DME4000

Standard sensor for measurement distances up to 220 m

SICK
Sensor Intelligence.

DME4000

Technical data overview

Resolution	0.05 mm / 0.25 mm (depending on type)
Repeatability	≤ 1 mm 2 mm 3 mm (depending on type)
Response time	6 ms
Output time	1 ms ... 4 ms (depending on type)
Digital output	
Type	Push-pull: PNP/NPN
SSI	✓
PROFIBUS DP	✓
Serial	✓, RS-422
DeviceNet™	✓
HIPERFACE ®	✓
CANopen	✓
Enclosure rating	IP65
Ambient temperature, operation	−40 °C ... +75 °C, operation with cooling case, operation with heating (depending on type)

Product description

The DME4000 is a reflector-based distance sensor supporting sensing ranges of up to 220 m. Highly dynamic and precise measurement, multi-functional switching outputs, and inputs for standby, preset, maintenance, and other system functions are some of the key features this sensor offers.

At a glance

• Measuring range 0.15 m ... 50 m / 0.15 m ... 130 m / 0.15 m ... 220 m
• Short positioning operations thanks to very fast measuring cells
• Very high accuracy and reproducibility
• Easy commissioning: illuminated LC display with diagnostics information
• Easy mounting and alignment concept: alignment bracket with spring / visible red light
• Variety of interfaces: SSI, RS-422, PROFIBUS, HIPERFACE, CANopen, DeviceNet

Your benefits

• Fast measurement cycles offer optimized integration into control loops for increased productivity
• Red laser light as well as adjustable mounting brackets (optional accessory) enable fast and easy alignment, ensuring on-time and cost-effective installation
• Multi-point self checks provide maintenance and replacement warnings increasing overall machine availability
• A tough metal housing as well as heating and cooling accessories ensure reliability in rough ambient conditions
• User-friendly display with easy-to-use menu along with external PC/PLC programming offers fast and cost-efficient setup
• Multiple serial interfaces provide high-speed position output to the controller and high flexibility in application integration
• Integrated speed monitoring offers additional information for increased process reliability

Ordering information

Other models and accessories → www.sick.com/DME4000

- **Communication interface:** SSI
- **Measuring range:** 0.15 m … 50 m, on "diamond grade" reflective tape
- **Output time:** 1 ms

Repeatability	Accuracy	Current consumption	Connection type	Type	Part no.
1 mm	± 3 mm	At 24 V DC < 1,000 mA	Male connector, M16, 8-pin	DME4000-121	1029792
≤ 1 mm	± 3 mm	At 24 V DC < 250 mA	Male connector, M16, 8-pin	DME4000-111	1029789

- **Communication interface:** SSI
- **Measuring range:** 0.15 m … 130 m, on "diamond grade" reflective tape
- **Output time:** 1 ms

Repeatability	Accuracy	Current consumption	Connection type	Type	Part no.
2 mm	± 5 mm	At 24 V DC < 1,000 mA	Male connector, M16, 8-pin	DME4000-221	1029794
		At 24 V DC < 250 mA	Male connector, M16, 8-pin	DME4000-211	1029790

- **Communication interface:** SSI
- **Measuring range:** 0.15 m … 220 m, on "diamond grade" reflective tape
- **Output time:** 1 ms

Repeatability	Accuracy	Current consumption	Connection type	Type	Part no.
3 mm	± 6 mm	At 24 V DC < 1,000 mA	Male connector, M16, 8-pin	DME4000-321	1041957
		At 24 V DC < 250 mA	Male connector, M16, 8-pin	DME4000-311	1041951

- **Communication interface:** PROFIBUS DP
- **Measuring range:** 0.15 m … 50 m, on "diamond grade" reflective tape
- **Output time:** 2 ms

Repeatability	Accuracy	Current consumption	Connection type	Type	Part no.
1 mm	± 3 mm	At 24 V DC < 1,000 mA	Male connector, 2 x M12, 5-pin, B-coded, 1 x M16, 8-pin, B-coded	DME4000-122	1029793
≤ 1 mm	± 3 mm	At 24 V DC < 250 mA		DME4000-112	1029788

- **Communication interface:** PROFIBUS DP
- **Measuring range:** 0.15 m … 130 m, on "diamond grade" reflective tape
- **Output time:** 2 ms

Repeatability	Accuracy	Current consumption	Connection type	Type	Part no.
2 mm	± 5 mm	At 24 V DC < 1,000 mA	Male connector, 2 x M12, 5-pin, B-coded, 1 x M16, 8-pin, B-coded	DME4000-222	1029795
		At 24 V DC < 250 mA		DME4000-212	1029791

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- **Communication interface:** PROFIBUS DP
- **Measuring range:** 0.15 m ... 220 m, on "diamond grade" reflective tape
- **Output time:** 2 ms

Repeatability	Accuracy	Current consumption	Connection type	Type	Part no.
3 mm	± 6 mm	At 24 V DC < 1,000 mA	Male connector, 2 x M12, 5-pin, B-coded, 1 x M16, 8-pin, B-coded	DME4000-322	1041958
		At 24 V DC < 250 mA		DME4000-312	1041950

- **Communication interface:** Serial
- **Measuring range:** 0.15 m ... 50 m, on "diamond grade" reflective tape
- **Output time:** 2 ms

Repeatability	Accuracy	Current consumption	Connection type	Type	Part no.
1 mm	± 3 mm	At 24 V DC < 1,000 mA	Male connector, M16, 8-pin	DME4000-123	1029797
≤ 1 mm	± 3 mm	At 24 V DC < 250 mA	Male connector, M16, 8-pin	DME4000-113	1029796

- **Communication interface:** Serial
- **Measuring range:** 0.15 m ... 130 m, on "diamond grade" reflective tape
- **Output time:** 2 ms

Repeatability	Accuracy	Current consumption	Connection type	Type	Part no.
2 mm	± 5 mm	At 24 V DC < 1,000 mA	Male connector, M16, 8-pin	DME4000-223	1029799
		At 24 V DC < 250 mA	Male connector, M16, 8-pin	DME4000-213	1029798

- **Communication interface:** Serial
- **Measuring range:** 0.15 m ... 220 m, on "diamond grade" reflective tape
- **Output time:** 2 ms

Repeatability	Accuracy	Current consumption	Connection type	Type	Part no.
3 mm	± 6 mm	At 24 V DC < 1,000 mA	Male connector, M16, 8-pin	DME4000-323	1041959
		At 24 V DC < 250 mA	Male connector, M16, 8-pin	DME4000-313	1041952

- **Communication interface:** DeviceNet™
- **Measuring range:** 0.15 m ... 50 m, on "diamond grade" reflective tape
- **Output time:** 2 ms

Repeatability	Accuracy	Current consumption	Connection type	Type	Part no.
1 mm	± 3 mm	At 24 V DC < 1,000 mA	Male connector, 1 x M12, 4-pin, 1 x M16, 8-pin	DME4000-124	1029808
		At 24 V DC < 250 mA	Male connector, M12, 5-pin, A-coded	DME4000-115	1029801
≤ 1 mm	± 3 mm	At 24 V DC < 250 mA	Male connector, 1 x M12, 4-pin, 1 x M16, 8-pin	DME4000-114	1029800

- **Communication interface:** DeviceNet™
- **Measuring range:** 0.15 m … 130 m, on "diamond grade" reflective tape
- **Output time:** 2 ms

Repeatability	Accuracy	Current consumption	Connection type	Type	Part no.
2 mm	± 5 mm	At 24 V DC < 1,000 mA	Male connector, 1 x M12, 4-pin, 1 x M16, 8-pin	DME4000-224	1029805
		At 24 V DC < 250 mA		DME4000-214	1029802
			Male connector, 1 x M16, 8-pin	DME4000-215	1029803

- **Communication interface:** DeviceNet™
- **Measuring range:** 0.15 m … 220 m, on "diamond grade" reflective tape
- **Output time:** 2 ms

Repeatability	Accuracy	Current consumption	Connection type	Type	Part no.
3 mm	± 6 mm	At 24 V DC < 1,000 mA	Male connector, 1 x M12, 4-pin, 1 x M16, 8-pin	DME4000-324	1041960
		At 24 V DC < 250 mA		DME4000-314	1041953
			Male connector, 1 x M16, 8-pin	DME4000-315	1041954

- **Communication interface:** HIPERFACE®
- **Measuring range:** 0.15 m … 50 m, on "diamond grade" reflective tape
- **Output time:** 2 ms

Repeatability	Accuracy	Current consumption	Connection type	Type	Part no.
1 mm	± 3 mm	At 24 V DC < 1,000 mA	Male connector, 1 x M12, 4-pin, 1 x M12, 8-pin	DME4000-127	1029812
≤ 1 mm	± 3 mm	At 24 V DC < 250 mA		DME4000-117	1029807

- **Communication interface:** HIPERFACE®
- **Measuring range:** 0.15 m … 130 m, on "diamond grade" reflective tape
- **Output time:** 2 ms

Repeatability	Accuracy	Current consumption	Connection type	Type	Part no.
2 mm	± 5 mm	At 24 V DC < 1,000 mA	Male connector, 1 x M12, 4-pin, 1 x M12, 8-pin	DME4000-227	1029804
		At 24 V DC < 250 mA		DME4000-217	1029806

- **Communication interface:** HIPERFACE®
- **Measuring range:** 0.15 m … 220 m, on "diamond grade" reflective tape
- **Output time:** 2 ms

Repeatability	Accuracy	Current consumption	Connection type	Type	Part no.
3 mm	± 6 mm	At 24 V DC < 1,000 mA	Male connector, 1 x M12, 4-pin, 1 x M12, 8-pin	DME4000-327	1041961
		At 24 V DC < 250 mA		DME4000-317	1041955

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- **Communication interface:** CANopen
- **Measuring range:** 0.15 m … 50 m, on "diamond grade" reflective tape
- **Output time:** 4 ms

Repeatability	Accuracy	Current consumption	Connection type	Type	Part no.
≤ 1 mm	± 3 mm	At 24 V DC < 250 mA	Male connector, M12, 5-pin	DME4000-119	1042838

- **Communication interface:** CANopen
- **Measuring range:** 0.15 m … 130 m, on "diamond grade" reflective tape
- **Output time:** 4 ms

Repeatability	Accuracy	Current consumption	Connection type	Type	Part no.
2 mm	± 5 mm	At 24 V DC < 250 mA	Male connector, M12, 5-pin	DME4000-219	1042839

- **Communication interface:** CANopen
- **Measuring range:** 0.15 m … 220 m, on "diamond grade" reflective tape
- **Output time:** 4 ms

Repeatability	Accuracy	Current consumption	Connection type	Type	Part no.
3 mm	± 6 mm	At 24 V DC < 250 mA	Male connector, M12, 5-pin	DME4000-319	1042841

- **Note:** with mounting adapter for DME5000 bracket
- **Communication interface:** SSI
- **Measuring range:** 0.15 m … 50 m, on "diamond grade" reflective tape
- **Output time:** 1 ms

Repeatability	Accuracy	Current consumption	Connection type	Type	Part no.
≤ 1 mm	± 3 mm	At 24 V DC < 250 mA	Male connector, M16, 8-pin	DME4000-111S05	1045159

- **Note:** with mounting adapter for DME5000 bracket
- **Communication interface:** SSI
- **Measuring range:** 0.15 m … 130 m, on "diamond grade" reflective tape
- **Output time:** 1 ms

Repeatability	Accuracy	Current consumption	Connection type	Type	Part no.
≤ 2 mm	± 5 mm	At 24 V DC < 1,000 mA	Male connector, M16, 8-pin	DME4000-211S06	1045160

- **Note:** with mounting adapter for DME5000 bracket
- **Communication interface:** SSI
- **Measuring range:** 0.15 m … 220 m, on "diamond grade" reflective tape
- **Output time:** 1 ms

Repeatability	Accuracy	Current consumption	Connection type	Type	Part no.
≤ 3 mm	± 6 mm	At 24 V DC < 1,000 mA	Male connector, M16, 8-pin	DME4000-311S01	1042733

- **Note:** with mounting adapter for DME5000 bracket
- **Communication interface:** DeviceNet™
- **Measuring range:** 0.15 m … 220 m, on "diamond grade" reflective tape
- **Output time:** 2 ms

Repeatability	Accuracy	Current consumption	Connection type	Type	Part no.
3 mm	± 6 mm	At 24 V DC < 250 mA	Male connector, M12, 5-pin, A-coded	DME4000-315S02	1042734

- **Note:** CANopen with separate connector
- **Communication interface:** CANopen
- **Measuring range:** 0.15 m … 50 m, on "diamond grade" reflective tape
- **Output time:** 4 ms

Repeatability	Accuracy	Current consumption	Connection type	Type	Part no.
1 mm	± 3 mm	At 24 V DC < 250 mA	Male connector, M12, 5-pin	DME4000-119S03	1045252

- **Note:** CANopen with separate connector
- **Communication interface:** CANopen
- **Measuring range:** 0.15 m … 130 m, on "diamond grade" reflective tape
- **Output time:** 4 ms

Repeatability	Accuracy	Current consumption	Connection type	Type	Part no.
2 mm	± 5 mm	At 24 V DC < 250 mA	Male connector, M12, 5-pin	DME4000-219S04	1045253

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is "Sensor Intelligence."

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