Product overview

Dx80

Precise measurement over large distances

SICK
Sensor Intelligence.

Advantages

Strong through a precise approach

In production processes, accurate distance measurement is crucial for ensuring a consistent product quality and avoiding downtime.

Higher efficiency
A large number of manual calibrations are no longer necessary thanks to the precise control of the production processes.

Better quality
The high repeatability makes fully automated motion sequences possible without readjustment.

Sustainability and resource efficiency
Minor deviations reduce the need to repeat tasks and reduce the use of resources.

Don't settle for a generic distance sensor — experience the difference!

Seamless system integration with IO-Link or Ethernet

Onboard IO-Link or Ethernet connectivity with TCP/IP combined with the future-oriented MQTT protocol enables seamless integration into industrial PLC and PC systems.

The sensor streams process data via TCP/IP or IO-Link and simultaneously outputs an analog output signal. The various data transmission options make the Dx80 distance sensor the ideal solution for smart factories and Industry 4.0 applications.

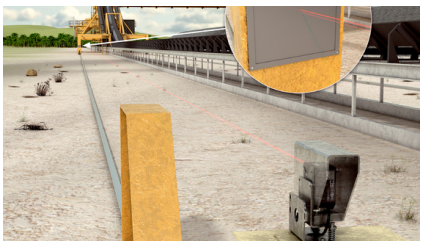
From the sensor to the cloud
The transmission of sensor data via the MQTT protocol ensures an efficient cloud connectivity. Location-independent access to data opens up far-reaching possibilities for condition monitoring and predictive maintenance.

Easy commissioning, integration and maintenance via IO-Link
Smart Sensors with IO-Link generate and receive data as well as information that goes beyond conventional switching signals or measured process parameters.
The quick replacement of the device keeps production interruptions to a minimum and machine availability to a high level. With SICK ConnectX, the sensor data from the Dx80 can be actively integrated into IT systems, for example via MQTT.

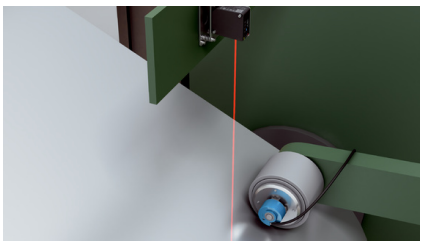
Next generation sensors – reliable and networked for the long term.

Countless possibilities

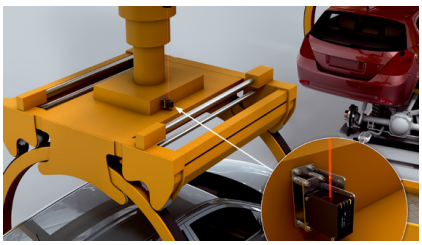
The versatile and durable Dx80 laser distance sensor can be used in numerous applications. The rugged metal housing and high IP enclosure rating contribute to reliable operation in harsh environments – even with severe temperature fluctuations and intense sunlight.



outdoor automation
Precision movements, even in demanding environments.



Machines
Achieve high efficiency in your production processes thanks to precise and stable measurement results.



Automotive
The Dx80 reliably performs positioning tasks in vehicle manufacturing, whether it be vehicles with a conventional combustion engine or alternative drive technology.

Meeting the challenge: Rely on rugged solutions.

Technical data overview

Resolution	≥ 0.1 mm
Repeatability	≥ 0.2 mm
Response time	33 ms ... 68 ms [1]
Output time	33 ms, 50 ms, 100 ms, 200 ms ... 3000 ms [2]
Analog output	4 mA ... 20 mA, ≤ 450 Ω0 V ... 10 V, ≤ 10,000 Ω
Digital output	
Type	Push-pull: PNP/NPN
IO-Link	✓, IO-Link V1.1
Ethernet	✓, TCP/IP
Enclosure rating	IP65 IP67
Ambient temperature, operation	–10 °C ... +50 °C, U_V ≤ 30 V –10 °C ... +80 °C, Operation with 2 cooling plates(2138205)/optionally with heat protection filter(2137825) [3]

[1] Depends on the object and filter settings.
[2] Continuously changing data output.
[3] With water cooling.

Product description

The Dx80 laser distance sensor combines a large measuring range with high measurement accuracy – all in a compact housing. The modern sensor with advanced materials and technologies enables high performance: with a scanning range of up to 80 m, it offers a measurement accuracy of ± 2 mm. This makes the sensor the ideal solution for demanding applications – whether in manufacturing, machine building or mobile systems.
With an integrated IO-Link interface or future-oriented Ethernet communication, the Dx80 can be flexibly integrated into a variety of automation environments.

At a glance

- Measurement accuracy of +/- 2 mm, repeatability ≥ 0.2 mm
- Measuring ranges from 0.05 m to 80 m on white and up to 14 m on black
- IO-Link V1.1 or Ethernet interface and MQTT with analog and digital output
- Intuitive configuration via SOPAS ET
- User-friendly TFT color display
- Proven metal housing

Your benefits

- Accurate measurements to increase process quality and save valuable resources
- Large measuring range to meet the requirements of a variety of applications
- Flexible system integration and access to sensor data via IO-Link or Ethernet interface with cloud connectivity via MQTT
- Effortless parameterization and visualization via SOPAS ET
- Easy commissioning and intuitive operating experience thanks to the symbol supported color display
- Compact and rugged metal housing for uncomplicated integration even in tight installation spaces

Fields of application

- Positioning tasks in robotic, handling, and mounting processes
- Precise measurement of the length, width and height of various materials
- Vertical and horizontal positioning of industrial cranes
- Distance monitoring and collision avoidance
- Detection and measurement of hot materials
- Quality control and gripper arm positioning

Ordering information

Other models and accessories ➜ www.sick.com/Dx80

- **Communication interface:** IO-Link
- **Measuring range:** 50 mm ... 80,000 mm, 90% remission factor, 50 mm ... 40,000 mm, 90% remission factor, 50 mm ... 14,000 mm, 6% remission factor
- **Laser class:** 2

Light source	Minimum response time	Digital output	Type of analog output	Type	Part no.
Laser, red	33 ms	1 ... 2 x push-pull: PNP/NPN	Current output / voltage output	DT80-311111	1118113

- **Communication interface:** Ethernet
- **Measuring range:** 50 mm ... 80,000 mm, 90% remission factor, 50 mm ... 40,000 mm, 90% remission factor, 50 mm ... 14,000 mm, 6% remission factor
- **Laser class:** 2

Light source	Minimum response time	Digital output	Type of analog output	Type	Part no.
Laser, red	33 ms	1 ... 2 x push-pull: PNP/NPN	Current output / voltage output	DT80-312121	1122259

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.”

WORLDWIDE PRESENCE:

Contacts and other locations –www.sick.com