Leuze electronic

HVS
PRECONISATEUR DE SOLUTIONS DEPUIS 1985

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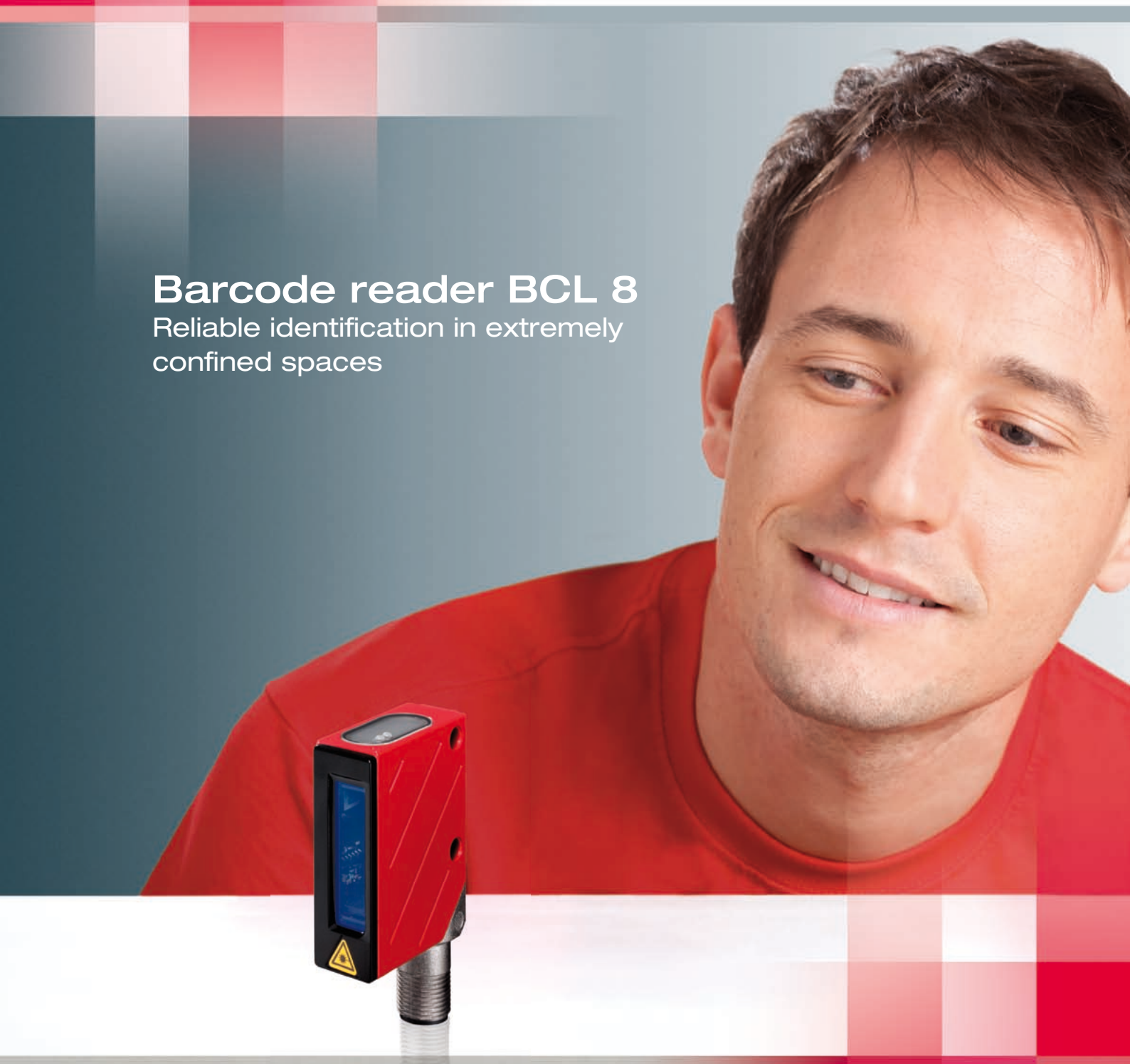
the sensor people

Barcode reader BCL 8

Reliable identification in extremely confined spaces



PRODUCT INFORMATION

The BCL 8 series – **Compact scanners** for **industrial applications**.

Its advantages in detail.

- **Compact constructions for more flexibility**
  The ultracompact dimensions of series 8 of only 48 x 38 x 15 mm enable installation even with confined space conditions such as in printers or packaging systems

- **Large reading field for variable modulus sizes**
  Despite its compact outer form, the BCL 8 has an extremely high reading field with great depth of field. This enables codes with a modulus size from 125 µm to 500 µm to be decoded by the scanner

- **Software support for easy operation**
  The *autoConfig* function makes the knowledge of codes superfluous: The barcode label is simply held in front of the scanner, which automatically adjusts to the type of code to be read

  The *autoReflAct* function enables automatic triggering without an additional photoelectric sensor

  The *BCL Config Tool* software simplifies all configuration events of the barcode reader, even in extensive projects

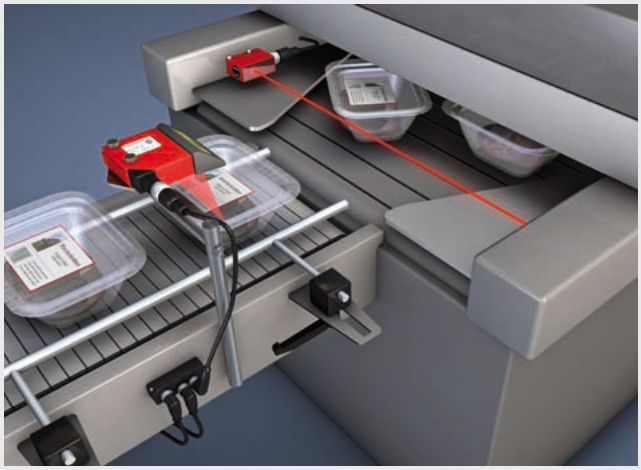
- **Sophisticated technology for fast integration**
  The well-known series 8 housing, the M12 connection technology, ready-made cables as well as the convenient configuration and/or programming enable fast implementation of the series during test, commissioning or during integration into standard production

- **Comprehensive interfaces for unlimited networking**
  Numerous connector units from the MA 8 / MA 200*i* series are available for all well-known bus systems as a gateway. (PROFIBUS, PROFINET, DeviceNet, Ethernet TCP / IP, Ethernet / IP, Ethercat or CANopen). Furthermore the integrated RS 232 interface for the point-to-point connection can be switched to the integrated Daisy Chain

- **High scanning rate for increased reliability**
  With its consistent 600 scans / s of the M-optics, the BCL 8 is ideally equipped, even for fast sequences. Hence it can verify the code e.g. by multiple reading, thus substantially contributing to a reliable application

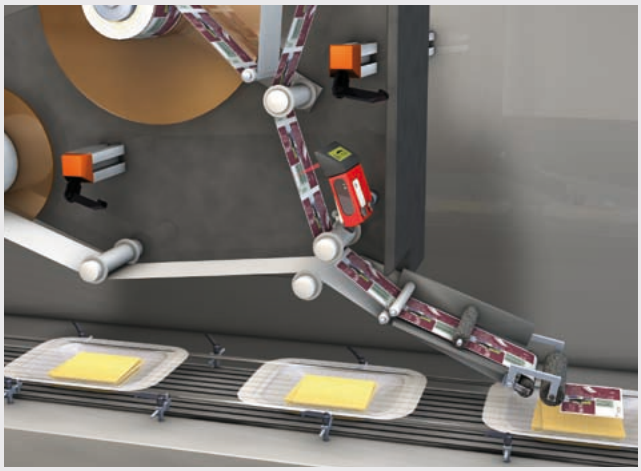
Industrial Execution

- The M12 connectors as well as the cable outlets in interaction with the stable metal/glass housing and the protection class IP 67 enable use even in rough industrial environments.



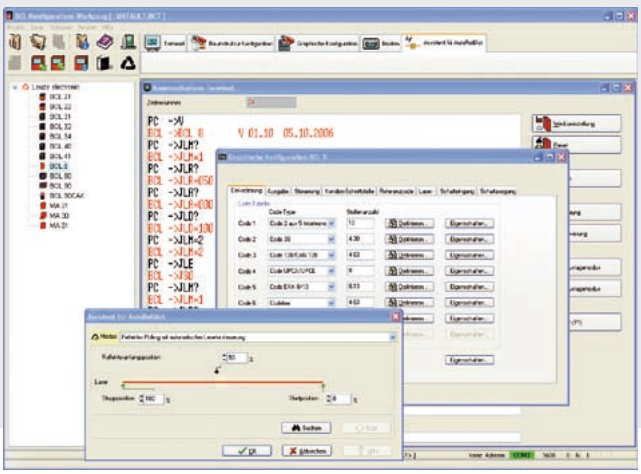
Various optics models

- The scanner is available with a front and lateral beam exit as well as with two different optics. This enables the reading task to be carried out in very confined spaces, depending on requirements.



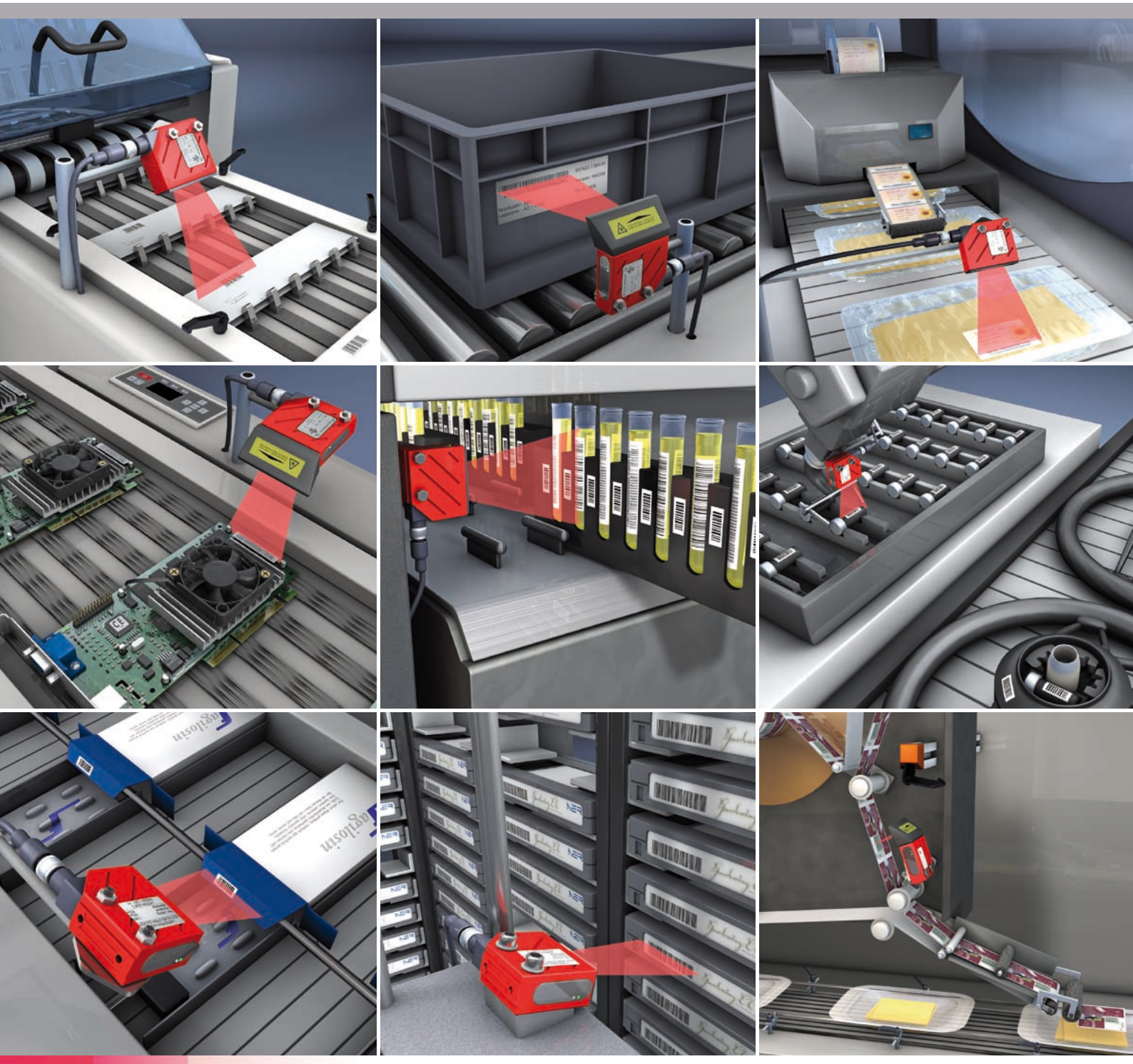
Integrated functions

- The alignment mode helps with the assessment of your application, the laser line can be exactly limited to the reading task, multiple reads within the trigger control or continuous reading are individually adjustable.
- The scanner can internally valuate the validity of codes with the reference code comparison function and provide the result in real time at the output. Time-consuming data transmission and processing in the host system are no longer required.

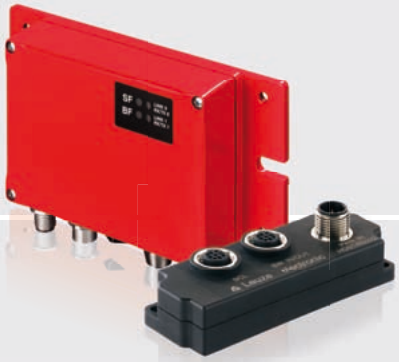


Versatile application possibilities:

As **a standard device** or **optimized design for the respective industrial sector**.



The accessories



Mounting devices

The combination of the proven mounting devices of the series 8 sensors with the selectable beam exit of the scanner provide extremely flexible mounting of the BCL 8. Hence the mounting of the barcode reader can be adapted to the respective application. Clampings on sheet metal plates, mounting on various round materials or extremely compact mounting are possible in very confined spaces with the BT 8-0 dovetail. Prepared drill holes and threads offer sufficient free space for project-specific fastenings.

Connection technology

The BCL 8 is delivered as standard with 2 m cable and an open cable end or with M12 connection technology. Due to the turning M12 screw connection and the extensive cable accessories, installation and maintenance of the versatile applications are always easy and safe.

Connector units

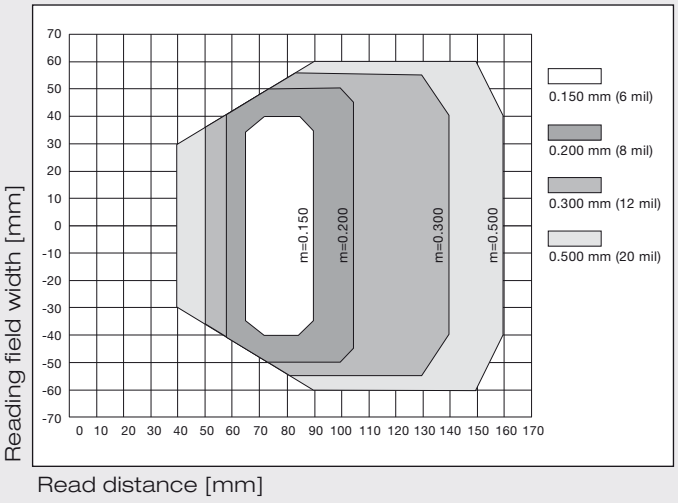
A multitude of convenient connector units enable the trouble-free implementation of the barcode reader in existing systems. The spectrum of the connector units reaches from the extremely cost-effective MA 8.1 to the connection to PROFIBUS, PROFINET, DeviceNet, Ethernet TCP / IP, Ethernet / IP, Ethercat or CANopen with the MA 200*i*.

The MA 8.1 enables the connection of the scanner to 24 V DC and the simultaneous use of the switching input and switching output. The integrated RS 232 is available as an interface to the host or in the Daisy Chain.

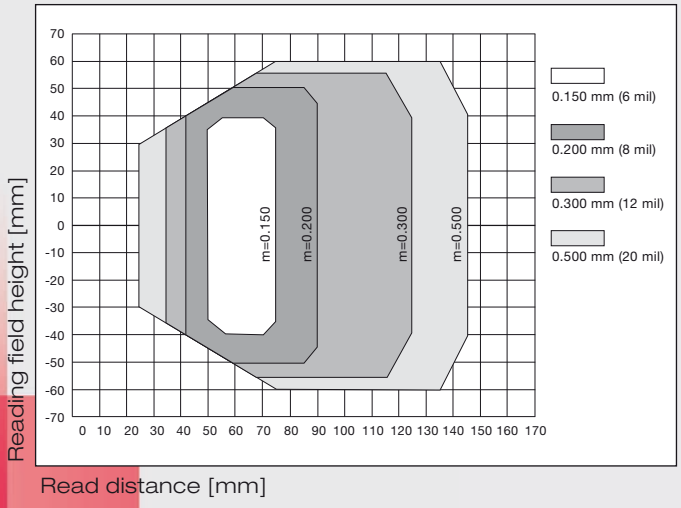
The reading field curves

Reading field curves with M-optics

Line scanner with beam exit at the front

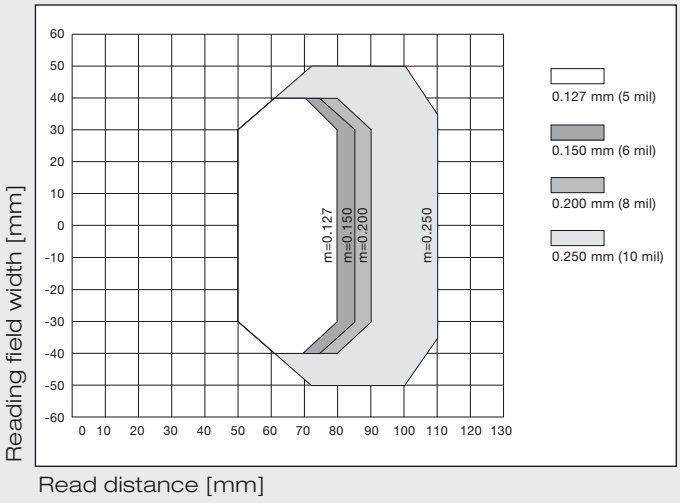


Line scanner with lateral beam exit

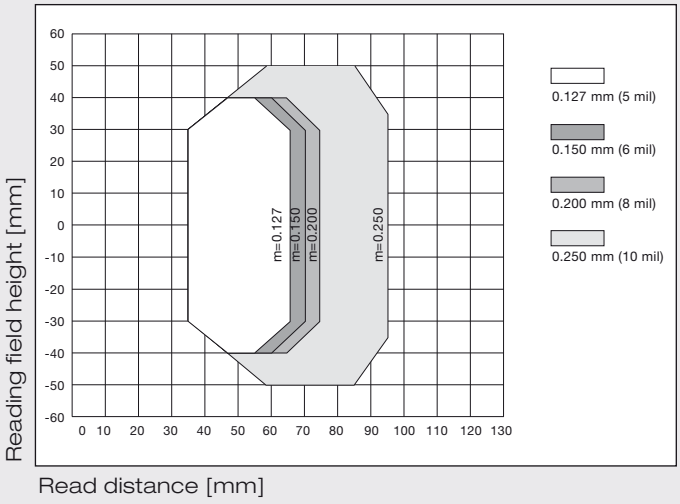


Reading field curves with N-optics

Line scanner with beam exit at the front



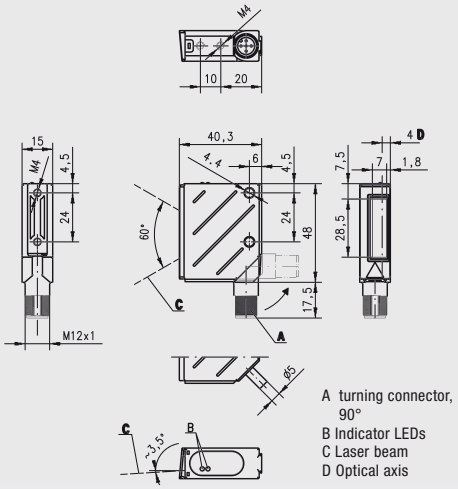
Line scanner with lateral beam exit



Technical data

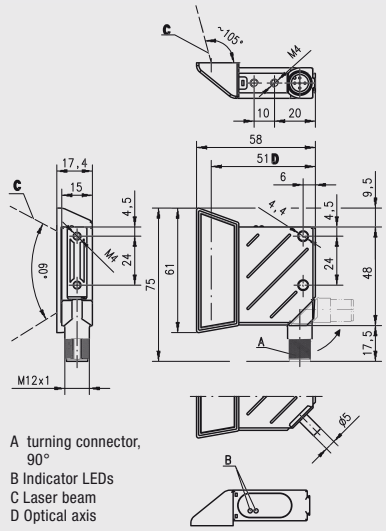
Dimensioned drawings

Beam exit at the front



A turning connector, 90°
B Indicator LEDs
C Laser beam
D Optical axis

lateral beam exit



A turning connector, 90°
B Indicator LEDs
C Laser beam
D Optical axis

Optical data		
Type	line scanner	
Light source	laser diode, red, approx. 650 nm	
Beam exit	front or lateral	
Scanning rate	M-optics: 600 scans/s	N-optics: 500 scans/s
Max. usable opening angle	approx. 60°	
Optics models / resolution	M-optics: 150 … 500 µm	N-optics: 125 … 250 µm
Read distance	corresponding to the modulus width, see reading field curves	
Laser safety class	class 2 acc. to EN 60825-1, class II acc. to U.S. 21 CFR1040.10, Notice No. 50	
Barcode data		
Code types	2/5I, Code 32, Code 39, Code 93, Code 128, EAN 128, EAN/UPC, EAN add-on, Codabar, Pharmacode	
Number of codes per scan	6	
Number of codes per reading gate	63	
Electrical data		
Interface	RS 232	
Protocols	framing protocol with / without acknowledgement, software handshake XON / XOFF, Daisy Chain	
Baud rate	4,800 … 57,600 Baud	
Data formats	7 or 8 data bits, None, Even, Odd Parity, 1, 2 stop bit(s)	
Service interface	RS 232: 9,600 baud, 8 data bits, no parity, 1 stop bit	
Switching inputs/outputs	1 port configurable as a switching input / output with MA 8 / MA 200*i*: 1 switching input / output each	
LEDs	1 device status, 1 read status	
Current consumption	max. 250 mA (2 W power supply unit recommended)	
Operating voltage	4.75 … 5.5 V DC (PELV), with MA 8 / MA 200*i*: 10 … 30 V DC	
Mechanical data		
Protection class	IP 67	
Weight	approx. 70 g	
Dimensions	see dimensioned drawing	
Housing	diecast zinc / glass	
Environmental data		
Ambient temperature	operation: 0 … +40 °C storage: -20 … +60 °C	
Air humidity	max. 90% rel. air humidity, non-condensing	
Vibration	IEC 60068-2-6, test FC	
Shock	IEC 60068-2-27, test Ea	
Electromagnetic compatibility	EN 55022, IEC 61000-4-2, -3. -4 and -6	
Conformity	CE, FCC Class B tested, UL	

Optoelectronic Sensors

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