

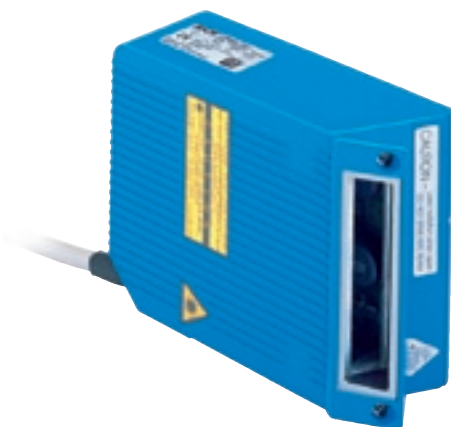


**ICR85x-2**  
**Image Code Reader**  
**– New Generation –**

Scanner family for dynamic  
reading of 1D and 2D codes

# ICR85x-2

## Image Code Reader



### 1D and 2D code reading with integrated laser line source

Utilising a platform of powerful processing technology and an innovative illumination concept, the ICR85x-2 scanner series sets new benchmarks in reading performance. The integrated laser line source provides a powerful and homogeneous illumination of the reading field for best stability of code reading results. Decoding and communication handling is supported by a multi-processor architecture which establishes the ICR85x-2 as a high-performance device.

The ICR850-2 (Standard), covers a reading field up to 80 mm. Codes with a minimum cell size of 0.2 mm are reliably identified at a maximum transport speed of 0.6 m/s. Larger cell sizes can be read with even a larger transport speed. This reading performance is realised by an internal scan frequency of 15,000 scans per second.

Another model with a focus for applications in electronics and component manufacturing is the ICR852-2 (High Density). Even the smallest cell sizes of 0.1 mm can be identified at maximum transport speed of 0.3 m/s. The reading field height is 40 mm.

For applications at higher transport speeds, the ICR855-2 (High Speed) is the right solution. With an internal scan frequency of up to 45 kHz, codes at a minimum cell size of 0.35 mm can be identified at speeds up to 4 m/s. With the reading height of 40 mm, different lateral positions of the code can be accommodated. This is the ideal scanner for document handling applications.

For all three scanner models, the specific advantages of using a laser line illumination/CCD line sensor combination apply. Codes are read as they pass the scanner "on-the-fly" in their normal travel through a machine. In this way the use of the ICR85x-2 enhances the throughput of the manufacturing machine. Another advantage is the possibility to trigger onto the object. While scanning the object surface the ICR85x-2 recognises code patterns and automatically starts decoding. Up to 50 different codes can be processed within one common reading gate. Codes can be positioned side-by-side (within the same scan line) or one-after-another along the surface of the coded object.

### Your benefits:

- Reduced cost through a fully integrated scanner (evaluation and illumination)
- Parallel decoding of bar codes and 2D codes with the same scanner at common settings
- Easy parameter setting via well established graphical user interface CLV Setup
- Omni-directional reading of bar codes and 2D codes
- Ideal for realising the transition from bar codes to 2D codes for existing manufacturing lines. Triggering and connectivity identical to SICK CLV4xx bar code scanner family.

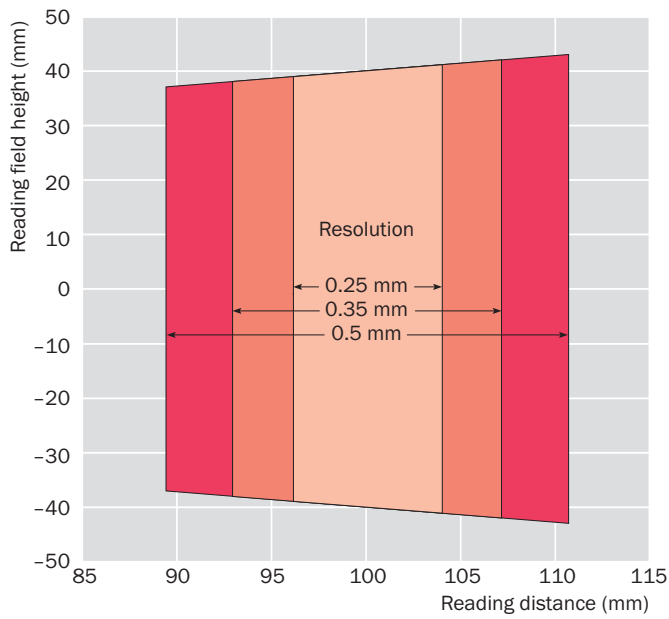
### The ICR85x-2 at a glance:

- ICR850-2: Wide reading field height of 80 mm
- ICR852-2: Reading high resolution codes at cell sizes/bar width down to 0.10 mm
- ICR855-2: Scan frequency up to 45 kHz for high transport speeds
- Laser line at 650 nm provides ideal illumination of the reading field
- On-board Ethernet interface introduces an innovative bus concept

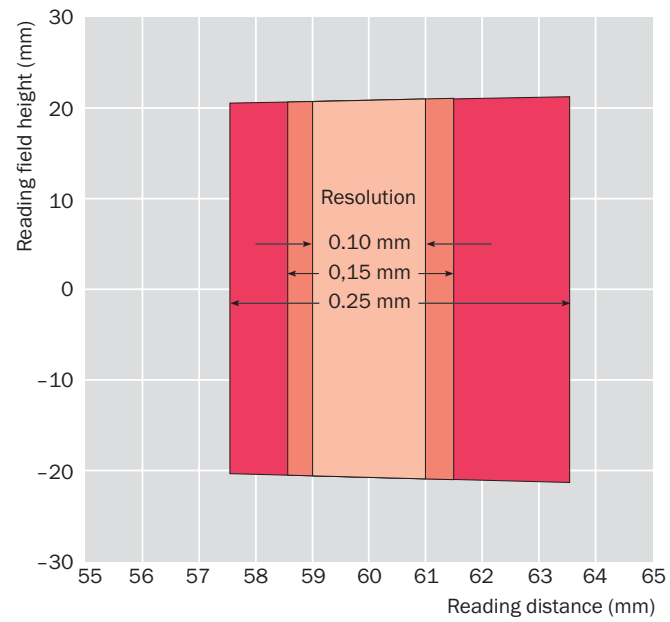


## Reading diagrams

### ICR850-2B1020

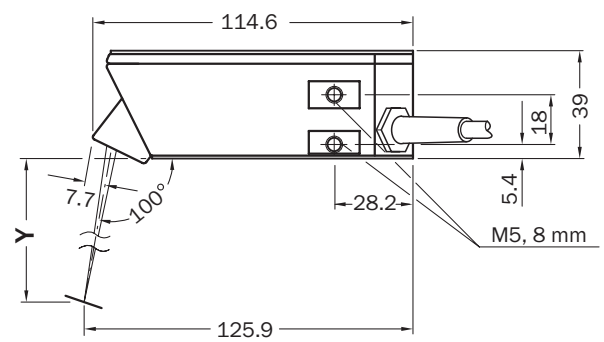
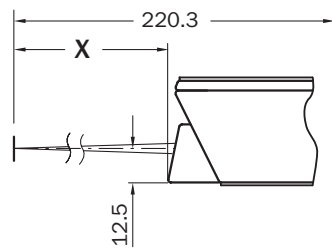


### ICR852-2A1020

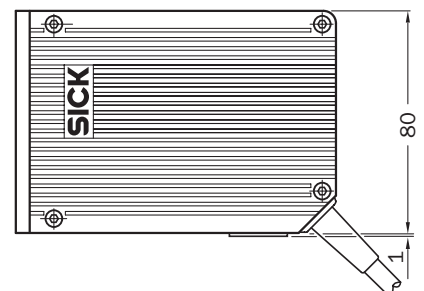
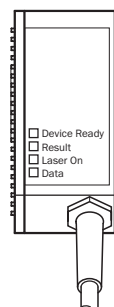


## Dimensional drawing ICR85x-2, front and side reading window

All dimensions in mm

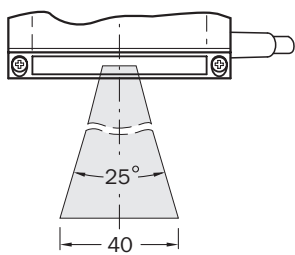
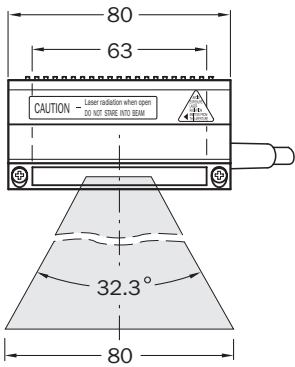
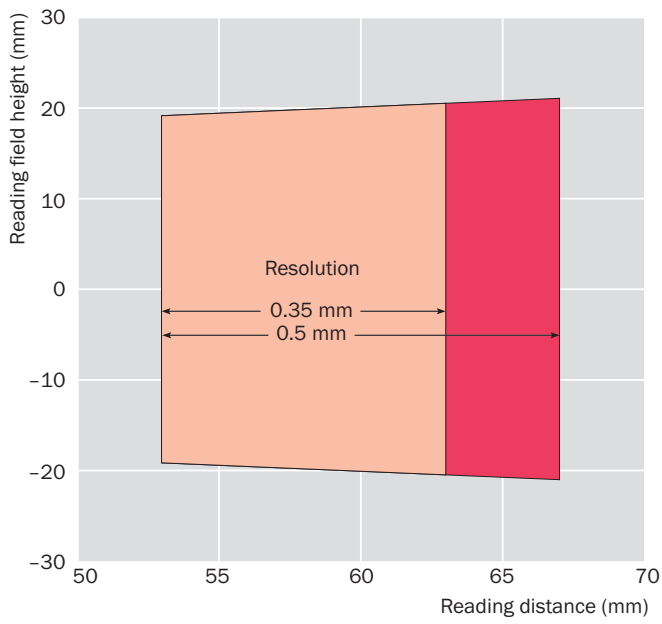


Type	X	Y
ICR850-2B0020	110	
ICR852-2A0020	70	
ICR855-2A0020	70	
ICR850-2B1020		100
ICR852-2A1020		60
ICR855-2A1020		60

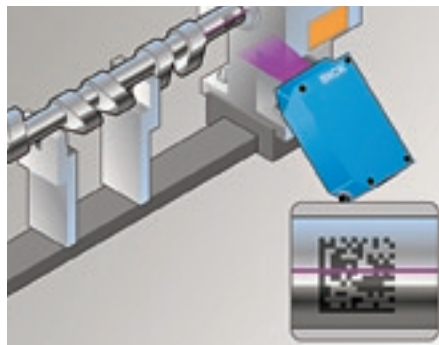




### ICR855-2A1020



Identify 2D codes on a camshaft



Scan bar codes and 2D codes on letters and circulars



## Technical Data

Type	ICR850-2 (Standard)	ICR852-2 (High Density)	ICR855-2 (High Speed)
Front reading window	ICR850-2B0020 (Order No. 1042280)	ICR852-2A0020 (Order No. 1042899)	ICR855-2A0020 (Order No. 1042898)
Side reading window	ICR850-2B1020 (Order No. 1042341)	ICR852-2A1020 (Order No. 1042900)	ICR855-2A1020 (Order No. 1042281)
Resolution	0.20 to 0.50 mm	0.10 to 0.25 mm	0.35 to 1 mm
Scanning frequency max.	15 kHz	15 kHz	45 kHz
Laser diode (wavelength)	Red light ( $\lambda = 650$ nm)		
MTBF of laser diode	20,000 h		
Laser class of the device	Class 2 pursuant to EN 60825-1/IEC 60825-1		
Code print contrast (PCS)	$\geq 60$ %		
Immunity to ambient light	2,000 lx on code		
Bar code types	Code 39, Code 128, Codabar, EAN, EAN 128, UPC, 2/5 Interleaved, Pharmacode, RSS limited		
Bar code length	Max. 50 characters (max. 4,000 characters across all codes per reading interval)		
2D code types	Data Matrix ECC200		
2D code size	To ISO/IEC 16022		
No. of codes per scan	1 to 20 (bar codes: 1 to 20 with standard decoder, 1 to 6 with SMART decoder)		
No. of codes per reading interval	1 to 50		
Optical indicators	4 x LED (status indicator)		
Acoustic indicators	Beeper, can be deactivated and assigned to a function for result status indication		
Reading pulse	"Sensor 1" switching input/free-running/serial interface		
"Host" data interface	RS 232 or RS 422/485, 300 Bd to 57,600 Bd, variable data output format		
"Ethernet" data interface	10/100 Mbit/s, TCP/IP, FTP		
"AUX" data interface	RS 232, 9,600 Bd, 8 data bits, no parity, 1 stop bit, fixed output format		
Digital switching inputs	2 ("Sensor 1", "Sensor 2")		
Digital switching outputs	2 ("Result 1", "Result 2")		
Electrical connection	RJ 45 socket at the device and cable 0.9 m with 15-pin D Sub HD connector		
Operating voltage/ power consumption	10 V to 30 V DC/ max. 11 W		
Housing	Zinc die-cast		
Electrical safety	To EN 61010-1		
Protection class	III, to EN 61140		
Enclosure rating	IP 65, to EN 60529; A2, with mounted adapter frame and IP 65 Ethernet cable or with mounted adapter frame and IP 65 cover. IP 30 without adapter frame and cover or with standard Ethernet cable.		
EMC/vibration/shock tested	To EN 61000-6-2 and EN 61000-6-4/EN 60068-2-6/EN 60068-2-27		
Weight	Approx. 900 g with connecting cable		
Operating/storage temperature	0 °C to +40 °C/ -20 °C to +70 °C		
Max. relative humidity	90 %, non condensing		

**Australia**

Phone +61 3 9497 4100  
1800 33 48 02 – tollfree  
E-Mail sales@sick.com.au

**Belgium/Luxembourg**

Phone +32 (0)2 466 55 66  
E-Mail info@sick.be

**Brasil**

Phone +55 11 3215-4900  
E-Mail sac@sick.com.br

**Ceská Republika**

Phone +420 2 57 91 18 50  
E-Mail sick@sick.cz

**China**

Phone +852-2763 6966  
E-Mail ghk@sick.com.hk

**Danmark**

Phone +45 45 82 64 00  
E-Mail sick@sick.dk

**Deutschland**

Phone +49 211 5301-0  
E-Mail info@sick.de

**España**

Phone +34 93 480 31 00  
E-Mail info@sick.es

**France**

Phone +33 1 64 62 35 00  
E-Mail info@sick.fr

**Great Britain**

Phone +44 (0)1727 831121  
E-Mail info@sick.co.uk

**India**

Phone +91-22-2822 7084  
E-Mail info@sick-india.com

**Italia**

Phone +39 02 27 43 41  
E-Mail info@sick.it

**Japan**

Phone +81 (0)3 3358 1341  
E-Mail support@sick.jp

**Nederlands**

Phone +31 (0)30 229 25 44  
E-Mail info@sick.nl

**Norge**

Phone +47 67 81 50 00  
E-Mail austefjord@sick.no

**Österreich**

Phone +43 (0)22 36 62 28 8-0  
E-Mail office@sick.at

**Polska**

Phone +48 22 837 40 50  
E-Mail info@sick.pl

**Republic of Korea**

Phone +82-2 786 6321/4  
E-Mail kang@sickkorea.net

**Republika Slovenija**

Phone +386 (0)1-47 69 990  
E-Mail office@sick.si

**România**

Phone +40 356 171 120  
E-Mail office@sick.ro

**Russia**

Phone +7 495 775 05 34  
E-Mail denis.kesaev@sick-  
automation.ru

**Schweiz**

Phone +41 41 619 29 39  
E-Mail contact@sick.ch

**Singapore**

Phone +65 6744 3732  
E-Mail admin@sicksgp.com.sg

**Suomi**

Phone +358-9-25 15 800  
E-Mail sick@sick.fi

**Sverige**

Phone +46 10 110 10 00  
E-Mail info@sick.se

**Taiwan**

Phone +886 2 2365-6292  
E-Mail sickgrc@ms6.hinet.net

**Türkiye**

Phone +90 216 587 74 00  
E-Mail info@sick.com.tr

**USA/Canada/México**

Phone +1(952) 941-6780  
1 800-325-7425 – tollfree  
E-Mail info@sickusa.com

More representatives and agencies  
in all major industrial nations at  
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