Outdoor Measurement Microphones

Outdoor Measurement Microphone WP40-90 with ASD Cable and Stand

The Outdoor Measurement Microphones offer a weather-protected measurement solution for our Sound Level Meters allowing acquisition of environmental noise data in outdoor applications. The corrosion-free polymer housing, wind screen, water-repellent membrane and bird spike provide excellent protection from rain, wind, dust and perching birds.

The Outdoor Measurement Microphones M2230-WP and M2340-WP fulfill the Class 1 requirements according to IEC 61672 and ANSI S1.4 for horizontal and vertical sound incidence. For compliance a spectral correction (horizontal and vertical) must be employed in the associated Sound Level Meter. The Outdoor Measurement Microphone M4262-WP fulfills the Class 2 requirements accordingly.

The outdoor microphones consist of a measurement microphone and one of two weather protection possibilities:

- WP40-90: #600 040 140
- WP62-90: #600 040 150

Features

— Class 1 and Class 2 Outdoor Measurement Microphones for vertical and horizontal sound incidence according IEC 61672 and ANSI S1.4

— Excellent protection from rain and dust (IP64), wind and perching birds

— Built from corrosion-free materials

— Removable top section for easy microphone calibration

— Standard tripod mount, optional pole mount

EFFECTIVE OUTDOOR PROTECTION

The 90 mm windscreen features a built-in water guard, a water-repellent membrane, and bird spikes, providing excellent protection against rain, wind, dust, and perching birds. This seamless design ensures optimal performance, keeping the measurement microphone safe from the elements while minimizing wind-induced noise.

WP40-90

SYSTEM SELF-TEST

The Outdoor Measurement Microphone M2340-WP is system self-test (CIC) enabled. Automated self-tests may be performed by NoiseScout, the unattended noise monitoring solution, in combination with one of our Sound Level Meters. This ensures reliable operation and precise measurements.

ROBUST DESIGN / EASY CALIBRATION

The upper section of the weather protection is snap-on mounted and can thus be easily removed by hand for manual calibration of the measurement microphone.

TECHNICAL SPECIFICATIONS

Model	M2230-WP-90	M2340-WP-90	M4262-WP-90
Microphone type	Omni-directional, free-field		
Classification IEC 61672, ANSI S1.4	Class 1	Class 1	Meets the Class 2 Frequency Response requirements
Intrinsic noise typical	16dB(A)	17dB(A)	32dB(A) SPL @ 16 mV/Pa
Maximum sound pressure level @ distortion factor 3%, 1 kHz	137dB SPL	138dB SPL	140dB SPL
Frequency range	5 Hz - 20 kHz		10 Hz - 30 kHz
Supply	Phantom power 48 VDC with XLR connector		
Mounting	Standard 3/8” tripod adapter included		
Windscreen diameter	90 mm (3.54”)		
Housing diameter	36 mm (1.41”)		
Housing lenght	366 mm (14.4”)		
Weight	300g (10.6 oz)		

Outdoor Microphone with Pole Mount Adapter and pole (cable inside the pole)

TECHNICAL SPECIFICATIONS

Model	M2230-WP-90	M2340-WP-90	M4262-WP-90
Environmental	Rainfall with Wind Proofing under extreme conditions: **Test A – *PASSED* – Duration 4 hours:** • Rainfall intensity Rate/ Distribution: 1200 mm/h, Uniform water coverage from 45° to WP40 and WP62 • Wind Speed / Direction: 30kmh (18.6 mph) / 90 ° to WP40 and WP62 **Test B – *PASSED* – Duration 40 minutes:** • Rainfall intensity Rate/ Distribution: 1200 mm/h, Uniform water coverage from 45° to WP40 and WP62 • Wind Speed / Direction: 110 km/h (68.4 mph) / 90 ° to WP40 and WP62		
Protection class	IP64		
Order Information NTi Audio #	600 040 050 + 600 040 140	600 040 230 + 600 040 140	600 040 075 + 600 040 150
Optional Accessory	• Pole Mount Adapter PM 1” # 600 040 067 (for pole diameter 25 - 33 mm, 1-1.3”) • Pole Mount Adapter PM 1 1/4” # 600 040 068 (for pole diameter 32 - 44 mm,1.25-1.75”)		

DISTRIBUTOR CONTACT:
CALTRON PTE LTD
email: caltron@caltron.sg
www.caltron.sg

Dehumidifier

FOR 1/2” OUTDOOR MEASUREMENT MICROPHONE

For the use of the outdoor measurement microphones (M2230-WP and M2340-WP) in weather-exposed locations with high humidity and temperatures that can cause dew, NTI recommends the TA202 dehumidifier. Due to the high impedance of the microphone capsule, even minimal moisture can affect its performance. The dehumidifier absorbs the moisture before it settles on the capsule, thereby providing accurate measurements, even under highly variable environmental conditions.

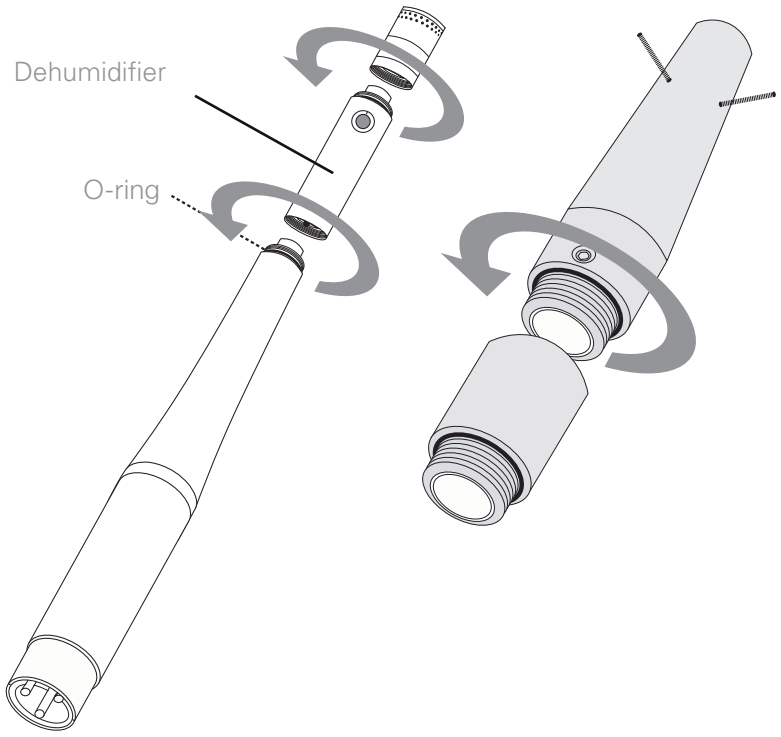
The TA202 dehumidifier is mounted between the MA220/MA230 preamplifier and the MC230A microphone capsule. It contains silica gel that effectively removes moisture from the air around the microphone capsule. As the gel absorbs moisture, it changes from its original blue color to a gray-pink hue. A window in the housing of the dehumidifier allows for monitoring the moisture content. For permanently installed, self-sufficient noise monitoring stations, NTI recommends routinely checking the color of the gel every three months.

By heating the TA202 dehumidifier to a maximum of +130 °C for few hours, it can be easily dried out and reused.

Specifications	
Attenuation	0 dB
max. heating to dry out gel	130°C (266°F)
Scope of Supply	• WP30/WP40 TA Housing Extension • TA202 Dehumidifier
Dimension (diameter x length)	• WP30/WP40 TA Housing Extension 36 x 47 mm (1.4” x 1.9”) • TA202 Dehumidifier 12.7 x 39.5 mm (0.5” x 1.6”)
Extends WP30/ WP40 length by	36 mm (1.4”)
Weight	41 g (1.4 oz)
NTi Audio #	Dehumidifier WP30: 600 040 063 Dehumidifier WP40: 600 040 0149

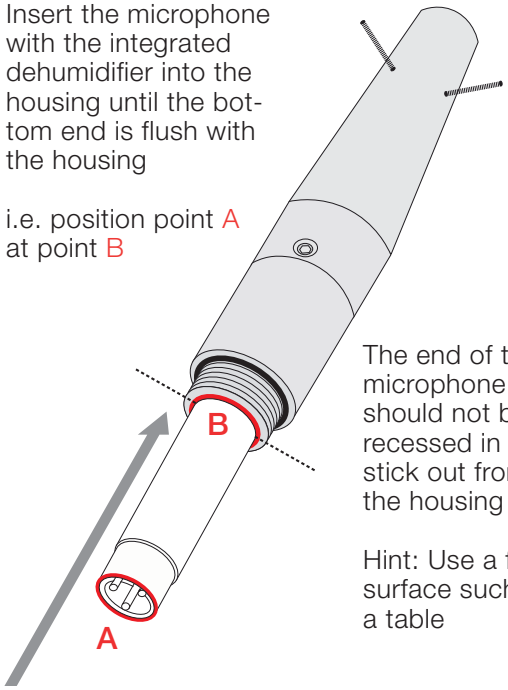
Dehumidifier for Outdoor Measurement Microphone

ASSEMBLY INSTRUCTION



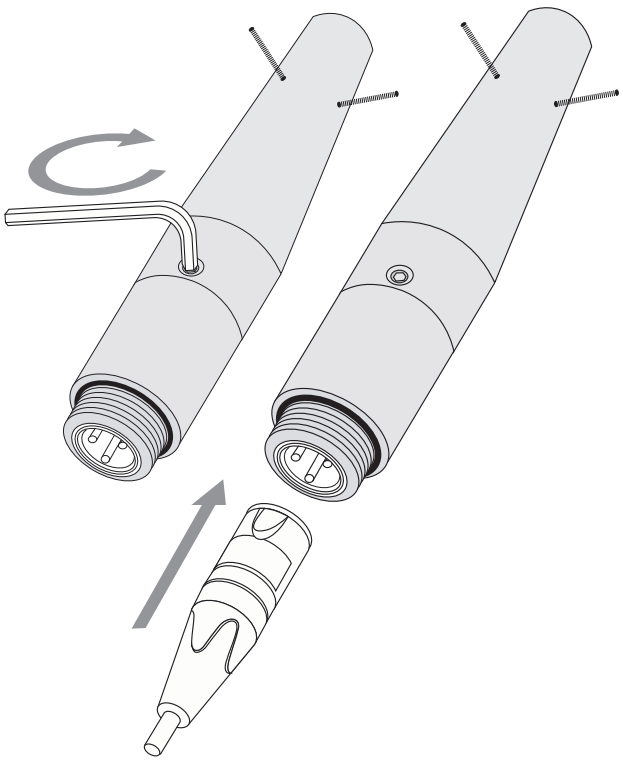
Insert the microphone with the integrated dehumidifier into the housing until the bottom end is flush with the housing

i.e. position point A at point B



The end of the microphone should not be recessed in or stick out from the housing

Hint: Use a flat surface such as a table



Tighten the fixing screw and attach the ASD cable

For the next stepts view the Weather Protection Assembly Guide

DISTRIBUTOR CONTACT:
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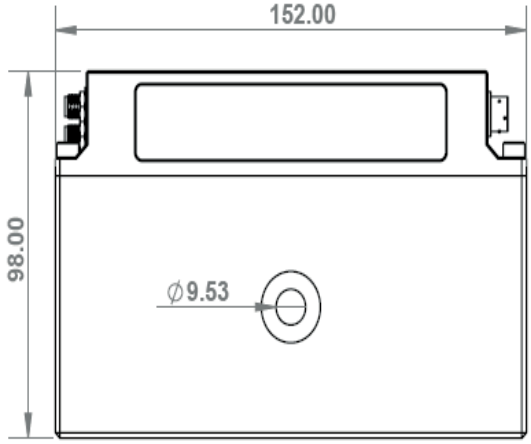
www.caltron.sg

GSS 5GV Vibration Monitor

FOR STRUCTURAL AND OCCUPANT MONITORING

The 5GV is a cutting-edge MEMS Vibration and Tilt monitor that boasts exceptional precision and an integrated 3G/4G gateway, making it the ideal solution for a wide range of industries. Its user-friendly design ensures that it is easy to configure, install, and manage remotely, reducing the need for time-consuming on-site visits. Thanks to its low-power design and external power options, the 5GV minimizes maintenance activities, allowing you to focus on what really matters. With user-defined alert thresholds, you will receive notifications directly when something requires your attention.



Features

- Standalone Sensor with Internal Storage
- No Cables - Complete Wireless Solution
- Indicator LEDs – Visually Confirm Operation
- Totally Sealed Case with Magnet On/Off
- Remotely Managed and Configured via SMS, MQTT explorer
- Locally managed via Bluetooth Mobile Application or USB attached PC Application
- Real-time SMS Alerts, FTP and HTTP Uploads
- Modular Communications (Bluetooth + 4G or Bluetooth + WiFi)
- 4 x Internal D Cell Lithium Batteries
- Low Power Battery Operation
- Can Operate on External Power, No Batteries installed
- Real-Time Clock synched to Cell Tower/ NTP
- CSV/JSON/BIN Data Output, Easy GISIntegration
- Built-in Temperature Compensation

INSTALLATION

- Easy to install, no technician needed
- The description of how to install can be found at GNSS 5GV Quick Guide

Technical Specifications	
Conformance	DIN 45669-1
Management Access Port	USB serial interface, Bluetooth (BLE)
Storage	Industrial MicroSD Card - 512 MB standard or 2 GB (optional upgrade)
Time Keeping	Real Time Clock (retains time for up to 3 months), Synched to NTP / Cell Tower
Vibration Limit (X, Y, Z)	±40 g
Maximum Response	1 Hz to 1 KHz
Accuracy	±2 %
Sample Rate (Hz)	1000, 2000, 4000 samples/second
Reading interval	30 to 3600 sec
Peak Particle Velocity (by design)	0.003 mm/sec to 620 mm/sec
Peak Particle Velocity (validated)	Up to 620 mm/sec
Peak Ground Acceleration (by design)	0.003 g
Time Stamping	Down to 1 millisecond
Buffer Size	8 MB
Alerts	Thresholds: 1 to 150 mm/sec (@ 2G Range) SMS Numbers: Can notify up to 5 mobile phones
Battery type	4 x ER34615M - 3,6v /14,5 Ah (total 58 Ah) or 4 Saft LSH20D (total 52 Ah) - 3,6 v /13 Ah
Battery consumption	• Up to 6 months in low-power mode - PPV/DF data is pushed through the 4G modem every 4 hours • Up to 3 months in real-time MQTT mode - PPV/DF data is pushed through the 4G modem in real time (every 30 seconds up to every 1 hour depending on the user reporting interval set).
Structural monitoring	Peak amplitude/frequency values (1 Hz to 1 KHz) with Zero Crossing or FFT method, Peak Particle Velocity (mm/s), Peak Vector Sum (mm/s). Threshold alerts, and historical trend readings.
Human response: (coming soon)	Acceleration 1/3 octave spectrum, vibration dose values (VDV) and acceleration total value Aw(t). Threshold alerts, and historical trend readings.

Technical Specifications	
Standards (frequency ranges)	ISEE seismograph, DIN 4150:3, DIN 4150:2, BS 7385, AS 2817.2-2006, ÖNORM S 9012, IN 1226, ICPE Circulaire 1986, NS 8176 COMFORT, NS 8141 CONSTRUCTION, NS 8141-1, ISO 8569 ACC, SS 02211 SHAFT, SS 4604861 COMFORT and SS 4604866 BLAST.
Standards (weightings)	ISO 2631:1989, ISO 2631:2003, UNI 9614-2017, BS6472-2008 and VC curves
GSM Modems	EG25 (3G/4G) Global bands (uses nanoSIM) BG96 (3G/4G) Global bands (uses microSIM)
Antennas	GSM, Bluetooth, GPS (optional)
Operating Temperature	-40 °C TO +85 °C
Dimensions	W 152 x L 98 x D 41 mm
Ingress Protection	IP67
Weight	1.15 kg (with battery base)
USB/External	Power 6-pin LEMO keyed connector with metal cap (IP68) and chain
Comes with	• mounting bracket • USB cable • field carry bag • magnet and lanyard
Order Information NTi Audio #	600 070 000

Tilt Specifications	
Tilt Readings	Pitch ± 90°, Roll ± 90°
Resolution	0.0035°
Accuracy	+/- 0.005°
Alert Thresholds	0.05° to 70.0°
Temperature Stability	+/- 0.005° (-45° to 85°)
Stabilisation Time	10 secs
Reading Interval	10 sec to 12 hours

CALTRON PTE LTD

Weather Station WXT

for NoiseScout

Vaisala WXT536 weather station

Overview

Rain, strong wind and the wind direction can influence the outdoor sound pressure level to be measured. Connect a weather station to your noise measurement station to simultaneously record the noise level and the weather data. Depending on the weather station model used, air pressure, temperature, air humidity, rain, hail, wind speed and wind direction are documented. NoiseScout supports the Vaisala models WXT532, WXT533 and WXT536.

Measurements

- Wind speed & direction
- Rainfall or hail
- Air pressure
- Humidity
- Temperature

Key features

- Low power consumption (3.5 mA typ.)
- 1 minute logging interval
- Configured for operation with XL3 or XL2+NetBox

Application

- Weather data collection in combination with environmental noise monitoring (outdoor).
- Customized noise analysis with the Data Explorer PC-software, by excluding e.g. periods of strong wind or heavy rain from the acquired data.

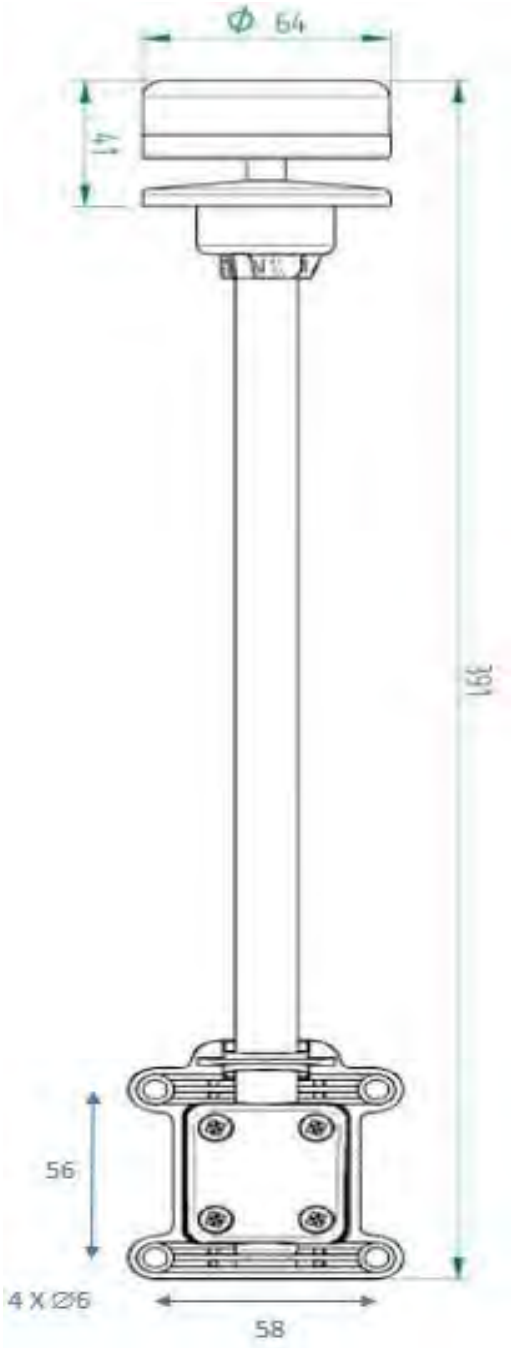
Specifications Weather Station WXT

Wind speed observation range accuracy output resolution measurement unit	 0 ... 60 m/s (134 mph) ±3 % @ 10 m/s (22 mph) 0.1 m/s m/s, mph
Wind direction azimuth accuracy output resolution averaging time	 0 ... 360° ±3.0° @ 10 m/s (22 mph) 1° 1 ... 3'600 s, sample rate 1, 2, 4 Hz
Rain intensity output resolution field accuracy	 0.1 mm/h (0.01 in/h) better than 5 %, weather-dependent
Hail intensity output resolution	0.1 hits/cm²h (1 hits/in²h)
Barometric pressure observation range accuracy @ 600 ... 1'100 hPa	 500 ... 1'100 hPa ±0.5 hPa @ 0 ... +30 °C (+32 ... +86 °F) ±1 hPa @ –52 ... +60 °C (–60 ... +140 °F)
Air temperature observation range accuracy @ +20 °C (+68 °F)	 –52 ... +60 °C (–60 ... +140 °F) ±0.3 °C (±0.54 °F)
Relative humidity observation range accuracy	 0 ... 100 %RH ±3 %RH @ 0 ... 90 %RH ±5 %RH @ 90 ... 100 %RH
Weight WXT532, WXT533 WXT536	 0.5 kg (1.1 lb) 0.7 kg (1.54 lb)
Operating conditions Temperature Humidity Air pressure Wind	 –52 ... +60 °C (–60 ... +140 °F) 0 ... 100 % RH 500 ... 1'100 hPa 0 ... 60 m/s (0 ... 134 mph)
Storage	–60 ... +70 °C (–76 ... +158 °F)
IP rating	IP65 without / IP66 with mounting kit
Power Supply operating voltage power consumption	 6 ... 24 VDC (–10 ... + 30 %) min. 0.1 mA @ 12 VDC typ. 3.5 mA @ 12 VDC max. 15 mA @ 6 VDC
Compliance EMC compatibility environmental compliance marks	 EN 61326-1, industrial environment / CISPR 32 / EN 55032, Class B IEC 60068-2-1, 2, 6, 14, 30, 31, 78 / IEC 60529, VDA 621-415 CE, RCM, RoHS, China RoHS, UKCA
Features	• WXT532: wind speed, wind direction • WXT533: wind speed, wind direction, rainfall, hail • WXT536: wind speed, wind direction, rainfall, hail, temperature, air pressure, humidity
Accessories included	• USB cable 1.4 m • USB extension 10 m • pole mounting kit • bird protection
Order Information	• WXT532: NTi Audio # 600 000 736 • WXT533: NTi Audio # 600 000 737 • WXT536: NTi Audio # 600 000 738 • Over-voltage protection: NTi Audio # 600 000 739

All information subject to change without notice.

LCJ SONIC-ANEMO-DLG-USB

WIND SPEED & DIRECTION AND TEMPERATURE SENSOR



Sonic-Anemo-DLG-USB ultrasonic weather station is designed to be used with XL3 Acoustic Analyzer. Rugged design, no moving part and one single cable for the data transmission and power supply makes it robust and easy to use.

Benefits

- Rugged design (no moving parts)
- Low power consumption
- One single cable (USB-A) for power supply and data transmission

Features

- Configured for operation with XL3 via a USB-A connection
- Wind speed, wind direction, temperature collection
- Logging interval of min, max and avg from 1 sec to 1 hour
- Data compatible with Data Explorer SW for markers generation
- Data stream through XL3 API

Delivery contents

- SONIC-ANEMO-DLG-USB ultrasonic anemometer with integrated datalogger
- 5m cable
- Adapter for vertical support
- Mounting accessories
- Installation and User Manual

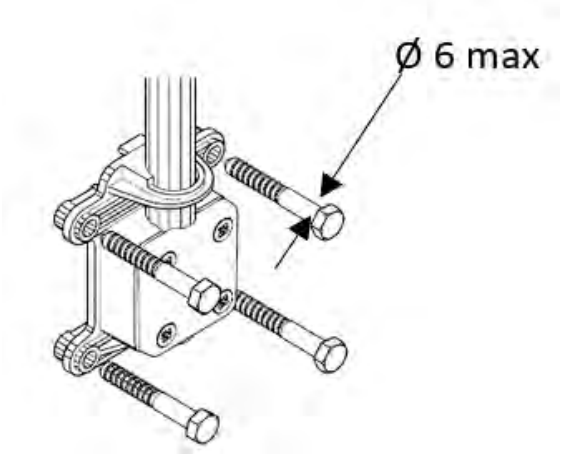
Installation and operation

Prepare the masthead for mechanical installation using the provided template for screwing. Ensure that the SONIC-ANEMO-DLG-USB sensor is oriented to face North, with the North mark located underneath the sensor. Whenever possible, avoid placing the sensor near cables that may cause high levels of radio interference.

The SONIC-ANEMO-DLG-USB comes with a mounting bracket allowing two mounting methods:

On a vertical surface:

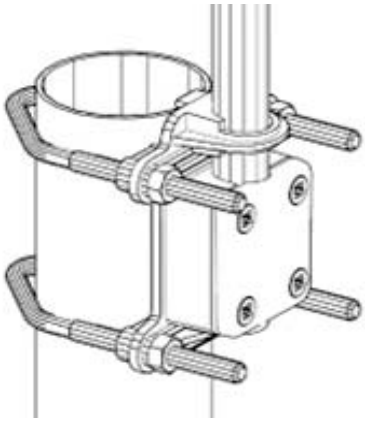
(the sleeper screws are not supplied)



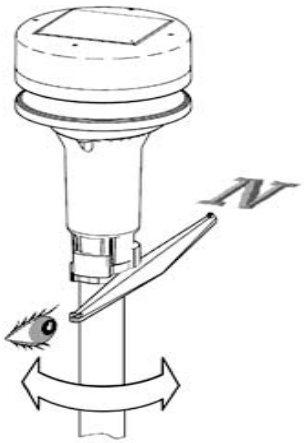
On apole

Pole diameter: Ø 35 mini ; Ø 48 maxi.

Max. tightening torque: 1.5 N.m



The sensor must be aligned to North. An alignment tool is supplied for this purpose. Clip the tool on the tube and slide it so that it snaps into the dedicated slots. Do not tamper with the slots. The tool must gently find its place. Slightly loosen the 4 screws that hold the tube. Align the tool - and the sensor - to North. Tighten the screws. Remove tools after use.



Note: Magnetic deviation must be considered to reference the measurements to True North.

Note: for mounting on a vertical surface, Glomex® RA106BRACKET and RA106BRACKINOX brackets are compatible. (see example opposite, not supplied)

To establish the connection between SONIC-ANEMO-DLG-USB and the XL3 Acoustic Analyzer, simply plug the cable into the USB A socket on the bottom of your XL3.

XL3 data sample

The XL3 Acoustic Analyzer logs weather data as a .txt file, similar to noise data. Here is an example of weather data stored with a logging period of 1 sec:

```
XL3 Weather Logging:
--------------------


# Hardware Configuration
    Device Info:        XL3, SNo. A3A-00493-D1, FW1.38
    Sensor S1:          LCJ Capteurs, SNo. 0724SDU008, USB
    Time Zone:          Europe/Paris (UTC +02:00 DST)

# Measurement Setup
    Log-Interval:       00:00:01.0

# Time
    Start:              2024-10-03, 15:35:51

# Weather Log Results
```

Date	Time	Speed_Min S1	Speed_Avg S1	Speed_Max S1	Dir_Min S1	Dir_Avg S1	Dir_Max S1	Temp S1
[YYYY-MM-DD]	[hh:mm:ss]	[m/s]	[m/s]	[m/s]	[deg]	[deg]	[deg]	[degC]
2024-10-03	15:35:59	0.80	1.20	1.70	0	359	323	18.0
2024-10-03	15:36:00	0.80	1.27	1.60	11	8	341	18.0
2024-10-03	15:36:01	1.10	1.20	1.30	7	12	20	18.0
2024-10-03	15:36:02	1.40	1.80	2.30	11	25	44	18.0
2024-10-03	15:36:03	1.90	2.03	2.10	4	15	23	18.0
2024-10-03	15:36:04	2.10	2.33	2.50	18	21	24	18.0
2024-10-03	15:36:05	1.70	1.90	2.10	23	25	30	18.0
2024-10-03	15:36:06	1.90	2.03	2.20	28	29	30	18.0
2024-10-03	15:36:07	1.80	2.10	2.30	17	22	27	18.0
2024-10-03	15:36:08	1.70	1.87	2.10	27	31	35	18.0
2024-10-03	15:36:09	2.40	2.50	2.60	30	33	35	18.0
2024-10-03	15:36:10	2.20	2.45	2.60	22	27	30	18.0
2024-10-03	15:36:11	2.50	2.67	2.80	37	37	39	18.0
2024-10-03	15:36:12	2.70	2.83	3.00	33	37	43	18.0
2024-10-03	15:36:13	2.60	2.90	3.30	30	32	39	18.0
2024-10-03	15:36:14	2.20	2.47	2.70	25	36	41	18.0
2024-10-03	15:36:15	1.40	1.77	2.20	29	32	39	18.0
2024-10-03	15:36:16	0.60	1.05	1.40	27	30	34	18.0
2024-10-03	15:36:17	0.40	0.47	0.60	18	29	44	18.0
2024-10-03	15:36:18	0.00	0.17	0.40	44	224	224	18.0

Technical Specifications	
Output data format	Serial link TTL 3V
Information transmitted	Min, Max, Avg W. Speed, Min, Max, Avg. W. Direction, Temperature
Output rate	Up to 1Hz
Wind module sensitivity	0.25 m/s
Wind module resolution	Up to 0.05 m/s
Wind module dynamic	0.12 to 40 m/s
Direction sensitivity	+/- 1,5°
Direction resolution	Up to 1°
Operating temperature	-15°C (without icing) to +55°C
Connection	USB-A
Weight	Head = 180 g | Complete set = 240 gr
Typical wind speed accuracy	• At 2.1 m/s: ±12% / ±0.35 m/s • At 3.0 m/s: ±6% / ±0.30 m/s • At 18.0 m/s: ±5% / ±0.75 m/s
Typical wind direction accuracy	• At 2.1 m/s: ±10° • At 3.0 m/s: ±6° • At 18.0 m/s: ±2°
Order Information NTi Audio #	600000746

DISTRIBUTOR CONTACT:
CALTRON PTE LTD
email: caltron@caltron.sg
www.caltron.sg

Weatherproof Enclosure

for Noise Monitoring Terminal

Noise Monitoring Terminal IP55
with outdoor mic mounted on tripod

The weatherproof enclosures (Large or Compact) are tailored fixed installation solutions for unattended noise monitoring. The enclosures are highly secure and constructed of strong, hard-wearing materials – available with IP55 or IP66 rating.

The weatherproof enclosure offers enough space for the sound level meter and required accessories. It includes a power module converting the external mains power supply to the internally required DC power levels. The active ventilation of the IP55 variant cools the interior in hot external conditions or where the terminal is located in areas of prolonged and direct sunlight.

Features

- Dedicated permanent noise monitoring solution
- Ready-made for mounting XL2 or XL3 Sound Level Meter
- Lockable
- Active ventilation included (IP55 only)

Optional Pole Mount Kit
for Noise Monitoring Terminal

Additionally required to complete the noise monitoring terminal:

- XL2 or XL3 Sound Level Meter
- Outdoor Microphone M2230-WP / M2340-WP (class 1) or M4261-WP (class 2)
- 4G/LTE Gateway (SIM-card by customer)
- ASD Cable from sound level meter to measurement microphone (available in length 5 m, 10 m, 20 m)
- Optional: Pole Mount Kit for Noise Monitoring Terminal
- Optional for XL2: NetBox for remote access
- Mains power cable (by customer)
- Tripod or microphone mast (by customer)

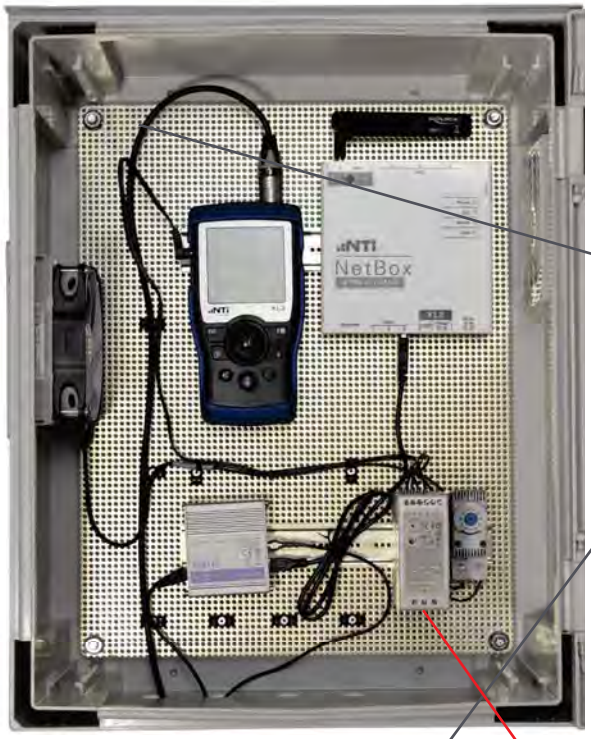
Specifications

	Weatherproof Enclosure Large IP55	Weatherproof Enclosure Large IP66	Weatherproof Enclosure Compact IP66
Material	Polyester, powder coated RAL 7035	Polyester, powder coated RAL 7035	Glass fibre reinforced polycarbonate
Ventilation	Ventilator On/Off via automated temperature control	–	–
Power Supply	Mains power 100 – 240 VAC		
Mounting	Mounting screws at each corner Optional: mounting brackets for pole mounting		
Scope of Supply	• Lockable terminal box (Compact: with padlock) • Circuit Breaker 2 poles, 16 A • Power module • Mounting plate for XL2 or XL3 • Mounting plate for NetBox • Adapter cable for NetBox power supply • Mains power adapter cable • Cable glands for 5 – 10 mm cable diameter • Ventilation (only for enclosure Large IP55)		
Outer Dimensions	515 x 415 x 230 mm (20.3″ x 16.4″ x 9.1″)	515 x 415 x 230 mm (20.3″ x 16.4″ x 9.1″)	400 x 400 x 130 mm (15.8″ x 15.8″ x 5.2″)
Temperature Range	–40 °C to +80 °C (–32° to 176 °F)		
Flammability	–	–	UL 746C 5 inch flame test
Optional Accessory	Pole Mount Kit, NTi Audio # 600 000 483	Pole Mount Kit, NTi Audio # 600 000 483	Pole Mount Kit, NTi Audio # 600 000 484
Order Information	NTi Audio # 600 000 480	NTi Audio # 600 000 486	NTi Audio # 600 000 485

All information is subject to change without notice.

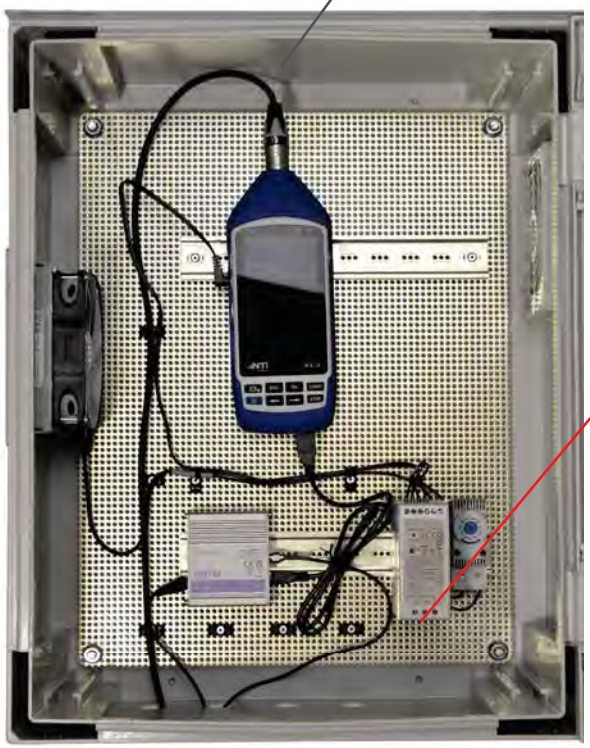
Weatherproof Enclosure Large, IP55 with Sound Level Meter

Setup A) with XL2, Netbox and Teltonika Gateway



ASD Cable to Outdoor
Measurement Microphone

Setup B) with XL3 and Teltonika Gateway



Connect Mains Power Cable here

Weatherproof Enclosure Compact, IP66 with Sound Level Meter

Setup A) with XL2, Netbox and Teltonika Gateway

ASD Cable to Outdoor
Measurement Microphone

Connect Mains Power Cable here

Setup B) with XL3 and Teltonika Gateway

DISTRIBUTOR CONTACT:
CALTRON PTE LTD
email: caltron@caltron.sg
www.caltron.sg

Basic Outdoor Case

for XL2 Sound Level Meter

The Basic Outdoor Case is a simple and efficient solution for outdoor noise monitoring. Powered either by an external mains supply or a small, high capacity battery pack the case is more than adequate for a number of days of monitoring. The robust and lightweight design protects the XL2 and accessories from a wide range of inclement weather conditions.

The hard wearing foam compartments contain the XL2 Sound Level Meter and M2230-WP outdoor microphone. Generous additional space is available for the battery pack and accessories.

Features

- Case is lockable with a key
- Mountable to a pole with straps for theft protection
- Available in IP43 and IP63 protection ratings

Basic Outdoor Case with XL2, Outdoor Microphone and accessories

Rain-protected cable aperture with case closed (IP43 configuration)

The case is lockable and available in either an IP43 rated model or an IP63 model. Cable connections for the microphone and external power supply are routed to the outside of the case via a splash-protected cable gland in the IP43 model. The IP63 Basic Outdoor Case comes with two waterproof XLR chassis connectors, an ASD Cable and a mains adapter with waterproof connectors.

Specifications

Typical battery life time powering the XL2 Sound Level Meter with 12 V Battery	• 12 Ah battery: 2 days • 22 Ah battery: 4 days • 42 Ah battery: 8 days
XL2 Power Supply	7.5 - 20.0 VDC @ minimum 6 Watt
Battery Cable	• ring cable shoe ending for 6 mm mounting screw • includes short-circuit safety fuse
Connectors @ IP63 rating version	• Measurement Microphone Neutrik TOP 5 pol female, IP65 Assignment: 1 - Ground, 2 - Hot, 3 - Cold, 4 - ASD • Power Supply Neutrik TOP 5 pol male, IP65 Assignment: 1 - Ground, 2 - Voltage
Scope of Supply	• IP43 » Basic Outdoor Case » Battery cable, # 650 000 118 • IP63 » Basic Outdoor Case » NetBox mains adapter with IP65 connector, # 620 000 010 » Adapter cable for NetBox power supply, # 650 000 141 » Special 5 m ASD Cable with IP65 connector, # 650 000 098 » Battery cable, # 650 000 118
Dimensions	• Case: 470 x 375 x 140 mm, 18.5" x 14.8" x 5.5" • Space for Accessories in Case: 220 x 187 x 60 mm, 8.7" x 7.4" x 2.4"
Temperature	-40 °C to +80 °C (-32° to 176 °F)
NTi Audio #	• 600 000 471 (IP43 rating) • 600 000 473 (IP63 rating)

Waterproof connectors for microphone and external power supply (IP63 configuration)

Removed protection plugs of waterproof connectors for microphone (IP63 configuration)

DISTRIBUTOR CONTACT:
CALTRON PTE LTD
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Heavy Duty Outdoor Case

for XL2 Sound Level Meter

The heavy duty outdoor case is a professional solution for short- and medium term unattended noise monitoring. The case provides comprehensive protection against dust, water and impacts. Internal dimensions provide ample space for battery packs to power the XL2 Sound Level Meter.

This heavy duty case protects the XL2 Sound Level Meter from all manner of weather conditions and unauthorized access to the case contents. It is lockable with a standard padlock and available with IP43 and IP65 protection ratings.

Features

- IP43 or IP65 Heavy Duty Outdoor Case
- Padlock Mounting
- Holds XL2, Outdoor Microphone, NetBox and Battery Packs

Heavy Duty Outdoor Case (equipment not included)

Rain-protected cable aperture
with case closed
(IP43 configuration)

Waterproof connectors for microphone
and external power supply
(IP65 configuration)

Removed protection plugs of
waterproof connectors for microphone
(IP65 configuration)

The splash-proof cable gland on the side of the IP43 case offers full flexibility in routing the required cable connections to the exterior. The IP65 version provides two waterproof XLR chassis connections and includes a special 5m ASD Cable with gender change and a mains adapter with waterproof connectors.

Specifications

Heavy Duty Outdoor Case contains space for	• XL2 Sound Level Meter • M2230-WP Outdoor Measurement Microphone with connected ASD Cable • Precision Calibrator • NetBox with 3G Modem and antenna • 2x Battery Packs
Battery Pack	Inlay optimized for 2 pcs. battery packs (not included) with dimensions 161 x 115 x 56 mm (6.3" x 4.5" x 2.2")
Typical battery life time	XL2 Sound Level Meter • 1x 22 Ah battery pack: 4 days; 2x 22 Ah: 8 days XL2 Sound Level Meter & NetBox (LAN, Wi-Fi) • 1x 22 Ah battery pack: 2 days; 2x 22 Ah: 4 days XL2 Sound Level Meter & NetBox with 3G Modem • 1x 22 Ah battery pack: 1.3 day; 2x 22 Ah: 2.6 days
Power Supply	• XL2 » 7.5 to 20.0 VDC » Power consumption < 3 W • NetBox » 7.5 to 16.0 VDC » Power consumption typ. 3 W
Connectors @ IP65 rating version	• Measurement Microphone Neutrik TOP 5 pol female, IP65 Assignment: 1 - Ground, 2 - Hot, 3 - Cold, 4 - ASD • 1x Power Supply Neutrik TOP 5 pol male, IP65 Assignment: 1 - Ground, 2 - Voltage • Prepared for operation without battery packs • Using an externally charged battery pack requires modifications of power cabling; one battery pack may be externaly charged upon modification
Scope of Supply	• IP43 » Heavy Duty Outdoor Case • IP65 » Heavy Duty Outdoor Case » NetBox mains adapter with IP65 connector, 2m, # 620 000 010 » Adapter cable for NetBox power supply, # 650 000 141 » Special 5 m ASD Cable with IP65 connector, # 650 000 098
Dimensions	• Case: 540 x 350 x 135 mm (21.3" x 13.8" x 5.3") • Space for a battery pack(s) in the case: 380 x 56 x 115 mm (15" x 4.5" x 2.2")
Weight (empty)	3.3 kg (7.3 lbs.)
Temperature Range	–40 °C to +80 °C (–32° to 176 °F)
NTi Audio #	• 600 000 476 (IP43 rating) • 600 000 477 (IP65 rating)
Recommended Accessory	Tracer Battery Adapter Cable (NTi # 600 000 478)

DISTRIBUTOR CONTACT:
CALTRON PTE LTD
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CALTRON PTE LTD

Heavy Duty Outdoor Case

for XL3 Sound Level Meter

The heavy duty outdoor case is a professional solution for short- and medium term unattended noise monitoring. The case provides comprehensive protection against dust, water and impacts. Internal dimensions provide ample space for battery packs to power the XL3 Sound Level Meter.

This heavy duty case protects the XL3 Sound Level Meter from all manner of weather conditions and unauthorized access to the case contents. It is lockable with a standard padlock and available with IP43 and IP65 protection ratings.

Features

- IP43 or IP65 Heavy Duty Outdoor Case
- Padlock Mounting
- Holds XL3, Outdoor Microphone, 4G/LTE Gateway, Battery Packs

Heavy Duty Outdoor Case (equipment not included)

Rain-protected cable aperture
with case closed
(IP43 configuration)

Waterproof connectors for microphone
and external power supply
(IP65 configuration)

Removed protection plugs of
waterproof connectors for microphone
(IP65 configuration)

The splash-proof cable gland on the side of the IP43 case offers full flexibility in routing the required cable connections to the exterior. The IP65 version provides two waterproof XLR chassis connections and includes a special 5 m ASD Cable with gender change and a mains adapter with waterproof connectors.

Specifications

Heavy Duty Outdoor Case contains space for	• XL3 Sound Level Meter • M2230-WP or M2340-WP or M4261-WP Outdoor Measurement Microphone with ASD Cable • Class 1 Sound Calibrator • 4G/LTE Gateway (AU/EU/JP) *or* 4G/LTE Router (US) • 2x Battery Packs
Battery Pack	Inlay optimized for 2 pcs. battery packs (not included) with dimensions 161 x 115 x 56 mm (6.3" x 4.5" x 2.2")
Typical battery life time	XL3 Sound level Meter • 1x 22 Ah battery pack: >7 days • 2x 22 Ah battery packs: 14.5 days XL3 with LAN or Wi-Fi connection • 1x 22 Ah battery pack: 7 days • 2x 22 Ah battery packs: 14 days XL3 Sound Level Meter with 4G/LTE Gateway *or* Router • 1x 22 Ah battery pack: 3 day • 2x 22 Ah battery packs: 6 days
Power Supply	XL3 Sound level Meter • 7.5 to 20 VDC (power consumption typ. 1.5 W @ LCD off) 4G/LTE Gateway • 9 to 30 VDC (power consumption typ. 2 W)
Connectors @ IP65 rating version	• Measurement Microphone Neutrik TOP 5 pol female, IP65 Assignment: 1 – Ground, 2 – Hot, 3 – Cold, 4 – ASD • 1x Power Supply Neutrik TOP 5 pol male, IP65 Assignment: 1 – Ground, 2 – Voltage • Prepared for operation without battery packs • Using an externally charged battery pack requires modifications of power cabling; one battery pack may be externaly charged upon modification
Scope of Supply	• IP43: Heavy Duty Outdoor Case • IP65: Heavy Duty Outdoor Case with special 5 m ASD Cable with IP65 connector (NTi # 650 000 098)
Dimensions	• Case: 540 x 350 x 135 mm (21.3" x 13.8" x 5.3") • Space for a battery pack(s) in the case: 380 x 56 x 115 mm (15" x 4.5" x 2.2")
Weight (empty)	3.3 kg (7.3 lbs.)
Temperature Range	–40 °C to +80 °C (–32° to 176 °F) ⚠ **Warning: Avoid Direct Sunlight** Do not expose the product to direct sunlight for extended periods. Prolonged exposure may cause overheating.
NTi Audio #	• 600 000 704 (IP43 rating) • 600 000 705 (IP65 rating)
Recommended Accessories	• Tracer Battery Adapter Cable (NTi # 600 000 478) • AU/EU/JP: 4G/LTE Gateway (NTi # 600 076 011) US: 4G/LTE Router (NTi # 600 076 012)