



Weidmüller 

Calibrators

Section I

Calibrators can be an invaluable tool during commissioning and for maintenance operations.

Calibrators

Portacal 275



Portacal 275

The Portacal 275 is an accurate handheld signal source and loop tester for milliamp, millivolt and voltage signals. It can be used in four modes:

- voltage source, which simulates auxiliary powered transmitters with proportional voltage outputs;
- millivolt source, which simulates many common plant based signals;
- current source, which simulates auxiliary powered transmitters with proportional current outputs;
- current sink mode, which simulates 2-wire (loop powered) transmitter outputs.

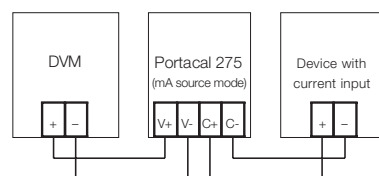
Features

- Compact, handheld and light
- Simulates loop powered transmitter operation
- LEDs to indicate source/sink operating mode
- 0-20mA / 4-20mA current ranges
- 0-5V / 1-5V / 0-200mV voltage ranges
- 0.1% accurate current source
- Test points for current output monitoring
- Switch select 0%, 100% or variable output
- Precision lockable 10-turn dial for variable signal output
- Powered from two PP3 9V batteries

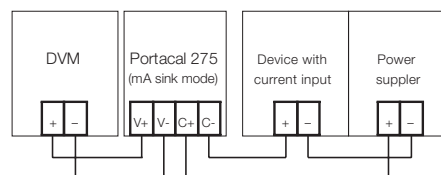
Applications

Use the Portacal 275 for:

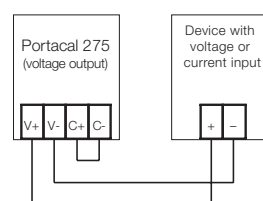
- Verifying input function on PLC/DCS systems
- Checking of valves with analogue input
- Checking of I/P converters
- Handy commissioning tool



Calibration of a transmitter with four-wire connection and current output



Calibration of a transmitter with two-wire connection



Calibration of a transmitter with four-wire connection and current or voltage input

Technical Data

Controls	
Variable output	0-100 % of output range using a precision lockable ten-turn dial
Fixed outputs	0 % and 100 % output using toggle switch
Range selections	0-20 mA, 4-20 mA, 0-200 mV and 0-5 V by toggle switch
Output type	mA source, mA sink, 0-200mV source, or 0-5 V/1-5V source, by toggle switches
Voltage Output	
Type	Millivolt or voltage source
Voltage ranges	0-5V / 1-5V
Millivolt ranges	0-200 mV / 40-200 mV
Impedance	250 Ω (voltage source mode) 10 Ω (millivolt source mode)
Current Output	
Type	mA source
Range	0-20mA
Max load	700 Ω
Current Sink Output (Two wire transmitter simulator)	
Type	mA sink (simulates loop powered transmitter)
Range	4-20mA
Loop Voltage	4-45Vdc
Power Supply	
Type	Battery Powered
Batteries	2 x 'PP3' Alkaline
Housing	
Type	Double Insulated Polycarbonate
Dimensions	112 mm (h) by 62 mm (w) by 31mm (d)

Ordering Data

Type	Order No.
Portacal 275	7940010202

Portacal 1000



Portacal 1000

The Portacal 1000 is a microprocessor based calibrator for mA and Volt signals. Functions include:

- Voltage Source, for simulating auxiliary powered transmitters with voltage outputs
- Current Source, for simulating auxiliary powered transmitters with current outputs (mA)
- Current Sink, for simulating 2 wire (loop powered) transmitters.

The Portacal 1000 has a large 12mm, 4 digit display for easy viewing and housed in a sturdy ABS plastic case. The large keypad has 9 Pre-labelled keys for common signal values, or use 9 stored locations for commonly used values. A ramp or step function with time interval between 2 or more values can be used for hands free calibration. The unit comes in a leather carry case with pouch for holding test leads. Supplied with 2 x sets of rechargeable batteries and charger, the Portacal 1000 is a true tradesman's best friend.

Features

- mA and Volt simulation
- Large easy to read display
- Ramp function with time interval
- Large push-buttons for easy adjustment

Applications

Use the Portacal 1000 for:

- Verifying input function on PLC/DCS systems
- Confirming output of 2/3 wire transmitters
- Calibration of valves with analogue input
- Checking of I/P converters.

Technical Data

Operation	
Type	Key Select Preset or Stored Values or Automatic Ramp Mode or Signal Measuring Mode
Voltage Output	
Range	Any voltage from 0.00 to 13.00 V in 0.01V steps
Accuracy	±5mV
Min. Load	1k3Ω
Current Output	
Range	Any current from 0.00 to 26.00mA in 0.01mA steps
Accuracy	±5µA
Max. Load	600Ω @ 20mA
Current Sink Output (Two wire transmitter simulator)	
Range	Any current from 0.00 to 26.00mA in 0.01mA steps
Accuracy	±5µA
Loop Voltage	9-45Vdc (across calibrator outputs)
Voltage Measurement	
Range	0.00 to 13.00V
Accuracy	±5mV ±1 count
Input Impedance	200KΩ
Current Measurement	
Range	0.00 to 26.00mA
Accuracy	±5µA ±1 count
Input Impedance	47Ω
Loop Powered Transmitter Test Mode	
Type	Measures and Powers Output Loop Powered devices
Range	0.00 to 26.00mA
Accuracy	±5µA ±1 count
Supply to loop	16 V ±10%
Performance	
Temperature Drift	Typically better than 0.01% of span per °C
Power Supply	
Type	Battery Powered
Batteries	4 x 'AA' Alkaline or 4 x 'AA' NiMH (supplied)
NiCd Battery life	Minimum 10 hours (@ 20 mA out into full load)
Charging Time	Up to 3 hours using the charger supplied
Housing	
Type	Dark brown ABS with black leather carrying case
Dimensions	100 mm (w) by 180 mm (h) by 44mm (d)
Weight	0.55 Kg

Ordering Data

Type	Order No.
Portacal 1000	7940010194