



DATA SHEET

# DME5000-124

DME5000  
Time-of-flight sensors

# SICK

Sensor Intelligence



TIME-OF-FLIGHT SENSORS

DME5000-124

ORDERING INFORMATION

| Type        | part no. |
|-------------|----------|
| DME5000-124 | 1025836  |

Further device versions and accessories at [www.sick.com/DME5000](http://www.sick.com/DME5000)



DETAILED TECHNICAL DATA

FEATURES

|                           |                                                                                                                                                                                                  |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Measuring range           | 0.15 m ... 70 m, on "diamond grade" reflective tape <sup>1)</sup>                                                                                                                                |
| Target                    | Reflector                                                                                                                                                                                        |
| Resolution                | 50 µm ... 5,000 µm                                                                                                                                                                               |
| Repeatability             | 0.5 mm <sup>1) 2)</sup>                                                                                                                                                                          |
| Measurement accuracy      | ± 2 mm                                                                                                                                                                                           |
| Response time             | 6 ms                                                                                                                                                                                             |
| Output time               | 2 ms                                                                                                                                                                                             |
| Emitted beam              | <div>Light sourceLaser, red <sup>3)</sup></div> <div>Type of lightVisible red light</div> <div>Typ. light spot size (distance)130 mm (at 70 m)<br/>270 mm (at 150 m)<br/>360 mm (at 220 m)</div> |
| Key laser figures         | <div>Normative referenceIEC 60825-1:2014, EN 60825-1:2014</div> <div>Laser class2 <sup>4)</sup></div>                                                                                            |
| Max. movement speed       | 10 m/s                                                                                                                                                                                           |
| Safety-related parameters | <div>MTTF<sub>D</sub>101 years</div> <div>DC<sub>avg</sub>0%</div>                                                                                                                               |

<sup>1)</sup> On "diamond grade" reflective tape.

<sup>2)</sup> Statistical error 1 σ, environmental conditions constant, min. warm-up time 10 min.

<sup>3)</sup> Average service life of 50,000 h at T<sub>A</sub> = +25 °C.

<sup>4)</sup> Do not intentionally look into the laser beam. Never point the laser beam at people's eyes.

## INTERFACES

|                              |                                        |
|------------------------------|----------------------------------------|
| DeviceNet™                   | ✓                                      |
| Digital output               |                                        |
| Number                       | 2                                      |
| Type                         | Push-pull: PNP/NPN                     |
| Maximum output current $I_A$ | $\leq 100 \text{ mA}$ <sup>1) 2)</sup> |
| Multifunctional input (MF)   | 1 x MF <sup>3) 4)</sup>                |

<sup>1)</sup> Max. 100 nF/20 mH.

<sup>2)</sup> HIGH =  $> V_S - 3 \text{ V}$  / LOW =  $< 2 \text{ V}$ .

<sup>3)</sup> HIGH =  $> 12 \text{ V}$  / LOW =  $< 3 \text{ V}$ .

<sup>4)</sup> Not reverse-polarity protected.

## ELECTRONICS

|                      |                                                         |
|----------------------|---------------------------------------------------------|
| Supply voltage $U_S$ | DC 18 V ... 30 V, limit values                          |
| Current consumption  | At 24 V DC < 1,000 mA                                   |
| Ripple               | $< 5 \text{ V}_{pp}$ <sup>1)</sup>                      |
| Initialization time  | 1.5 s <sup>2)</sup>                                     |
| Display              | Display                                                 |
| Enclosure rating     | IP65                                                    |
| Protection class     | II <sup>3)</sup>                                        |
| Connection type      | Male connector, 1 x M12, 4-pin, A-coded, 1 x M16, 8-pin |

<sup>1)</sup> May not fall short of or exceed  $V_S$  tolerances.

<sup>2)</sup> After loss of reflector < 1 s at max. speed  $V_{max} < 1 \text{ m/s}$ .

<sup>3)</sup> Reference voltage DC 32 V.

## MECHANICS

|                        |                         |
|------------------------|-------------------------|
| Dimensions (W x H x D) | 61 mm x 101 mm x 176 mm |
| Housing material       | Metal (zinc diecast)    |
| Window material        | Glass                   |
| Weight                 | Approx. 1,650 g         |

## AMBIENT DATA

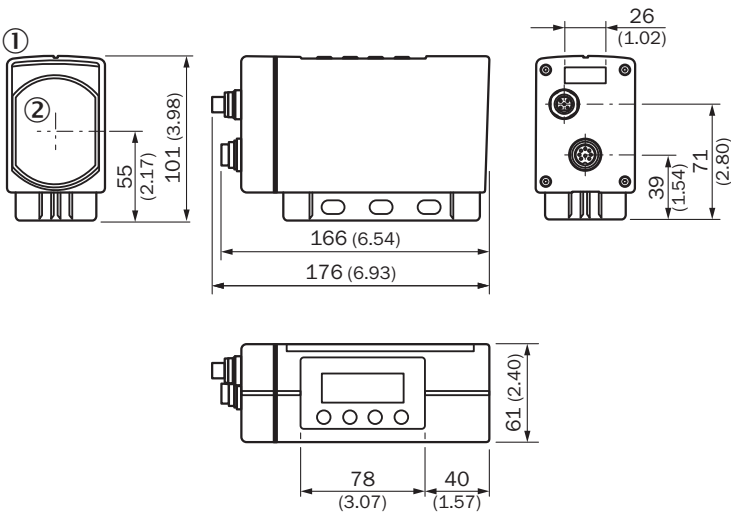
|                                     |                                                                                             |
|-------------------------------------|---------------------------------------------------------------------------------------------|
| Ambient temperature, operation      | -40 °C ... +55 °C, operation with heating<br>-40 °C ... +75 °C, operation with cooling case |
| Ambient temperature, storage        | -25 °C ... +75 °C                                                                           |
| Effect of air pressure              | 0.3 ppm/hPa                                                                                 |
| Effect of air temperature           | 1 ppm/K                                                                                     |
| Temperature drift                   | Typ. 0.1 mm/K                                                                               |
| Typ. Ambient light immunity         | $\leq 40,000 \text{ lx}$                                                                    |
| Mechanical load                     | Shock: (EN 600 68-2-27 / -2-29)<br>Sine: (EN 600 68-2-6)<br>Noise: (EN 600 68-2-64)         |
| Electromagnetic compatibility (EMC) | EN 61000-6-2, EN 55011                                                                      |

## CERTIFICATES

|                              |   |
|------------------------------|---|
| EU declaration of conformity | ✓ |
|------------------------------|---|

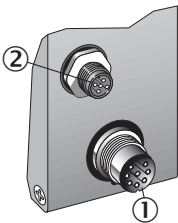
|                                                                                 |   |
|---------------------------------------------------------------------------------|---|
| UK declaration of conformity                                                    | ✓ |
| ACMA declaration of conformity                                                  | ✓ |
| Moroccan declaration of conformity                                              | ✓ |
| China RoHS                                                                      | ✓ |
| Optical radiation safety (GB 44703:2024) declaration of manufacturer (low risk) | ✓ |

DIMENSIONAL DRAWING DME5000-XX4 DEVICENET



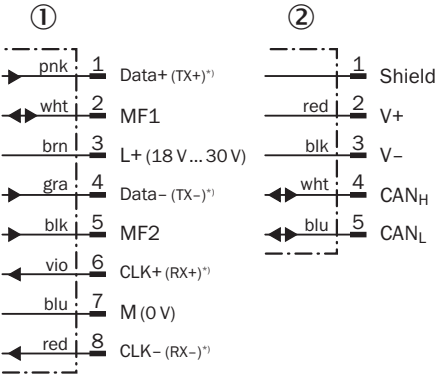
Dimensions in mm (inch)  
① LC display  
② Center of optical axis

CONNECTION TYPE DME4/5XXX-XX4 DEVICENET CONNECTOR 1 X M12, 5-PIN, A-CODED 1 X M16, 8-PIN



① Connector M16, 8-pin  
② Connector M12, 5-pin, A-coded

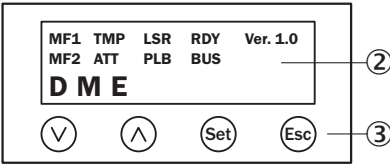
CONNECTION DIAGRAM DME5000-XX4 DEVICENET



<sup>\*)</sup> For connection of interface adapter.

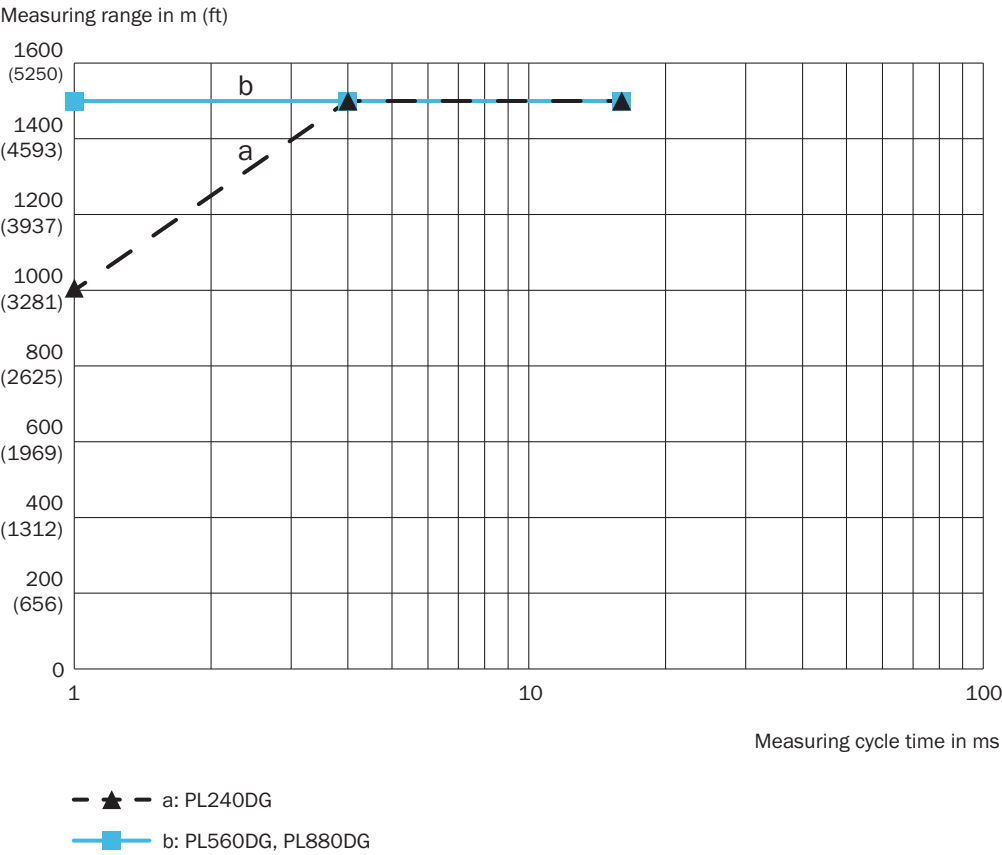
- ① Connector M16, 8-pin
- ② Connector M12, 5-pin, A-coded

ADJUSTMENT POSSIBLE



- ② LC display
- ③ Keypad

WORKING RANGE DIAGRAM DL1000 MEASURING RANGE BASED ON MEASUREMENT CYCLE TIME AND REFLECTOR TYPE



Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at [www.sick.com/1025836](http://www.sick.com/1025836)



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# SICK AT A GLANCE

SICK is a leading global technology company for intelligent sensors and integrated solutions in industrial automation. Our technologies set benchmarks, making your industrial processes more efficient, safer and more sustainable – both in logistics and manufacturing operations.

SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

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