



## Distance measurements in all of their varieties

From millimeter to kilometer measurement ranges



# Not a question of distance, but instead of technology.

Distance measurements – according to all rules of physics.

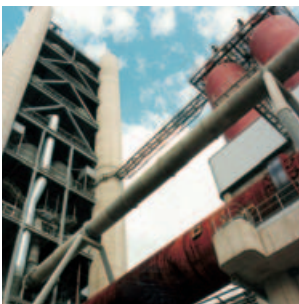


You can detect distances or other dimensions such as filling levels or positions precisely using SICK distance sensors. Our products stand for the highest degree of measurement accuracy at small and great distances and ensure smooth production processes. In doing this, our optoelectric distance or ultrasonic sensors use the specific advantages of measuring with light or ultrasound. The linear and wire draw encoders supplement the portfolio of the path and position measurements in industrial automation.



## SICK – Global player in sensor technology.

The company with more than 50 years of sensor technology has more than 4,000 employees in more than 20 countries and is one of the leading sensor manufacturers in the world today. SICK is not only a component supplier, but also an experienced system partner for large projects in almost all branches of industry. In collaboration with customers, SICK works continually on innovative product ideas and new, future-oriented equipment technologies.





# Measuring accurately can be so easy.

Sometimes it is not so easy to measure distances precisely. But you can master these tasks as easy as child's play with the sensors from SICK.

There are different sensors for an extremely wide range of applications. Which system fits best technologically and economically to your tasks depends on which distances should be measured and how precise the measurements need to be.

## OUR SENSICK DISTANCE SENSORS



Measure distances in harsh ambient conditions with a high resolution – highly accurate all the way to “μ” and with less installation work for large measurement distances.

### OPTIC SENSORS

(Scanners)

### OPTIC SENSORS

(Reflectors)

### ULTRASONIC SENSORS

ENCODERS (LINEAR)

ENCODERS (WIRE DRAW)

DT 10

DT 2

OD, OD Hi

UM/UC

BTF

KH 53

OD Hi 30  
[2 ms/0.08 mm]

OD 25\*\*\*  
[1 ms/0.1 mm]

OD max 30\*\*\*  
[0,5 ms/0.02 mm]

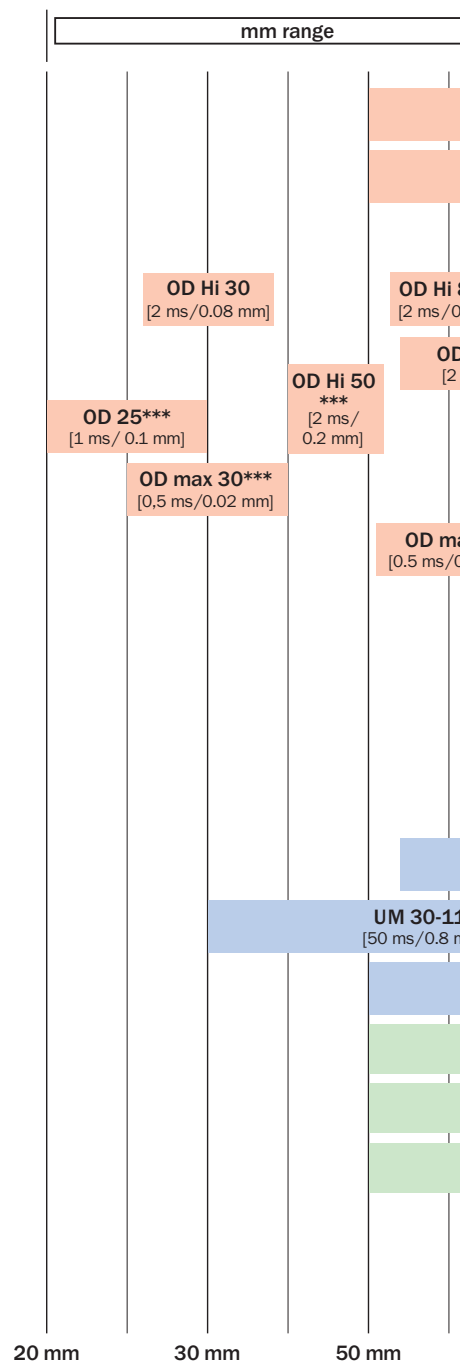
OD Hi 50  
\*\*\*  
[2 ms/  
0.2 mm]

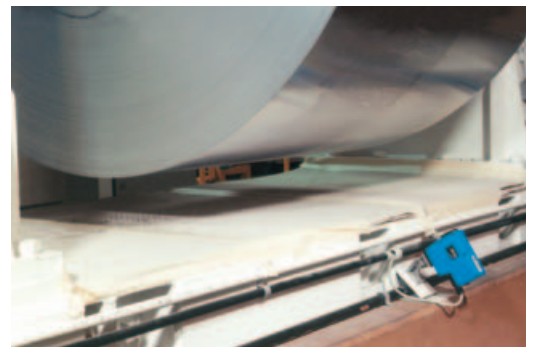
OD Hi  
[2 ms/0.08 mm]

OD  
[2 ms/0.08 mm]

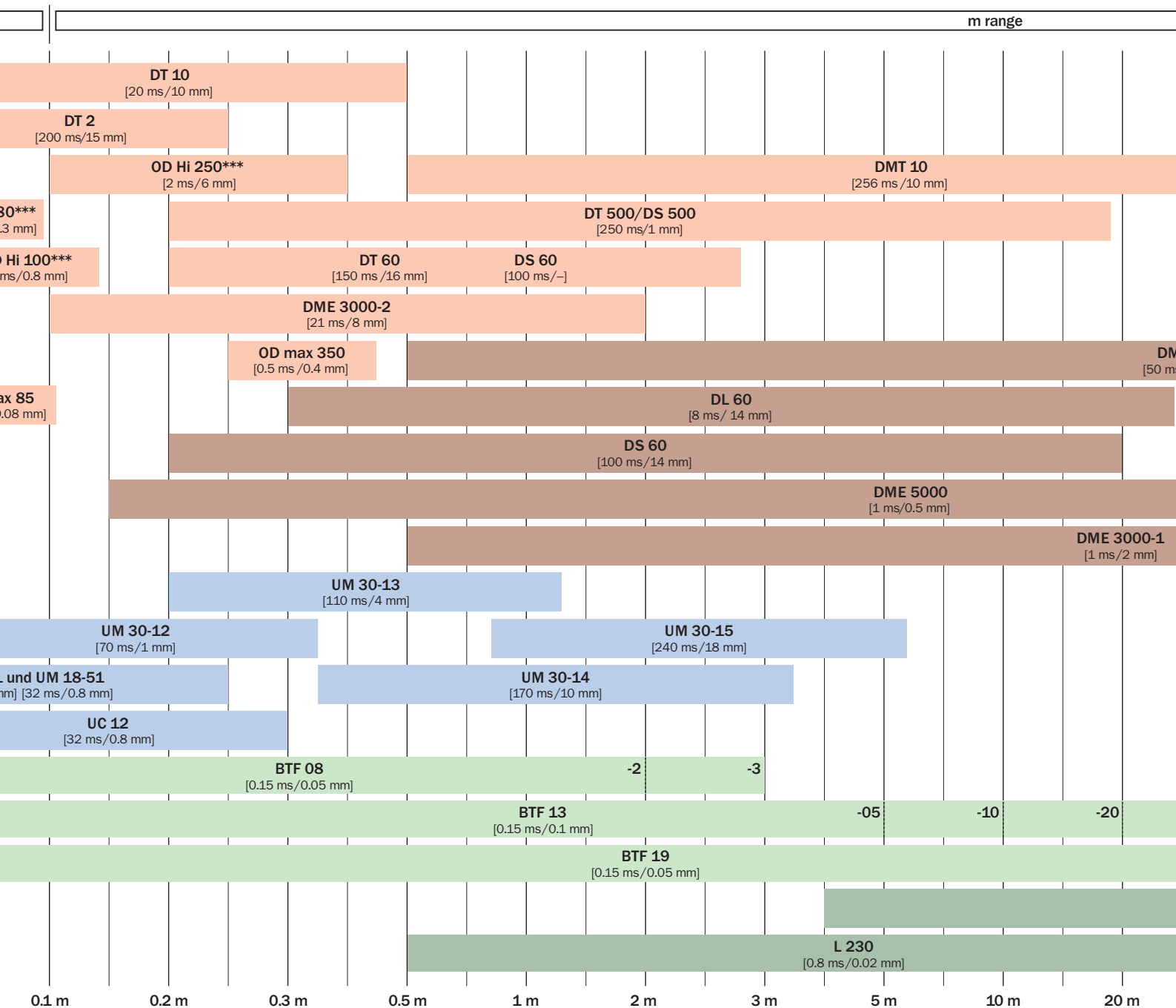
OD max  
[0.5 ms/0.02 mm]

UM 30-11  
[50 ms/0.8 mm]





## THE MEASUREMENT RANGES\*: FROM MILLIMETERS TO KILOMETERS



\*\*\* The value of accuracy (instead of reproducibility) is shown here.



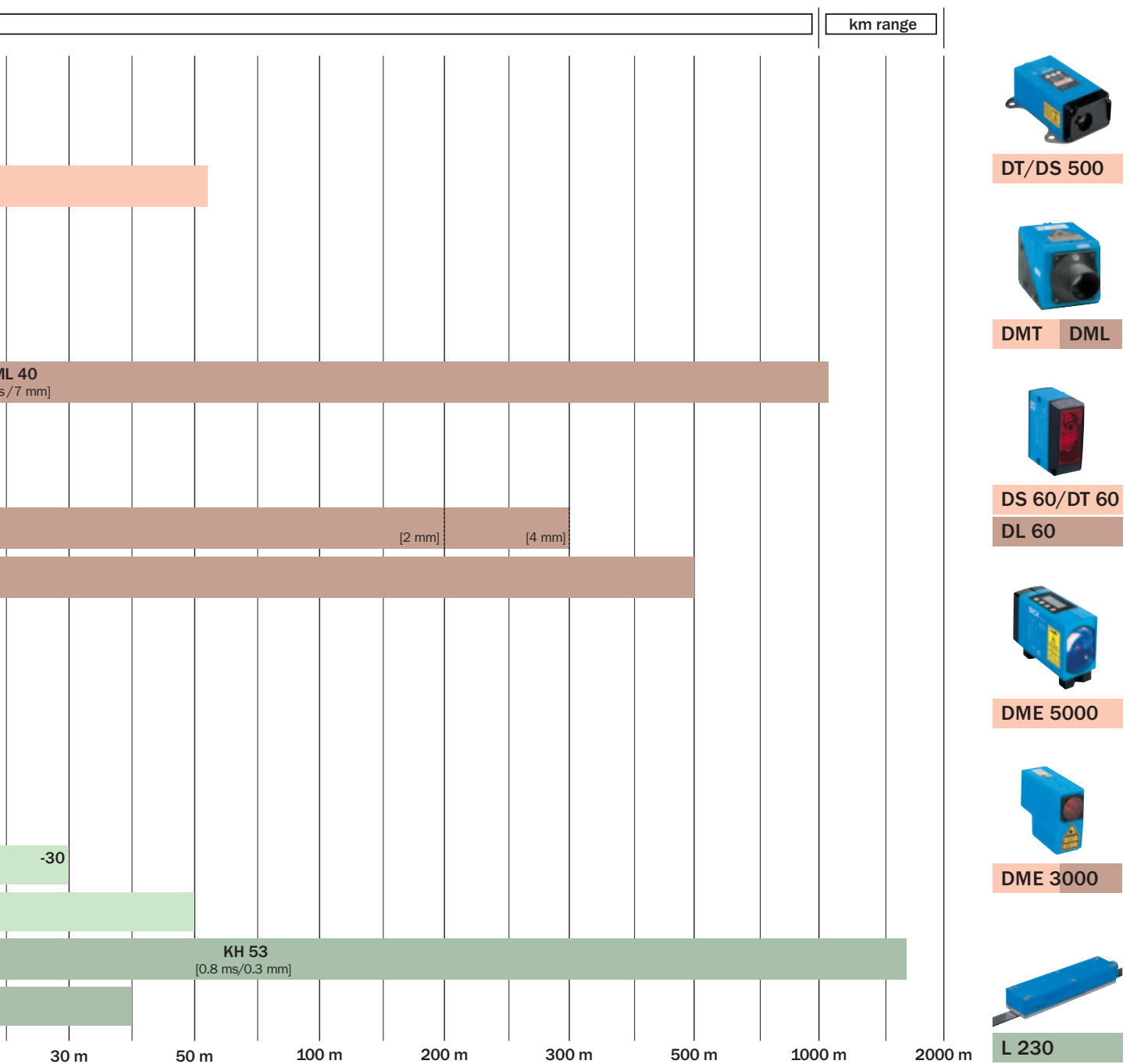
## Key

### Sensor type\*\*

[response time in ms/reproducibility (accuracy) in mm]

\* For optic sensors are indicated scanner distances on black surfaces;  
for other values see data sheet.

\*\* Typical values of the product series;  
for the exact data see data sheet.







# Different operating principles – adapted to your application.

## OPTIC SENSORS

**Send light, gain information.**

Optic sensors measure distances – depending on the measurement range and accuracy – with laser light according to the principle of run-time measurement or the geometric triangulation procedure with laser, red or infrared light.

## DISTANCE SENSORS IN SCANNER MODE



Small measurement ranges and the smallest objects are displayed extremely precisely using triangulation: the series of OD Displacement

Sensors. On the other hand, run-time measurement is ideal for larger scanning ranges.

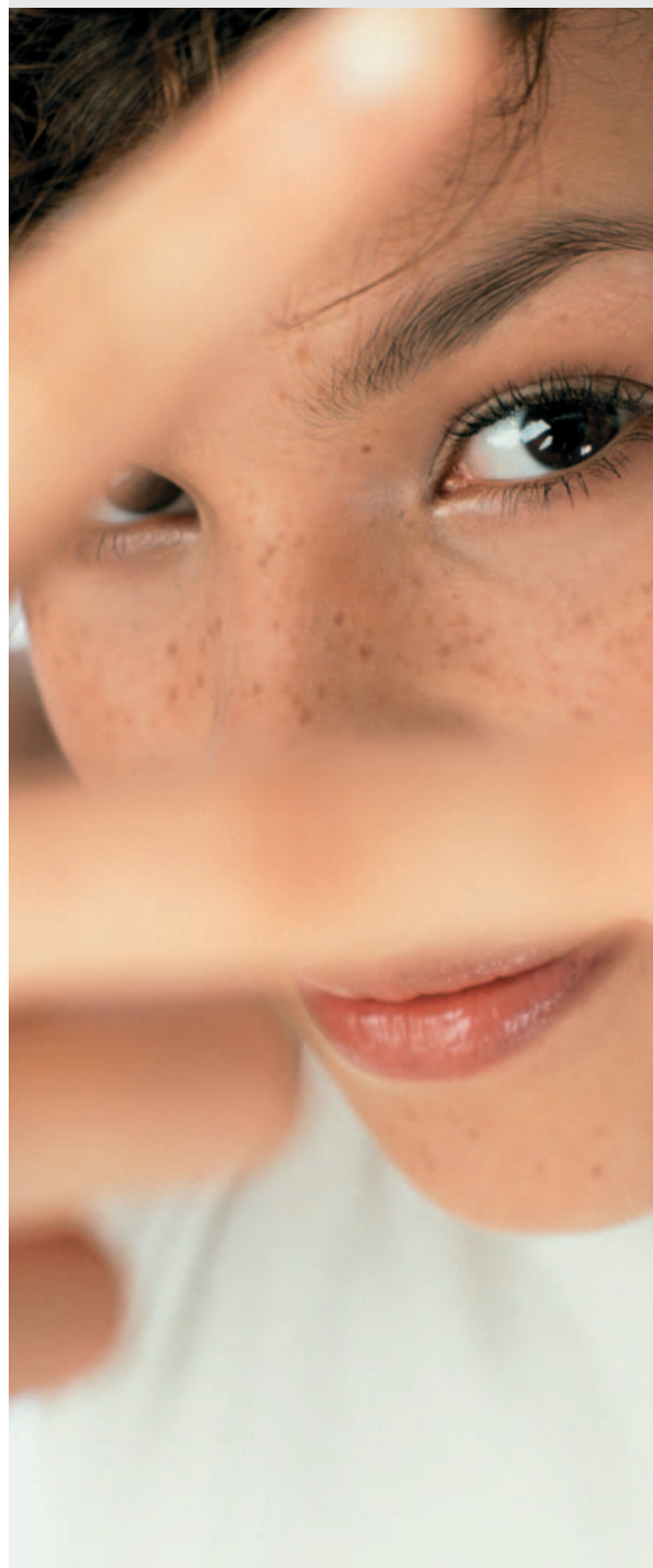
## DISTANCE SENSORS IN REFLECTOR MODE



You measure the distance to a reflector using run-time measurement. This is ideal for positioning in position control loops or for larger measurement ranges, e.g., for determining the position of vehicles moving on rails.



**Starting on page 10**





## ULTRASONIC SENSORS

**Measure distances to objects – independent of their appearance.**

Contactless distance measurement using the run-time measurement of the emitted ultrasonic wave in the medium of air. The measurement is independent of the material shape or color; even transparent foils, bottles and glass are detected.

## ULTRASONIC SENSORS



The excellent background suppression and the insensitivity to all kinds of foreign substances in the ambient air ensure a high degree of measurement accuracy.

## ENCODERS

**Path measurement even for extremely great distances – without reference run.**

Great distances, even in harsh ambient conditions, with and without linear guide: linear encoders are suited for transmitting current measurement positions, e.g., in logistics. The wire draw encoders work without linear guide and provide high resolution path and position information.

## LINEAR ENCODER



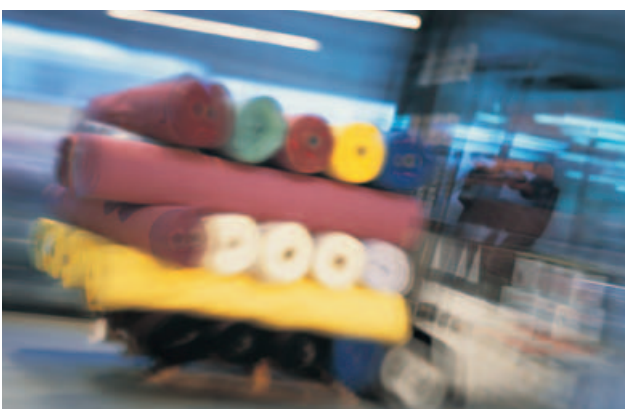
The reading head detects contactless – and consequently free of wear and tear – the absolute and current measurement position along a measurement distance and transmits this directly.

## WIRE DRAW ENCODERS



This combination of cable-pull mechanics and absolute encoder counts the number of drum revolutions proportional to length and outputs this as measurement signal.

➔ **Starting on page 16**



➔ **Starting on page 18**



# Where precise measuring is decisive.

## OD, OD HI DISPLACEMENT SENSOR



**Measurement ranges**  
 $25 \pm 5 / 30 \pm 4 / 50 \pm 10 /$   
 $80 \pm 15 / 100 \pm 40 /$   
 $250 \pm 150 \text{ mm}$

The displacement sensor OD measures even the smallest differences.

A precise, focused laser light illuminates the measurement object, and high resolution CMOS lines detect the object distance according to the triangulation principle.

[starting from 1 ms/  
from 0.1 mm]

20 mm      400 mm\*



### OD, OD Hi – measure accurately with easy handling

The OD is not only an extremely precise displacement sensor, but also very easy to operate thanks to the simple setting and calibration via teach-in. An analogue measurement output of 4–20 mA also signals the measurement distance, and a digital switching output makes it possible to use it as highly precise scanner with background suppression. The special extra: the functions of the OD can be expanded further using the evaluation unit ODC.

|                               |   |
|-------------------------------|---|
| Operating principle           | Triangulation with red light laser diode/LED  |
| Parameterizing                | Teach-in/Display  |
| Interface                     | 1 x switching output/1 x analogue output<br>1 x teach-in input/1 x blanking input<br>Profibus-DP, RS 232 (with evaluation unit) |
| Connection type               | Cable/M12 plug  |
| Dimensions<br>(W X H X D, mm) | 20.4 x 60 x 50  |

\* Scanning range on black surfaces (6 % remission)

## OD max™ DISPLACEMENT SENSOR



**Measurement ranges**  
 $30 \pm 5 / 85 \pm 20 /$   
 $350 \pm 100 \text{ mm}$

The OD max™ is a high-end system, which is composed of a sensor head and an amplifier unit with integrated arithmetic functions.

The OD max™ is a high-end system, which is composed of a sensor head and an amplifier unit with integrated arithmetic functions.

[starting from 0.5 ms/  
from 0.02 mm]

25 mm      450 mm\*



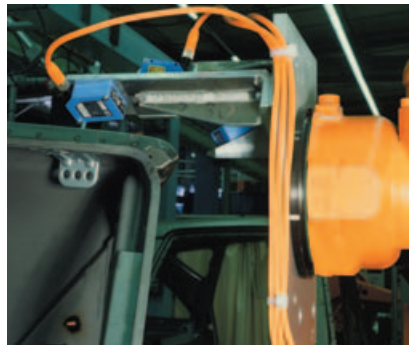
### OD max™ – measure and evaluate arithmetically

Based on CMOS technology, even shiny or dark surfaces – independent of the object – are measured extremely accurately.

- Difference measurements possible: Even moving objects can be measured.
- Integrated color display for fast and easy operation start-up.

|                               |  |
|-------------------------------|--|
| Operating principle           | Triangulation with red light laser diode   |
| Parameterizing                | Teach-in/Display at evaluation unit  |
| Interface                     | 5 x switching output/2 x analogue output<br>2 x Zero Reset/3 x Hold/3 x Bank input |
| Connection type               | Terminals  |
| Dimensions<br>(W X H X D, mm) | 25.6 x 78 x 76.5 (sensor)<br>and 103 x 78 x 47 (amplifier)                         |

\* Scanning range on black surfaces (6 % remission)



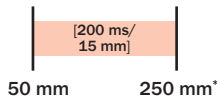
## DT 2 DISTANCE SENSOR



**Measurement range**  
50 ... 300 mm

The DT 2 is a triangulation sensor, which outputs the measurement

distance via an analogue current interface as plug-and-play equipment.



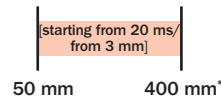
## DT 10 DISTANCE SENSOR



**Measurement range**  
50 ... 500 mm

The DT 10 measures according to the triangulation principle. Receiver

lines developed specially by SICK ensure accurate measurement results.



### DT 2 – Plug-and-Play

The DT 2 provides a 4–20 mA signal proportional to distance. It was developed for industrial applications at close range and has small, compact housing. The LED emits infrared sender light. The equipment plug is rotatable by 90°.

### DT 10 – Plug-and-Play and larger measurement range

The DT 10 provides a 4–20 mA signal proportional to distance. It is well suited for applications at close range with teach-in button for fast operation startup, visible status LEDs all around and lean design. The LED emits red sender light.

|                            |                                 |
|----------------------------|---------------------------------|
| Operating principle        | Triangulation with infrared LED |
| Parameterizing             | No setting required             |
| Interface                  | 1 x analogue output             |
| Connection type            | M12 plug                        |
| Dimensions (W X H X D, mm) | 15 x 49 x 41.5                  |

|                            |   |
|----------------------------|---|
| Operating principle        | Triangulation with red LED  |
| Parameterizing             | Teach-in  |
| Interface                  | 1 x switching output<br>1 x teach-in input<br>1 x analogue output |
| Connection type            | M12 plug  |
| Dimensions (W X H X D, mm) | 17.6 x 75.5 x 33.5  |

\* Scanning range on black surfaces (6 % remission)

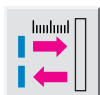
\* Scanning range on black surfaces (6 % remission)



## For large ranges in scanner mode.



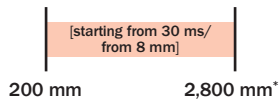
### DT 60, DS 60 DISTANCE SENSORS



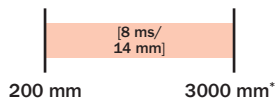
**Measurement range**  
**200 ... 5300 mm**

These distance sensors are easy to handle and ideal for large measurement ranges, which are made possible by measurement of the light transit time.

#### DT 60



#### DS 60

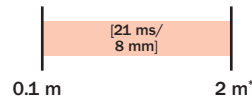


### DME 3000-2 DISTANCE MEASURING DEVICE



**Measurement range**  
**100 mm ... 10 m**

Tried and tested thousands of times: Precise measurement results using phase correlation. The resolution of 0.1 mm corresponds to a light transit time of less than one pico-second.



#### DT 60 "Scanner" – Plug-and-Play and Teach-in Models

The DT 60 provides a 4–20 mA signal proportional to distance. In addition to the model with teachable measurement ranges, there is a Plug-and-Play model with preset measurement range.

#### DS 60 "Scanner" – The solution even for critical surfaces

The sensor is best suited for large scanning ranges and measurements of dark, critical surfaces. The DS 60 can be set easily via teach-in. Optionally: small light spot for precise detection of small objects or large light spot for uneven surfaces.

|                            |   |
|----------------------------|---|
| Operating principle        | Light transit time with red light and infrared laser diode                                  |
| Parameterizing             | Teach-in  |
| Interface                  | DS: 2 x switching output<br>DT: 1 x switching output/1 x analogue output<br>DS/DT: Teach-in |
| Connection type            | M12 plug  |
| Dimensions (W X H X D, mm) | 38 x 104 x 87   |

\* Scanning range on black surfaces (6 % remission)

#### DME 3000-2 "Scanners" – measure fast and can be used in many ways

Take advantage of the many benefits of this equipment, which captivates thanks to its simple alignment and visible red light laser class 2 (safe for eyes). For precise, fast measurements on black objects up to a distance of two meters, this sensor handles the measurement task optimally thanks to its parameterizable averaging. It also has two adjustable switching outputs, e.g., for end position monitoring, and increases the availability of your system thanks to its integrated pre-failure message output and error output.

|                            |   |
|----------------------------|---|
| Operating principle        | Light transit time with red light laser diode                           |
| Parameterizing             | Display/function keys   |
| Interface                  | 4 x switching output<br>Pre-failure message<br>SSI, Profibus DP, RS 422 |
| Connection type            | M16 plug  |
| Dimensions (W X H X D, mm) | 54 x 105 x 138  |

\* Scanning range on black surfaces (6 % remission)

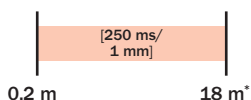


## DS 500, DT 500 DISTANCE SENSOR



**Measurement range**  
0.2 ... 30 m

This laser-analogue sensor is practically ideally suited for use with large scanning distances with substantial requirements for measurement value quality.



### DS 500, DT 500 – determine large scanning ranges accurately

18 m scanning range on black surfaces make the DT/DS 500 a problem-solver. With its optional alignment bracket, aligning the highly visible light spot is no problem even at a distance of 18 m. The heating integrated in the equipment and a special outer housing made the DS 500 fit for outdoor applications.

|                            |   |
|----------------------------|---|
| Operating principle        | Light transit time with red light laser diode                 |
| Parameterizing             | Display/function keys   |
| Interface                  | DS: 2 x switching output<br>DT: 1 x analogue output<br>RS 422 |
| Connection type            | M12 plug  |
| Dimensions (W X H X D, mm) | 110 x 50 x 151  |

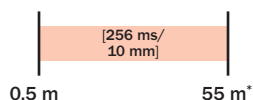
\* Scanning range on black surfaces (6 % remission)

## DMT 10 DISTANCE MEASURING DEVICE



**Measurement range**  
0.5 ... 155 m

The pulse run-time measures in times of only four nano-seconds using tiny laser light flashes. This sensor provides very large scanning distances.



### DMT 10 “Scanner” – measure everywhere and program individually

This device has a measurement range of up to 155 m thanks to pulse run-time measurement. This makes measurements on almost all surfaces possible. This sensor can be aligned easily even for greater scanning ranges thanks to its integrated laser pointer. The measurement values are transmitted easily via various interfaces: analogue/RS 232 or Profibus. There are two adjustable switching outputs for applications such as end switches.

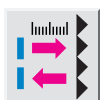
|                            |  |
|----------------------------|--|
| Operating principle        | Light transit time “pulse run-time” with infrared laser diode          |
| Parameterizing             | PC via RS 232  |
| Interface                  | 2 x switching output<br>1 x analogue output<br>Profibus, RS 232/RS 422 |
| Connection type            | Plug/terminal chamber/PG   |
| Dimensions (W X H X D, mm) | 99.5 x 99.5 x 213.5  |

\* Scanning range on black surfaces (6 % remission)

# Handle large distances and critical surfaces easily.



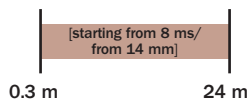
## DL 60, DS 60 DISTANCE SENSORS



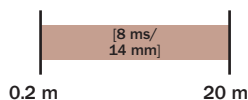
**Measurement ranges**  
300 mm ... 24 m/  
200 mm ... 20 m

Compact, laser distance measurement systems for simple distance determination on reflective tape.

### DL 60



### DS 60

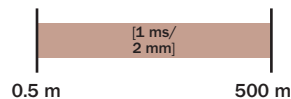


## DME 3000-1 DISTANCE MEASURING DEVICE



**Measurement range**  
0.1 ... 500 m

High degree of measurement dynamics and accuracy for very large distances.



### DL 60 "Reflector" – freely selectable measurement range

The DL 60 provides a 4–20 mA signal proportional to distance. The analogue output can be scaled freely within the measurement range via teach-in or the default values can be used.

### DS 60 "Reflector" – variable uses

The reflector model measures distances up to 20 meters. Two switching outputs detect three distance ranges: reflective tape at a great distance, reflective tape at a medium distance and reflective tape at close range.

|                            |  |
|----------------------------|--|
| Operating principle        | Light transit time with red light and infrared light laser diode             |
| Parameterizing             | Teach-in   |
| Interface                  | DS: 2 x switching output<br>DT: 1 x switching output/<br>1 x analogue output |
| Connection type            | M12 plug   |
| Dimensions (W X H X D, mm) | 38 x 104 x 87  |

### DME 3000-1 "Reflector" – fast and easy alignment

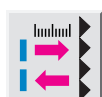
This device measures up to 500 meters on reflectors, and the fast measurement times make use in dynamic position control loops possible. The DME 3000 can be aligned easily thanks to the highly visible red light laser of class 2 (safe for eyes). The device has variable interfaces, and operation startup is easy via a display.

|                            |  |
|----------------------------|--|
| Operating principle        | Light transit time with red light laser diode            |
| Parameterizing             | Display/function keys                                    |
| Interface                  | 4 x B<br>Pre-failure message<br>SSI, Profibus DP, RS 422 |
| Connection type            | M16 plug   |
| Dimensions (W X H X D, mm) | 54 x 105 x 138   |



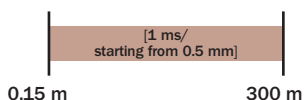


## DME 5000 DISTANCE MEASURING DEVICE



**Measurement range**  
**0.15 ... 300 m**

Positioning of high-bay stackers in millisecond cycles: contactless, free of wear and tear, simple and precise up to 10 m/s fast.

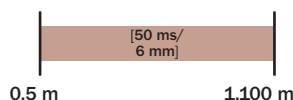


## DML 40 DISTANCE MEASURING DEVICE



**Measurement range**  
**0.5 ... 1100 m**

The pulse run-time measures in times of only four nano-seconds using tiny laser light flashes. This sensor provides very large scanning distances.



### DME 5000 – positioning of high-bay stackers: contactless, simple and precise

The distance measurement equipment DME 5000 can be used both in automatic small parts warehouses as well as high-bay warehouses for pallets thanks to its various measurement range models. Fast and easy operation is possible thanks to the illuminated display, which shows measurement value and status information parallel. The mounting bracket with three screw connections makes mechanical offset setting possible and simplifies installation and alignment. Equipment heating and heatable reflectors make use in cold-storage depots possible.

|                            |   |
|----------------------------|---|
| Operating principle        | Light transit time "phase correlation" with laser diodes                                    |
| Parameterizing             | Display   |
| Interface                  | 2 x switching output<br>Standby/Preset Input<br>SSI, Profibus, RS 422, DeviceNet, Hiperface |
| Connection type            | Plug  |
| Dimensions (W X H X D, mm) | 61 x 101 x 176  |

### DML "Reflector" – multifaceted options even for outside

The DML measures distance up to a distance of 600 meters on reflectors of one square meter area and 1,200 meters when glass triple reflectors are used. The large signal reserves also provide sufficient options for outside use.

|                            |  |
|----------------------------|--|
| Operating principle        | Light transit time "pulse run-time" with infrared laser diode          |
| Parameterizing             | PC via RS 232  |
| Interface                  | 2 x switching output<br>1 x analogue output<br>Profibus, RS 232/RS 422 |
| Connection type            | Plugs/Terminals  |
| Dimensions (W X H X D, mm) | 99.5 x 99.5 x 213.5  |

# Measure distance with ultrasound – insensitive to suspended solids in the air.



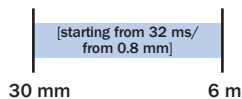
## UM 30 ULTRASONIC SENSOR



**Measurement ranges**  
30 ... 1300 mm/  
350 ... 3400 mm/  
800 ... 6000 mm

Ultrasonic sensors  
UM 30 are used as  
contactless proximity

detectors. The medium “air” transmits the waves between sensor and object.



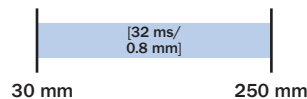
## UM 18 ULTRASONIC SENSOR



**Measurement range**  
30 ... 250 mm

Contactless with almost  
perfect background sup-  
pression for precise

detection.



### UM 30 – Specialist with large diameter

The ultrasonic sensors of these series detect at close or remote ranges independent of the material. The analogue output switches automatically between current and voltage. It can be used in every measurement environment with its 4–20 mA or DC 0–10 V. Suspended solids in the air do not hinder measurement. Temperature compensation compensates automatically for temperature fluctuations in the air. The specific metric design simplifies installation.

### UM 18 – do big things with a small diameter

Distances to objects, which include foils, glass, bottles or liquids, are measured with a high degree of precision independently of materials and shapes. The M18 thread design simplifies installation in cramped spaces. An accessory helps when the spaces are extremely cramped: The ultrasound can be rerouted using appropriate reflectors (almost without any loss).

|                           |   |
|---------------------------|---|
| Operating principle       | Run-time measurement with ultrasound                                      |
| Parameterizing            | Teach-in  |
| Interface                 | 1 x switching output or<br>2 x switching output or<br>1 x analogue output |
| Connection type           | Plug  |
| Dimensions<br>(M x L, mm) | M30 x 138/measurement head Ø 65   |

|                           |   |
|---------------------------|---|
| Operating principle       | Run-time measurement with ultrasound                                      |
| Parameterizing            | Teach-in  |
| Interface                 | 1 x switching output or<br>2 x switching output or<br>1 x analogue output |
| Connection type           | Plug  |
| Dimensions<br>(M x L, mm) | M18 x 127.5   |



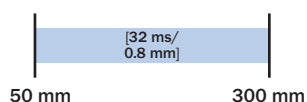
## UC 12 ULTRASONIC SENSOR



**Measurement ranges**  
20 ... 250 mm/  
50 ... 350 mm

The housing shape has been optimized for many applications – including

accurate measurements.



### UC 12 – in best shape with a conventional sensor design

In addition to the standard benefits of measuring with ultrasound, the reversible switching outputs simplify connection to every connection. The compact sensor design simplifies installation and is largely insensitive to soiling. The housing has the same construction as the optic analogue sensor DT 2 and the photoelectric switches in the W 12 series. The equipment plug is rotatable by 90°.

|                               |                                      |
|-------------------------------|--------------------------------------|
| Operating principle           | Run-time measurement with ultrasound |
| Parameterizing                | Teach-in                             |
| Interface                     | 1 x switching output                 |
| Connection type               | M12 plug                             |
| Dimensions<br>(W X H X D, mm) | 15 x 50.5 x 43.5                     |



# Precise information about the transport paths.



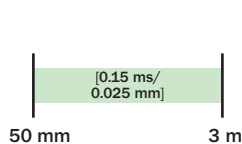
## BTF 08 ABSOLUTE WIRE DRAW ENCODER



**Measurement  
length up to 3 m**

If a measurement point should be targeted anew, BTF wire draw encoders

achieve a high measurement resolution and good reproducibility for small measurement distances.



### BTF 08 – the series for small measurement distances up to 3 m

Thanks to simple installation, numerous application uses are possible such as in hydraulic presses, plastic molding machines, stamping machines, format adjustments in industrial sawing machines or sheet metal working machines. The maximum transport speed is 4 m/s.

|                            |  |
|----------------------------|--|
| Operating principle        | Wire draw mechanics with encoder                       |
| Parameterizing             | None   |
| Interface                  | SSI, Profibus, CANopen, DeviceNet, Incremental HTL/TTL |
| Connection type            | Round screw system, bus connection adapter             |
| Dimensions (W X H X D, mm) | 80 x 80 x 165–202                                      |

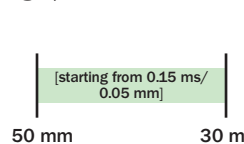
## BTF 13 ABSOLUTE WIRE DRAW ENCODER



**Measurement  
length up to 30 m**

BTF wire draw encoder for medium measurement distances do not

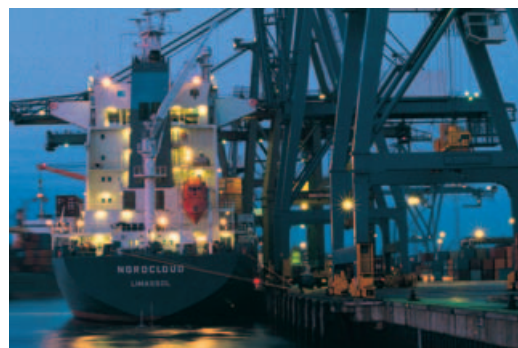
require any precise parallel guides and can also be used in difficult ambient conditions (e.g., smoke, steam or external light).



### BTF 13 – versatile series for medium measurement distances up to 30 m

Typical applications in position detection are in combination with winding or rack-and-pinion drives, mobile cranes, elevating platforms, forklifts, high-bay warehouses (vertical movement of the high-bay stackers) and filling level measurements. The maximum transport speed is 4 m/s.

|                            |  |
|----------------------------|--|
| Operating principle        | Wire draw mechanics with encoder                       |
| Parameterizing             | None   |
| Interface                  | SSI, Profibus, CANopen, DeviceNet, Incremental HTL/TTL |
| Connection type            | Round screw system, bus connection adapter             |
| Dimensions (W X H X D, mm) | 130 x 130 x 215–420                                    |



## BTF 19 ABSOLUTE WIRE DRAW ENCODER



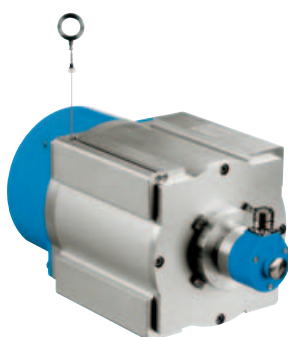
**Measurement  
length up to 50 m**

Wire draw encoders of the BTF 19 series provide important and correct

interfaces for automation technology.

starting from 0.15 ms/  
from 0.1 mm

50 mm      50 m



### BTF 19 – the series for large measurement distances from 30 to 50 meters

BTF wire draw encoders for large measurement distances are especially inexpensive compared to other measurement systems and are used for position detection with gantry cranes in paper warehouses. Wire draw encoders can be used there despite the great amount of dust in the air. The maximum transport speed is 4 m/s.

|                            |  |
|----------------------------|--|
| Operating principle        | Wire draw mechanics with encoder                       |
| Parameterizing             | None   |
| Interface                  | SSI, Profibus, CANopen, DeviceNet, Incremental HTL/TTL |
| Connection type            | Round screw system, bus connection adapter             |
| Dimensions (W X H X D, mm) | 190 x 190 x 385  |

# Precise point positioning even over long distances.



## KH 53 ABSOLUTE ENCODER, LINEAR



**Measurement  
length up to  
1700 m**

The reading head determines the absolute position contactless – and

consequently free of wear and tear – from a number of gauges, which are placed along the measurement path.

4 m  
[starting from 0.8 ms/  
from 0.3 mm]  
1700 m



### KH 53 – free of wear and tear for harsh ambient conditions

The reading head of the KH 53 is composed of a number of magnetoresistive sensors, which always determine the absolute position from at least three continuous magnets (in the gauges). Thanks to this absolute position detection, no reference run is required. These sensors are suited for applications on cranes outside, especially with harsh ambient conditions, for example. The maximum transport speed is 6.6 m/s.

|                               |   |
|-------------------------------|---|
| Operating principle           | Linear encoder                                  |
| Parameterizing                | None  |
| Interface                     | SSI/RS 422, Profibus                            |
| Connection type               | Cable/round screw system/<br>connection adapter |
| Dimensions<br>(W X H X D, mm) | Dependent on measurement distance               |

## L 230 ABSOLUTE ENCODER, LINEAR

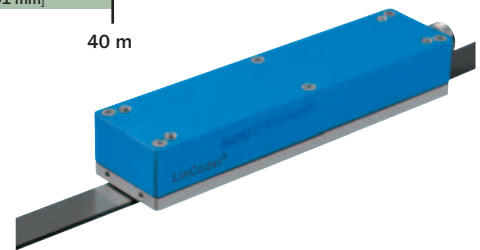


**Measurement  
length up to 40 m**

In the measurement system LinCoder® L 230, a coded magnetic tape,

laminated on a ferromagnetic steel band, replace the gauge component. A reading head also determines the absolute position here, which moves contactless along the magnetic tape.

0.5 m  
[starting from 0.8 ms/  
from 0.01 mm]  
40 m

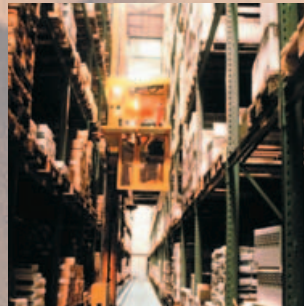


### L 230 – for high transport speed

The magnetic tape can also be affixed directly on steel backgrounds using tape despite the magnetic detection. Consequently, the system is ideal for use in wood and glass working, on paper machines, presses, portal robots and in medical engineering. Servo linear motors are positioned precisely using the Hiperface interface. The maximum transport speed is 6 m/s.

|                               |                              |
|-------------------------------|------------------------------|
| Operating principle           | Linear encoder               |
| Parameterizing                | None                         |
| Interface                     | SSI/Hiperface                |
| Connection type               | Plug                         |
| Dimensions<br>(W X H X D, mm) | 57 x 39 x 254 (reading head) |

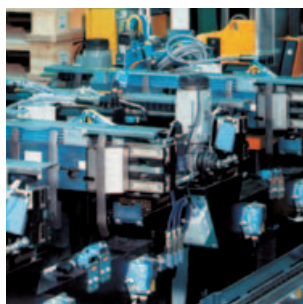




## RANGE OF EXPERTISE

### INDUSTRIAL SENSORS

Our complete range of sensors provides answers to suit any application in the field of automation. Even under rugged ambient conditions objects are reliably detected, counted and positioned in respect of their form, location and surface finish, as well as their distances established with pin-point accuracy.



### INDUSTRIAL SAFETY SYSTEMS

Comprehensive safeguarding of both personnel and machinery! As specialists in Sensor Technology, SICK develops and manufactures pioneering products for providing protection in hazardous zones, dangerous locations and for safeguarding access points. By providing services, which encompass all aspects of machine safety and security, SICK is setting new standards in Safety Technology.



### AUTO IDENT

Whether the tasks involve identification, handling, classification or volume measurement, innovative Auto Ident systems and laser measuring systems function extremely reliably, even under rapid cycle times. They conform to the latest Standards and can be simply and speedily integrated in all industrial environments and external applications.



### ANALYZERS AND PROCESS INSTRUMENTATION

System control, maintaining setpoints, optimising process control and monitoring the flow of materials – the instruments and services for Analysis and Process Measurement, supplied by SICK MAIHAK, are setting the standards for these applications in terms of Technology and Quality.



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