



opt.sense // Wireless Sensor Technology



PRODUCT DESCRIPTION

The **opt.sense** is the highlight and, thanks to wireless sensor technology, offers many possible uses and guarantees you maximum transparency. Whether for a new installation or retrofitting – these intelligent energy harvesting sensors can be easily integrated into your system and are wirelessly connected to our intelligent control unit (opt.control). The wireless communication interfaces enable a comprehensive network infrastructure in real time.

Platform independent:

Interfaces/Communication: 6LoWPAN, NB-IoT, I2C

WIRELESS

The wireless sensor technology of the **opt.sense** product portfolio enables your energy management system to collect real-time data on all relevant energy parameters from every consumer, source and energy storage device. As a maintenance-free plug & play product, it can be easily and simply attached to the respective measuring points without special tools and with minimal installation effort. The sensors automatically connect to opt.control within a very short time and immediately deliver the relevant energy parameters. In this way, maximum transparency of the energy parameters can be flexibly set up and expanded. In addition to the classic parameters such as power, current and voltage, our sensors also provide a variety of other parameters, such as phase frequency, time of zero crossing, signal analysis, active power and many more. For our customers, there is not only the added value of maximum transparency in the energy sector, but also the possibility of optimizing additional resources, since the parameters recorded can be used to draw appropriate conclusions, for example in the area of maintenance in the event of a possible defect in a product.

WITHOUT COMPLEX CABLING

The **opt.sense** product range gets energy where it costs nothing. For this we use the existing environmental energy for radio communication and data transmission to the IoT Edge Gateway. The combination with our wireless sensor technology enables maintenance-free application scenarios in the field of digital energy management. The overall package offers you maximum transparency with the highest level of integration and without complex wiring. Internet of Things has never been so easy! The sophisticated security system provides comprehensive protection for all your data. Plug & Play into the Olmatic IoT.

TECHNICAL OVERVIEW

Current Range	3-400A rms
Voltage Range	up to 400V rms
Frequency	50/60 Hz
Accuracy	Class 0.2 metrology, CT class 3
Sample Rate	8kHz (filtered) / 32kHz (unfiltered)
Interfaces/Communication	6LoWPAN, NB-IoT, I2C
Power Quality Indices	IEC 61000-4-30 Class S Dip and swell monitors Line frequency - one per phase Zero crossing zero-crossing timeout Phase angle measurements
Advanced Metrology Feature Set	Total and fundamental active power volt amperes reactive (VAR) volt amperes (VA) Watt-hour VAR hour VA hour Total and fundamental IRMS, VRMS Total harmonic distortion Power factor
Protection TVS	ESD acc. to IEC61000-4-2 (at the RF pin) Surge protection at current terminals MOV protection at voltage terminals
Size (W x D x H)	36 x 48 x 50,4 mm
Operating Temperature	-20°C to 80°C