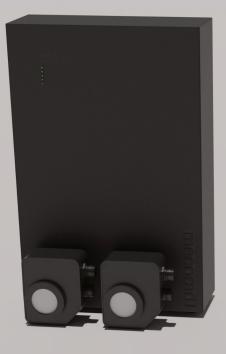# mecorad

Technical File for wtl Series
English language

ADVANCED TWO-SENSOR SELF-CALIBRATION

The wtl Series features state-of-the-art self-calibration technology, ensuring micrometer precision in measurements of width, thickness, and length

MINIMAL MAINTENANCE AND SCALABILITY

The series is designed for low upkeep requirements and is scalable to meet different technical and distance specifications, ensuring a long-term, adaptable solution for industrial measurement needs

COMPREHENSIVE SOFTWARE INTEGRATION

Facilitates the distribution of digital information across production levels, enabling in-line interventions for yield improvement and detailed production analysis

MODULAR AND DYNAMIC CONFIGURATION

The series boasts a modular design that can be easily integrated into various production lines and adapted to evolving information needs

SMART MONITORING CAPABILITIES

Equipped with the Watchdog Package for real-time status information transmission, and multiple communication interfaces including Modbus/TCP, TCP/IP, REST, and MQTT for versatile data delivery

EXTREME CONDITION COMPATIBILITY

Engineered to operate reliably in harsh conditions such as high heat, dust, smoke, fog, and spray environments, the wtl Series is designed for challenging industrial settings

Technical Data

Offering advanced solutions with two-sensor self-calibration, wtl Series achieves micrometer precision and accuracy in measurements of width, thickness and length.

Amount of Sensors to Operate	2 up to 16
Temperature Independent Measurement	Hot or Cold[1] dimension
Pyrometer Integration	Integration of standard wtl third party Pyrometer[1]
Trigger Modes for Measurement	non triggered, triggered by PLC, IT[2] or self-triggered
PLC Interface	Modbus TCP/IP
Alternative Communication Interface[2]	MQTT[3] with QoS 2, REST[4] or a raw TCP/IP[5]
Additional Communication Capabilities[2]	Receive information for a measurement e.g. reference values, trigger signals, material identification and more
Monitoring Interface[6]	WebSockets or MQTT[3] with QoS 2
Monitoring Capabilities[6]	Internal information of Sensors and Processing Unit, their Metadata and measurement related information
Interface Encryption	Transport Layer Security (TLS), additional RFC 7519 Industry Standard[7]
Web Configuration Dashboard	Embedded Web Application for observing and calibrating the Solution
Browser Compatibility	Chrome/Edge[8]
Sensor Housing Material Options	Aluminum alloy or Stainless Steel
Process Unit Delivery	Switch cabinet or protected housing[9]
Protection	IP20 (switch cabinet), IP68 (protected housing), IP68/IP69K (radar sensor unit)
Certification of radar sensors	CE, FCC
Power	230 VAC / 50 Hz or 110 VAC/ 60 Hz for U.S. Market available
Power Consumption	~500 Watt (with 16 Sensors)
Measurement Principle	FMCW-Radar

1 Pyrometer integration is needed
2 Alternative Communication interface (COM Module) is needed
3 MQTT Broker is not included
4 Customer side has to implement its own mechanisms to connect to the REST interface. Cannot be used for non triggered measurements
5 We propose the use of MQTT or REST over TCP/IP due to their authentication processes
6 Monitoring Interface (Watchdog Module) is needed
7 For REST/Websocket interfaces
8 Firefox is not supported; All Chrome based Browsers are supported
9 Stable up to 260°C