

## Fan speed monitoring

## LU2

Characteristics:

- **Monitoring a fan speed**
- **for ground-switching outputs**
- **1 Fan**
- **Status display in the front of the device**
- **Collective alarm output**
- **Supply 24VDC**
- **for mounting rail mounting TS35**
- **clear terminal marking**
- **small dimensions**
- **Design 6.3mm, terminal housing**
- **high reliability, 5 years warranty**



Description

The fan monitoring devices LU2 are used for speed monitoring of fans with ground switching signal output. The minimum speed can be set via a potentiometer. If the set minimum speed of the fan is not reached, this is signalized via a common fault signal output transistor and a green LED in the front of the housing indicates the fault. The function of this signal output can be switched via a dip switch. S1-1 set to off means that the output switches off (0V) when the fan speed falls below the set value, whereas S1-1 set to ON the output is set to on (24V).

The devices require an auxiliary power of 24Vdc and can be snapped onto TS35 mounting rail.

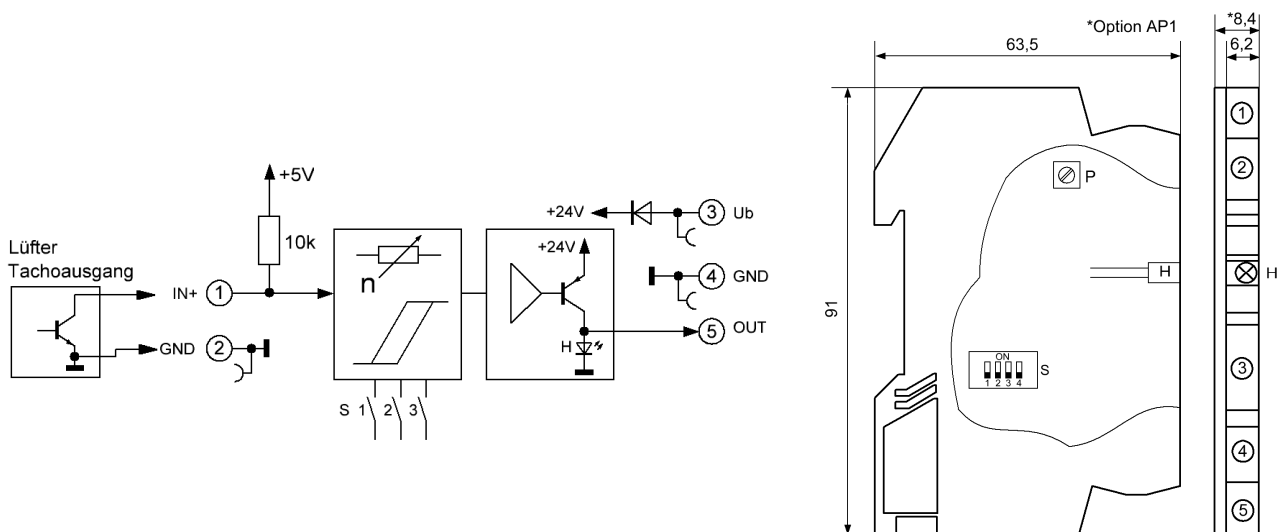
Application:

Monitoring the speed of fans with ground switching output.

Adjust as follows:

1. Dip-switch S1-1 to OFF.  
(If the fan speed falls below the minimum speed, the LED and output are switched off).
2. Set potentiometer (P) to the left-hand position.
3. Set the fan to the desired minimum speed to be monitored.
4. Switch on supply voltage of LU2.
5. Turn potentiometer (P) slowly to the right until LED (H) switches off.
6. Then turn potentiometer (P) slowly to the left until LED (H) switches on again.
7. Reduce fan speed. LED must now switch off.
8. Adjustment finished.

When Dip switch S1-1 is set to ON, the switching behaviour of the LED and the output is inverted. Please observe points 5 and 6 during adjustment.



## Technical Data

### Supply:

Supply voltage	: 19,2...30VDC (Ucc)
Power consumption	: 20mA + Last

### Input:

Input	: for ground switching devices with NPN output internal 10 k OHM pull-up resistor to 5V
Monitoring range	: 1 to 85 Hz / 60...5100 U/min / adjustable with 1-turn potentiometer

### Output:

Output voltage	: Ucc – 1V
Output current	: max. 100mA, short circuit proof < 3s
Switchable	: S1-1: OFF / Output 0V on error S1-1: ON / Output 24V on error S1-2, S1-3 = not used

### General data:

Operating temperature	: 0...50°C
Storage temperature	: -25...+85°C, condensation before putting into operation is not allowed
MTBF	: 293 years mean time between failures – according to EN 61709 (SN 29500). Requirements: Stationary operation in clean rooms, average ambient temperature 40 °C, no aeration, continuous operation
CE conformity	: EN 61326-1, EN 61000-4-2/3*/4/5/6*, EN 61000-6-4 * during measurements, small deviations are possible

### Body:

Dimension	: See drawing, 6,2mm terminal block body, 6,2x63,5x91mm
Material	: PA 6, 6 / V2
Protection category	: IP00, IP20 with side cover/end cover plate
Connection	: Spring force connection 0, 2 - 4mm <sup>2</sup> , inflexible, 0, 2 – 2,5mm, flexible Contact load with link plugs max. 24A
Fixing	: Snap-on mounting for norm rail TS35
Mounting position	: As you like / Mountable side by side
Weight	: 21g

#### **Note on safety:**

---



Disconnect the power supply before attempting to open the unit.

During the operation of this module it is possible that parts of the module, even there is extra-low voltage, (for example shunt measurement) are under dangerous voltage! Therefore a non-observance of this caution may cause damage of property or physical injury.

Only trained qualified personnel should install or operate the unit. Before installation the qualified personnel should read the documentation and should familiarize themselves with the unit.

If there is visible damage to the body of the unit it should be immediately replaced and not put into operation.



Please ensure that there is a sufficient prevention against electrostatic discharge during installation of the unit.

#### **Installation Information:**

---

Pay attention and make sure the unit is far away from mounted sources that may disturb the device such as magnetic coils, transformers, frequency converters etc.

#### **Wiring advice:**

---

Use only shielded cables. The shield is to be connected extensively to ground. Do not mix power- and signal-wires/cables in the same cable tray.

#### **Limited warranty:**

---

The LEG Industrie-Elektronik GmbH warranted that the product does not have any material or processing defects in a period of 5 years after date of delivery.

It is up to the choice of LEG to repair or to exchange an inoperative unit.

Subsequent damages or any claim for indemnification above the functionality of the unit are excluded.

This limited warranty is only valid if ...

1. the product was installed and put into operation according to the LEG operation documentation;
2. the technical configuration of the power supply was abided;
3. the product was not used for unintended purposes;
4. there were no unauthorized modifications or manipulations, misuse or repairs without previous agreement from LEG .

Our Terms of Trade are based on the "General Conditions for the supply of products and services of the Electrical and Electronics Industry" including the "Complementary Clause: Extended Reservation of Property" of the ZVEI e.V. (German Association of Electrical Manufacturers).

#### **Miscellaneous:**

---

We expressly reserve the right, without previous notice, to correct errors contained in any data of this information brochure, and to make alterations to the program and technical modifications.