Leuze electronic

the sensor people

Barcode reader BCL 500*i*

The new generation with a variety of integrated interfaces

Now also with PROFINET® *inside*

PRODUCT INFORMATION

Connectivity

at its finest.

Barcode reader with integrated fieldbus connectivity. The BCL 500*i* series.

Integrated networking – this capability is one of the key features of the trendsetting barcode readers of the BCL 500*i* series. A variety of available integrated fieldbus interfaces considerably simplify handling of the systems, since time-consuming connections via gateways are eliminated. Commissioning is as simple as connecting to the respective fieldbus system, and configuration can be performed without any additional software.

The world's first barcode reader with integrated PROFINET – BCL 548*i*.

Now available as a world first is the BCL 548*i* with integrated PROFINET interface, enabling simple operation and configuration directly via the control. Should it be necessary to exchange a device, the configuration is automatically loaded onto the replacement device. By means of an integrated switch, the BCL 548*i* can loop the PROFINET on to other devices, thereby allowing them to be connected to one another in a line or ring structure. The connection of the BCL 548*i* via standardized M12 connectors and the available, corresponding ready-made cables, make wiring economical, transparent and fail-safe.

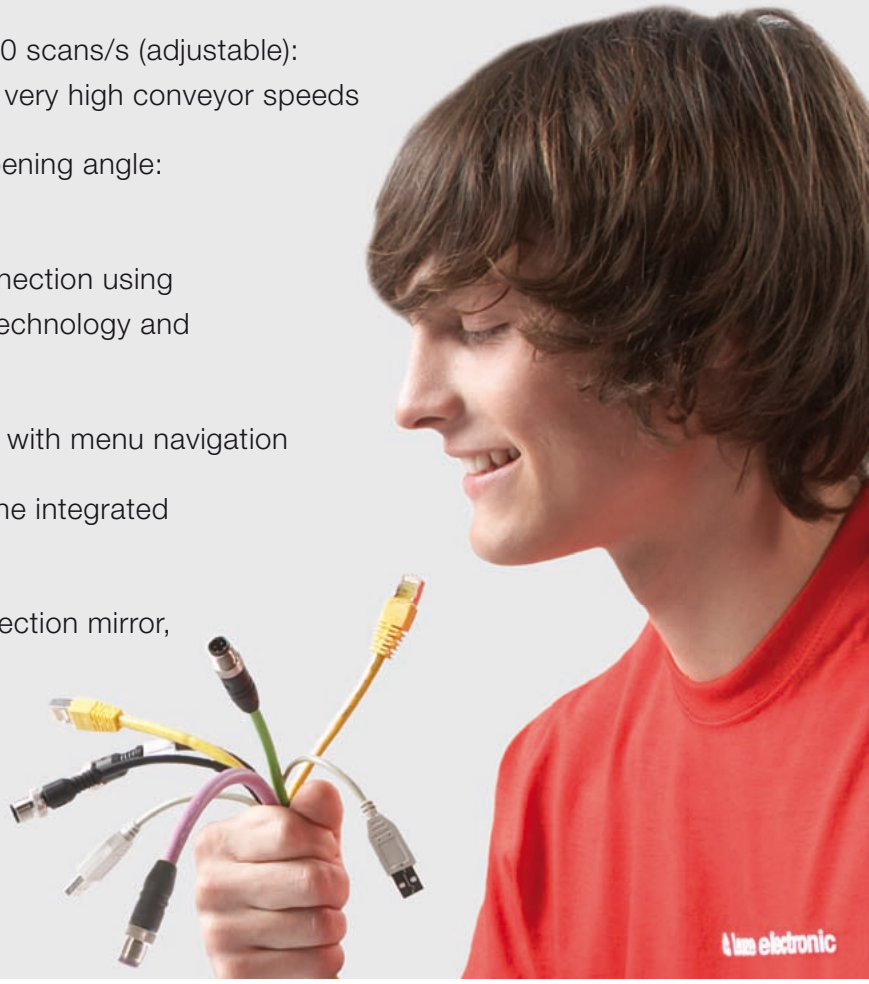
World first PROFINET inside

Simple handling.

Large variety of interfaces and models.

The main advantages of the BCL 500*i* series.

- Integrated fieldbus and Industrial Ethernet connectivity: PROFIBUS, PROFINET, ETHERNET and MULTINET
- Code reconstruction technology (CRT): Facilitates identification of soiled or damaged codes
- High scanning rate of 800–1.200 scans/s (adjustable): Facilitates identification even at very high conveyor speeds
- High depth of field and large opening angle: For wide transport systems
- Simple commissioning and connection using M12-Ultra-Lock™ connection technology and intelligent fastening concept
- Intuitive, multi-language display with menu navigation
- Convenient configuration with the integrated webConfig tool via USB
- Various models: single line, deflection mirror, oscillating mirror for flexible use
- Optional heating models to -35 °C



BCL 500*i* Series
Interface models.

BCL 500*i*

RS232 RS422 multiNet

- Integrated network master for controlling the Leuze multiNet plus network
- Stand-alone operation
- Number of slave participants can be set via the display

BCL 501*i*

RS485 multiNet

- multiNet slave on the Leuze network
- User addresses in the network can be set via the display

BCL 504*i*

- Integrated PROFIBUS
- Direct configuration via PROFIBUS
- PROFIBUS user addresses can be set via the display

BCL 508*i*

Ethernet

- Integrated Ethernet
- TCP/IP
- Baud rate 10/100 MBaud

BCL 548*i*

- Integrated PROFINET
- Integrated Switch
- Direct configuration via PROFINET

Configuration made easy:
BCL 500*i* webConfig.

The fast track to custom configuration of barcode readers.

The Leuze electronic webConfig tool integrated in the device provides a web technology-based graphic user interface for configuration of the BCL 500*i* series bar code readers which is totally independent of the operating system.

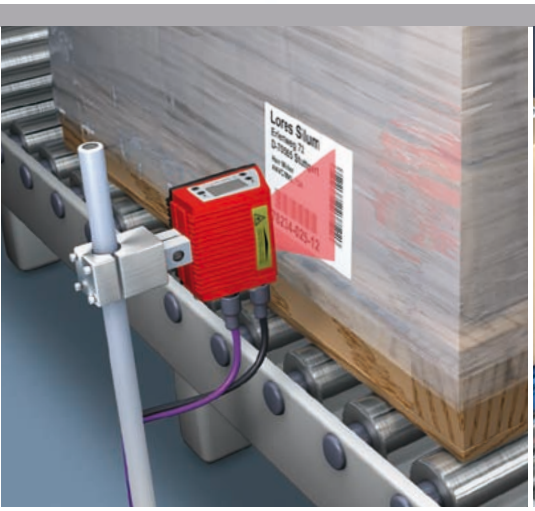
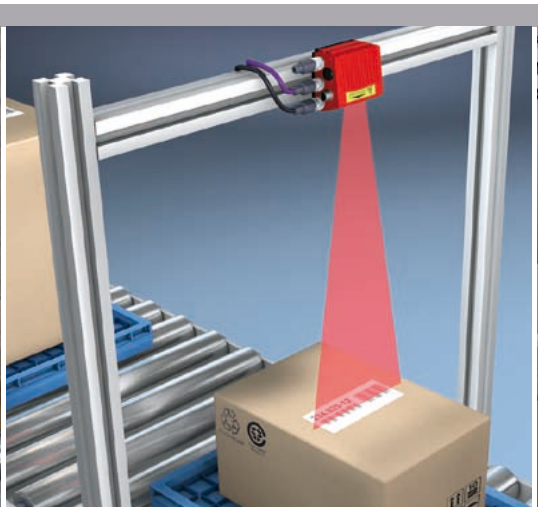
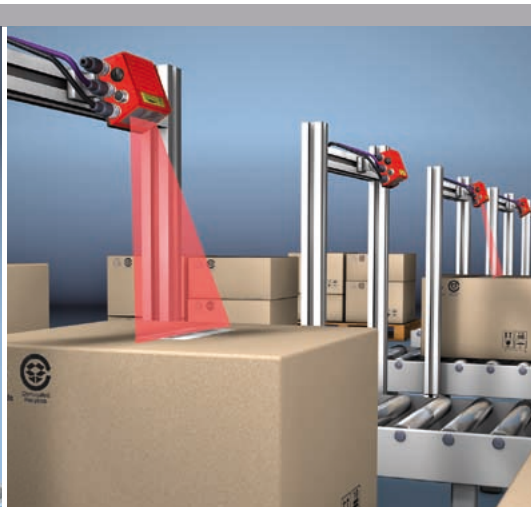
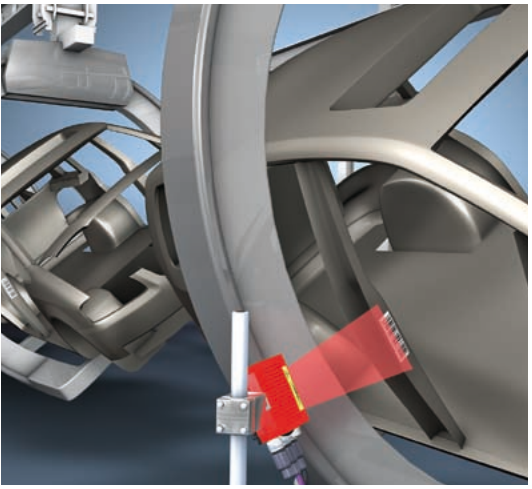
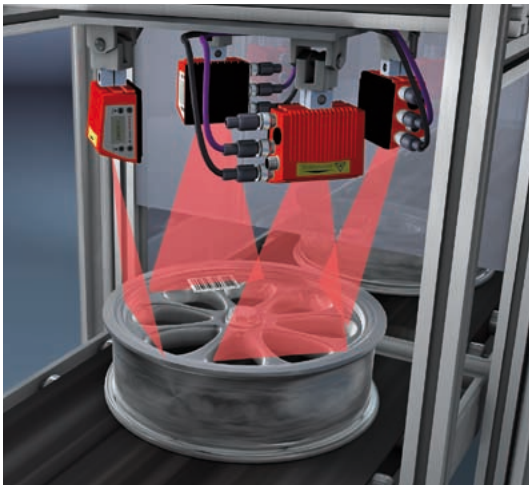
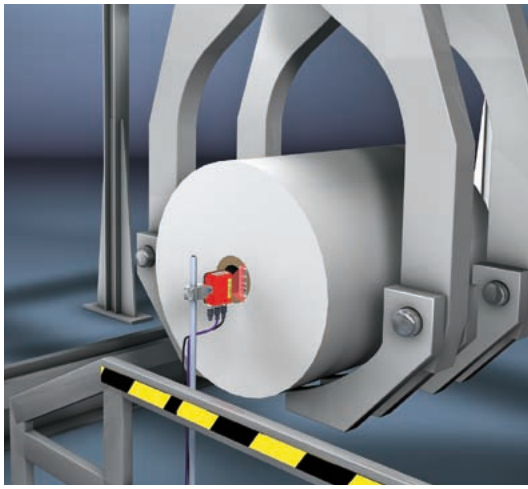
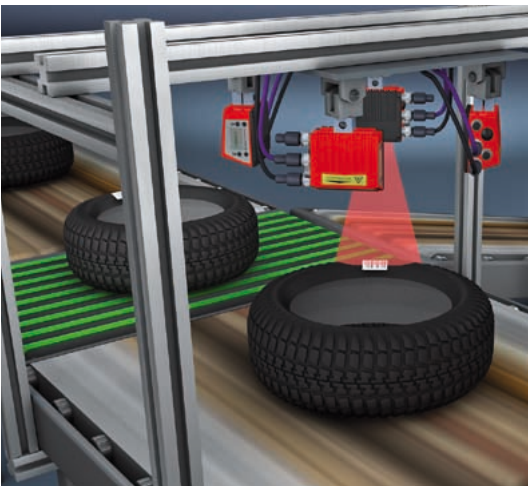
Through the use of HTTP as communication protocol and by using only standard technologies on the client side (HTML, JavaScript and AJAX), it is possible to operate the webConfig tool on any PC with a browser without the need for a direct internet connection. The connection to the USB service interface of the BCL 500*i* series barcode readers is established via the PC-side USB-interface using a USB cable.

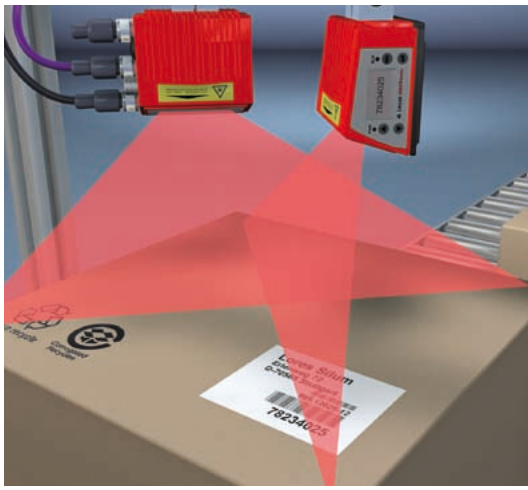
The webConfig tool is accessed via a login which, depending on the authorizations of the currently logged-in user, permits varying levels of access to the individual pages and their contents.

The individual parameters are – where useful – graphically displayed in order to better illustrate the meaning of the what are often perceived as abstract parameters. The result is an easy-to-use and practically-oriented user interface!

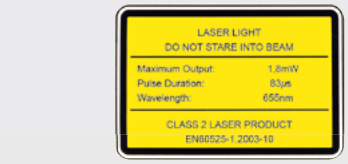
The user interface is divided into various function groups to optimally support the user in the various operating situations.

Limitless possibilities for your applications.



Technical data



	BCL 500*i*
Line scanner	**Specifications of the line scanners wit**
Type	
Line scanner without heating*	**Stand alone and multiNet Plus Master**
Optical data	
Light source	
Beam exit	
Scanning rate	
Useful opening angle	
Optics models / resolution	
Read distance	
Laser safety class	
Barcode data	
Code types	
Number of barcodes per scan	
Electrical data	
Interface type	1 x RS232/422 and 1 x RS485 each encoded to M12 (B)
Protocols	Leuze Standard, Leuze multiNet plus, ACK/NAK, 3964 (R), RK 512, Xon/Xoff
Baud rate	4.800 ... 115.400 Baud
Data formats	Data bits: 7,8 / Stop bits: 1,2 Parity: None, Even, Odd
Service interface	
Operating voltage	
Power consumption	
Operating and display elements	
Display	
Keyboard	
LEDs	
Mechanical data	
Protection class	
Weight	
Dimensions (W x H x D)	
Housing	
Environmental data	
Operating temperature range	
Storage temperature range	
Air humidity	
Vibration	
Shock	
Continuous shock	
Electromag. compatibility	
Line scanner with oscillating mirror	
Type	
Line scanner with oscillating mirror without heating*	Stand alone and multiNet Plus Master
Optical data	
Beam exit	
Oscillation frequency	
Max. swivel angle	
Electrical data	
Power consumption	
Mechanical data	
Weight	
Dimensions (W x H x D)	
Line scanner with deflection mirror	
Type	
Line scanner with deflection mirror without heating*	Stand alone and multiNet Plus Master
Optical data	
Beam exit	
Max. optical adjustment range of the beam exit	
Electrical data	
Power consumption	
Mechanical data	
Weight	
Dimensions (W x H x D)	

* Data for scanners with optics heating: see technical description, download under www.leuze.com

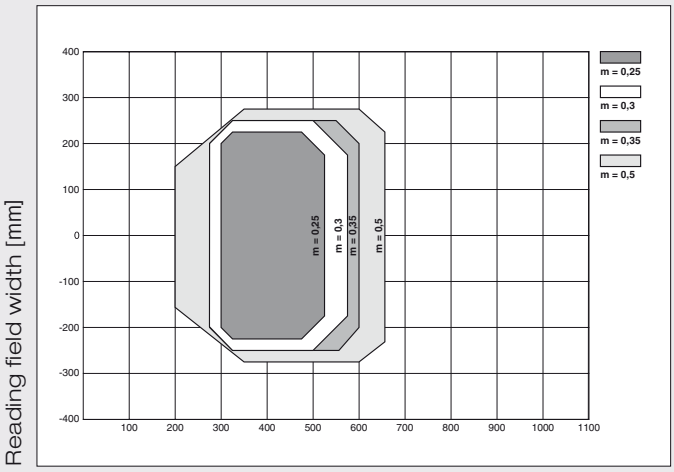
BCL 501*i*	BCL 504*i*	BCL 508*i*	BCL 548*i*
hout heating			
multiNet Plus Slave	**PROFIBUS DP**	**Ethernet**	**PROFINET**
Laser diode λ = 650 nm / 655 nm (red light)			
Front			
1.000 scans/s (adjustable in the range 800 -1.200 scans/s)			
Max. 60 °			
High density (N): 0.25–0.5 mm; medium density (M): 0.35 – 0.8 mm; low density (F): 0.5 –1.0 mm; ultra low density (L): 0.7–1.0 mm			
See reading field curves			
2 acc. to EN 60825-1, CDRH (U.S. 21 CFR 1040.10)			
2/5 Interleaved, Code 39, Code 128, EAN / UPC, Codabar, Code 93, RSS 14			
6			
1 x RS485 encoded to 2 x M12 (B)	1 x RS485 encoded to 2 x M12 (B)	Ethernet encoded to 2 x M12 (D)	PROFINET encoded to 2 x M12 (D)
Leuze Standard, Leuze multiNet plus	PROFIBUS DP	Ethernet, TCP / IP / UDP	PROFINET / RT, TCP / IP
4.800 ... 115.400 Baud	9.6 Kbaud –12 MBaud	10 / 100 MBaud	10 / 100 MBaud
Data bits: 7,8 / Stop bits: 1,2 Parity: None, Even, Odd	Slave DPV1	–	–
USB 1.1 compatible, A-coded			
10 ... 30 V DC (SK III, class 2)			
Approx. 10 W			
Monochromatic graphical display, 128 x 64 pixel, background lighting			
4 buttons			
2 LEDs for power (PWR) and bus state (BUS), two-colored (red/green)			
IP 65			
1.1 kg			
63 x 123.5 x 106.5 mm			
Diecast aluminum			
0 °C – +40 °C			
-20 °C – +70 °C			
Air humidity max. 90 % rel. humidity, non-condensing			
IEC 60068-2-6, test FC			
IEC 60068-2-27, Ea test			
IEC 60068-2-29, test Eb			
EN 55022, EN 61326-1; IEC 61000-6-2 (includes IEC 61000-4-2, -3, -4, -5 and -6)			
Technical data same as for line scanner without heating, however with the following differences:			
multiNet Plus Slave	PROFIBUS DP	Ethernet	PROFINET / RT, TCP / IP
Lateral zero position at an angle of 90°			
0-10 Hz (adjustable, max. frequency is dependent on set swivel angle)			
+/- 20° (adjustable)			
Approx. 14 W			
1.5 kg			
84 x 173 x 147 mm			
Technical data same as for line scanner without heating, however with the following differences:			
multiNet Plus Slave	PROFIBUS DP	Ethernet	PROFINET / RT, TCP / IP
Optical data - beam exit with lateral zero position at an angle of 90°			
+/- 10° (adjustable via display or software)			
Approx. 11 W			
1.4 kg			
84 x 173 x 147 mm			

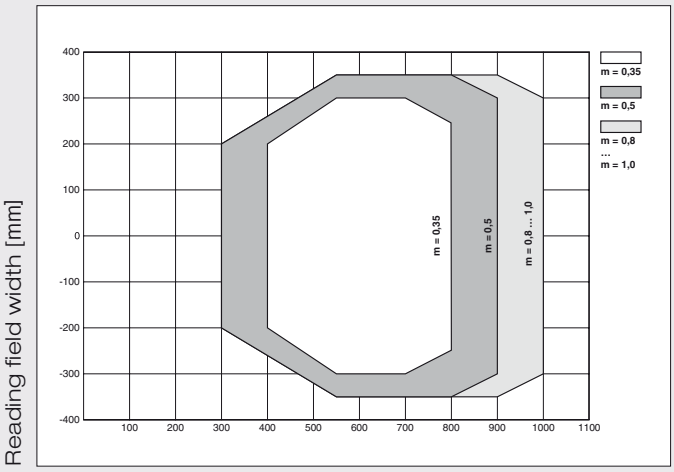
The reading field curves

Reading field curve for N-optics

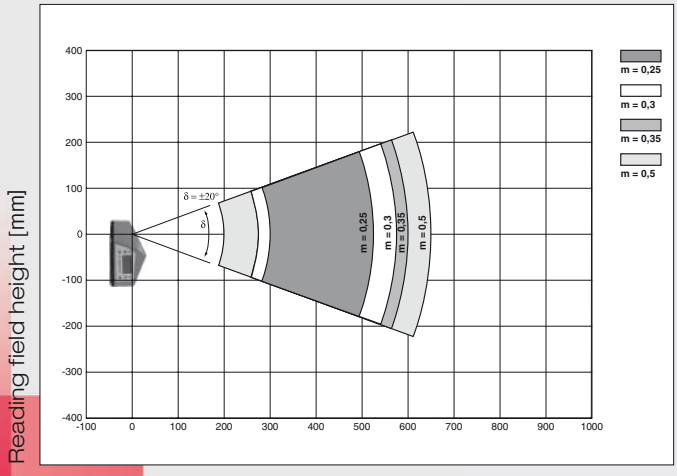
Reading field curve for M-optics

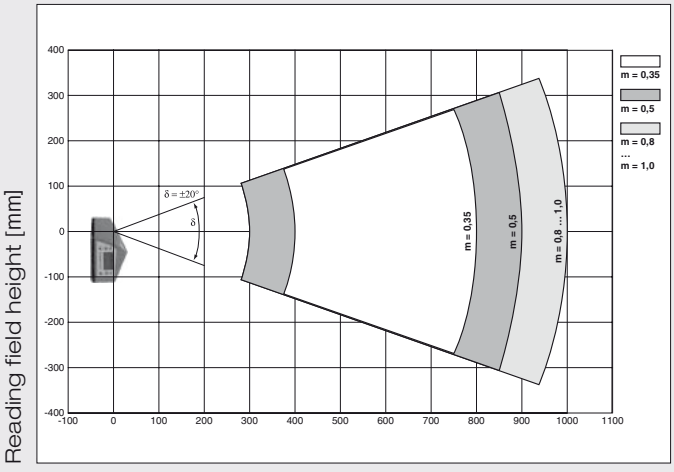
Line scanner with/without deflection mirror or oscillating mirror





Line scanner with oscillating mirror (lateral reading curve)

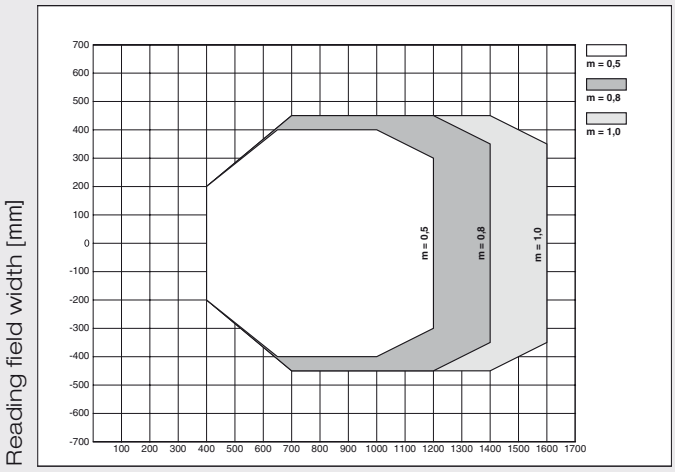


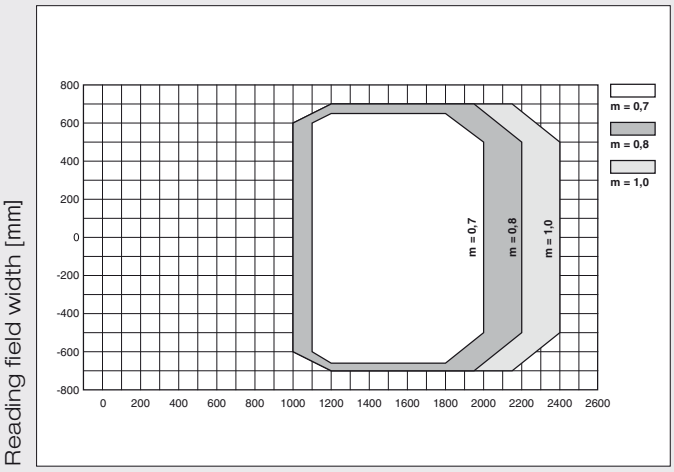


Reading field curve for F-optics

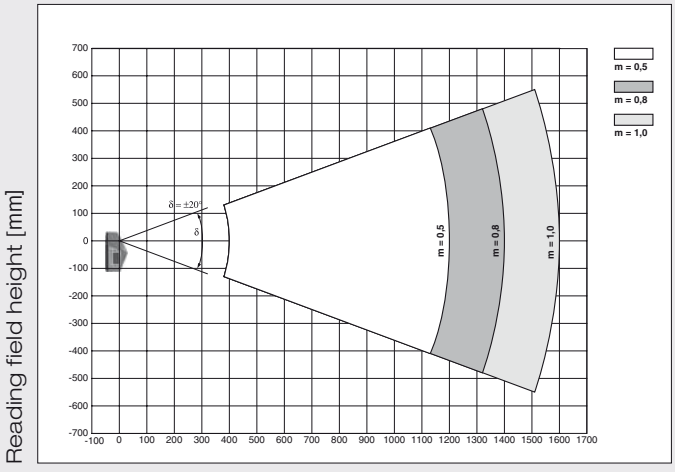
Reading field curve for L-optics

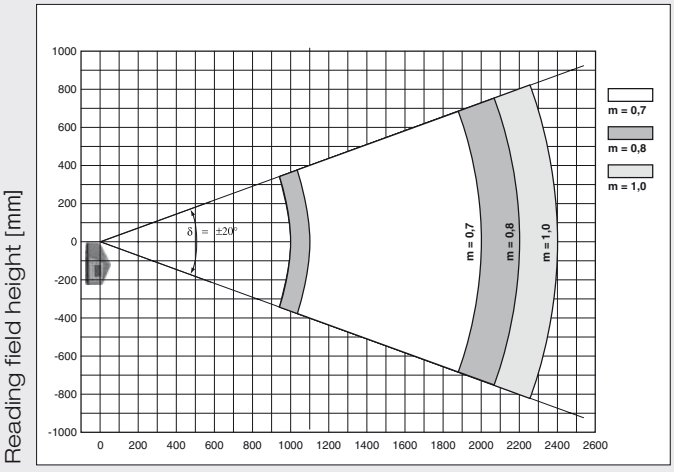
Line scanner with/without deflection mirror or oscillating mirror





Line scanner with oscillating mirror (lateral reading curve)





Optoelectronic Sensors

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Special Sensors
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Forked Sensors
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Data Transmission Systems
Distance Measurement

Barcode 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 Scanners
Safety Light Curtains
Transceiver and Multiple Light Beam Safety Devices
Single Light Beam Safety Devices
AS-i-Safety Product Range
Safety Sensor Technology for PROFIBUS DP
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Safety Relays
Sensor Accessories and Signal Devices
Safety Engineering Software
Machine Safety Services

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