

Information from Olaf Tempelmeier via the FB VW GTi Conversion club – part 2!

The main loom!

OK this goes out to all the "Loomies" ;o)

I took some pictures of my detached loom right out of a Golf 3 GTI from 95 with **ADY** Engine Code. This should be all you need for the conversion from the donor.

This is the main loom right out of the donor without any stripping.

in the upper area you see the T68 and some smaller connectors. In the lower left area you see the light-cables which will be cut off after stripping. In the lower right area you see the T28 which goes the engine:

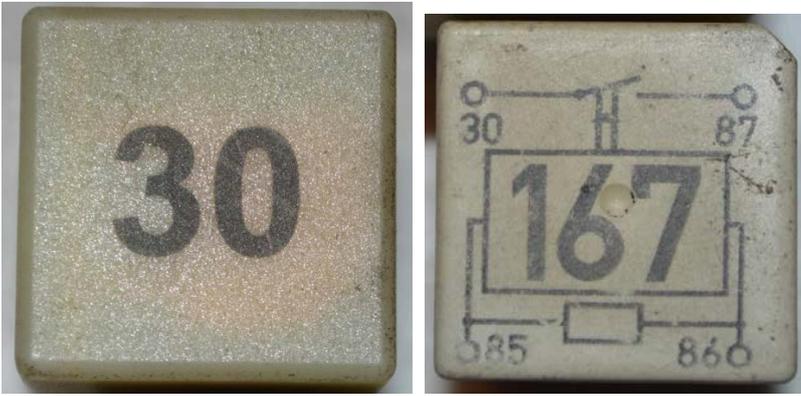


These are the two relays you need from the donor:

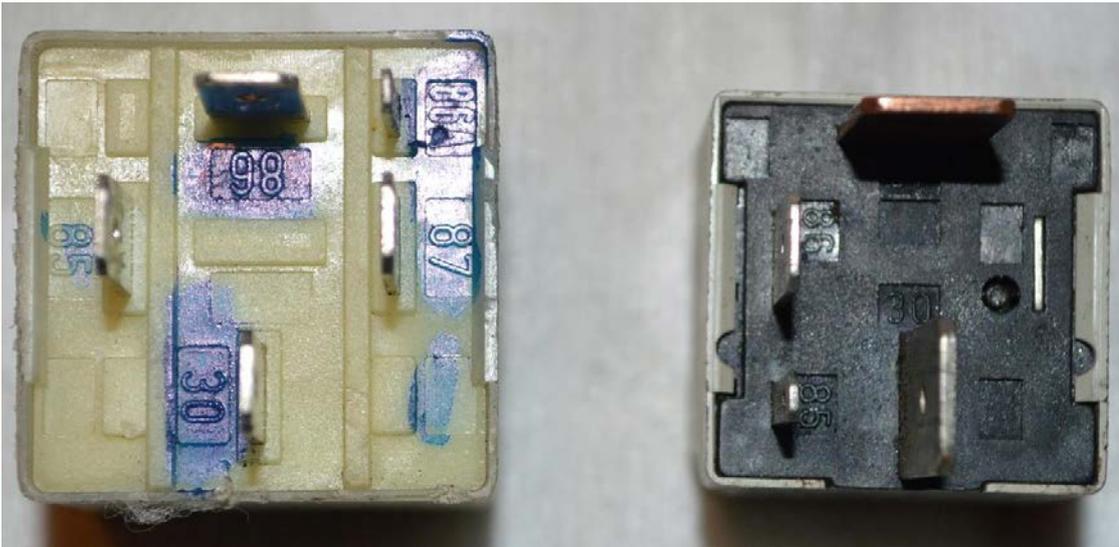
Partnumbers:

relay 30: 165 906 381

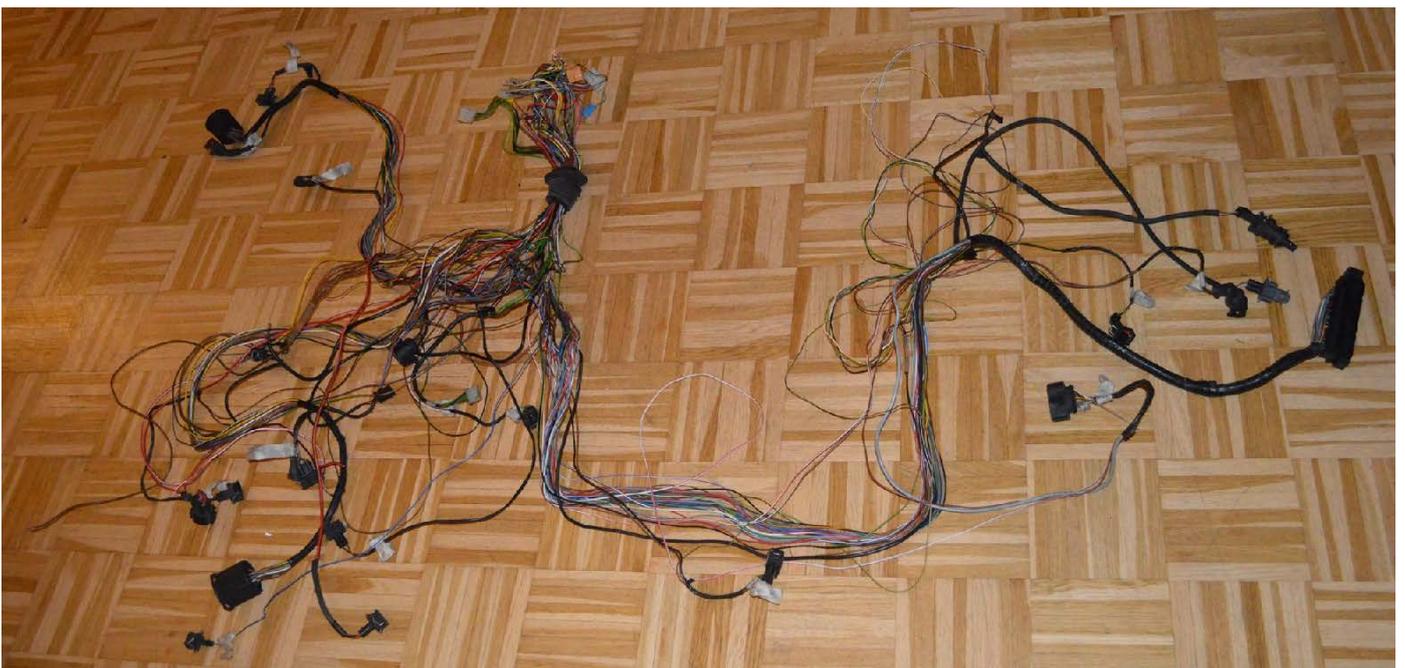
relay 167: 191 906 383C



the two relays from the back, you can use the two old relay holder in the back from the turbo-diesel engine ... or you buy new one. Number 30 = Main Power relay, 167 is the Fuel pump relay. More on these later.



So first step: Loom removed from the insulation tape. You can cut off the rubber bits which were at the cables for the flashers.



The connectors on the right side: The big mighty T68, than the temperature sensors, lambda probe, activated charcoal valve:



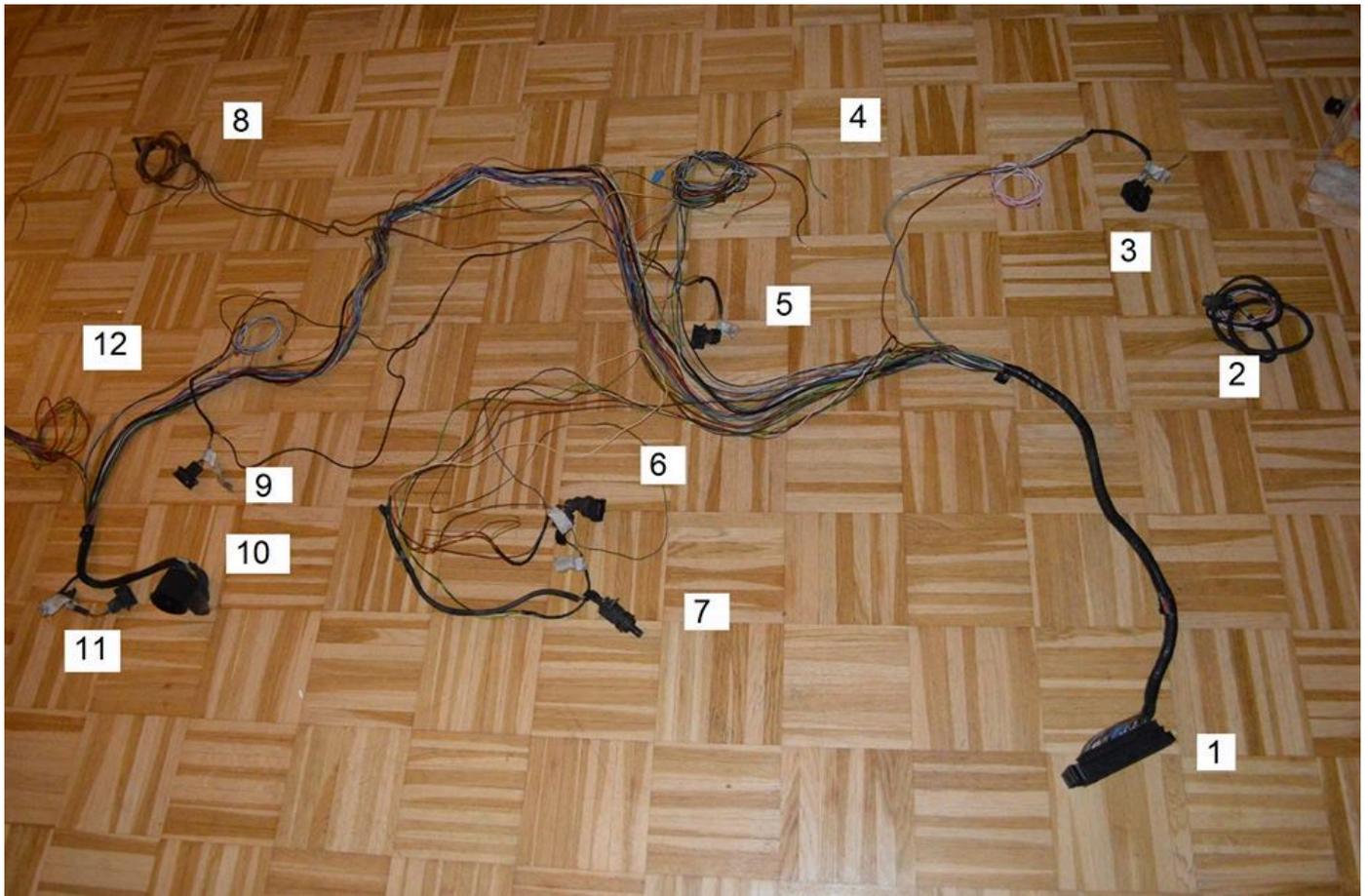
The connectors on the right side:

- 1 The big mighty T68,
- 2 the intake air temperature sensor for ecu
- 3 the outside air temperature sensor for the dash (mfa)
- 4 air mass flow meter
- 5 activated charcoal filter valve (if you mount it)
- 6 lambda probe

The T28 connector for the engine



completely stripped loom... some cables must cut off, e.g. some earth or plus cables which are fitted together



- 1 T68
- 2 outside air temperature (dash)
- 3 lambda probe
- 4 lines to connect to the car (see colors at wiring plan)
- 5 ignition coil
- 6 activated charcoal filter valve, plus air mass flow meter
- 7 intake air temperature
- 8 earth / ground cables
- 9 speed Signal (can be cut off)
- 10 T28 plus knocking Sensor
- 11 t.d.c sensor

OK second part ... the day after the strip party:

We have to connect some cables to the relays, to some instruments and some sensors:

First we do the easy things: Cables from the T28:

Cables on the left are going to the T68 (ECU)

Cables on the right are going to the T28 (engine)

Cables in the middle are the following:

from left to right:

T28a/8: brown / white: connect it with loom earth

T28a/17: red with yellow connector - comes from fuel pump relay (167) pin

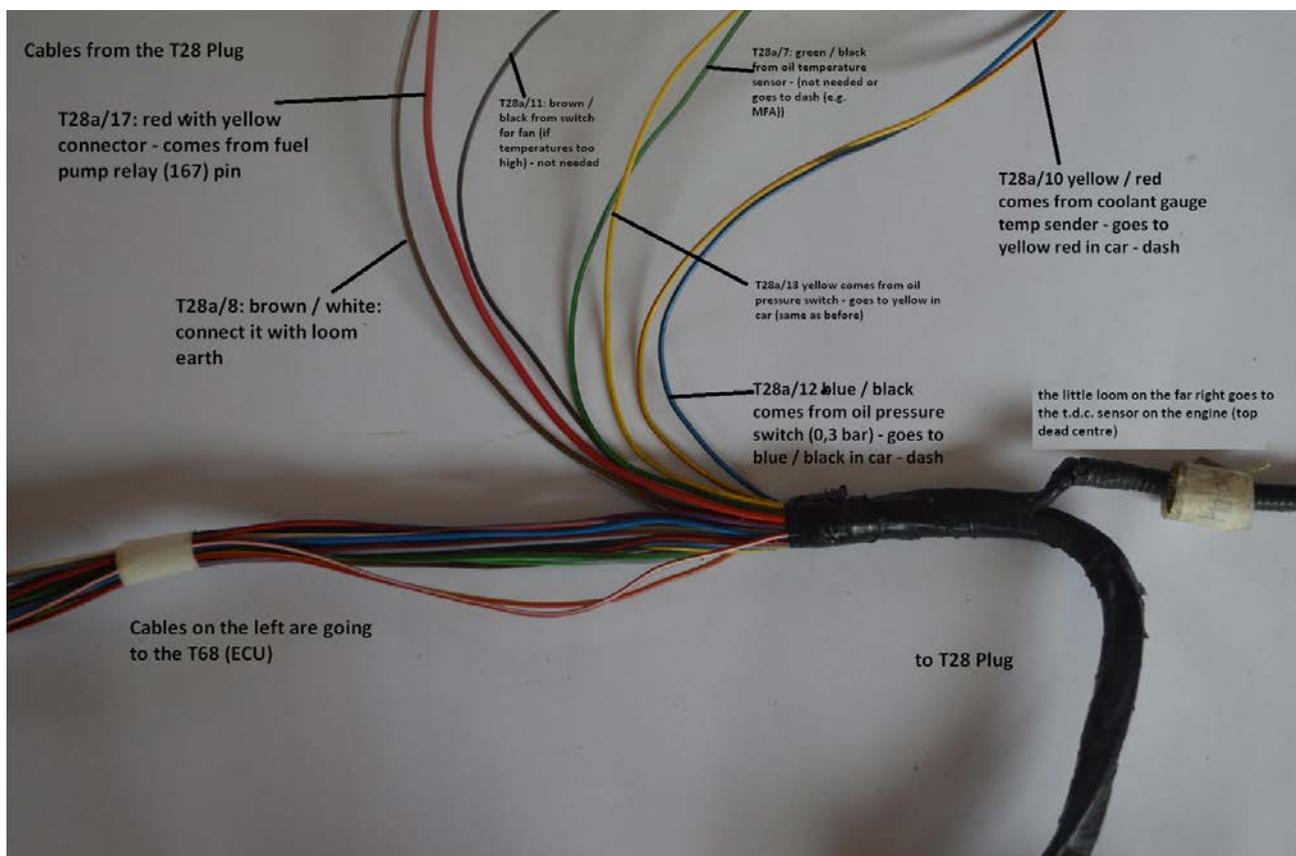
T28a/11: brown / black from switch for fan (if temperatures too high) - not needed

T28a/7: green / black from oil temperature sensor - (not needed or goes to dash (e.g. MFA))

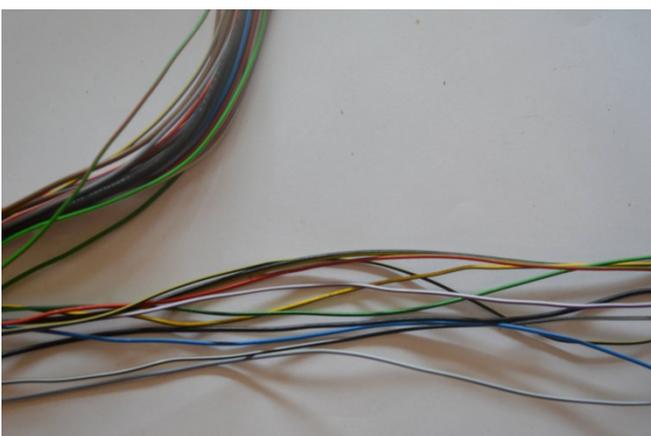
T28a/13 yellow comes from oil pressure switch - goes to yellow in car (same as before)

T28a/10 yellow / red comes from coolant gauge temp sender - goes to yellow red in car - dash

T28a/12 blue / black comes from oil pressure switch (0,3 bar) - goes to blue / black in car - dash



Now we come to the other end: cables from the T68:



ok and here the cables in detail:

from top down:

colour / colour means: cable colour / trace colour

T68/ Nr means: Connector T68 to ECU and the pin number of the connector

relay 30 is the main power relay for the ecu

relay 167 is the fuel pump relay

relay 30 pin 6/87 means: pin 87 at the relay 30

black / yellow (small) connected with

T68/23 black / yellow (thick) - goes to relay 30 pin 6/87

T68/19 green / black rev counter signal for Golf dash (T25 rev counter won't work with it)

T68/31 yellow / blue goes to fuel pump relay 167 pin 3/85

T68/32 red / green cranking signal - connect to car line 50 (black / red in JX)

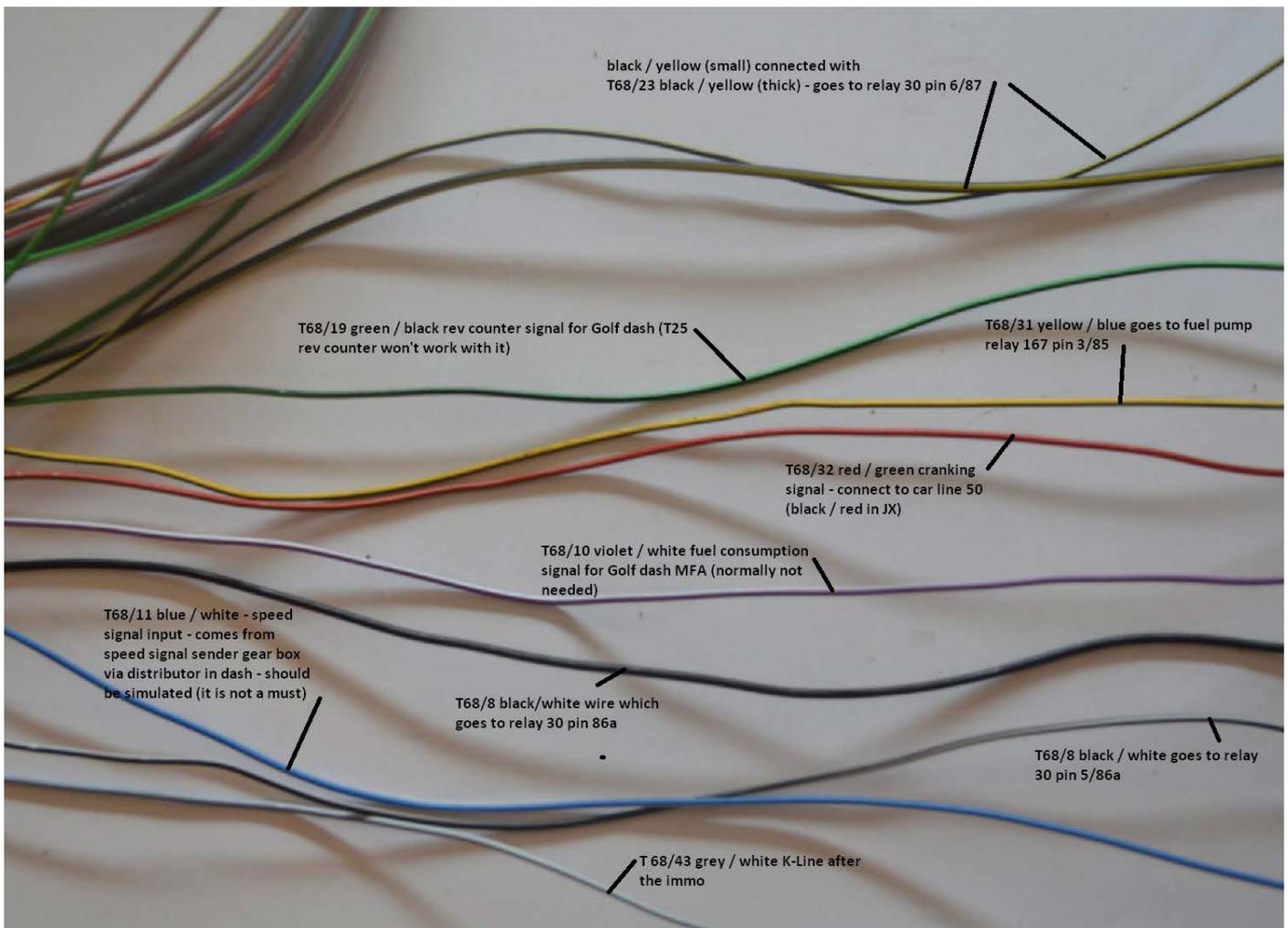
T68/10 violet / white fuel consumption signal for Golf dash MFA (normally not needed)

T68 black grey - have to look

T68/11 blue / white - speed signal input - comes from speed signal sender gear box via distributor in dash - should be simulated (it is not a must)

T68/8 black / white goes to relay 30 pin 5/86a

T 68/43 grey / white K-Line after the immo



Third part: thrilling relays ...

this seems to be the most complicated part of the conversion, and why most won't do it by themselves ...

We need only two relays as it is built in the donors of our engines (one silent minute for all the the good donors which are gone *g*)

- the fuel pump relay with a big number 167 on the top and
- the main power relay with a number 30 on it's top.

so first the fuel pump relay (167):

pin 30 is connected to the line 30 (permanent plus) of the car

pin 87 goes to a fuse with 20A and other bits

after the fuse:

1mm² red/white cable to the LambdaProbeConnector Pin1 (heating)

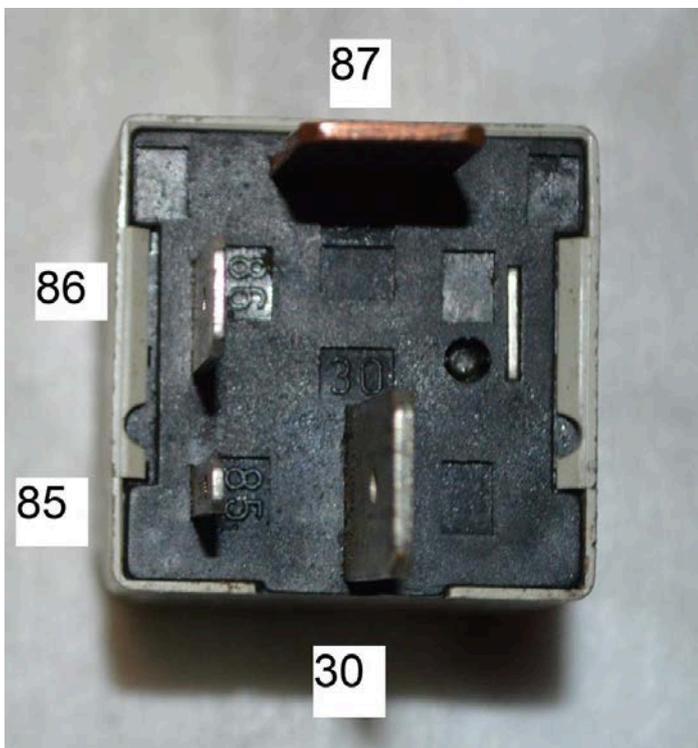
1,5mm² red/yellow cable to plus for the fuel pump

the other bits:

1,5mm² red cable to T28a/ injectionvalves

pin 85 is to be connected with T68/31 yellow/blue

pin 86 goes to line 15 (ignition plus) of the car



now **the main power relay 30:**

pin 30 is connected to the line 30 (permanent plus) of the car

pin 87 goes to the 1,5mm² black/yellow cable of the T68/23 and 0,5mm² black/yellow air massmeter

pin 85 is connected to line 31 (earth) of the car

pin 86 is connected to line 15 (ignition plus) of the car

pin 86a is to be connected with 0,5mm² black/white cable of T68/8

