



# Schaeffler OPTIME

The answer to unplanned downtimes

- OPTIME offers a complete solution package for automatic condition monitoring of rotating machines. For the first time, it is possible to economically monitor industrial drive units in a production site at a high scale.
- The OPTIME Solution consists of three components, Wireless Sensors, Gateways and a Digital Service. All components are required for a functional installation of the solution.
- Sensors are installed within minutes and the solution configures automatically. Using one of the most reliable and energy-efficient wireless meshnet technologies, the data is transferred via a gateway into a cloud.
- Schaeffler's deep know-how in monitoring of rotating assets and physical models of machinery, combined with machine learning, allows for automated analytics. An easy-to-use app displays the condition of machines, gives alarms and provides diagnosis for highest transparency at all times.





  
HURYZA

**SCHAEFFLER**

# Product specification

## Schaeffler OPTIME

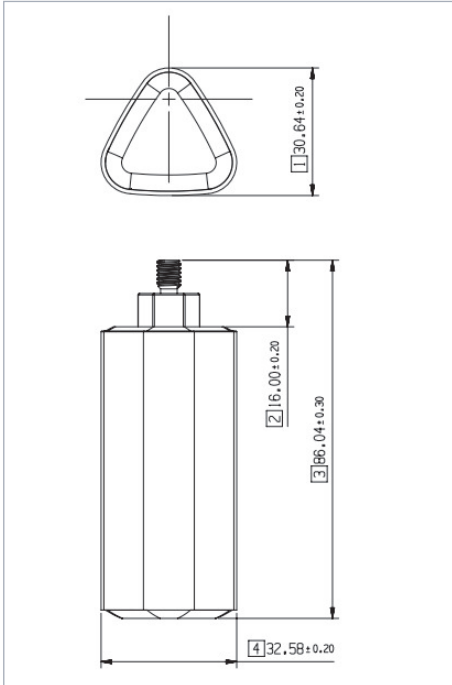
| <b>OPTIME sensors</b>                                      | <b>OPTIME-3</b>   | <b>OPTIME-5</b>   |
|--|--|--|
| Vibration bandwidth  | 10 Hz – 3 kHz  | 10 Hz – 5 kHz  |
| Amplitude range  | ±2/±4/±8/±16 g   | ±2/±4/±8/±16 g   |
| Temperature trend measurement                              | -40°C to +85°C   | -40°C to +85°C   |
| Calculated KPIs  | RMS <sub>Low</sub> , Kurtosis <sub>Low</sub> , ISO <sub>VELOCITY</sub> , RMS <sub>High</sub> , Kurtosis <sub>High</sub> , DeMod, Temperature | RMS <sub>Low</sub> , Kurtosis <sub>Low</sub> , ISO <sub>VELOCITY</sub> , RMS <sub>High</sub> , Kurtosis <sub>High</sub> , DeMod, Temperature |
| Measurement cycle  | KPIs: every 4 h<br>Time waveform: every 24 h   | KPIs: every 4 h<br>Time waveform: every 24 h   |
| Typical target applications                                | Motors, generators, fans, pillow block bearings, up to 3.000 rpm   | Pumps, geared motors and small gearboxes, compressors, HVACs etc., up to 5.000 rpm   |
| Sensor commissioning                                       | NFC (Near Field Communication)   | NFC (Near Field Communication)   |
| Communication  | Wirepas Mesh (2.4GHz ISM Band)   | Wirepas Mesh (2.4GHz ISM Band)   |
| Sensor transmission range (line of sight)                  | up to 100 m  | up to 100 m  |
| Power supply   | Non-replaceable Li-SOCl <sub>2</sub> battery   | Non-replaceable Li-SOCl <sub>2</sub> battery   |
| Typical battery life                                       | up to 5 years (depending on configuration)   | up to 5 years (depending on configuration)   |
| Operating temperature range                                | -40° to +85°C  | -40° to +85°C  |
| Recommended storage temperature (for optimum battery life) | 0° to 30°C   | 0° to 30°C   |
| Ingress protection   | IP 69K   | IP 69K   |
| Materials  | Mounting base: steel AISI 316, housing: thermoplastics   | Mounting base: steel AISI 316, housing: thermoplastics   |
| Mounting   | Single Bolt Mounting (M6) (Adapters available)   | Single Bolt Mounting (M6) (Adapters available)   |
| Dimensions   | Please see drawings  |  |
| Certifications   | Europe: CE (Radio Equipment Directive 2014/53/EU) for further countries please see manual)   |  |
| Hazardous Area Classification                              | Zone 1 (in planning)   | Zone 1 (in planning)   |

### OPTIME Gateway

|                                     |  |
|-------------------------------------|--|
| Sensor communication                | Wirepas Mesh (2.4GHz ISM Band)   |
| Communication to Schaeffler IoT Hub | 2G, LTE CAT M1 (default)<br>Wi-Fi 2.4GHz, Ethernet RJ45                                    |
| SIM card format                     | Micro-SIM (3FF)  |
| Ingress Protection                  | IP 66/67   |
| Temperature range                   | -20°C to 50°C (operation), -40°C to 85°C (storage)   |
| Power supply                        | Voltage Range 85-264VAC, 47-440Hz, Power Consumption 30VA max.                             |
| Dimensions                          | Please see drawings  |
| Certifications                      | Europe: CE (Radio Equipment Directive 2014/53/EU), for further countries please see manual |

# Product specification

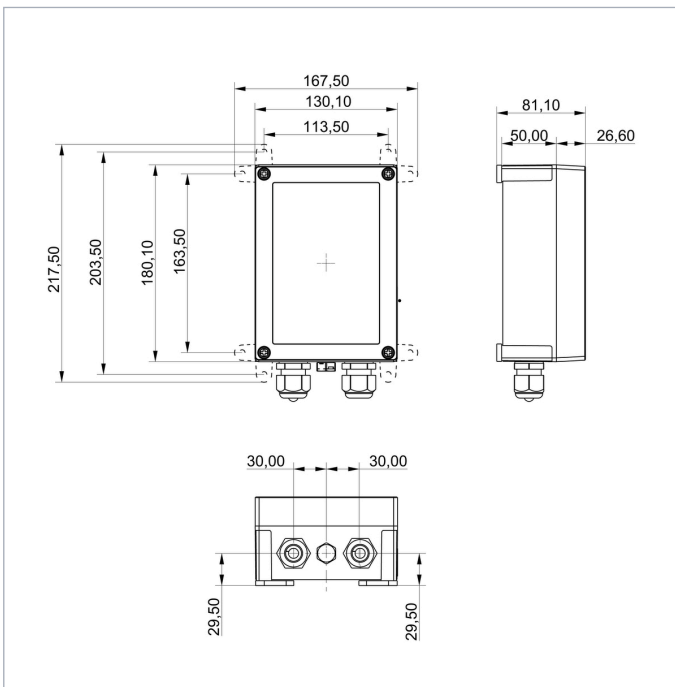
## Schaeffler OPTIME



Dimensions of OPTIME Sensor



Installing OPTIME



Dimensions OPTIME Gateway



OPTIME in action

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