ACT-400

Acoustic Connected Terminal.
Pair it, Plug it, Leave it

The Acoustic Connected Terminal – ACT-400 is the newest addition to Acoem's ecosystem. It combines the precision of a Class 1 sound level meter with the maximum protection of an outdoor kit and full connectivity with Cadence™.

Specifications

IEC class: IEC 61672-1 ed. 2.0 (2013)
IEC 61620 (1995) NF EN 61260/A1 (2002):
Sound Level Meter, Integrating Sound Level Meter with storage, group X.

Dynamic range: 21-138 dB (A, B), 26-138 dB (C), 31-138 dB (Z)
1 single range for a rated sensitivity of 50 mV/Pa

Linear operating range for A-weighting:
5 frequencies :
31,5 Hz : 26-97 dB; 1 kHz : 24-137 dB; 4 kHz : 24-137 dB;
8 kHz : 24-133 dB; 12,5 kHz : 24-129 dB

Dynamic range Peak: 61-140 dBC, 1 single range

Time weightings: Slow, Fast, Impulse, Peak

Frequency weightings: A, B ,C,Z,

Instantaneous broadband values stored:

	LXY				LXYeq				LXYTd	LXYMinMax			
	A	B	C	Z	A	B	C	Z	A	A	B	C	Z
F	X	X	X	X	X	X	X	X	X	X	X	X	X
S	X	X	X	X	X	X	X	X	X	X	X	X	X
I	X	X	X	X	X	X	X	X	X	X	X	X	X
Pk			X	X									

LnsT (sliding Ln), Laeqst (sliding Laeq), LAexPT (expsore level)
"PNL/PNLT for Aircraft and helicopter measurements applications

Filters: 1/1 (8Hz-16kHz) et 1/3 (6.3Hz-20kHz)

Statistics: 7 selectable Ln in parallel from L1 to L99, 1 dB class;
Samples for calculation: T if Leq or 20 ms if LXY, 0.1 dB resolution

Input high pass filter: 0,3 Hz / 10 Hz

Reference level: 94 dB

Audio recording: Uncompressed metrological signal, Fs = 51200 Hz;
Sampling frequencies: 51200, 25600, 12800, 6400, 3200, 1600 Hz;
Pre-trigger = 10s at Fs=51200 Hz; mp3 . wav format available.

Triggers: Settings for pre-trigger, post-trigger, minimum time, end time
Types: on instant acoustic & weather values
(except wind direction), instant spectral values, TTL input

Typical background noise (with MCE3): Less than 21,5 dB according to the measurement range

Preamplifier: Integrated, not removable

Connection: Cellular network connection: Embedded modem 4G LTE cat 4
Different modems are available depending on the region in the world.
USB: Type 2.0; mass storage mode, charge on USB
Ethernet connection: connector RJ45, Speed: 100 MB/s, DHCP mode
WIFI connection: IEEE 801.11b, g ; Access point
WIFI is used only to connect to the device but is not available for push data.

Specifications

SMS:	The device can send sms - depending on SIM card subscription options
	Send an SMS with the serial number, localization of the device, date, time, and text. SMS sent on Metrological events (acoustic or weather triggers or any triggers, low battery (less than 10%), and device displacement (anti-theft)
Electrical check:	Programmable periodicity: 1, 2 or 4 times per day (0h,0h-12h, 0h, 6h, 12h, 18h);
	3 pre-set frequencies (1000 Hz, 2000 Hz, and 4000 Hz)
	2 user-defined frequencies (between 10 Hz and 20 kHz) ;
	2 user-defined excitation levels, maximum level 5 V (100%)
TTL output:	R = 100 Ohms / 0 / 5V
TTL input:	R = 100 kOhms / 0...1V = "0" 1.8...5V ="1"
Battery:	Type lithium polymer ; Voltage 3.7V ; Capacity 6750 mAh ;
	Non-removable, charging time approximately 3 hours
Typical power consumption:	Without communication <1200 mW
Power supply – not included in the package:	DC 8 to 28 V on charge input; DC 5 V on USB input (slow charge)
	Three types of power supply are available, and you have the choice between: a weatherproof power supply, a standard power supply that can be one already used with DUO FUSION CUBE, a bar wires power supply to do your own connectors
Memory:	SD, SDHC or SDXC card, 2 GB or higher (2GB standard delivery) for measured data and signals. Minimum recommended requirement: ≥ class 10.
	Please note only SD cards provided by Acoem should be used.;
	Acoem cannot be held responsible for data loss if the SD card used is not delivered by Acoem ; Measured data is stored on the SD card every 10 seconds.; Non-volatile memory for configurations, system log (500), calibration data (500) and electrical checks (500)
Clock:	GPS PPS, error < 50 milliseconds ; Internal clock, error < 0.5 s/24 hours
Localization:	Automatic with integrated GPS;
	Information stored with measurement campaigns
Warm-up time:	From power off: < 25 seconds
Operating temperature:	–10°C to +50°C
Humidity:	IEC 60068-2-78: damp heat: 90% HR (non-condensing at 40°C)
Electromagnetic compatibility:	According to Directive 2004/108/EC ;
	NF EN 61000-6-1 NF EN 61000-6-2 NF EN 61000-6-3 NF EN 61000-6-4 (2001);
	ETSI EN 300 328 V1.5.1 (2004)
Protection:	IP55 in standard use - vertical with integral windscreen, cover connector, and nose cone - included in the package
Weight and dimensions:	775g.	H x L x P: 300x70x52mm

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Specifications

Artificial Intelligence: Source noise recognition is available with Cadence depending on the subscription.

API compatibility: Compatible with API requests to get data in JSON format directly. Get aggregated Data from Cadence in a universal format

Public IP: Not required to be used with Cadence.

Additional comments: AI compatiblesl firmware options are included in the ACT-400
Only the internal channel is available, not compatible with DMK.
The measurement configuration is changed with Cadence only.
WIFI is used to connect to the device, not to push data.

Accessories
Weatherproof kit ACC1098000
Included in the package:

Integral protection
ACC1097000

Nose cone
ACC316100A

Fastening profile
ACC1096000

Connectors cover
DU01015000

Weather stations: (not included)

	SST1070000 ANEMOMETER	SST3051000 WXT532	SST3051000 WXT536
Wind speed	✓	✓	✓
Wind direction	✓	✓	✓
Air temperature			✓
Relative humidity			✓
Rain intensity			✓
Barometric pressure			✓

ACT-400's RS232 connector is compatible with 3 sensors offering the possibility to add weather data on the campaign directly with the same device measuring synchroneously Acoustic data and available in real time with Cadence.

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