BHUVI
Sash Controller
Model – 310

Save Energy | Enhance Safety

Syannlab Solutions Pvt. Ltd.
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Automatic sash controller is a vital component of a laboratory fume hood, designed to regulate the opening and closing of the fume hood sash for greater safety, efficiency and convenience. It ensures the closure of the window to minimize exposure to hazardous fumes and chemicals while reducing energy consumption. By automatically closing the sash based on occupancy or environmental conditions, this controller enhance user protection, reduce contamination risks and improve ventilation efficiency. Their importance lies in safeguarding laboratory personnel from toxic exposure while contributing to sustainable energy management.

This device is equipped with an LED push button to move the sash up, down and stop. A glowing LED indicates when the device is ready to operate. To ensure proper closure the device is supplied with a non-contact type metal sensor that enables clutter-free close operation. The clutch-free design makes the setup less prone to maintenance issues. An IR Beam sensor positioned below the sash stops movement when an obstacle is detected. A PIR sensor detects motion to stop and restart the closing operation. Additionally, an optional IR curtain sensor placed right in front of the sash ensures maximum safety during closure.

- Microcontroller based
- High torque drive 70Kg-cm
- Push / Pull Gesture operation
- LED indication for open status
- Easy programming with 1 button
- Non-contact type close sensor
- 2 Line display screen
- IR Beam and PIR Motion Sensors
- IR Curtain protection (optional)
- Configurable analogue output
- Configurable 230V 5A relay
- Emergency closure via Modbus
- Modbus Protocol (optional)
- 230V, 5A, 1Ph power supply

Models: - For Rope / Belt / Chain driven sash mechanism
- With Modbus output (optional)
- Various IR curtain sensors (optional)

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Technical Specification

Electrical:

Mains Supply: AC 230V, 5A, 1 Phase (direct termination)
Power Adaptor: AC 230V, 5A
Operative Power: DC 24V, 4A
Output: DC 24V, 4A
Relay output 230V 5A (for Light)
Analog output 0(2) – 10 DC (AO / for Damper)

Mechanical:

- Exhaust energy saving of up to 90%.
- Increased usage diversity of up to 90%.
- Enhanced safety features for the fume hood.
- Clutch-free design, less prone to maintenance issues.
- Push button with LED, for healthy and faulty indication
- Audible beep for input confirmation.
- Selectable sash close / open speed—five levels with soft stop.
- Gesture-based soft touch open & close operation.
- LCD two-line display for programming.
- Easy operation & programming via a button.
- Contactless close position sensor with both NO & NC type.
- Infrared beam below the sash frame for operational safety.
- Infrared curtain in front of the sash frame for additional safety (optional).
- High-torque reversable DC motor drive
- Passive infrared sensor for motion detection.
- Motor high-current cutoff.
- Various drive options including rope, belt & chain.
- Sash remains functional even when the power is interrupted
- Communication protocol: Modbus RTU.
- Emergency open or close function via Modbus from BMS.

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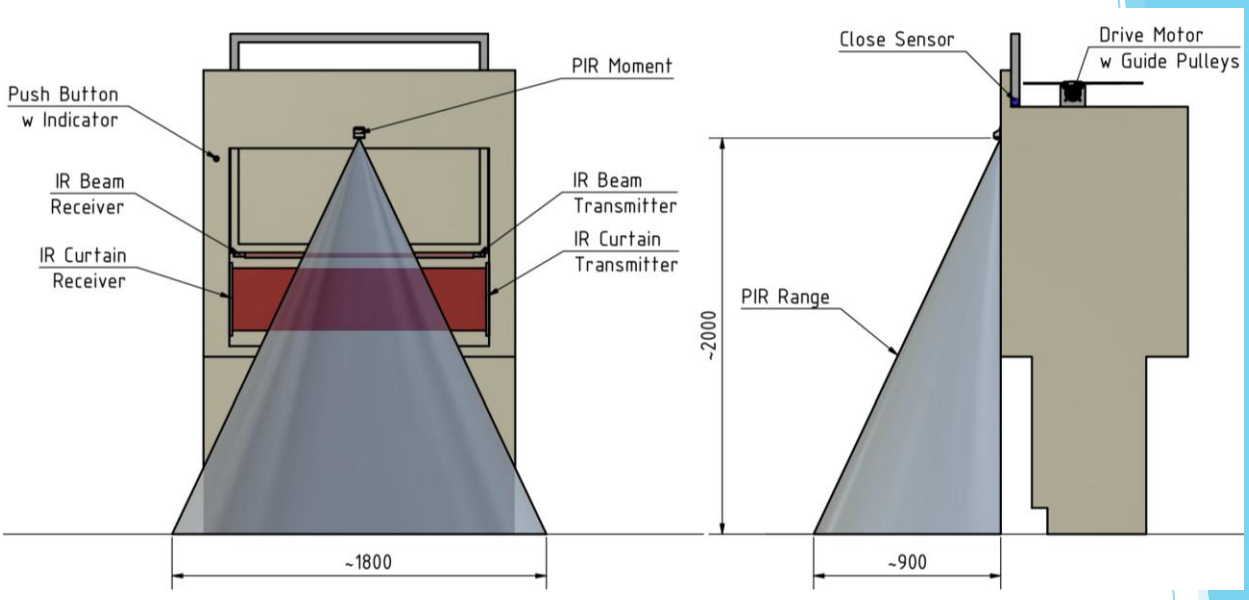
Diagram:



310 - ABCD - 00

Model No
310 – Standard
311 – Modbus RTU

A - Pully Type
1-Rope, 2-Belt, 3-Chain
B - Rope, Belt or Chain Size
C - Curtain IR (Optional)
0 = No Curtain IR Sensor
1, 2, 3 & 4 =
140, 220, 300 & 380mm sensing ht.
D – Not Applicable (0)

Configuration
00 – Standard

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Please scan for real time working video.

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