

F10 General Vehicle Electronics

11. Exterior Lighting

The exterior lights of the F10 are based on those of the F01.

The F10 535i and 550i come standard equipped with bi-xenon headlights (option 522).

The F10 528i is equipped with halogen headlights as standard equipment (bi-xenon headlights option 522 is available).

With bi-xenon headlights, the daytime running lights and the side lights are implemented using light-emitting diodes.

The familiar light switches from the F01 is used on the F10.

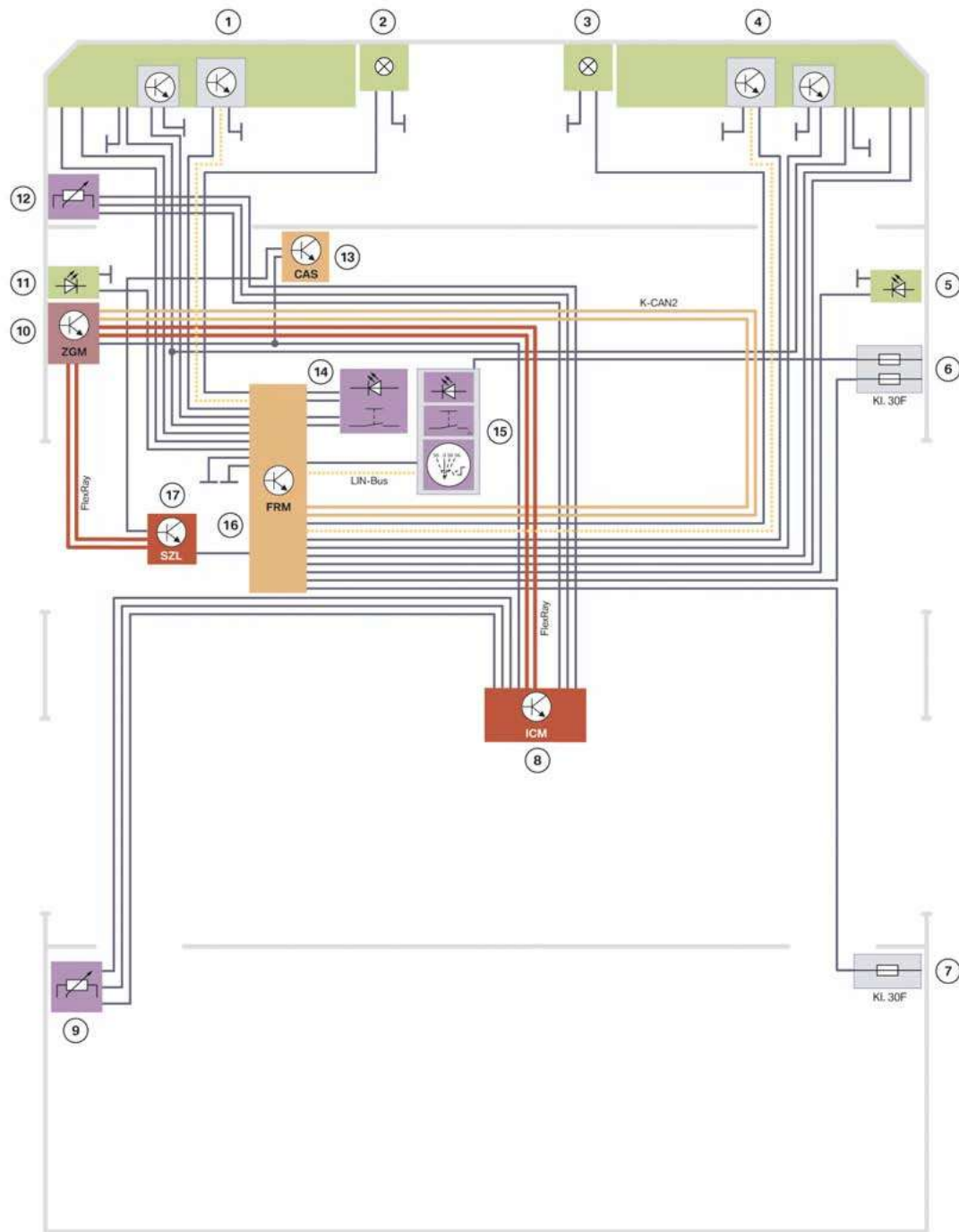
The adaptive headlights are available for the F10 as optional equipment (option 524). It is installed only in conjunction with bi-xenon headlights (option 522).

For more information on the exterior lights, refer to the F01/F02 "Exterior lighting" training material available on TIS and ICP.

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11.1. System wiring diagram



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F10 System wiring diagram for front exterior lights

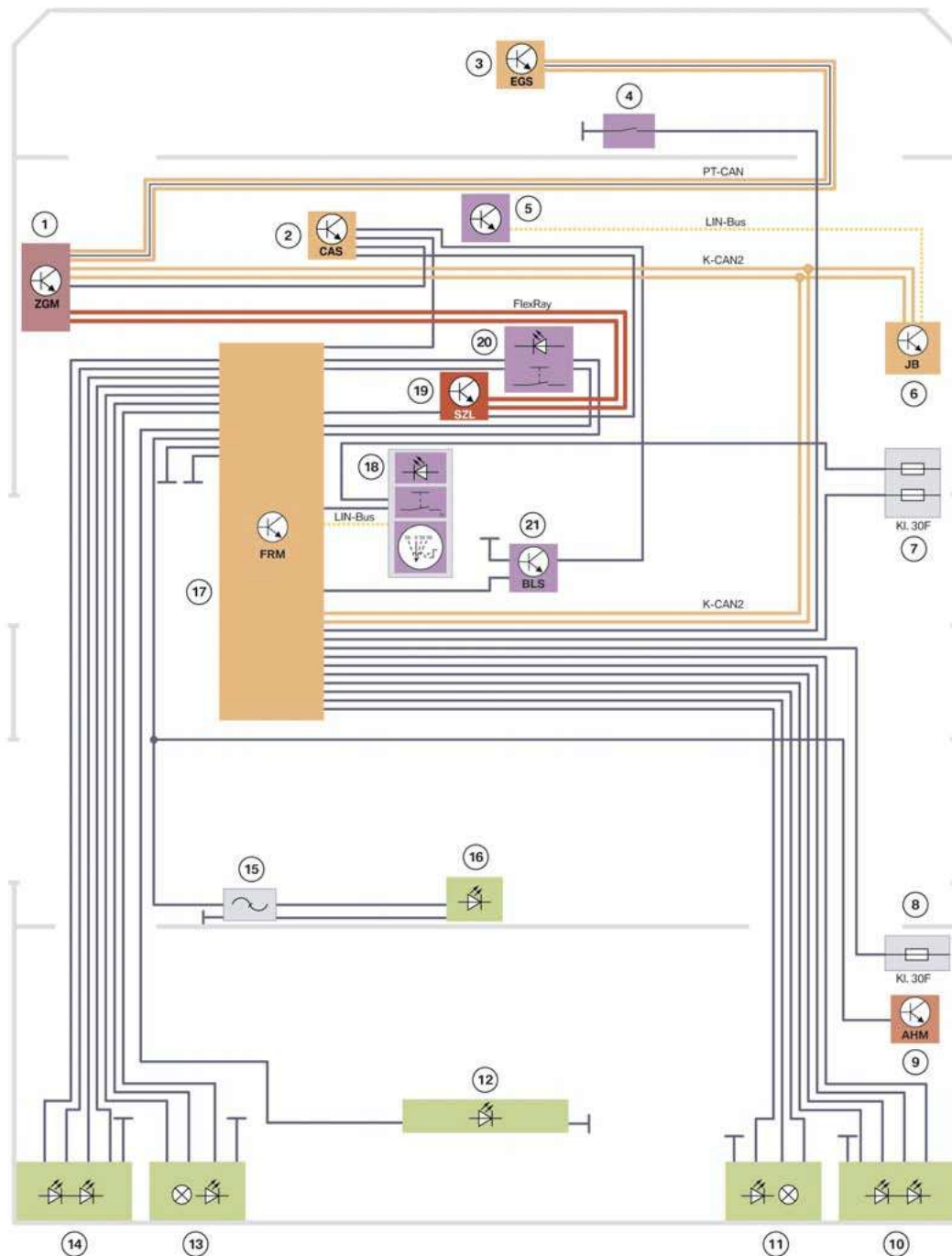
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Index	Explanation
1	Left headlight
2	Front fog light, left
3	Front fog light, right
4	Right headlight
5	Right auxiliary turn indicator
6	Front distribution box
7	Rear power distribution box
8	Integrated Chassis Management (ICM)
9	Rear ride height sensor (only with option 522)
10	Central Gateway Module (ZGM)
11	Left auxiliary turn indicator
12	Front ride height sensor (only with option 522)
13	Car Access System (CAS)
14	Hazard warning switch
15	Control panel, light switch
16	Footwell module (FRM)
17	Steering column switch cluster (SZL)

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F10 System wiring diagram for rear exterior lights

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11. Exterior Lighting

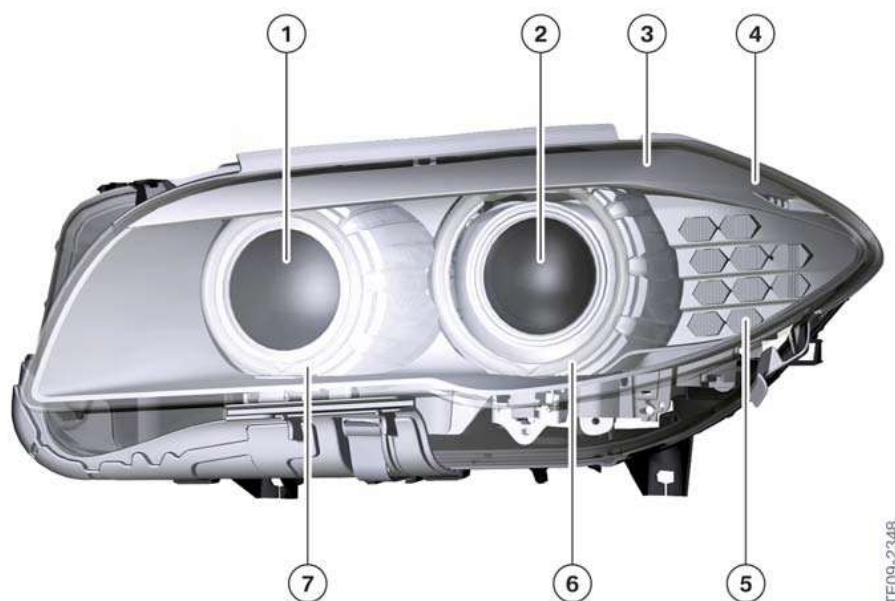
Index	Explanation
1	Central Gateway Module (ZGM)
2	Car Access System (CAS)
3	Electronic transmission control (EGS) (with automatic transmission)
4	Reverse light switch (with manual transmission)
5	Rain-light-solar-condensation sensor
6	Junction Box (JB)
7	Front distribution box
8	Rear power distribution box
9	Trailer module AHM (Not for US)
10	Outer rear light cluster, right
11	Inner rear light cluster, right
12	Licence plate light
13	Inner rear light cluster, left
14	Outer rear light cluster, left
15	Filter with trap circuit
16	Additional brake light
17	Footwell module (FRM)
18	Control panel, light switch
19	Steering column switch cluster (SZL)
20	Hazard warning switch
21	Brake light switch

11.2. Front Lighting

The structure of the front headlights can be seen in the following graphic.

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11. Exterior Lighting



F10 Front headlight

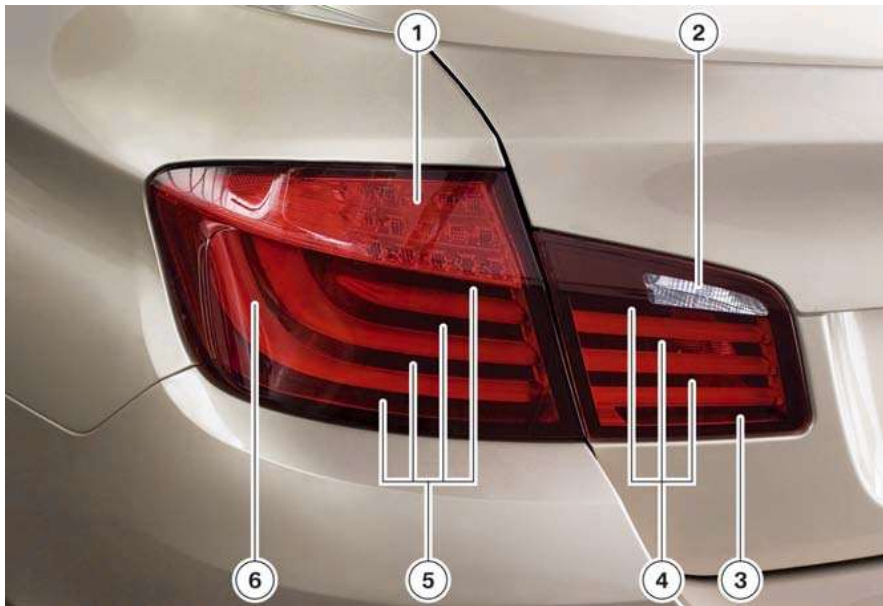
Index	Explanation
1	Turning light (option 524, only available with bi-xenon) or high beam headlight with halogen headlights
2	Bi-xenon low-beam headlight/high beam headlight or low-beam headlight with halogen headlights
3	Decorative lighting (light-emitting diodes)
4	Side marker light (light-emitting diodes)
5	Turn indicator (light-emitting diodes with bi-xenon)
6	Parking light/daytime driving lights corona ring (light-emitting diodes, daytime driving light function only with bi-xenon)
7	Parking light/daytime driving lights corona ring (light-emitting diodes, daytime driving light function only with bi-xenon)

11.3. Rear Lighting

The F10 has a two-piece rear light. The structure of the rear lights can be seen in the following graphic.

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11. Exterior Lighting



F10 Rear light

Index	Explanation
1	Turn signal indicator light (LEDs)
2	Reverse light
3	Brake light for Brake Force Display
4	Brake light (LEDs)
5	Reflector, side marking
6	Tail light (LEDs)

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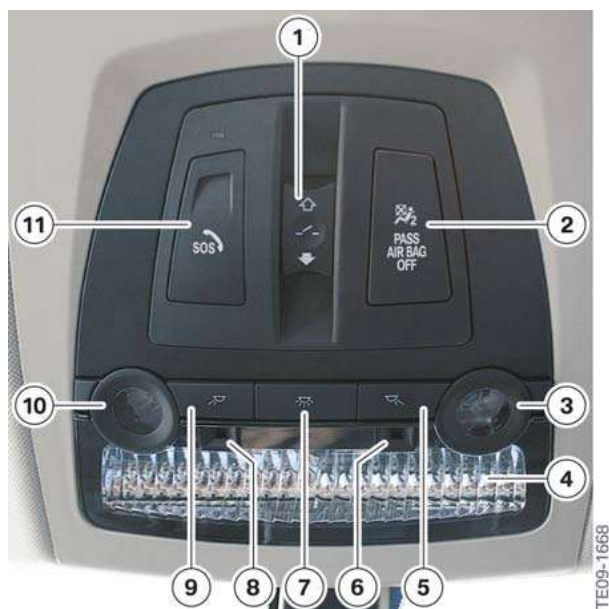
12. Interior Lighting

12.1. Overview

The interior lighting of the F10 is controlled by the footwell module FRM control unit.

The footwell module is the central control unit for the interior lighting. All interior lighting outputs of the footwell module are pulse-modulated. This ensures that the interior light functions at a constant brightness level in the event of voltage fluctuations. The pulse width modulation is also used for the "soft ON/soft OFF" function.

The components for the interior light in the front roof area are integrated in the roof function center and in the sun visors. The footwell lighting is located underneath the dashboard. The rear reading and interior lights are supplied with voltage via the roof function center.



F10 Roof function center

Index	Explanation
1	Glass sunroof switch
2	Indicator lamp for front passenger airbag deactivation
3	Right reading light
4	Interior light
5	Right reading light button
6	Ambient lighting
7	Interior light button
8	Ambient lighting
9	Left reading light button
10	Left reading light
11	Emergency call button

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12. Interior Lighting

12.2. System wiring diagram

The system wiring diagram follows the description below and provides an overview of the full extent of all possible interior light options.

The following examples describe some switching operations for the interior light.

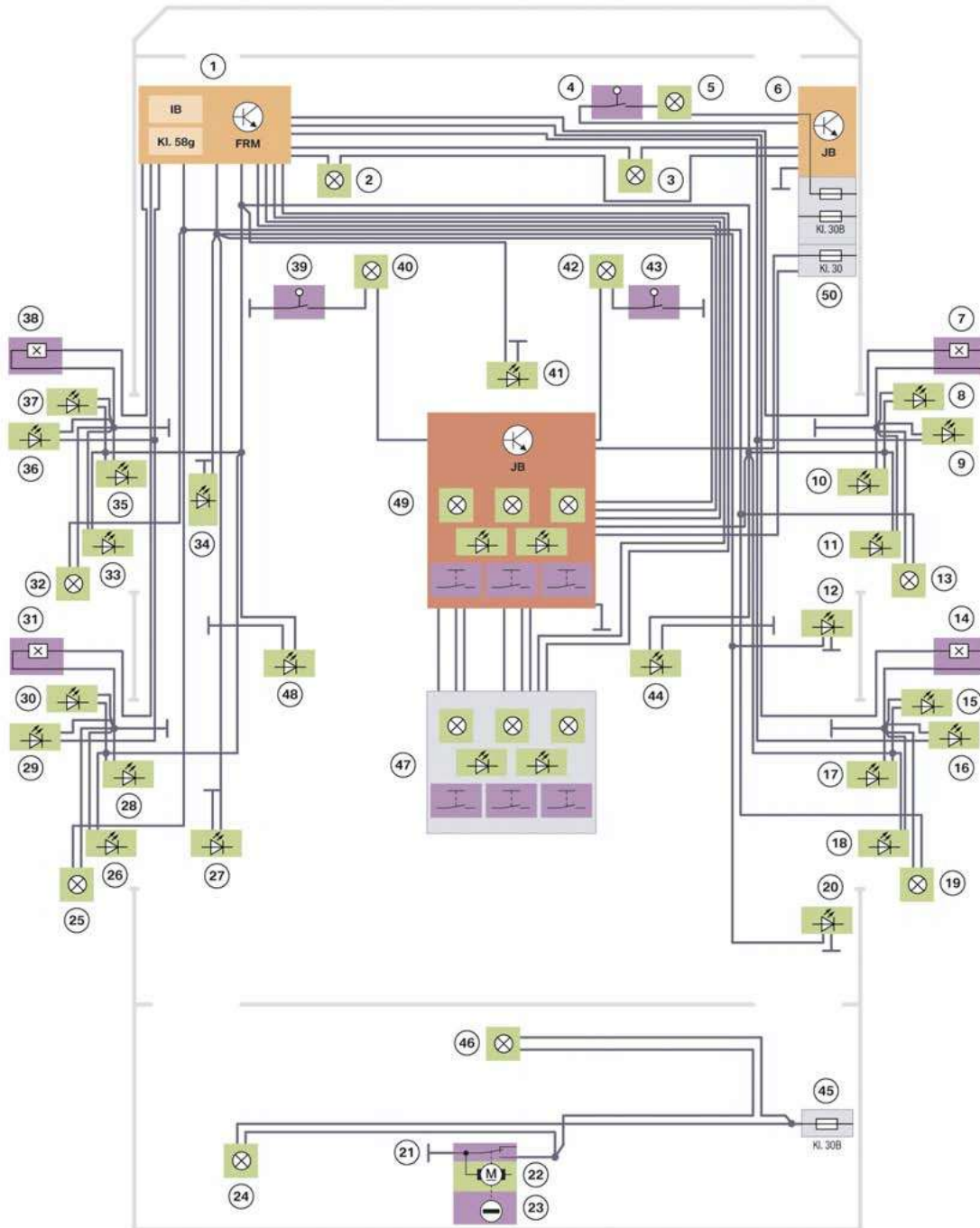
The status of the door contact (Hall sensor) in the lock (38) changes, for example, when the door is opened with the vehicle unlocked. The footwell module (1) evaluates the status and sends the request to switch on the interior light.

At the same time, the door entry lighting (32) for the door that is open and the footwell lights (2, 3) are switched on by the footwell module. The status of the door contact changes again when the vehicle door is closed. The footwell module initiates the procedure to switch off the interior light.

The luggage compartment lights and the lights in the luggage compartment lid (24, 46) are connected to the voltage supply via terminal 30B. If one of the luggage compartment lids is opened, the status of the tailgate contact switch changes (27). The luggage compartment lights and the luggage compartment lid light are switched on directly via the tailgate contact switch.

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12. Interior Lighting



F10 System wiring diagram for interior light

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Index	Explanation
1	Footwell module (FRM)
2	Footwell light, driver's side
3	Footwell light, front passenger's side
4	Glove compartment switch
5	Glove box light
6	Junction Box (JB)
7	Door contact, front passenger side
8	Exterior door handle light, front passenger side
9	Ground lights, front passenger side
10	Inside door handle light, front passenger side
11	Door pocket lighting, front passenger side
12	Entrance lighting, front passenger side
13	Door entry lighting, front passenger side
14	Door switch, passenger side, rear
15	Exterior door handle light, passenger side, rear
16	Rear, passenger-side illuminated entry system
17	Interior door handle light, passenger side, rear
18	Door pocket light, passenger side, rear
19	Doorway light, passenger side, rear
20	Entrance lighting, rear passenger side
21	Tailgate contact switch
22	Tailgate lock motor
23	Lock barrel, tailgate
24	Luggage compartment light in tailgate
25	Doorway light, driver's side, rear
26	Door pocket light, driver's side, rear
27	Entrance lighting, rear driver's side
28	Interior door handle light, driver's side, rear
29	Rear, driver's side illuminated entry system
30	Exterior door handle light, driver's side, rear
31	Door switch, driver's side, rear
32	Door entry lighting, front driver's side
33	Door pocket lighting, front driver's side
34	Door pocket lighting, front driver's side
35	Inside door handle light, front driver's side

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Index	Explanation
36	Ground lights, front driver's side
37	Outside door handle light, front driver's side
38	Door contact, front driver's side
39	Make-up mirror light switch, front driver's side
40	Make-up mirror light, front driver's side
41	Center console storage compartment light, front
42	Make-up mirror light, front passenger side
43	Make-up mirror light switch, front passenger side
44	Map pocket light, front passenger seat backrest
45	Luggage compartment junction box
46	Luggage compartment light
47	Interior/reading light unit, rear
48	Map pocket light, driver's seat backrest
49	Interior/reading light unit, front
50	Front power distribution box
Kl. 30	Terminal 30
Term. 30B	Terminal 30 basic operation
Kl. 58g	Terminal 58g
IB	Interior lighting control