

das-Nano Irys datasheet

Coating Thickness Inspection Solution



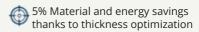


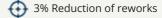
das-Nano Irys is a **contactless** patented system that using **terahertz waves** and proprietary algorithms developed by das-Nano provides the thickness of every layer in multilayer coatings in a non-destructive way.

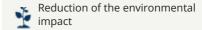
Improve and fully control your painting process with das-Nano Irys

- Real-time data on the thickness of each coating layer
- Early detection and correction of quality errors
- Control and supervision of the painting process
- Full knowledge for a more robust process

Direct benefits for your business







No need for cost extensive calibrations

das-Nano Irys Datasheet

Measurable coating configurations

Substrates	Ferrous and non- ferrous metals, fiber composite materials (CFRP/ GFRP) and polymers (thermoplastic, elastomers)
Base coats	Solid, metallic, pearlescent, two-phase, trilayer and paints with magnetic particles, among others
Clear coats	Matt, gloss and tinted
Surfaces	Flat and curved surfaces (concave and convex). Temperature from 10 to 150°C
Wetness condition	Dry, wet and cured coatings

Performance of the system

Thickness accuracy	1 μm	
Minimum thickness	5 μm	
Number of layers	Up to 5 layers	
Sampled area per point 4-mm spot size		
Measurement time per point	Between 0.5 and 5 seconds	
Measurement head distance to the inspected surface	Optimum working distance to the inspected surface: between 80 and 120 mm. Further distances are possible if required	
Positioning accuracy of the robot head	Normal incidence to the inspected surface Error < 0.2°	

Hardware and connectivity

Dimensions	 Robot head: 380 x 320 x 90 mm Supply unit with housing:
(L × W × H)	610 x 581 x 332 mm
Approx.	 Robot head: 5 kg Supply unit: 46 kg Connection wires: depending on
weight	the required length
Connection wires	- 1 x umbilical cable: approx diameter 28 mm and bending radius 60 mm - 3 x data wire: approx diameter 6.2 mm and bending radius 66 mm - 3 x power wire: approx diameter 6.7 mm and bending radius 100 mm Wiring in sections to facilitate maintenance actions Length: typically 20 m, longer or shorter cables upon request
Comms	- Ethernet connection to communicate the system with PLCs in the factory using TCP/IP sockets - Remote control available for SW and FW updates

Operational requirements

Robotic system	Compatible with any conventional robot: any model and brand
Operating temperature	15°C (59°F) – 35°C (95°F)
Operating humidity	Relative humidity < 75%
Operating atmosphere	Non-condensing atmosphere
Factory environment key features	Patented vibration compensation system that allows more accurate measurements No need for recalibration stops IP54
Power requirements	110 / 240 VAC, 4 A-line power, 50-60 Hz Single phase, two-wire plug
Auxiliary systems	No auxiliary systems are required (i.e. water, compressed air, gas)
Quality certifications	CE marking, REACH and RoHS compliant, ISO 9001, ISO 27001



The new light for the industry



POLYTEC GmbH Tel: +49 (72 43) 604 1730

Polytec-Platz 1 - 7 Fax: +49 (72 43) 6 99 44 D -76337 Waldbronn E-Mail: ot@polytec.de GERMANY www.polytec.de







VIDEO: IRYS AT CLIENT FACILITIES

All rights reserved. This document contains confidential information, property of das-Nano Tech S.L., and cannot be reproduced, copied, or revealed to third parties, without the express written authorization of das-Nano Tech S.L. The information of this document must be kept secret and used in the exclusive benefit of das-Nano Tech S.L.