

Portacal 275

Hand-held signal source and loop calibrator

The Portacal 275 is a precise hand-held signal source for current and voltage signals. It can be used in four modes which allows the calibration of standard current/voltage transmitters.

The operating mode "voltage source" simulates auxiliary-powered transmitters with proportional voltage outputs. The mode "current source" allows emulation of transmitters with proportional current outputs. The "mv source" mode simulates a variety of other analogue signals from many different applications. The "current sink" mode simulates the outputs of a two-wire (loop powered) transmitter.

The Portacal 275 is equipped with a scalable potentiometer (0 to 100 %) that can be adjusted in steps to an accuracy of 0.1 %. Together with the output-range switch, the potentiometer allows for a quick and precise adjustment of the signal value. A typical accuracy of ± 0.25 % is possible. An integrated test point, for connecting external measurement devices, allows for a higher accuracy of ± 0.1 %.

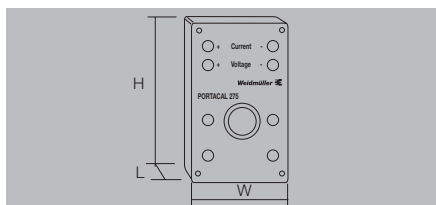
Technical features:

- Light and portable device
- Simulates loop-powered transmitter operation
- LED for indication of source/sink operating mode
- Current ranges: 0 to 20 mA / 4 to 20 mA / Voltage ranges: 0 to 5 V / 1 to 5 V / 0 to 200 mV
- 0.1 % accurate current source
- Test points for current output monitoring
- Switch select 0 %, 100 % or variable output
- Signal outputs can be adjusted with spindle potentiometer for high accuracy
- Powered from two 9 V block batteries

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Calibration device for current and voltage signals

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Technical data

Output of voltage mode

Output voltage	0...5 V / 1...5 V; 0...200 mV / 40...200 mV
Resolution	0.01 V
Output resistance	250 Ω @ V / 10 Ω @ mV
Accuracy	< 0.2% (0% and 100%)

Output current mode

Output current	0 (4)...20 mA
Resolution	0.01 mA
Last resistor, max.	700 Ω (current source) ($V_{out} - 4$) / 0.02 Ω (current sink)

Output voltage, max. @ current sink	4...45 V DC
Accuracy	< 0.1% (0% and 100%)
Residual ripple	< 1 μA

Settings

Range of adjustment	0 (4)...20 mA / 0...200 mA (current source), 0...5 V (voltage source) or as current sink selectable with toggle switch
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Output, variable	0...100 % with precision potentiometer
Output, fixed	0 or 100 % with toggle switch

General data

Temperature coefficient	typ. 40 ppm @ °C
Accuracy	0.25 % of signal range
Supply voltage	Batteries, 2 x 9-V blocks 6...22 mA (current source) 2 mA (current sink)
Ambient temperature	0 °C...+60 °C
Storage temperature	-25 °C...+70 °C
Type of connection	Socket
EMC standards	DIN EN 61326
Approvals	CE, cULus

Dimensions

Length x width x height	mm	31 / 62 / 112
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Note

Including two one-metre-long test leads sw/rt with banana plug/terminal and one bridge lead

Ordering data

Type	Qty.	Order No.
P275	1	7940010202

Note

Accessories

Note

Wiring diagram

