SICK.COM

DATA SHEET

Deflector mirror

Mirror
Reflectors and optics

SICK Sensor Intelligence

REFLECTORS AND OPTICS

Deflector mirror

ORDERING INFORMATION

Type	part no.
Deflector mirror	2096970

Further device versions and accessories at www.sick.com/Mirror

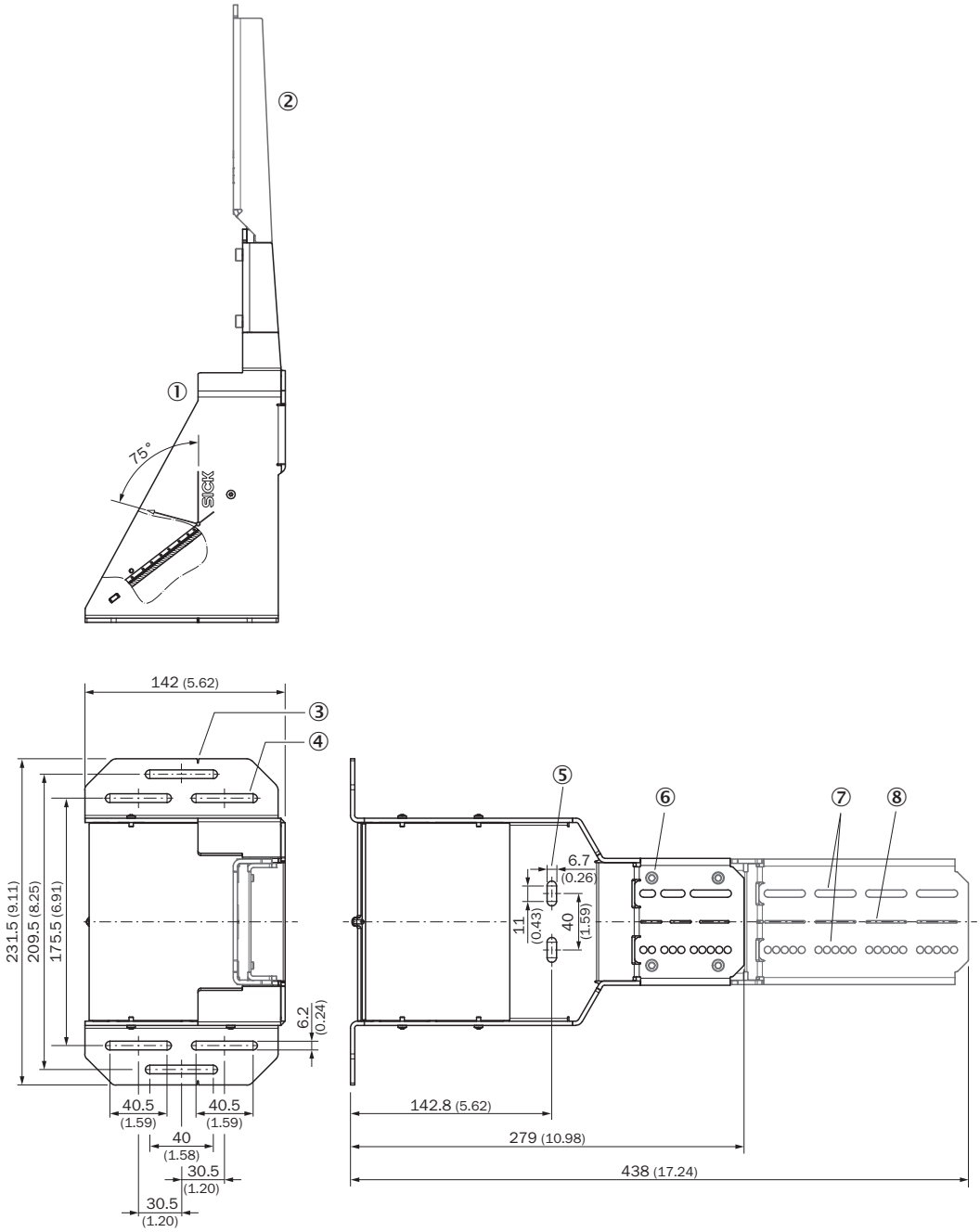
DETAILED TECHNICAL DATA

FEATURES

Description	The deflector mirror enables the use of cameras even in applications with very limited installation space. If the working distance required for the camera is not possible due to the design, the mirror deflects the optical beam path by approx. 90°. This allows the camera to be mounted flexibly without restricting the required field of view. The mirror geometry is designed in such a way that the entire camera image is precisely captured and reliably deflected. That means the deflector mirror offers a rugged solution when installation space is limited or an alternative viewing direction is required.
Suitable for	Lector63x, Lector83x, Lector85x, Inspector83x, Inspector85x
Save Space	Lector85x: ≤ 229.2 mm [1] Lector83x: ≤ 314 mm [1]

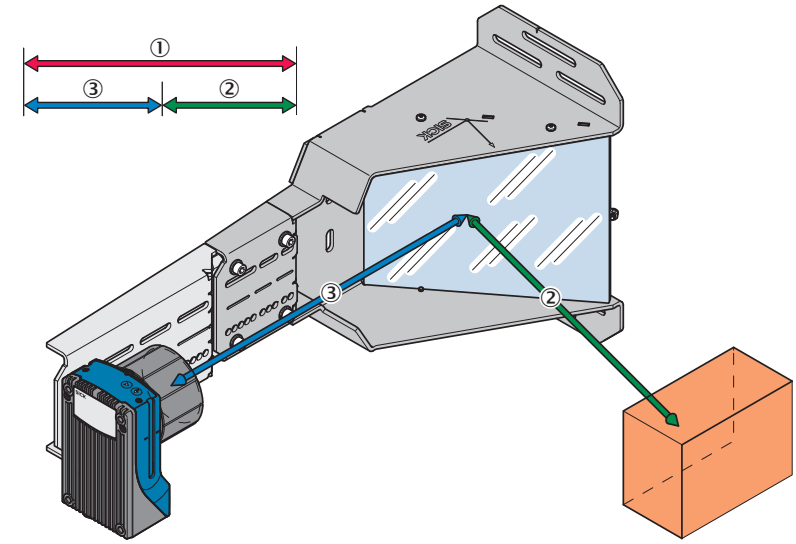
[1] For details, see mounting instructions in the technical drawings section.

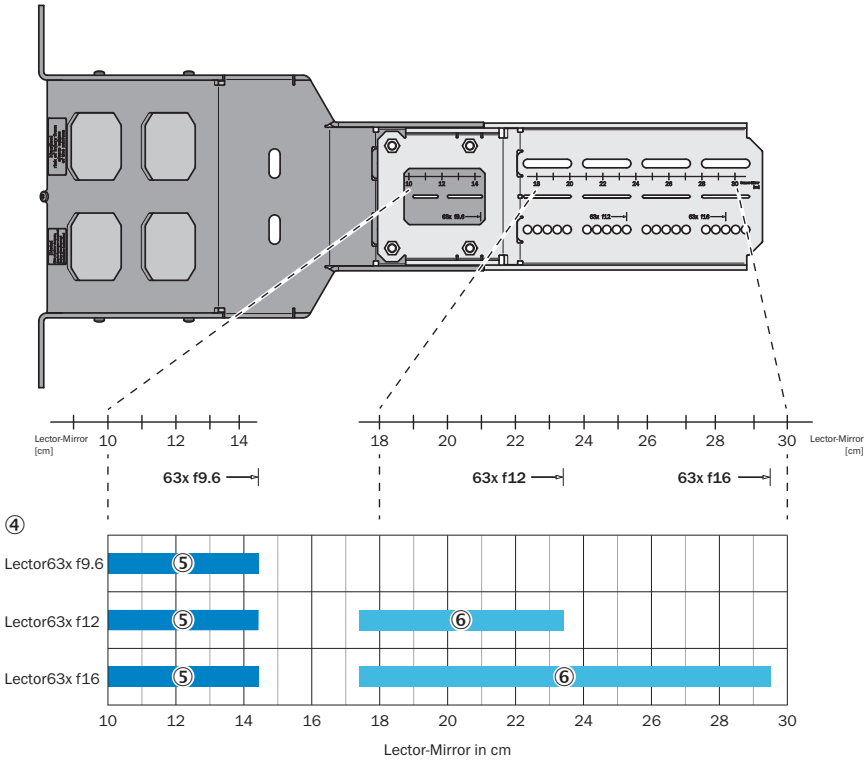
DIMENSIONAL DRAWING LECTOR DEFLECTOR MIRROR



Dimensions in mm (inch)
① Deflector mirrors
② Extension
③ Notch as measuring aid for determining the distance between mirror and object
④ Slotted holes for mounting the deflector mirror (top side)
⑤ Slotted holes for mounting the deflector mirror (back side)
⑥ Through hole for mounting the extension
⑦ Through holes and slotted holes for mounting Lector
⑧ Viewing slots for positioning Lector on the optical axis

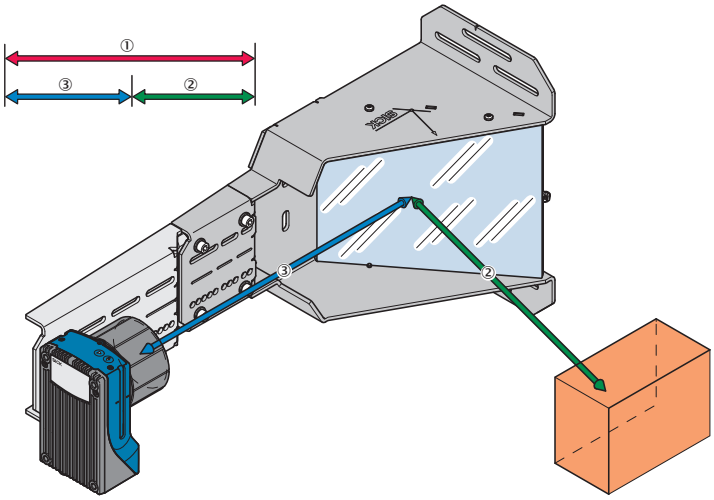
INSTRUCTION FOR INSTALLATION

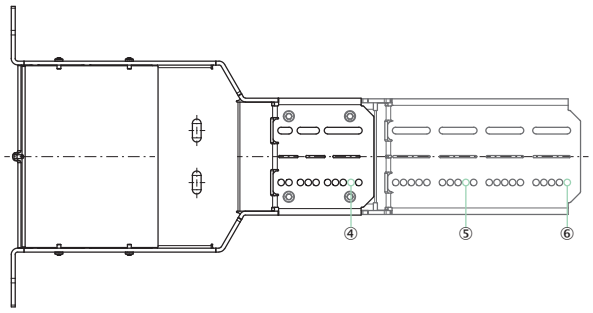




① Determine the required working distance using the Lector view diagram depending on the application conditions
② Determine the required distance between object and mirror depending on the application conditions
③ Calculate the resulting distance between Lector and mirror
④ Decide using the diagram whether or not the extension is required
⑤ Attainable distances between Lector and mirror without extension
⑥ Attainable distances between Lector and mirror with extension

INSTRUCTION FOR INSTALLATION LECTOR83X 3MP - DETERMINATION OF MOUNTING POSITION

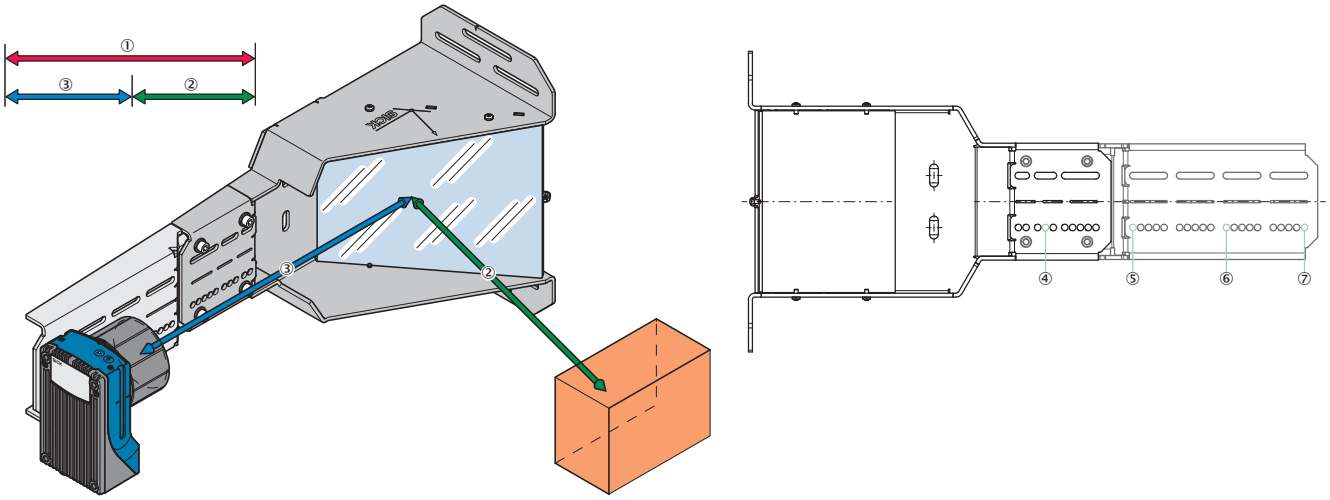




The maximum mounting position indicates the distance at which the entire camera image is completely deflected by the mirror. The mounting position depends on the image sensor and the lens.
① Determine the required working distance for the specific application conditions using the field of view diagram.
② Determine the required distance between the object and mirror for the specific application conditions.
③ Calculate the resulting distance between the product and mirror.
④ Max. mounting position, focal length: 8 mm
⑤ Max. mounting position, focal length: 12 mm, deflector mirror with extension
⑥ Max. mounting position, focal length: 16 mm and 25 mm, deflector mirror with extension

Mounting position	① Required working distance	② Distance between object and mirror	③ Distance between camera and mirror [mm]	Space saving [mm]
④	See field of view diagram of the camera	See application	133	92.1
⑤			226	169.6
⑥			304	245.6

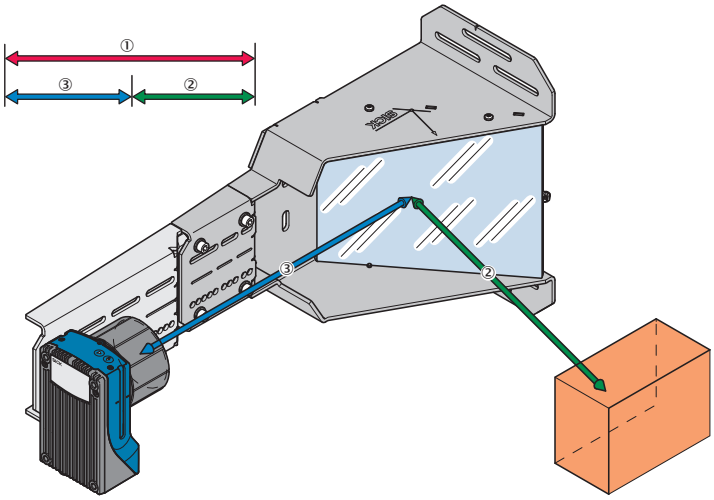
INSTRUCTION FOR INSTALLATION LECTOR83X 5MP - DETERMINATION OF MOUNTING POSITION

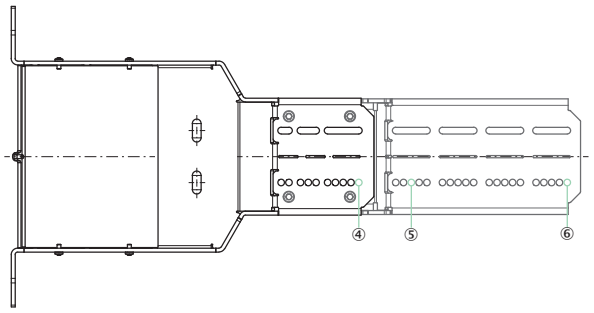


The maximum mounting position indicates the distance at which the entire camera image is completely deflected by the mirror. The mounting position depends on the image sensor and the lens.
① Determine the required working distance for the specific application conditions using the field of view diagram.
② Determine the required distance between the object and mirror for the specific application conditions.
③ Calculate the resulting distance between the product and mirror.
④ Max. mounting position, focal length: 8 mm
⑤ Max. mounting position, focal length: 12 mm, deflector mirror with extension
⑥ Max. mounting position, focal length: 16 mm, deflector mirror with extension
⑦ Max. mounting position, focal length: 25 mm, deflector mirror with extension

Mounting position	① Required working distance	② Distance between object and mirror	③ Distance between camera and mirror [mm]	Space saving [mm]
④	See field of view diagram of the camera	See application	100	61.1
⑤			172	117.6
⑥304			244	187.6
⑦	-	-	304	245.6

INSTRUCTION FOR INSTALLATION LECTOR85X 5MP - DETERMINATION OF MOUNTING POSITION

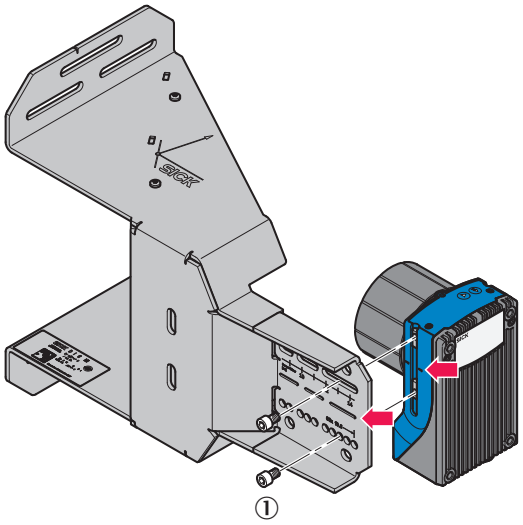


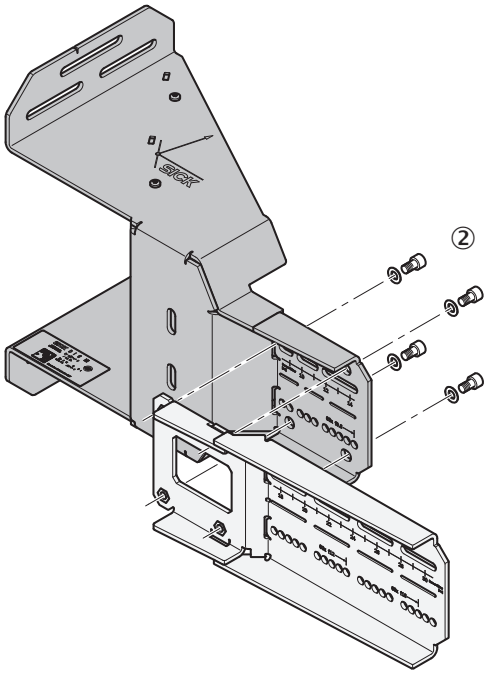


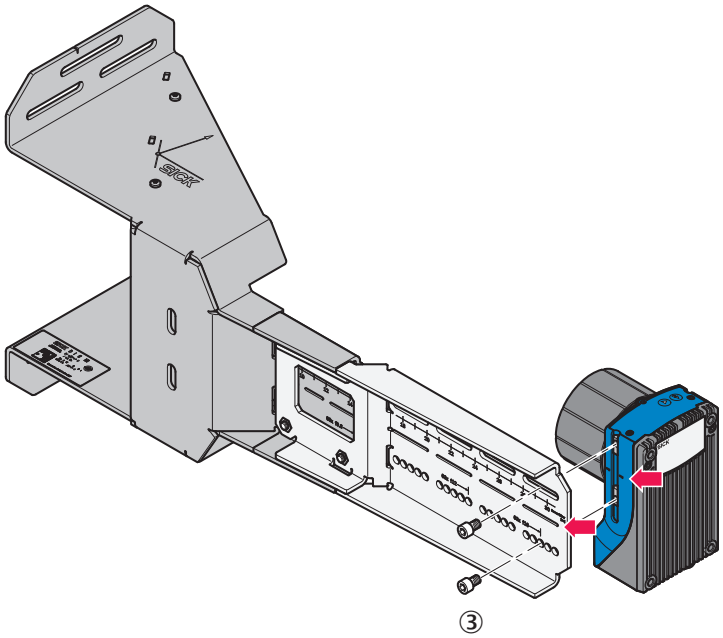
The maximum mounting position indicates the distance at which the entire camera image is completely deflected by the mirror. The mounting position depends on the image sensor and the lens.
① Determine the required working distance for the specific application conditions using the field of view diagram.
② Determine the required distance between the object and mirror for the specific application conditions.
③ Calculate the resulting distance between the product and mirror.
④ Max. mounting position, focal length: 12 mm
⑤ Max. mounting position, focal length: 16 mm, deflector mirror with extension
⑥ Max. mounting position, focal length: 25 mm, deflector mirror with extension

Mounting position	① Required working distance	② Distance between object and mirror	③ Distance between camera and mirror [mm]	Space saving [mm]
④	See field of view diagram of the camera	See application	140	82.7
⑤			185	113.2
⑥			350	229.2

INSTRUCTION FOR INSTALLATION LECTOR DEFLECTOR MIRROR







① Use without extension: screw Lector to the deflector mirror at the desired distance (see printed measuring scale), pay attention to the vertical alignment (narrow slotted hole and mark on Lector, see red arrows)
② Use with extension: screw extension to the deflector mirror (4x)
③ Screw Lector to the extension at the desired distance (see printed measuring scale), pay attention to the vertical alignment (narrow slotted hole and mark on Lector, see red arrows)

Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at www.sick.com/2096970

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SICK AT A GLANCE

SICK is a leading global technology company for intelligent sensors and integrated solutions in industrial automation. Our technologies set benchmarks, making your industrial processes more efficient, safer and more sustainable – both in logistics and manufacturing operations.

SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

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