

Measuring transducer

VR40 for resistance

VR40 are transducers converting measured quantities of resistance 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 out-put and auxiliary supply.

The transducers are mounted directly on profiled bar 35EN50022. Connection to selfopening clamps for max 2,5 mm 2 wires.

The transducers are manufactured according to IEC688.

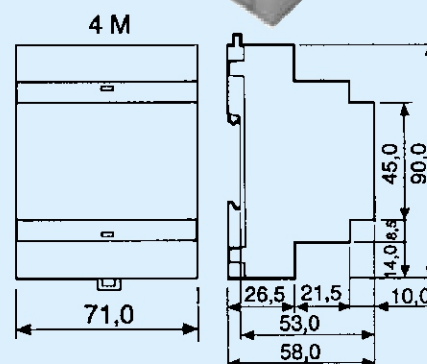
Order facts:

Type	Output	External load
VR40-151	0 □ 5 ± 5 mA	0-2000 Ω
VR40-152	0 □ 10 ± 10 mA	0-1000 Ω
VR40-153	0 □ 20 ± 20 mA	0- 500 Ω
VR40-154	4 □ 20 mA	0- 500 Ω
VR40-155	0 □ 10 ± 10 V	>700 Ω

Orderform:

Measuring transducer for resistance

Type VR40-154
 Measuring range 0 – 2200 Ω
 Output 4 □ 20 mA
 Power supply 230 V, 50 Hz



Technical data

Input

Range 0-25 to 0-5000 Ω
 3 wire connection

Output

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

General data

Accuracy <±0,2%
 Linearity error <0,1%
 Response time 0-90% <80 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 24, 110, 230 VAC ±15%,
 47-70 Hz, ca 2 VA
 Universal AC/DC 20 □ 85 V AC/DC
 80 □ 250 V AC/DC
 Weight 0,4 kg

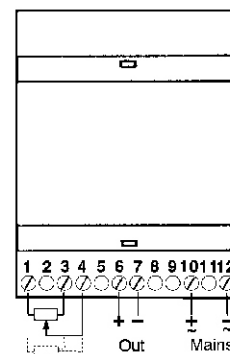
Options on request

Standards

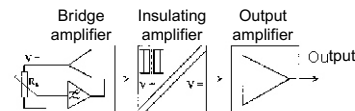
General standards for measuring transducers
 EN60688, IEC688

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.



Connecting diagrams VR40



Design

A constant current is driven from the bridge amplifier to the measuring object. The voltage over Rx is amplified to a standard value which is galvanically separated from input in the insulating amplifier.

The galvanically insulated measuring signal is converted to a load independent DC current or voltage in the output amplifier.