



munisense

NP-series Noise monitoring stations

A sophisticated family of fast, energy-efficient, weatherproof, wireless noise monitoring stations that store their measurement data real-time in the INSIGHTNOW™ cloud portal.

Sound recognition

The NP-series is the new generation that supports advanced sound recognition, alongside all IEC 60651/60804/61672 features. In the cloud portal, sounds in the living environment are identified (level, time, sound source and location). Common sounds in the environment are automatically recognized. Unknown sounds can be identified, with the support of listening, and added to the database for future automatic recognition.

Never lose data

The NP-series is suitable for indoor and outdoor use and measures all sound parameters, 1/3 octave, spectral data and audio streaming. The meters also store their measurement data and high quality audio internally. So their data is never lost.

Ideal meters for difficult circumstances

The NP family is robust and extremely suitable for outdoor mounting on lamp posts. The NP-series uses the energy-efficient IoT communication LTE-M, which also allows measurements at locations with insufficient 4G coverage. The NP-series also supports WiFi and, optional, Ethernet.

Reliable and autonomous

The meters can also act as a hub for our other measurement systems, like the SP-series noise meters and our air quality monitoring stations. The NP family can operate up to three days on the internal rechargeable Li-Ion battery. An optional battery pack extends measurement time to more than 15 days. And in combination with a solar panel, these meters measure continuously.

The NP-series are ideal for measurements where energy and/or internet are not available.

Sound recognition

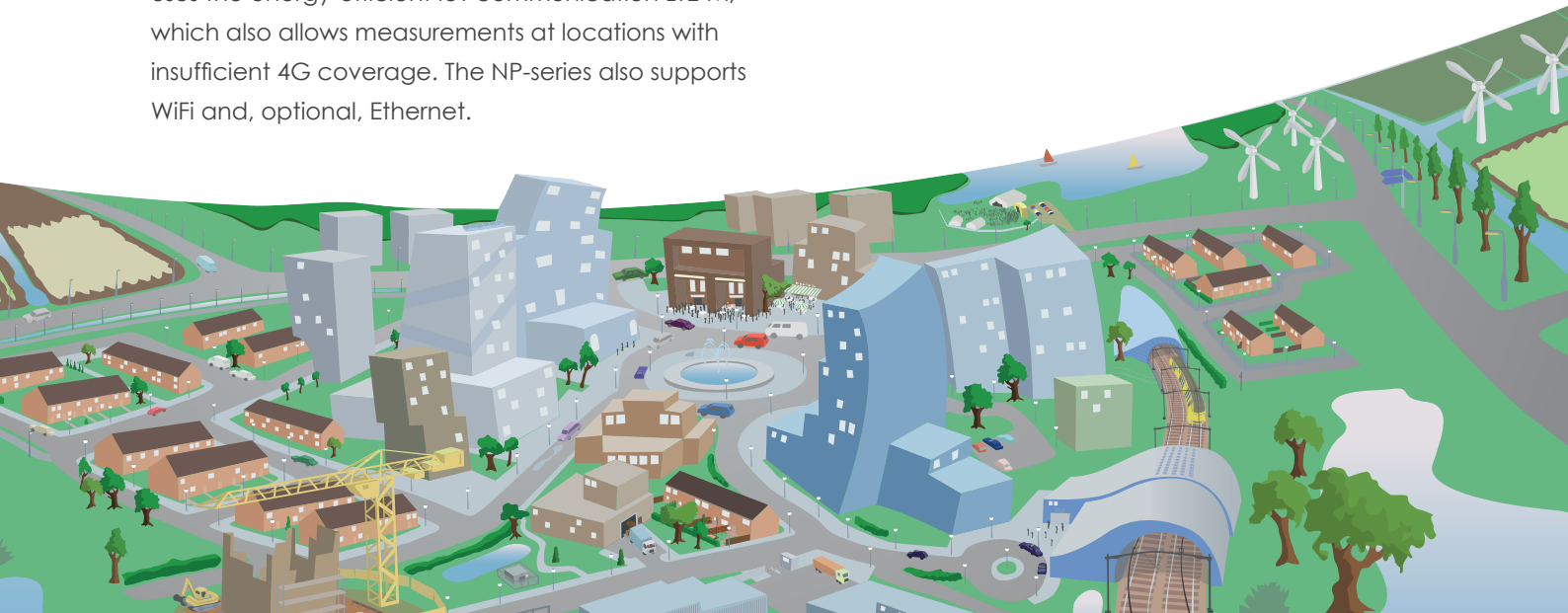
IEC 60651/60804/61672

Realtime, online, selfsufficient, wireless, auto recovery

Internal storage of measurement data and WAV up to 3 months

Visualization via INSIGHTNOW™ portal

LTE-M IoT communication; reliable and energy efficient



Munisense NP-series:	NP2	NP4
Standard		
IEC 60651/60804/61672	Class 2	Class 1
PTB Admission		pending
Meetwaarden		
$L_F, L_{MAX}, L_{EQ}, L_E, L_T, L_{PEAK}$		Yes
Advancing $L_{EQ}, T, T=1, 60, 180, 300, 900, 3600$ sec		Yes
$L_{EQ}, T, T=0,125$ sec		Yes
Calculated values *)		Yes
Frequency weightings	dB(A), dB(C) and dB(Z)	
Time weighting	Fast, Slow, Impulse	
Measurement range total	30 - 130 dB(A)	20 - 140 dB(A)
Measurement ranges (overlap)	1	2
Resolution	0,01 dB	0,01 dB
Accuracy	1,5 dB	0,7 dB
Noise floor meter (dB(A))	22 dB	5 dB
Spectra, 1/3 Octave	20 Hz - 8 kHz	10 Hz - 20 KHz
Audio	OggVorbis and/or WAV	
Sound recognition options:		
	Mel-Frequency Cepstral Coeff. (MFCC)	
	Gammatone Cepstral Coeff. (GTCC)	
	Detection weather conditions	
	Fireworks detection	
Microphone		
Type	Omni	Omni
Diameter	1/4"	1/2"
Heating	Yes	Yes
Microphone cable extendable	No	up to 10 m
Weather protection	Poly Carbonate	RVS
Storage		
Levels (second values)	6 mth	1 year
Spectra	6 mth	1 year
Audio	1 mth	3 mth
Capacity	64 Gb	265 Gb
Network		
WAN:	LTE-M (4G, GPRS optional)	
LAN:	WiFi (Ethernet optional**)	
Energy		
Consumption using LTE-M	1.1 W	
Consumption using 4G	3 W	
Connector adapter	12 - 30 V	
Supports solar energy (MPPT)	Yes	
Battery (Li-Ion)		
Capacity	74 Wh	
Operating time (days)	1 - 3	
Environmental conditions		
Long term outdoor measurements	Yes	
Temperature	-20 - 60 °C	
Temperature charging Li-Ion battery	-20 - 45 °C	
Humidity	10 - 99 %	
Ingress Protection	IP65	
Other conditions		
Timestamp (accuracy)	100 μ s	
Real time clock	Yes	
GPS location	Yes	
Device temperature visible	Yes	
Dimensions and weight		
Dimensions (L x W x H) (mm)		
Body and microphone	80x60x400	80x60x440
Incl. weather protection	80x60x480	80x60x540
Incl. weather prot. and antenna	80x60x540	80x60x600
Weight (grams)	1200	1500

* Percentile $L_{(95)}, L_{10}, L_{NN}$ / Equivalent noise L_{EQ} (1 second - 1 year) / Dose effect noise $L_{EA}, CEL / L_{AQ}$ (nuisance)

** The NP2-E and NP4-E versions include Ethernet



Model NP2

Model NP4

Accessories NP-series

These meters come complete with power adapter/charger, pole clamp (20-80 mm) and 5 meters power or ethernet cable.

Optional are items such as:

Solarpanel 30W, battery pack, lamp post connecting set, 24V PowerOverEthernet adapter, lamp post support, wind protection (20 cm) and a carrying case



About Munisense

Munisense develops, produces, supplies and manages innovative measurement solutions for businesses and governments. Solutions that give stakeholders direct online insight into noise, water quality, water levels and air quality. The information is online available at any time for visualization, analysis or periodic reports. This way managers and policymakers can measure in real time; remotely, reliable and smarter.

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