



AIMax®
Productinformation



AIMax

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The ZEISS AIMax digital-optical 3D sensor is the new benchmark in robot-based 3D inline metrology for sheet metal processing and car body construction. The unique combination of three measuring principles in one compact sensor enables the measurement of complex geometric characteristics such as holes, bolts, and gap and flush with maximum robustness, as well as attributive characteristic recognition.

AIMax benefits

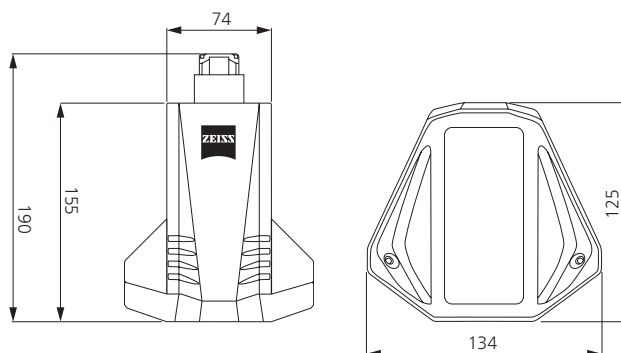
- Unique combination of three measuring principles in one sensor for gray scale image processing, multi-line triangulation and shadow analysis
- Digital (GigE) camera technology with signal lines up to 100 m
- High resolution for increased measuring accuracy
- Fastest measuring speed for characteristic analysis
- Flexible illumination control for optimal illumination such as individually switchable segment illumination and combinations to generate ideal contrast of difficult-to-measure features
- Optimized sensor design for the measurement of features with an inclined sensor (not Normal-to-Metal)
- Attributive feature recognition for data matrix codes, existence checks, type identification and visibly recognizable process errors

AIMax applications

- Inspection of assembly and welding processes
- Inline measuring technology in car body construction, metalworking, structural parts
- Gap and flush measurement in the body-in-white and final assembly
- Location recognition and positioning (parts, car bodies)
- Robot-based coordinate measuring technology

AIMax specifications

Camera	Digital (GigE) camera technology (monochrome)
Resolution	1280 x 1024 pixels
Illumination	AIMax: Near infrared, 880 nm AIMax Laser: Hyper red, 635 nm
Laser class	AIMax: Near infrared, 880 nm AIMax Laser: Hyper red, 635 nm
Measuring distance	2M (only AIMax laser)
Field of view	80 (X) x 65 (Y) x 20 (Z)
Dimensions	155 x 134 x 125 mm
Weight	Approx. 3.45 kg (add. sensor mounting tool approx. 4.70 kg)
Measuring time	<0.1 to 0.5 seconds/measuring position. Typical sensor measuring time depends on number of photos taken and illumination used. The typical measuring time, including robot movement, is 1.8 to 3.0 seconds/measuring position depending on the robot type and the measuring position on the part.



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