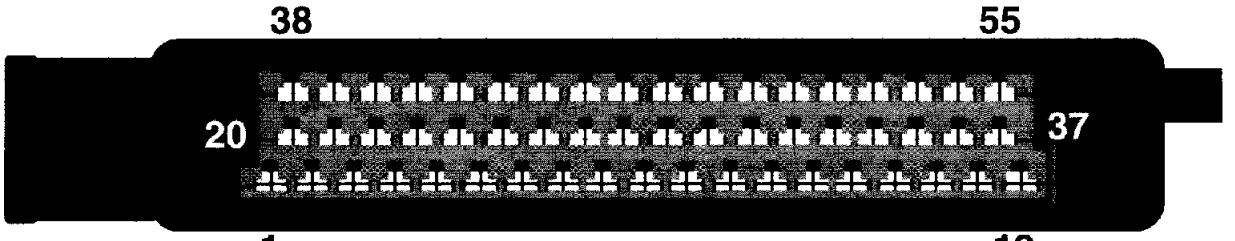
MODEL :	750IL
YEAR (S) :	1988 - 90
TYPE SYSTEM :	LH - MOTRONIC
ECU LOCATION (S):	REAR ENGINE COMPARTMENT PASSENGER SIDE

ECU PLUG REFERENCE



55 POSITION ECU PLUG

CONTROL UNIT PIN TERMINAL IDENTIFICATION

1 - Ignition pulse
2 - Ground shield for ignition pulse
3 - Fuel pump relay control
4 - NO CONNECTION
5 - Evap purge
6 - Engine speed output signal (Tach)
7 - Air mass meter load signal
8 - Cylinder identification sensor
9 - NO CONNECTION
10 - Ground
11 - NO CONNECTION
12 - Air mass meter supply
13 - Diagnostic link
14 - Ground
15 - NO CONNECTION
16 - Injector driver stage
17 - Injector driver stage
18 - Battery (+)
19 - Ground
20 - NO CONNECTION
21 - NO CONNECTION
22 - Check engine control
23 - Oxygen sensor heater relay control
24 - Ground
25 - Air flow meter burn-off signal
26 - Air flow meter ground
27 - Main relay supply
28 - Oxygen sensor signal
29 - NO CONNECTION
30 - NO CONNECTION
31 - Cylinder identification sensor
32 - Fuel rate signal
33 - NO CONNECTION
34 - NO CONNECTION
35 - NO CONNECTION
36 - Main relay control
37 - Main relay supply
38 - Anti-theft
39 - Diagnostic link
40 - A/C compressor
41 - NO CONNECTION
42 - P/N switch
43 - CO adjust
44 - Intake air temperature sensor
45 - Coolant temperature sensor
46 - NO CONNECTION
47 - Mark/speed sensor (+)
48 - Mark/speed sensor (-)
49 - NO CONNECTION
50 - Timing control signal
51 - ECT
52 - Closed throttle control
53 - Full load throttle control
54 - ECT
55 - Diagnostic link

*Engine braking torque on 325,
**NO CONNECTION on 325 & 528e

VOLTAGE MEASUREMENTS

MANUFACTURER	BMW
MODEL (S)	750IL
YEAR (S)	1988-90
TYPE SYSTEM	LH - MOTRONIC

TECHNICAL DATA

GROUNDS

Key	OFF	ON	Volts
(Pin G1 to 2)		√	0.0 - .02
(Pin G1 to 10)		√	0.0 - .02
(Pin G1 to 14)		√	0.0 - .02
(Pin G1 to 19)		√	0.0 - .02
(Pin G1 to 24)		√	0.0 - .02
(Pin to)			

BATTERY SUPPLY

Key	OFF	ON	Volts
(Pin 18 to 19) 1	√		11.0 - 13.0
(Pin 18 to 19) 1		√	11.0 - 13.0

MAIN RELAY SUPPLY

Key	OFF	ON	Volts
(Pin 19 to 27)	√		0.0
(Pin 19 to 27)		√	11.0 - 13.0
(Pin 19 to 37)	√		0.0
(Pin 19 to 37)		√	11.0 - 13.0

COOLANT TEMPERATURE SENSOR

Temperature° F	Volts
68 (Pin 45 to 19)	3.35 - 3.5
176 - 194 (Pin 45 to 19)	1.10 - 1.15

AIR TEMPERATURE SENSOR

Temperature° F	Volts
68 (Pin 44 to 26)	3.35 - 3.50
104 - 122 (Pin 44 to 26)	1.40 - 2.55

FUEL PUMP RELAY

Key ON	Volts
(Pin 3 to 19)	11.0 - 13.0
Cranking	
(Pin 3 to 19)	0.0 - 1.0
Idling	
(Pin 3 to 19)	0.0 - 1.0

TECHNICAL DATA

THROTTLE SWITCH

Position	Volts
Closed (Pin 24 to 52)	.10 - .50
Opened (Pin 24 to 52)	8.0 - 8.5
Opened (Pin 24 to 53)	8.0 - 8.5
Full load (Pin 24 to 53)	.10 - .50

AIR MASS METER

Key ON	Volts
Supply (Pin 12 to 26)	4.5 - 5.5
Ref. (Pin to)	
Load (Pin 7 to 26)	1.30 - 1.50
CO Adj. (Pin 43 to 26)	1.20 - 1.50
Engine Idling	
Supply (Pin 12 to 26)	4.5 - 5.5
Ref. (Pin to)	
Load (Pin 7 to 26)	2.30 - 2.50
CO Adj. (Pin 43 to 26)	1.20 - 1.50

OXYGEN SENSOR

Key ON	Volts
(Pin 24 to 28)	.40 - .50
Engine Idling	
(Pin 24 to 28)	.10 - .80

OXYGEN SENSOR HEATER

ENGINE IDLING	Volts
(Pin 19 to 23)	0.0 - 2.0

EVAPORATIVE PURGE VALVE

Key ON	Altitude	Volts
(Pin 5 to 10)		1.0 - 2.0

BMW 750iL models 1988 thru 1990. DME pinout specifications for voltages, grounds, continuity and resistances. LH-Motronic System
Engine electronics

OHMS MEASUREMENTS

MANUFACTURER	BMW
MODEL (S)	750IL
YEAR (S)	1988-90
TYPE SYSTEM	LH - MOTRONIC

TECHNICAL DATA

CAUTION: *WHEN MEASURING OHMS* ***DISCONNECT THE ECU*** *FROM THE HARNESS PLUG AND* ***NEVER TURN THE IGNITION KEY ON.*** *IT IS POSSIBLE THAT FAILURE TO FOLLOW THESE STEPS WILL RESULT IN* ***DAMAGE TO THE ECU.***

GROUNDS

Key OFF	Resistance - ohms
(Pin G1 to 2)	0.0 - .05
(Pin G1 to 10)	0.0 - .05
(Pin G1 to 14)	0.0 - .05
(Pin G1 to 19)	0.0 - .05
(Pin to)	

MAGNETIC COIL SENSORS

Sensor type	Resistance - ohms
Speed/Mark (Pin47 to48)	550 - 650
Cylinder ID (Pin 8 to 31)	.20 - .80

COOLANT TEMPERATURE SENSOR

Temperature °F	Resistance - ohms
68 (Pin 45 to 19)	2200 - 2700
176 - 194 (Pin 45to 19)	200 - 400

AIR TEMPERATURE SENSOR

Temperature °F	Resistance - ohms
68 (Pin 44to 26)	2200 - 2700
104 - 122 (Pin 44to 26)	700 - 1000

THROTTLE SWITCH

Position	Resistance - ohms
Closed (Pin52 to 19)	0 - 2
Full load (Pin 53to 19)	0 - 2

FUEL PUMP RELAY

Coil winding	Resistance - ohms
(Pin 3 to37)	80 - 90

TECHNICAL DATA

AIR FLOW SENSOR

	Resistance - ohms
Load (Pin 7 to 26)	3 - 4
CO Adj. (Pin 26 to 43)	300 - 500
Burn-off (Pin 26 to 25)	2000 - 3000

SINGLE INJECTOR

Winding	Resistance - ohms
Across Injector contacts	15.0 - 17.0

INJECTOR GROUP(S)

Winding	Resistance - ohms
(Pin 37 to 16)	6.0 - 7.0
(Pin 37 to 17)	6.0 - 7.0