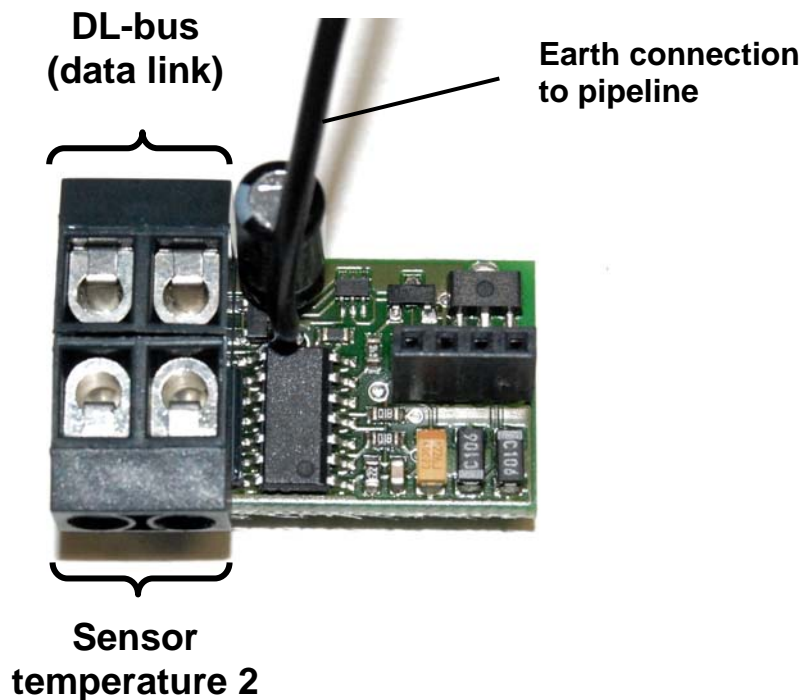




# Signal converter for VFS / RPS



The signal converter **SGF-DL** permits reading in of measurements from electronic volume flow sensors of type VFS X-XX and pressure sensors of type RPS 0-6 via the data link (DL-bus). It takes its power supply from the DL-bus and returns the corresponding measurement when requested by the controller (**ESR31** (from version 1.0), **ESR21 UVR61-3** and **UVR63H** from version 5.0 and **UVR1611** from version A3.00). The input "Temperature 2" permits connection of an additional temperature sensor.

Thus for example, when connected to a VFS, all the values required for heat quantity measurement can be read in over the DL-bus. The polarity of the connections ("earth") is interchangeable, hence need not be observed.

Bus load (DL-Bus) : 33 %

The following sensors are supported:

- VFS 1-12 Volume flow 1 to 12 litre / minute
- VFS 1-20 Volume flow 1 to 20 litre / minute
- VFS 2-40 Volume flow 2 to 40 litre / minute
- VFS 5-100 Volume flow 5 to 100 litre / minute
- RPS 0-6 Pressure 0 to 6 bar

Additional temperature sensors (temperature 2):

- Pt1000
- KTY (2000 Ohm at 25°C)

## Addressing:

A request from the controller is made up of the **address** of the signal converter and the **index** of a measurement recorded there.

The **address** is specified on the signal converter PCB by breaking the conductors which are labelled 1, 2 and 4. These are located on the rear side, at the outer edgeboard, close to the screw terminal. If none of the conductors are cut, the PCB is assigned address 1 (factory setting). Provided no other sensors are connected to the DL-bus, no change of address is required.

The effective address is derived from address 1 (= factory setting) plus the sum of all the disconnected values.

Example: required address 6 = 1 (factory setting) + 1 + 4  
= conductors 1 and 4 must be cut.

The **index** of the respective measurements is fixed:

Index:	Measurement:	Sensor type
1	Volume flow [1l/h]	VFS 2-40
2	Temperature [0.1°C]	VFS X-XX, RPS 0-6
3	Temperature 2 [0.1°C]	PT1000
4	Temperature 2 [0.1°C]	KTY
5	Pressure [0.01 bar]	RPS 0-6
6	Volume flow [1l/h]	VFS 1-12
7	Volume flow [1l/h]	VFS 1-20
8	Volume flow [1l/h]	VFS 5-100

**ESR21, ESR31, UVR61-3, UVR63H:** The desired measured values are imported as "External sensors" (setting in the menu "EXT DL"), where address and index are specified.

**Example:**



Here the external sensor **E3** has been allocated the sensor value of **address 1** with **index 3**, that is the value of a temperature sensor PT1000, which is connected to the signal converter.

**UVR1611:** The measurements are parameterised as **analog** network inputs:

**NW.Node:** Sensor address (above example: 1)  
**Anal.NW.Outp.:** Measurement value index (above example: 3)  
**Source:** DL

**Important notice:** When used with VFS sensors, the wire (5) projecting from the signal converter PCB should be connected to the hydraulic line so that an electrical connection is made, insofar as the line is made of electrically conducting material.

With the RPS sensor, this is not necessary (the wire can be pinched off).