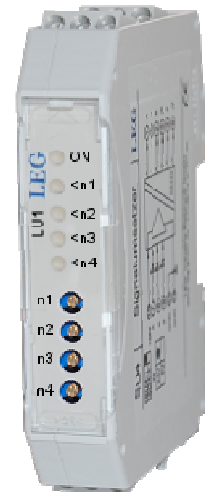


Fan – Speed monitoring

LU1

Characteristics:

- **Monitoring a fan speed**
- **for ground-switching outputs**
- **1 to 4 fans**
- **Status display in the front of the device**
- **Collective alarm output**
- **Supply 24VDC**
- **for mounting rail mounting TS35**
- **clear terminal marking**
- **small dimensions**



Description:

The fan monitoring devices LU1 are used for speed monitoring of fans with ground-switching tachometer signal output. Up to 4 fans can be monitored in parallel. The minimum speed can be set separately for each fan or jointly for all 4 fans via a 20-turn spindle potentiometer, depending on the device version. If the set minimum speed of a fan is not reached, this is indicated via a common fault signal output (relay de-energised / quiescent current principle) and a red LED in the front of the housing indicates the fault for the corresponding channel (depending on the device variant).

A green LED indicates that the device is ready for operation. The devices require an auxiliary power of 24Vdc and can be snapped onto TS35 mounting rail.

Monitoring speed in delivery state: 600 rpm corresponds to 10 Hz

Attention:

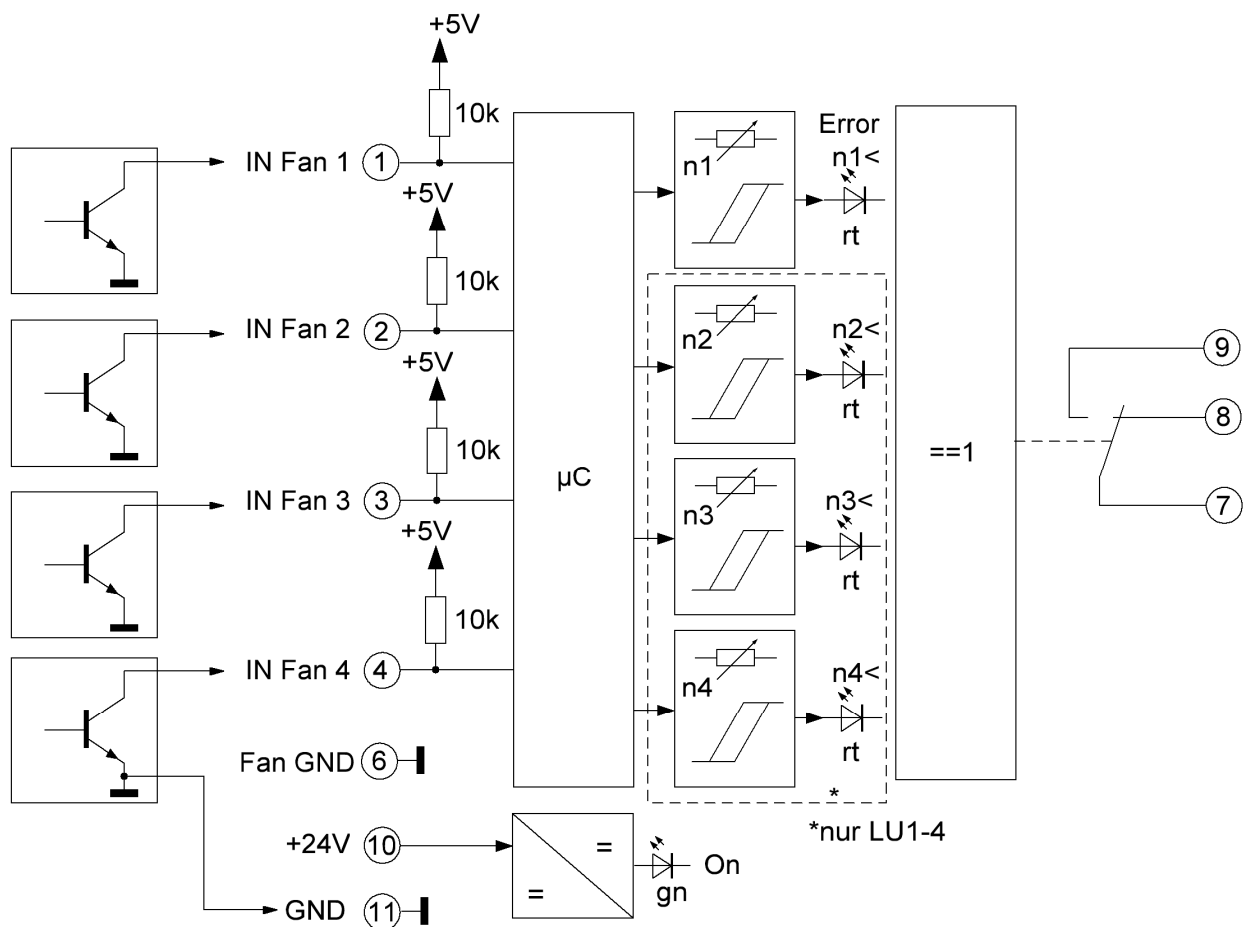
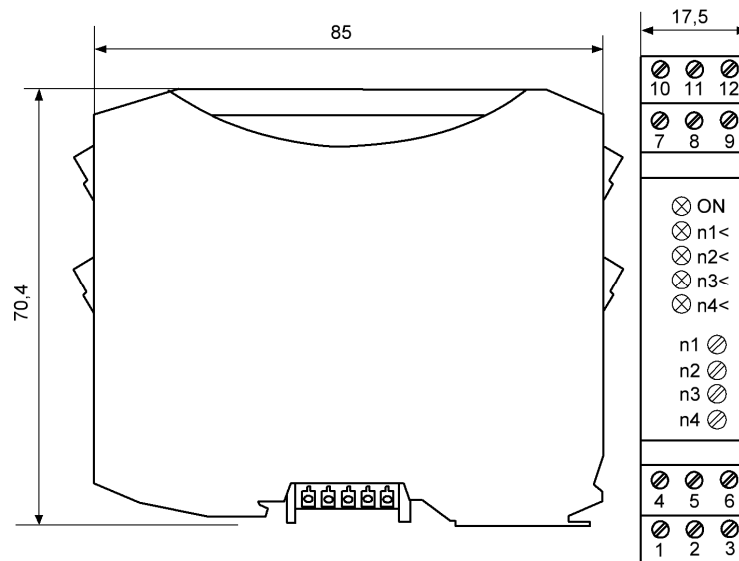
If not all 4 channels are used, the inputs which are not required must be connected in parallel with one of the active inputs in order to function correctly. Open unconnected channels will otherwise lead to an error message.

Application:

Speed monitoring for fans, with ground switching output.

Order Code: **Output:**

LU1-1	common speed adjustment for all 4 fans
LU1-4	speed adjustment for every single fan



Technical Data

Supply:

Supply voltage : 19...30VDC
Power consumption : <0,5VA

Inputs:

4 inputs : for ground switching NPN outputs
internal 10 k Ohm pull-up resistor an 5V
Monitoring range : 1 to 100 Hz / adjustable with 20-turn potentiometer
Pulse width : >= 2ms

Outputs:

Error contact : Relays 1 change over contact
Principle of reporting : Quiescent current principle, in fault-free operation contact closed
Contact load : 230VAC / 3A / 24VDC / 1,5A

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
* small deviations are possible during measurements

Body:

Dimension : See drawing, 17,5mm adjoin body, 17,5x70,4x90,5mm (with terminals)
Material : PA / V0
Protection category : IP20
Connection : M3-screw-type terminal 0, 14 - 2,5mm², flexible or inflexible
Fixing : Snap-on mounting for norm rail TS35
Weight : 122g

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.