LEG Industrie-Elektronik **GmbH** - **LEG**

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Universal Amplifier / Precision Summation Amplifier UV2

Characteristics:

- **Voltage or current output**
- **6 inputs**
  3 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 UV2 have been developed for the conditioning of norm signals. The maximum input voltage may be up to 50VDC. Six inputs, 3 not negating and 3 negating, which can be optional used as voltage- or current input, offers the user the possibility of signal amplifying or signal attenuation. Due to the internal wiring of the inputs in balanced ratio -1:-1:-4:+1:+1:+1 the devices can also be used as an adder or subtractor. Due to the chosen input the gain can be adjusted by the 20-turn spindle potentiometer R2 in the range of 0, 5...32. A through the front accessible, on solder terminals mounted resistor R3, for a further gain adjustment, can be easily replaced by the user without opening the unit. Because of the freely disposal reference voltage of 10V/DC and one more 20-turn spindle potentiometer R1 an offset adjustment or even an adjustment for invers characteristics can be done. The devices of series UV2 have a 2-way galvanic isolation between input/output and can be snapped onto TS35 mounting rail, they require a power supply of 24V DC.

Application:

Conditioning of measuring signals, adder, subtractor, invers characteristic

Order code:

	Output:
UV2-1	0…±10V
UV2-2	0…±20mA

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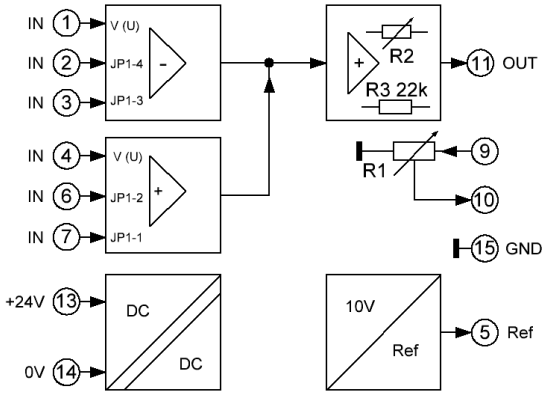
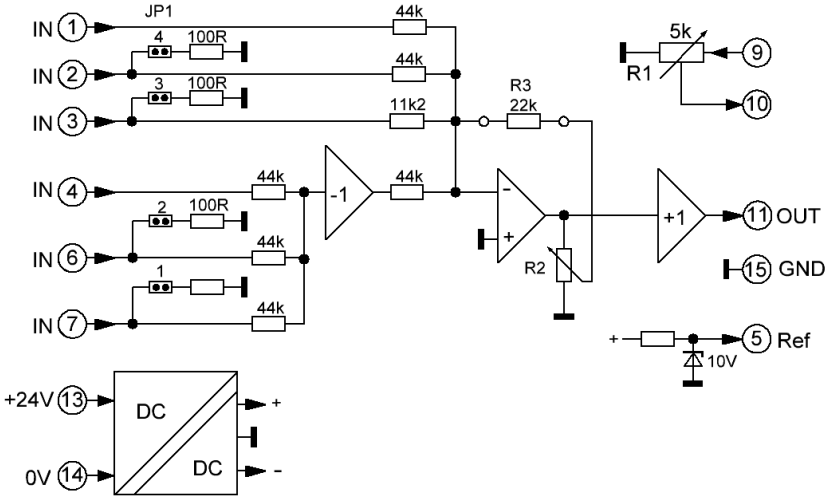
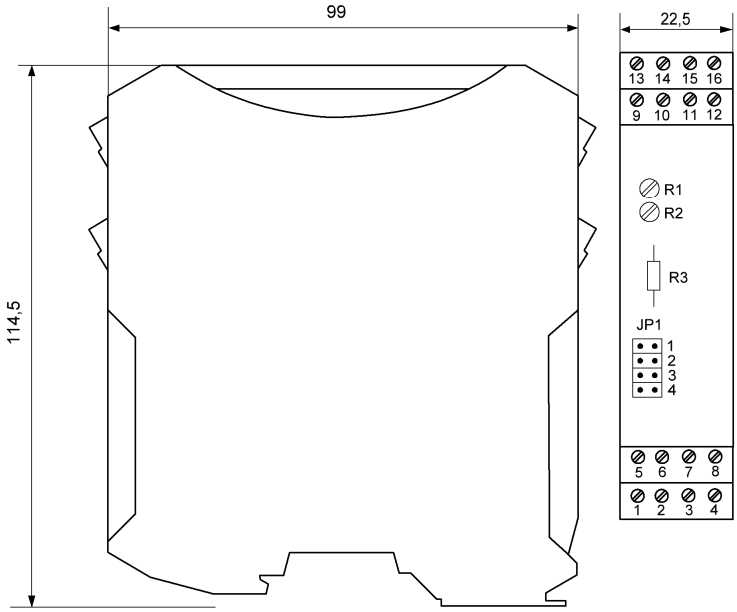
Block diagram:



Detailed block diagram:



Construction:



Data sheet UV2 revision: 02 - 2015

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Technical data

Auxiliary power:

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

Inputs:

Voltage input	:	0...±10 / Rin: 44kΩ resp.: 11,2k Ω / overload max. 50V	
Current input	:	0...±20mA / load resistor 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
Terminal (7)	:	+0, 5	+8

Outputs:

Voltage output	:	0...±10V / max. 20mA
Current output	:	0...±20mA / load resistor 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	:	22,5mm adjoin body, 22,5x114,5x104,5mm (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	:	115g

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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.