Instrumentation for Critical Room Monitoring

BULLETIN CRM-1



Instrumentation for Critical Room Monitoring

Today's headlines underscore the need for improved infectious disease control in hospitals, clinics and medical research facilities. It helps keep patients and employees safe by preventing the spread of deadly viruses and superbugs.

The threat is real. The challenge is daunting.

To ensure that controlled environments are not compromised, instruments have to be highly accurate and supremely reliable. Lives depend on it. So do your regulatory requirements and financial goals.

The importance of pressure...

The pressure necessary to prevent contaminant infiltration into cleanrooms, isolation rooms and operating rooms is astoundingly low. Specifications can vary from a differential of 0.01 to 0.15 inches of water:

- Too low, and there won't be enough air movement to contain particles.
- Too high, and the air will move into places that it shouldn't, like ceiling joints, and it will become difficult to open or close doors.

With such a tight tolerance of a miniscule differential pressure required, the DP measuring device controling the air handling equipment must be extremely accurate, sensitive and stable.

How can we help?

Most cleanrooms and operating rooms require a positive pressure working environment. The pressure in the room is maintained at a higher level than the surrounding rooms or hallways to keep contaminants from entering the controlled room. Dust particles and microbes outside the room will be repelled by higher pressurized air spilling out of the room whenever a door is opened. Often, these environments consist of several separately controlled rooms surrounding or leading up to the critical area which can include a gowning area and an airlock. Each of these areas will be held at slightly different pressures to ensure that the air always moves in the correct direction.

In hospital "airborne infection isolation rooms," the opposite case is true. To keep contagions from exiting the room, a diminutive volume of the room's atmosphere is evacuated to create a lower pressure than the surrounding areas. This negative pressure will control the direction of the air flow so that when the door is opened, air from the adjacent area will push into the isolation room, preventing virus or bacteria from leaving the room and infecting staff, visitors or other patients.

The Ashcroft[®] CXLdp and DXLdp ultralow pressure transmitters are specifically designed to meet these extreme requirements. Offered in accuracies down to $\pm 0.25\%$ of span, both are able to proficiently measure DP changes down to a fraction of an inch of water and deliver the proven reliability essential to ensuring that contaminants and diseases are appropriately contained for maximum protection of people and processes.

There is more...

We offer a complete portfolio of products, from switches to board level transmitters.

Learn more at **www.ashcroft.com** or call us at **203-378-8281**.



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MODEL: CXLdp ACCURACY: 0.80% span 0.40% span

PRESSURE CONNECTION: Board level 1/4 Male barb 1/8 NPT Female

OUTPUT SIGNAL: 4-20mA 0-10Vdc/0-5Vdc

0.25% span

ELECTRICAL TERMINATION: Screw terminal 1/2 NPT Conduit (optional)

MOUNTING: DIN EN 50035 Threaded fasteners

LOCAL INDICATION: Power LED

UNIDIRECTIONAL PRESSURE RANGES: 0.10 to 25 IWC

BIDIRECTIONAL PRESSURE RANGES: -0.05 to +0.05 IWC -15 to +15 IWC

WARRANTY: Three years



MODEL: DXLdp

1.00% span 0.50% span 0.25% span

PRESSURE CONNECTION: 11/64 Male barb 1/8 NPT Female

OUTPUT SIGNAL: 4-20mA 1-5Vdc 1-6Vdc 0-5Vdc 0-10Vdc

ELECTRICAL TERMINATION: Screw terminal

MOUNTING: DIN EN 50022

DIN EN 50035 DIN EN 50045

LOCAL INDICATION: LED (optional)

UNIDIRECTIONAL PRESSURE RANGES: 0.10 to 100 IWC

BIDIRECTIONAL PRESSURE RANGES: -0.05 to +0.05 IWC -100 to +100 IWC

WARRANTY:

Three years





MODEL: GL42 ACCURACY:

1.00% span 0.50% span

PRESSURE CONNECTION: 1/4 Male barb 1/8 NPT Female

OUTPUT SIGNAL: 4-20mA

ELECTRICAL TERMINATION: 1/2 NPT Female conduit Cable gland

MOUNTING: **DIN EN 50022 DIN EN 50035** DIN EN 50045 (optional) Threaded fasteners

LOCAL INDICATION: 4 digit LCD

UNIDIRECTIONAL PRESSURE RANGES: 0.10 to 25 IWC

BIDIRECTIONAL PRESSURE RANGES: -0.05 to +0.05 IWC

-15 to +15 IWC WARRANTY:

Two years





MODEL: AXL ACCURACY: 2.00% span 1.00% span

PRESSURE CONNECTION: 3mm tube stub

OUTPUT SIGNAL: Ratiometric (0.5 to 4.5Vdc with a 5 Vdc supply)

ELECTRICAL TERMINATION: No leads JST Connector with leads (optional)

MOUNTING: Threaded fasteners

LOCAL INDICATION: None UNIDIRECTIONAL PRESSURE RANGES: 0.10 to 25 IWC

BIDIRECTIONAL PRESSURE RANGES: -0.05 to +0.05 IWC -100 to +100 IWC

WARRANTY: Three years





MODEL: IXLdp

ACCURACY: 1.00% span 0.50% span 0.25% span

PRESSURE CONNECTION: 1/4 NPT Female Board level

OUTPUT SIGNAL: 4-20mA 0-5Vdc 1-5Vdc 1-6Vdc

ELECTRICAL TERMINATION: Screw terminal

MOUNTING: Threaded fasteners

LOCAL INDICATION: None UNIDIRECTIONAL PRESSURE RANGES: 0.10 to 200 IWC

BIDIRECTIONAL PRESSURE RANGES: -0.05 to +0.05 IWC -100 to +100 IWC

WARRANTY: Three years



AGENCY MARK ON OUR PRODUCTS



MODEL: XLdp

ACCURACY: 1.00% span 0.50% span

PRESSURE CONNECTION: 1/4 Male barb 1/8 NPT Female

OUTPUT SIGNAL: 4-20mA

ELECTRICAL TERMINATION: Screw terminal

MOUNTING: Threaded fasteners

LOCAL INDICATION: None UNIDIRECTIONAL PRESSURE RANGES: 0.10 to 25 IWC

BIDIRECTIONAL PRESSURE RANGES: -0.05 to +0.05 IWC -15 to +15 IWC

WARRANTY: Three years



LOOK FOR THIS MARK ON OUR PRODUCTS



MODEL: RXLdp

ACCURACY: 1.00% span

PRESSURE CONNECTION: 1/4 Male barb 1/8 NPT Female 1/8 Male barb

OUTPUT SIGNAL: 4-20mA 1-5Vdc 1-6Vdc

ELECTRICAL TERMINATION: Screw terminal

MOUNTING: Threaded fasteners

LOCAL INDICATION: None

UNIDIRECTIONAL PRESSURE RANGES: 0.10 to 100 IWC

BIDIRECTIONAL PRESSURE RANGES: -0.05 to +0.05 IWC -100 to +100 IWC

WARRANTY: Three years



* Optional





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