

the **sensor** people

Bar code reader BCL 300*i*

The multi-talent with extensive
equipment options

modular
individual sensor solutions 





You decide

what your bar code reader can do.

The bar code readers of the BCL 300*i* series set new standards in equipment options.


What makes our new BCL 300*i* series special is its **modularity**. For the first time, you can select from a large number of equipment options to individually configure a device optimally for your application. You thereby obtain a bar code reader perfectly tailored to your needs with regard to function, connection, mounting, and operation and one that stands for reliability and system availability.

Top performance and practical innovation in all areas

The BCL 300*i* convinces not only with its proven performance characteristics such as the high-performance code reconstruction technology, the integrated fieldbus connectivity and the—in this performance class—unrivalled optical data at long operating range and wide opening angle.

With the unique hood with integrated connectors, the device can also be quickly connected to your fieldbus environment without complicated plug mounting.

In addition, the compact scanner can be used as an Ethernet switch in the network and can be configured either via the browser-based webConfig tool conveniently and directly via Ethernet or directly in the PROFIBUS/PROFINET environment.



Compromises are a thing of the **past** –
today the word is **modular**.



With the new BCL 300*i*, select between **freely combinable equipment variants**.
We call this flexible type of product configuration modular.

● Display elements

- Graphical display
- LED display

● Optics/read fields

- High Density (N)
- Medium Density (M)
- Low Density (F)
- Ultra Low Density (L)

● Scanner

- Oscillating mirror
- Deflection mirror
- Front scanner
- Line scanner
- Raster scanner

● Options

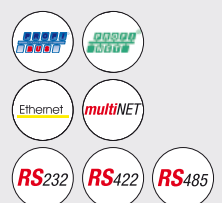
- Heating
- Mounting systems

● Connection technology

- Modular connector hood
- Modular terminal hood
- Modular connection box
- Connection cable

● Interfaces

- PROFIBUS
- PROFINET
- Ethernet TCP/IP
- multiNet
- RS 232 / 422 / 485



Convincing performance characteristics: **The advantages** of the BCL 300*i* at a glance.



Modularity

First bar code reader with freely combinable equipment for optimum adaptation to your application.

Full CRT (code reconstruction technology)

The most powerful code reconstruction technology on the market; also reliably detects heavily damaged or soiled codes.

High-quality optics

The used optics facilitate a large depth of field and wide opening angle for reliable detection, even with wide conveyor lines.



Ethernet

Integrated fieldbus connectivity = *i*

A range of available fieldbus interfaces enables direct integration and configuration of the system without additional software.

webConfig

Operating-system independent, browser-based configuration tool.

Ethernet switch

The device can function as an Ethernet switch to create a linearly structured network.



Flexible electrical connection

For the BCL 300*i*, you can select from four different connection options.

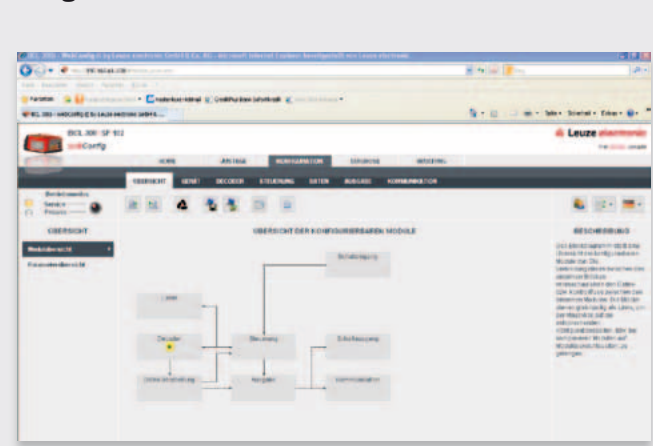
Small construction

Compact housing design for problem-free placement directly at the conveyor line.

The fast track to custom configuration
of your bar code reader.

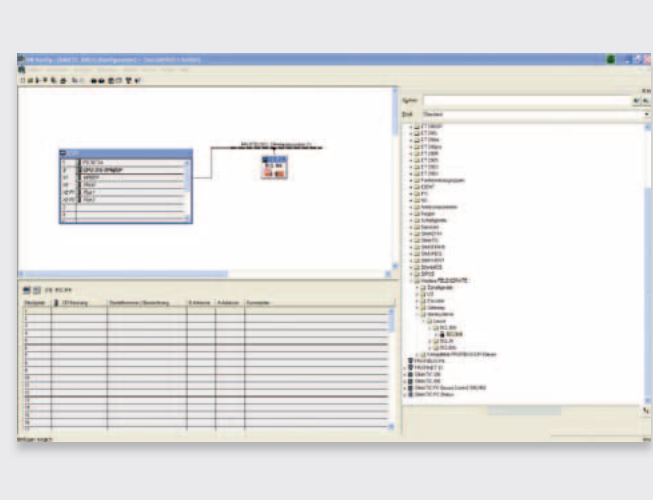
The Leuze electronic BCL 300*i* webConfig.

With the integrated webConfig tool, an operating-system independent, web-technology based, multi-language user interface is available for configuring the device. The individual parameters are presented in an easy-to-understand, graphic form.

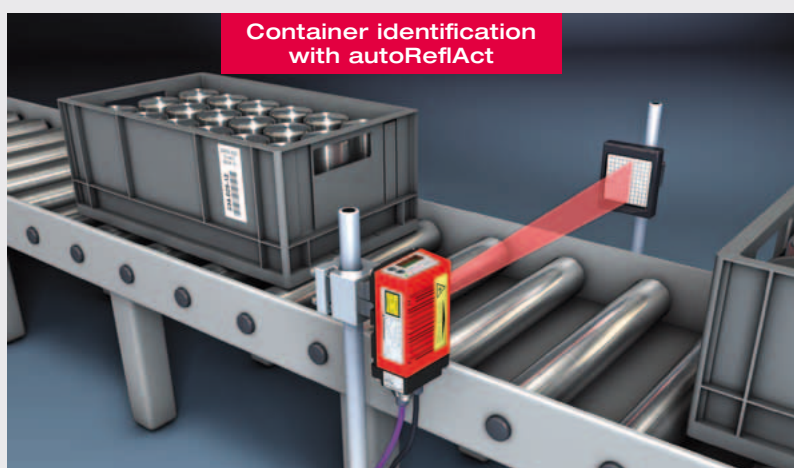
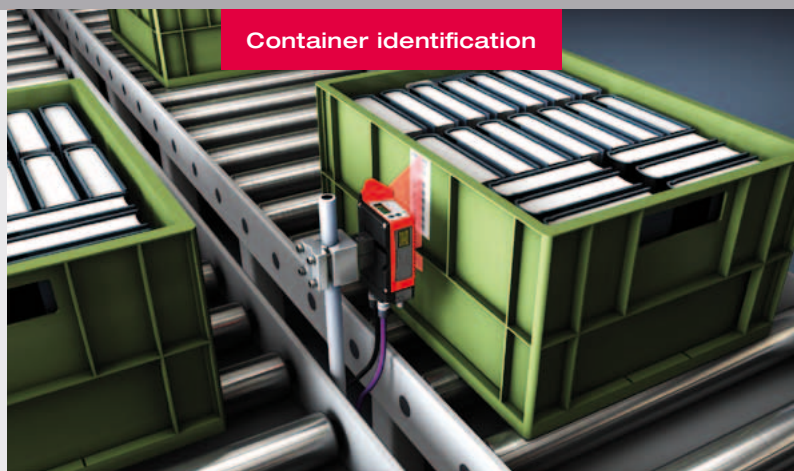
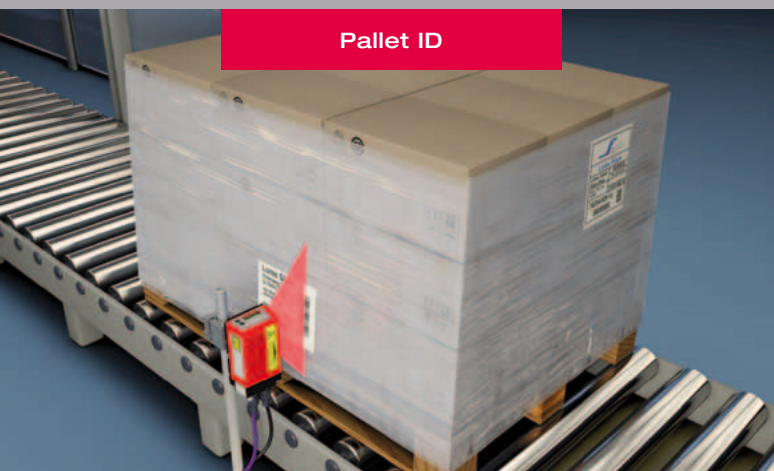


The BCL 300*i* in the PROFIBUS/PROFINET world.

With the integrated PROFIBUS or the integrated PROFINET, it is possible to configure the BCL 300*i* via the module structure contained in the GSD/GSDML file directly via the HW Config. In doing so, the parameters that are set are stored in the control and, should a device need to be replaced, automatically transferred to the new device.

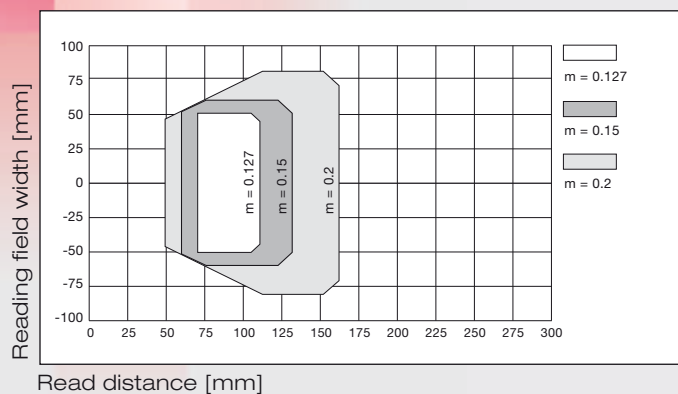


Diverse application possibilities



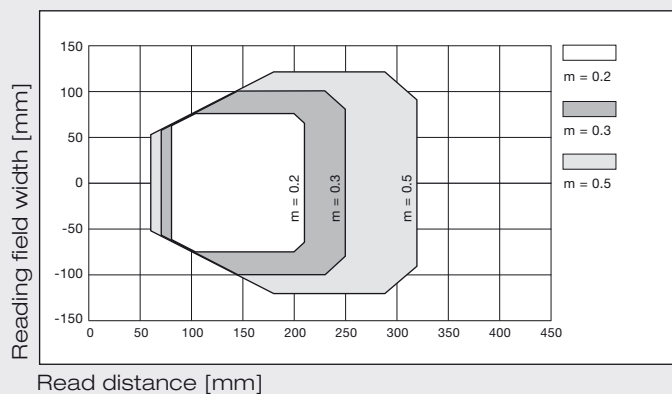
Reading field curves High Density (N)

BCL 3xxi S/R1 N 102 – line scanner w/o deflection mirror

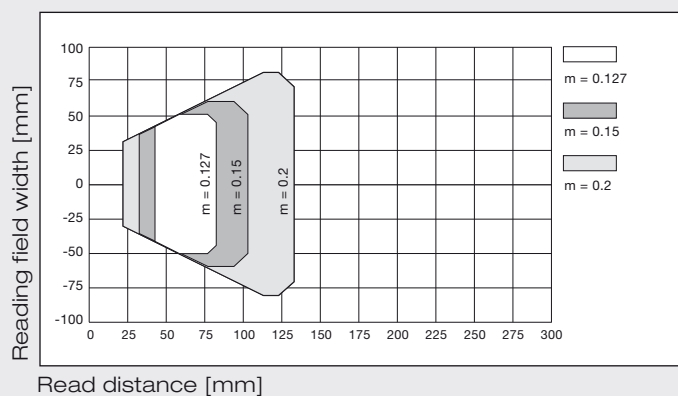


Reading field curves Medium Density (M)

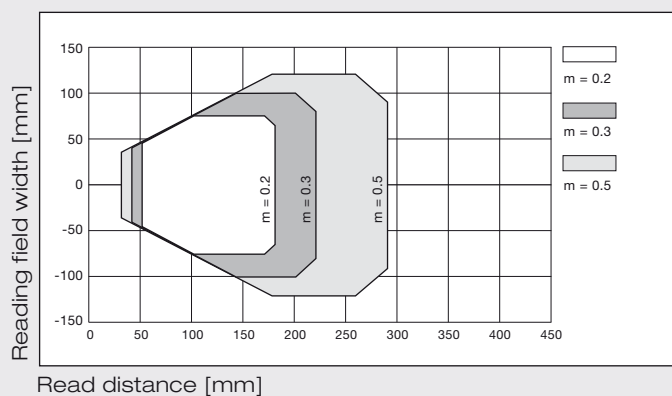
BCL 3xxi S/R1 M 102 – line scanner w/o deflection mirror



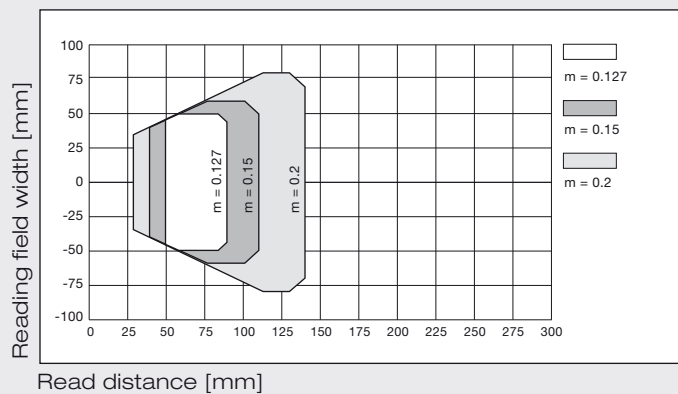
BCL 3xxi S/R1 N 100 – line scanner w/ deflection mirror



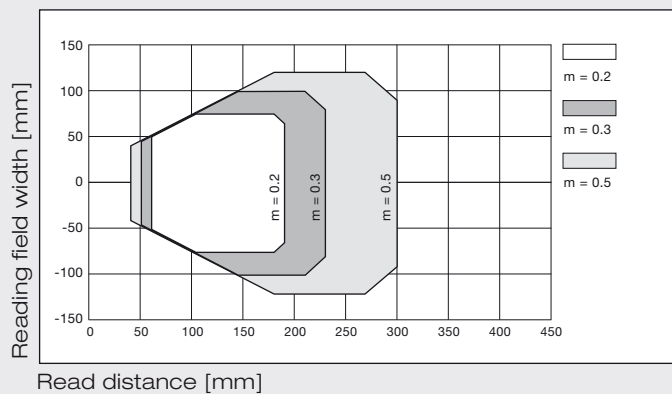
BCL 3xxi S/R1 M 100 – line scanner w/ deflection mirror



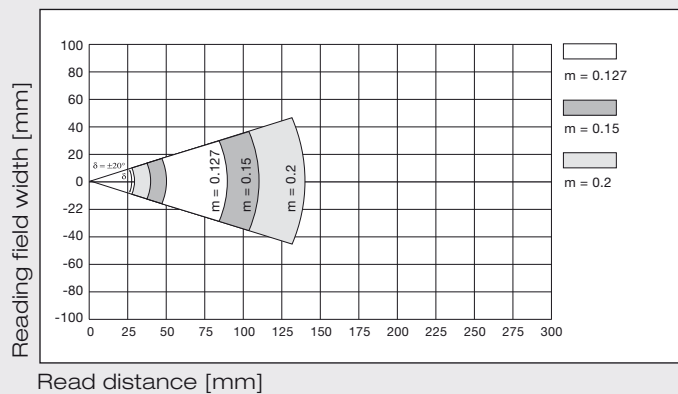
BCL 3xxi ON 100 – for oscillating-mirror scanner



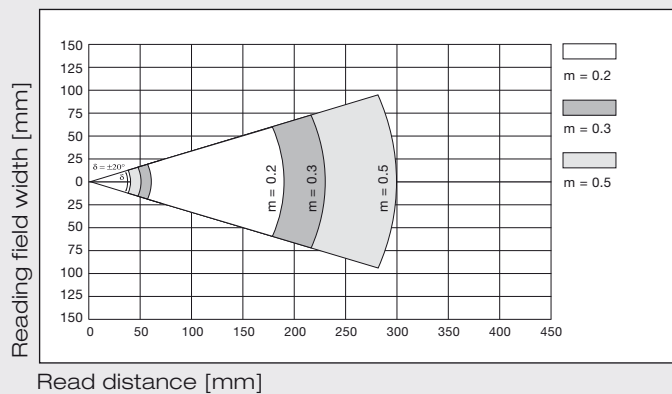
BCL 3xxi OM 100 – for oscillating-mirror scanner



BCL 3xxi ON 100 – lat. oscillating-mirror scanner

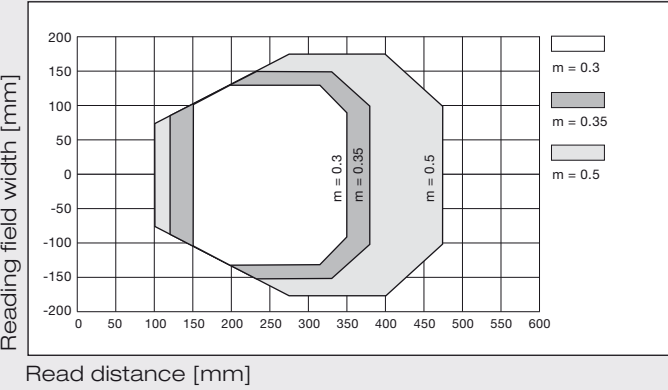


BCL 3xxi OM 100 – lat. oscillating-mirror scanner



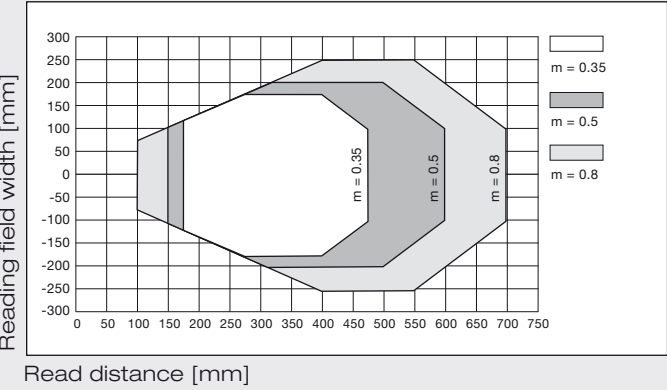
Reading field curves Low Density (F)

BCL 3xxi S/R1 F 102 – line scanner w/o deflection mirror

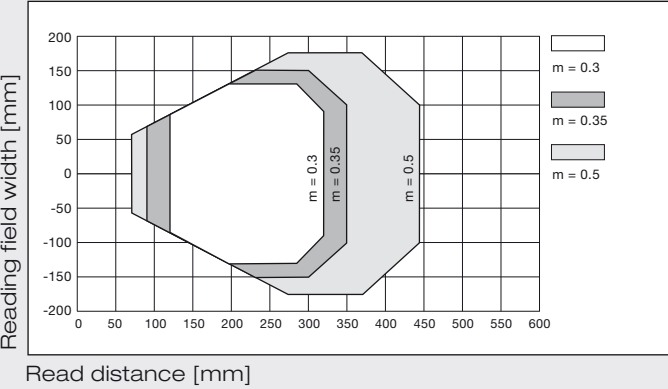


Reading field curves Ultra Low Density (L)

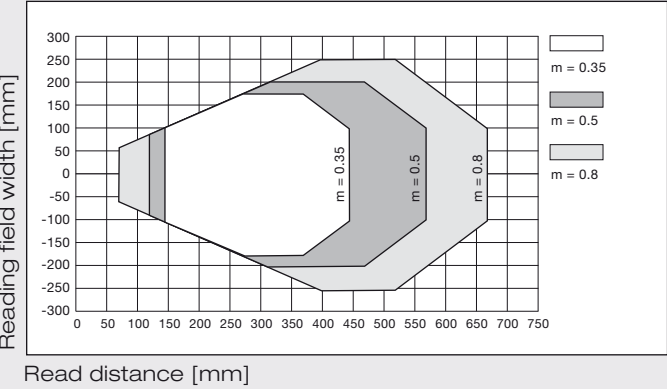
BCL 3xxi S/R1 L 102 – line scanner w/o deflection mirror



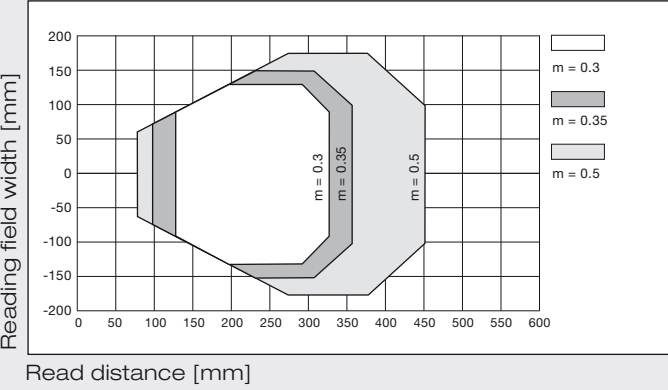
BCL 3xxi S/R1 F 100 – line scanner w/ deflection mirror



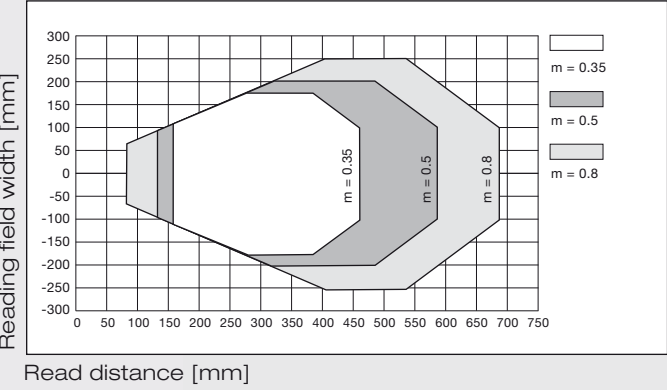
BCL 3xxi S/R1 L 100 – line scanner w/ deflection mirror



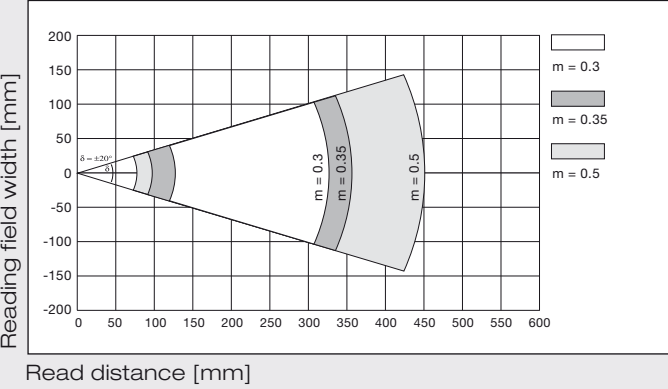
BCL 3xxi OF 100 – for oscillating-mirror scanner



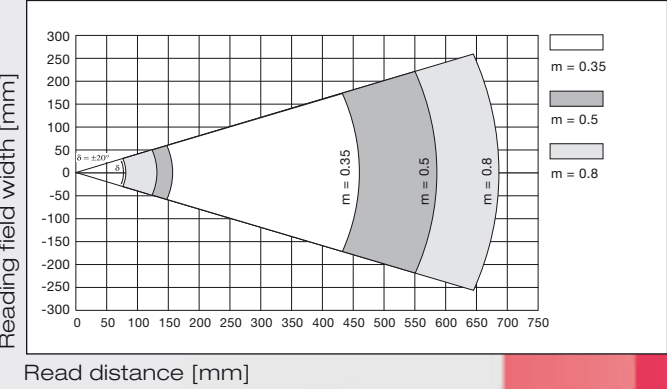
BCL 3xxi OL 100 – for oscillating-mirror scanner



BCL 3xxi OF 100 – lat. oscillating-mirror scanner



BCL 3xxi OL 100 – lat. oscillating-mirror scanner



	BCL 300 <i>i</i>	BCL 301 <i>i</i>	BCL 304 <i>i</i>	BCL 308 <i>i</i>	BCL 348 <i>i</i>
Line scanner	Specifications of the line scanners without heating				
Type					
Line scanner without heating*	Standalone	multiNet Plus Slave	PROFIBUS DP	Ethernet	PROFINET
Optical data					
Light source	Laser diode λ = 655 nm				
Beam exit	At the front				
Scanning rate	1,000 scans/s				
Useful opening angle	Max. 60°				
Optics models / resolution	High density (N): 0.127–0.2 mm; medium density (M): 0.2–0.5 mm; low density (F): 0.3–0.8 mm; ultra low density (L): 0.35–0.8 mm				
Read distance	See reading field curves				
Laser safety class	2 acc. to EN 60825-1, CDRH (U.S. 21 CFR 1040.10)				
Bar code data					
Code types	2/5 Interleaved, Code 39, Code 128, EAN / UPC, Codabar, Code 93, RSS 14				
Number of bar codes per scan	6				
Electrical data					
Interface type	External connection box (MA 100) M12 via MS 300 Terminals via MK 300	External connection box (MA 100) M12 via MS 301 Terminals via MK 301	M12 via MS 304 Terminals via MK 304	M12 via MS 308 Terminals via MK 308	M12 via MS 348 Terminals via MK 348
Protocols	Leuze standard, ACK/NAK, 3964 (R), RK 512, Xon/Xoff	Leuze standard, Leuze multiNet plus	PROFIBUS DP	Ethernet, TCP/IP/UDP	PROFINET/RT, TCP/IP, UDP
Baud rate	4,800 ... 115,400 Baud	4,800 ... 115,400 Baud	9.6 Kbaud –12 MBaud	10/100 MBaud	10/100 MBaud
Data formats	Data bits: 7,8/Stop bits: 1,2 Parity: None, Even, Odd	Data bits: 7,8/Stop bits: 1,2 Parity: None, Even, Odd	Slave DPV1	–	–
Service interface	USB 2.0 Mini-B type socket				
Operating voltage	18 ... 30 V DC (SK III, class 2)				
Power consumption	Approx. 4 W				
Operating and display elements					
Display (optional)	Monochromatic graphical display, 128 × 32 pixel, background lighting (optional)				
Keyboard (optional)	2 buttons				
LEDs	2 LEDs for power (PWR) and bus state (BUS), two-colored (red/green)				
Mechanical data					
Protection class only with MS/MK/KB connection hoods	IP 65				
Weight	270 g				
Dimensions (W × H × D)	44 × 95 × 68 mm				
Housing	Diecast aluminum				
Environmental data					
Operating temperature range	0 °C – +40 °C				
Storage temperature range	-20 °C – +70 °C				
Air humidity	Air humidity max. 90 % rel. humidity, non-condensing				
Vibration	IEC 60068-2-6, test FC				
Shock	IEC 60068-2-27, test Ea				
Continuous shock	IEC 60068-2-29, test Eb				
Electromag. compatibility	EN 55022, EN 61326-1; IEC 61000-6-2 (includes IEC 61000-4-2, -3, -4, -5 and -6)				
Line scanner with oscillating mirror	Technical data same as for line scanner without heating, however with the following differences:				
Type					
Line scanner with oscillating mirror w/o heating*	Standalone	multiNet Plus Slave	PROFIBUS DP	Ethernet	PROFINET/RT, TCP/IP
Optical data					
Beam exit	Lateral zero position at an angle of 90°				
Oscillation frequency	0-10 Hz (adjustable, max. frequency is dependent on set swivel angle)				
Max. swivel angle	+/- 20° (adjustable)				
Electrical data					
Power consumption	Approx. 10 W				
Mechanical data					
Weight	580 g				
Dimensions (W × H × D)	58 × 125 × 110 mm				
Line scanner with deflection mirror	Technical data same as for line scanner without heating, however with the following differences:				
Type					
Line scanner with deflection mirror w/o heating*	Standalone	multiNet Plus Slave	PROFIBUS DP	Ethernet	PROFINET/RT, TCP/IP
Optical data					
Beam exit	Optical data - beam exit with lateral zero position at an angle of 105°				
Electrical data					
Power consumption	Approx. 4 W				
Mechanical data					
Weight	350 g				
Dimensions (W× H × D)	44 × 103 × 96 mm				

Optoelectronic Sensors

Cubic series
Cylindrical Sensors, Mini Sensors, Fiber Optic Amplifiers
Measuring Sensors
Special Sensors
Light Curtains
Forked Sensors
Double Sheet Monitoring, Splice Detection
Inductive Switches
Accessories

Identification Systems

Data Transmission Systems

Distance Measurement

Bar Code Readers
RF-IDent-Systems
Modular Interfacing Units
Industrial Image Processing Systems
Optical Data Transmission Systems
Optical Distance Measurement/Positioning
Mobile Code Readers

Safety Sensors

Safety Systems

Safety Services

Safety Laser Scanner
Safety Light Curtains
Transceivers and Multiple Light Beam Safety Devices
Single Light Beam Safety Devices
AS-i-Safety Product Range
Safety Sensor Technology for PROFIBUS DP
Safety Switches, Safety Locking Devices, Safety Command Devices
Safety Relays
Sensor Accessories and Signal Devices
Safety Engineering Software
Machine Safety Services

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