



UPS-III

Druck loop calibrator

The UPS-III is a rugged and extremely compact loop calibrator. Measuring 77 mm x 129 mm (3 in. x 5 in.) and weighing just 275 g (9.7 oz), it fits comfortably in a shirt pocket. It is an essential tool for loop testing, instrument maintenance and valve set-up, with an easy to read display and simple to use time saving features.

Features

- Measure or source 0 to 24 mA
- Accuracy 0.01% of reading
- Dual mA or % readout, linear or flow
- Step, span check, valve check, ramp
- 60 VDC measurement and continuity
- HART® compatible
- Adjustable display contrast
- Adjustable resolution
- Uses industry standard AA batteries
- Battery voltage and battery low indicator
- Information screen reports serial number, software version and calibration date
- Primary reading in mA or %
- Auto power off (enable or disable)
- Pin protected closed case calibration
- Optional protective over-boot with bench stand, hanging loop and quick connect belt clip
- Optional AC line adaptor

Graphic display

The graphic display with menu-driven interface is easier to use than traditional knobs, switches, multi-function keys and dual key sequences.

Measure or source 0 to 24 mA

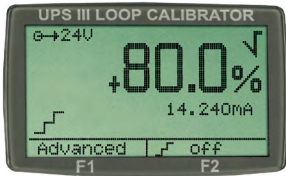
An internal 24 V loop supply is available in both measure and source modes, essential during plant shutdowns.

Accuracy 0.01% of reading

This includes 12 month stability and temperature effects. The UPS-III can maintain a 4:1 calibration ratio with the latest instrumentation and is typically 20 to 80 times more accurate than a Digital Multi-Meter (DMM).

Simultaneous % readout

Displays mA and the percentage value of 4 to 20 mA or 0 to 20 mA. The UPS-III also converts mA readings to % flow. This is not possible with many loop calibrators.



Step, span check and value check

Step quickly through linearity tests and zero/span adjustments. In valve mode, seating can be checked and the positioner set.

Step mode	0%	25%	50%	75%	100%
4 to 20 mA linear	4	8	12	16	20
0 to 20 mA linear	0	5	10	15	20
4 to 20 mA flow	4	5	8	13	20
0 to 20 mA flow	0	1.25	5	11.25	20
4 to 20 mA span check	4	-	-	-	20
0 to 20 mA span check	0	-	-	-	20
4 to 20 mA valve	3.8, 4, 4.2	-	12	-	19, 20, 21

Auto step and ramp

Outputs have adjustable rates (1 to 599 seconds) for single-handed loop testing, valve set-up and slew rate checks.

“Fast Set” output

Allows valves to be set to within 0.001 mA using the arrow keys. Holding a key quickly ramps the output to the next valve. The system is ideal for alarm trip tests.

60 VDC measurement

For loop diagnostics and maintenance of voltage output instruments

Continuity and switch test facility

This reduces DMM dependence when fault finding, checking loop integrity and testing switches.

HART compatible

Internal 235 Ω loop resistor (menu selectable)

EMC compliance to EN 61326-1

Complies with heavy industry standard. Most loop calibrators are only suitable for light industrial use.

UPS-II specifications

Performance

Function	Range	Resolution	1 year accuracy ¹ % rdg + counts	Remarks
Source mAr	24 mA	0.001	0.01% + 2	V max 75V
Source mA and 24V	24 mA	0.001	0.01% + 2	R max 1 kΩ at 20 mA
Measure	24 mA	0.001	0.01% + 2	V max mA 75V
Measure mA and 24V	24 mA	0.001	0.01% + 2	R _{measure} 15 Ω
Measure V	60 V	0.001	0.01% + 4	R _{measure} 1 MΩ
Continuity	<100 Ω	-	-	1 mA current

¹Accuracy includes temperature effects 62°F to 80°F (17°C to 27°C). For use outside these limits add 0.0015%/°F (0.003%/°C).

Electrical

Power supply

4 x 1.5 V AA-size alkaline batteries (standard) or universal power supply (see P/N 191-129)

Battery life

75 hours in read mode, 18 hours at 12 mA

Auto power down

30 minutes after last key press

Low battery warning

Battery symbol displayed

Open loop

Flashes “open loop”

Loop resistance high

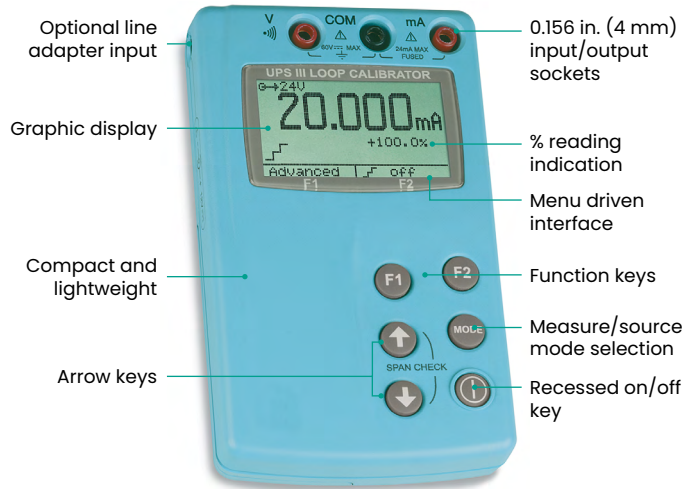
Flashes “check loop Ω”

Out of range

Displays <<<< (under), >>>> (over)

HART resistor

235 Ω menu selectable loop resistor



Environmental

Calibration reference

22°C (72°F) ±3.6°C (±2°F)/RH 45% ±15%

Operating temperature

-10°C to 50°C (14°F to 122°F)

Relative humidity

0% to 90% non-condensing

Conformity

CE marked
EN 61326-1

Physical

Housing material

High impact ABS

Dimensions (w x h x d)

77 mm x 129 mm x 24 mm (3 in. x 5 in. x 1 in.)

Weight

275 g (9.7 oz) including batteries

Display

Graphic LCD, 31 mm x 54 mm (1.2 in. x 2.1 in.)

Electrical terminals

Gold plated, 4 mm sockets

UPS-III ordering information

Please order the following part numbers as separate line items.

P/N UPS-III: Loop calibrator

The UPS-III is supplied as standard with a certificate of calibration, user guide, test leads, and a set of alkaline batteries

Options

P/N UNO-38023: Protective over-boot

Nitrile rubber over-boot provides maximum impact protection. A bench stand, hanging loop and two-part "quick fit" belt attachment are incorporated into the design (see photograph on page 1).

P/N UNO-38016: Carry case

Fabric carry case

P/N 191-129: Mains adapter

Universal mains input adapter to power the UPS-III

Calibration standards

Instruments manufactured by Druck are calibrated against precision equipment traceable to International Standards. We also offer UKAS accredited calibrations. Please contact your local Druck customer care for more information.

Supporting services

Our highly trained staff can support you, no matter where you are in the world. We can provide nationally accredited calibration (both initially and at periodic intervals), extended warranty terms, maintenance and even rental of portable or laboratory instruments. Further details can be found on our website at: www.bakerhughesds.com/measurement-sensing/druck-pressure-measurement/pressure-services

Related products

Process calibrators

We offer a comprehensive range of portable pressure, temperature and electrical field calibrators. To help you select the right process calibration tools we have categorized our products into three ranges:

- The Essential range provides rugged, accurate and easy-to-use test and calibration tools.
- The Expert range introduces higher accuracy and more functionality
- The Elite range provides a modular system offering state-of-the-art multifunction communication and calibration



Laboratory and workshop instruments

Our PACE Series offers a comprehensive range of pressure controllers and indicators.



Pressure transducers and transmitters

We offer a wide range of pressure transducers and transmitters including analog, digital and HART/Smart devices. Please contact Druck for further information.