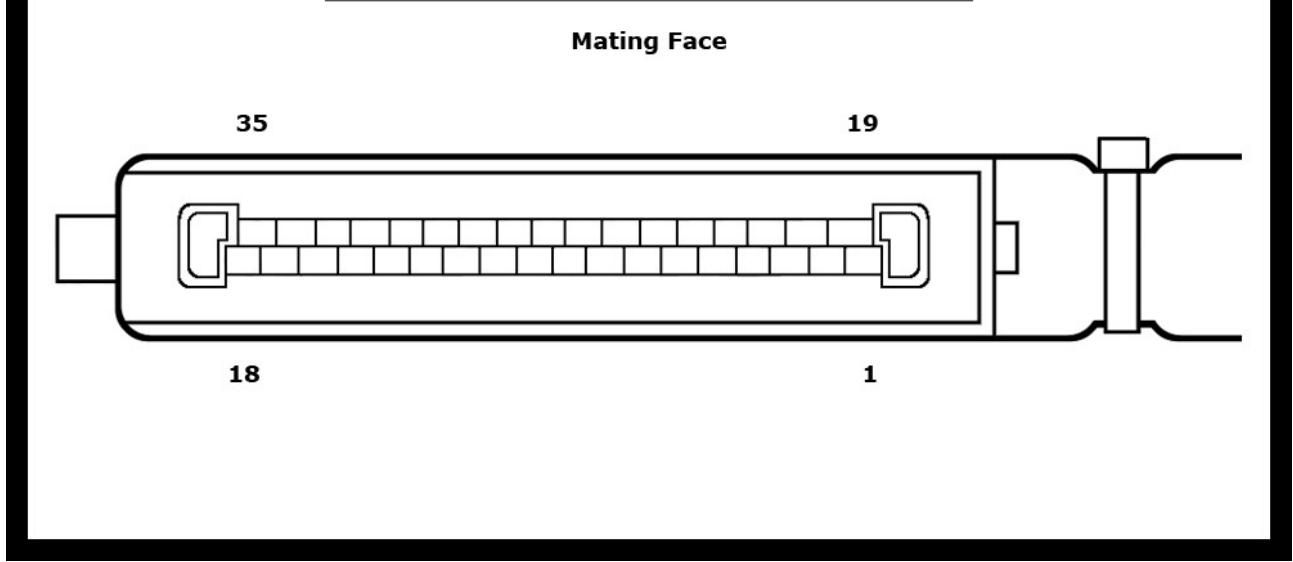


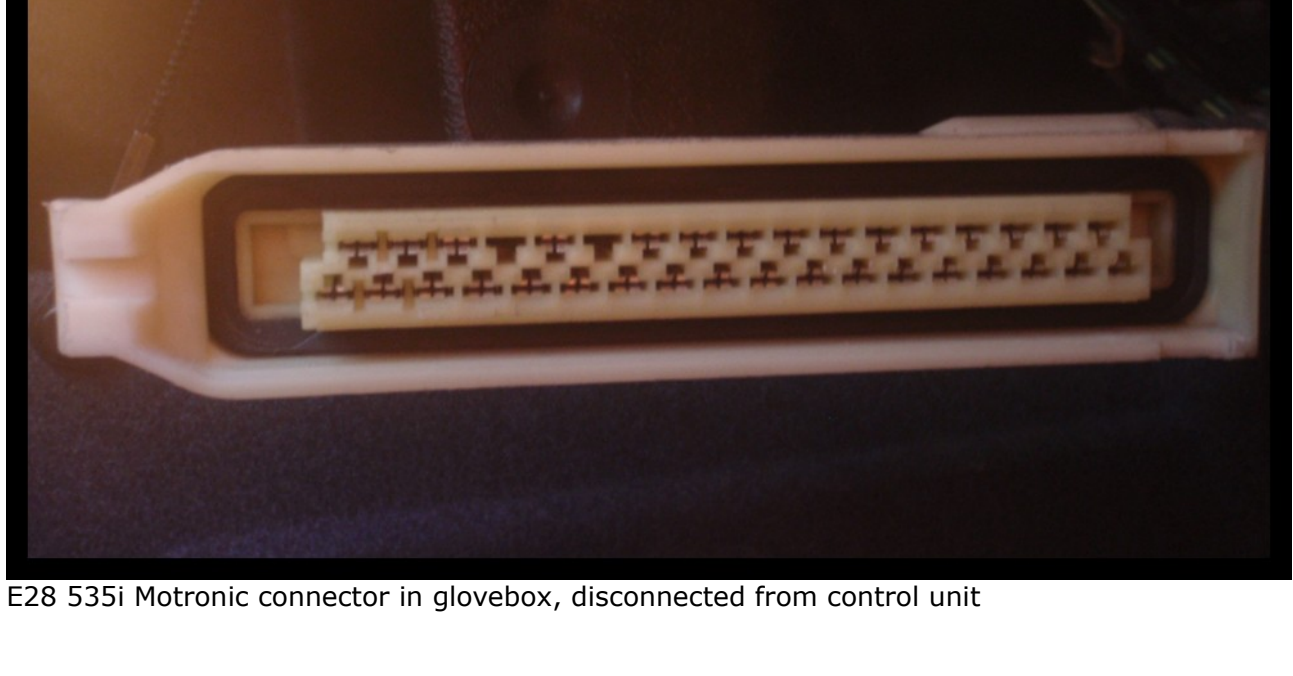
MOTRONIC 1.0 Pinout

BMW E28 535i

1	Ignition Timing Control	19	Ground
2	Closed Throttle Input	20	Fuel Pump Relay Control
3	Wide Open Throttle Input	21	Engine Speed Output
4	Start Engine Input	22	Air Inlet Temperature Input
5	Ground/Shield	23	Shields
6	Common for Air Flow Meter	24	Oxygen Sensor Input
7	Air Flow Input	25	Reference Point Sensor Input
8	Engine Speed Sensor Input	26	Reference Point Sensor Input
9	Reference Output for Air Flow Meter	27	Engine Speed Sensor Input
10	?	28	Transmission Input
11	Fuel Rate Output	29	A/C On Input
12	?	30	- Empty -
13	Engine Temperature Input	31	Oxygen Sensor Heater Control
14	Fuel Injector Control 1,2,3	32	- Empty -
15	Fuel Injector Control 4,5,6	33	Idle Speed Actuator
16	Ground	34	Idle Speed Actuator
17	Ground	35	(+) Ignition Power Input
18	(+) Continuous Power Input		



Motronic 1.0 connector pin diagram



E28 535i Motronic connector in glovebox, disconnected from control unit

Details (E28 535i)

Conventional current flow is observed

1	Ignition Timing Control	BK
-Comes from (S105) ECU function: Controls primary ignition coil by switching the ground side of its circuit		
ETM 1360-1		
2	Closed Throttle Input	BR/BU
-Goes to (LL) of throttle switch		
ETM 1360-1		
3	Wide Open Throttle Input	BR/BK
-Goes to (VL) of throttle switch		
ETM 1360-1		
4	Start Engine Input	BK/YL
ETM 1240-0		
5	Ground/Shield	BR
-Goes to (G102) -Grounds shield of reference point sensor wires		
ETM		
6	Common for Air Flow Meter	GY/BU
-Comes from pin (4) of air flow meter connector		
ETM 1360-7		
7	Air Flow Input	GY/YL
-Comes from pin (2) of air flow meter connector		
ETM 1360-7		
8	Engine Speed Sensor Input	YL
-Comes from engine speed sensor connector (black connector)		
ETM 1360-1, 1360-7		
9	Reference Output for Air Flow Meter	GY/WT
-Comes from pin (3) of air flow meter connector		
ETM 1360-7		
10		STANDARD BR AUTO BR/GN
Standard: Connected to socket (17) via (C131) and is ultimately grounded to (G102)		
Automatic: Goes to socket (2) of (C238) and ultimately pin (ME) of transmission control unit connector (socket (24) of connector)		
ETM 1360-1, 2460-3		
11	Fuel Rate Output	WT
-Goes to pin (3) of (C103) and ultimately socket (2) of (C1) which plugs into pin (KL11) of the instrument cluster circuit board		
ETM 6210-0, 6210-4, 6581-1, 6581-2		
12	?	WT/GR
-Goes to socket (5) of diagnostic connector		
ETM 1360-1		
13	Engine Temperature Input	BR/RD
ETM 1360-1		
14	Fuel Injector Control 1,2,3	BR/WT
-Comes from (S109) -Controls injectors 1, 2 and 3 by switching the ground side of their circuits (all three at the same time)		
ETM 1360-5		
15	Fuel Injector Control 4,5,6	BR/YL
-Comes from (S106) -Controls injectors 4, 5, and 6 by switching the ground side of their circuits (all three at the same time)		
ETM 1360-5		
16	Ground	BR
Goes to (G102)		
ETM 1360-1		
17	Ground	BR
-Goes to (G102) -Is connected to socket (10) via (C131)		
ETM 1360-1		
18	(+) Continuous Power Input	RD
-Comes from socket of pin (30) of main relay -Hot at all times		
ETM 1360-4		
19	Ground	BR
-Goes to (G102)		
ETM 1360-1		
20	Fuel Pump Relay Control	BR/GN
-		
ETM 1250-0		
21	Engine Speed Output	BK/BU
-Goes to socket (1) of (C103) and ultimately to socket (8) of (C1) which plugs to pin (TD) of instrument cluster circuit board		
ETM 6210-4		
22	Air Inlet Temperature Input	GY/VI
-Comes from pin (1) of air flow meter connector		
ETM 1360-7		
23	Shields	N/A
-Shield for oxygen sensor and engine speed sensor wires		
ETM 1360-7		
24	Oxygen Sensor Input	GN
-Comes from (C141) of oxygen sensor		
ETM 1360-7		
25	Reference Point Sensor Input	YL
-Comes from reference point sensor connector (gray connector)		
ETM 1360-1, 1360-7		
26	Reference Point Sensor Input	BK
-Comes from reference point sensor connector (gray connector)		
ETM 1360-1, 1360-7		
27	Engine Speed Sensor Input	BK
-Comes from engine speed sensor connector (black connector)		
ETM 1360-1, 1360-7		
28	Transmission Input	BR/BK
Standard: Goes to socket (1) of (C132) and ultimately is grounded to (G102)		
Automatic: goes to socket (6) of (C238) and ultimately pin (2) of (C1) to the transmission range switch		
ETM 1350-1, 1360-0, 1360-1		
29	A/C On Input	BU/BK
-Comes from A/C compressor clutch		
ETM 1360-1, 6411-0, 6454-0		
30	- Empty -	
XX XX XX		
31	Oxygen Sensor Heater Control	GY/BR
-Comes from socket of pin (85) of oxygen sensor relay		
ETM 1250-0		
32	- Empty -	
XX XX XX		
33	Idle Speed Actuator	WT/YL
-Comes from (5) of idle speed actuator -Extend control		
ETM 1360-7		
34	Idle Speed Actuator	BK/GN
-Comes from (3) of idle speed actuator -Retract control		
ETM 1360-7		
35	(+) Ignition Power Input	RD/BU
-Comes from socket of pin (87) of main relay -Hot in 'RUN' or 'START'		
ETM		