

2013 Mercedes C250 (W204, 1.8L turbo) - Starter Relay Wiring

Symptom reported: no click, dash lights do not come on

The starter relay is powered **from the circuit 15 relay** (see diagram: "HOT W/ CIRCUIT 15 RELAY ENERGIZED" -> Fuse 7 20A -> relay). If the dash will not light, circuit 15 is not switching on, so the starter relay **cannot** click no matter what. The problem is upstream of the starter circuit. Check in this order:

1. Battery: resting voltage at the posts (12.4V+ is healthy) and whether it holds when the key is turned. Clean/tighten both terminals.
2. Main grounds: battery ground point W10 (near battery) and the engine ground straps.
3. Prefuses: front prefuse box F32 (right rear of engine bay) - the 400A pyrofuse/prefuse feeds the car.
4. Key / ignition switch (EZS, N73): try the spare key. If the car does not wake at all with a good battery, the EZS or steering lock (ESL, N26/5) is the usual suspect on W204s.

(Steps 1-4 are general diagnostic order, not from the Mercedes manual.)

Starter relay (N10/1kM) - read from the C250 diagram

Location: relay "M" in the front SAM fuse & relay module, left rear of engine compartment.

Power in: circuit 15 relay -> Fuse 7 (20A) -> relay contact.

Output to starter: SAM connector 3M pin 4 -> starter terminal 50 (factory V6 sheet shows this as a 2.5mm² violet/white wire through X26).

Diode tap: relay output also leaves at connector 5M pin 7.

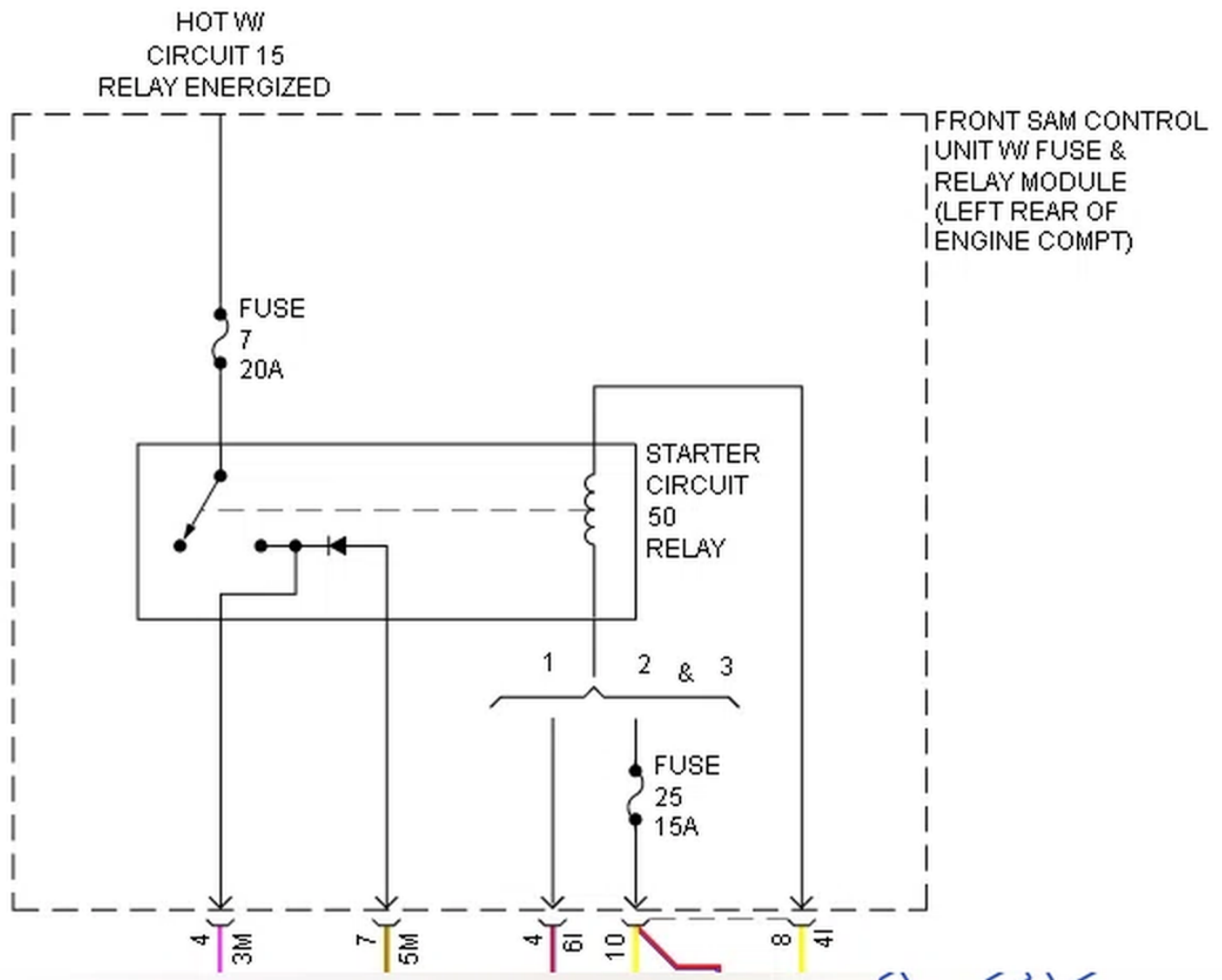
Coil: one side at connector 4I pin 8, the other at connector 6I pin 4 (path "1", which appears to be the 1.8L turbo variant; the fuse 25 15A path "2 & 3" appears to be the V6s - variant numbering read from the diagram legend, not confirmed).

Coil is switched by the engine computer (ME-SFI, N3/10) per Mercedes documentation.

Quick test once the dash lights up: with the key held in START, 12V should appear at starter terminal 50. 12V there but no crank = starter/cable. No 12V = relay or its control.

Pages that follow: (2) C250 starter relay diagram, top section (the rest of that page is paywalled on the source site). (3-5) Factory Mercedes diagram pe15.00-p-2101-97fad, starter/alternator/battery, drawn for the V6 272 engine in the W204 - the battery/starter power side is shown for reference.

C250 starter circuit 50 relay (source: portal-diagnostov.com, 2012 C250 Starting diagram)



Document number: pe15.00-p-2101-97fad
Document title: Wiring diagram for starter, alternator, battery

Code:	Designation:	Position:
A0	Color code key	23L
B95	Battery sensor	15L
F32	Front electrical prefuse box	10A
F32f150	Prefuse 150	6B
F32f88	Pyrofuse 88	7B
G1	On-board electrical system battery	13L
G2	Alternator	5L
LIN C1	Drive train LIN	4B
M1	Starter	12L
N10/1	Front SAM control unit with fuse and relay module	9L
N10/2	Rear SAM control unit with fuse and relay module	19L
N3/10	ME-SFI [ME] control unit	3A
U12	Valid for left-hand drive vehicles	15G
U13	Valid for right-hand drive vehicles	15G
W10	Right front battery ground point	15H
W10/7	Left front battery ground point	15H
X26	Interior and engine wiring harness electrical connector	9H

