

ULTRA WIDE BAND RADAR SENSOR

ARTIS A80

Human Presence Detection Radar UWB (Ultra-Wide band)

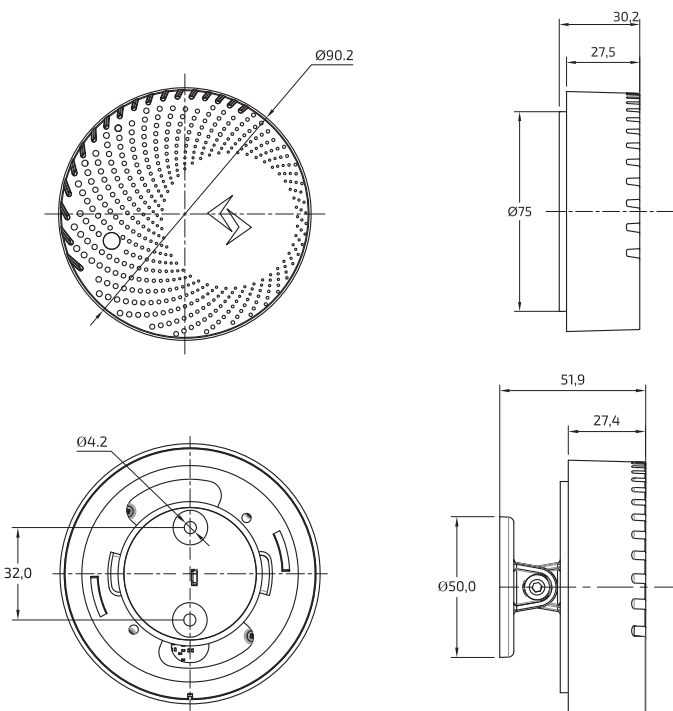
Sycra®'s Artis series of sensors is the latest generation of advanced radar sensor which includes the environmental monitoring, light intensity and human presence detection.

It can be fully customized based on the needs of building.

Artis A80 sensor can insure collection of complex information such as people motion, human presence, ambient light, temperature, air humidity, atmospheric pressure, and indoor air quality (IAQ), total volatile organic compound (TVOC), CO₂, odors and noise.

All those information are analyzed and implemented by Odin station to optimize building automation and maximize energy savings and operations.

Artis A40L also supports Over-The-Air (OTA) and Device Management (DM) protocols to perform monitoring, maintenance and Firmware updates.



Note: Dimensions graph unit: mm

Features

- People motion sensing
- Human presence detection
- Working in any weather and environments
- Compact dimensions
- Modular design
- Fast and easy installation
- Wireless Mesh OTA system setup and firmware update
- WirelessMesh system setup and data transmission: people motion and presence, illumination, temperature, humidity, air pressure
- Lower layer in IoT System

Applications

- Building Automation
- Greenhouse
- Smart Garden
- Traffic and Street Lights
- Industrial Facilities
- Wireless Mesh Node

Technical data

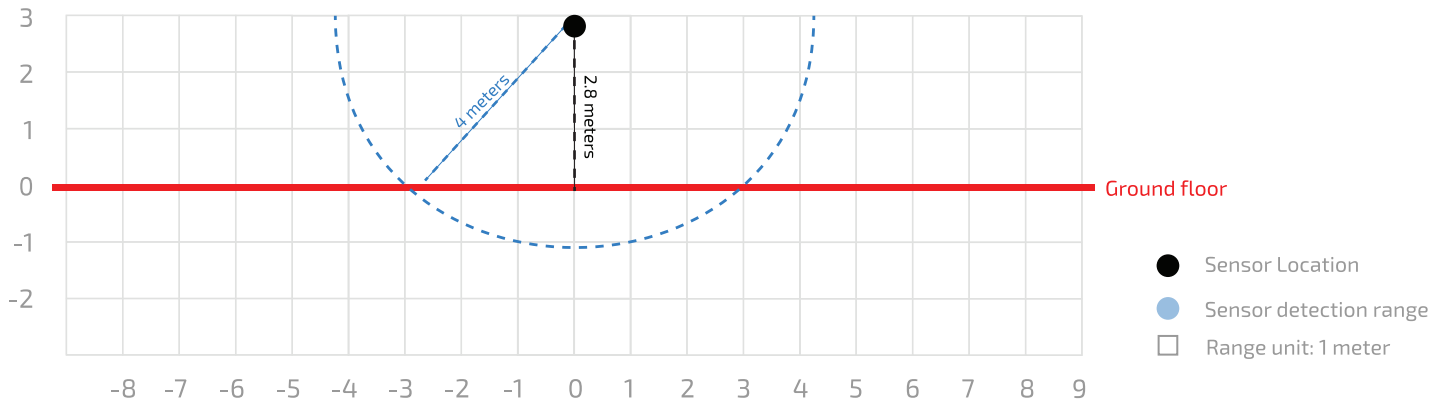
Input constant voltage	12-48Vdc/ 5V(Optional)
Input current	6-11mA/ ~19mA(Optional)
Wireless Operation frequency	2.40 - 2.48 GHz
Wireless Transmission power	+8dbm
Wireless Mesh Range	~30m (outdoor)
Operated temperature	-20°C~+60°C
Maximum case temperature	85°C
Storage temperature	-30°C~85°C
Relative humidity	10%-90%, non-condensing
Ingress Protection	IP20
Finishes	ABS White
Weight	~110g
Size	φ90.2xH30.2mm
Ambient Light Sensor	0~20,000 lux
Radar sensor	
Motion range max. distance	~3.5m
Max. Human presence area	~3.5m
Radar frequency	7.58GHz
Detection direction	Up to 180 degrees (horizontal, vertical)
Ambient Sensor (Optional)	
Temperature	-40°C~+85°C
Humidity	0 % to 100 %RH ±3%RH
Atmospheric Pressure	300 - 1100hPa ±1.7hPa
Noise	30-90dB
Gas (Optional)	
IAQ	UBA ¹ and PBAQ ² standards
CO ₂	400-5000ppm
TVOC	1 to 2000 µg/m ³

¹: UBA. German Federal Environmental Agency Umweltbundesamt

²: PBAQ. Public Building Air Quality standards

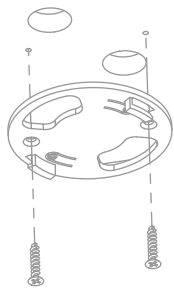
Ceiling mounted radar range

Default sensitive value, unit: m. it's suggested install on the ceiling at around 2.8m. The radar detects area showed as below graph for a reference.

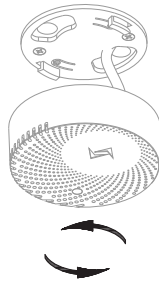


Installation diagrams

Ceiling mount



STEP 1: Fix the holder to the ceiling with the 2 provided screws



STEP 2: Clip the body onto the main base plate.

Configuration options



E.g, Artis A80B1011D2 means Artis sensor with complete Ultra Wideband (UWB) impulse radar sensor module, light sensor, temperature, humidity and pressure sensor, gas sensor, and noise sensor, which is powered by DC5V, mounted on the ceiling.

Series

- A40 24Ghz Radar Sensor - Short Range
- A40L 24Ghz Radar Sensor - Long Range
- A80 Ultra-Wide Band Sensor

Communication

- B Wireless mesh
- L LoRa
- Z Zigbee
- T Thread

Sensors

- H: Temperature, humidity and pressure sensor..... 0/1
- T: Temperature sensor..... 0/1
- G: Gas sensor..... 0/1
- N: Noise sensor..... 0/1

Power supply

- D1 12-48Vdc
- D2 5Vdc



Germany
Stahlgruberring 36
81829 Munich,
Germany
(49) 89 215522535

Hong Kong
Unit 725, 7/F, Building 19W,
No. 19 Science Park West Avenue,
Hong Kong
(852) 6575 0495

China
7 Ganli 6th rd, 2F Building 2,
Longgang district, 518000
Shenzhen, China
(86) 755 2891 1623

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