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NICO Digital Test Gauge

DIG10 SERIES

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2024
Edition 2.2


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DIGITAL PRESSURE GAUGE

PRESSURE MEASUREMENT · PRODUCT CATALOG

DIG10 Series

Digital Test Gauges

A complete family of digital pressure test gauges and calibrators — from the economical DIG10-E for general industry to the flagship DIG10-CAL reference calibrator, plus a differential-pressure variant for HVAC and clean-room service.

6+1 MODELS ONE SERIES

`DIG10-E` `DIG10-B` `DIG10-P` `DIG10-DL` `DIG10-PRO` `DIG10-CAL`

`DIG10-DP` `±0.025% FS` `1000 bar` `1M records`

Digital Pressure Measurement — Fundamentals

The DIG10 series measures pressure with a high-performance silicon sensor, digital signal processing and a backlit LCD — giving accurate, stable, parallax-free readings with multi-unit display and logging.

Sensor & accuracy

A silicon sensor converts pressure to an electrical signal that is digitised and linearised. Accuracy scales with sensor technology: **piezoresistive** (E/B), **temperature-compensated silicon** (P/PRO) and a **precision resonant silicon** reference sensor in the DIG10-CAL with ±0.01% FS/year stability.

The Reference Hierarchy

Tier	Models	Typical accuracy	Role
Field indication	DIG10-E	±0.5% FS	Replace analog gauges
Field test	DIG10-B / P / DL	±0.2…0.1% FS	Service, verification, logging
Workshop reference	DIG10-PRO	±0.05% FS	Calibrate field instruments
Laboratory reference	DIG10-CAL	±0.025% FS	Master reference / metrology

Advantages of Digital Test Gauges

- ✓ Large backlit LCD — clear, parallax-free digital reading.
- ✓ Multi-unit display (bar, psi, kPa, MPa, mbar, mmHg, inH_2O, kg/cm²).
- ✓ Peak / Min / Max hold, tare / zero and selectable resolution.
- ✓ Rechargeable battery with USB-C charging and auto power-off.
- ✓ Rugged stainless-steel pressure port; field-portable.

Limitations & Where Not to Use

- Battery-powered handheld — not a fixed process transmitter (no continuous 4–20 mA loop).
- Apply pressure within the rated range; protect against overpressure spikes.
- Re-charge / verify the battery before critical calibration work.
- Keep the sensor port clean and dry; not for clogging or freezing media.

Where NOT to use

- Permanent in-line process signalling / control → use a process transmitter (PTH13 / DPT11).
- Non-compatible or clogging media on the pressure port.
- Use outside the rated pressure or temperature limits.

Display & Measurement Functions

- Multi-unit display: bar, psi, kPa, MPa, mbar, mmHg, inH_2O, kg/cm².
- Peak / Min / Max hold and Tare / Zero functions.
- On-board data logging up to 1,000,000 records (model-dependent), USB-C export.
- Filter-monitoring mode (FILTER OK / CHANGE) on the DP variant.
- Clean-room mode (POSITIVE / NEGATIVE pressure) on the DP variant.
- Leak-test function: pressure decay, leakage rate and test duration.

Specialised Operating Modes (DIG10-DP)

Filter Monitoring

Shows FILTER OK / CHANGE from the differential pressure across the filter.

Clean-Room Mode

Indicates POSITIVE / NEGATIVE room pressure for clean-room verification.

Leak Test

Computes pressure decay, leakage rate and test duration.

TECHNICAL SPECIFICATIONS

Complete Specification Comparison

Parameter	DIG10-E	DIG10-B	DIG10-P	DIG10-PRO	DIG10-CAL
Accuracy	±0.5% FS	±0.2% FS	±0.1% FS	±0.05% FS	**±0.025% FS**
Optional Accuracy	±0.25% FS	±0.1% FS	±0.05% FS	—	±0.01% FS
Repeatability	—	—	—	±0.02% FS	±0.01% FS
Display Digits	5	5	5	6	6
Digit Height	12 mm	15 mm	18 mm	18 mm	18 mm
Dial Diameter	80 mm	100 mm	100 mm	100 mm	120 mm
Pressure Range	-1 to 600 bar	Vac. to 1000 bar	Vac. to 1000 bar	-1 to 1000 bar	Vac. to 1000 bar
Overpressure	150% FS	150% FS	150% FS	150% FS	150% FS
Sampling Rate	2 Hz	5 Hz	10 Hz	20 Hz	50 Hz
Long-term Stability	±0.2% FS/yr	±0.1% FS/yr	±0.05% FS/yr	±0.02% FS/yr	±0.01% FS/yr
Operating Temp.	-10 to +60°C	-10 to +60°C	-20 to +70°C	-20 to +70°C	-20 to +70°C
Housing Material	SS304	SS304	SS304	SS304	SS316L
Wetted Parts	SS304	SS316L	SS316L	SS316L	SS316L
Protection	IP65	IP65	IP67	IP67	IP67
Power Supply	2×AAA	3×AAA	Li Rechargeable	Li Rechargeable	Li Rechargeable
Battery Life	12 months	12 months	1000 hours	1500 hours	2000 hours
Charging	—	—	USB Type-C	USB Type-C	USB Type-C
Bluetooth	—	—	BT 5.0	BT 5.0	BT 5.0
Data Logger	—	—	270,000 rec.	500,000 rec.	1,000,000 rec.
Display Rotation	Fixed	Fixed	330°	330°	330°
Weight (approx.)	350 g	550 g	650 g	700 g	900 g
Connections	G¼, G½, NPT	G¼, G½, NPT	G¼, G½, NPT	G¼, G½, NPT	G¼, G½, NPT

Sensor Technology: DIG10-E/B use high-accuracy silicon piezoresistive sensors. DIG10-P/PRO incorporate temperature-compensated high-precision silicon sensors. DIG10-CAL uses a precision silicon resonant sensor for reference-grade stability (±0.01% FS/year).

The DIG10 Series

Seven models share one digital platform and scale by accuracy, sensor technology and features:

Model	Name	Accuracy	Target market
DIG10-E	Economic Digital Pressure Gauge	±0.5% FS	General Industry
DIG10-B	Industrial Digital Test Gauge	±0.2% FS	Industrial Service
DIG10-P	Professional Digital Test Gauge	±0.1% FS	Professional Field
DIG10-DL	Data Logger Pressure Gauge	±0.1% FS	Long-term Testing
DIG10-PRO	Precision Test Gauge	±0.05% FS	Calibration Workshop
DIG10-CAL	Reference Digital Pressure Calibrator	±0.025% FS	Reference Laboratory
DIG10-DP	Differential Pressure Variant	±0.25% FS	HVAC · Clean Rooms · Filter

Quick Selection — Which Model?

Model	When to choose this model
DIG10-E	The entry-level digital gauge replacing analog dials for everyday industrial reading.
DIG10-B	The industrial workhorse for test and verification — full functions for service teams.
DIG10-P	Professional-grade gauge with temperature compensation for stable, accurate field readings.
DIG10-DL	Logging gauge recording up to 1,000,000 timestamped records with USB export.
DIG10-PRO	Precision instrument for the calibration workshop — verifies process gauges and transmitters in-house.
DIG10-CAL	The flagship reference calibrator — ±0.025% FS with a resonant silicon sensor and ±0.01% FS/year stability.
DIG10-DP	Handheld differential variant for HVAC, clean rooms and filters — with filter, clean-room and leak-test modes.

Selection rule

Pick by required **accuracy and role**: indication → E; field test → B/P; logging → DL; workshop reference → PRO; lab reference → CAL; differential (HVAC/clean room) → DP. Then set the range so the working pressure sits around mid-scale.

DIG10-E

Piezoresistive · ±0.5% FS

Economic Digital Pressure Gauge

The entry-level digital gauge replacing analog dials for everyday industrial reading.

Product Overview

The DIG10-E is the entry-level digital pressure gauge for everyday industrial reading — a clear, backlit, parallax-free display that replaces analog gauges where battery convenience and easy reading matter, at an economical price.

Technical Specifications

Technical Specifications	
Sensor technology	Silicon piezoresistive
Accuracy	±0.5% FS
Pressure ranges	Vacuum, compound and 0…1 bar up to 0…1000 bar (DP: ±30 Pa…±500 kPa)
Display	Backlit LCD, multi-unit, selectable resolution
Units	bar, psi, kPa, MPa, mbar, mmHg, inH_2O, kg/cm²
Functions	Peak / Min / Max, tare / zero, data logging (model-dependent)
Data logging	—
Process connection	G¼, G½, ¼ NPT
Wetted parts	Stainless steel 316L
Power	Rechargeable battery, USB-C charging, auto power-off
Operating temperature	-10…+50 °C
Ingress protection	IP54 / IP65
Certifications	Traceable calibration certificate (accredited on request)

Applications

Plant maintenance · General monitoring · Workshops · Utilities

Features & Benefits

- ✓ Backlit, parallax-free digital display
- ✓ Multi-unit reading
- ✓ Peak / hold function
- ✓ Rechargeable USB-C battery

Limitations & Where Not to Use

- Lowest-accuracy model — for test/calibration use B / P / PRO / CAL.
- Battery-powered handheld — not a fixed process transmitter (no continuous 4–20 mA loop).
- Apply pressure within the rated range; protect against overpressure spikes.
- Re-charge / verify the battery before critical calibration work.
- Keep the sensor port clean and dry; not for clogging or freezing media.

Selection Guide

Choose for budget-sensitive general indication where a clear digital reading replaces an analog gauge.

Not recommended for

- Test & calibration → DIG10-B/P/PRO/CAL
- Logging → DIG10-DL
- Differential → DIG10-DP

Quick Selection Table

Criterion	Guidance
Choose when	Economical digital indication
Avoid when	Calibration accuracy → PRO/CAL

Ordering Code

Structure: `DIG10-[M]-[RNG]-[CN]-[MNT]-[OPT]`

Example order code: `DIG10-E-16B-G14-BM-XX`

Decoded example

1. `DIG10` — Digital test gauge series
2. `E` — Economic, ±0.5% FS
3. `16B` — Range 0…16 bar
4. `G14` — G¼ connection
5. `BM` — Bottom mount
6. `XX` — Standard

Accessories & Options

Common options: traceable calibration certificate (CC), data-logging firmware (DL), RS-232/USB output (RS), connection adapters, protective boot and carrying case. See the Accessories chapter.

Installation & Maintenance Notes

- Tare at atmosphere before measurement; bleed air on liquid systems.
- Apply pressure smoothly within the rated range; protect against spikes.
- Recalibrate against a higher-class reference (PRO / CAL) at the required interval.

DIG10-B

Piezoresistive · ±0.2% FS

Industrial Digital Test Gauge

The industrial workhorse for test and verification — full functions for service teams.

Product Overview

The DIG10-B is the industrial test workhorse: higher accuracy than the economic model with full measurement functions (Peak/Min/Max, tare, multi-unit) for field service and verification teams.

Technical Specifications

Technical Specifications	
Sensor technology	Silicon piezoresistive
Accuracy	±0.2% FS
Pressure ranges	Vacuum, compound and 0…1 bar up to 0…1000 bar (DP: ±30 Pa…±500 kPa)
Display	Backlit LCD, multi-unit, selectable resolution
Units	bar, psi, kPa, MPa, mbar, mmHg, inH_2O, kg/cm²
Functions	Peak / Min / Max, tare / zero, data logging (model-dependent)
Data logging	Basic
Process connection	G¼, G½, ¼ NPT
Wetted parts	Stainless steel 316L
Power	Rechargeable battery, USB-C charging, auto power-off
Operating temperature	-10…+50 °C
Ingress protection	IP54 / IP65
Certifications	Traceable calibration certificate (accredited on request)

Applications

Field service · Test & verification · Calibration check · Maintenance

Features & Benefits

- ✓ Class ±0.2% FS for test duty
- ✓ Peak / Min / Max and tare/zero
- ✓ Multi-unit, selectable resolution
- ✓ Basic on-board recording

Limitations & Where Not to Use

- For workshop/reference accuracy use PRO / CAL.
- Battery-powered handheld — not a fixed process transmitter (no continuous 4–20 mA loop).
- Apply pressure within the rated range; protect against overpressure spikes.
- Re-charge / verify the battery before critical calibration work.
- Keep the sensor port clean and dry; not for clogging or freezing media.

Selection Guide

Choose for field test and verification needing solid ±0.2% accuracy and full functions.

Not recommended for

- Reference calibration → CAL
- Long-term logging → DL

Quick Selection Table

Criterion	Guidance
Choose when	Field test & verification
Avoid when	Reference work → PRO/CAL

Ordering Code

Structure: `DIG10-[M]-[RNG]-[CN]-[MNT]-[OPT]`

Example order code: `DIG10-B-100B-G14-BM-CC`

Decoded example

1. `DIG10` — Digital test gauge series
2. `B` — Industrial, ±0.2% FS
3. `100B` — Range 0…100 bar
4. `G14` — G¼ connection
5. `BM` — Bottom mount
6. `CC` — Calibration certificate

Accessories & Options

Common options: traceable calibration certificate (CC), data-logging firmware (DL), RS-232/USB output (RS), connection adapters, protective boot and carrying case. See the Accessories chapter.

Installation & Maintenance Notes

- Tare at atmosphere before measurement; bleed air on liquid systems.
- Apply pressure smoothly within the rated range; protect against spikes.
- Recalibrate against a higher-class reference (PRO / CAL) at the required interval.

DIG10-P

Compensated silicon · ±0.1% FS

Professional Digital Test Gauge

Professional-grade gauge with temperature compensation for stable, accurate field readings.

Product Overview

The DIG10-P is a professional-grade test gauge with a temperature-compensated sensor for stable, accurate readings across the working temperature range — the right tool for professional field calibration and QC.

Technical Specifications

Technical Specifications	
Sensor technology	Temperature-compensated silicon
Accuracy	±0.1% FS
Pressure ranges	Vacuum, compound and 0…1 bar up to 0…1000 bar (DP: ±30 Pa…±500 kPa)
Display	Backlit LCD, multi-unit, selectable resolution
Units	bar, psi, kPa, MPa, mbar, mmHg, inH_2O, kg/cm²
Functions	Peak / Min / Max, tare / zero, data logging (model-dependent)
Data logging	up to 1,000,000 records (DL / CAL)
Process connection	G¼, G½, ¼ NPT
Wetted parts	Stainless steel 316L
Power	Rechargeable battery, USB-C charging, auto power-off
Operating temperature	-10…+50 °C
Ingress protection	IP54 / IP65
Certifications	Traceable calibration certificate (accredited on request)

Applications

Professional service · Field calibration · QC · Process verification

Features & Benefits

- ✓ Class ±0.1% FS with temperature compensation
- ✓ Stable over a wide ambient range
- ✓ Full function set, high resolution
- ✓ Traceable certificate available

Limitations & Where Not to Use

- For ±0.05% / ±0.025% reference work use PRO / CAL.
- Battery-powered handheld — not a fixed process transmitter (no continuous 4–20 mA loop).
- Apply pressure within the rated range; protect against overpressure spikes.
- Re-charge / verify the battery before critical calibration work.
- Keep the sensor port clean and dry; not for clogging or freezing media.

Selection Guide

Choose for professional field calibration needing temperature-stable ±0.1% accuracy.

Not recommended for

- Workshop reference → PRO
- Reference lab → CAL

Quick Selection Table

Criterion	Guidance
Choose when	Professional field calibration
Avoid when	Reference lab → CAL

Ordering Code

Structure: `DIG10-[M]-[RNG]-[CN]-[MNT]-[OPT]`

Example order code: `DIG10-P-400B-G12-BM-CC`

Decoded example

1. `DIG10` — Digital test gauge series
2. `P` — Professional, ±0.1% FS
3. `400B` — Range 0…400 bar
4. `G12` — G½ connection
5. `BM` — Bottom mount
6. `CC` — Calibration certificate

Accessories & Options

Common options: traceable calibration certificate (CC), data-logging firmware (DL), RS-232/USB output (RS), connection adapters, protective boot and carrying case. See the Accessories chapter.

Installation & Maintenance Notes

- Tare at atmosphere before measurement; bleed air on liquid systems.
- Apply pressure smoothly within the rated range; protect against spikes.
- Recalibrate against a higher-class reference (PRO / CAL) at the required interval.

DIG10-DL

Compensated silicon · logger

Data Logger Pressure Gauge

Logging gauge recording up to 1,000,000 timestamped records with USB export.

Product Overview

The DIG10-DL records pressure over time — up to 1,000,000 timestamped records with a configurable sampling interval and USB-C export for PC analysis. Ideal for endurance, leak-decay and long-term field studies.

Technical Specifications

Technical Specifications	
Sensor technology	Temperature-compensated silicon
Accuracy	±0.1% FS
Pressure ranges	Vacuum, compound and 0…1 bar up to 0…1000 bar (DP: ±30 Pa…±500 kPa)
Display	Backlit LCD, multi-unit, selectable resolution
Units	bar, psi, kPa, MPa, mbar, mmHg, inH_2O, kg/cm²
Functions	Peak / Min / Max, tare / zero, data logging (model-dependent)
Data logging	Up to 1,000,000 records
Process connection	G¼, G½, ¼ NPT
Wetted parts	Stainless steel 316L
Power	Rechargeable battery, USB-C charging, auto power-off
Operating temperature	-10…+50 °C
Ingress protection	IP54 / IP65
Certifications	Traceable calibration certificate (accredited on request)

Applications

Endurance testing · Leak / decay tests · Trend logging · Field studies

Features & Benefits

- ✓ On-board logging up to 1,000,000 records
- ✓ Configurable sampling interval
- ✓ USB-C export for analysis
- ✓ Peak / Min / Max & trend capture

Limitations & Where Not to Use

- For the highest reference accuracy use CAL.
- Battery-powered handheld — not a fixed process transmitter (no continuous 4–20 mA loop).
- Apply pressure within the rated range; protect against overpressure spikes.
- Re-charge / verify the battery before critical calibration work.
- Keep the sensor port clean and dry; not for clogging or freezing media.

Selection Guide

Choose where pressure must be recorded over time for endurance, leak or trend studies.

Not recommended for

- Spot reading only → B/P
- Reference calibration → CAL

Quick Selection Table

Criterion	Guidance
Choose when	Logging over time
Avoid when	Reference accuracy → CAL

Ordering Code

Structure: `DIG10-[M]-[RNG]-[CN]-[MNT]-[OPT]`

Example order code: `DIG10-DL-100B-G14-BM-DL`

Decoded example

1. `DIG10` — Digital test gauge series
2. `DL` — Data logger, ±0.1% FS
3. `100B` — Range 0…100 bar
4. `G14` — G¼ connection
5. `BM` — Bottom mount
6. `DL` — Data-logging firmware

Accessories & Options

Common options: traceable calibration certificate (CC), data-logging firmware (DL), RS-232/USB output (RS), connection adapters, protective boot and carrying case. See the Accessories chapter.

Installation & Maintenance Notes

- Tare at atmosphere before measurement; bleed air on liquid systems.
- Apply pressure smoothly within the rated range; protect against spikes.
- Recalibrate against a higher-class reference (PRO / CAL) at the required interval.

DIG10-PRO

HP compensated silicon · ±0.05% FS

Precision Test Gauge

Precision instrument for the calibration workshop — verifies process gauges and transmitters in-house.

Product Overview

The DIG10-PRO is a precision instrument for the calibration workshop: ±0.05% FS accuracy to verify and adjust process gauges and transmitters in-house, supplied with a traceable calibration certificate.

Technical Specifications

Technical Specifications	
Sensor technology	High-precision compensated silicon
Accuracy	±0.05% FS
Pressure ranges	Vacuum, compound and 0…1 bar up to 0…1000 bar (DP: ±30 Pa…±500 kPa)
Display	Backlit LCD, multi-unit, selectable resolution
Units	bar, psi, kPa, MPa, mbar, mmHg, inH_2O, kg/cm²
Functions	Peak / Min / Max, tare / zero, data logging (model-dependent)
Data logging	up to 1,000,000 records (DL / CAL)
Process connection	G¼, G½, ¼ NPT
Wetted parts	Stainless steel 316L
Power	Rechargeable battery, USB-C charging, auto power-off
Operating temperature	-10…+50 °C
Ingress protection	IP54 / IP65
Certifications	Traceable calibration certificate (accredited on request)

Applications

Calibration workshop · In-house verification · Instrument QC · Service centres

Features & Benefits

- ✓ Class ±0.05% FS precision
- ✓ High-precision compensated sensor
- ✓ Reference for Class 0.1–1.0 instruments
- ✓ Traceable certificate included

Limitations & Where Not to Use

- For laboratory reference accuracy use CAL (±0.025%).
- Battery-powered handheld — not a fixed process transmitter (no continuous 4–20 mA loop).
- Apply pressure within the rated range; protect against overpressure spikes.
- Re-charge / verify the battery before critical calibration work.
- Keep the sensor port clean and dry; not for clogging or freezing media.

Selection Guide

Choose as the workshop reference to verify and adjust field process instruments.

Not recommended for

- Accredited reference lab → CAL
- Field handheld duty → B/P

Quick Selection Table

Criterion	Guidance
Choose when	Workshop reference
Avoid when	Reference lab → CAL

Ordering Code

Structure: `DIG10-[M]-[RNG]-[CN]-[MNT]-[OPT]`

Example order code: `DIG10-PRO-100B-G12-BM-CC`

Decoded example

1. `DIG10` — Digital test gauge series
2. `PRO` — Precision, ±0.05% FS
3. `100B` — Range 0…100 bar
4. `G12` — G½ connection
5. `BM` — Bottom mount
6. `CC` — Calibration certificate

Accessories & Options

Common options: traceable calibration certificate (CC), data-logging firmware (DL), RS-232/USB output (RS), connection adapters, protective boot and carrying case. See the Accessories chapter.

Installation & Maintenance Notes

- Tare at atmosphere before measurement; bleed air on liquid systems.
- Apply pressure smoothly within the rated range; protect against spikes.
- Recalibrate against a higher-class reference (PRO / CAL) at the required interval.

DIG10-CAL

Resonant silicon · ±0.025% FS

Reference Digital Pressure Calibrator FLAGSHIP

The flagship reference calibrator — ±0.025% FS with a resonant silicon sensor and ±0.01% FS/year stability.

Product Overview

The DIG10-CAL is the flagship reference calibrator: ±0.025% FS accuracy with a precision silicon resonant sensor and ±0.01% FS/year long-term stability for laboratory-grade reference measurement and the calibration of field and workshop instruments.

Technical Specifications

Technical Specifications	
Sensor technology	Precision silicon resonant (±0.01% FS/yr)
Accuracy	±0.025% FS
Pressure ranges	Vacuum, compound and 0…1 bar up to 0…1000 bar (DP: ±30 Pa…±500 kPa)
Display	Backlit LCD, multi-unit, selectable resolution
Units	bar, psi, kPa, MPa, mbar, mmHg, inH_2O, kg/cm²
Functions	Peak / Min / Max, tare / zero, data logging (model-dependent)
Data logging	Up to 1,000,000 records
Process connection	G¼, G½, ¼ NPT
Wetted parts	Stainless steel 316L
Power	Rechargeable battery, USB-C charging, auto power-off
Operating temperature	-10…+50 °C
Ingress protection	IP54 / IP65
Certifications	Traceable calibration certificate (accredited on request)

Applications

Reference laboratory · Accredited calibration · Master reference · Metrology

Features & Benefits

- ✓ Reference-grade ±0.025% FS accuracy
- ✓ Precision silicon resonant sensor
- ✓ ±0.01% FS/year long-term stability
- ✓ Accredited calibration certificate on request

Limitations & Where Not to Use

- Premium reference instrument — for field duty B / P are more economical.
- Battery-powered handheld — not a fixed process transmitter (no continuous 4–20 mA loop).
- Apply pressure within the rated range; protect against overpressure spikes.
- Re-charge / verify the battery before critical calibration work.
- Keep the sensor port clean and dry; not for clogging or freezing media.

Selection Guide

Choose as the laboratory master reference for calibrating field and workshop instruments.

Not recommended for

- General field reading → E/B
- Logging-only field work → DL

Quick Selection Table

Criterion	Guidance
Choose when	Reference / metrology lab
Avoid when	Field reading → E/B

Ordering Code

Structure: `DIG10-[M]-[RNG]-[CN]-[MNT]-[OPT]`

Example order code: `DIG10-CAL-1000B-G12-BM-CC`

Decoded example

1. `DIG10` — Digital test gauge series
2. `CAL` — Reference, ±0.025% FS
3. `1000B` — Range 0…1000 bar
4. `G12` — G½ connection
5. `BM` — Bottom mount
6. `CC` — Accredited certificate

Accessories & Options

Common options: traceable calibration certificate (CC), data-logging firmware (DL), RS-232/USB output (RS), connection adapters, protective boot and carrying case. See the Accessories chapter.

Installation & Maintenance Notes

- Tare at atmosphere before measurement; bleed air on liquid systems.
- Apply pressure smoothly within the rated range; protect against spikes.
- Recalibrate against a higher-class reference (PRO / CAL) at the required interval.

DIG10-DP

Differential silicon · ±0.25% FS

Differential Pressure Variant

Handheld differential variant for HVAC, clean rooms and filters — with filter, clean-room and leak-test modes.

Product Overview

The DIG10-DP is a handheld differential-pressure variant for HVAC, clean-room and filter applications, with dedicated filter-monitoring, clean-room and leak-test modes and low-DP ranges from ±30 Pa to ±500 kPa.

Technical Specifications

Technical Specifications	
Sensor technology	Differential silicon
Accuracy	±0.25% FS
Pressure ranges	±30 Pa to ±500 kPa
Display	Backlit LCD, multi-unit, selectable resolution
Units	bar, psi, kPa, MPa, mbar, mmHg, inH_2O, kg/cm²
Functions	Peak / Min / Max, tare / zero, data logging (model-dependent)
Data logging	up to 1,000,000 records (DL / CAL)
Process connection	G¼, G½, ¼ NPT
Wetted parts	Stainless steel 316L
Power	Rechargeable battery, USB-C charging, auto power-off
Operating temperature	-10…+50 °C
Ingress protection	IP54 / IP65
Certifications	Traceable calibration certificate (accredited on request)

Applications

HVAC balancing · Clean rooms · HEPA / filter test · Duct & airflow

Features & Benefits

- ✓ DP ranges ±30 Pa to ±500 kPa
- ✓ Filter-monitoring mode (OK / CHANGE)
- ✓ Clean-room mode (positive / negative)
- ✓ Leak test (decay, rate, duration)

Limitations & Where Not to Use

- Gauge (line) pressure measurement → use the standard DIG10 models.
- Battery-powered handheld — not a fixed process transmitter (no continuous 4–20 mA loop).
- Apply pressure within the rated range; protect against overpressure spikes.
- Re-charge / verify the battery before critical calibration work.
- Keep the sensor port clean and dry; not for clogging or freezing media.

Selection Guide

Choose for differential pressure in HVAC, clean-room and filter applications.

Not recommended for

- Line / gauge pressure → DIG10-E…CAL
- Permanent DP signal → DPT11 transmitter

Quick Selection Table

Criterion	Guidance
Choose when	Differential pressure, HVAC/clean room
Avoid when	Line pressure → standard DIG10

Ordering Code

Structure: `DIG10-[M]-[RNG]-[CN]-[MNT]-[OPT]`

Example order code: `DIG10-DP-…-G14-BM-XX`

Decoded example

1. `DIG10` — Digital test gauge series
2. `DP` — Differential, ±0.25% FS
3. `…` — DP range ±30 Pa…±500 kPa
4. `G14` — G¼ / hose-barb
5. `BM` — Bottom mount
6. `XX` — Standard

Accessories & Options

Common options: traceable calibration certificate (CC), data-logging firmware (DL), RS-232/USB output (RS), connection adapters, protective boot and carrying case. See the Accessories chapter.

Installation & Maintenance Notes

- Tare at atmosphere before measurement; bleed air on liquid systems.
- Apply pressure smoothly within the rated range; protect against spikes.
- Recalibrate against a higher-class reference (PRO / CAL) at the required interval.

Complete Technical Specifications

Comparison across the six gauge/calibrator models. The DIG10-DP differential variant (±0.25% FS, ±30 Pa…±500 kPa) is specified separately for HVAC and clean-room duty.

Specification	E	B	P	DL	PRO	CAL
Accuracy (FS)	±0.5% FS	±0.2% FS	±0.1% FS	±0.1% FS	±0.05% FS	±0.025% FS
Sensor	Piezoresistive	Piezoresistive	Comp. silicon	Comp. silicon	HP silicon	Resonant silicon
Pressure ranges	-1…1000 bar	-1…1000 bar	-1…1000 bar	-1…1000 bar	-1…1000 bar	-1…1000 bar
Display	Backlit LCD	Backlit LCD	Backlit LCD	Backlit LCD	Backlit LCD	Backlit LCD
Data logging	—	Basic	Yes	1M records	Yes	1M records
Long-term stability	—	—	—	—	±0.05%/yr	±0.01%/yr
Power	Rechargeable · USB-C	Rechargeable · USB-C	Rechargeable · USB-C	Rechargeable · USB-C	Rechargeable · USB-C	Rechargeable · USB-C
Protection	IP54	IP65	IP65	IP65	IP65	IP65
Calibration cert.	Option	Yes	Yes	Yes	Yes	Accredited opt.

All accuracy values stated at reference conditions (20 °C). Specifications subject to change without notice; confirm against the official datasheet before order.

Ordering System

The DIG10 order code is one scalable system across the series: `DIG10-[M]-[RNG]-[CN]-[MNT]-[OPT]`

Example order code: `DIG10-B-100B-G14-BM-CC`

[M] Model	
E	Economic · ±0.5%
B	Industrial · ±0.2%
P	Professional · ±0.1%
DL	Data logger · ±0.1%
PRO	Precision · ±0.05%
CAL	Reference · ±0.025%
DP	Differential · ±0.25%

[RNG] Pressure range	
V1B	−1…0 bar (vacuum)
V1PB	−1…1 bar (compound)
1B	0…1 bar
16B	0…16 bar
100B	0…100 bar
400B	0…400 bar
1000B	0…1000 bar
…	full range table

[CN] Connection	
G14	G¼
G12	G½
N14	¼ NPT

[MNT] Mounting	
BM	Bottom mount
RM	Rear (back) mount

[OPT] Options	
XX	Standard
CC	Traceable calibration cert.
DL	Data-logging firmware
RS	RS-232 / USB output

Common ordering mistakes

- Choosing a range whose working point is near full scale instead of mid-scale.
- Ordering a logging model without the data-logging firmware (DL) option.
- Mismatched connection thread vs the process adapter.

Installation & Calibration Guidelines

1. Connect to a clean, dry pressure port; use the correct adapter for the connection thread.
2. Bleed trapped air on liquid systems before zeroing.
3. Zero (tare) the gauge at atmospheric pressure before measurement.
4. Apply pressure smoothly; avoid sudden spikes beyond the rated range.
5. Charge the battery fully before field calibration sessions.

Accessories

Accessory / option	Code	Function
Pressure connection adapters	—	G¼ / G½ / ¼ NPT adapters
Traceable calibration certificate	CC	Calibration traceable per ISO/IEC 17025
Data-logging firmware / software	DL	On-board logging + PC export
RS-232 / USB output	RS	Live data to PC
Protective rubber boot	—	Field impact protection
Carrying case	—	Transport and storage

Maintenance & Troubleshooting

Symptom	Likely cause	Action
Reading offset at zero	Zero drift / trapped air	Tare at atmosphere; bleed air on liquid systems
Reading disagrees with reference	Out of calibration	Recalibrate against a higher-class reference (PRO / CAL)
Short battery life	Battery ageing / backlight always on	Recharge; replace battery; use auto power-off
Display error / no power	Discharged battery or fault	Charge via USB-C; if persists, return for service
Sluggish / sticky reading	Blocked or contaminated port	Clean the pressure port; avoid clogging media

Calibration & Storage

- Recalibrate against a higher-class reference (PRO / CAL) at the required interval.
- Store charged, dry and within the stated temperature limits.
- Protect the pressure port and display from impact and contamination.

All specifications should be verified against the latest official NICO datasheet before final publication.

NICO

DIG10 — Digital Test Gauge Series

DIG10-E
Economic Digital Pressure Gauge

DIG10-B
Industrial Digital Test Gauge

DIG10-P
Professional Digital Test Gauge

DIG10-DL
Data Logger Pressure Gauge

DIG10-PRO
Precision Test Gauge

DIG10-CAL
Reference Digital Pressure Calibrator

DIG10-DP
Differential Pressure Variant

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