DATA SHEET
KY-LOC 1D.03.01

moving or fixed

High integrity measurement, with antenna diversity

transmitted data

moving or fixed
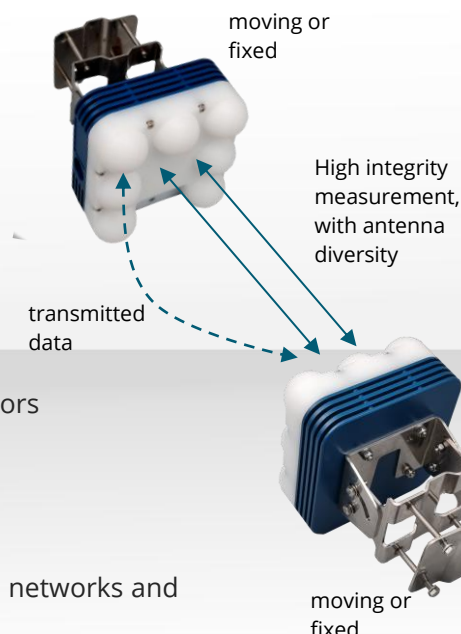
- Precise and reliable distance measurement between two radar sensors to activate collision warning thresholds and measure distances.

- PL/SIL level certification possible (as a system with 2 parallel pairs)

- Maintenance-free indoor and outdoor operation.

- RF based solution, no interference with WiFi, mobile communication networks and electric arc furnaces.

HIGH PRECISION DISTANCE MEASUREMENT

TECHNICAL DATA: KY-LOC 1D.03.01

Anti-collision detection range[1]	0,5 m ≤ x ≤ 1000 m
Distance measurement range[1]	0,5 m ≤ x ≤ 1000 m
Repeat accuracy of measurement[2]	typ. ± 5 mm
Absolute distance accuracy[2]	typ. ± 15 mm
Opening Angle horizontal/vertical	± 3°
Update rate	up to 30 Hz
User data transfer parallel to measurement	up to 1 kbit/s
Protection	IP66, IP66k and IP68 (cntd. plugs, 24h@1m)
Operating temperature	-30 ... +75 °C; -22 ... 167 F
Weight, dimensions LxWxD	2100 g; 171x161x84 mm (without support bracket)
Voltage, power consumption (M12, 5 pin, male, A-coded)	12 ... 24 V DC or PoE (802.3af), 7 W
Operation frequency	60-64 GHz
Interface (M12, 8 pin, female, X-coded)	Ethernet (100Base-Tx), PoE (802.3af)
Radio compliance	ETSI, FCC, IC

1) Environmental conditions may affect the signal path
2) Values may vary with radio regulations applicable

KY-LOC 1D.03.01 - Quick Facts

- Best-in-class high frequency radio positioning.

- Antenna diversity built into a single device, with several separate measurements paths.

- High system integrity with maximized $MTTF_D$ (>20years) for automation/safety applications

- Parallel wireless user data transmission without the use of WiFi.

- Highly reliable under adverse weather conditions, dust, and dirt.

- User-defined preset distance warnings for collision avoidance.

- No interference with WiFi or 5G.

- Multiple KY-LOC pairs can operate in parallel using different channel settings.

- Easy integration with PLC devices

- Easy to install, adjustable mounting bracket, connectors and cables available.
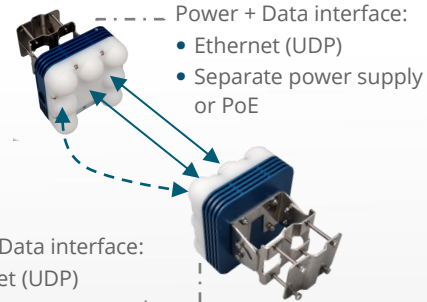
- Maintenance-free.

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Power + Data interface:
- Ethernet (UDP)
- Separate power supply or PoE

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Mechanical Interface

161mm
171mm
84mm
100-140mm
70°
Ø ≤ 60mm

Output Interface

- Interface converter KY-XTRA B.06.01 enabling: Profinet, Ethernet IP
- Interface converter KY-XTRA B.06.01 + KY-XTRA B.05.01 enabling: Profibus

- Output signal module example: KY-XTRA B.10.01 with industrial output signals (dry contacts) based on defined distance warning thresholds

APPLICATION EXAMPLES

X-Y-Z AXIS MOTION CONTROL

Speed dynamic warning zones
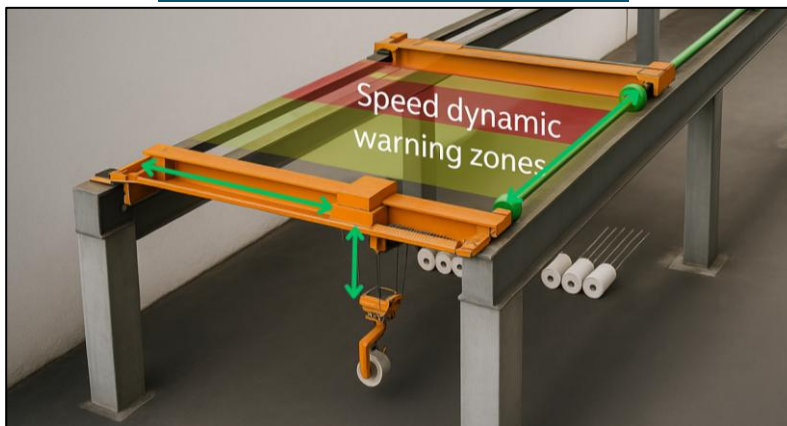
INTEGRATION WITH SAFETY PLC

Radar Pair 1

Radar Pair 2

Safe PLC PL/SIL

SAFE VALUE
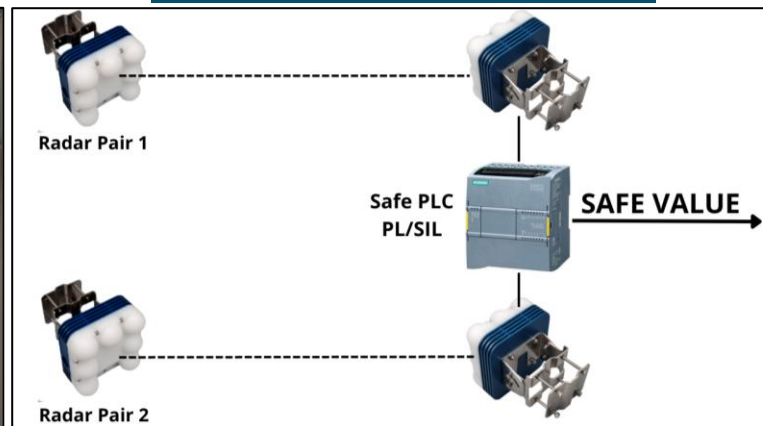
CRANES
- Collision avoidance
- No-go zones
- X-Y-Z axis motion control

RAIL BOUND EQUIPMENT
- Stacker Reclaimer
- Gantry Cranes
- Ladle transfer cars

COKE OVEN BATTERIES
- Quenching, Charging, Pusher car positioning
- Safety zones detection

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