


Fuses and relays Kia Optima / K5 (TF; 2010 - 2016)

 car-box.info/kia/optima-k5/tf-2010-2016.html

The K5 sedan (also known as Optima or Magentis) is a business class car of the South Korean company Kia Motors, production of which began in 2000. In this article, we will take a detailed look at the fuse box diagrams for the Kia Optima / K5 (third generation; TF index) 2010, 2011, 2012, 2013, 2014, 2015, 2016 years of manufacture.

In the engine compartment



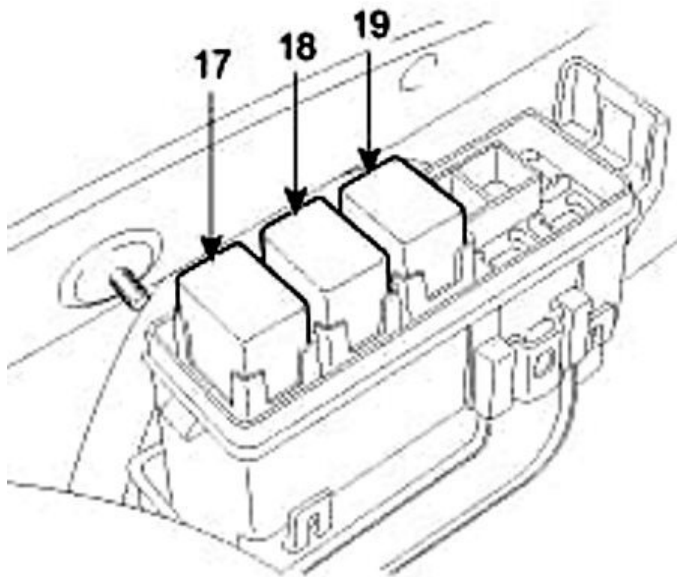
Location of components:

- 1 - relay block;
- 2 - main fuse;
- 3 - main fuse and relay block.

Relay block

Located on the right side of the car, next to the windshield.

Diagram



No.	Description
17	Start button 1 (ACC)
18	Start button 2 (IG1)
19	Start button 3 (IG2)

Main fuse box

Located on the left side of the engine compartment. This unit may have several modifications depending on the year of the car and the engine installed.

Diagram

SPARE	-	20A
WIPER	Body control unit, rain sensor, windshield wipers	10A
VACUUM PUMP	Brake vacuum pump	20A
AMS	Battery sensor	10A
TCU 1	Transmission control unit	20A
STOP LAMP	HAC Relay, Brake Light Relay	15A
DECISER	Defroster relay	20A
IG1	Egnition lock	40A
B+ 1	B+	50A
B+ 2	B+	60A
C/FAN 2	Cooling fan 2	60A
IG 2	ignition switch, IG2 RLY	40A
ESC 1	ESC System B+, ABS Valve A/B B+	40A
ESC 2	ESC B+ valve	40A
RR HTD	Relay RR HTD	40A
B+ 3	B+	60A
MDPS	EPS system	80A
SPARE	Reserve	25A
C/FAN 1	Cooling fan 1	50A
BLOWER	Ventilation system	40A
EPB 2	Electric parking brake / BATT2	30A
EPB 1	Electric parking brake / BATT1	30A
ECU 2	EMS block (B+)	40A
ECU 4	Engine ECU	10A

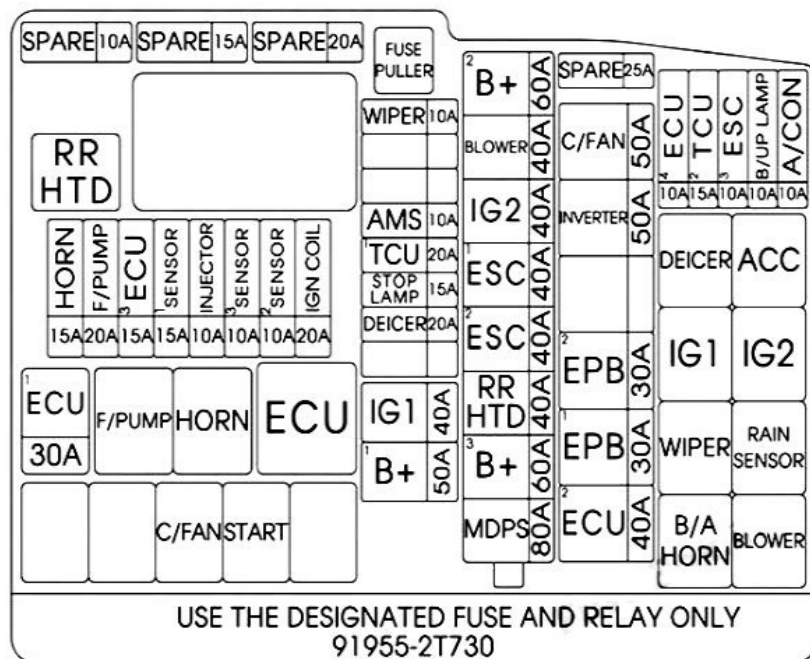
Diagram

TCU 2	Speed sensor, POSITION SW. O_P_INVERTER	15A
ESC 3	ESC system - IGN1	10A
B/UP LAMP	Electrochromic Mirror, BCM, Rear Combination Lamp (Left/Right)	10A
A/CON	Air Conditioning Control Module (Automatic Air Conditioning)	10A

Type 2

Unit number 91955-2T730. Theta 2.4 GDI engine.

Diagram



Name	Description	Amps
A/CON	Air Conditioning Control Module (Automatic Air Conditioning)	10
AMS	Battery sensor	10
B/UP LAMP	Electrochromic Mirror, BCM, Rear Combination Lamp (Left/Right)	10
B+ 1	B+	50

Diagram

B+ 2	B+	60
B+ 3	B+	60
BLOWER	Fan relay	40
C/FAN	Cooling system	50
DECISER	glass defroster relay	20
ECU 1	electronic control unit	30
ECU 2	EMS Bay (B+)	40
ECU 3	PCU (GDI) BATT. DIRECT	15
ECU 4	Engine ECU	10
EPB 1	Electric parking brake 1	30
EPB 2	Electric parking brake 2	30
ESC 1	Electronic Stability Control, ABS Valve Diagnostics A/B B+	40
ESC 2	ESC B+ valve	40
ESC 3	ESC system - IGN1	10
F/PUMP	Fuel pump fuse	20
HORN	Sound signal (left and right)	15
IG2	Ignition switch, IG2 relay	40
IG1	Egnition lock	40
IGN COIL	Ignition coils	20
INJECTOR	Injection system	10
INVERTER	O_P_INVERTER	50
MDPS	EPS control module	80
RR HTD	REEL E/R BOX RR HTD RLY	40
RR HTD	RLY.1 (RR HTD relay)	40
SENSOR 1	Oxygen sensor (up/down)	15

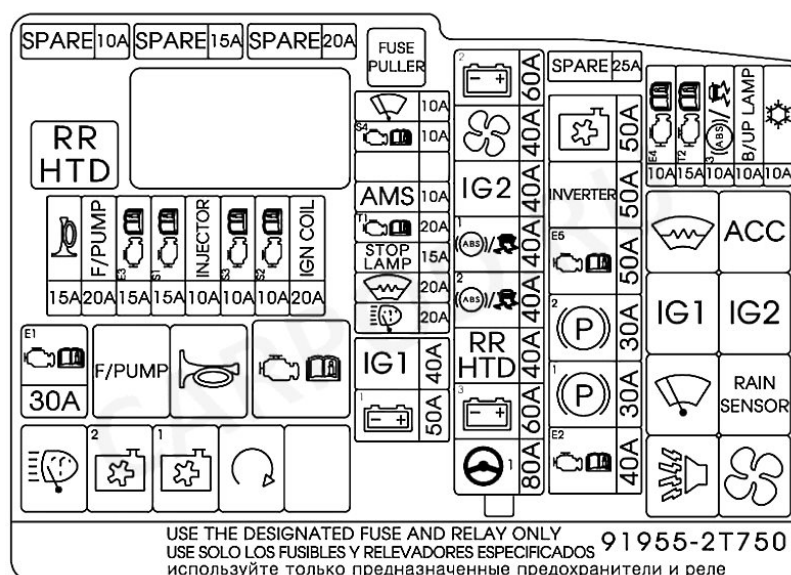
Diagram

SENSOR 2	CKP (GDI), VIS (GDI), OCV1, 2 (GDI), PCSV (GDI), CCV (GDI)	10
SENSOR 3	CMP1, 2 (GDI, TGDI), Immobilizer	10
SPARE	Reserve	10
SPARE	Reserve	15
SPARE	Reserve	20
SPARE	Reserve	25
STOP LAMP	RLY.10 (HAC Relay), Brake Light Relay	15
TCU 1	transmission control unit	20
TCU 2	Speed sensor, POSITION SW. O_P_INVERTER	15
WIPER	body control unit, rain sensor, windshield wipers	10

Type 3

Fuse box number 91955-2T750.

Diagram



RR HDT - heated rear window relay

F/PUMP - fuel pump relay 20A

Diagram

INJECTOR - engine injectors 10A

IGN COIL - ignition coils 20A

AMS - battery sensor 10A

STOP LAMP - HAC relay, brake light relay 15A

IG1 - ignition switch 40A

IG2 - ignition switch, 2 ignition relays 40A

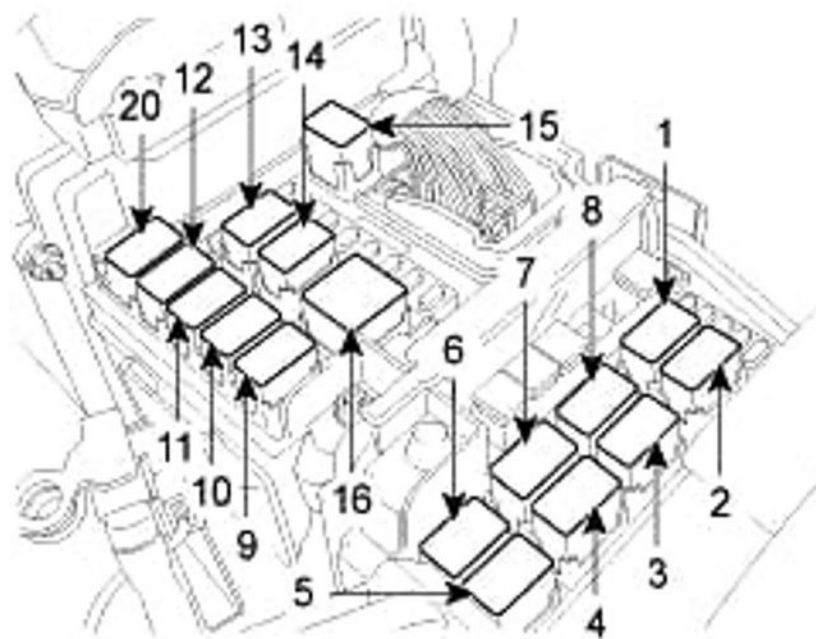
RR HDT - rear window defroster fuse 40A

INVERTER - oil pump inverter 50A

B/UP LAMP - electrochromic mirror, rear combination lamp (left/right)

RAIN SENSOR - multifunction switch, windshield wiper, rain sensor

Separate relay description



-
1. Front window defroster relay,
 2. SMK unit relay,
 3. HAC relay,
 4. Rain sensor relay,
 5. Fan relay,
 6. Horn relay,
 7. Wiper relay,

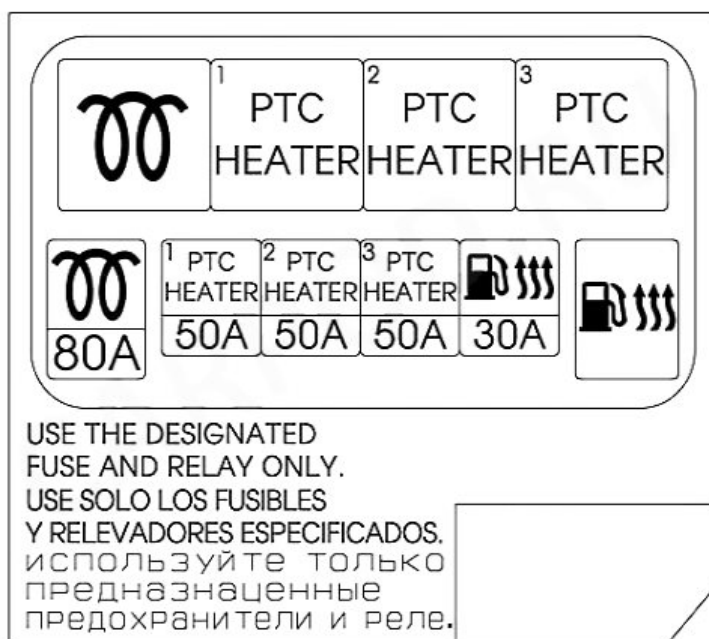
Separate relay description

- 8. Reserved,
- 9. Reserved,
- 10 Start Relay,
- 11. A/C Fan Relay (Low Speed),
- 12. A/C Fan Relay (High Speed),
- 13. Fuel Pump Relay,
- 14. Signal Relay,
- 15. Rear Window Defogger Relay,
- 16. Engine Control Relay,
- 20. Reserved

Additional unit (diesel)

Located in the front part of the engine compartment. Only models with diesel engines.

Diagram



Diagram

80A - glow plugs;

PTC HEATER - heater (additional heater),

30A - fuel filter

Main fuse



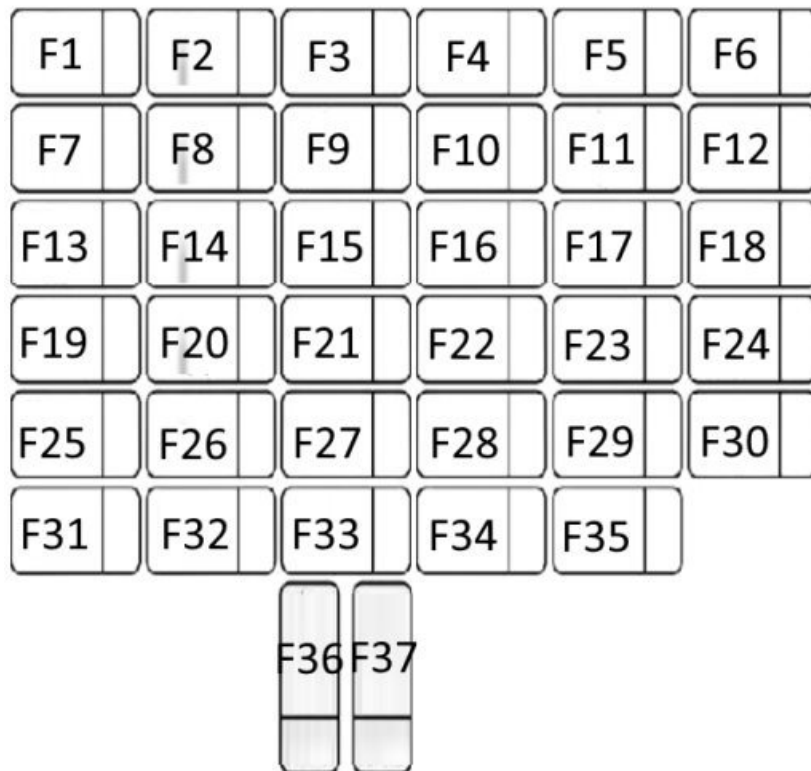
Located on the positive terminal of the battery. It is made in the form of a fusible insert.

In the passenger compartment

The fuse box is located on the driver's side of the dashboard.

Type 1

Diagram



No.	Description
F1	Sport mode switch, key lock solenoid (without power key)
F2	Electrical control unit key (with electric key)
F3	<u>Front power socket (cigarette lighter fuse).</u>
F4	Electrical control unit key (with smart key), left/right rear seat heater relay, engine compartment relay and fuse box (relay 2)
F5	BCM (body electrical control unit), panoramic sunroof, rain sensor
F6	Spare
F7	Trunk Lid Relay, Tailgate & Trunk Opening Switch, Trunk Lid Opening Motor, ICM Relay Box (Tank Flood Opening Relay)
F8	Driver/passenger door trim lamp, power exterior mirror switch, air conditioning control unit, dashboard extension trim lamp, overhead console lamp, amplifier, BCM (body electrical control unit), electrical control unit. key (with electronic key), audio system, audio visual head unit with navigation

Diagram

F9	<u>Optima cigarette lighter fuse</u>
F10	Steering wheel heater
F11	Air conditioning control module, relay and fuse block M/O (RELAY 14)
F12	Relay and fuse box M/O (RELAY 11/12), multi-function switch, front wiper motor
F13	Driver/passenger seat cushion heating with climate control (with seat climate control), driver/passenger seat heating module (without seat climate control)
F14	Spare
F15	Power outside mirror, driver/passenger side
F16	Driver/passenger seat cushion heater with climate control (with climate control seats), driver/passenger seat heater module (without climate control seats), front seat heater and seat climate control switch
F17	Instrument cluster
F18	Electrical control unit key (with electric key), security alarm relay (without electric key)
F19	Rear Seat Heater Relay L/R
F20	Passenger Seat Manual Switch
F21	Rear fog lamp relay
F22	Left/right headlamp angle corrector actuator, VSM unit, automatic headlamp angle correction unit (automatic HLLD), manual headlamp angle adjustment unit (manual HLLD), automatic transmission lever position indicator, instrument cluster, electrochromic mirror, integrated driver's seat memory system module, rear parking assist buzzer, air conditioning control module, lane-keep assist module, parking assist module
F23	Reserve
F24	Power Security Control Module, Seat Belt Reminder Indicator (Right-Hand Drive), Warning Light (Europe)
F25	Driver window module with electric anti-pinch control (left-hand drive), passenger window module with electric anti-pinch control (right-hand drive), left rear door window module with electric anti-pinch control, left-hand power window relay

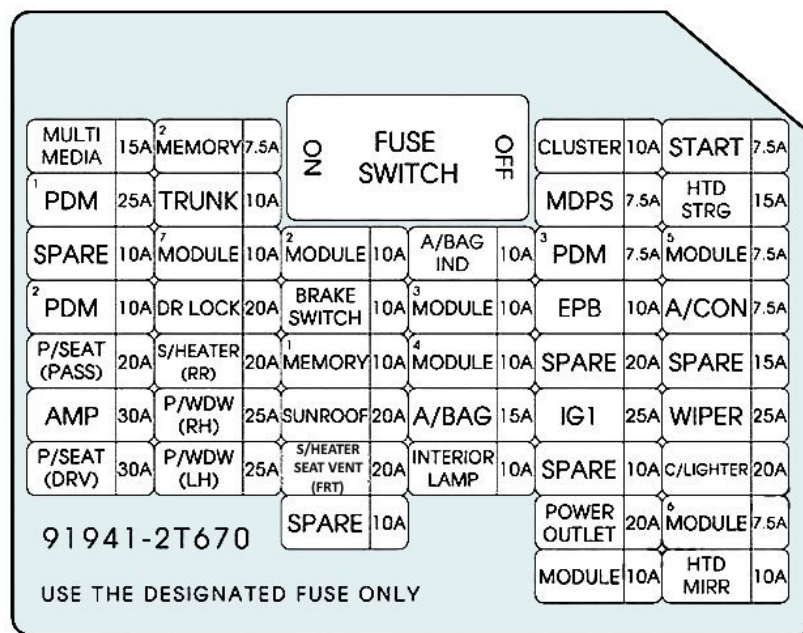
Diagram

F26	Amplifier
F27	Electrical control unit key, key fob holder, start/stop button
F28	Spare
F29	Instrument panel extension switch, EPS control module (with MDPS), steering angle sensor (without MDPS)
F30	Electrical control unit key (with electric key)
F31	Driver window module with electric anti-pressure glass (right-hand drive), passenger window module with electric anti-pressure glass (left-hand drive), right rear door window module with electric anti-pressure glass, right window elevator relay
F32	Driver Seat IMS Module, Driver Seat Manual Mode Switch, Driver Seat Lumbar Support Switch (2-Way)
F33	Door lock relay, door unlock relay, turn signal horn relay, double lock relay (right side control)
F34	Panoramic sunroof
F35	Fuse protection in the engine compartment block (F11, F12, F13)
F36	Audiovisual head unit with navigation
F37	Driver/passenger door exterior key handle (with power key), driver/passenger door lamp, air conditioning control unit, ignition key light and door release switch (without power key), radio frequency receiver (with power key), driver IMS unit, BCM, power exterior mirror switch, automatic light switch, data connector, driver/passenger door sill lamp, instrument cluster, automatic light switch and photocell (with security alarm system)

On the back of the block there may be relays: left and right window relays with power glass, trunk lid relay and door lock relay.

Type 2

Diagram



Name	Description	Amps
MULTIMEDIA	ISG LDC AUDIO,AUDIO_UVO, AUDIO (PA30A,B), NAVI1.5, NAVI_3.0, NAVI_4.0, TMU	15
PDM 1	Smart Key Control Module (with Smart Key)	25
SPARE	Spare	10
PDM2	Smart key system control unit, BUTTON START SW	10
P/SEAT(PASS)	Passenger Seat Manual Switch	20
AMP	Amplifier	30
P/SEAT (DRV)	Driver IMS Module, Driver Seat Manual Switch, Driver Lumbar Support Switch (2WAY)	30
MEMORY 2	PIC_RF_RECEIVER	7.5
TRUNK	Trunk lid relay, trunk light	10
MODULE 7	SPORT_MODE_SW, rear power window switch	10
DR LOCK	Door lock and unlock relay, lock relay (right-hand drive vehicles), turn signal sound relay	20
S/HEATER (RR)	Rear seat heating relay left/right	20

Diagram

P / WDW (RH)	Driver Power Window Module (Right Hand Drive), Passenger Power Window Module (Left Hand Drive), Rear Power Window Module Right Side, Right Power Window Relay	25
P / WDW (LH)	Driver Power Window Module (Left Hand Drive), Passenger Power Window Module (Right Drive), Rear Safety Power Window Module, Left Hand Drive Window Module, Left Power Window Relay	25
MODULE 2	BCM, panoramic sunroof, rain sensor	10
BRAKE SWITCH	Smart Key Control Module, Start-Stop Button Switch, Key Fob Holder, Brake Light Switch	10
MEMORY 1	SEAT EXTN (IMS), DR_TRIM_EXTN (FOLD'G), CLUSTER, A/CON, ECM, AUTOMATIC FOLDING, Tire Pressure Monitoring System, Cigarette Lighter Socket, A_L_PHOTO_SNSR, MUT	10
SUNROOF	Panoramic sunroof	20
S / HEATER (FRT) SEAT VENT (FRT)	Heated and ventilated front seats	20
SPARE	Reserve	10
A / BAG IND	Dashboard	10
MODULE 3	Sport mode switch, ignition switch/key solenoid (no smart key)	10
MODULE 4	Driver/Passenger CCS Control Module (if equipped), Driver/Passenger Seat Heater Module (without CCS), Front Seat Heater and CCS Switch, Oil Pump Inverter, ISG Low DC/DC Converter, Tire Pressure Monitor Module	10
A/BAG	A/BAG UNIT IG1 , WCS_PASS IG1	15
INTERIOR LAMP	Driver and passenger smart key exterior handle (smart key models), driver and passenger door lamp, air conditioning control module, ignition key or door alarm (without smart key), radio (with smart key), driver IMS module, BCM, data connector, driver and passenger door antimosquito lamp,	10

Diagram

exterior mirror switch, auto light sensor and photo sensor (with OB/alarm), auto lamp cut-off relay, instrument cluster

CLUSTER	Instrument cluster (IGN1)	10
MDPS	Hazard Panel Switch, EPS Control Module (Models with Power Steering), Steering Angle Sensor (Vehicles without Power Steering), Transmission Lever Indicator, Parking Brake Switch and Control Module	7.5
PDM 3	Smart Key Control Module (if equipped)	7.5
EPB	Electric parking brake	10
SPARE	Reserve	20
IG 1	E/R block IG1	25
SPARE	Reserve	10
POWER OUTLET	<u>Front cigarette lighter socket</u>	20
MODULE 1	Automatic headlight leveling device module (automatic HLLD), headlight leveling device switch (manual HLLD), left and right headlight leveling device actuator, BCM, front intelligent parking assist module, instrument cluster, electrochromic rearview mirror, air conditioning control, driver IMS module, rear parking assist buzzer, lane keeping assist module	10
START	Relay B/ALARM	7.5
HTD STRG	Steering wheel heater	15
MODULE 5	Smart Key Control Module (Smart Key Models), Rear Seat Heater Relay, E/R Fuse and Relay Box (RLY.2), Diesel Engine - Fuel Filter Relay	7.5
A/CON	Air Conditioning Control Module, E/R Fuse and Relay Box (RLY 14)	7.5
SPARE	Reserve	15
WIPER	Windshield wiper and washer	25
C/LIGHTER	<u>Cigarette lighter fuse Kia Optima 3</u>	20

Diagram

MODULE 6	Sunroof (IG2), Ionization, DSL_BOX, RR_SEAT_WARMER	7.5
HTD MIRR	Electric exterior mirrors	10