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# ECO 531 INDUSTRIAL SENSOR - ACTUATOR MULTI ZONE 1-Wire GATEWAY

Art. Nr. 11624-24



## APPLICATION

- Innovative sensor-actuator solution for industry
- State-of-the-art universal central device for all modern machines, systems and consumers Energy optimization for all thanks to many sensors
- Industrial systems, mechanical engineering, building management, silo monitoring, IIoT and M2M
- Can be used regardless of manufacturer
- Up to 30 sensors and actuators in up to 3 1-Wire zones via plug-and-play.

## ADVANTAGE

- Cost and time savings thanks to fast installation and commissioning
- Connect, switch on and you will immediately receive measured values
- Intuitive operation via web server

## BESCHREIBUNG

The ECO 531 Central Unit/Gateway is a modern system bus interface designed for comprehensive monitoring and control of facilities. It seamlessly integrates up to 30 sensors and actuators using the Industrial 1-Wire Bus and the Auto-E-Connect Plug-and-Play System. The ECO central units are low-maintenance industrial devices, serving as the standard for 1-Wire bus systems for over 10 years, providing stability and meeting high "Security by Design" standards.

The gateway can be controlled in parallel by PLC controllers, cloud applications, and text protocols through GLT- and media-control systems. The easy installation of complex systems is facilitated by the integrated 1-Wire Zone feature. ESERA offers a wide range of sensors and actuators for the gateway to meet market demands. User-friendliness is evident in the straightforward configuration, software updates, and data deployment via the web server, accessible through LAN or the easily activatable Access Point.

## HIGHLIGHTS

Fully automatic PLUG and PLAY system for up to 30 Sensors and actuators up to 3 bus zones

Web server and access point for configuration, debug and firmware updates

Data interface for Modbus/TCP, MQTT and ASCII

Auto-E-Connect Plug and Play Level I to III

Writing and reading all Sensors and actuators at high speed

Low-maintenance device in industrial quality, natively programmed, without Linux

Robust industrial design

Extended temperature range -20°C to 50°C

Extensive protective circuits and good device protection

Simple assembly



## EQUIPMENT OPTIONS / EXTENSIONS / OPTIONS

- Ultrafast iButton or RFID Read function for access or security authentication
- TPM (Trusted Platform Module) hardware for secure boot and SSL certificates optional
- Optional firmware versions, e.g. for 1-wire memory (EEPROM) and iButton read without programming.
- Customization and branding possible.

## TECHNICAL DATA

Special feature	<ul style="list-style-type: none"> <li>• 3 independent 1-wire bus segments for sensors and actuators</li> <li>• Web server for data connection configuration</li> <li>• 30-minute access to the internal access point at the touch of a button</li> <li>• High-performance Ethernet interface</li> <li>• Easy integration of up to 30 sensors thanks to patented plug-and-play system</li> <li>• Secure Boot (from 2024) and SSL-encrypted firmware for a high level of security.</li> <li>• Secure by Design</li> </ul>
Data interface	Ethernet, 10/100Mbit, autonegotiation, DHCP or fixed IP address
Number of data connections	max. 4 in parallel (1xASCII, 2xModbus and 1xMQTT)
Protocols	ESERA ASCII text, Modbus TCP and MQTT protocol
LAN operating modes	TCP socket, TCP client, UDP
Plug and Play Support/ Auto-E-Connect Support	Pre Configuration: Desired OWD storage Automatic Positioning: OWD extended Plug And Play Sensor finder function: LED display for sensor detection Classes Assignment: OWD class via ECO Gateway
Industrial 1-Wire Bus Support	DS2401 (electronic keys (iButton or RFID)), DS1820, DS18S20, DS18B20, DS2405, DS2406, DS2413, DS2408, DS2423, DS2438, DS2450 and all ESERA sensors, actuators and memories
Bus interface	Up to 3 x Industrial 1-Wire Bus Bus voltage: 5VDC, maximum 1A / 12VDC, maximum 1.2A
Power supply	15-30VDC
Power consumption	<ul style="list-style-type: none"> <li>• Maximum 2 watts at 24VDC (without sensors on the bus interface)</li> <li>• Maximum 30 watts at full load of the 5V and 12V outputs</li> </ul>
Connection	Screw terminals for stranded wire and wire up to 1.5qmm
Dimensions	70 x 90 x 70mm (WxHxD)
Housing (color)	Gray
Housing material	ABS plastic (RAL6020)
Degree of protection, protection class	IP20 / III
Temperature, humidity, operation	-20°C to 50°C, 10-92%, non-condensing

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