CONTENTS

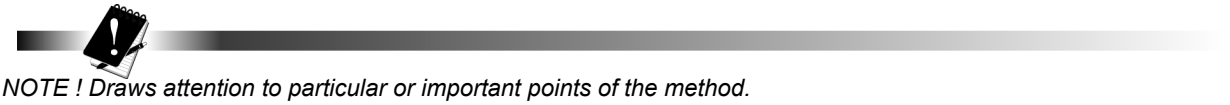
GENERALITIES

Warnings

In this document, safety instructions are symbolized as follows:

DANGER ! Non-observance of the procedure described or lack of care or attention, risk causing serious injury or even death.

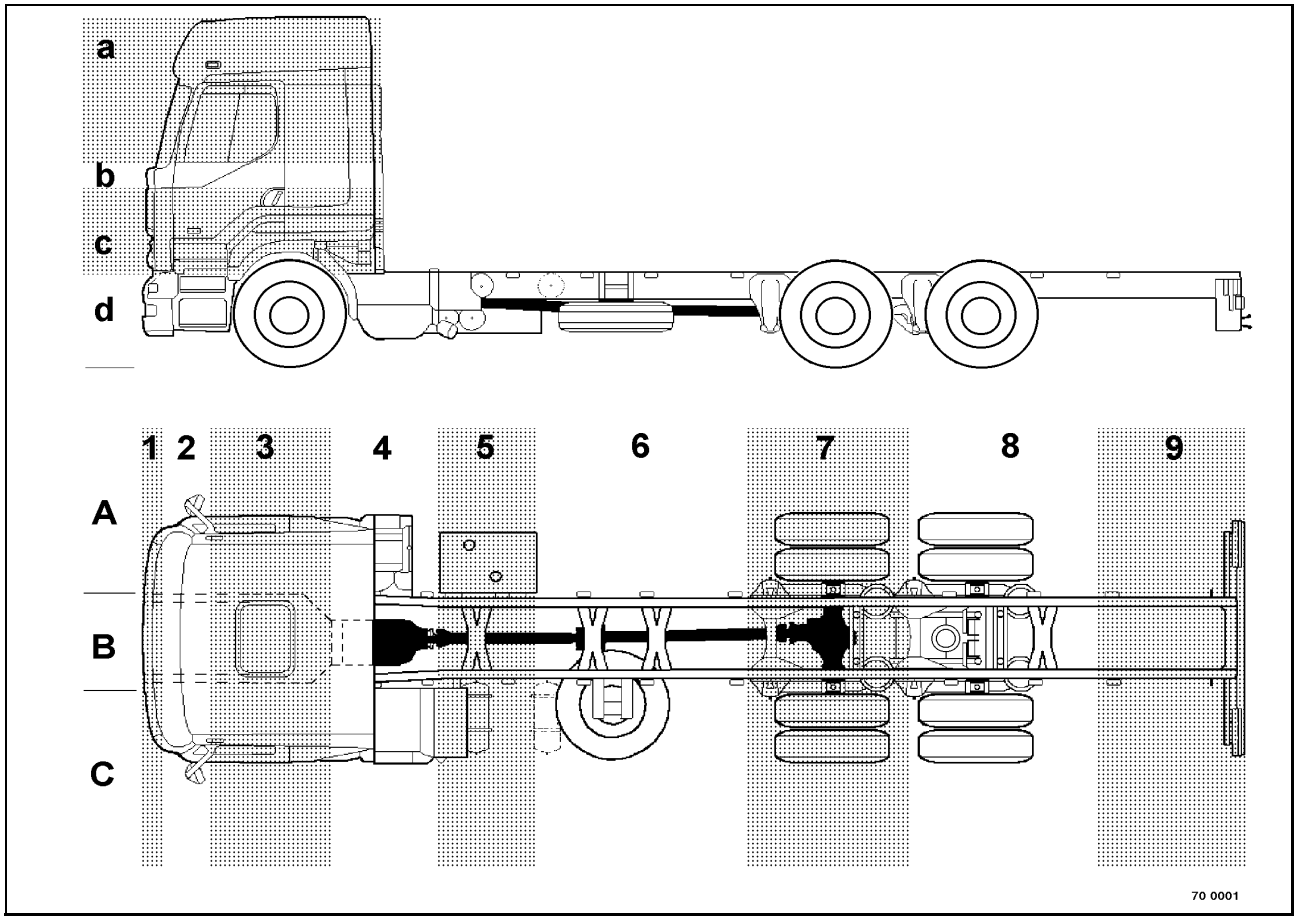
WARNING ! Any different or inappropriate working method risks causing damage to the product.



NOTE ! Draws attention to particular or important points of the method.

Comply without fail with the regulations in force relative to the recovery and treatment of used parts and waste.

Vehicle voluminal breakdown



The vehicle is broken down into several zones each designated by an item number.

Heightwise breakdown:
Reserved for the bodywork, **4** zones designated by a small letter.

Widthwise breakdown:
Three zones designated by a capital letter.
A: RH side and RH sidemember.
B: Central part.
C: LH side and LH sidemember.

Lengthwise breakdown:
9 zones designated by a figure.
Zone **7** is specific for **6x2 - 6x4 - 6x6 - 8x4**.

Zone 1 indicates:
- on the chassis, the bumper and the components it supports.
- on the cab, the front end components accessible through the grille.

Example:
A1: bumper RH section (headlamps, ...)
C3: LH front wheel (ABS sensor, ...)
C2b: dashboard
A3c: passenger's seat

How to read the diagrams

Definition of an illustration

The electrical diagram consists of several plates.

These plates are numbered, to the bottom right by:
- A six-digit reference number for the illustration.
- A letter standing for the revision index for the illustration.This is to be found on the same line as the reference number.
- A three-character alphanumerical code defining the folio number.

A diagram plate is broken down into **5** zones in the vertical direction.
These zones are identified by **0** to **4**.
A diagram plate is broken down into **5** zones in the horizontal direction.
These zones are identified by **A** to **E**.

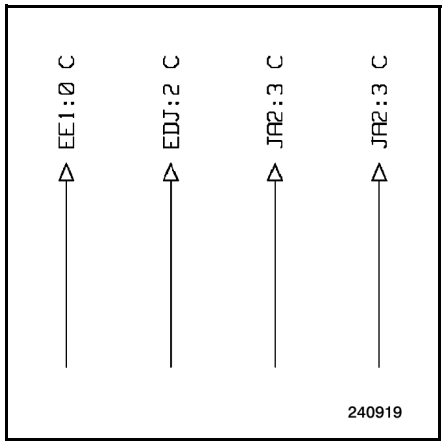
If the information is available in vector format and if you have installed the application to view it, it is possible to find the title of the diagram by clicking on the code referencing the page, and to find the vehicle type by clicking on the code referencing the diagram.

Definitions of symbols used in a diagram

Cross-references

A cross-reference is defined by:
- a three-character alphanumeric code indicating the number of the destination page.
- a number indicating the zone in which the cross-reference is found.

If the information is available in vector format and if you have installed the application to view it, it is possible to go to the page requested automatically by clicking on it..



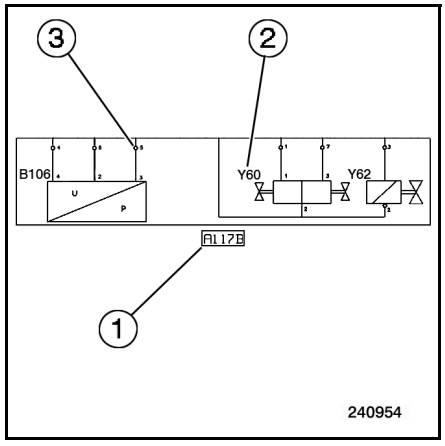
Appliances

Each appliance shown in the diagram is identified by an after-sales code number.

If the after-sales code number is framed (item **(1)** of the illustration opposite), it indicates a single appliance or an assembly comprising several functions.

If the after-sales code number is not framed (item **(2)** of the illustration opposite), it indicates a single appliance. It is then to be found inside the symbol.

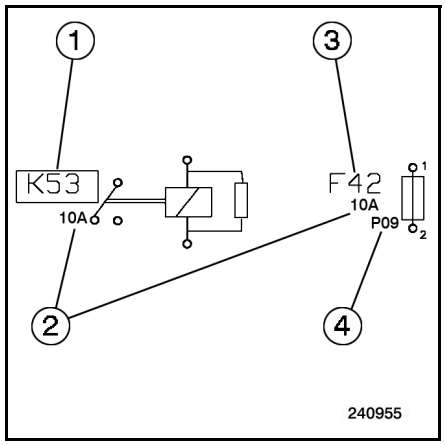
All the terminals of each appliance are defined by a numerical or alphanumerical code number if necessary (item (3) of the illustration opposite).



If the information is available in vector format and if you have installed the application to view it, it is possible to find the function of the unit by clicking on it.

Fuses and relays

The relays are designated by an alphanumeric aftermarket code (mark **(1)** on the illustration opposite) and by the value of the rated current that can cross them (mark **(2)** on the illustration opposite).
The fuses, for their part, are designated simply by an alphanumeric code (mark **(3)** on the illustration opposite) and by the value of the rated current that can cross them (mark **(2)** on the illustration opposite).
The position of a fuse on the electrical distribution box is designated by an alphanumeric code (mark **(4)** on the illustration opposite).



Polarities
Polarities are identified by a numerical code number.
For each function there is one same single code number.

Example:
2007 = battery "positive" direct current power supply.
1 = earth.

If the information is available in vector format and if you have installed the application to view it, it is possible to find the function of the wires by clicking on them. However the information is only available for wires with a numeric reference.

Graphic conventions

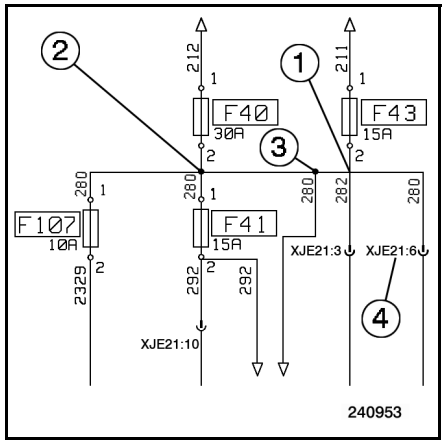
When an intersection is not reinforced by a connection point, the polarities cross each other and are distinct (mark **(1)** on the illustration opposite).

When an intersection is reinforced by a connection point, we have the same level of information on the wires (same potential) (mark **(2)** on the illustration opposite).

It is possible for supplementary connection points to be applied to the diagram for reasons of legibility (mark **(3)** on the illustration opposite).

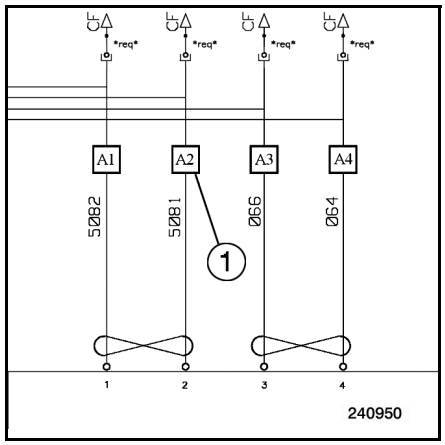
The item **(4)** represents a terminal of the connector located on the electrical distribution box.

Example with an alphanumerical item **XJE21:6:**
- **XJE21**: name of the connector;
- **6**: number of the terminal of that connector.



Variants

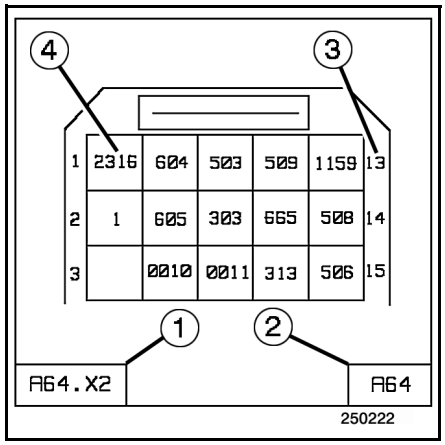
The mark **(1)** serves to identify the variant associated with the polarity using an alphanumeric code.



If the information is available in vector format and if you have installed the application to view it, it is possible to find "the variant" of the wire by clicking on the information.

Wiring harnesses

Presentation of connectors:
(1): connector number
(2): code number of appliance to which it is connected
(3): terminal number
(4): number of the wire in the terminal



Device encoding rules

The list below shows the correlation between the first letter of a code and the associated devices

Letters	Devices
A	ECUs, Amplifiers, Radio set, Component assembly.
B	Sensors, Microphones, Speakers.
C	Capacities, Condensers.
E	Bulbs.
F	Fuses.
G	Batteries, Alternator.
H	Audible warnings.
K	Relays.
M	Motors.
P	Available power supply connectors.
R	Resistors.
S	Controls.
U	Voltage transformers, Modulators.
V	Diodes.
W	Antennas.
X	Sockets, Connectors, Earth collectors.
Y	Solenoid valves, Electric valves.

Colour code applicable to connectors and wires

Each connector features a fool proofing system consisting of a mechanical device and a colour code.
Some wires are referenced only by a colour code.

This code may differ depending on:
- The engineering date of the wiring harnesses.
- The construction date of the vehicle.

The list below indicates the correspondence between an alphabetical code and the colour of the wires or connectors forming a harness.

For a cable with a basic colour and a stripe in another colour, the basic colour is indicated first, followed by the colour of the stripe:

Example: **BU/WH** Basic colour blue with a white stripe.

Colour code	Colour
BK or **SB**	Black
BU or **BL**	Blue
BN	Brown
GN	Green
OG or **OR**	Orange
PK or **P**	Pink
RD or **R**	Red
VT or **VO**	Violet
WH or **W**	White
YE or **Y**	Yellow
GY or **GR**	Grey
NL	Colourless

There is no information on the function of the wires when the vector format viewing feature is used

Electrical distribution

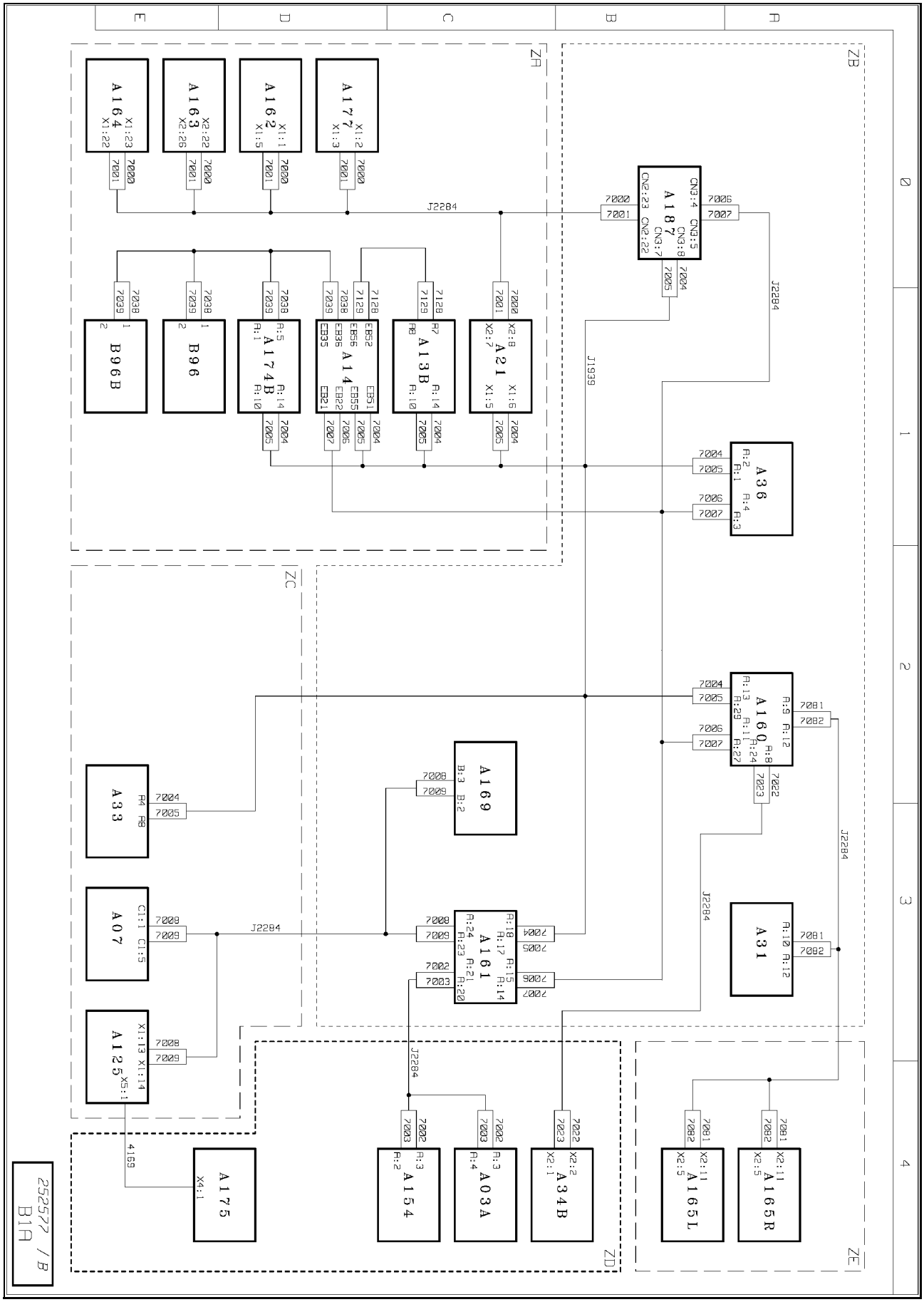
The electric distribution box inside the cab contains most of the fuses and relays for the vehicle electrical network.
The terminals of the electrical distribution box are also shown in the basic diagram.
Each side of the electrical distribution box is detailed in the "Electrical distribution" chapter.

Chassis - cab connection

The chassis-cab connection box enables the information to be found inside the cab to cross the bulkhead and be routed to the outside and vice versa.
Each connector of the chassis-cab connection box is detailed in the "Chassis-cab / bulkhead grommet connection " chapter.

COMMUNICATION BUS ARCHITECTURE

CAN BUS architecture



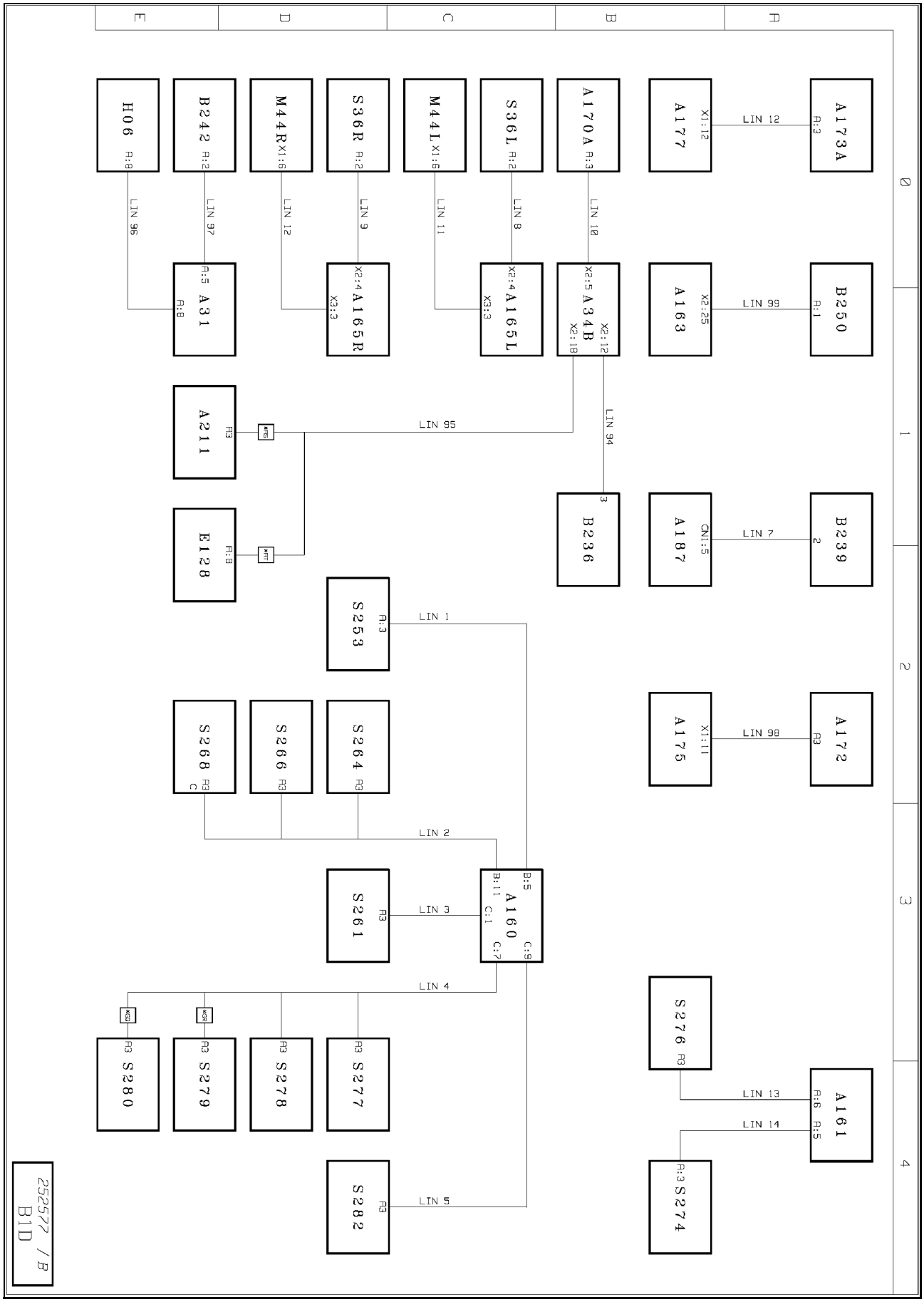
CAN BUS architecture

Key to appliances

Code	Function	Location
A03A	Main information display	C2b
A07	Radio set	B2b
A13B	Robotized transmission management ECU	B6d
A14	Engine management ECU	B3c
A21	Braking management ECU (EBS)	B6d
A31	Vehicle anti-theft system ECU	B2c
A33	Tachograph	C2a
A34B	Air conditioning management ECU	A2c
A36	Bodybuilder pre-equipment management ECU (BBM)	B2c
A125	Onboard management system interface ECU	B1a
A154	Video display	B2b
A160	Cab information management ECU (CIOM)	B2c
A161	Man/machine interface management ECU (HMIIOM)	B2c
A162	Front chassis area information management ECU (FCIOM)	A2d
A163	Central chassis area information management ECU (CCIOM)	B6d
A164	Rear chassis area information management ECU (RCIOM)	B8d
A165L	Left-hand door information management ECU (DDM/PDM)	C3c
A165R	Right-hand door information management ECU (DDM/PDM)	A3c
A169	Video ECU (VS)	B2c
A174B	Exhaust gases post-treatment management ECU (ACM)	B6d
A175	Additional telematics management ECU (TESP)	B2c
A177	Air production management (APM)	B5d
A187	Main vehicle management ECU (VMCU)	B2b
B96	Nitrogen oxide concentration sensor	A5d
B96B	Nitrogen oxide concentration sensor after catalytic converter	A5d

ZA: chassis zone
ZB: ECU bracket on dashboard
ZC: overhead ledge zone
ZD: dashboard zone
ZE: doors zone

BUS architecture LIN



BUS architecture LIN

Key to appliances

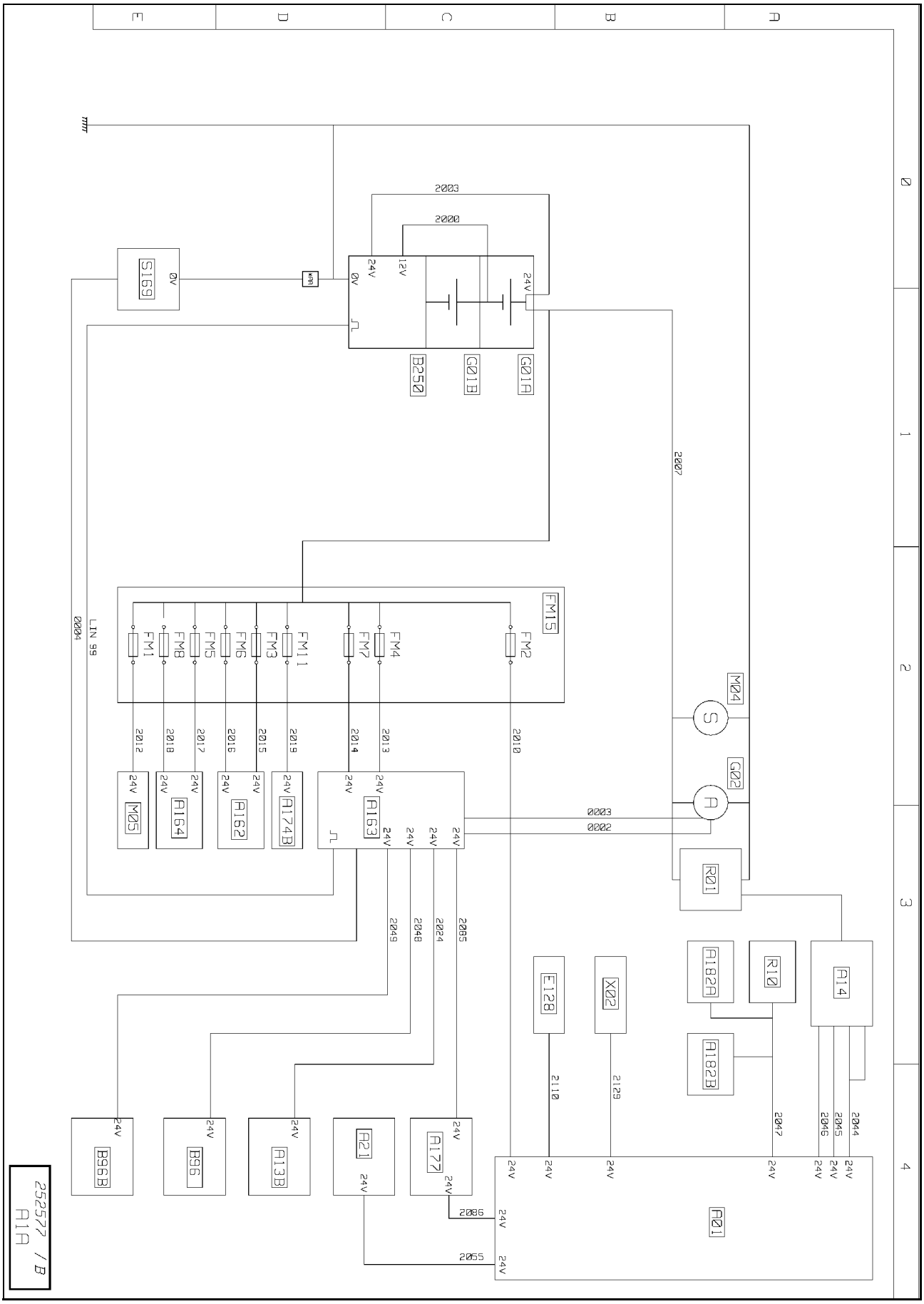
Code	Function	Location
A31	Vehicle anti-theft system ECU	B2c
A34B	Air conditioning management ECU	A2c
A160	Cab information management ECU (CIOM)	B2c
A161	Man/machine interface management ECU (HMIIOM)	B2c
A163	Central chassis area information management ECU (CCIOM)	B6d
A165L	Left-hand door information management ECU (DDM/PDM)	C3c
A165R	Right-hand door information management ECU (DDM/PDM)	A3c
A170A	Cab air conditioning control panel	B2b
A172	Infra-red receiver for interconnection between the keypad and the Navigation functions management ECU	B2c
A173A	Parking brake electrical control	B2b
A175	Additional telematics management ECU (TESP)	B2c
A177	Air production management (APM)	B5d
A187	Main vehicle management ECU (VMCU)	B2b
A211	Air/air independent heater	C3c
B236	Mist on windscreen sensor	B1b
B239	Rain and light detection sensors unit	B1b
B242	Ultrasound decoder for anti-intrusion protection (UIP)	B4a
B250	24V DC battery charge status sensor	C5d
E128	Air/water independent heater	A3c
H06	Horn - Alarm siren	A2c
M44L	Front left-hand door window mechanism motor with anti-pinch system	C3c
M44R	Front right-hand door window mechanism motor with anti-pinch system	A3c
S36L	Control for front left-hand window mechanism motor	C3c
S36R	Control for front right-hand window mechanism motor	A3c
S253	Onboard equipment auxiliaries management remote control (LECM)	B4b
S261	Re-positionable control unit (group 5)	C2a
S264	Re-positionable control unit (group 1)	B2c
S266	Re-positionable control unit (group 2)	B2c
S268	Re-positionable control unit (group 3)	B2c
S274	Steering wheel mounted controls	C2b
S276	Steering wheel mounted controls	C2b
S277	External lighting controls unit	C2c
S278	Cruise control commands unit	B2c
S279	Differential lock selector controls unit	B2c
S280	Cab lighting control	B2c
S282	Air suspension controls assembly	C3c

AS: with air/air independent heating
AT: with air/water independent heating
GQ: with differential lock variation control
GR: with passenger compartment lighting variation control

SHARED FUNCTIONS

Summary of shared functions

Shared function - Distribution and management of electrical energy without ADR



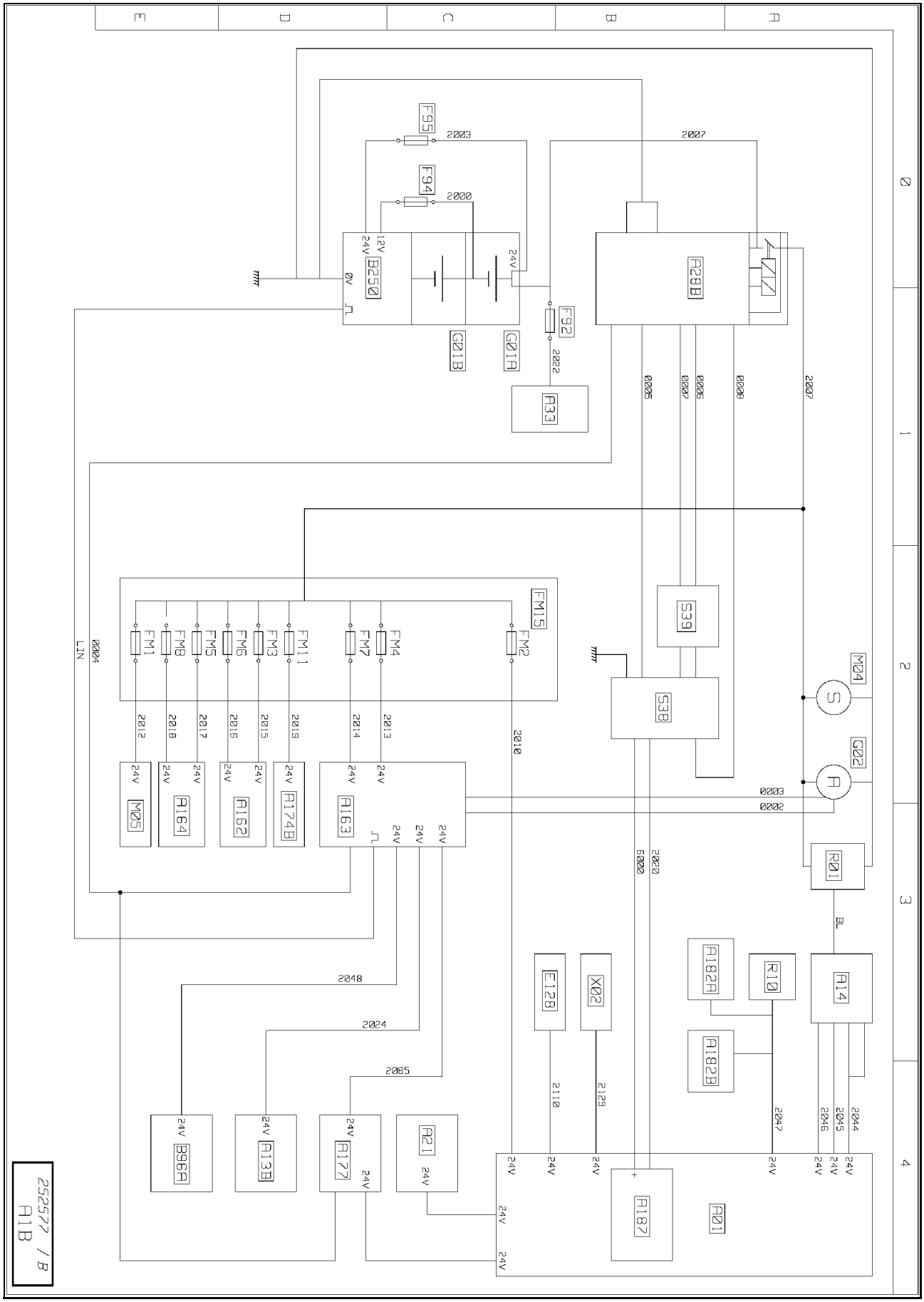
Shared function - Distribution and management of electrical energy without ADR

Key to appliances

Code	Function name	Location
A01	Electric distribution unit in cab	-
A13B	Robotized transmission management ECU	CD5
A14	Engine management ECU	CC4/CCH
A21	Braking management ECU (EBS)	CF3/CFR/CFS/HBD/HBE
A162	Front chassis area information management ECU (FCIOM)	EA1/EA2/EA3/EFG/FA1/ GA1/GBP
A163	Central chassis area information management ECU (CCIOM)	BAH/CDU/CG1/HBD/ HBE/JAE
A164	Rear chassis area information management ECU (RCIOM)	CDU/CGA/CGM/CK1/ EAA/EBH/HBD/HBE
A174B	Exhaust gases post-treatment management ECU (ACM)	CCX/CCZ/CE5
A177	Air production management (APM)	CKL
A182A	N° 1 heater for diesel filter and dryer (WIF)	CCA
A182B	N° 2 heater for diesel filter and dryer (WIF)	CCA
B96	Nitrogen oxide concentration sensor	CCX
B96B	Nitrogen oxide concentration sensor after catalytic converter	CCX
B250	24V DC battery charge status sensor	BA2
E128	Air/water independent heater	GBA
FM15	Power fuses box	BA2
G01A	12V DC battery N° 1	BA2
G01B	12V DC battery N° 2	BA2
G02	Alternator	BA2
M04	Starter	BA2
M05	Axle lift hydraulic pump motor	CK1
R01	Intake air preheating resistor	CCT
R10	Fuel heating resistor N° 2	CCH
S169	Engine emergency stop control (on the chassis)	BAH
X02	ABS/EBS trailer socket	HBD/HBE

AA: with electrical master switch

Shared function - Distribution and management of electrical energy with ADR

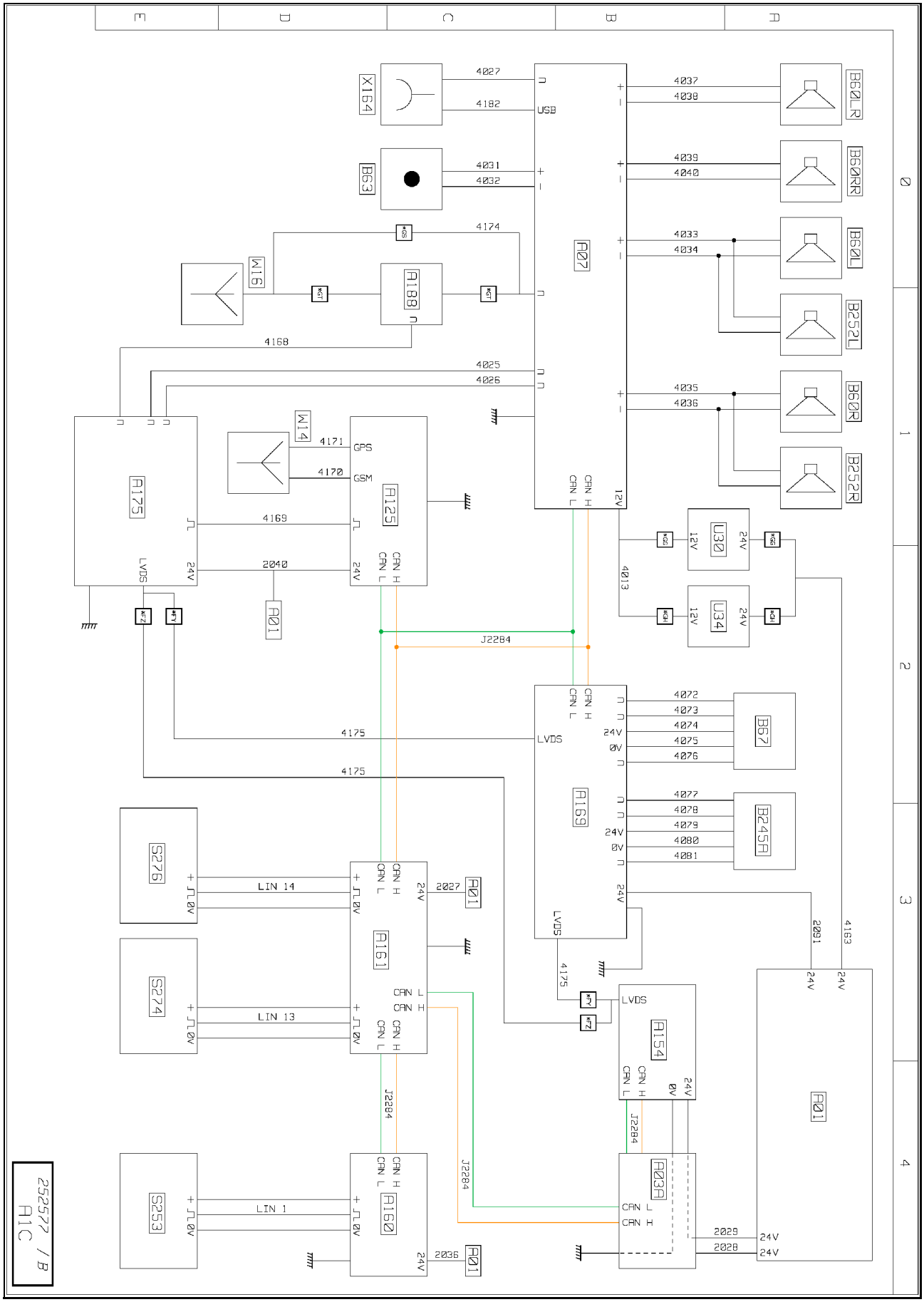


Shared function - Distribution and management of electrical energy with ADR

Key to appliances

Code	Function name	Location
A01	Electric distribution unit in cab	-
A13B	Robotized transmission management ECU	CD5
A14	Engine management ECU	CC4/CCH
A21	Braking management ECU (EBS)	CF3/CFR/CFS/HBD/HBE
A28B	Vehicle main supply management ECU (ADR)	BA3
A33	Tachograph	CB1
A162	Front chassis area information management ECU (FCIOM)	EA1/EA2/EA3/EFG/FA1/ GA1/GBP
A163	Central chassis area information management ECU (CCIOM)	BAH/CDU/CG1/HBD/ HBE/JAE
A164	Rear chassis area information management ECU (RCIOM)	CDU/CGA/CGM/CK1/ EAA/EBH/HBD/HBE
A174B	Exhaust gases post-treatment management ECU (ACM)	CCX/CCZ/CE5
A177	Air production management (APM)	CKL
A182A	N° 1 heater for diesel filter and dryer (WIF)	CCA
A182B	N° 2 heater for diesel filter and dryer (WIF)	CCA
A187	Main vehicle management ECU (VMCU)	BA3/BB1/CA3/CB1/CBK/ CCA/DA7/DA8/EBJ/FA1/ GA1/GC1/GDA/GEA/ GEQ/HA1/JAD/JAF/JAG
B96A	Nitrogen oxide concentration sensor after catalytic converter	CCX
B250	24V DC battery charge status sensor	BA2
E128	Air/water independent heater	GBA
FM15	Power fuses box	BA2
G01A	12V DC battery N° 1	BA2
G01B	12V DC battery N° 2	BA2
G02	Alternator	BA2
M04	Starter	BA2
M05	Axle lift hydraulic pump motor	CK1
R01	Intake air preheating resistor	CCT
R10	Fuel heating resistor N° 2	CCH
S38	Vehicle emergency stop control	BA3
S39	Vehicle emergency stop control	BA3
X02	ABS/EBS trailer socket	HBD/HBE

Shared function - Display



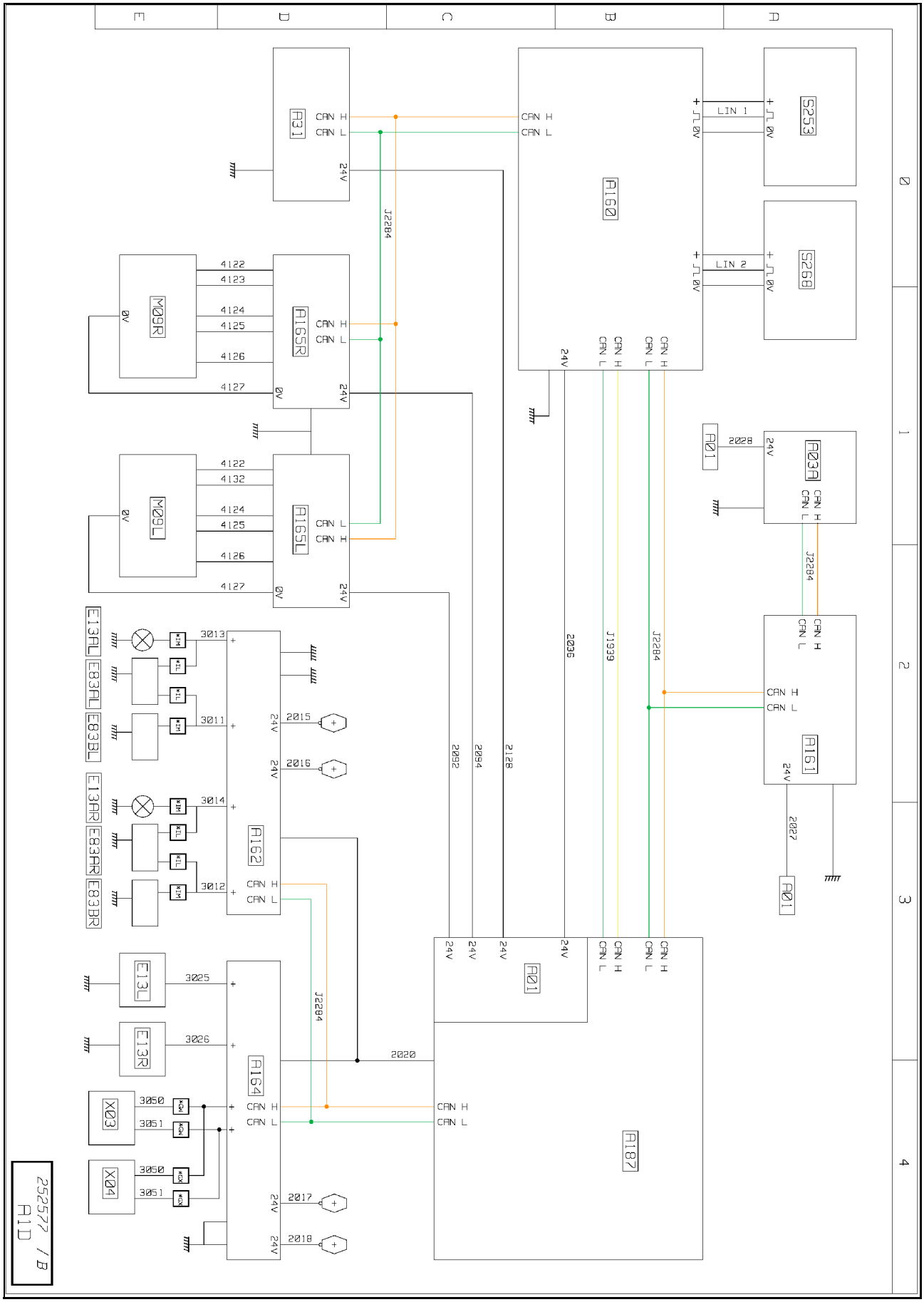
Shared function - Display

Key to appliances

Code	Function name	Location
A01	Electric distribution unit in cab	-
A03A	Main information display	CAK
A07	Radio set	GDH
A125	Onboard management system interface ECU	CBT
A154	Video display	DAE
A160	Cab information management ECU (CIOM)	DA6/EFG/GF1
A161	Man/machine interface management ECU (HMIIOM)	CAK/GF2
A169	Video ECU (VS)	DAE
A175	Additional telematics management ECU (TESP)	CBT
A188	FM signal distributor	CBT
B60L	LH front loudspeaker	GDH
B60LR	Rear left-hand speaker	GDH
B60R	RH front loudspeaker	GDH
B60RR	Rear right-hand speaker	GDH
B63	Microphone	GDH
B67	Vehicle rear visibility assistance camera	DAE
B245A	Vehicle rear visibility assistance camera	DAE
B252L	Tweeter speaker left-hand side	GDH
B252R	Tweeter speaker right-hand side	GDH
S253	Onboard equipment auxiliaries management remote control (LECM)	GF1
S274	Steering wheel mounted controls	GF2
S276	Steering wheel mounted controls	GF2
U30	Voltage transformer 24V / 12V - 20A	GEA
U34	Voltage transformer 24V / 12V - 25A	GEA
W14	GPS antenna	CBT
W16	Radio set antenna	CBT
X164	USB and auxiliary audio connector	GDH

FY: with video ECU
FZ: without video ECU
GG: with **20A** transformer under the dashboard
GH: with **25A** transformer under the dashboard
GS: without supplementary telematics management ECU
GT: with supplementary telematics management ECU

Shared function - Locking/Unlocking of doors



Shared function - Locking/Unlocking of doors

Key to appliances

Code	Function name	Location
A01	Electric distribution unit in cab	-
A03A	Main information display	CAK
A31	Vehicle anti-theft system ECU	DAA
A160	Cab information management ECU (CIOM)	DA6/EFG/GF1
A161	Man/machine interface management ECU (HMIIOM)	CAK/GF2
A162	Front chassis area information management ECU (FCIOM)	EA2/EA3/EFG/ FA1/GA1/GBP
A164	Rear chassis area information management ECU (RCIOM)	CDU/CGA/CGM/EAA/ EBH/HBD/HBE
A165L	Left-hand door information management ECU (DDM/PDM)	DA7
A165R	Right-hand door information management ECU (DDM/PDM)	DA8
A187	Main vehicle management ECU (VMCU)	BA3/BB1/CA3/CB1/CBK/ CCA/DA7/DA8/EBJ/FA1/ GA1/GC1/GDA/GEA/ GEQ/HA1/JAD/JAF/JAG
E13AL	Direction indicator lamp LH side	EA3
E13AR	Direction indicator lamp RH side	EA3
E13L	Direction indicator lamp LH rear	EAA
E13R	Direction indicator lamp RH rear	EAA
E83AL	LH light unit	EA2
E83AR	RH light unit	EA2
E83BL	LH light unit	EA3
E83BR	RH light unit	EA3
M09L	Front left-hand door locking system unit	DA7
M09R	Front right-hand door locking system unit	DA8
S253	Onboard equipment auxiliaries management remote control (LECM)	GF1
S268	Re-positionable control unit (group 3)	GF1
X03	15-pin trailer socket	HBD/HBE
X04	Trailer connection (7-pin type 24 N)	HBD

GW: with **15**-pin trailer socket
GX: with **2 7**-pin trailer sockets
IL: with main beam headlights
IM: with on-site headlights

After direct battery power(s).