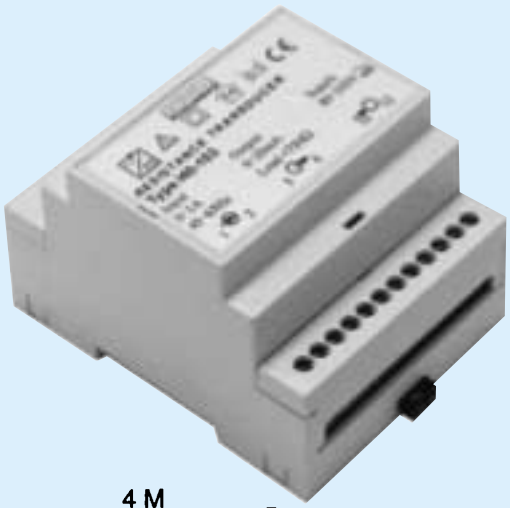
Measuring transducers

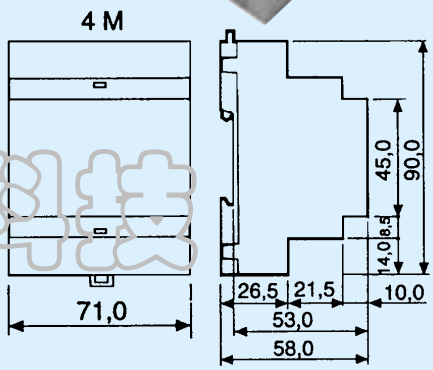
VI40 for DC current
VU40 for DC voltage

VI40 and VU40 are transducers convering measured quantities of current and voltage into a proportional load independent DC signal.

The output signal can be connected to one or several receiving instruments such as panel indicators, recorders, controllers etc. The transducers have galvanic separation between in- and output and auxiliary supply.

The transducers are mounted directly on profiled bar 35 EN 50022. Connection to selfopening clamps for max 2,5 mm 2 wires. The transducers are manufactured according to IEC688.





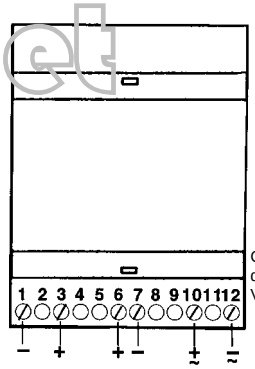
Order facts:

Type	*Output*	*External load*
VI40-151 VU40-151	0 – 5 ± 5 mA	0-2000 Ω
VI40-152 VU40-152	0 – 10 ± 10 mA	0-1000 Ω
VI40-153 VU40-153	0 – 20 ± 20 mA	0- 500 Ω
VI40-154 VU40-154	4 – 20 mA	0- 500 Ω
VI40-155 VU40-155	0 – 10 ± 10 V	>700 Ω

Orderform:

Measuring transducer for DC voltage

Type	VU40-153
Measuring range	0 – 250 VDC
Output	0 – 20 mA
Power supply	230 V, 50 Hz



Connecting diagrams VI/VU40

Technical data

Input VI40

Range	min 0 – 0,5 mA (±0,25 mA) max 0 – 250 mA (±250 mA)
Input impedance	voltage drop 1 V (50Ω at 20 mA)
Overload capacity	$3 \times I_{in}$ continuously, $8 \times I_{in}$, 1 s (max 750 mA)

Input VU40

Range	0-60 mV to 300 V or ±30 mV to ±300 V
Input impedance	10 kΩ/V
Overload capacity	<3 V, $3 \times U_{in}$ continuously <3 V, $10 \times U_{in}$, 1 s >3 V, $3 \times U_{in}$, 1 s

Output

Output signal (span)	min 0 –1 mA, max 0 – 20 mA
Range	0…5/10/20, 4-20 mA
Load	max 10 V
Current limitation	<30 mA
Voltage	0 – 10 V
Burden	>700Ω
Ripple	<1% p.p

General data

Accuracy	<0,2%
Linearity error	<0,1%
Response time	0 – 90 <30 ms
Temperature influence	<0,1%/10°C
Temperature range	-25…+60°C operation -40…+70°C storage
Test voltage	3,7 kV, 50 Hz, 1 min
Power supply AC	24, 110, 230 V ±15%, 47–70 Hz, ca 2 VA
Universal AC/DC	20–85 V AC/DC 80–250 V AC/DC

Options on request

Standards

General standards for measuring transducers EN60688, IEC688

EMC	emission EN50081-2 immunity EN50082-2 *)
Safety	EN61010-1, IEC1010-1
Inputs	overvoltage cat. III
Outputs	overvoltage cat. II
Pollution degree	2

*) At certain frequencies minor deviations from the class accuracy may occur during the disturbance.

Design

The transducer consists of an input stage where the input signal is converted to a mathing current signal that goes via a galvanic separation stage - where the signal is chopped, transformed and rectified - to the output amplifier.

The AC power supply comes from a transfor-mer that gives a galvanic separation. Those parts that need separate power get it via a rectifying stage. The DC power comes from a switched unit that gives galvanic separation.