ASHCROFT®

Trust the shield.®

CLEANROOM-MONITORING

/ CLARITY

We meet our responsibilities with clarity. Objectively & technically, as well as in cooperation. Especially where there is no substitute for accuracy. Where we take responsibility with our work and our products:

For us, it's about more than the sum of all parts, more than the highest technical know-how. For us, it's about unconditional reliability and being the responsible partner you can rely on. We build partnerships on this clarity.

With our differential pressure transmitter product family, we are able to provide excellent support for your cleanroom projects – with accuracy at the limit of physical feasibility and with reliable long-term stability.

MEASURE US BY IT!

CLEANROOM

/ THIS IS ASHCROFT

DEVELOPMENT FROM TRADITION

When Edward Ashcroft founded our company in 1852, his mission was to protect the steam-powered industry and its workers by using more sophisticated and reliable instruments. Times have changed, but not our attitude. With a history of more than 165 years, of which more than 40 years with our own production in Europe, we have experienced and learned a lot. Together with our customers, we have mastered three industrial revolutions, survived global and regional conflicts and crisis's. We look forward to accompanying our customers with our products in the fourth industrial revolution as well.

GLOBAL - REGIONAL - LOCAL

Globally positioned - regionally represented and locally available for you.
With local contacts who speak your language and are ready to solve your challenges.

OUR GREATEST STRENGTH

All of Ashcroft's products and services are the result of our exceptional people. We are all passionate about our common goal, the best customer satisfaction. Ashcroft is inspired of a common commitment to our work and to each other. Combining the talents of our diverse workforce makes us more competitive, resilient and better able to respond to the ever-changing needs of our customers and markets.

OUR MOTIVATION

As a customer and partner, you are the focus of our attention. We are passionate about designing and producing the most innovative, high quality pressure and temperature measuring instruments on our planet.

OUR VALUES

Our five corporate values are not abstract, but are lived by us, and every Ashcroft employee bases his or her daily actions on them.

THINK CUSTOMER FIRST

Every measure, every plan and every project is aimed first and foremost at you, our customer. We see the world through your eyes.

NEVER SETTLE / CHALLENGE THE STATUS QUO

What was true yesterday is not necessarily true today. At Ashcroft, we challenge each other to never be indifferent, to keep improving ourselves and the company.

RESPECT EACH OTHER

We celebrate our diversity, share our ideas and intensify our collective thinking. We act and discuss in mutual respect and thus find better solutions.

THINK BEYOND BORDERS

Across geographical borders. Beyond the factory. Beyond your own area of responsibility. Beyond the personal comfort zone.

WIN AS A TEAM

The common goal is more important to us than our own.

INNOVATION

RESPONSIBILITY

/ ASHCROFT DIFFERENTIAL PRESSURE TRANSMITTERS

CLARITY

ACCURACY

CLEANROOM

/ ASHCROFT DIFFERENTIAL PRESSURE TRANSMITTERS

CLEAN ROOMS ARE NOT ONLY NEEDED IN MEDICAL TECHNOLOGY, BUT ALSO IN SEMICONDUCTOR PRODUCTION, OPTICS AND LASER TECHNOLOGY, AEROSPACE TECHNOLOGY, LIFE SCIENCES AND MEDICAL RESEARCH.

The cleanroom classes are defined according to various standards and their planning and realisation requires the highest demands on the systems used and their components.

Equipped with a highly reliable and accurate sensing element, featuring the patented Ashcroft® Si-Glas™ sensor, Ashcroft offers a range of differential pressure transmitters specifically designed and developed for use in the cleanroom industry. Using an ultra-thin single crystal diaphragm, Ashcroft differential pressure transmitters offer inherent sensor repeatability and stability, making them highly accurate, long-term stable and reliable measurement instruments for cleanroom pressure monitoring.

SENSOR CROSS-SECTION

The silicon diaphragm sensor has no glues or other organics to contribute to drift or mechanical degradation over time.

TruAccuracy

Ashcroft differential pressure transmitters incorporate the TruAccuracy™ specification. Ashcroft's TruAccuracy™ specification is exclusively based on terminal point methodology instead of statistically derived schemes like "best fit straight line". TruAccuracy™ means the Ashcroft DXLdp has ±0.25 % of span accuracy out of the box. Zero and span setting errors are already included in the ±0.25 % of span accuracy spec. The DXLdp is ready to be installed with no additional calibration adjustments required. A unit from another manufacturer advertised as ±0.25 % best fit straight line may actually be a ±1.25 % to ±2.25 % device. Using best fit straight line method, the accuracy spec does not include zero and span setting errors, which can be as much as ±1.00 % each.

CLEANROOM

ASHCROFT SPOOLCAL™ – A FANTASTIC OPTION

CLEANROOMS ARE QUALIFIED ACCORDING TO INTERNATIONAL STANDARDS BEFORE THEY ARE PUT INTO OPERATION. AS SOON AS CHANGES ARE MADE TO THE APPROVED SYSTEM, BE IT ONLY FOR MAINTENANCE OR INSPECTION, A SUBSEQUENT COST-INTENSIVE VALIDATION IS REQUIRED.

A significant change here is the simple disconnection of electrical connection wires and/or pressure measurement tubes for the differential pressure measurement technology used.
Ashcroft DXLdp and GXLdp Series Differential Pressure Transmitters offer the plant operator a way to perform electrical and pressure checks without changing the overall system. With the optional SpoolCal™ calibration valve, the cleanroom operator and their service partners can make important measurements and adjustments directly on the Ashcroft differential pressure in no time:

- Connection of a master gauge to verify the current measured value
- Calibration and adjustment of the differential pressure transmitter

This control and maintenance function without simultaneous changes to the overall system is unique in the world of differential pressure measurement technology.

GENERATIONS AHEAD OF ANY OTHER DIFFERENTIAL PRESSURE TRANSMITTER

Especially during cleaning work in the clean room, one-sided overload peaks of up to 250 mbar can occur very quickly, which very often lead to an irreparable defect of the differential pressure transmitter. That's why we use our own sensors that have been specially developed for the special conditions of everyday service in the cleanroom industry and have overload protection of up to 1.4 bar.

PRACTICE IN FOCUS

We know your challenges, because it is often the space that is lacking to accurately accommodate measurement technology with pressure measurement tubes and electrical connections, be it in the false ceiling or in the control cabinet. That is why we have developed the CXLdp and DXLdp, probably the most compact differential pressure transmitters.

FRONT ACCESS TEST JACKS AND LED INDICATORS. MEASURABLE AND VISIBLE INNOVATION

With the “Front access test jacks” option, you can pick up the output signal of the differential pressure measurement directly at the transmitter without disconnecting the actual wiring. The optional LED range status indicators shows you logically and clearly whether your overall system is in the desired operating state.

CLEANROOM

VALIDATION & CALIBRATION WITHOUT SEPARATION FROM THE PROCESS

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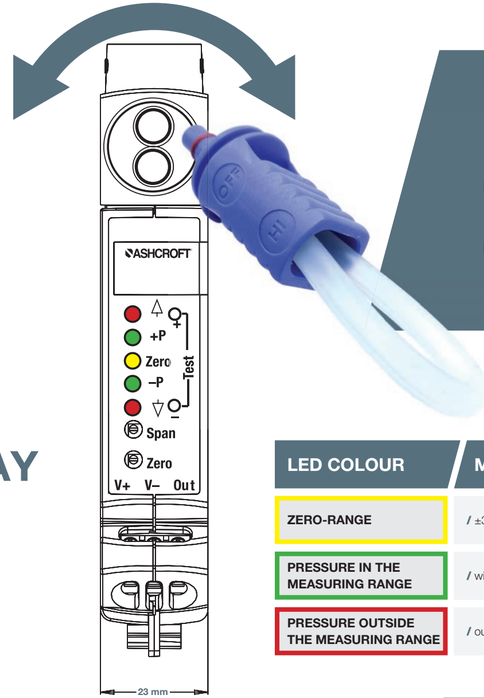
CONTROL

Turn 90 degrees counterclockwise to enter “control” mode

- Unit remains exposed to the process pressure
- Portable master gauge can be used to validate the measured value



CALIBRATION

Turn 90 degrees clockwise to enter “calibration” mode

- Unit is disconnected from the process pressure
- Portable pressure source and master gauge is used to calibrate the output.

DXLDP LED DISPLAY

OPTION: LED DISPLAY

- Allows quick visual status or diagnostic indication inside/outside the range
- This function includes front access test jacks for an uninterrupted signal reference

LED COLOUR	MEASUREMENT
ZERO-RANGE	/ ±3 % at the nominal zero point
PRESSURE IN THE MEASURING RANGE	/ within ±3 % to 106 % of the measuring range
PRESSURE OUTSIDE THE MEASURING RANGE	/ outside ±106 % of the measuring range

CLEANROOM

/ ASHCROFT DXLDP

DIFFERENTIAL PRESSURE TRANSMITTER

APPLICATIONS

High-precision pressure measurement for building automation, pressure cascade monitoring in clean rooms in the semiconductor, biotechnology and pharmaceutical industries, overpressure measurement of smoke protection pressure systems, filter monitoring, volume flow measurement and calibration of low-pressure measuring instruments.

PERFORMANCE FEATURES

- Patented SpoolCal™ calibration valve for on-site calibration without dismantling the process connections (optional)
- Front access test jacks for checking without disconnecting the wires
- Status LED for fast process diagnosis
- Mounting on standard rail to reduce mounting effort and calibration costs
- 2:1 range turndown
- Integrated voltage stabilisation for use with simple unregulated voltage sources

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/ TECHNICAL SPECIFICATIONS

FUNCTIONAL PRINCIPLE	/ Silicon Glass / Titanium Differential Capacitor with Silicon Diaphragm	**PRESSURE**	/ Differential pressure, positive and negative overpressure and combined ranges
MEASURING RANGES UNIDIRECTIONAL IN PA	/ 25 / 50 / 100 / 250 / 500 / 1.000 / 2.500 / 5.000 / 10.000 / 12.500	**PROCESS CONNECTION**	/ 11/64" barbed, 1/8 NPT female, according to ANSI/ASME B1.20.1
MEASURING RANGES BIDIRECTIONAL IN PA	/ ±12,5 / ±25 / ±50 / ±125 / ±250 / ±500 / ±1.250 / ±2.500 / ±5.000 / ±6.250	**PROCESS MEDIA**	/ Clean and dry air, non-conductive and non-corrosive gases
ACCURACY ACCORDING TO DIN 16 086	/ 0.25 % / 0.5 % or 1.0 % of span	**MATERIALS**	/ Process connection brass / measuring element: silicon, titanium, glass / housing: polycarbonate, glass fibre reinforced (UL94-V-1)
REPEATABILITY	/ 0.03 % at 0.25 % accuracy / 0.05 % at 0.5 % accuracy / 0.1 % at 1.0 % accuracy	**MOUNTING**	/ Standard rail EN 50022, EN 50035 and 50045
LONG-TERM STABILITY	/ ≤ 0.5 % of span / year	**INGRESS PROTECTION**	/ IP40
RESPONSE TIME (10 ... 90 %)	/ 250 ms (10 ms or 1 s optional)	**AUXILIARY POWER, REVERSE POLARITY PROTECTED**	/ 12 ... 36 VDC
WARM-UP TIME	/ 15 seconds	**OUTPUT SIGNAL**	/ 4-20 mA (2-wire) / 1-5/6 VDC (3-wire) / 0-5/10 VDC (3-wire)
MEASURING RANGE TURN-DOWN	/ optional 2:1	**PROOF PRESSURE**	/ 0.7 bar
BURST PRESSURE	/ 1.7 bar	**STATIC PRESSURE**	/ 1.7 bar

CLEANROOM

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/ TECHNICAL SPECIFICATIONS

FUNCTIONAL PRINCIPLE	/ Silicon glass / aluminium differential capacitor with silicon diaphragm	**PRESSURE**	/ Differential pressure, positive and negative overpressure and combined ranges
MEASURING RANGES UNIDIRECTIONAL IN PA	/ 25 / 50 / 60 / 100 / 125 / 160 / 200 / 250 / 300 / 400 / 500 / 600 / 1.000 / 1.600 / 2.000 / 2.500 / 4.000 / 5.000 / 6.000	**PROCESS CONNECTION**	/ 1/8 NPT female thread / 1/4 barbed male / 3/16 barbed male **NOTE:** The connection set included in the scope of delivery contains all three variants.
MEASURING RANGES BIDIRECTIONAL IN PA	/ ±25 / ±50 / ±60 / ±100 / ±125 / ±160 / ±200 / ±250 / ±300 / ±400 / ±500 / ±600 / ±1.000 / ±1600 / ±2000 / ±2.500 / ±4.000 / ±5.000	**PROCESS MEDIA**	/ Clean and dry air, non-conductive and non-corrosive gases
ACCURACY ACCORDING TO DIN 16 086	/ 0.25 % or 0.5 % of span	**MATERIALS**	/ Process connection brass / measuring element: silicon, titanium, glass / housing: polycarbonate, glass fibre reinforced (UL94-V-1)
OPERATING TEMPERATURE RANGE	/ -20 ... 80 °C	**MOUNTING**	/ Standard DIN rail, front panel or wall mounting
LONG-TERM STABILITY	/ ≤ 0.25 % of span / year	**INGRESS PROTECTION**	/ IP67
RESPONSE TIME (10 ... 90 %)	/ Adjustable in the menu: 250 ms / 1 s, 3 s or 5 s	**AUXILIARY POWER, REVERSE POLARITY PROTECTED**	/ 12 ... 36 VDC
WARM-UP TIME	/ 15 seconds	**OUTPUT SIGNAL**	/ 4-20 mA (2-wire) / 4-20 mA (3-wire) / 0-5 VDC (3-wire) / 1-5 VDC (3-wire) / 1-6 VDC (3-wire) / 0-10 VDC (3-wire)
ENGINEERING UNITS SELECTION	/ all international low pressure engineering units can be selected	**PROOF PRESSURE**	/ 0.7 bar
BURST PRESSURE	/ 1.7 bar	**STATIC PRESSURE**	/ 1.7 bar
SWITCHING OUTPUTS	/ 2x Field programmable (set and reset) NPN or PNP switch output		

CLEANROOM

/ ASHCROFT GXLDP

DIFFERENTIAL PRESSURE TRANSMITTER

APPLICATIONS

High-precision pressure measurement for building automation, pressure cascade monitoring in clean rooms in the semiconductor, biotechnology and pharmaceutical industries, overpressure measurement of smoke protection pressure systems, filter monitoring, volume flow measurement and calibration of low-pressure measuring instruments.

PERFORMANCE FEATURES

- Patented SpoolCal™ calibration valve for on-site calibration without dismantling the process connections (optional)
- Backlit LC display
- Field selectable outputs
- Standard DIN rail, panel or wall mounting
- Two field programable (set and reset) switch outputs
- Initial calibration certificate included in the scope of delivery

CLEANROOM

/ ASHCROFT CXLDP

DIFFERENTIAL PRESSURE TRANSMITTER

APPLICATIONS

High-precision pressure measurement for building automation, pressure cascade monitoring in clean rooms in the semiconductor, biotechnology and pharmaceutical industries, overpressure measurement of smoke protection pressure systems, filter monitoring, volume flow measurement and calibration of low-pressure measuring instruments.

PERFORMANCE FEATURES

- ABS plastic housing for mounting on standard DIN rails or wall mounting
- LED operating status display
- High overload protection up to 1 bar
- Unidirectional and bidirectional measuring ranges
- Detachable Euro style terminal block

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/ TECHNICAL SPECIFICATIONS

FUNCTIONAL PRINCIPLE	/ Silicon glass / aluminium differential capacitor with silicon diaphragm	**PRESSURE**	/ Differential pressure, positive and negative overpressure and combined ranges
MEASURING RANGES UNIDIRECTIONAL IN PA	/ 25 / 50 / 60 / 100 / 125 / 160 / 200 / 250 / 300 / 400 / 500 / 600 / 1.000 / 1.600 / 2.000 / 2.500 / 4.000 / 5.000 / 6.000	**PROCESS CONNECTION**	/ 1/4 brass barbed fittings, 1/8 NPT female, according to ANSI/ASME B1.20.1
MEASURING RANGES BIDIRECTIONAL IN PA	/ ±25 / ±50 / ±60 / ±100 / ±125 / ±160 / ±200 / ±250 / ±300 / ±400 / ±500 / ±600 / ±1.000 / ±1600 / ±2000 / ±2.500 / ±4.000 / ±5.000	**PROCESS MEDIA**	/ Clean and dry air, non-conductive and non-corrosive gases
ACCURACY ACCORDING TO DIN 16 086	/ 0.25 % / 0.4 % or 0.8 % of span	**MATERIALS**	/ Process connection brass / measuring element: silicon, titanium, glass / housing: polycarbonate, glass fibre reinforced (UL94-V-1)
OPERATING TEMPERATURE RANGE	/ -17 ... 71 °C	**MOUNTING**	/ DIN standard rail or wall mounting
LONG-TERM STABILITY	/ ≤ 0.25 % of span / year	**INGRESS PROTECTION**	/ IP20 (IP54 optional)
RESPONSE TIME (10 ... 90 %)	/ 250 ms	**AUXILIARY POWER, REVERSE POLARITY PROTECTED**	/ 12 ... 36 VDC
WARM-UP TIME	/ 15 seconds	**OUTPUT SIGNAL**	/ 4-20 mA (2-wire) / 0-5 VDC (3-wire) / 0-10 VDC (3-wire)
ADJUSTMENT POTENTIOMETERS	/ Zero point and span ± 5 % of span	**PROOF PRESSURE**	/ 1.0 bar
BURST PRESSURE	/ 1.7 bar	**STATIC PRESSURE**	/ 1.7 bar

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