# A new dimension in vision









## **Vision**

Vision solutions are ideal for automated inspection and measurement tasks. SICK's vision sensors, smart cameras and 3D cameras can be used to solve a wide range of applications where there

is a need to measure, locate, inspect and identify. Vision systems provide a solution for more complex applicationspecific tasks. Our vision products and systems are built for industrial environments, carefully designed to leverage SICK's 60-plus years of experience with industrial sensors.



# Vision

Inspector	
IVC-3D	
Ranger	



#### At a glance

- High-speed positioning and inspection
- Powerful "object locator" tool, independent of position, rotation and scale
- Unique, interchangeable housing design supporting dome and various optical accessories
- Simple step-by-step configuration in PC including emulator
- Easy-to-use operator interfaces
- Flexible machine and HMI design interfaces

#### Your benefits

- Powerful yet simple tools enable flexibility in various positioning and inspection applications
- Unique, interchangeable housing design provides the easiest way to improve image quality
- The simple configuration in SOPAS, including emulator for offline configuration and testing, will reduce downtimes in production to a minimum
- The easy-to-use operator interfaces are optimized to make it easier for the operator to oversee daily work more efficiently
- Ethernet communication and web API gives excellent connectivity and freedom to customize user's HMI



#### → www.mysick.com/en/Inspector

For more information, just enter the link or scan the QR code and get direct access to technical data, CAD design models, operating instructions, software, application examples and much more.



### **Ordering information**

Other models available at www.mysick.com/en/Inspector

Product name	Field of view internal illumination	Light source	Task	Optics	Model name	Part no.
Inspector I10 Standard	20 mm x 20 mm 72 mm x 72 mm	White ring light	Detecting	Fixed	VSPI-1R111	1042779
Inspector I20 Flex	20 mm x 20 mm 72 mm x 72 mm	White ring light	Detecting	Exchangeable	VSPI-2F111	1046732
Inspector I20-IR Flex	20 mm x 20 mm 72 mm x 72 mm	IR ring light, 850 nm	Detecting	Exchangeable	VSPI-2F141	1054704
Inspector I40	22 mm x 15 mm 79 mm x 58 mm	White ring light	Detecting	Exchangeable	VSPI-4F2111	1047913
Inspector I40-LUT	22 mm x 15 mm 79 mm x 58 mm	UV ring light	Detecting	Exchangeable	VSPI-4F2311	1050694
Inspector I40-IR Flex	22 mm x 15 mm 79 mm x 58 mm	IR ring light, 850 nm	Detecting	Exchangeable	VSPI-4F2411	1054705
Inspector P30	20 mm x 20 mm 72 mm x 72 mm	White ring light	Positioning	Exchangeable	VSPP-3F1122	1051982
Inspector PI50	22 mm x 15 mm 79 mm x 58 mm	White ring light	Detecting, Positioning	Exchangeable	VSPP-5F2113	1056082
Inspector PI50-IR	22 mm x 15 mm 79 mm x 58 mm	IR ring light, 850 nm	Detecting, Positioning	Exchangeable	VSPP-5F2413	1057303

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## **Accessories**

	Accessory category	Brief description	Model name	Part no.
	Lens and accessories	Replaces the front window and creates even and homogeneous illumination. For shiny surfaces. Includes adapter ring and O-ring.	Inspector Flex Dome	2050678
		Interchangeable lens, focal length 6 mm, including distance ring	OBJ-B06025BA	2049668
		Interchangeable lens, focal length 16 mm, including distance ring	OBJ-B16018BA	2049418
		Color filter/blue filter (468 nm ± 62 nm), PMMA	Inspector Flex blue color filter	2050676
	Optical filters	Color filter/green filter (544 nm ± 53 nm), PMMA	Inspector Flex green color filter	2050677
		Color filter/red filter (> 548 nm), PMMA	Inspector Flex red color filter	2050675
		Inspector Flex visible block filter, > 730 nm	Inspector Flex visible block filter	2061248
	Plug connectors and cables	Power supply and I/O cable, 5 m, M12, 12-pin (female connector/open)	DOL-1212-G05MAS01	6036556
The second second		Connection cable, Ethernet patch cable, 5 m, straight, connector M12, 4-pin to connector RJ-45	SSL-2J04-G05ME	6035389
	Test and monitoring tools	Inspector Viewer	VSPV-22222	2057556



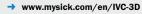


## At a glance

- Easy 3D measurement provides information about object height, shape and volume
- Independent of contrast and color
- Factory calibrated instantly providing true metric dimensions at production speed
- Easy-to-use graphical user interface for fast application development
- Stand-alone operation, no PC needed after configuration
- Simple connection of PLCs, robots, and other control systems, e.g., via Ethernet/IP or OPC
- Scans up to 5,000 profiles per second
- · Industrial, robust metal housing

#### Your benefits

- The IVC-3D makes advanced 3D shape inspections easy, enabling cost-efficient solutions
- Contrast-independent measurement provides greater reliability even at varying object color and when the object color is the same as the background
- Factory calibrated instantly providing true metric dimensions at production speed
- Self-contained, including all required lighting and analysis software, reducing complexity and cost
- The IVC Studio user interface is easy-to-use and ensures fast application development, saving time and reducing costs
- The camera's OPC server and EtherNet/IP interface enables simple communication with PLCs, robots and control systems, making integration easy



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## **Ordering information**

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Other models and accessories available at www.mysick.com/en/IVC-3D

3D profile resolution	Example field of view (H x W)	Working distance	Height resolution	Product name	Model name	Part no.
1,400 points	300 mm 1,000 mm	280 mm 1,200 mm <sup>1)</sup>	1.2 mm	IVC-3D 300	IVC-3D41111	1041204
				IVC-3D 300, plastic windows	IVC-3D41112	1048269
		280 mm 1,200 mm		IVC-3D 300, stainless steel	IVC-3D41113	1049024
		207 mm 238 mm <sup>2)</sup>	0.015 mm	IVC-3D 30	IVC-3D31111	1041205
	30 mm 50 mm			IVC-3D 30, plastic windows	IVC-3D31112	1046810
	50 mm 150 mm	190 mm 274 mm <sup>1)</sup>	0.04 mm	IVC-3D 50	IVC-3D21111	1027538
				IVC-3D 50, plastic windows	IVC-3D21112	1041710
		190 mm 274 mm		IVC-3D 50, stainless steel	IVC-3D21113	1050157
	100 mm 200 mm	260 mm 400 mm <sup>1)</sup>	0.05 mm	IVC-3D 100	IVC-3D51111	1043579
2,048 points				IVC-3D 100, plastic windows	IVC-3D51112	1046912
				IVC-3D 100 class IIIb /3B laser	IVC-3D51121	1046868
		260 mm 400 mm		IVC-3D 100, stainless steel	IVC-3D51113	1050158
	200 mm 600 mm	300 mm 675 mm <sup>1)</sup>	0.2 mm	IVC-3D 200	IVC-3D11111	1027539
				IVC-3D 200, plastic windows	IVC-3D11112	1042152
		300 mm 675 mm		IVC-3D 200, stainless steel	IVC-3D11113	1048004

 $<sup>^{1)}</sup>$  +/- 5~% of max. height range.  $^{2)}$  +/- 10~% of max. height range.





## At a glance

- High speed 3D at unmatched speed and quality
- In-machine 3D calibration tool
- Contrast and color independent measurements
- MultiScan technology to measure 3D, contrast, and scatter at the same time
- Full flexibility in configuration, working distance, and field of view
- Sensor resolutions of up to 1,536 pixels in 3D and 3,072 pixels in gray scale
- Gigabit Ethernet and CameraLink interfaces

#### **Your benefits**

- High-speed and high-resolution measurement allow you to increase production throughput and still ensure product quality
- Contrast-independent 3D provides more reliable size and position measurements, regardless of an object's color or height
- Unique MultiScan technology lets one camera do the job of many, reducing costs for integration, maintenance, and accessories, creating cost-efficient solutions
- The high level of flexibility and versatility of Ranger makes it an ideal choice for the most challenging tasks
- The wide range of Ranger variants allows you to adapt solution performance and cost with low additional effort



#### → www.mysick.com/en/Ranger

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#### **Ordering information**

Other models and accessories available at www.mysick.com/en/Ranger

Sensor resolution	Technology	Communication interface	Maximum performance	Product name	Model name	Part no.
	3D, LineScan	-	1,000 fps 3D profiles/second	Ranger D40	Ranger-D40213	1040383
F40 F40		CameraLink	30,000 fps 3D profiles/second	Ranger C40	Ranger-C40412	1014218
512 px x 512 px			35,000 fps 3D profiles/second	Ranger E40	Ranger-E40414	1040378
	3D, Color, MultiScan, LineScan	-		ColorRanger E40	Ranger-E40434	1050266
		-	1,000 fps 3D profiles/second	Ranger D50	Ranger-D50213	1040384
			30,000 fps 3D profiles/second	Ranger C50	Ranger-C50412	1014216
		CameraLink		Ranger C50 IR	Ranger-C50422	1014223
	3D, LineScan			Ranger C55	Ranger-C55412	1014217
				Ranger C50 IR	Ranger-C55422	1014224
		-	35,000 fps 3D profiles/second	Ranger E50	Ranger-E50414	1040379
1,536 px x 512 px				Ranger E50 IR	Ranger-E50424	1040381
				Ranger E55	Ranger-E55414	1040380
				Ranger E50 IR	Ranger-E55424	1040382
	3D, Color, MultiScan, LineScan	-	35,000 fps 3D profiles/second	ColorRanger E50	Ranger-E50434	1050267
				ColorRanger E50 IR	Ranger-E50444	1050269
				ColorRanger E55	Ranger-E55434	1050268
				ColorRanger E55 IR	Ranger-E55444	1050270