

Product Information VTV-2

CONTROLS

Buffer Amplifier VTV-2

Application / Specified Usage

- Galvanic separation of scaled signals (0...10 V, 0/4...20 mA)

Features

- Isolation voltage 1 kV
- Variable zero and gain
- Connection via plug-in terminal
- Scaled In/Output selectable and configurable
- On-site adjustment without external devices
- Switchable without de-mounting by switches in front
- Narrow design (22,5 mm)
- Power supply 20...255 V AC/DC
- Snap-on case for mounting on standard DIN-Rail
- Functional compatibility to Negele devices of VTV and ZTV series
- Connection compatible to Negele devices of VTV series
- Front panel shielded by see-throug cover
- Special ranges possible on request

Authorizations

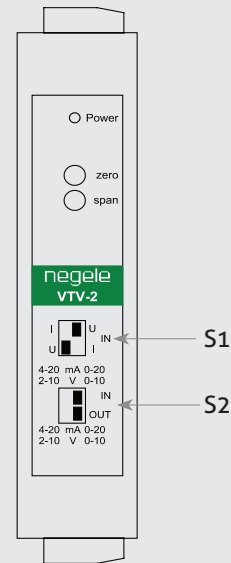
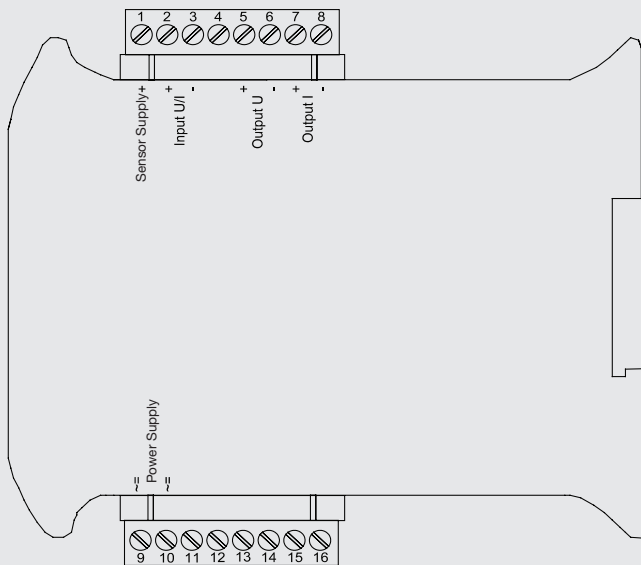


Buffer Amplifier VTV-2



Specification		
Housing	acc. to DIN norm dimensions (W x H x D)	made of ABS for rail mounting acc. to EN50022 22.5 x 111 x 120 mm
Protection Class		IP 20
Ambient	operation temperature storage temperature humidity	0...+55 °C -10...+55 °C 0...95 % no condensation
Electrical connectvion		2.5 mm ² screw-type terminals pluggable
Input	switchable	Current 0/4...20 mA (R _i = 50 Ω) Voltage 0...10 V (R _i = 50 kΩ)
Output	2 relays for limit values 1 relay for failure indication	max. 250 V / 3 A AC changeover contacts
Output sensor supply	optional with VTV-2 / S	clamp 1 / 3, 20...24 V DC / 25 mA max.
Linearity error	adjustment on specific range	≤ ±0.2 % of end point ≤ ±0.1 % of end point
Temperature drift	typical	≤ 0.01 %/k
Isolation voltage	Input - Output Input/Output - Supply	1 kV 1 kV
Test voltage		1 kV / 50 hz / 60 s
Transmission frequency		≤ 30 hz
Supply	AC DC	24...255 V, 48...62 Hz, 4.5 VA 20...255 V, 2.5 W
Power consumption		2.5 W / 4.5 VA
Weight		148 g

Drawing Electrical Connection | Front View



Potentiometer

Name	Function	Adjustment range
zero	offset	±5 %
span	gain	±10 %

Advice to Switch Position



The S1 switches "IN U/I" for switching the input from voltage to current must always be cross switched. Incorrect setting will not, however, cause damage. Correct operation of the plant can no longer be guaranteed in this state. The switches may be switched only in the unstressed condition of the equipment.

Option Switch

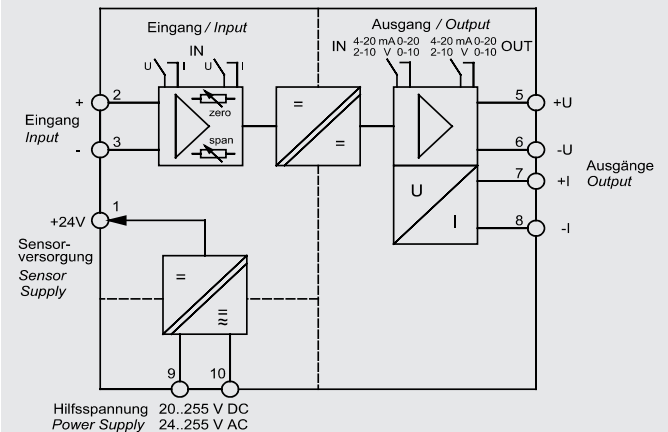
Name	Function	Adjustment
IN I / U	Input switch (I/U)	Current / Voltage
IN	Input switch 0 / 20 ... 100 %	0...20 mA / 0...10 V or 4...20 mA / 2...10 V
OUT	Output switch 0 / 20 ... 100 %	0...20 mA / 0...10 V or 4...20 mA / 2...10 V

Measurement Range			Switch		
Input	Output U	Output I	IN I / U S1	IN S2	OUT S2
0...10 V	0...10 V	0...20 mA	U / U	0-10 0-20	0-10 0-20
0...10 V	2...10 V	4...20 mA	U / U	0-10 0-20	2-10 4-20
0...20 mA	0...10 V	0...20 mA	I / I	0-10 0-20	0-10 0-20
0...20 mA	2...10 V	4...20 mA	I / I	0-10 0-20	2-10 4-20
4...20 mA	0...10 V	0...20 mA	I / I	2-10 4-20	0-10 0-20
4...20 mA	2...10 V	4...20 mA	I / I	2-10 4-20	2-10 4-20

Adjustment

1. Set In-/Output combination of unit according to chart.
2. Connect set point device at Input (2/3)
3. Connect external current measurement instrument (range 20 mA DC) in-line to current Output or voltage measurement device (range 10 V DC) parallel to voltage Output of VTV-2 (see block diagram above)
4. Connect power supply (9/10)
5. Induct zero signal (0/4 mA or 0 V) to Input
6. Adjust output to 0 mA (4 mA for output 4...20 mA or 0 V for output 0...10 V) by twisting on "zero" trimmer
7. Induct maximal signal (20 mA or 10 V) to Input
8. Adjust maximum output to 20 mA or 10 V by twisting on "span" trimmer

Block diagram



Advice



- For installation and adjustment please pay attention to additional informations given in the data sheet enclosed with the device.

Conventional Usage



- Not suitable for applications in explosive areas.
- Not suitable for applications in security-relevant equipments (SIL).

Transport / Storage



- No outdoor storage
- Dry and dust free
- Not exposed to corrosive media
- Protected against solar radiation
- Avoiding mechanical shock and vibration
- Storage temperature -10...+55 °C
- Relative humidity maximum 95 %

Reshipment



- Use suitable transport packaging only to avoid damage of the equipment!

Standards and Guidelines



- You have to comply with applicable regulations and directives.

Disposal



- This instrument is not subject to the WEEE directive 2002/96/EC and the respective national laws.
- Pass the instrument directly on to a specialised recycling company and do not use the municipal collecting points.

Advice to EMC



- The device agrees to following standards: EMC directive 2004/108/EC.
- You have to guarantee the EMC directives for the entire equipment.

Order Code

VTV-2

Sensor supply

X (without)

SV (sensor supply integrated)

Special Range

X (standard)

special (special range acc. to customer requirements, please specify in plaintext, on request)

VTV-2 / SV / X

Notes