

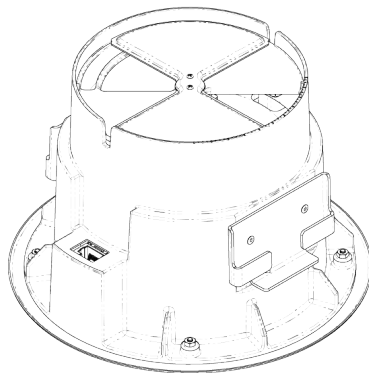
# Numa-I Datasheet

The Numa-I is a personal air vent that can be controlled via Numa Air Mobile app. The vent controls speed and direction of central air to provide personal temperature control and ventilation.

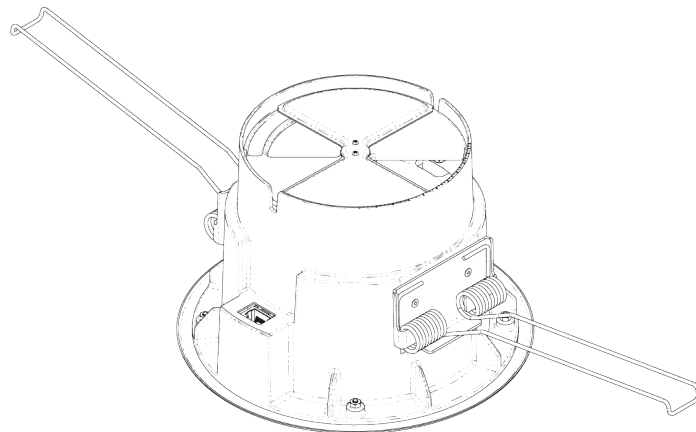


Numa-I : 1.02 kg  
 Tile Bridge : 0.29 kg  
 Mounting Springs: 0.06 kg

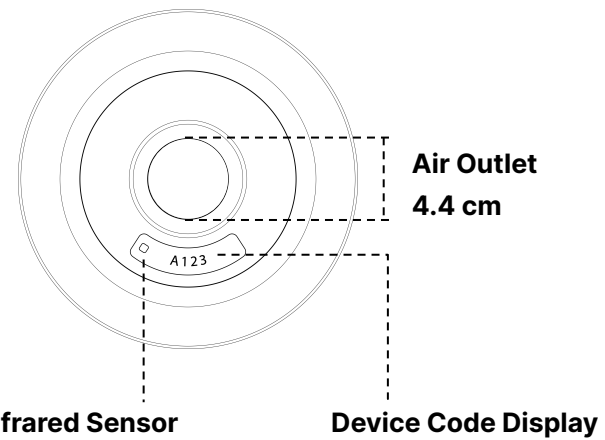
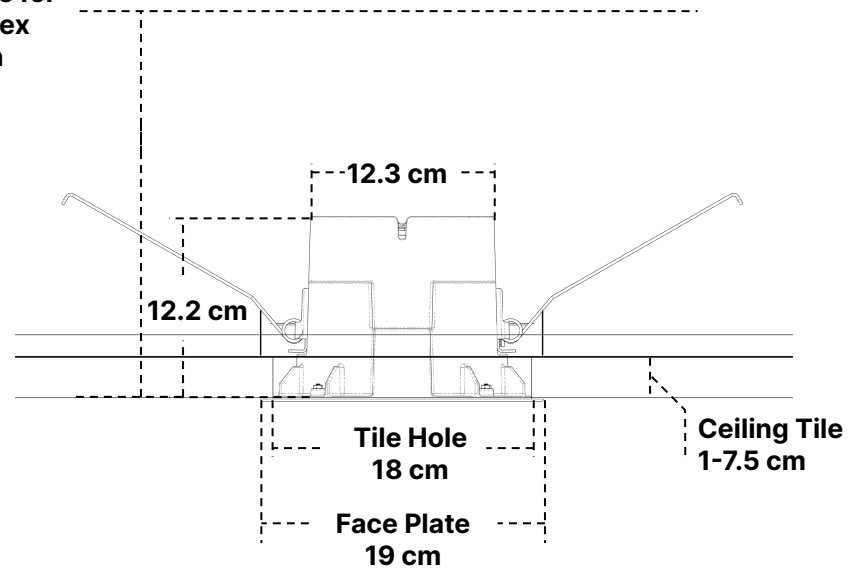
30 cm clearance for  
 125 mm round flex  
 duct connection



Numa-I



Numa-I with Mounting Springs

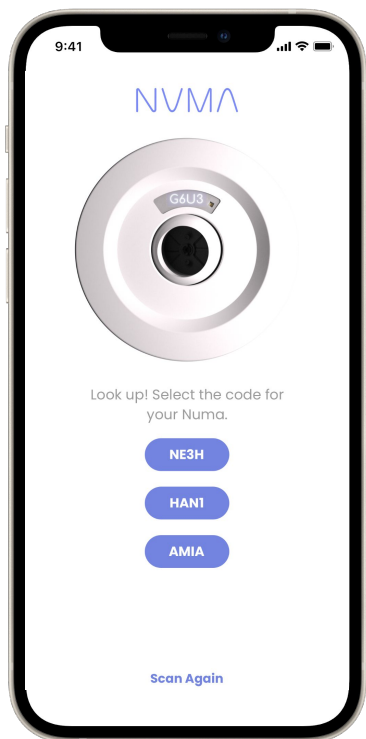


**User controls via Numa Air Mobile App**

- Airflow control
- Air direction control:
  - +/-15 degrees from vertical in all directions,
  - 70 cm coverage radius (Based on installation height of 2.7 m)
- Android and iOS apps connect over Bluetooth using device code displayed.

**Remote Data Collection and Control**

- Data points can be read or written by BMS using BACnet IP for data collection and remote device control.
- Override occupant control with:
  - Fixed airflow setpoint
  - Temperature control setpoint based on radiant temperatures below the device.
- Collect data including:
  - Occupied/unoccupied (60 cm coverage radius at 2.7m height)
  - Discharge air temperature and humidity
  - Flow measurement and setpoint
  - Average radiant temperature



Instant Pairing



Intuitive Control

**Safety/Sustainability Compliance**

- UL2043 Compliant: flame and smoke resistant
- Materials comply with Living Building Challenge Red List
- Fulfills LEED v4.1 Commercial Interior Thermal Comfort credit requirement for Individual Thermal Control or Innovation credit

**Power:**

Max 10W, standby <1W via Power-over-Ethernet 802.3af or 802.3at over Cat6a cable.

**Supply Air:**

MERV-13 or better filters must be installed upstream of Numa devices to ensure clean air.

Minimum discharge air temperature of 12.3°C

System static pressure for Numa must be 25-125 Pa

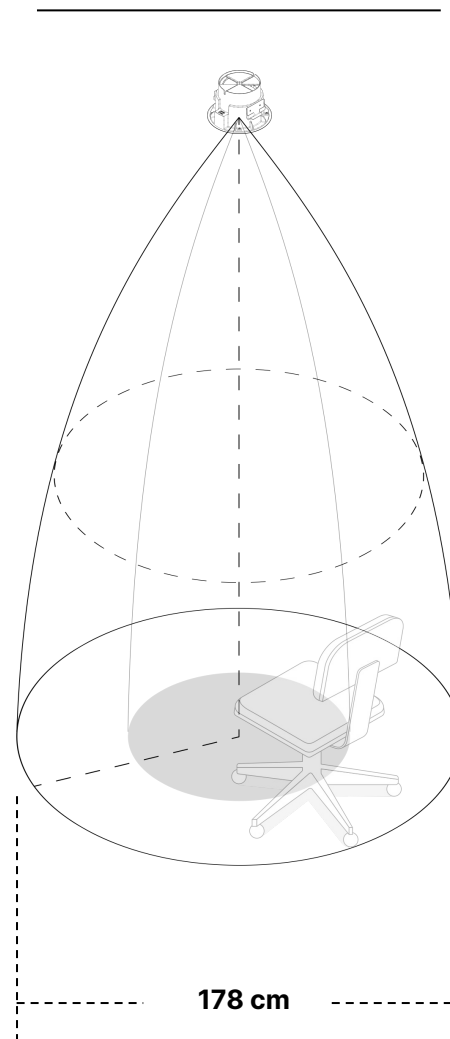
**Mounting:**

Numa should be mounted no more than 3.3 m above the floor for seated users.

Numa must be within 70 cm in horizontal plane of center of chair.

Numas must be at least 60 cm from each other and other diffusers.

Numa range at 2.7 m height



- **User airflow commands via Mobile app correspond to 5 to 17 l/s, however airflow setpoints above 17 l/s can be set over BACnet.**
- System static pressure of 50 Pa is recommended.

System Static Pressure Pa	Max. NC Rating	Max. l/s	Min. l/s	Sitting Height Centerline Air Speed m/s at Max. l/s*	Sitting Height Centerline Air Speed m/s at Min. l/s*
25	<15	11	5	0.9	0.1
50	19	16	6	1.2	0.3
75	24	20	7	1.4**	0.4**
124	34	27	9	1.8**	0.5**

\*150 cm below air discharge

\*\*extrapolated

Air velocity values measured with discharge air 11°C lower than space temperature

Object	Name	Units	Default	R/W	Stored on power cycle
CSV0	ip_address	n/a	192.168.1.177	R/W	Y
CSV1	object_instance	n/a	22222	R/W	Y
CSV2	device_code	n/a	variable	R/W	Y
AI0	discharge_temperature	°C	n/a	R	N
AI1	avg_radiant_temperature	°C	n/a	R	N
AI2	airflow	l/s	n/a	R	N
AI3	user_airflow_setpoint	l/s	17	R	N
AI4	effective_airflow_setpoint	l/s	17	R	N
BV0	override	0,1	0	R/W	Y
BV1	reset	0,1	0	R/W	N
AV0	airflow_setpoint	l/s	10	R/W	Y
AV1	radiant_temperature_setpoint	°C	24	R/W	Y
AV2	min_user_flow_setpoint	l/s	0	R/W	Y
AV3	max_user_flow_setpoint	l/s	17	R/W	Y
MSV0	mode	user=1, auto=2, fixed=3	user	R/W	Y
BI0	occupied	0,1	n/a	R	N

- Use reset command (reset=1) or cycle power for change in BACnet object instance, IP address, or device\_code to take effect.

Note: Auto and Fixed modes can be enabled at all times by setting override to 1 or only when unoccupied by setting override to 0 (default).

1. User
  - Numa-I maintains the `user_flow_setpoint` which is based on the last air speed command made via the Numa Air mobile app.
  - Air speed command from Numa Air mobile app corresponds 0-100% of the allowable flow setpoint range as designated by `min_user_flow_setpoint` and `max_user_flow_setpoint`.
  - If override is set to 1 Numa-I will modulate damper to maintain `min_user_flow_setpoint` if unoccupied.
2. Auto
  - Numa-I modulates damper to make `avg_radiant_temperature` match `radiant_temperature_setpoint`. `avg_radiant_temperature` is the average of values collected by the infrared sensor facing out from the Numa-I's faceplate.
3. Fixed
  - Numa-I maintains `fixed_flow_setpoint`.

Use the Numa Air app (available on App Store, Google Play) to confirm airflow between 25-35 CFM for good user experience. No flow hood required. To ensure each Numa-I is fully open during balancing, scan and select device, enter Ops View by clicking icon on top right (see below), and set airflow setpoint well above 35 CFM, e.g. 50 CFM. Airflow rate can then be confirmed from Ops View.

