LEG Industrie-Elektronik **GmbH**

D- 41751 Viersen-Dülken · Textilstr.2
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Precision Differential Amplifier DV2

Features:

- Linearity error < 0.005%
- Adjustable gain 0.9…99
- Differential input
- Adjustable cutoff frequency 15 Hz; 1.3 kHz; 3 kHz
- Adjustable output 0…±10 V, 0…±20 mA, 4…20 mA
- Zero point and gain adjustable, coarse/fine
- Power supply 24 VDC
- For TS35 DIN rail mounting
- Clear terminal labeling
- Compact dimensions
- Width 22.5 mm
- High reliability, 5-year warranty

Description:

The DV2 precision amplifiers operate as differential amplifiers with an instrument amplifier at the input, which features a high common-mode rejection ratio of >=78 dB. Users have access to four gain ranges, which can be coarsely preselected via DIP switches. Fine adjustment is then performed separately for offset and gain using two potentiometers each, with coarse and fine adjustment options. A voltage output is available for powering external devices. This can be set to 5V or 10V via a switch and has a current capacity of 80mA. A configurable output provides the standard signals 0…±10V, 0…±20mA, or 4…20mA as desired. A special feature is DIP switch S1-9; if this is set to “on,” the input of the measurement amplifier operates bipolarly, while the output operates unipolarly. In this case, an output value of 5V or 10mA corresponds to an input voltage of zero, 0V or 0mA corresponds to the minimum measured value, and 10V or 20mA corresponds to the maximum measured value. The selection of the output signal and its transmission frequency is also controlled via DIP switches. The devices are housed in a 22.5 mm wide enclosure suitable for mounting on a standard DIN rail.

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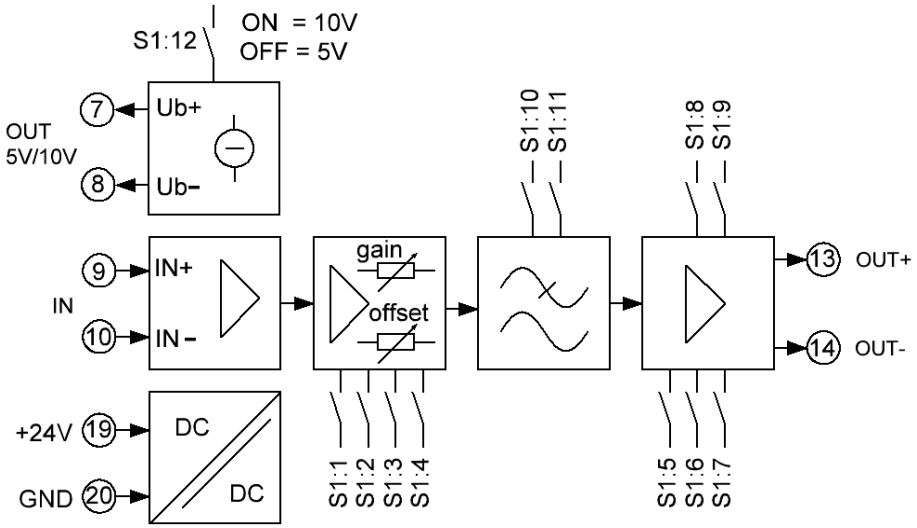
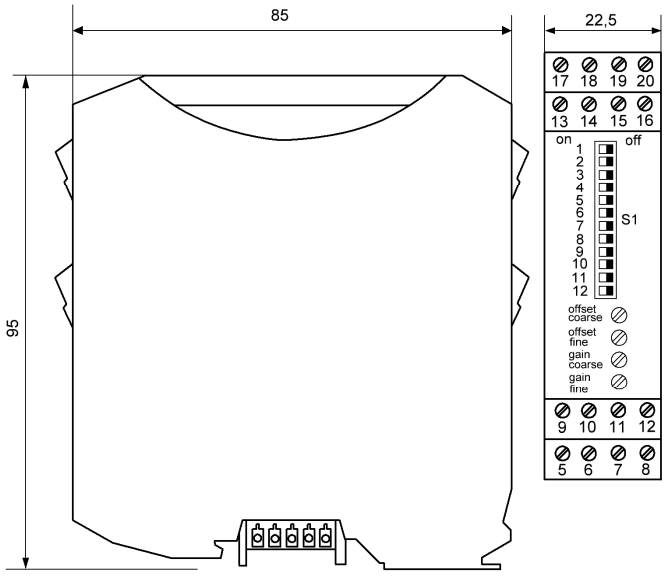
switch position ● = ein					S1								
Gain	1	2	3	4	Output	5	6	7	8	Cutoff frequency	10	11	Voltage output	12
0,9 … 3				●	0…±10 V	●		●		15 Hz	●		10 V	●
2,9 … 10			●		2 …10 V	●		●	●	1,3 kHz		●	5 V	
9 … 30		●			0…±20 mA		●			3 kHz				
29 … 100	●				4 … 20 mA		●		●					

S1-9: ON = bipolar input / unipolar output





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Technical Specifications

Auxiliary power:

Supply voltage	:	19,2…30VDC
Power consumption	:	2VA

Input:

Input voltagr	:	0…±10V / max. 11V
Overload	:	max. 30V
Common-mode rejection:		>=78dB at Gain=1
Input resistance	:	1MΩ
Zero adjustment	:	max. 50% from Endpoint
Gain	:	min.0,9 / max. 3 / 10 / 30 / 100

Output:

Voltage output	:	0...±10V / max. 20mA
Current output	:	0(4)...±20mA / Burden max. 500Ω
Residual ripple	:	< 5mV
Transmission frequency:		15Hz / 1,3kHz / 3 kHz switchable
Voltage source	:	5V oder 10V / max. 80mA / switchable, gegulated, short-circuit-proof

Accuracy:

Linearity error	:	< 0,005%
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	:	68 years Mean Time Between Failures – according to EN 61709 (SN29500) Requirements: Stationary operation in clean rooms, average ambient temperature 40 ° C, no forced ventilation, 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	:	22,5mm adjoin body, 22,5x114,5x104,5mm (with terminals)
Material	:	PA / V0
Protection category	:	IP20
Fixing	:	M3-screw-type terminal 0, 14 - 2,5mm², flexible or inflexible
Fixing	:	Snap-on mounting for norm rail TS35
Weight	:	100g

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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 himself 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.