

## Multi-gauge installation FZS600 (1998..1999)

These instructions are applicable to the FZS600 model year **1998**.



Production time: 1998 – 1999

Model Code 5DM1 / 4

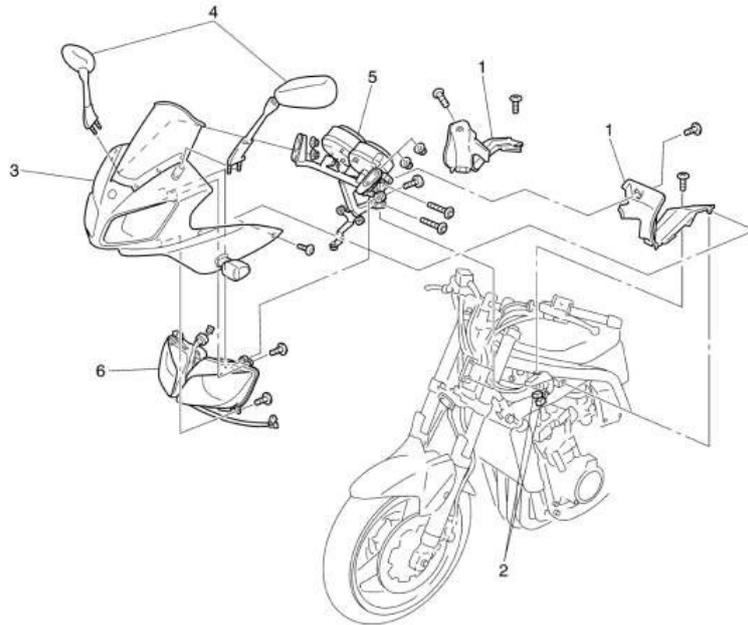
Fuel tank: 18 liter

Rectangular headlights (aka “box-eye”)

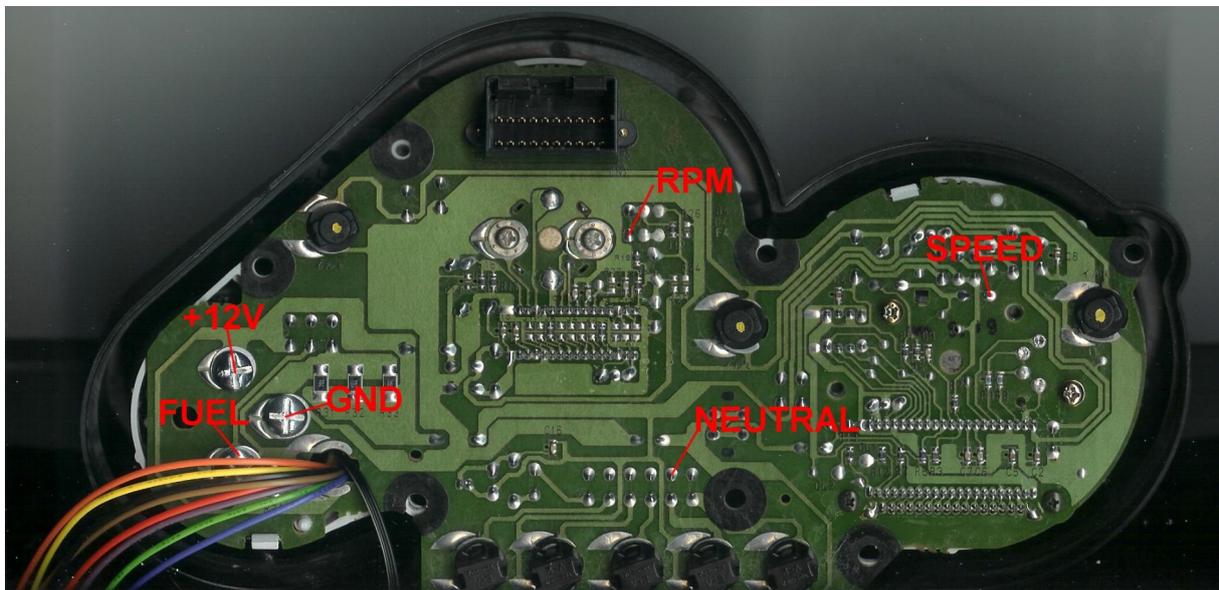
Cockpit with 1 single button, 20-pin harness connector



- Remove windshield and inner fairings(1)
- Pull off rubber boot and unplug connector from cluster using a flat blade screwdriver
- Remove 3 nuts and washers (10 mm wrench) on the back side of cluster(5)



- Flip cluster around and open 7 screws
- Open cluster



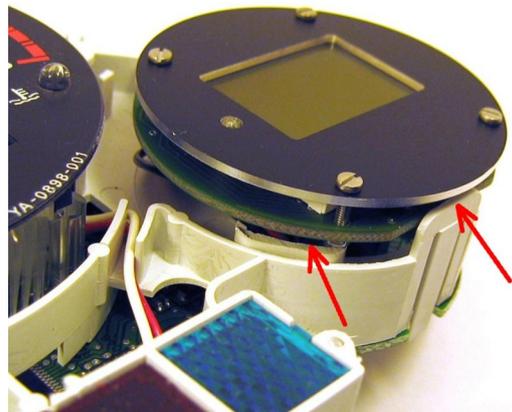
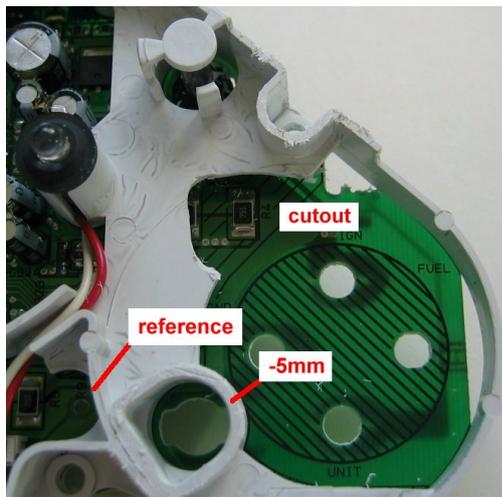
- Remove fuel gauge (3 screws)

- Pull off fuel warning bulb

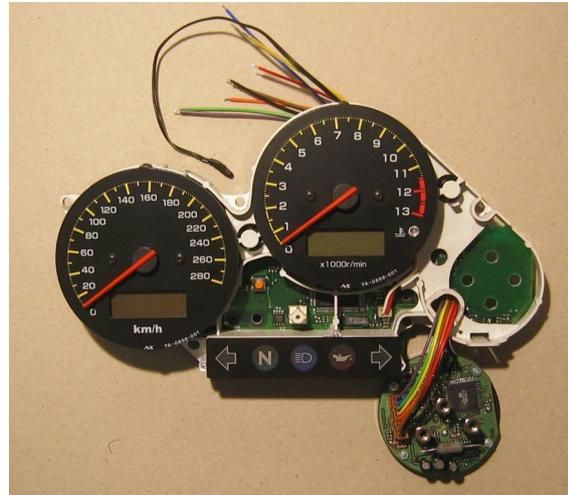
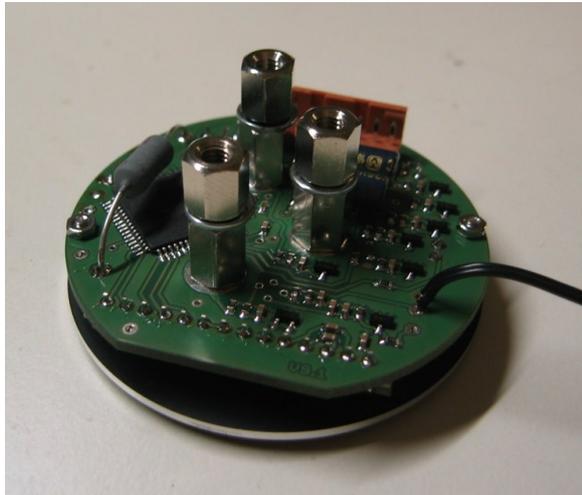
- Cut off the plastic tube to be at least flush with the plastic frame. Take a blade, side cutter or dremel to lower it down a few additional millimeter. Also dremel a small cutout into the flat part, beware of the electronic components below.



It is very important to have enough clearance for the cables. The cables must not obstruct the bolts from resting flat on the green board. Otherwise the bolts might get ripped off when tightening the screws!



- Prepare the gauge. Mount the 3 short bolts, including washers, as shown in the picture. Be careful to not apply too much torque, just a bit more than hand-tight is enough. The washers are required to get the correct mounting height and clearance for the cables.



- Route all cables through the warning-light tube/hole. Position the gauge to fit the mounting holes.
- Tighten the M3 screws from the back to secure the gauge. Use washers. Do not apply excessive torque! Check once again for sufficient clearance and good fit. The gauge has to rest easily on the mounting bolts and must not be forced down by the screws to get into position. Shorten the plastic tube even more in case of any doubt.
- Identify the proper solder spots on the cluster board, counter-check with the following pictures. Shorten all wires to the minimum required length, to avoid squeezing during reassembly of the housing:

Cable configuration (**V9**, latest version):

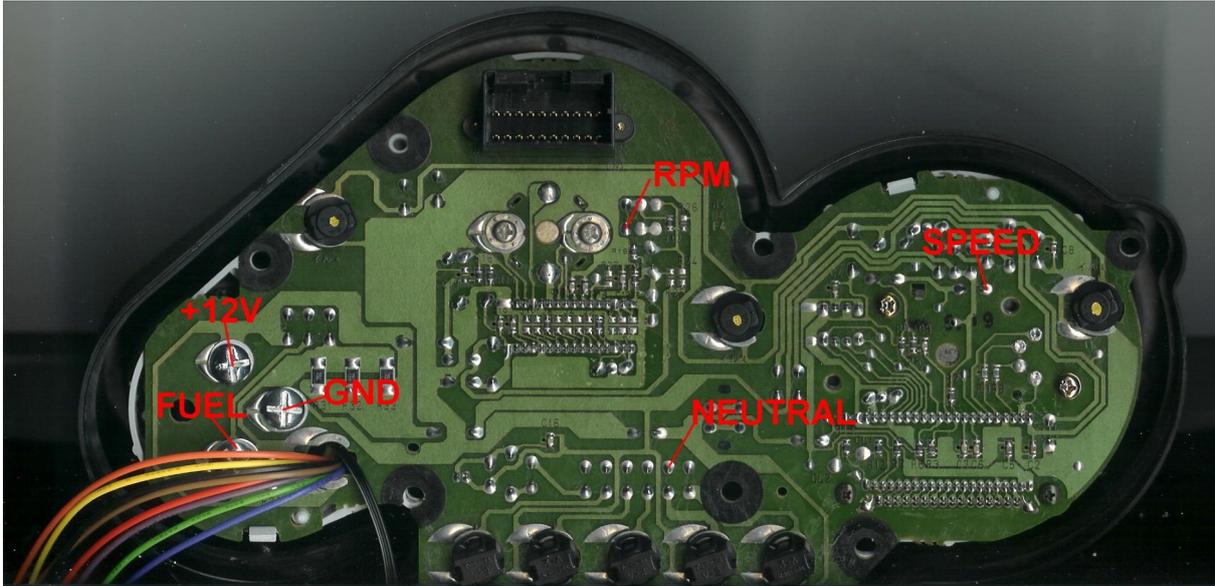
Color	Function	Comment
Black	RPM input	See picture
Brown	Water temperature Sensor	Special chapter
Red	Neutral input	See picture
Orange	Speedoheater output	Not used
Yellow	Speed input	See picture
Green	Third button input	optional
Blue	Button RESET input	Special chapter
Purple	Button SELECT input	Special chapter

**Green** wire is not connected to the cluster board, it's an option for later use. Could be connect to an additional third button, for switching viewmodes or stopwatch. Leave it open/unused for now.

**Brown** wire is not connected to the cluster board, but going to the temperature sensor.

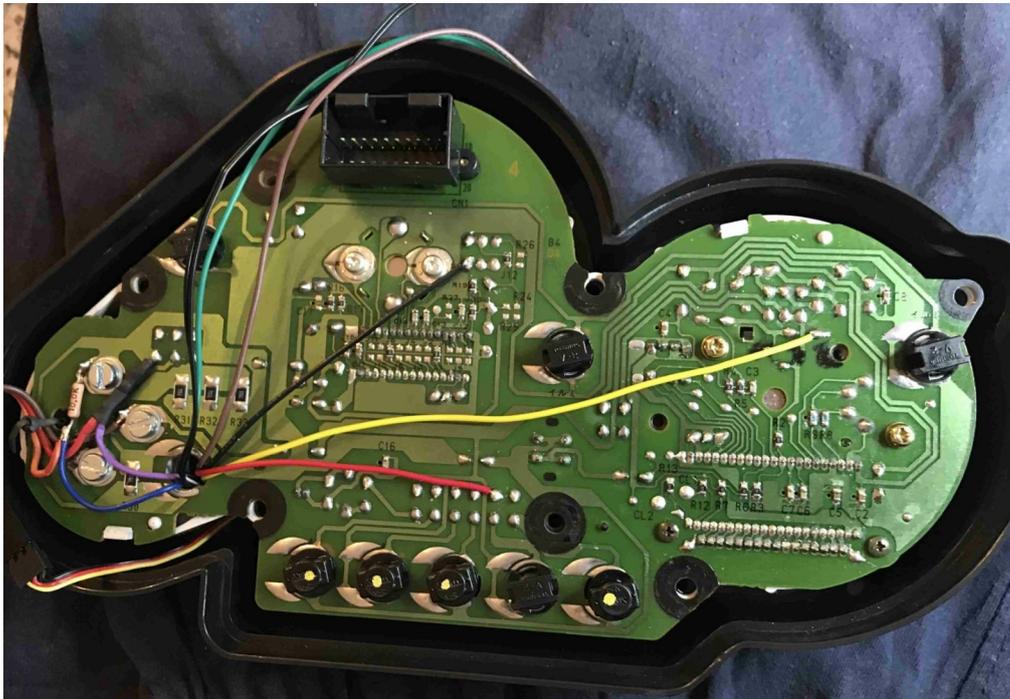
**Orange** wire is unused.

The **ambient temperature sensor** is located at the end of the **black double-wire**, no soldering required. Place it anywhere outside the cluster.

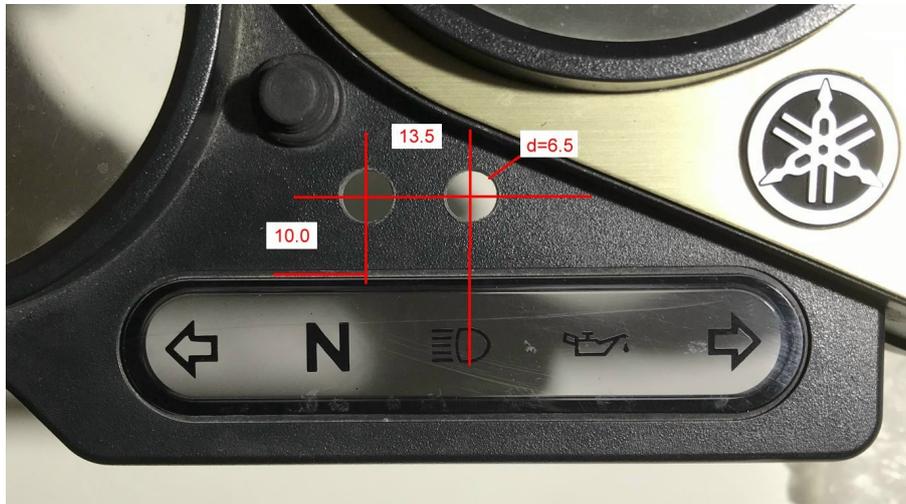


- Check twice to ensure that the correct solder spots have been used.
- Make sure the wires are not squeezed when putting the housing back on. A blob of glue might help to keep them in place.

The final wiring should look similar to this:



- Modify the front housing, drill 2 holes for the buttons.
- Start with the right-hand side hole
- Align center to „high beam“ sign and 10mm above plastic window
- Drill diameter 6,5mm
- Distance between holes 13,5mm



- Mount the buttons:



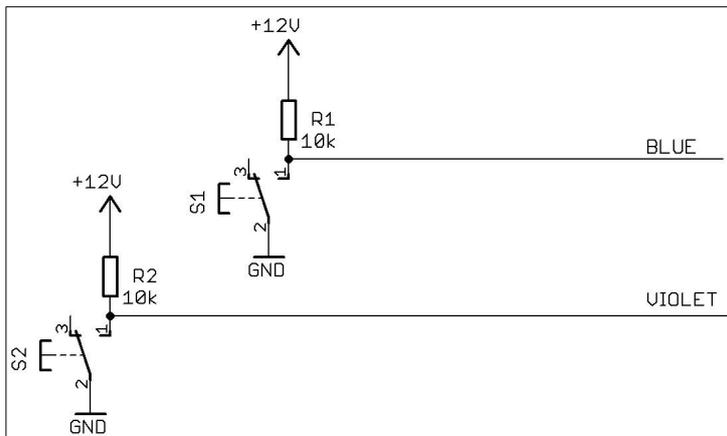
- Install the rubber sealing boots



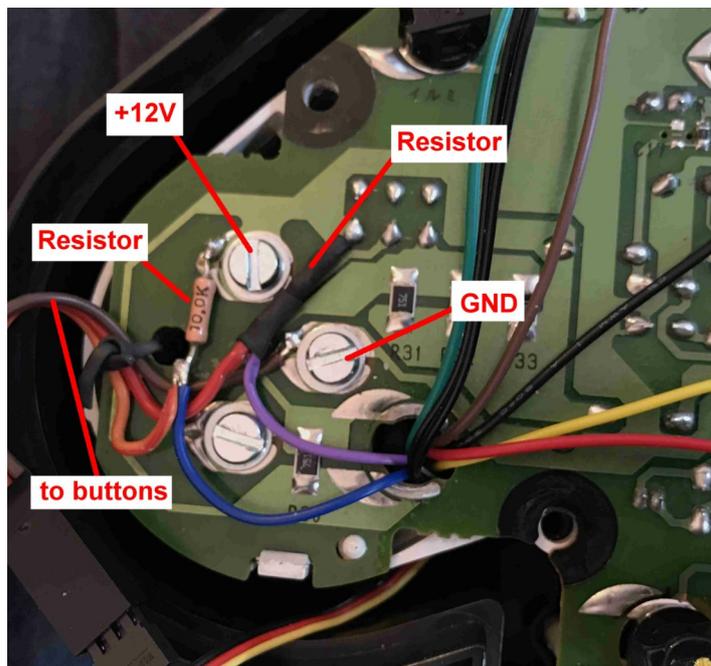
- Recommended parts:
- 2 x button: APEM momentary pushbutton switch 9633N
- 2 x sealing boots: APEM N33261002 (U1403)



- The buttons require additional wiring with 2 resistors



- Locate the 12V and GND terminals near the mounting screws
- In this example one resistor is isolated by a heat shrink hose



## Sensor for water or oil temperature

Internal modifications inside the gauge are required! Request before ordering!

The early FZS600 models do not have any water- or oil-temperature sensors from factory. The gauge supports aftermarket sensors from KOSO. Either water or oil can be used. The sensors only differ mechanically, not electrically.

### KOSO partnumbers:

Water:	BF030125-n, PT1/8 x28
Oil:	BF140150-n, M14xP1.5
Extension cable, fits both sensors:	BO002000

### Oil temperature measurement

The sensor replaces the oil drain plug.



### Water Temperature measurement

The sensor replaces the yellow thermo-switch in the thermostat housing. It comes with a water-proof plug and optional cabling (recommended to be used).





(The **yellow** switch (single contact) controls the over-temperature warning light. The new warning light function is provided by the gauge. The **blue** switch (two contacts) controls the fan and has to be left untouched.)

The sensor's cables are connected to **BROWN** (see table on page 4) from the gauge and **GND** inside the cluster.

- All required modifications are done
- Complete the cluster by reversing the disassembly steps

## Operation and settings

The multi-gauge is operated by using the **SELECT** and **RESET** button on the cluster.

During normal usage the **RESET** button is used to toggle between different view-modes.

To access the settings menu press and hold the **SELECT** button until the display shows the menu screen. To avoid interferences with the odometer the multi-gauge only reacts if **SELECT** is pressed for more than two seconds.

Don't get confused by the naming of the buttons, their function is not related to the naming.

During menu operations the **SELECT** button serves to move the cursor on the screen, **RESET** is used to execute the selected action. Best practice is to keep **SELECT** pressed, release if the desired menu item is reached. The cursor runs through the items in a cycle.

A separate document with a detailed description of all functions and settings is available. Consult this document before modifying any settings.