Version B03

GX-B MULTI SENSOR [ASSECCORY FOR CHILLED BEAM CONTROLLER BCXb]

Multisensor GX-B.

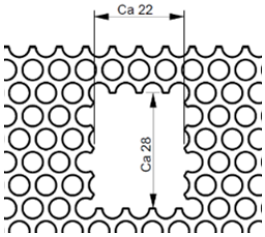
INTRODUCTION

GX-B is a sensor unit designed to detect and measure presence, room temperature, carbon dioxide levels, light levels, and humidity. The unit is sold as an accessory to Lindinvent's chilled beam control system. The delivery includes a sensor module with cables.

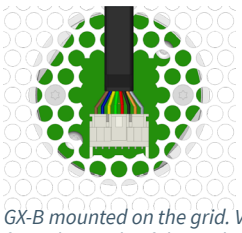
INSTALLATION

GX-B is screwed onto the cooling baffle's grid after an opening has been cut in the grid, see measurements below. Cut with wire cutters or use a hole saw.

Ensure that the screw holes in the sensor module align next to the grid opening and that the connector on the sensor module fits into the opening. The cabling can be connected to the sensor module before it is screwed into the grid. Screws are included.

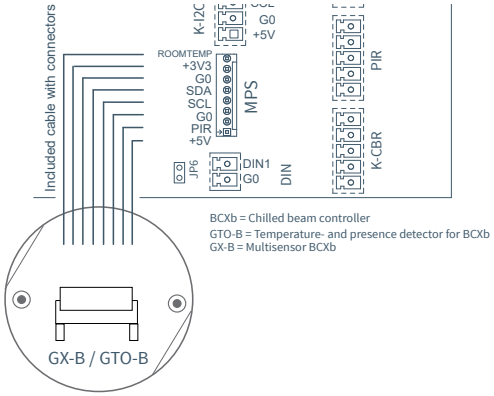


Opening in the grid of the climate baffle.



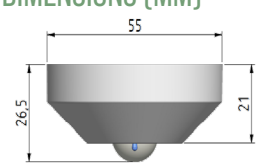
GX-B mounted on the grid. View from the inside of the grid towards the back of the sensor module.

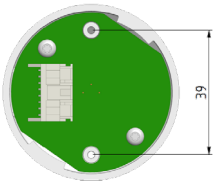
CONNECTION TO BCXb



A section of the external wiring diagram for BCXb showing the connection for the cabling from GX-B.

DIMENSIONS (MM)





TECHNICAL SPECIFICATIONS

General

Temperature Sensor
The sensor is a thermistor of type NTC.
Calibrated for the range of 0-50ºC, linear.
Measurement accuracy: ± 0.5 K

Presence Detector
Digital PIR: Passive IR with 200 zones
Detection distance: 2.5 - 4.1 m
Detection area: 107º x 107º

Carbon Dioxide Sensor
Measurement range: 400 - 10,000 ppm
Accuracy: ± (30 ppm + 3%) with background calibration to 400 ppm

Light Level Sensor

Range: 0 - 10 kLux

Humidity Sensor
Note: The humidity measurement function is not implemented. GX-B is prepared for relative humidity measurement.

Indicators
RGB LED indicating operational status.
LED for indicating power to the sensor.

Material
Casing: PP
Cabling: 8-pin connector, halogen-free
Color: RAL9003
IP Rating: The casing meets IP20

Electrical System

Power Supply: 3,3 och 5 V

Power Consumption: <0,1 VA

Complies with EMC and Low Voltage Directive

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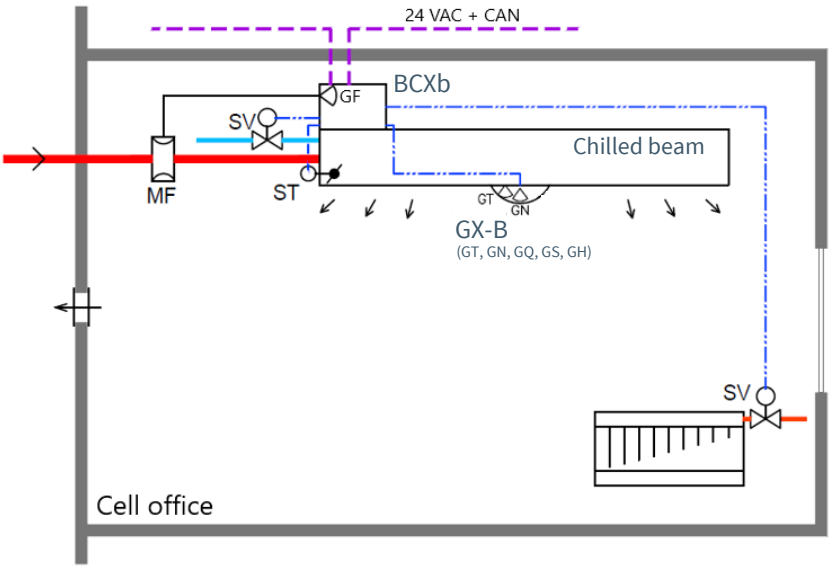
OPERATING DIAGRAM WITH GX-B

Cell office with cooling baffle (VAV baffle) & radiator

- The supply air flow is measured in the BCXb via the internal flow sensor connected to the MF measuring unit in the supply air duct.
- The GX-B is connected to the controller.
- When presence is detected, the supply air flow increases from the minimum flow to the projected occupancy flow.
- As the room temperature rises, the cooling valve and air flow are sequentially regulated. Waterborne cooling is prioritized as the standard.
- As the room temperature decreases, the air flow is reduced to the set occupancy or absence flow (minimum flow).
- The temperature sensor takes higher priority than the presence sensor.
- As the room temperature decreases, the radiator valve is regulated according to the set proportional band (P-band).
- The exhaust damper in the corridor continuously balances the supply air flow with any set offset.
- The room control can be set to an economy mode where the room is neither heated nor cooled within specified limits.
- Reading of actual values and changes to setpoints and settings can be made via a central control system or through the LINDINSIDE mobile app.



Material Specification:
(Baffle without built-in flow meter)

BCXb:	Chilled beam room climate controller
MF:	Flow measuring unit SMED
GX-B:	Presence detector (GN) Room temperature sensor (GT) Carbon dioxide sensor (GQ) Light level sensor (GS) Humidity sensor (GH)
SV:	Valve actuator (A40405) 24VAC ON/OFF
ST:	Damper motor integrated in the chilled beam

ADDITIONAL PRODUCT DOCUMENTATION

Documents are available at www.lindinvent.se

Document	Comment
Installation Instruction	See instructions here in the product description for GX-B.
Commissioning Instructions	See commissioning instructions for BCXb/DCV-B.
Maintenance Instructions	Considered maintenance-free.
External Connection Diagram	Shows wiring connections.
Environmental Product Declaration	For assessment by the Building Product Assessment.
AMA Text	Search via AMA code UBB for temperature sensors. See the relevant control unit and section for accessories.