

A2249 Digital diesel electronics control unit

Plug connector overview

Number	X-pin, colour	Description
X2411	96-pin, black	Component connector Digital diesel electronics control unit
X2412	58-pin, black	Component connector Digital diesel electronics control unit

Pin assignments at plug connector X2411

Pin	Type	Description / Signal type	Connection / Measuring notes
1	A	Voltage supply, fuel injector	Injector 4
2	A	Voltage supply, fuel injector	Injector 6
3	A	Voltage supply, fuel injector	Injector 5
4		Not used	
5		Not used	
6	M	Ground, charge air temperature sensor	Charge air temperature sensor
7	M	Ground, coolant temperature sensor	Coolant temperature sensor
8	M	Ground Exhaust temperature sensor before catalytic converter	Exhaust temperature sensor before catalytic converter
9	M	Ground Exhaust temperature sensor before particle filter	Exhaust temperature sensor before particle filter
10	E	Signal, oil pressure switch	Oil pressure switch
11	M	Ground, fuel temperature sensor	Fuel temperature sensor

12	M	Ground Oxygen sensor before catalytic converter	Oxygen sensor before catalytic converter
13		Not used	
14	M	Camshaft sensor ground	Hall-effect sensor, camshaft 1
15	M	Ground, crankshaft position/rpm sensor	Speed (rpm) sensor
16	M	Oxygen sensor heater in front of catalytic converter	Oxygen sensor before catalytic converter
17		Not used	
18		Not used	
19		Not used	
20		Not used	
21		Not used	
22		Not used	
23		Not used	
24	A	Signal, electric changeover valve for engine mount	Electrical changeover valve, engine mount
25	M	Ground, fuel injector	Injector 4
26	M	Ground, fuel injector	Injector 6
27	M	Ground, fuel injector	Injector 5

28		Not used	
29		Not used	
30	A	Voltage supply, rail pressure sensor	Rail pressure sensor
31		Not used	
32	A	Voltage supply, boost pressure sensor	Boost pressure sensor
33	A	Supply Exhaust backpressure sensor	Exhaust backpressure sensor
34	E	Signal Exhaust temperature sensor before particle filter	Exhaust temperature sensor before particle filter
35		Not used	
36	E	Signal Oxygen sensor before catalytic converter	Oxygen sensor before catalytic converter
37		Not used	
38	E	Signal, oil level sensor	Oil level sensor
39	A	Voltage supply, crankshaft position/rpm sensor	Speed (rpm) sensor
40		Not used	
41		Not used	
42		Not used	
43		Not used	

44	A	Activation, DDE relay	DDE main relay
45	E	Signal, hot film air mass meter	Hot-film air mass meter
46	E	Signal, intake air temperature	Hot-film air mass meter
47	M	Ground Hot-film air-mass meter	Hot-film air mass meter
48		Not used	
49	A	Voltage supply, fuel injector	Injector 1
50	A	Voltage supply, fuel injector	Injector 3
51	A	Voltage supply, fuel injector	Injector 2
52		Not used	
53		Not used	
54	E	Signal, boost pressure sensor	Boost pressure sensor
55		Not used	
56	E	Signal, rail pressure sensor	Rail pressure sensor
57	E	Signal, fuel temperature	Fuel temperature sensor
58	E	Signal Exhaust temperature sensor before catalytic converter	Exhaust temperature sensor before catalytic converter
59	E		Exhaust backpressure sensor

		Signal Exhaust backpressure sensor	
60	E	Signal Oxygen sensor before catalytic converter	Oxygen sensor before catalytic converter
61		Not used	
62	E	Signal, camshaft sensor	Hall-effect sensor, camshaft 1
63		Not used	
64		Not used	
65		Not used	
66		Not used	
67		Not used	
68	A/E	Bi-directional data interface	Preheating control unit
69	A/E	Bi-directional data interface	Alternator
70	M	Ground, preheating control unit	Preheating control unit
71	A	Signal, volume control valve	Volume control valve
72	A	Signal, rail pressure control valve	Rail pressure control valve
73	M	Ground, fuel injector	Injector 1
74	M	Ground, fuel injector	Injector 3
75	M	Ground, fuel injector	Injector 2

76		Not used	
77		Not used	
78	M	Ground, rail pressure sensor	Rail pressure sensor
79		Not used	
80	M	Ground, boost pressure sensor	Boost pressure sensor
81	M	Ground Exhaust backpressure sensor	Exhaust backpressure sensor
82	E	Signal, coolant temperature	Coolant temperature sensor
83	E	Signal, charge air temperature	Charge air temperature sensor
84	E	Signal Oxygen sensor before catalytic converter	Oxygen sensor before catalytic converter
85		Not used	
86	M	Ground, oil level sensor	Oil level sensor
87	E	Signal, crankshaft position/rpm sensor	Speed (rpm) sensor
88		Not used	
89		Not used	
90		Not used	
91		Not used	

92		Not used	
93	A	Signal Boost pressure adjuster 1	Boost pressure adjuster 1
94	A	Signal, solenoid valve for exhaust gas recirculation	Solenoid valve, exhaust gas recirculation
95	A	Signal, changeover valve for swirl flaps	Electric changeover valve, swirl flaps
96	A	Signal Throttle valve	Throttle valve

Pin assignments at plug connector X2412

Pin	Type	Description / Signal type	Connection / Measuring notes
1	E	Voltage supply, control unit	B+ potential distributor
2	M	Ground	Ground point
3	E	Voltage supply, control unit	B+ potential distributor
4	M	Ground	Ground point
5	E	Voltage supply, control unit	B+ potential distributor
6	M	Ground	Ground point
7	E	Wake-up signal, terminal 15	Connector , terminal 15 wake-up signal
8		Not used	
9		Not used	

10	E	Signal, electronic vehicle immobilizer	Car access system
11	E	Diagnosis, fuel heating	Fuel heater
12		Not used	
13		Not used	
14	E	Signal, battery sensor	Battery sensor
15		Not used	
16		Not used	
17		Not used	
18		Not used	
19	A	Signal, E-box fan	E-box fan
20		Not used	
21		Not used	
22		Not used	
23	E	Brake light test signal	Brake light switch
24		Not used	
25		Not used	
26		Not used	

27		Not used	
28		Not used	
29	M	Ground, accelerator pedal position sensor	Accelerator pedal module
30	M	Ground, accelerator pedal position sensor	Accelerator pedal module
31	A	Signal Solenoid, radiator shutter	Solenoid, radiator shutter
32		Not used	
33	A/E	Signal PT-CAN low	CAN-bus connector
34	E	Start signal	Car access control unit
35		Not used	
36	E	Brake light signal	Brake light switch
37		Not used	
38		Not used	
39	E	Signal, accelerator pedal position sensor	Accelerator pedal module
40	A	Signal, electric fan	Electric fan
41		Not used	
42		Not used	
43	A		Accelerator pedal module

		Supply, accelerator pedal position sensor	
44		Not used	
45		Not used	
46	A/E	Signal PT-CAN high	CAN-bus connector
47		Not used	
48		Not used	
49		Not used	
50	E	Signal, clutch switch	Clutch switch
51		Not used	
52	E	Signal, accelerator pedal position sensor	Accelerator pedal module
53	A	Speed signal	OBDII socket
54		Not used	
55		Not used	
56	A	Supply, accelerator pedal position sensor	Accelerator pedal module
57		Not used	
58		Not used	