



# 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.



# Product specification

## Schaeffler OPTIME

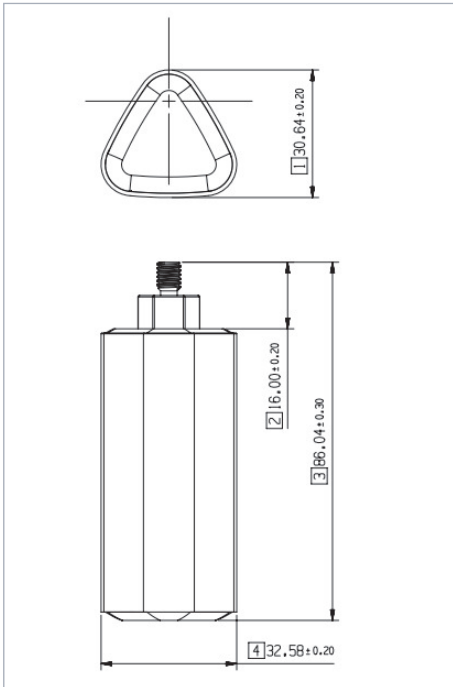
OPTIME sensors	OPTIME-3 	OPTIME-5 
Vibration bandwidth	10 Hz – 3 kHz	10 Hz – 5 kHz
Amplitude range	$\pm 2/\pm 4/\pm 8/\pm 16$ g	$\pm 2/\pm 4/\pm 8/\pm 16$ g
Temperature trend measurement	-40°C to +85°C	-40°C to +85°C
Calculated KPIs	RMS <sub>Low</sub> , Kurtosis <sub>Low</sub> , ISO <sub>VELOCITY</sub> , 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 Time waveform: every 24 h	KPIs: every 4 h 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)	100 m	100 m
Power supply	Non-replaceable Li-SOCl <sub>2</sub> battery	Non-replaceable Li-SOCl <sub>2</sub> battery
Calculated battery life (-10° to 50°C)	5 years	5 years
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 (planned for 09/2020)	Zone 0 (planned for 09/2020)

### OPTIME Gateway

Sensor communication	Wirepas Mesh (2.4GHz ISM Band)
Communication to Schaeffler IoT hub	2G, LTE CAT M1 (default) 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

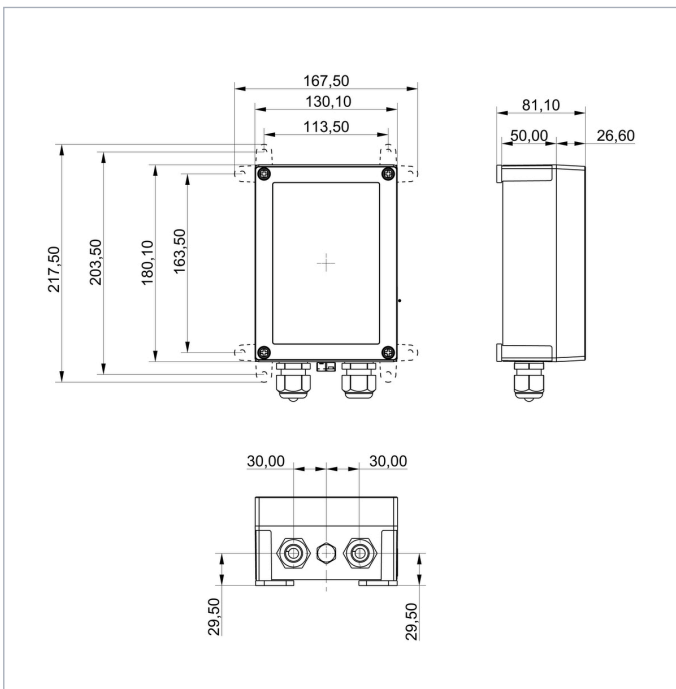
## Schaeffler OPTIME



Dimensions of OPTIME Sensor



Installing OPTIME



Dimensions OPTIME Gateway



OPTIME in action

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