

Universal Amplifier / Precision Summation Amplifier

UV1

Characteristics:

- Voltage or current output
- 5 inputs
 - 2 non negating / 3 negating
- High precision, linearity error < 0,003%
- Amplification range 0,5 – 32, fine adjustable
- Free potentiometer
- Free 10VDC reference voltage
- Power supply 24VDC
- Mountable on 35mm cap rail TS35
- Clear terminal labeling
- Narrow design
- Shape 17,5mm
- PB - Power -Bus compatible
- High reliability, 5 years warranty



Description:

The devices of the universal amplifier series UV1 have been developed for the conditioning of standard signals, the voltage can be up to 50VDC. Five inputs, 2 not negating and 3 negating, can be used as voltage- or current input. Due to the internal wiring of the inputs in balanced ratio -1: -1: -4 +1 +1, the devices can also be used as an adder or subtractor. Depending on the selected input the amplification range is 0, 5...32 adjustable through a 20-turn potentiometer. The free reference voltage of 10VDC and one free potentiometer 5k Ω afford further capabilities. The devices of series UV1 have a 2-way galvanic isolation between input/output and auxiliary power can be snapped onto TS35 mounting rail and require a power supply of 24V DC.

Application:

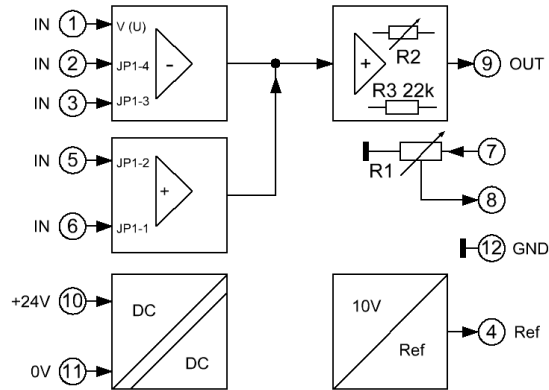
Conditioning of measuring signals, adder, subtractor

Order-No.:

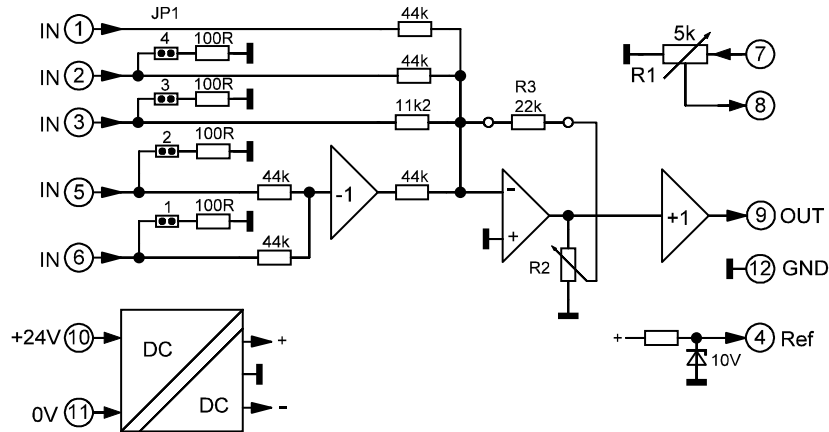
Output:

UV1-1	0... \pm 10V
UV1-2	0... \pm 20mA

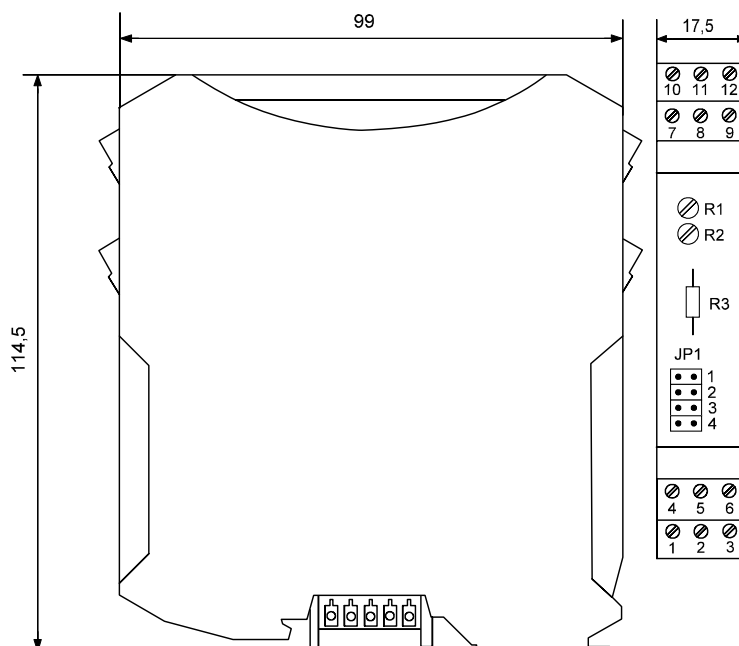
Block diagram:



Detailed block diagram:



Construction:



Technical data

Auxiliary power:

Power supply	:	19, 2...30VDC
Current consumption	:	< 1,5VA

Inputs:

Voltage input	:	±0...10 / overload max. 50V
Current input	:	±0...20mA / burden 100Ω / overload max. 100mA
Amplification	:	min. max.
Terminal (1)	:	-0, 5 -8
Terminal (2)	:	-0, 5 -8
Terminal (3)	:	-2 -32
Terminal (5)	:	+0, 5 +8
Terminal (6)	:	+0, 5 +8

Outputs:

Voltage output	:	0...±10V / max. 20mA
Current output	:	0...±20mA / burden max. 500Ω
Reference voltage	:	10VDC / max. 5mA
Potentiometer	:	5kΩ / 0,75W / 20-turn

Accuracy:

Linearity error	:	< 0,003%
Zero point error	:	< 0,001%
Temperature coefficient	:	< 0,002% / K

General data:

Operating temperature	:	0...50°C
Storage temperature	:	-25...+85°C, condensation before putting into operation is not allowed
MTBF	:	110 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 are small deviations possible

Body:

Dimension	:	See drawing, 17,5mm adjoin body, 17,5x114,5x104,5mm (with terminals)
Material	:	PA / V0
Protection category	:	IP20
Connection	:	M3-screw-type terminal 0, 14 - 2,5mm ² , flexible or inflexible
Fixing	:	Snap-on mounting for norm rail TS35
Weight	:	107g

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.