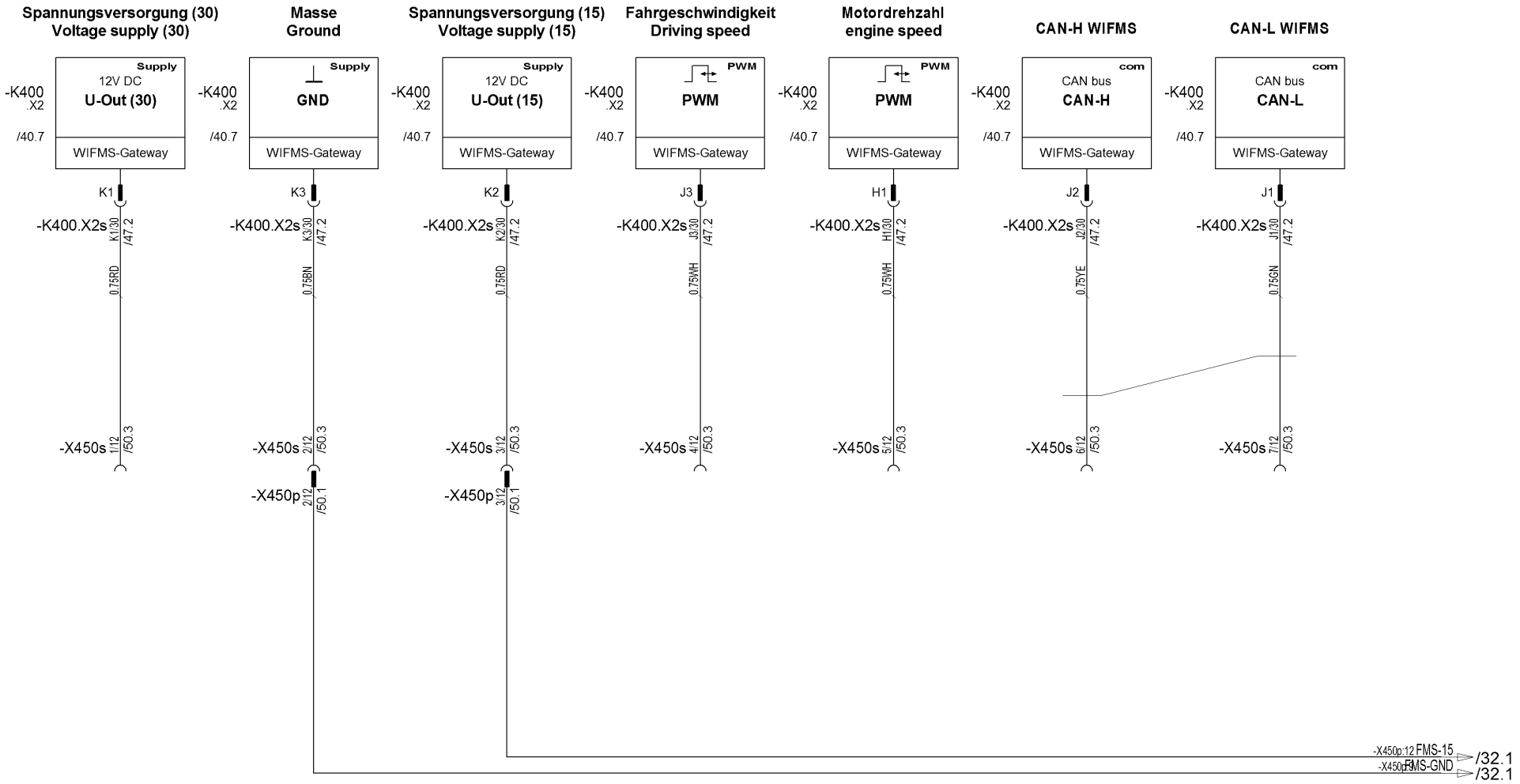
Arbeitsindikator
Working indicator

Füllstand Kraftstoff
Level fuel

Motortemperatur
engine temp.

Drawing by:	Approved by:	last change:	Status:	Document No.:	HAMM	Material No.: 2174533	Revision No.: 02	Option WIFMS Schnittstelle Option WIFMS Interface	Sheet: 30 of 59 Sheets
date 29.01.2016	date	date	SF AE = changable PF = prototype release SF = serial release	Partial Document No.:		Series code: H201	Valid for Serial No.: from 0001 to 4029		
name Mar.Schedl	name	name		Version No.:		Sheet plant: Sheet Location:			
E - CAE	Document type: ESP	Function group No.: 15							

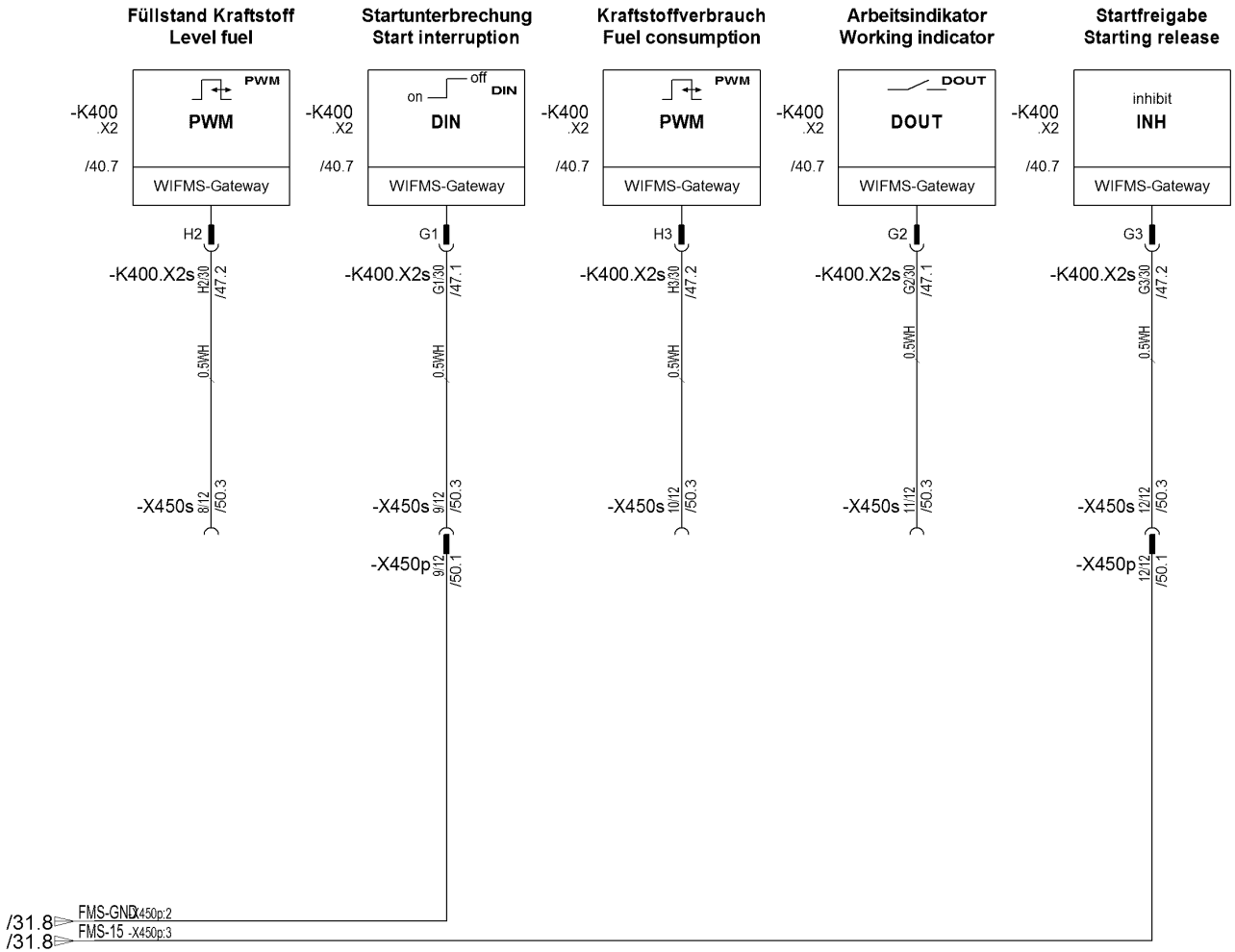
Electric



Drawing by:	Approved by:	last change:	Status:	Document No.:		Material No.:	Revision No.:	Sheet:
date 29.01.2016	date	date	SF AE = changable PF = prototype release SF = serial release	Partial Document No.:	HAMM	2174533	02	31 of 59 Sheets
name Mar.Schedl	name	name		Version No.:		Series code: H201	Valid for Serial No.: from 0001 to 4029	
E - CAE	Document type: ESP	Function group No.: 15				Sheet plant: Sheet Location:		

Option WIFMS Schnittstelle
Option WIFMS Interface

Electric

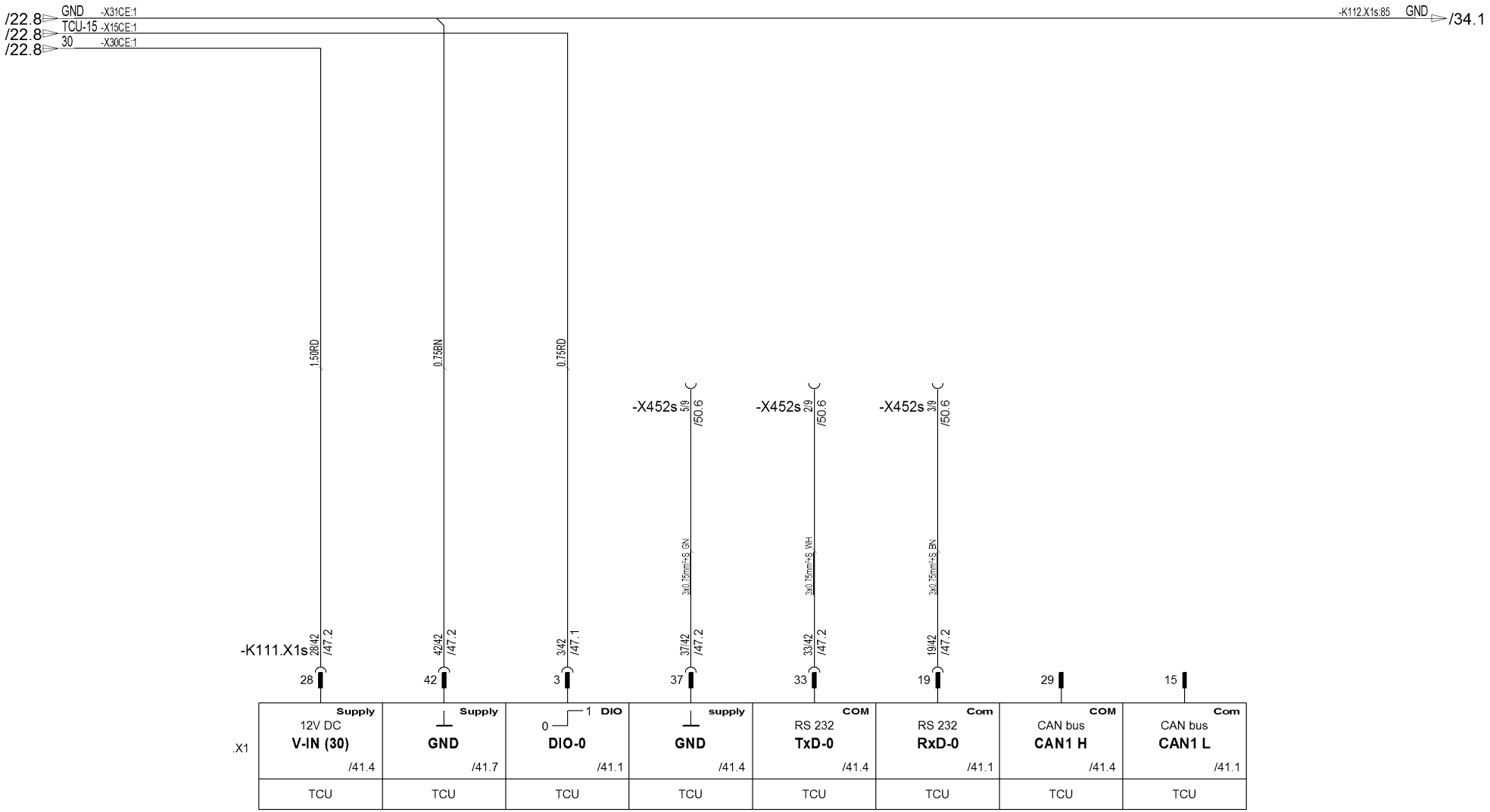


Schutzvermerk nach ISO 16016 beachten

Refer to protection notice ISO 16016

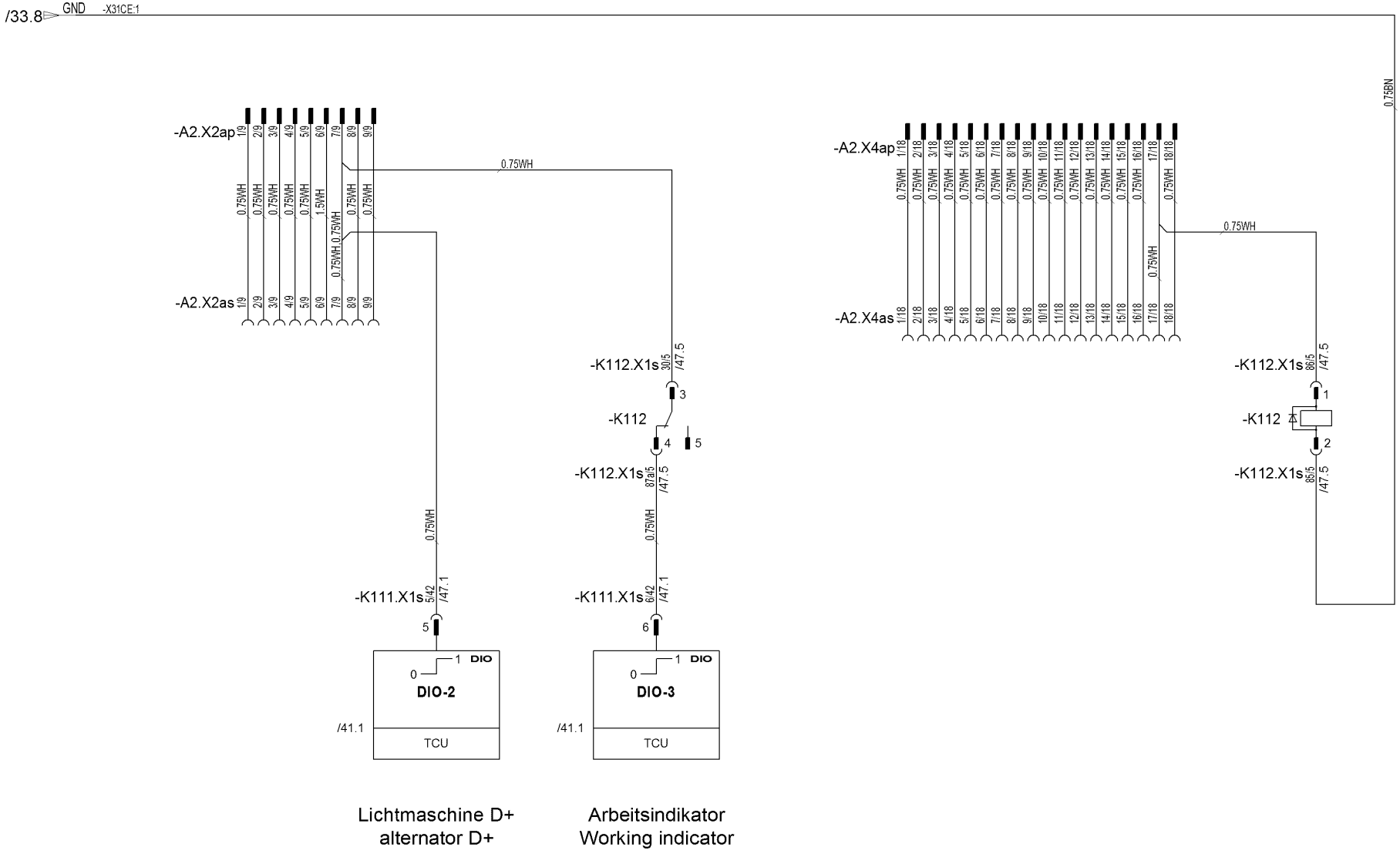
Drawing by:	Approved by:	last change:	Status:	Document No.:		Material No.:	Revision No.:	Option WIFMS Schnittstelle Option WIFMS Interface	Sheet:
date 29.01.2016	date	date	SF AE = changable PF = prototype release SF = serial release	Partial Document No.:	HAMM	2174533	02		32 of 59 Sheets
name Mar.Schedl	name	name		Version No.:		Series code: H201	Valid for Serial No.: from 0001 to 4029		
E - CAE	Document type: ESP	Function group No.: 15				Sheet plant: Sheet Location:			

Electric

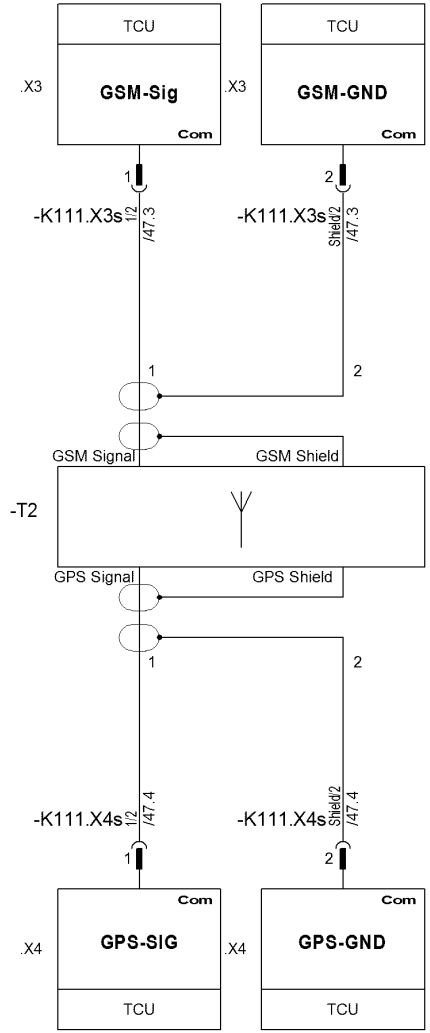


Refer to protection notice ISO 16016 Schutzvermerk nach ISO 16016 beachten

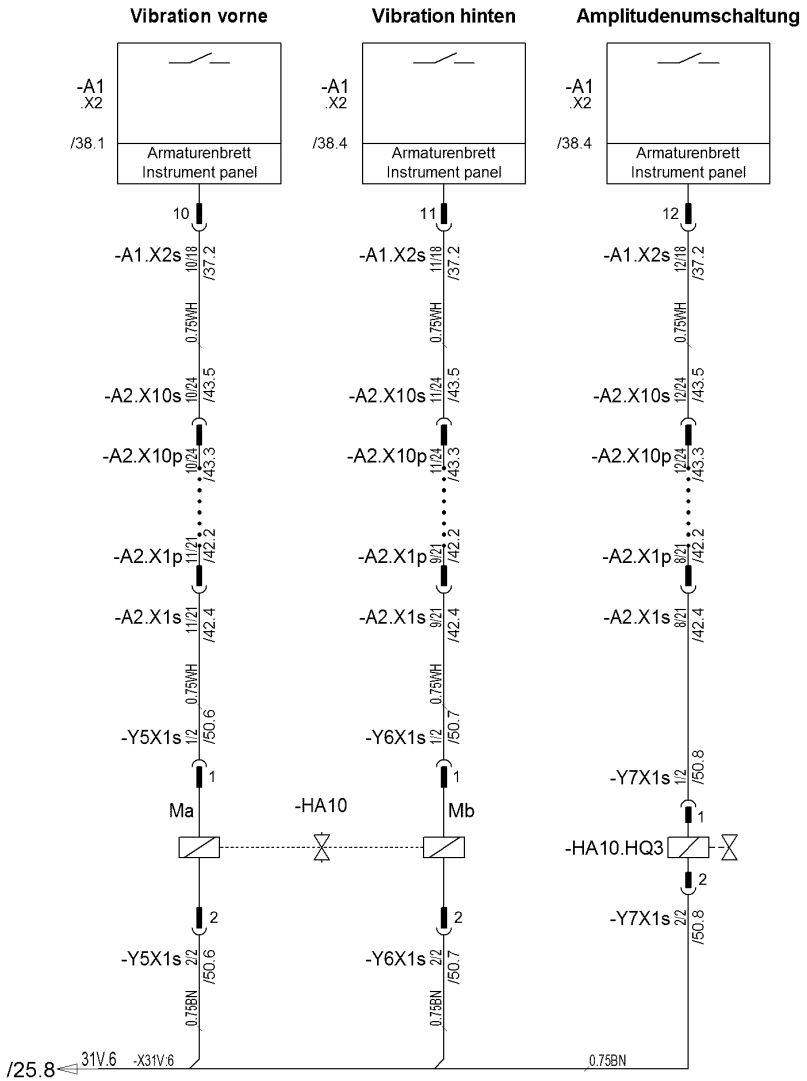
Drawing by:	Approved by:	last change:	Status:	Document No.:		Material No.: 2174533	Revision No.: 02	Option TCU Versorgung Option TCU supply	Sheet: 33 of 59 Sheets
date 29.01.2016	date	date	SF AE = changable PF = prototype release SF = serial release	Partial Document No.:	HAMM	Series code: H201	Valid for Serial No.: from 0001 to 4029		
name Mar.Schedl	name	name		Version No.:		Sheet plant: Sheet Location:			
E - CAE	Document type: ESP	Function group No.: 15							

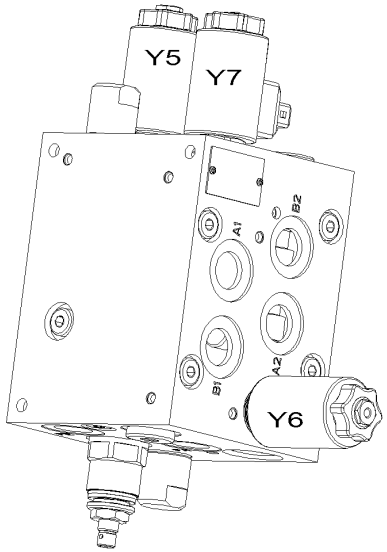


Drawing by:	Approved by:	last change:	Status:	Document No.:		Material No.: 2174533	Revision No.: 02	Option TCU D+ Arbeitsindikator Option TCU D+ Working indicator	Sheet: 34 of 59 Sheets
date 29.01.2016	date	date	SF AE = changable PF = prototype release SF = serial release	Partial Document No.:	HAMM	Series code: H201	Valid for Serial No.: from 0001 to 4029		
name Mar.Schedl	name	name		Version No.:		Sheet plant: Sheet Location:			
E - CAE	Document type: ESP	Function group No.: 15							



Drawing by:	Approved by:	last change:	Status:	Document No.:		Material No.: 2174533	Revision No.: 02	Option TCU Antenne Option TCU Antenna	Sheet: 35 of 59 Sheets
date 29.01.2016	date	date	SF AE = changable PF = prototype release SF = serial release	Partial Document No.:	HAMM	Series code: H201	Valid for Serial No.: from 0001 to 4029		
name Mar.Schedl	name	name		Version No.:		Sheet plant: Sheet Location:			
E - CAE	Document type: ESP	Function group No.: 15							



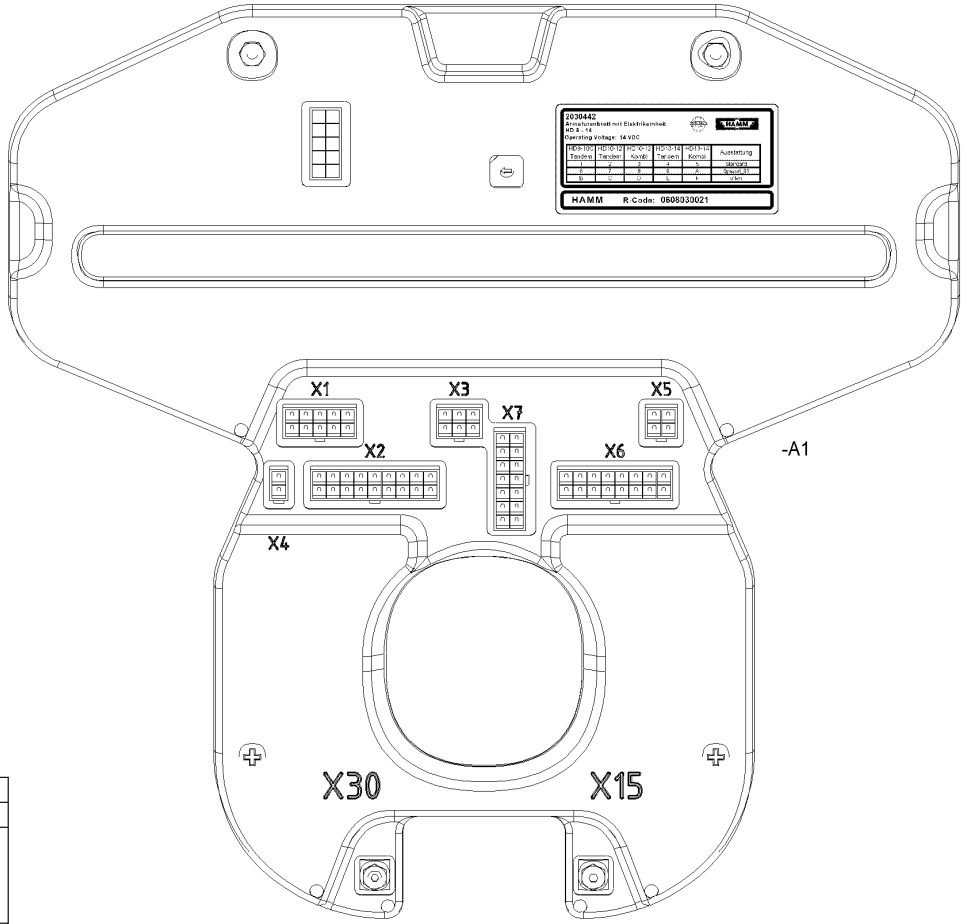


Y5: Vibration vorn
Y5: Vibration front

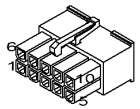
Y6: Vibration hinten
Y6: Vibration rear

Y7: Vibroumschaltung
Y7: Changing over - vibration

Drawing by:	Approved by:	last change:	Status:	Document No.:		Material No.:	Revision No.:		Sheet:
date 29.01.2016	date	date	SF AE = changable PF = prototype release SF = serial release		HAMM	2174533	02	Vibration Vibration	36 of 59 Sheets
name Mar.Schedl	name	name		Partial Document No.:		Series code: H201	Valid for Serial No.: from 0001 to 4029		
E - CAE	Document type: ESP	Function group No.: 26		Version No.:		Sheet plant: Sheet Location:			

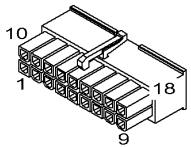


-A1.X1s



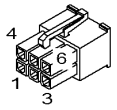
1: /5.2
2: /4.1
3: /23.4
4:
5: /4.2
6: /5.2
7: /24.3
8: /24.1
9: /24.3
10: /24.2

-A1.X2s



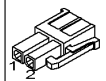
1: /12.3
2: /24.6
3: /24.5
4: /21.2
5: /19.5
6: /19.3
7: /19.2
8: /18.7
9: /25.4
10: /36.1
11: /36.2
12: /36.3
13: /17.3
14: /17.8
15: /22.4
16:
17: /6.4
18:

-A1.X3s



1: /10.7
2: /10.1
3:
4: /10.8
5: /10.2
6: /10.4

-A1.X4s



1: /27.1
2: /27.2

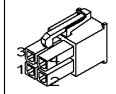
-A1.X30

1: /12.3

-A1.X15

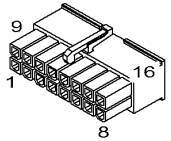
1: /12.2

-A1.X5s



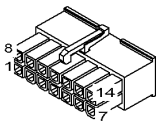
1: /20.5
2: /20.5
3: /20.6
4: /20.7

-A1.X6s



1: /15.1
2: /15.4
3: /15.3
4: /14.7
5: /15.2
6: /14.6
7: /14.5
8: /14.4
9: /25.1
10: /25.3
11: /14.8
12: /14.2
13: /26.6
14: /14.3
15:
16: /26.7

-A1.X7s



1: /11.6
2: /11.3
3: /11.4
4: /11.7
5: /5.4
6:
7:
8: /8.1
9:
10: /7.1
11: /9.1
12:
13: /6.5
14:

Drawing by:	Approved by:	last change:	Status:	Document No.:		Material No.: 2174533	Revision No.: 02	Übersicht Armaturenbrett General arrangement Instrument panel	Sheet: 37 of 59 Sheets
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name Mar.Schedl	name	name		Version No.:		Sheet plant: Sheet Location:			
E - CAE	Document type: ESP	Function group No.:							

Electric

Schutzvermerk nach ISO 16016 beachten

Refer to protection notice ISO 16016

Armaturenbrett
Instrument panel

-A1

1/m

Anschluss Pin	Signal signal	Querverweis cross-reference	Beschreibung description	Anschluss Pin	Signal signal	Querverweis cross-reference	Beschreibung description	Anschluss Pin	Signal signal	Querverweis cross-reference	Beschreibung description
.X1		/5.2	Warntonsummer -	.X2		/36.2	Vibration hinten	.X6		/15.1	MFG GND
.X1		/4.1	Not-Aus out	.X2		/36.3	Amplitudenumschaltung	.X6		/15.5	MFG KAG ab
.X1		/23.4	50a Zündschloß	.X2		/17.7	Hubmagnet	.X6		/15.3	MFG KAG auf
.X1			nc	.X2		/17.3	Starterrelais	.X6		/14.7	Sitzkontakt
.X1		/4.2	Not-Aus in	.X2		/22.4	D+ Lichtmaschine D+ alternator	.X6		/15.2	MFG Vibrotaste
.X1		/5.2	Warntonsummer +	.X2			nc	.X6		/14.6	Back-Up
.X1		/24.2	Fahren out 1	.X2		/6.3	Signalhorn	.X6		/14.5	Verriegelung
.X1		/24.1	Bremse out 1	.X2			Signalhorn	.X6		/14.4	Automatik
.X1		/24.3	Fahren in 1	.X3		/10.6	Standlicht VR	.X6		/25.1	Allradsperre
.X1		/24.2	Bremse in 1	.X3		/10.1	Fahrlicht VR	.X6		/25.2	Allradsperre
.X2		/12.2	GND	.X3			Fahrlicht VL	.X6		/14.8	Sitzkontakt
.X2		/24.5	Fahren out	.X3		/10.7	Blinker VR	.X6		/14.2	Sensoren 12V
.X2		/24.4	Bremse out	.X3		/10.2	Blinker VL	.X6		/14.3	Sensoren GND
.X2		/21.1	Hydrauliköl	.X3		/10.4	Standlicht VL	.X6		/26.6	Wasserpumpe
.X2		/19.4	Luftfilter	.X4		/27.1	KAG auf	.X6			Wasserpumpe
.X2		/19.3	Kühlerwasser	.X4		/27.2	KAG ab	.X6		/26.7	Additivpumpe
.X2		/19.1	Öldruck	.X5		/20.4	Füllstand 2/3	.X7		/11.5	Blinker HR
.X2		/18.7	Vorglühanzeige	.X5		/20.5	Füllstand 1/3	.X7		/11.3	Blinker HL
.X2		/25.3	Ventil Allradsperre	.X5		/20.6	Füllstand 1/10	.X7		/11.4	Standlicht HL
.X2		/36.1	Vibration vorne	.X5		/20.6	Füllstand 12V	.X7		/11.6	Standlicht HR

Drawing by:	Approved by:	last change:	Status:	Document No.:		Material No.: 2174533	Revision No.: 02	Übersicht Armaturenbrett General arrangement Instrument panel	Sheet: 38 of 59 Sheets
date 29.01.2016	date	date	SF AE = changable PF = prototype release SF = serial release	Partial Document No.:	HAMM	Series code: H201	Valid for Serial No.: from 0001 to 4029		
name Mar.Schedl	name	name		Version No.:		Sheet plant: Sheet Location:			
E - CAE	Document type: ESP	Function group No.:							

Electric

Armaturenbrett
Instrument panel

-A1

n/m

Anschluss Pin	Signal signal	Querverweis cross-reference	Beschreibung description	Anschluss Pin	Signal signal	Querverweis cross-reference	Beschreibung description	Anschluss Pin	Signal signal	Querverweis cross-reference	Beschreibung description
.X7 :		/5.3	Backup	:				:			
.X7 :			nc	:				:			
.X7 :			nc	:				:			
.X7 :		/8.1	Bandagenbel.rechts	:				:			
.X7 :			Bandagenbel.links	:				:			
.X7 :		/7.1	Arbeitsscheinwerfer	:				:			
.X7 :		/9.1	Rückfahrscheinwerfer	:				:			
.X7 :			Rückfahrscheinwerfer	:				:			
.X7 :			Arbeitsscheinwerfer	:				:			
.X7 :		/6.5	Rundumkennleuchte	:				:			
.X30 :		/12.3	Terminal 30	:				:			
.X15 :		/12.2	Terminal 15	:				:			
:		/38.1		:				:			
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Schutzvermerk nach ISO 16016 beachten

Refer to protection notice ISO 16016

Drawing by:	Approved by:	last change:	Status:	Document No.:		Material No.: 2174533	Revision No.: 02	Übersicht Armaturenbrett General arrangement Instrument panel	Sheet: 39 of 59 Sheets
date 29.01.2016	date	date	SF AE = changable PF = prototype release SF = serial release	Partial Document No.:	HAMM	Series code: H201	Valid for Serial No.: from 0001 to 4029		
name Mar.Schedl	name	name		Version No.:		Sheet plant: Sheet Location:			
E - CAE	Document type: ESP	Function group No.:							

WIFMS-Gateway

-K400

1/m

Anschluss Pin	Signal signal	Querverweis cross-reference	Beschreibung description	Anschluss Pin	Signal signal	Querverweis cross-reference	Beschreibung description	Anschluss Pin	Signal signal	Querverweis cross-reference	Beschreibung description
.X1 :L1	Relay OUT	/28.6	Wegfahrsperre Drive inhibit	.X1 :T3	FIN FIN	/29.5	Motordrehzahl engine speed	.X2 :D2	DOUT DOUT		Vibrationsfrequenz Vibration frequency
.X1 :L2	Relay IN	/28.5	Wegfahrsperre Drive inhibit	.X1 :W1	FIN FIN		Turbine 2 Turbine 2	.X2 :D3	DOUT DOUT		
.X1 :L3	INH		Startfreigabe Starting release	.X1 :W2	FIN FIN		Turbine 1 Turbine 1	.X2 :E1	+U-Out (30) Supply		Spannungsversorgung (30) Voltage supply (30)
.X1 :M1	AIN AIN	/30.6	Füllstand Kraftstoff Level fuel	.X1 :W3	FIN FIN	/30.2	Vibrationsfrequenz hinten Vibration frequency rear	.X2 :E2	U-Out (15) Supply		Spannungsversorgung (15) Voltage supply (15)
.X1 :M2	CAN-L com	/29.4	CAN-L Maschine CAN-L machine	.X1 :X1	DIN DIN	/30.5	Arbeitsindikator Working indicator	.X2 :E3	GND Supply		Masse Ground
.X1 :M3	CAN-H com	/29.3	CAN-H Maschine CAN-H machine	.X1 :X2	DIN DIN	/30.3	Amplitude, groß Amplitude, large	.X2 :F1	CAN-L COM		CAN-L Tachograph CAN-L Speedometer
.X1 :N1	AIN AIN		Luftdruck Air pressure	.X1 :X3	DIN DIN	/30.4	Amplitude, klein Amplitude, small	.X2 :F2	CAN-H com		CAN-H Tachograph CAN-H Speedometer
.X1 :N2	AIN AIN		Temperatur Hydrauliköl temperature Hydraulic oil	.X1 :Y1	UART 1 com			.X2 :F3	GND Supply		Masse Ground
.X1 :N3	AIN AIN	/30.7	Motortemperatur engine temp.	.X1 :Y2	UART 2 com			.X2 :G1	DIN DIN	/32.2	Startunterbrechung Start interruption
.X1 :P1	+U (58) Supply		Standlicht Parking light	.X1 :Y3	GND Supply		Masse Ground	.X2 :G2	DOUT DOUT	/32.4	Arbeitsindikator Working indicator
.X1 :P2	+U (15) Supply		+U Klemme 15 +U Terminal 15	.X2 :A1	U-Out Sensor Supply		+U Drehzahlsensor +U Speed sensor	.X2 :G3	INH	/32.5	Startfreigabe Starting release
.X1 :P3	GND Supply		Masse Ground	.X2 :A2	GND Supply		Masse Sensor Ground Sensor	.X2 :H1	PWM PWM	/31.5	Motordrehzahl engine speed
.X1 :R1	+U (30) Supply	/28.2	+U Klemme 30 +U Terminal 30	.X2 :A3	UART 3 com			.X2 :H2	PWM PWM	/32.1	Füllstand Kraftstoff Level fuel
.X1 :R2	+U (15) Supply	/28.1	+U Klemme 15 +U Terminal 15	.X2 :B1	DOUT DOUT			.X2 :H3	PWM PWM	/32.3	Kraftstoffverbrauch Fuel consumption
.X1 :R3	GND Supply	/28.3	Masse Ground	.X2 :B2	DOUT DOUT		Fahrgeschwindigkeit inv. Driving speed inv.	.X2 :J1	CAN-L com	/31.7	CAN-L WIFMS
.X1 :S1	VCC Ref. Supply		VCC Ref. Ext.	.X2 :B3	DOUT DOUT		Fahrgeschwindigkeit Driving speed	.X2 :J2	CAN-H com	/31.6	CAN-H WIFMS
.X1 :S2	U Ref. +10V Supply		U Ref. ext. +10V	.X2 :C1	DOUT DOUT		Frequenz Amplitude, klein Frequency Amplitude, small	.X2 :J3	PWM PWM	/31.4	Fahrgeschwindigkeit Driving speed
.X1 :S3	GND Supply		Masse Ground	.X2 :C2	DOUT DOUT		Frequenz Amplitude, groß Frequency Amplitude, large	.X2 :K1	U-Out (30) Supply	/31.1	Spannungsversorgung (30) Voltage supply (30)
.X1 :T1	FIN FIN	/30.1	Vibrationsfrequenz vorn Vibration frequency front	.X2 :C3	DOUT DOUT			.X2 :K2	U-Out (15) Supply	/31.3	Spannungsversorgung (15) Voltage supply (15)
.X1 :T2	FIN FIN	/29.6	Fahrgeschwindigkeit Driving speed	.X2 :D1	U-Out (58) Supply		Standlicht Parking light	.X2 :K3	GND Supply	/31.2	Masse Ground

Drawing by:	Approved by:	last change:	Status:	Document No.:	HAMM	Material No.: 2174533	Revision No.: 02	Übersicht WIFMS-Gateway General arrangement WIFMS-Gateway	Sheet: 40 of 59 Sheets
date 29.01.2016	date	date	SF AE = changable PF = prototype release SF = serial release	Partial Document No.:		Series code: H201	Valid for Serial No.: from 0001 to 4029		
name Mar.Schedl	name	name		Version No.:		Sheet plant: Sheet Location:			
E - CAE	Document type: ESP	Function group No.:							

TCU

-K111

1/m

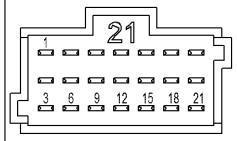
Anschluss Pin	Signal signal	Querverweis cross-reference	Beschreibung description	Anschluss Pin	Signal signal	Querverweis cross-reference	Beschreibung description	Anschluss Pin	Signal signal	Querverweis cross-reference	Beschreibung description
.X1 :1	CAN 1 term Com			.X1 :21	RxD-1/DTR-0 Com			.X1 :41	SPKP FIN		
.X1 :2	CAN 2 term Com			.X1 :22	K-Line 2 Supply			.X1 :42	GND Supply	/33.3	
.X1 :3	DIO-0 DIO	/33.4		.X1 :23	GND Supply			.X2 :1	TX+ Com		
.X1 :4	DIO-1 DIO			.X1 :24	AIN-1 AIN			.X2 :2	TX- Com		
.X1 :5	DIO-2 DIO	/34.2		.X1 :25	AIN-3 AIN			.X2 :3	RX+ Com		
.X1 :6	DIO-3 DIO	/34.4		.X1 :26	MICN FIN			.X2 :4	n.c. Com		
.X1 :7	DIO-4 DIO			.X1 :27	SPKN FIN			.X2 :5	n.c. Com		
.X1 :8	DIO-5 DIO			.X1 :28	V-IN (30) Supply	/33.3		.X2 :6	RX- Com		
.X1 :9	DIO-6 DIO			.X1 :29	CAN1 H COM	/33.6		.X2 :7	n.c. Com		
.X1 :10	DIO-7 DIO			.X1 :30	CAN2 H COM			.X2 :8	n.c. Com		
.X1 :11	DIO-8 DIO			.X1 :31	GND-ISO supply			.X3 :1	GSM-Sig Com	/35.3	
.X1 :12	DIO-9 DIO			.X1 :32	RS485A Com			.X3 :2	GSM-GND Com	/35.4	
.X1 :13	ON/OFF IN			.X1 :33	TxD-0 COM	/33.5		.X4 :1	GPS-SIG Com	/35.3	
.X1 :14	V-OUT (4V5) supply			.X1 :34	TxD-3/RTS-0 COM			.X4 :2	GPS-GND Com	/35.4	
.X1 :15	CAN1 L Com	/33.7		.X1 :35	TxD-1/DCD-0 Com			:			
.X1 :16	CAN2 L Com			.X1 :36	K-Line-1 D-OUT			:			
.X1 :17	V-ISO (4V5) Supply			.X1 :37	GND supply	/33.4		:			
.X1 :18	RS485B Com			.X1 :38	AIN-0 AIN			:			
.X1 :19	RxD-0 Com	/33.6		.X1 :39	AIN-2 AIN			:			
.X1 :20	RxD-3/CTS-0 Com			.X1 :40	MICP FIN			:			

Drawing by:	Approved by:	last change:	Status:	Document No.:		Material No.:	Revision No.:	Sheet:
date 29.01.2016	date	date	SF AE = changable PF = prototype release SF = serial release		HAMM	2174533	02	41
name Mar.Schedl	name	name		Partial Document No.:		Series code: H201	Valid for Serial No.: from 0001 to 4029	of 59 Sheets
E - CAE	Document type: ESP	Function group No.:		Version No.:		Sheet plant: Sheet Location:		

Übersicht Telematic Control Unit
General arrangement Telematic Control Unit

Electric

-A2.X1p



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6:	/10.6	17:	/24.6
7:	/27.1	18:	/20.6
8:	/36.3	19:	/24.5
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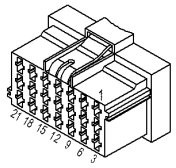
-A2.X1s



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-A2.X2ap

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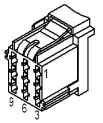
-A2.X2as



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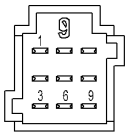
-A2.X2p



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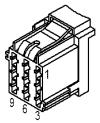
-A2.X2s



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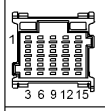

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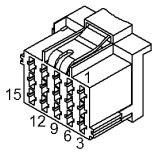

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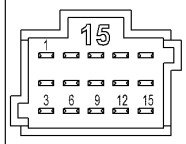

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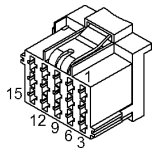

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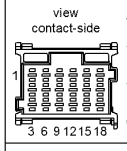
-A2.X4ap



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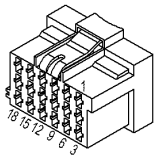

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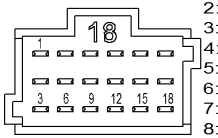

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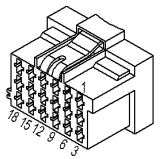
8:	/14.3	17:	/14.5
9:	/15.3	18:	/14.4

Drawing by:	Approved by:	last change:	Status:	Document No.:		Material No.:	Revision No.:	Übersicht Steckerbelegung General arrangement Plug occupancy	Sheet:
date 29.01.2016	date	date	SF AE = changable PF = prototype release SF = serial release	Partial Document No.:	HAMM	2174533	02		42 of 59 Sheets
name Mar.Schedl	name	name		Version No.:		Series code: H201	Valid for Serial No.: from 0001 to 4029		
E - CAE	Document type: ESP	Function group No.:				Sheet plant: Sheet Location:			

-A2.X4s



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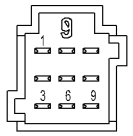

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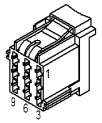

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-A2.X6p

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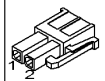
-A2.X6s



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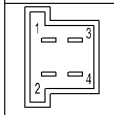

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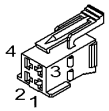

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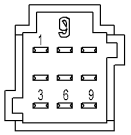

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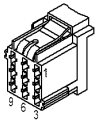

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3:	
4:	/26.3
5:	
6:	/28.2
7:	
8:	/28.4
9:	

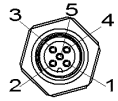
-A2.X9ap

1: /16.2

-A2.X9as

1: /16.2

-A2.X9s



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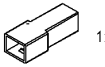
3:	/29.2
4:	/29.3
5:	/29.4

-A2.X10ap



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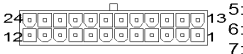
-A2.X10as

1: /16.2

-A2.X10p



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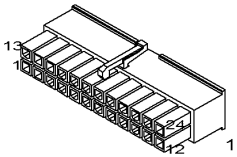
2:	/24.6	14:	/17.8
3:	/24.5	15:	/22.4
4:	/21.2	16:	/6.4
5:	/19.5	17:	/10.7
6:	/19.3	18:	/10.1
7:	/19.2	19:	
8:	/18.7	20:	/10.8
9:	/25.4	21:	/10.2
10:	/36.1	22:	/10.4
11:	/36.2	23:	/27.1
12:	/36.3	24:	/27.2

-A2.X10s



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2:	/24.6	14:	/17.3
3:	/24.5	15:	/22.4
4:	/21.2	16:	/6.4
5:	/19.5	17:	/10.7
6:	/19.3	18:	/10.1
7:	/19.2	19:	/27.1
8:	/18.7	20:	/10.4
9:	/25.4	21:	/10.2
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11:	/36.2	23:	
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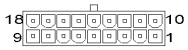
-A2.X11p



1:	/20.5	10:	/14.6
2:	/20.5	11:	/14.5
3:	/20.6	12:	/14.4
4:	/20.7	13:	/25.3
5:	/15.1	14:	/25.1
6:	/15.3	15:	/14.8
7:	/15.4	16:	/14.2
8:	/14.7	17:	/14.3
9:	/15.2	18:	

Drawing by:	Approved by:	last change:	Status:	Document No.:	Material No.:	Revision No.:
date 29.01.2016	date	date	SF AE = changable PF = prototype release SF = serial release		2174533	02
name Mar.Schedl	name	name		Partial Document No.:	Series code: H201	Valid for Serial No.: from 0001 to 4029
E - CAE	Document type: ESP	Function group No.:		Version No.:	Sheet plant: Sheet Location:	

HAMM

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General arrangement Plug occupancy

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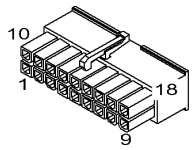
Electric

Schutzvermerk nach ISO 16016 beachten

Refer to protection notice ISO 16016

-A2.X11s



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3:	/20.6	12:	/14.4
4:	/20.7	13:	/25.3
5:	/15.1	14:	/25.1
6:	/15.3	15:	/14.8
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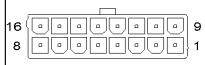
9:	/15.2	18:	

-A2.X12p



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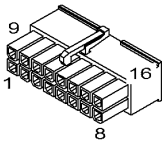
2:	/11.3	10:	/26.6
3:	/11.4	11:	/26.7
4:	/11.7	12:	
5:	/5.4	13:	
6:	/8.1	14:	
7:	/7.1	15:	
8:	/9.1	16:	

-A2.X12s



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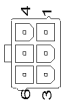
2:	/11.3	10:	/26.6
3:	/11.4	11:	/26.7
4:	/11.7	12:	
5:	/5.4	13:	
6:	/8.1	14:	
7:	/7.1	15:	
8:	/9.1	16:	

-A2.X13p



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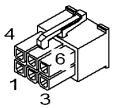
4:	/29.3
5:	/29.4
6:	

-A2.X13s



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3:	
4:	/29.3
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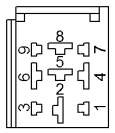
6:	

-A5.X1



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3:	/15.5
4:	/15.6
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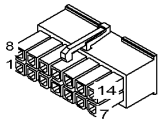
6:	/15.6
7:	/15.7
8:	/15.7
9:	/15.8

-A6.X1s



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3:	/13.3	10:	/13.4
4:	/13.3	11:	/13.5
5:	/13.4	12:	/13.5
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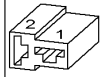
7:	/13.4	14:	/13.5

-A6.X2s



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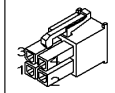
-A6.X3s



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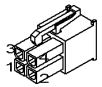
3:	/13.3
4:	/13.3

-A6.X4s



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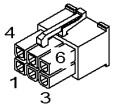
3:	/13.4
4:	/13.4

-A6.X5s



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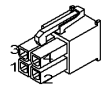
3:	/13.5
4:	/13.5
5:	/13.5
6:	/13.5

-A6.X6s



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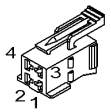
3:	/13.6
4:	

-A6.X7s



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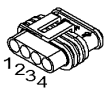
4:	/13.7

-B9.X1



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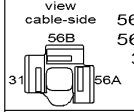
3:	/20.5
4:	/20.5

-E2.X1s



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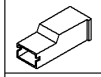
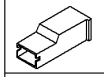
56B:	/10.4
31:	/10.4

-E2.X2s



1:	/10.4

-E2.X3s



1:	/10.5

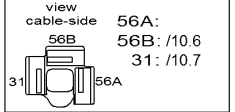
-E3Xs

1:	/10.2
2:	/10.3

Drawing by:		Approved by:		last change:		Status:		Document No.:			Material No.:	Revision No.:	Sheet:
date	29.01.2016	date		date		SF	AE = changable PF = prototype release SF = serial release	Partial Document No.:	HAMM		2174533	02	44 of 59 Sheets
name	Mar.Schedl	name		name				Version No.:			Series code: H201	Valid for Serial No.: from 0001 to 4029	
E - CAE		Document type: ESP		Function group No.:							Sheet plant: Sheet Location:		

Übersicht Steckerbelegung
General arrangement Plug occupancy

-E5.X1s



56A:
56B: /10.6
31: /10.7

-E5.X2s

1: /10.7

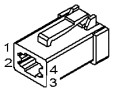
-E5.X3s

1: /10.7

-E6Xs

1: /10.8
2: /10.8

-E7.X1s



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3: /11.4
4:

-E7a.X1s

1: /11.2

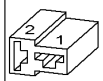
-E7a.X2s

1: /11.2

-E7Xap

1: /11.2
2: /11.2

-E7Xas



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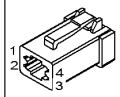
-E9.X1s



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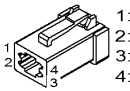
2:
3: /9.3
4: /9.3

-E10.X1s



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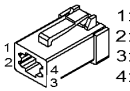
4:

-E12.X1s



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-E13X1b

1: /7.4
2: /7.4

-E13X2b

1: /7.4
2: /7.4

-E14X1b

1: /7.5
2: /7.5

-E14X2b

1: /7.6
2: /7.6

-E15.1Xp

1: /8.6
2: /8.6

-E15.1Xs

1: /8.6
2: /8.6

-E15.2Xp

1: /8.7
2: /8.7

-E15.2Xs

1: /8.7
2: /8.7

-E15Xp

1: /8.6
2: /8.6

-E15Xs

1: /8.6
2: /8.6

-E16.1Xp

1: /8.4
2: /8.4

-E16.1Xs

1: /8.4
2: /8.4

-E16.2Xp

1: /8.5
2: /8.5

-E16.2Xs

1: /8.5
2: /8.5

-E16Xp

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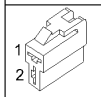
2: /8.4

-E16Xs

1: /8.4
2: /8.4

-G2.X2s



1: /22.2
2: /22.2

-H2Xb

1: /5.4
2: /5.4

Drawing by:	Approved by:	last change:	Status:	Document No.:	HAMM	Material No.: 2174533	Revision No.: 02	Sheet: 45 of 59 Sheets
date 29.01.2016	date	date	SF AE = changable PF = prototype release SF = serial release	Partial Document No.:		Series code: H201	Valid for Serial No.: from 0001 to 4029	Übersicht Steckerbelegung General arrangement Plug occupancy
name Mar.Schedl	name	name		Version No.:		Sheet plant: Sheet Location:		
E - CAE	Document type: ESP	Function group No.:						

-H2Xp

1: /5.4
2: /5.4

-H3.X1

1: /6.7

-H3.X2

1: /6.7

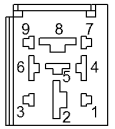
-H4.X1

1: /6.2

-H4.X2

1: /6.2

-K1.X1s



1:
2: /22.5
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6: /23.3
7:
8: /22.5
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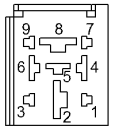
-K01.X1s



1:
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8: /17.2
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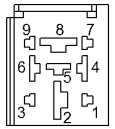
-K2.X1s



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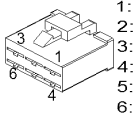
5:
6: /23.4
7:
8: /22.6
9:

-K02Xs



1:
2:
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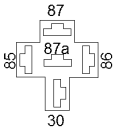
4: /18.5
5: /18.4
6: /18.6

-K3.X1



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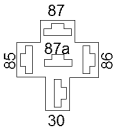
85: /26.6
30: /26.2
87a:
87: /26.2

-K4.X1



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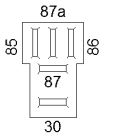
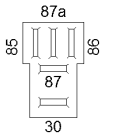
85: /26.7
30: /26.4
87a:
87: /26.4

-K5.X1s



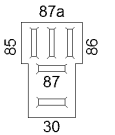
86: /6.5
85: /6.5
30: /6.6
87a:
87: /6.6

-K6.X1s



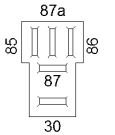
86: /6.4
85: /6.4
30: /6.2
87a:
87: /6.2

-K7.X1



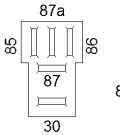
86: /10.1
85: /10.1
30: /10.3
87a:
87: /10.4

-K8.X1s



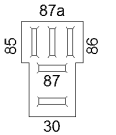
86: /9.1
85: /9.1
30: /9.2
87a:
87: /9.3

-K9.X1s



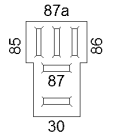
86: /7.1
85: /7.1
30: /7.3
87a:
87: /7.3

-K10.X1s



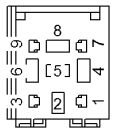
86: /8.1
85: /8.1
30: /8.2
87a:
87: /8.2

-K11.X1s



86: /25.4
85: /25.4
30: /25.5
87a:
87: /25.5

-K18.X1s



1:
2: /5.5
3:
4: /5.7
5:
6: /5.7
7:
8: /5.5
9:

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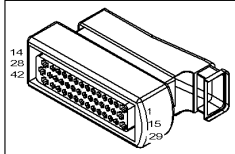
-K111.X1s



1:	8:	15:	29:
2:	9:	16:	30:
3: /33.4	10:	17:	31:
4:	11:	18:	32:
5: /34.3	12:	19: /33.6	33: /33.5
6: /34.4	13:	20:	34:
7:	14:	21:	35:
		22:	36:
		23:	37: /33.4
		24:	38:
		25:	39:
		26:	40:
		27:	41:
		28: /33.2	42: /33.3

-K111.X3s

VIOLETT

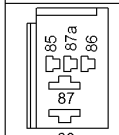
1: /35.4
Shield: /35.5

-K111.X4s

BLAU

1: /35.4
Shield: /35.5

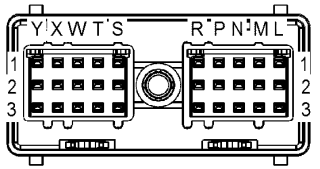
-K112.X1s



86: /34.7
85: /34.7
30: /34.4
87a: /34.4
87:

-K400.X1s

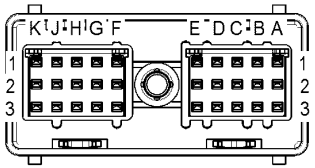
view: contact-side



L1: /28.7	P2:	T3: /29.5
L2: /28.6	P3:	W1:
L3:	R1: /28.3	W2:
M1: /30.6	R2: /28.2	W3: /30.3
M2: /29.4	R3: /28.4	X1: /30.5
M3: /29.3	S1:	X2: /30.4
N1:	S2:	X3: /30.5
N2:	S3:	Y1:
N3: /30.7	T1: /30.2	Y2:
P1:	T2: /29.6	Y3:

-K400.X2s

view: contact-side

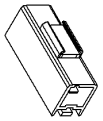


A1:	D2:	G3: /32.5
A2:	D3:	H1: /31.5
A3:	E1:	H2: /32.2
B1:	E2:	H3: /32.3
B2:	E3:	J1: /31.7
B3:	F1:	J2: /31.6
C1:	F2:	J3: /31.4
C2:	F3:	K1: /31.1
C3:	G1: /32.3	K2: /31.3
D1:	G2: /32.4	K3: /31.2

-M1B1Xs

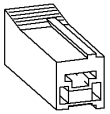
1: /29.7
2: /29.7
3: /29.8

-M1X1p



1: /18.2

-M1X1s



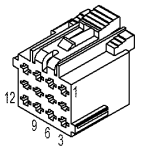
1: /18.2

-M1X2p

view contact-side

1: /19.3	7: /20.2
2: /19.2	8: /22.3
3: /19.5	9: /17.5
4: /22.3	10:
5: /17.5	11: /17.7
6: /20.2	12:

-M1X2s



1: /19.3
2: /19.2
3: /19.5
4: /22.3
5: /17.5
6: /20.2
7: /20.2
8: /22.3
9: /17.5
10:
11: /17.7
12:

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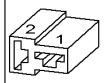
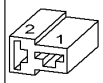
-M2Xs



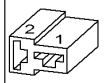
1: /26.2
2: /26.2

-M3Xs



1: /26.4
2: /26.4

-M4X1s



1: /20.2
2: /20.2

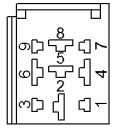
-M4XBp

1: /20.2
2: /20.2

-M4XBs

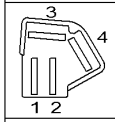
1: /20.2
2: /20.2

-P1.X1



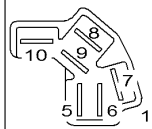
1:
2:
3:
4: /5.2
5:
6: /5.2
7:
8:
9:

-S1.X1



1: /23.2
2:
3: /23.2
4: /23.2

-S1.X2



5:
6: /23.3
7: /23.3
8: /23.3
9: /23.3
10:

-S1X3p

1: /23.3

-S1X3s

1: /23.3

-S5.X1

1: /21.2

-S6.X1

1: /19.3
2:

-S7.X1

1: /19.2

-S8.X1s

1: /19.5
2: /19.5

-S9.X1

1: /26.3

-S9.X2

1: /26.3

-S10.X1a

1: /25.1

-S10.X1b

1: /25.1

-S13LXp

BLUE

1: /13.2
2: /13.2
3: /13.2

-S13LXs

BLUE

1: /13.2
2: /13.2
3: /13.2

-S13RXp

GREEN

1: /13.4
2: /13.3
3: /13.4

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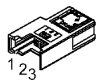
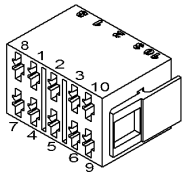
-S13RXs

GREEN



1: /13.4
2: /13.3
3: /13.4

-S15.X1



1:
2: /16.2
3: /16.2
4:
5:
6:
7:
8:
9:
10:

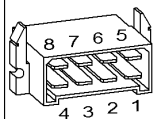
-S16.X1

1: /26.5

-S16.X2

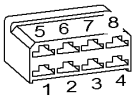
1: /26.5

-X12p



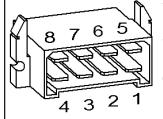
1: /10.4
2: /10.4
3: /10.2
4: /10.5
5: /10.6
6: /10.7
7: /10.8
8: /10.5

-X12s



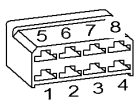
1: /10.4
2: /10.4
3: /10.2
4: /10.5
5: /10.6
6: /10.7
7: /10.8
8: /10.5

-X13p



1: /9.3
2: /11.4
3: /11.3
4: /11.5
5: /9.4
6: /11.6
7: /11.6
8: /11.7

-X13s



1: /9.3
2: /11.4
3: /11.3
4: /11.5
5: /9.4
6: /11.6
7: /11.6
8: /11.7

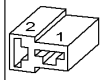
-X14p

1: /7.4
2: /7.5
3: /6.7
4: /7.8

-X14s

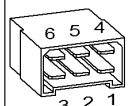
1: /7.4
2: /7.5
3: /6.7
4: /7.8

-X20.X1



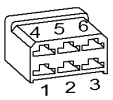
1: /23.6
2: /23.6

-X21p



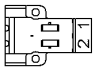
1: /16.4
2: /16.3
3: /16.4
4:
5: /16.3
6:

-X21s



1: /16.4
2: /16.3
3: /16.4
4:
5: /16.3
6:

-X30p



1: /28.6
2:

-X30s

1: /28.6
2:

-X40p

1: /23.6
2: /23.6

-X40s

1: /23.6
2: /23.6

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name Mar.Schedl	name	name		Version No.:		Sheet plant: Sheet Location:			
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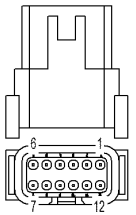
Electric

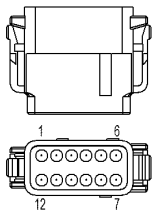
-X450p



view cable-side

1:
2: /31.2
3: /31.3
4:
5:
6:
7:
8:
9: /32.3
10:
11:
12: /32.5

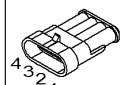
-X450s



view cable-side

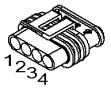
1: /31.1
2: /31.2
3: /31.3
4: /31.4
5: /31.5
6: /31.6
7: /31.7
8: /32.2
9: /32.3
10: /32.3
11: /32.4
12: /32.5

-X451p



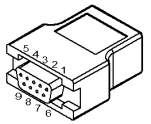
1:
2:
3: /29.5
4:

-X451s



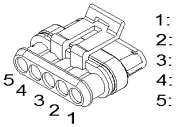
1:
2: /30.7
3: /29.5
4: /29.6

-X452s



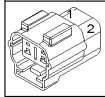
1:
2: /33.5
3: /33.6
4:
5: /33.4
6:
7:
8:
9:

-X453s



1: /30.2
2: /30.3
3: /30.4
4: /30.5
5:

-Y1X1s



1: /17.6
2: /17.6

-Y2b.X1s

1: /25.6
2: /25.6

-Y2X1s

1: /25.5
2: /25.5

-Y3X1s

1: /24.5
2: /24.5

-Y4X1s

1: /24.6
2: /24.6

-Y5X1s

1: /36.1
2: /36.1

-Y6X1s

1: /36.2
2: /36.2

-Y7X1s

1: /36.3
2: /36.3

-Y8X1s

1: /27.2
2: /27.2

-Y9X1s

1: /27.1
2: /27.1

-Y10X1s

1: /27.3
2: /27.3

Schutzvermerk nach ISO 16016 beachten

Refer to protection notice ISO 16016

Drawing by:	Approved by:	last change:	Status:	Document No.:	HAMM	Material No.: 2174533	Revision No.: 02	Übersicht Steckerbelegung General arrangement Plug occupancy	Sheet: 50 of 59 Sheets
date 29.01.2016	date	date	SF AE = changable PF = prototype release SF = serial release	Partial Document No.:		Series code: H201	Valid for Serial No.: from 0001 to 4029		
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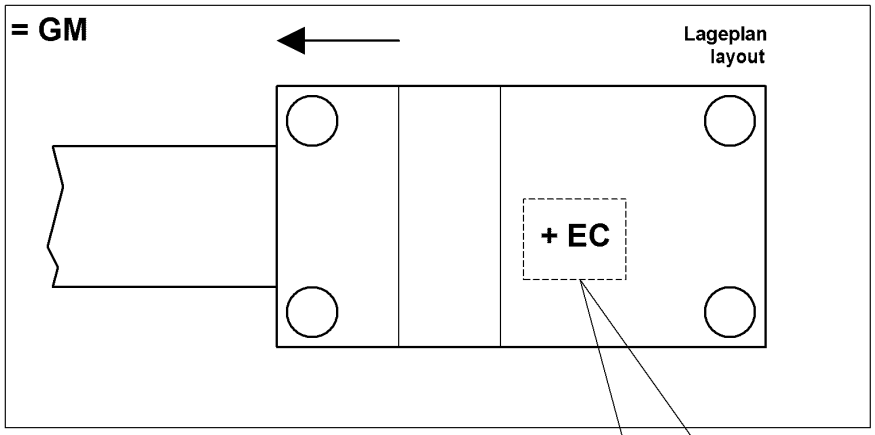
Aufbau Betriebsmittelkennzeichen / device designation configuration



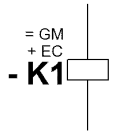
= Anlagenkennzeichen
plant designation

\+ Ortskennzeichen
location designation

\- **Art/Zählnummer**
type/number

Betriebsmittel-
kennzeichen

device
designation



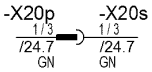
Minimales Betriebsmittelkennzeichen: Nur Art/Zählnummer
minimal device designation: type/number only

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!

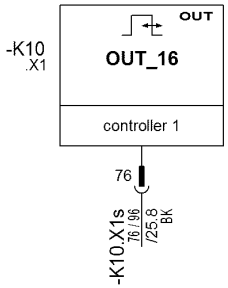
Bezeichnungserklärungen / designation explanations

Stecker zu Stecker Verbindung / connector to connector connection



	Deutsch	English
-X20p	p = Stiftkontakt	p = pin contact
-X20s	s = Buchsenkontakt	s = socket contact
1 / 3	Kontakt 1 von 3 Kontakten	contact 1 of 3 contacts
/24.7	Steckermaster auf Blatt 24, Strompfad 7	connector master on sheet 24, current path 7
GN	Gehäusefarbe Stecker = Grün	connector housing colour = green

Gerät zu Stecker Verbindung / device to connector connection



	Deutsch	English
-K10	Art/Zählnummer Gerät	type/number device
.X1	Anschlussstecker X1 am Gerät	connector plug X1 on device
OUT	Schnittstellentyp	interface type
OUT_16	Schnittstellenname	interface name
controller 1	Gerätename	device name
76	Kontakt des Anschlusssteckers	contact of connector plug
-K10.X1s	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 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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Gerätekennbuchstaben, elektrisch (beispielhaft) / device code letter, electric (exemplified)

Gerätekennbuchstabe / device code letter	Deutsch	English	Gerätekennbuchstabe / device code letter	Deutsch	English
- 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			

Drawing by:	Approved by:	last change:	Status:	Document No.:	HAMM	Material No.: 2174533	Revision No.: 02	Erklärung Gerätekennbuchstaben, elektrisch Explanation device code letter, electric	Sheet: 52 of 59 Sheets
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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

Drawing by:	Approved by:	last change:	Status:	Document No.:		Material No.:	Revision No.:	Erklärung Gerätekennbuchstaben, hydraulisch Explanation device code letter, hydraulic	Sheet:
date 29.01.2016	date	date	SF AE = changable PF = prototype release SF = serial release	Partial Document No.:	HAMM	2174533	02		53 of 59 Sheets
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Electric

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		
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		
IN 1,2...	Zählereingang counter input		
IN (V)	Spannungseingang voltage input		
IN (mA)	Stromeingang current input		
IN (Ω)	Widerstandseingang resistance input		
IN (Hz)	Frequenzeingang frequency input		
OUT	Digitalausgang digital output		
OUT	Pulsweitenmodulationsausgang pulse width modulation output		
OUT 0...20mA	analoge Stromquelle analogue current supply		

***Standardsymbole sind von DIN EN 60671 abgeleitet**
Standard symbols are derived from DIN EN 60617

Refer to protection notice ISO 16016 Schutzvermerk nach ISO 16016 beachten

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name Mar.Schedl	name	name		Version No.:		Sheet plant: Sheet Location:			
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Electric

Linienformate / line formats

Linienart / line type	Linienstärke / Grafik / line thickness / graphic	Bedeutung / standing
Volllinie / solid line	0,25mm	Standard / standard
Strichpunktlinie / dash-dotted line	0,25mm	PE (Schutzerde) / PE (protecting earth)
Strichlinie / dashed line	0,25mm	Bauteilumrandung, bzw. Zusammengehörigkeit / component border, togetherness
Strichlinie / dashed line	0,25mm	Optionen / options
Punktlinie / dotted line	0,75mm	Leiterbahnverbindungen einer Platine (nicht als Drahtleitung ausgeführte Verbindung) / conductor line of a edge board

Farbbezeichnungen / colour designations

Abkürzungen Farbbezeichnungen / colour abbreviations	Deutsch	English
BU	blau	blue
BN	braun	brown
YE	gelb	yellow
GN	grün	green
GY	grau	grey
OG	orange	orange
PK	rosa	pink
RD	rot	red
BK	schwarz	black
TQ	türkis	turquois
VT	violett	violet
WH	weiss	white

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Betriebsmittelkennzeichen / Device designation	Blatt / Sheet	Betriebsmittelkennzeichen / Device designation	Blatt / Sheet	Betriebsmittelkennzeichen / Device designation	Blatt / Sheet
-A1	/38.1	-A2.X9ap	/43.5	-E1	/16.3
-A1.X1s	/37.1	-A2.X9as	/43.6	-E2	/10.3
-A1.X2s	/37.2	-A2.X9s	/43.6	-E2.X1s	/44.4
-A1.X3s	/37.1	-A2.X10ap	/43.8	-E2.X2s	/44.5
-A1.X4s	/37.2	-A2.X10as	/43.1	-E2.X3s	/44.6
-A1.X5s	/37.8	-A2.X10p	/43.2	-E3	/10.2
-A1.X6s	/37.7	-A2.X10s	/43.5	-E3Xs	/44.7
-A1.X7s	/37.7	-A2.X11p	/43.7	-E5	/10.6
-A1.X15	/37.5	-A2.X11s	/44.1	-E5.X1s	/45.1
-A1.X30	/37.4	-A2.X12p	/44.3	-E5.X2s	/45.2
-A2.X1p	/42.1	-A2.X12s	/44.5	-E5.X3s	/45.3
-A2.X1s	/42.4	-A2.X13p	/44.7	-E6	/10.8
-A2.X2p	/42.8	-A5	/15.5	-E6Xs	/45.4
-A2.X2s	/42.1	-A5.X1	/44.1	-E7	/11.3
-A2.X3ap	/42.4	-A6	/13.3	-E7.X1s	/45.5
-A2.X3as	/42.3	-A6.X1s	/44.3	-E7a	/11.2
-A2.X3p	/42.6	-A6.X2s	/44.4	-E7a.X1s	/45.6
-A2.X3s	/42.1	-A6.X3s	/44.5	-E7a.X2s	/45.7
-A2.X4p	/42.7	-A6.X4s	/44.6	-E7Xap	/45.1
-A2.X4s	/43.1	-A6.X5s	/44.7	-E7Xas	/45.2
-A2.X5p	/43.3	-A6.X6s	/44.1	-E9	/9.2
-A2.X5s	/43.4	-A6.X7s	/44.2	-E9.X1s	/45.3
-A2.X6p	/43.5	-B1	/13.5	-E10	/11.6
-A2.X6s	/43.7	-B2	/13.6	-E10.X1s	/45.4
-A2.X7p	/43.7	-B3	/13.6	-E12	/9.4
-A2.X7s	/43.1	-B9	/20.5	-E12.X1s	/45.5
-A2.X8p	/43.2	-B9.X1	/44.3	-E13.1	/7.4
-A2.X8s	/43.4	-C1	/22.7	-E13.2	/7.4

Drawing by: date 29.01.2016, name Mar.Schedl
Approved by: date, name
last change: date, name
E - CAE
Document type: ESP
Function group No.:
Status: SF (AE = changable, PF = prototype release, SF = serial release)
Document No.:
Partial Document No.:
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Betriebsmittelliste
device list
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Betriebsmittelkennzeichen / Device designation	Blatt / Sheet	Betriebsmittelkennzeichen / Device designation	Blatt / Sheet	Betriebsmittelkennzeichen / Device designation	Blatt / Sheet
-E13X1b	/45.6	-F2X1	/18.3	-F16X1	/26.2
-E13X2b	/45.7	-F3	/8.2	-F17	/6.7
-E14.1	/7.5	-F3X1	/8.2	-F17X1	/6.7
-E14.2	/7.6	-F4	/10.3	-F17X15	/6.7
-E14X1b	/45.1	-F4X1	/10.3	-F17X30	/6.7
-E14X2b	/45.2	-F5	/10.6	-F18X1	/5.5
-E15.1	/8.6	-F5X1	/10.6	-G1	/22.1
-E15.1Xp	/45.3	-F6	/9.2	-G2	/22.2
-E15.1Xs	/45.4	-F6X1	/9.2	-G2.X2s	/45.7
-E15.2	/8.7	-F7	/7.3	-H2	/5.4
-E15.2Xp	/45.5	-F7X1	/7.3	-H2Xb	/45.8
-E15.2Xs	/45.6	-F8	/18.3	-H2Xp	/46.1
-E15Xp	/45.7	-F8X1	/18.3	-H3.X1	/46.2
-E15Xs	/45.8	-F9	/15.8	-H3.X2	/46.3
-E16.1	/8.4	-F9X1	/15.8	-H4	/6.2
-E16.1Xp	/45.1	-F10	/26.3	-H4.X1	/46.4
-E16.1Xs	/45.2	-F10X1	/26.3	-H4.X2	/46.5
-E16.2	/8.5	-F11	/16.2	-HA1	/25.5
-E16.2Xp	/45.3	-F11X1	/16.2	-HA10	/36.1
-E16.2Xs	/45.4	-F12	/28.2	-HA50	/27.1
-E16Xp	/45.5	-F12X1	/28.2	-HA51	/27.3
-E16Xs	/45.6	-F13	/23.6	-HQ1	/24.5
-F01	/22.3	-F13X1	/23.6	-HQ7	/24.6
-F1_A	/25.5	-F14	/6.2	-K01	/17.5
-F1X_A	/25.4	-F14X1	/6.2	-K1	/23.2
-F1X_B	/25.4	-F15	/26.4	-K01.X1s	/46.1
-F1X_Com	/25.4	-F15X1	/26.4	-K1.X1s	/46.7
-F2	/18.3	-F16	/26.2	-K02	/18.4

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Betriebsmittelliste
device list

Betriebsmittelkennzeichen / Device designation	Blatt / Sheet	Betriebsmittelkennzeichen / Device designation	Blatt / Sheet	Betriebsmittelkennzeichen / Device designation	Blatt / Sheet
-K02	/18.5	-M1X1p	/47.4	-S5	/21.2
-K02	/18.5	-M1X1s	/47.5	-S5.X1	/48.4
-K02	/18.6	-M1X2p	/47.6	-S6	/19.3
-K2	/23.4	-M1X2s	/47.7	-S6.X1	/48.5
-K2.X1s	/46.2	-M2	/26.2	-S7	/19.2
-K02Xs	/46.3	-M2Xs	/48.1	-S7.X1	/48.6
-K03	/18.5	-M3	/26.4	-S8	/19.4
-K3	/26.6	-M3Xs	/48.2	-S8.X1s	/48.7
-K3.X1	/46.4	-M4	/20.2	-S9	/26.3
-K4	/26.7	-M4.X1s	/48.3	-S9.X1	/48.1
-K4.X1	/46.6	-P1	/5.2	-S9.X2	/48.2
-K5	/6.5	-P1.X1	/46.6	-S10	/25.1
-K5.X1s	/46.7	-P2	/6.7	-S10.X1a	/48.3
-K6	/6.3	-Q1	/22.1	-S10.X1b	/48.4
-K6.X1s	/46.8	-R1.1	/18.1	-S11	/16.4
-K7	/10.1	-R1.2	/18.2	-S12L	/13.1
-K7.X1	/46.1	-R1.3	/18.2	-S13L	/13.2
-K8	/9.1	-R2	/17.3	-S13LXp	/48.5
-K8.X1s	/46.2	-R3	/22.6	-S13LXs	/48.6
-K9	/7.1	-S1	/23.2	-S13R	/13.4
-K9.X1s	/46.3	-S1.X1	/48.7	-S13RXp	/48.7
-K10	/8.1	-S1.X2	/48.1	-S13RXs	/48.8
-K10.X1s	/46.4	-S1X3p	/48.2	-S14R	/13.3
-K11.X1s	/46.6	-S1X3s	/48.3	-S15	/16.2
-K18	/5.5	-S2	/4.1	-S15.X1	/49.1
-K18	/5.6	-S2.1	/4.1	-S16	/26.5
-K18.X1s	/46.7	-S2.2	/24.1	-S16.X1	/49.2
-M1	/17.1	-S2.3	/24.3	-S16.X2	/49.3

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name Mar.Schedl	name	name		Version No.:		Sheet plant: Sheet Location:			
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Betriebsmittelkennzeichen / Device designation	Blatt / Sheet	Betriebsmittelkennzeichen / Device designation	Blatt / Sheet	Betriebsmittelkennzeichen / Device designation	Blatt / Sheet
-V1	/23.3	-X31V	/22.4		
-V2	/23.4	-X31V	/25.5		
-V3	/26.6	-Y1	/17.6		
-V4	/26.8	-Y1X1s	/50.1		
-W1	/22.2	-Y2X1s	/50.3		
-X12p	/49.5	-Y3X1s	/50.4		
-X12s	/49.6	-Y4X1s	/50.5		
-X13p	/49.7	-Y5X1s	/50.6		
-X13s	/49.1	-Y6X1s	/50.7		
-X14p	/49.2	-Y8X1s	/50.1		
-X14s	/49.3	-Y9X1s	/50.2		
-X15CE	/22.7	-Y10X1s	/50.3		
-X19CE	/18.2				
-X20	/23.6				
-X20.X1	/49.4				
-X21p	/49.5				
-X21s	/49.7				
-X30CE	/22.6				
-X31CE	/22.6				
-X31H	/5.4				
-X31H	/7.8				
-X31H	/13.7				
-X31H	/22.5				
-X31M	/22.3				
-X31V	/6.2				
-X31V	/10.5				
-X31V	/22.1				
-X31V	/22.2				

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E - CAE	Document type: ESP	Function group No.:							