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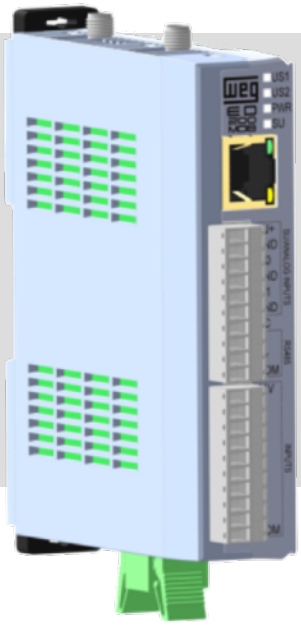
Sense Gate

Industrial IoT Gateway

FLEXIBILITY IN CONNECTIVITY



The Sense Gate is an LTE/4G-based industrial gateway for the Internet of Things (IoT).

For transformer monitoring and especially cloud-based applications that require complete wireless and Ethernet communication solutions, the Sense Gate industrial communication gateway is the ideal solution.

The gateway receives data from sensors via Modbus-RTU/TCP protocols and sends it to the cloud using the MQTT protocol. Communication is performed remotely via a cellular module (LTE Cat 1). It also features local Ethernet and RS-485 communication interfaces, digital and analog inputs, as well as GNSS for geolocation.

The Sense Gate is part of the transformer monitoring package. HV Assets offers flexible solutions, enabling the monitoring of virtually your entire fleet of transformers.

Applications

The Sense Gate is used in conjunction with sensors and the HV Assets Care asset management platform, enabling IoT connectivity in a substation environment.

Suitable for a wide temperature range, the gateway is installed directly in the transformer's control box and can withstand the most severe industrial applications.

Key Features

- ARM Cortex-A7 CPU @ 1.2 GHz with 256 MB RAM and 8 GB Flash
- LTE Cat 1 Bis modem with multi-band support
- 1x Ethernet 10/100 Mbps port (RJ45) + 1x RS-485 Serial Interface
- 8x Isolated Digital Inputs (24V) + 2x Analog Inputs (4-20 mA and 0-10 Vdc)
- MQTT client for cloud communication
- Support for Modbus TCP/RTU and LwM2M protocols
- Remote firmware update and web-based management
- Wide operating temperature range: -20 °C to +70 °C

Within the broad field of Industrial IoT, factories are seeking solutions that can help them utilize powerful data analytics to increase service levels and reduce operational costs. This means that the demand for an easy and reliable way to extract data from field applications is increasing. The Sense Gate improves service quality by facilitating infrastructure connectivity and equipment monitoring. This allows manufacturers to gain insights into asset usage behaviors and intelligence through big data analysis.

Specifications

Environment	
Operating Temperature	-20 °C to +70 °C
Storage Temperature	-40 °C to +85 °C
Humidity	5 to 95% (non-condensing)
System	
CPU	ARM Cortex-A7 @ 1.2 GHz
Memory	256 MB
Storage	8 GB Flash
Communication	
Serial Port	1x RS-485
Ethernet Port	1x 10/100 Base-T RJ-45
Cellular	1x LTE Cat 1 Bis interface
Communication Protocols	Modbus TCP/RTU, MQTT, and LwM2M
Digital Inputs	
Quantity	8x isolated inputs
Voltage	24 VDC
Analog Inputs	
Quantity	2x inputs
Type	4-20 mA and 0-10 Vdc
General	
Power Supply	9-30 VCC
Mounting	DIN-Rail
Certifications	Anatel

Dimensions	
Width x Height x Depth	115 x 90 x 20 mm