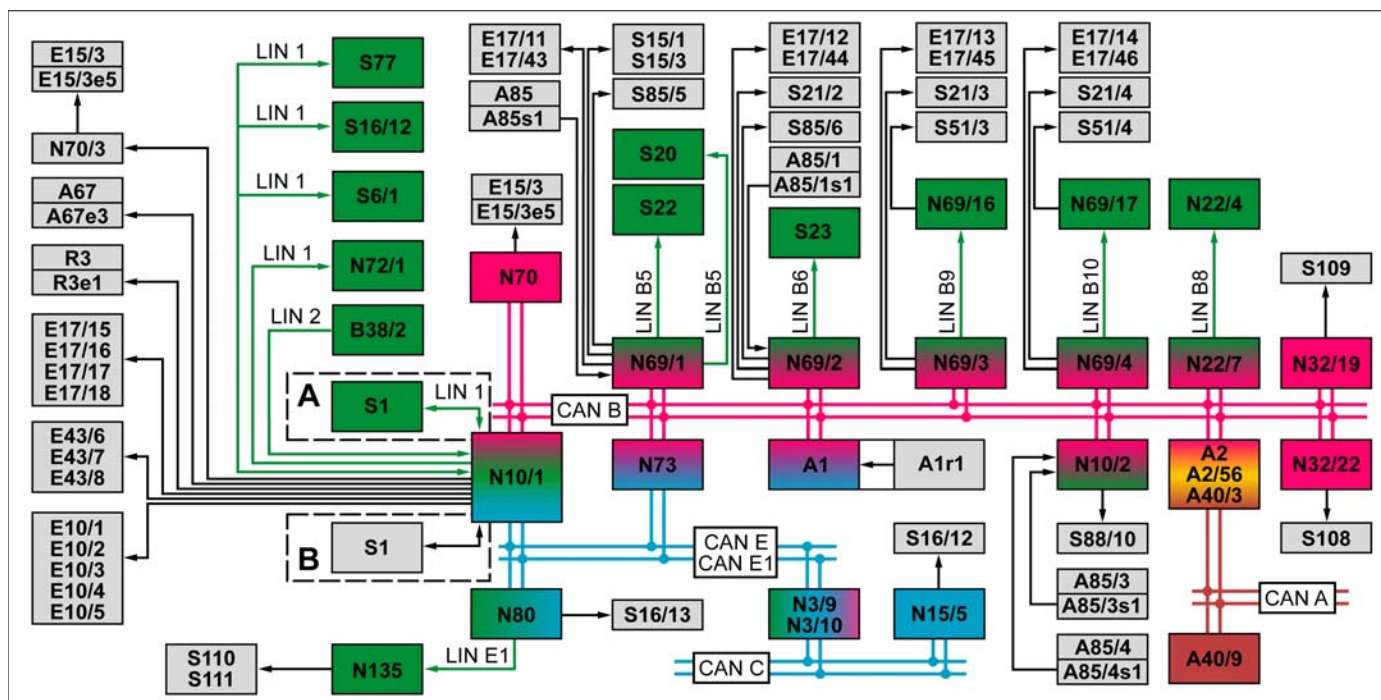


MODEL 212



P82.20-4056-79

A1	Instrument cluster	N69/3	Left rear door control unit
A1r1	Instrument illumination brightness control	N69/4	Right rear door control unit
A2	Radio (with CODE 523 (MB Audio 20 radio) or CODE 510 (Audio 20 with CD changer) or CODE 505 (20 NTG5 radio without navigation capability) or CODE 522 (Audio 20 radio))	N69/16	Left rear door analog/digital converter (with CODE 872 (Electric seat heater for left and right rear seat))
A2/56	Radio with auto-pilot system (with CODE 511 (Audio 50 APS with DVD changer) or CODE 525 (MB Audio 50 APS radio))	N69/17	Right rear door analog/digital converter (with CODE 872 (Electric seat heater for left and right rear seat))
A40/3	COMAND controller unit (with CODE 512 (COMAND APS with changer) or CODE 526 (COMAND with single DVD drive (without navigation)) or CODE 527 (COMAND APS with single DVD drive (with navigation)) or CODE 528 (COMAND incl. DVD changer) or CODE 531 (COMAND APS))	N70	Overhead control panel control unit (with CODE 414 (Power glass tilting/sliding roof))
A40/9	Audio/COMAND control panel	N70/3	Overhead control panel electronics (except CODE 414 (Power glass tilting/sliding roof))
A67	Inside rear-view mirror	N72/1	Upper control panel control unit
A67e3	Ambient lamp	N73	Electronic ignition switch control unit
A85	Left front door lock	N80	Steering column module control unit
A85s1	Left front door rotary tumbler switch	N135	Steering wheel electronics
A85/1s1	Right front door rotary tumbler switch	R3	Cigarette lighter with front ashtray illumination (with code 301 (Ashtray package/smoker package))
A85/3	Left rear door lock	R3e1	Ashtray illumination (with CODE 301 (Ashtray package/smoker package))
A85/3s1	Left rear door rotary tumbler switch	S1	Exterior lights switch
A85/4	Right rear door lock	S6/1	Instrument panel switch group (up to 28.02.2013)
A85/4s1	Right rear door rotary tumbler switch	S15/1	Trunk lid release button (model 212.0/1 except CODE 881 (Remote trunk closing (RTC [HDFS])))
B38/2	Rain/light sensor	S15/3	Driver trunk lid/liftgate control button (model 212 with CODE 881 (Remote trunk closing (RTC [HDFS])) or model 212.2)
E10/1	Left center air outlet symbol illumination	S16/12	Automatic transmission mode button (for transmission 722.6 directly actuated, for transmission 722.9, 724.2, 725 actuated over steering LIN (LIN E1))
E10/2	Left front side air outlet symbol illumination	S16/13	DIRECT SELECT lever (transmission 722.9, 724.2, 725)
E10/3	Right front side air outlet symbol illumination	S20	Driver-side power window and outside mirror adjustment switch group
		S21/2	Passenger-side power window switch

E10/4	Right center air outlet symbol illumination	S21/3	Left rear power window switch
E10/5	Rear vent symbol illumination (with CODE 581 (Comfort automatic air conditioning))	S21/4	Right rear power window switch
E15/3	Rear dome lamp	S22	Left front seat adjustment switch group (with CODE 275 (Memory package for electrically adjustable front seats))
E15/3e5	Rear dome lamp ambiance illumination (with CODE 954 (Avantgarde) or CODE 955 (Elegance))	S23	Right front seat adjustment switch group (with CODE 275 (Memory package (electrically adjustable front seats))
E17/11	Left front door door handle illumination	S51/3	Left rear seat heater button (with CODE 872 (Electric seat heater for left and right rear seat))
E17/12	Right front door door handle illumination	S51/4	Right rear seat heater button (with CODE 872 (Electric seat heater for left and right rear seat))
E17/13	Left rear door door handle illumination	S77	Suspension button group (with CODE 489 (AIRMATIC (air suspension with continuous adjustable damping)))
E17/14	Right rear door door handle illumination	S85/5	Left front door central locking interior switch
E17/15	Right front footwell lamp (with CODE 954 (Avantgarde) or CODE 955 (Elegance))	S85/6	Right front door central locking interior switch
E17/16	Left front footwell lamp (with CODE 954 (Avantgarde) or CODE 955 (Elegance))	S88/10	Trunk lid emergency opening switch (model 212.0/1 with CODE 494 (USA version))
E17/17	Left rear footwell lamp (with CODE 954 (Avantgarde) or CODE 955 (Elegance))	S108	Front passenger dynamic multicontour seat button group (with CODE 432 (Left and right dynamic multicontour seat))
E17/18	Right rear footwell lamp (with CODE 954 (Avantgarde) or CODE 955 (Elegance))	S109	Driver seat dynamic multicontour seat button group (with CODE 432 (Left and right dynamic multicontour seat))
E17/43	Left front door ambiance illumination (with CODE 954 (Avantgarde) or CODE 955 (Elegance))	S110	Left multifunction steering wheel button group
E17/44	Right front door ambiance illumination (with CODE 954 (Avantgarde) or CODE 955 (Elegance))	S111	Right multifunction steering wheel button group
E17/45	Left rear door ambiance illumination (with CODE 954 (Avantgarde) or CODE 955 (Elegance))	CAN A	Telematics CAN
E17/46	Right rear door ambiance illumination (with CODE 954 (Avantgarde) or CODE 955 (Elegance))	CAN B	Interior CAN
E43/6	Center console ambiance illumination (with CODE 954 (Avantgarde) or CODE 955 (Elegance))	CAN C	Drive train CAN
E43/7	Driver instrument panel ambiance illumination (with CODE 954 (Avantgarde) or CODE 955 (Elegance))	CAN E	Chassis CAN (up to 28.02.2013)
E43/8	Front passenger side instrument panel ambiance illumination (with CODE 954 (Avantgarde) or CODE 955 (Elegance))	CAN E1	Chassis CAN 1 (as of 01.03.2013)
N3/9	CDI control unit (diesel engine)	LIN 1	Instrument panel LIN
N3/10	ME-SFI [ME] control unit (gasoline engine)	LIN 2	Wiper/inside rear-view mirror LIN
N10/1	Front SAM control unit with fuse and relay module	LIN B5	Left front door LIN
N10/2	Rear SAM control unit with fuse and relay module	LIN B6	Right front door LIN
N15/5	Electronic selector lever module control unit (transmission 722.6)	LIN B8	Climate control LIN
N22/4	Rear automatic climate control operating unit (with code (581) Comfort automatic air conditioning)	LIN B9	Left rear door LIN
N22/7	Automatic air conditioning control and operating unit	LIN B10	Right rear door LIN
N32/19	Left front dynamic multicontour seat control unit (with CODE 432 (Left and right dynamic multicontour seat))	LIN E1	Steering LIN
N32/22	Right front dynamic multicontour seat control unit (with CODE 432 (Left and right dynamic multicontour seat))	A	Model 212.0 up to 30.11.2009 except model 212.077
N69/1	Left front door control unit	B	Model 212.077, model 212.2 and model 212.0 as of 01.12.2009, model 212.1
N69/2	Right front door control unit		

Function requirements, general

- No overvoltage or undervoltage

Symbol and ambiance illumination in general

The symbol and ambiance illumination feature provides the brightness-adjustable illumination of all controls as well as the illumination of the vehicle interior.

Additional function requirements, search and symbol illumination

- Standing lights ON (circuit 58)

Function sequence for switch and controls and symbol illumination

In order to control the search and symbol illumination, the instrument cluster reads in the following signals and evaluates them:

- Status of standing lights actuation, by front SAM control unit via interior CAN

Symbol and ambiance illumination encompasses the following subfunctions:

- **Function sequence for switch and controls and symbol illumination**
- **Function sequence for ambiance illumination (with CODE 954 (Avantgarde) or CODE 955 (Elegance))**

- ME-SFI [ME] control unit (gasoline engine)
- Steering column module control unit

The CDI control unit or the ME-SFI [ME] control unit sends the circuit 58d signal over the drive train CAN to the electronic selector lever module control unit (transmission 722.6). The electronic selector lever module control unit actuates the switch and controls and symbol illumination for the transmission mode button of the automatic transmission.

- Instrument illumination brightness control status (continuous adjustment of switch and controls and symbol illumination brightness)

i If the ambient illumination function is activated via the instrument cluster, it automatically switches itself on when the vehicle is unlocked using central locking (CL [ZV]). This causes "Standing lights actuation active" status to be set, which also activates the search and symbol illumination. If the driver door is then opened, the ambient illumination goes off. "Standing lights actuation active" status is canceled, and the instrument cluster deactivates the search and symbol illumination. The controls in the vehicle are illuminated again only after circuit 15R is then switched on.

The instrument cluster uses the incoming data to generate the circuit 58d signal and sends it to the following control units to actuate the switch and controls and symbol illumination:

- Radio (with CODE 523 (MB Audio 20 radio) or CODE 510 (Audio 20 with CD changer) or CODE 505 (20 NTG5 radio without navigation capability) or CODE 522 (Audio 20 radio))
- Radio with auto-pilot system (with CODE 511 (Audio 50 APS with DVD changer) or CODE 525 (MB Audio 50 APS radio))
- COMAND controller unit (with CODE 512 (COMAND APS with changer) or CODE 526 (COMAND with single DVD drive (without navigation)) or CODE 527 (COMAND APS with single DVD drive (with navigation)) or CODE 528 (COMAND incl. DVD changer) or CODE 531 (COMAND APS))
- Front SAM control unit
- Rear SAM control unit
- Automatic air conditioning control and operating unit
- Left front dynamic multicontour seat control unit (with CODE 432 (Left and right dynamic multicontour seat))
- Right front dynamic multicontour seat control unit (with CODE 432 (Left and right dynamic multicontour seat))
- Left front door control unit
- Right front door control unit
- Left rear door control unit
- Right rear door control unit
- Overhead control panel control unit (with CODE 414 (Power glass tilting/sliding roof))

i MODEL 212.0/1

with CODE 494 (US version)

The switch and controls and symbol illumination for the trunk lid emergency opening switch is actuated by the rear SAM control unit independent of the circuit 58s signal.

The radio or the COMAND controller unit sends the signal for circuit 58d over the telematics CAN to the Audio/COMAND control panel.

The front SAM control unit actuates the following components:

- Actuation via the instrument panel LIN:
 - Upper control panel control unit
 - Exterior lights switch (model 212.0 up to 30.11.2009 except model 212.077)
 - Instrument panel switch group (up to 28.02.2013)
 - A/T transmission mode button (transmission 722.9, 724.2, 725)
 - Suspension button group (with CODE 489 (AIRMATIC (air suspension with continuous adjustable damping)))
- Direct actuation:
 - Surround lamp in inside mirror
 - Rear dome lamp ambiance illumination in the rear dome lamp (with CODE 954 (Avantgarde) or CODE 955 (Elegance)) over the overhead control panel electronics (except CODE 414 (Power glass tilting/sliding roof))
 - Ashtray illumination in cigarette lighter with front ashtray illumination (with CODE 301 (Ashtray package/smoker package))
 - Exterior lights switch (model 212.077, model 212.2 and model 212.0 as of 01.12.2009, 212.1)
- Actuation via the instrument panel circuit 58d connector sleeve (Z50/1):
 - Left center air outlet symbol illumination
 - Left front side air outlet symbol illumination
 - Right front side air outlet symbol illumination
 - Right center air outlet symbol illumination
- Actuation via the vehicle interior circuit 58d connector sleeve (Z51/6):
 - Rear vent symbol illumination (with CODE 581 (Comfort automatic air conditioning))

The front SAM control unit also sends the circuit 58d signal over the chassis CAN (up to 28.02.2013) or chassis CAN 1 (as of 01.03.2013) to the following control units:

- CDI control unit (diesel engine)

The steering column tube module control unit actuates the following components:

- Actuation via steering LIN:
 - Steering wheel electronics:
 - Left multifunction steering wheel button group
 - Right multifunction steering wheel button group
- Direct actuation:
 - DIRECT SELECT lever (transmission 722.9, 724.2, 725)

The overhead control panel control unit (with CODE 414 (Power glass tilting/sliding roof)) actuates the rear dome lamp ambiance illumination (with CODE 954 (Avantgarde) or CODE 955 (Elegance)).

The automatic air conditioning control and operating unit actuates the switch and controls and symbol illumination of the integrated controls directly and the rear automatic air conditioning operating unit (with CODE 581 (Comfort automatic air conditioning)) over climate control LIN.

The left front dynamic multicontour seat control unit actuates the driver dynamic multicontour seat button group.

The right front dynamic multicontour seat control unit actuates the front passenger dynamic multicontour seat button group.

The left front door control unit actuates the following components:

- Actuation via left front door LIN:
 - Driver-side power window and outside mirror adjustment switch group
 - Left front switch group, seat adjustment (with CODE 275 (Memory package for electrically adjustable front seats))
- Direct actuation:
 - Left front door door handle illumination
 - Trunk lid release button (model 212.0/1 except CODE 881 (Remote trunk closing (RTC [HDFS])) or
 - Driver trunk lid/liftgate control button (model 212 with CODE 881 (Remote trunk closing (RTC [HDFS])) or model 212.2)
 - Left front door central locking interior switch

The right front door control unit actuates the following components:

- Actuation via right front door LIN:
 - Right front seat adjustment switch group (with CODE 275 (Memory package (electrically adjustable front seats)))
- Direct actuation:
 - Right front door door handle illumination
 - Passenger-side power window switch
 - Right front door central locking interior switch

The left rear door control unit actuates the following components:

- Actuation via left rear door LIN:
 - Left rear seat heater button over the left rear door analog/digital converter (with CODE 872 (Electric seat heater for left and right rear seat))
- Direct actuation:
 - Left rear door door handle illumination
 - Left rear power window switch

The right rear door control unit actuates the following components:

- Actuation via right rear door LIN:
 - Right rear seat heater button over right rear door analog/digital converter (with CODE 872 (Electric seat heater for left and right rear seat))
- Direct actuation:
 - Right rear door door handle illumination
 - Right rear power window switch

i The door handle illumination, the ambient lamp and the rear dome lamp ambiance illumination are actuated at a defined value if circuit 15R is On and there is an implausible circuit 58d signal. The status of circuit 15 is sent by the electronic ignition lock control unit over the interior CAN to the front SAM control unit and to the corresponding control units.

Additional function requirements for ambiance illumination (with CODE 954 (Avantgarde) or CODE 955 (Elegance))

- Circuit 15R ON
- Rain/light sensor signals "Darkness detected"
- Illumination intensity of ambiance illumination set

Function sequence for ambiance illumination (with CODE 954 (Avantgarde) or CODE 955 (Elegance))

The ambiance illumination encompasses the illumination of the footwells, the trim pieces at the instrument panel, the center console and the trim pieces at the vehicle doors. The intensity of the ambiance illumination can be adjusted in five stages using the "Settings" menu in the instrument cluster.

In order to control the ambiance illumination, the front SAM control unit reads in and evaluates in the following signals:

- Status of rain/light sensor via wiper/inside rear-view mirror LIN
- Status of circuit 15 from electronic ignition lock control unit via interior CAN
- Status of ambiance illumination brightness from instrument cluster via interior CAN

The front SAM control unit sends the request to switch on the ambiance illumination to the following control units via interior CAN:

- Left front door control unit
- Right front door control unit
- Left rear door control unit
- Right rear door control unit

The front SAM control unit actuates the following components directly:

- Center console ambiance illumination

- Driver-side instrument panel ambiance illumination
- Passenger-side instrument panel ambiance illumination

The left front door control unit actuates the left front door ambiance illumination.

The right front door control unit actuates the right front door ambiance illumination.

The left rear door control unit actuates the left rear door ambiance illumination.

The right rear door control unit actuates the right rear door ambiance illumination.

Furthermore, the front SAM control unit actuates the footwell illumination components at a defined value:

- Right front footwell lamp
- Left front footwell lamp
- Left rear footwell lamp
- Right rear footwell lamp

When the vehicle is unlocked using the central locking system, the ambiance illumination components are actuated at a set brightness setting. Opening a vehicle door or manually switching on the interior illumination causes the ambiance illumination to be actuated at a brightness setting that corresponds to 100 % . After closing the vehicle door, the ambiance illumination components are actuated again at the previously set brightness setting. The function is deactivated when the central locking is locked.

The status of the vehicle doors is read in by the front SAM control unit via interior CAN as follows.

- Status of left front door rotary tumbler switch in left front door lock from left front door control unit
- Status of right front door rotary tumbler switch in right front door lock from right front door control unit
- Status of left rear door rotary tumbler switch in left rear door lock and status of right rear door rotary tumbler switch in right rear door lock from rear SAM control unit

i If no other ambiance illumination function is active, the ambiance illumination is controlled on the basis of the circuit 58d signal.

	Search and symbol illumination electrical function schematic		PE82.20-P-2054-97DAA
	Electrical function schematic ambiance illumination	MODEL 212 with CODE 954 (Avantgarde)MODEL 212 with CODE 955 (Elegance)	PE82.20-P-2053-97DAA
	Overview of interior illumination (IBL) system components		GF82.20-P-9997FL