

E30 M3 Engine Harness (late 87 build)		car side wire color	engine side wire color	description
1	alternator	blue	blue	wire from alternator back to instrument cluster, function identical between e30 and e36
2	oil level sensor pin 1 (static)	blue/yellow	white	can be connected separately to oil level sensor on 525i oil pan
3	---	---	---	
4	coolant temp sender	brown/violet	brown/white	signal from engine coolant temp sensor to instrument cluster, use coolant temp sender from e30 m3 (1 710 511)
5	oil pressure	black/brown	brown/green	signal from engine oil pressure sensor to instrument cluster
6	o2 sensor relay	green/yellow	yellow/blue & green/yellow	brings +12V from fuse #9 to o2 sensor heater relay contact (not the coil), dme controls relay, e36 o2 sensor relay gets power from e36 harness
7	ignition	green	green	car provides +12V on this with the ignition on
8	---	---	---	
9	---	---	---	
10	oil level sensor pin 2 (dynamic)	violet/green	yellow	can be connected separately to oil level sensor on 525i oil pan
11	service interval reset	white/blue	white/blue	signal from diag connector to instrument cluster, has no function related to engine management
12	---	---	---	
13	fuel pump relay	violet/red	green/violet	+12V from engine harness side relay to fuel pump, dme controls fuel pump relay
14	---	---	---	
15	---	---	---	
16	rxd - pin 6 of diag conn	black/white	white/black	no use that I am aware of - ignore
17	---	---	---	
18	starter	black/yellow	black/yellow	car provides +12V on this wire with starter engaged
19	oil temp sender	brown/yellow	brown/violet	signal from e30 m3 oil temp sensor to instrument cluster
20	---	---	---	
E30 M3 C103 (in glove box)				
1	engine speed	black		signal from dme to tachometer
2	main relay	green/red		ignore
3	fuel rate	yellow/white		signal from dme to obc and instrument cluster
E36 S50 Harness				
		engine side wire color		
1	---	---	---	
2	---	---	---	
3	---	---	---	
4	ac compressor control	black/blue		signal from dme to turn on compressor relay
5	normal speed relay	black/gray		signal from dme to turn on normal speed relay
6	climate control module	violet/gray		signal from car to dme to turn on a/c
7	starter immobilization relay	green	ignore	signal from car to dme to disable starting
8	check engine	gray	wire to cluster	check engine light
9	---	---	---	
10	reverse light	blue/yellow	ignore	transmission switch connects to engine harness on the e36, the e30 transmission switch connects to the chassis
11	engine coolant temp 1	brown/yellow	ignore	signal from e36 instrument cluster to coolant temp sensor, not used in e30
12	engine coolant temp 2	brown/violet	goes to e30 harness pin 4	return signal from sensor to instrument cluster, e30 sensor uses a single wire that connects to this wire
13	oxygen sensor, fuel pump relay	green/violet	goes to e30 harness pin 15	power from engine side relay to fuel pump
14	speed out	black/white	wire to cluster, green plug	road speed signal from instrument cluster to dme, (used for higher rev limit above 1st gear speeds?), run wire from 2-pin green connector on back of instrument cluster to this wire
15	wiper module	black/green	ignore	
16	data link	white/yellow	ignore	
17	data link dme	white/violet	ignore	
18	starter	black/yellow	goes to e30 harness pin 18	same function as e30
19	service reset	white/green	goes to e30 harness pin 11	same function as e30 - has nothing to do with engine management
20	Engine Speed	black	wire to glove box c103 black wire	rpm signal from dme, goes to pin 1 of e30 c103
21	ignition	green	goes to e30 harness pin 7	same function as e30
22	reversing light switch	green/white	ignore	transmission switch connects to engine harness on the e36, e30 goes to body chassis
23	oil pressure	brown/white	goes to e30 harness pin 5	same function as e30
24	instrument cluster	white/black	a	fuel consumption signal from dme to instrument cluster
25	alternator	blue	goes to e30 harness pin 1	same function as e30
95 s50 harness has three relays				
engine control module relay		dme controls this relay, controls power to most engine sensors, etc..		
fuel pump relay		dme controls this relay, fuel pump power out goes through harness connector		
oxygen sensor heater relay		self contained in engine harness, no wires pass through harness connector		
power is delivered to the s14 harness via the grn/yel wire, this wire is not needed on e36 as power comes to the s50 via a red wire to the battery terminal				
the green ignition wire from the e30 goes to the s50 dme to turn on the engine management system				
oil level sensor - looking into the engine side connector with the middle bump up, pin numbering left to right is 3,2,1 - pin 3 is ground, wires 1 & 2 connect to e30 m3 harness				