Accuracy in Every Line of *Sight*

SMAVOO *Distance*

SMAVOO SMART DISTANCE
C10C8B95A4C0E813
LORAWAN EU
FREQ: 868MHz
Crafted with love in
Hannover, Germany
SMAVOO

SMAVOO

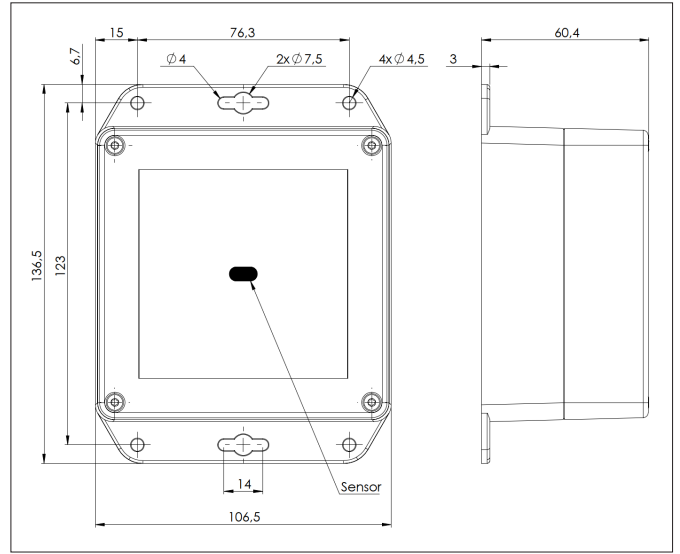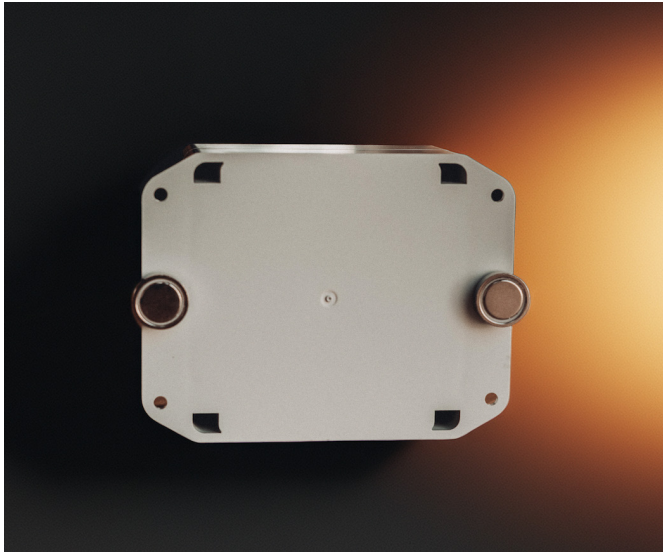Article Numbers: PC113.ENP.001, PC123.ENP.002

Description

The SMAVOO Short Range sensor is a compact distance sensor that measures up to 4 meters, enabling reliable load-carrier and box counting as well as material-presence detection. It ensures continuous stock monitoring and can automatically trigger material reordering when 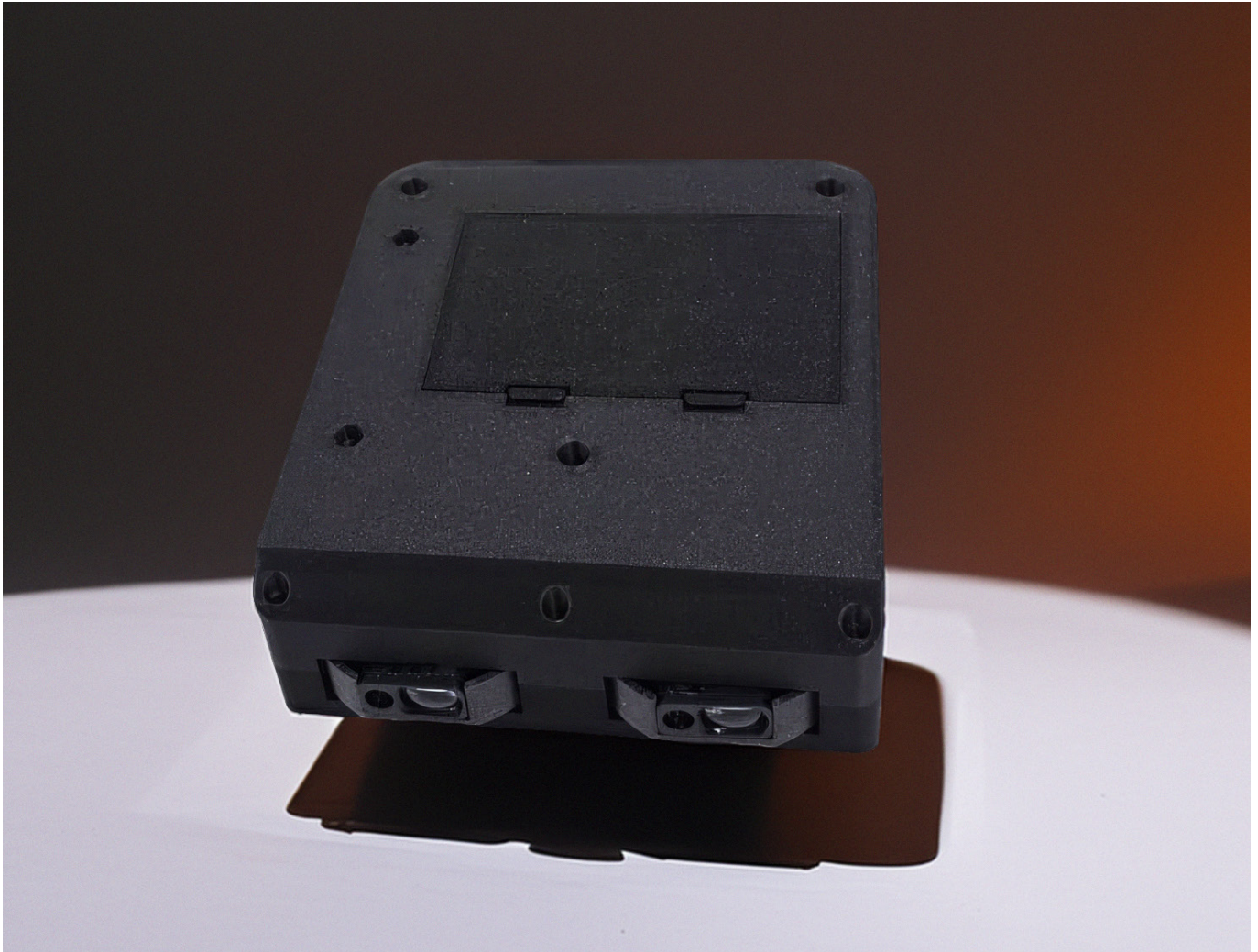required. With its robust design, it integrates effortlessly into existing setups, helping streamline material flow and reduce downtime. Its accurate short-range detection supports repeatable performance even in warehouse environments. Hybrid connectivity (WiFi & LoRaWAN) ensures reliable integration across diverse industrial operations.

Key Features

01. Distance Measuring up to 4 meters

02. Robust Enclosure & Easy to Install

03. Point or Area Measurement and AGV Ready

04. Long Battery Life or Optional External Power Connector

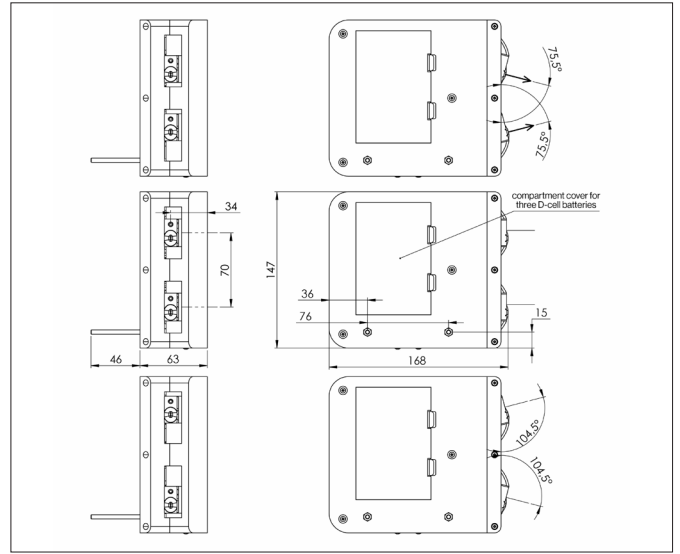| Enclosure	Dimensions	136,5 mm x 106,5 mm x 60,4 mm
	Material & Color	ABS, light grey
	Installation	Mounting via housing flanges, optional magnetic mount
Power Management	Power Supply	2x ER34615 lithium batteries
	Lifetime	Up to 5 years
Temperature Regulations	Operating Temperature	-10 °C to +40 °C
	Ingress Protection (IP)	IP40
Quality & Compliance	Certifications	CE
	Warranty	24 months
Device Functionality	Distance Measuring	Up to 4 meters, optional multi zone ranging
	Button	Button with RGB LED
	External Connector	Service interface
		Optional M12 external power connector

Description

The SMAVOO Dual Long Range sensor delivers precise distance measurement up to 40 meters and ensures reliable load-carrier and box counting, as well as material presence detection. It can automatically trigger material reordering when needed, helping maintain smooth and efficient warehouse operations. With two independently adjustable sensors and a slim, easy-to-install design, it fits seamlessly into existing shelving and conveyor setups. The sensor reduces downtime, optimizes material flow, and supports flexible connectivity through hybrid communication options (WiFi & LoRaWAN) across diverse industrial environments.

Key Features

01. Two Independently Angle-Adjustable Distance Sensors

02. Long Battery Life or Optional External Power Connector

03. Distance Measuring up to 40 Meters

04. Easy to Install

Enclosure	Dimensions	168 mm x 147 mm x 63 mm
	Material & Color	Synthetic material, black
	Installation	Mounting with screws on a flat surface
Power Management	Power Supply	3x ER34615 lithium batteries
	Lifetime	Up to 3 years
Temperature Regulations	Operating Temperature	-10 °C to +40 °C
	Ingress Protection (IP)	IP40
Quality & Compliance	Certifications	CE
	Warranty	24 months
Device Functionality	Distance Measuring	Up to 40 meters
	Button	Button with RGB LED
	External Connector	Service interface
		Optional M12 external power connector

Use-Cases

Goods Receipt

At receiving docks, SMAVOO Distance sensors detect occupied bays and pallet/box positioning via distance measurement. For close-range setups, the Short Range Distance measures up to 4 m and supports point or area measurement (AGV-ready). For larger zones, the Dual Long Range measures up to 40 m with two independently angle-adjustable sensors. Hybrid WiFi/LoRaWAN connectivity enables real-time status updates and system integration.

Warehouse

Inside the warehouse, SMAVOO Distance sensors optimize space and improve safety. Mounted on racks or ceilings, they measure free slots, detect empty positions, and verify pallets are fully pushed in. Millimeter accuracy reduces misplacements and unused gaps. Integrated with WMS and automation, they provide continuous positioning feedback and serve as collision prevention for vehicles and robots. The result: higher storage density, fewer errors, and safer operations.

Picking

In picking, distance sensors help workers reach the right bin faster and with fewer errors. Mounted on shelves or carts, they verify the picker is in front of the correct location by detecting reflectors or tags. Light-enabled versions like the Smavoo Lightcube add visual cues while confirming presence. This reduces search time, supports fast onboarding of new staff, and improves accuracy—enabling smoother fulfillment and higher pick rates with less effort.

Transport

During internal transport, SMAVOO Distance sensors enable safe AGV and forklift navigation. Installed on vehicles or intersections, they measure distances to obstacles and pedestrians in real time, triggering slowdowns or stops when needed. They can also support smarter routing by detecting whether aisles are clear. This reduces collisions and product damage while improving flow, allowing vehicles to move faster when paths are free and only stop when truly necessary.

Production

In production, the SMAVOO Distance sensor verifies precise positioning of parts and clearances for robots, flagging misalignment before errors or jams occur. It can also monitor bin fill levels by measuring distance to the material surface and trigger replenishment when thresholds are reached. Rugged and accurate in dust, heat and vibration, it replaces manual checks with real-time monitoring—improving uptime, material availability and consistent quality on fast-moving lines.

Frequently Asked Questions

What's the difference between the measurement ranges, and how do I choose the right one?

We offer two measurement ranges to match your needs: the SMAVOO Short Range Distance measures up to 4 meters, and the SMAVOO Dual Long Range measures up to 40 meters. Choose Short Range for close-proximity presence detection and counting at shelves, bins, or stations, and choose Dual Long Range when you need long-distance monitoring in aisles, racking, or conveyor setups – especially if two independently adjustable sensors help you cover two zones from one mounting point.

How does the sensor perform in dusty warehouse environments or with varying lighting conditions?

The Distance Sensor uses infrared technology, which is highly reliable in industrial environments regardless of ambient lighting. The sensor maintains millimeter-level accuracy even in dusty conditions. For enhanced visibility, we offer laser visualization options that help operators see exactly what the sensor is measuring, making setup and verification easier in challenging environments.

How does the dual connectivity (WiFi and LoRaWAN) benefit our operations?

Both sensors support hybrid connectivity via WiFi and LoRaWAN, giving you flexibility across different facility layouts and coverage conditions. In practice, WiFi is ideal where you have strong network coverage, while LoRaWAN is a reliable option for longer-range communication or areas where WiFi is limited.

What level of accuracy can we expect, and how does it handle false readings?

Both sensors are built for reliable, repeatable detection in industrial settings. The Short Range Distance delivers consistent short-range sensing up to 4 m for presence detection and counting, while the Dual Long Range provides precise distance measurement up to 40 m—with two adjustable sensors for stable coverage of larger zones.

Can multiple sensors work together in a coordinated system?

Yes! Multiple sensors can be deployed as part of an integrated system, sharing data and providing comprehensive coverage of your facility. They can communicate with each other and your central management system to create a complete picture of your warehouse activity, from goods receipt to shipping. This coordinated approach enables advanced applications like automated space optimization, predictive maintenance, and complete material flow tracking.
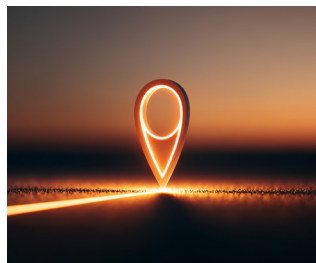
ONE.CORE *Function*

SMAVOO ONE.CORE is the heart of the SMAVOO ecosystem — a fully modular sensor platform designed specifically for demanding industrial environments. Unlike conventional IoT devices with fixed feature sets, ONE.CORE adapts precisely to your requirements through interchangeable communication modules, configurable sensor interfaces, and edge-computing capabilities. Born out of frustration with proprietary systems that lock companies into inflexible technologies, ONE.CORE is built on open standards and a future-proof design. Start with exactly what you need today and expand the platform seamlessly as your business grows and evolves naturally — all without having to replace your hardware investment.
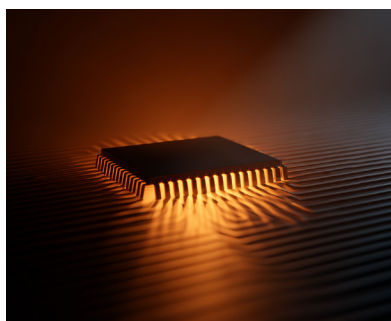
ONE.CORE *Key Features*

01.
Modular Communication: WiFi, LoRaWAN, Bluetooth Low Energy (BLE)

02.
Plug-and-Play Interface for Sensors (RFID, Barcode, Environment, Movement)

03.
Designed for Edge Intelligence, Buffering, and Fail-Safety

ONE.CORE *Multiband*

Core.CPU	240 MHz Dual Core CPU	ADC voltage monitoring (battery)
	520 KB SRAM, 4MB flash	Secure boot with flash encryption
	Hardware encryption (AES, RSA, ECC, HASH)	
	Ultra low power consumption	
Core.WiFi	WPA2 Enterprise (EAP-TLS, EAP-TTLS, EAP-PEAP, EAP-FAST)	
	IEEE 802.11 b/g/n, up to 150 Mbps	
	X.509 certifications (4096-bit)	
	Firmware upgrade via Over-the-Air Update (OTA)	
Core.LoRaWAN (optional)	CN470/IN865/EU868/RU864/US915/AU915/KR920/AS923-1&2&3&4	
	FSK, GFSK, MSK, GMSK, LoRaTM and OOK Modulation	
	127 dB Dynamic Range RSSI	Over the Air Activation (OTAA)
	Activation by Personalization (ABP)	Advanced Encryption Standard (AES)
	−144 dBm sensitivity	IEEE802.15.4g
Core.BLE (optional Core.PDI)	Compliant with Bluetooth v4.2 BR/EDR and Bluetooth LE specifications	
	NZIF receiver with −94 dBm Bluetooth LE sensitivity	
	Adaptive Frequency Hopping (AFH)	
	Bluetooth 4.2 BR/EDR and Bluetooth LE dual mode controller	
	Multi-connections in Classic Bluetooth and Bluetooth LE	
	Simultaneous advertising and scanning	

SMAVOO

Subject to errors and technical changes

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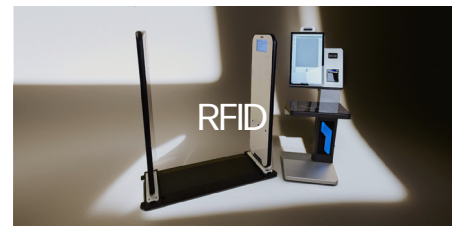E-Mail: info@smavoo.com
www.smavoo.com

SMAVOO *Solutions*

Hybrid Tracking

Hybrid indoor and outdoor tracking means none of your assets go AWOL on our watch. Our smart trackers give you a real-tme overview over your assets, and seamlessly move from outdoor to indoor. Our RFID solutions make sure you always know what's there - even with tricky interferences or metal parts.
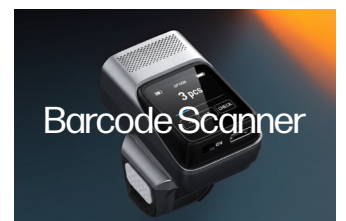

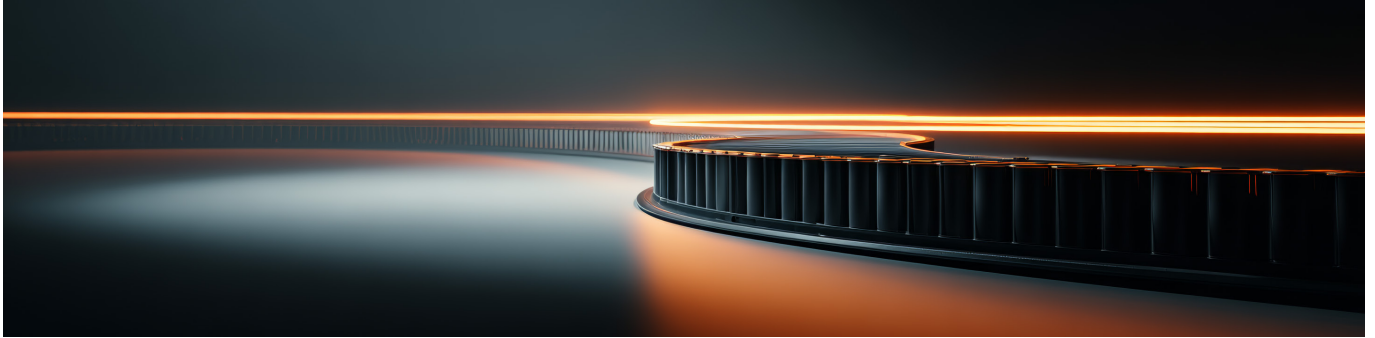GPS Tracker

Indoor Tracker

RFID

Smart Picking

Smart picking guides your workers from A to B - and our solutions are there to make sure every pick is the right one. From saving paper by replacing picklists with our EPD Tablets, handsfree Barcode-Scanners or our range of smar labels for KLTs and GLTs - we're always there to make sure the process flows just as intended.
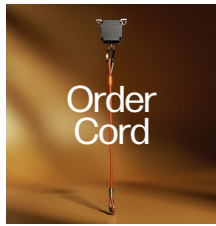

Indoor Tracker

7.5 Double Label

Tablet 11.6

Barcode Scanner

Subject to errors and technical changes

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Smart Reordering & eKanban

With our range of automatic and semi-automatic line feeding solutions, we make sure your line never stops. From Distance Sensors to Switches and Scales that detect when material levels are below a certain threshold to Order Cords and Reorder-Buttons: We make sure everything arrives on time, every time.
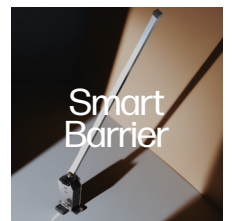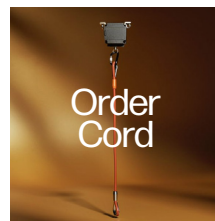

Indoor Tracker | Order Cord | Switch | Trolley | Scale | Distance

AGV / AMR Sensors

Our range of AGV/AMR sensors make sure your indoor transport is always perfectly coordinated and safe. With light-guided systems, AGV Buzzers and Smart Barriers, your existing fleet always finds its way through your warehouse - and if you're still looking for an AGV fleet, we've got you covered with our models as well.

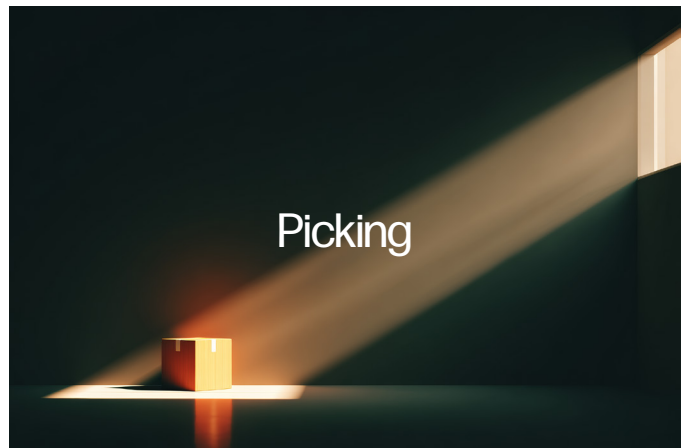Lightcube | Lighttube | Distance | AGV / AMR Button | Order Cord | Smart Barrier

About SMAVOO

At SMAVOO, we believe in all-in-one-solutions: Hardware, Software & Service. We specialize in Industrial IoT (IIoT) solutions for production and logistics. Our expertise spans RFID technology, sensor networks, and software development with the goal of creating modular systems that make operations efficient, transparent, and error-free. Our customized solutions help companies digitalize their processes and make smarter decisions through real-time tracking across all modern workflows.

Material Flow

Inbound

Goods Receipt

Warehouse

Picking

Transport

Production

We're not here to bulldoze your workflow: Keep what works, ditch what doesn't. We plug in, make it smarter, and let you scale or pivot without rewriting your playbook. And because we're logistics people too, we know the pain of endless integration projects. We've been there, done that, and built something better: Fast rollouts, real support, and partnerships that don't vanish after go-live. Our track record? Industry leaders trust us to keep them ahead - because we deliver the goods, not just the sales pitch.

Smart, Seamless and Scalable. Or *Simply SMAVOO.*

Contact Us

Excited about the future? So are we, and we look forward to optimizing your processes together. Whether you're interested in a demo setup or just a casual introduction, you can reach us here.

General Enquiries

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