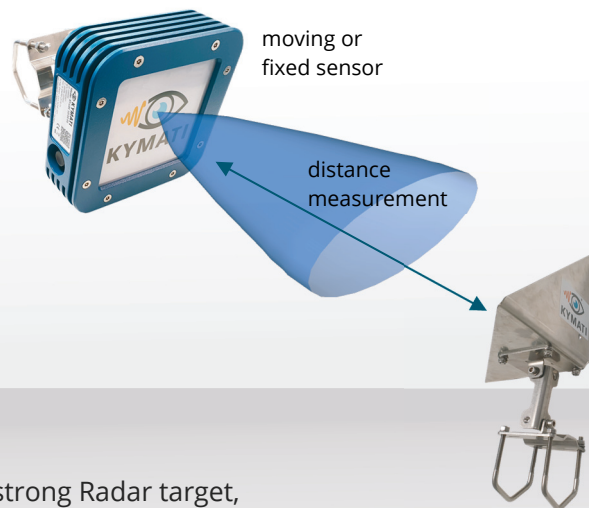


DATA SHEET

KY-RAY 1D.01.01



- Precise and reliable distance measurement from Radar sensor to strong Radar target, to activate warning thresholds and measure distances.
- Maintenance-free indoor and outdoor operation.
- RF based, no interference with WiFi and mobile communication networks.

Radar target,
moving or fixed,
e. g. corner reflector
KY-XTRA M.02.01

1D DISTANCE MEASUREMENT TO RADAR TARGET

The KY-RAY 1D.01.01 Radar is designed to measure the 1D distance (line-of-sight) to a strong Radar target such as a corner reflector or other reflective objects. The detection range is depending on the Radar Cross Section, RCS, of the target. The table below provides a basic indication. Vibration or angular misalignment does not disturb the measurement. The sensor and the target can have individual side and height offsets, while the Radar always measures the shortest line-of-sight to the target. Several integrated send/receive antennas in the Radar sensor ensure the measurement integrity.

KY-RAY 1D.01.01 does not require/allocate any WiFi or mobile communication frequencies and is also not affected by such radio signals.

TECHNICAL DATA: KY-RAY 1D.01.01

| | |
|--|--|
| Measurement range ¹⁾ , depending on RCS | 2 m ≤ x ≤ 150 m (truck, corner reflector); ≤ 50 m (non-metal objects with 1m size) |
| Repeat accuracy of measurement ¹⁾ | up to 15 mm (depending on target movement and orientation) |
| Absolute distance accuracy ¹⁾ | up to 50 mm |
| Update rate | up to 20 Hz |
| Protection | IP 66, IP66k and IP68 (cntd. plugs, 24h@1m) |
| Operating temperature | -30 ... +75 °C; -22 ... 167 F |
| Weight, dimensions LxWxD | 1060 g; 138x138x43mm (without support) |
| Voltage, power consumption (M12, 5 pin, male, A-coded) | 9 ... 36 V DC or PoE (802.3af), 5 W |
| Frequency | 61 GHz (ISM band) |
| Interface (M12, 8 pin, female, X-coded) | Ethernet (100Base-Tx), PoE (802.3af) |

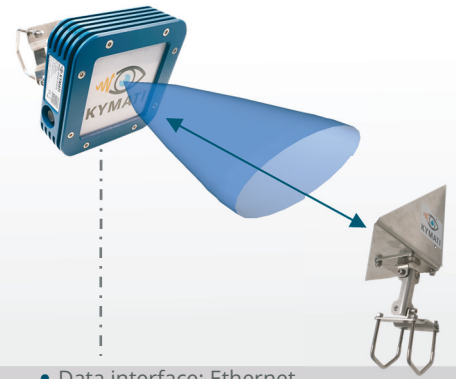
¹⁾ Values may vary with radio regulations applicable

KY-RAY 1D.01.01- Quick Facts

- High frequency, very cost-effective radio positioning for moving machines (e.g. cranes, transfer cars).
- Easy to install, adjustable mounting bracket included.
- In case of use as collision warning, it should not be the only means to protect personal safety.
- No precise horizontal or vertical alignment required.
- Target can be in extreme heat, without any power connection.
- Highly reliable under adverse weather conditions, dust, and dirt.
- Several distance warning thresholds can be determined by user.
- No interference with WiFi or mobile communication.
- Multiple KY-RAY units can operate in parallel, with managed signal trigger.
- Maintenance-free.

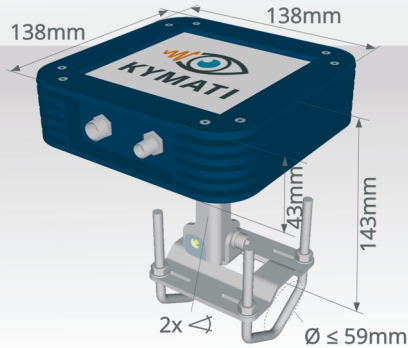
DATA SHEET

KY-RAY 1D.01.01



- Data interface: Ethernet
- Power: separate power supply or PoE

Mechanical Interface



Electrical Interface

- Output signal module
KY-XTRA B.10.01 with digital output signals based on defined distance warning thresholds
- Interface converter
KY-XTRA B.01.01 enabling: Profibus, Profinet, Ethernet IP, Modbus, CAN

APPLICATION EXAMPLES

