

[Does your BMW E46 have door lock problem. Check out my web site.](#)

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Below is a BMW General Module 5 (aka ZKE5 and GM5)

I have gone through the wiring diagrams and compiled this list of connections to the module. Since this module is used in the 3-series sedan, coupe, convertible and wagon as well as the Z4 and X3 there are some differences between the cars which are not listed, but, this list is generally correct. For the most accurate information go to the BMW WDS and look up your specific car.



Pin	Function on Connector X254	Wire Size/Color
1	SFBHZ2 - Window Switch Right Rear (S42-1)	0.5 WS/GE
2	SFFHZ - Driver's Window Switch for Rear Driver Side Window, Close (S126-9)	0.5 BL/GN
3	Front Passenger's Window Switch for Rear Passenger Side Window, Close (S127-4)	0.5 BL/GE
4	SFFHZ2 - Window Switch Left Rear (S41-1)	0.5 WS/GE
5	Park Angle/Tilt Sensor, In (B28-4)	0.5 SW/RT
6	Park Angle/Tilt Sensor, Out (B28-1)	0.5 SW/BL
7	Engine Hood Switch (S19-2)	0.5 VI/GN
8	Anti-Theft Horn, Out (H1)	0.75 SW/BL
9	To A36, rear washer and wiper module on Wagons (X13268-5)	0.35 BL/GE
10	ERHK - Input Sedan & Coupe - Trunk lock cylinder	0.35 BR/BL
11	Left Windscreen Washer Jet Heater from 2004-03	0.5 GN/GE

12	EKSBH - Window Anti-Trap Strip Right Rear	0.35 BR/RT
13	Not Used	----
14	SFFHA - Driver's Window Switch for Rear Driver Side Window, Open (S126-6)	0.5 SW/GE
15	Front Passenger's Window Switch for Rear Passenger Side Window, Open (S127-5)	0.5 SW/RT
16	SFFHA2 - Window Switch Left Rear (S41-4)	0.5 WS/GN
17	SFBHA2 - Window Switch Right Rear (S42-4)	0.5 WS/GN
18	Not Used	----
19	Signal, Interior Protection II (A123) (Convertible Only)	0.5 SW/GE
20	Tire Pressure Control Unit	0.35 VI/WS
21	KSIS - Driver's Window Disable Switch (S126-8)	0.5 GN/BL
22	VA2 - Cig Lighter light & Gear shift light (2002/09 on)	0.75 RT/GN
23	Rear View Mirror LED, Alarm Indicator	0.5 GR/SW/GE
24	Signal, Interior Protection Unit I (A121)	0.5 SW/GE
25	Common with pin X254-11 Right Windscreen Washer Jet Heater	0.5 GN/GE
26	EKSFH - Window Anti-Trap Strip Left Rear	0.35 BR/GE

Pin	Function on Connector X253	Wire Size/Color
1	Windshield Wiper Switch 1 (S5-7)	0.35 SW/BL
2	VRBT - Lock Front Passenger Door	0.5 BL/RT
3	Windshield Wiper Switch 2 (S5-1)	0.35 SW/WS
4	SFBA - Front Passenger's Window, Window Switch Open (S127-3)	0.35 GR/BL
5	SFFA - Driver's Window, Window Switch, Open (S126-1)	0.35 GR/SW
6	Trunk Release, Button, Inside (S204-6)	0.35 GR/BR
7	Central Lock Button (S18-5)	0.35 GE/RT
8	Interior Light Switch, Continuous Operation (E34-7)	0.35 BR/GE
9	K-Bus	0.35 WS/RT/G
10	Ground (X10012)	0.5 BR/SW
11	W11 - Wiper Relay Control (Relay K11-1)	0.35 BR/BL
12	Headlight Washer Pump Relay Control (K6-4)	0.75 BL/SW
13	MVRFT - Driver's Door Lock Motor, Lock	0.75 WS
14	MZS - Right Rear Door Lock Motor, Double Locking	0.75 SW
15	MZS - Left Rear Door Lock Motor, Double Locking	0.75 SW
16	MZS - Passenger Door Lock Motor, Double Locking	0.75 SW
17	MERHK - Trunk Lid Release Motor (M17)	0.5 GR/GN
18	IB - Footwell Light	0.75 RT/BL
19	SWA - Windshield Wiper Switch, Spray (S5-4)	0.35 BR/VI

20	ERFT - Unlock, Driver's Door, Key Position Sensor	0.5 WS/SW
21	ERBT - Unlock Front Passenger Door (or Vert-top lid lock driver's side)	0.5 WS/SW
22	VRFT - Lock, Driver's Door, Key position sensor	0.5 BL/RT
23	TKBH - Right Rear Door Contact (or Vert-top lid motor unlocked)	0.35 BR/SW
24	TKFH - Left Rear Door Contact (or Vert-top lid lock passenger side)	0.35 BR/GR
25	TKBT - Front Passenger Door Contact	0.5 BR/GR/GE
26	TKFT - Driver's Door Contact	0.5 BR/GR/GE
27	Switched +12V (Accessory/On/Start)	0.5 VI/GE
28	EKSFT - Window Anti Trap Strip Left Front	0.35 BR/RT
29	EKSBT - Window Anti Trap Strip Right Front	0.35 BR/BL
30	WI2 - Wiper Speed 2 Relay Control (K11-3)	0.35 BR/BL
31	RERHS - Open Collector Output Convertible - to relay K18363 for convertible top cover Wagon - to relay K90 for rear window release	0.5 WS/BL
32	MZS - Driver's Door Lock Motor, Double Locking	0.75 SW
33	MER - Front Passenger Door Lock Motor, Common, Unlock	0.75 BL
34	MER - Left Rear Door Lock Motor, Common, Unlock	0.75 BL
35	MER - Fuel Filler Lock Motor, Unlock	0.75 BL
36	MER - Right Rear Door Lock Motor, Unlock (or Vert-Glovebox lock)	0.75 BL
37	VRHK - Input Sedan & Coupe - Lift gate Lock Switch Convertible - Glovebox closed switch)	0.35 BR/VI
38	Multiple Restraint System Control Unit (Signal Crash Sensor)	0.35 GR/BL
39	Not Used	----
40	SFBZ - Front Passenger's Window, Window Switch, Close (S127-2)	0.35 GR/GE
41	SFFZ - Driver Window, Window Switch, Close (S126-4)	0.35 GR/BR
42	HKK - Trunk/Tailgate Contact	0.35 GR/BR
43	TOEVK - Vert-Top Open Mechanical top only (A169 X1869-3)	0.35 GR/GE
44	TOEHK - Button, open tailgate	0.35 GR/GE
45	RSK - Signal Return, Wiper Rest Position (M3)	0.35 BR/GN
46	SWINT - Windshield Wiper Switch Intermittant Variable Resistor (S5-9)	0.35 SW/GN
47	Constant +12V for general module electronics	0.5 RT/VI
48	LIN-Bus (2003 on)	0.35 GE/VI
49	FZV - Signal from FZV Antenna Amplifier remote key fob (N8-3)	0.35 BL/RT
50	MZS - Fuel Filler Lock Motor, Lock	0.75 WS
51	MER - Driver's Door Lock Motor Common, Unlock	0.75 BL
52	MVR - Right Rear Door Lock Motor, Lock	0.75 SW
53	MVR - Left Rear Door Lock Motor, Lock	0.75 WS

Pin	Function on Connector X332	Wire Size/Color
1	Constant +12 for trunk/rear release and lights	2.5 RT/GR
2	WP - Windshield Washer Pump	1.0 SW
3	VA - Interior/Trunk/Glove Box Light	1.5 RT/GE
4	MFFHZ - Window Motor Left Rear Close (M20-2)	2.5 BL/GN
5	MFBHZ - Window Motor Right Rear Close (M22-2)	2.5 BL/RT
6	MFBA - Window Motor Right Front Open (M23-2)	2.5 BL/VI
7	MFFA - Window Motor Left Front Open (M21-2)	2.5 BL/GR
8	Constant +12V for Front Windows	4.0 RT/GN
9	Constant +12V for Door Locks	2.5 RT/SW
10	Constant +12V for Rear Windows	2.5 RT/GN
11	MFFHA - Window Motor Left Rear Open (M20-1)	2.5 SW/GE
12	MFBHA - Window Motor Right Rear Open (M22-1)	2.5 WS/GE
13	MFBZ - Window Motor Right Front Closed (M23-1)	2.5 SW/VI
14	MFFZ - Window Motor Left Front Closed (M21-1)	2.5 SW/GN
15	Ground (X490)	4.0 BR

Connector	E46 3-series	E83 X3	E85/86 Z4	
X253-27	Fuse 9-5A	Fuse 9-5A	Fuse 12-5A	Switched power (Acc, On, Start)
X253-47	Fuse 49-5A	Fuse 49-5A	Fuse 10-5A	Power, general module electronics
X332-1	Fuse 52-30A	Fuse 52-30A	Fuse 26-30A	Power, trunk/rear lid release, interior/glove box/trunk lights
X332-8	Fuse 48-30A	Fuse 48-30A	Fuse 46-30A	Power, front windows
X332-9	Fuse 60-25A	Fuse 60-25A	Fuse 11-30A	Power, door lock
X332-10	Fuse 71-30A/10A	Fuse 71-30A	N/A	Power, rear windows

Fuse # and function for [E46 3-series](#) and X3

Fuse 9 - 5 Amps - brake light, light module, on board computer, speed control (Powered in Accessory, On and Start)

Color Code	Color
SW	Black
BR	Brown
RT	Red
GE	Yellow
GN	Green
BL	Blue

VI	Violet
GR	Gray
WS	White

Wire Size (mm ²)	AWG equivalent
0.35	20
0.50	18
0.75	16-17
1.0	15-16
2.5	11-12

KL 0	Ignition off
KL R	Ignition Accessory
KL 15	Ignition On/Run
KL 30	Ignition Start

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