TA120

Noise measuring sensor for Smart Cities

*Optional

PRESENTATION

Noise has become an essential vector when sensing smart cities.

CESVA's more than 45 years of experience designing and manufacturing sound level meters are concentrated in the *TA120* noise measuring sensor.

The *TA120* brings together in a small sized single piece of equipment, the accuracy of a Class 1 sound level meter, maximum protection of a professional outdoor kit (rain, snow, wind, dust, birds, IP65) and full connectivity with major open source platforms and industrial protocols.

The *TA120* requires minimal annual maintenance and can be verified with an acoustic calibrator (IEC 60942).

The *TA120* offers you high precision and reliability noise measurements.

APPLICATIONS

- Smart Cities sensing
- Noise surveillance networks (permanent monitoring):
  - Road and port infrastructures
  - Industrial activities
  - Separate waste collection routes
  - Control of Works
- Noise monitoring:
  - Concerts, festivals, major events and exhibitions
  - Sports events and racetracks
  - Quiet areas (acoustically protected)
- Generating noise maps and displaying in real time noise levels

NoisePlatform

MAIN FEATURES

- Class 1 precision sensor according to IEC 61672-1.
- Protection against external agents with an outdoor kit: wind, rain and birds. Keeps class 1 precision. IP65 protection.
- Can be fully integrated into different platforms: NoisePlatform (CESVA), open source ones such as Sentilo or proprietary platforms like Telefónica or Smarty Planet.
- Light weighted small sized and easy to install in street lights, marquees, billboards, shelters, kiosks and advertising posts.
- Powered by mains, POE (Power over Ethernet), 12 VDC (Solar panels*, external batteries).
- Continuous measurement 24 h/7 days a week.
- Minimum annual maintenance. Materials used in the manufacture of *TA120* ensure a long life.
- Removable outdoor kit for quick verification and adjustment with an acoustic calibrator (IEC 60942).
- Network with unlimited number of sensors
- Communication by Ethernet (RJ45), Wi-Fi*, 3G/GPRS modem*, 4-20 mA loop*.

TA120

TECHNICAL SPECIFICATIONS

Noise measuring sensor for Smart Cities

NOISE MEASUREMENT ACCORDING TO IEC 61672

DETECTOR: Equivalent continuous sound level and Fast and Slow time weighted sound level

FREQUENCY WEIGHTING: A and C

MEASURED FUNCTION: Equivalent level with frequency weighting A and C with programable integration time from 1s to 60 min: LAeqT, LCeqT. Maximum time weighted level with fast and slow time weighting over a programable time from 1s to 60 min with frequency weighting A: LAFmaxT, LASmaxT

RESOLUTION	0.1 dB
ACCURACY according to IEC 61672-1:	class 1
MEASUREMENT SINGLE RANGE from noise:	28 to 120 dBA
LINEARITY RANGE at 1kHz :	35 to 120 dBA
MEASUREMENT SINGLE RANGE from noise:	35 to 120 dBC
LINEARITY RANGE at 1kHz :	42 to 120 dBC

ACOUSTIC VERIFICATION: with acoustic calibrator (IEC 60942)

MICROPHONE

TYPE:	½" condenser microphone
POLARIZATION:	0 V

PROTECTION AGAINST EXTERNAL AGENTS

OUTDOOR KIT:

PROTECTION AGAINST: Rain, snow, wind and birds

DEGREE OF PROTECTION PROVIDED BY THE ENCLOSURE

CONNECTIVITY

USB COMMUNICATION for configuration:
TYPE: Digital complies with USB rev. 2.0 (type B)
ETHERNET COMMUNICATION for data transmission:
PORT: RJ45, 10/100 Mbps
4-20 mA CURRENT LOOP:
CL120 module* required
TYPE: Analog
3G/GPRS COMMUNICATION for data transmission:
MR123 module* required (micro SIM)
Wi-Fi COMMUNICATION for data transmission:
WF120 module* required

OPTIONS*

WF120	Module for data transmission Wi-Fi
MR123	Module for data transmission 3G/GPRS

*Optional

Integration times shorter than 10s require high-speed networks

TRANSMISSION PROTOCOLS

PROTOCOL :	HTTP, HTTPS (Secure connection)
IP ADDRESS:	Static or dynamic (DHCP)

REMOTE CONTROL

FEATURES :	Remote configuration of the sensor

POWER

MAINS: 100/240 V~ 0.6 A | 50/60 Hz

TYPICAL POWER CONSUMPTION: 1 W

POWER CONSUMPTION charging BA120 battery*: 18 W

URBAN LIGHTNING NETWORK: BA120 battery* required

Powering form the urban lightning network with battery support.

PoE (Power over Ethernet)

Uninterrupted power through the Ethernet cable.

ENVIRONMENTAL CRITERIA

INFLUENCE OF THE TEMPERATURE:

CORRECT NOISE

MEASUREMENT RANGE: from -10 to +50 °C

RANGE FOR CORRECT CHARGING

AND DISCHARGING OF THE BATTERY*: from 0 to +40 °C

DIMENSIONS, WEIGHT & MARKING

DIMENSIONS:	395 x 120 x 91 mm
WEIGHT:	without battery 960 g
	with battery* 1150 g

CL120	Analog output for 4-20mA current loop
BA120	Internal lithium battery for 24h cycles
PS120	Solar panel kit (BA120 Battery* required)

The characteristics, technical specifications and accessories may vary without prior notice