SOU12V90CAN001
SOUND MODULE

CONTENT

1. Specifications
2. Drawing
3. Function Description
4. Test Method
5. Reliability Test
6. Packing
7. History Change Record



1. SPECIFICATIONS

Parameter	Unit	Conditions / Description	MIN	TYP	MAX
Operating Voltage	V		9		16
Current Consumption	mA				300
SPL	dB	At 10 km/h (12V/1m)	50		90
		At 20 km/h (12V/1m)	50		90
		At Reverse Drive (12V/1m)	50		90
Terminal Connection		+12VDC, GND, CAN_H, CAN_L			
IP Rating	IP			67	
Housing Colour				BLACK	
Contact				TERMINAL	
Packaging				BOX	
Operating Temperature	°C		-40		+85
Storage Temperature	°C		-40		+85
Weight	g		150	170	190

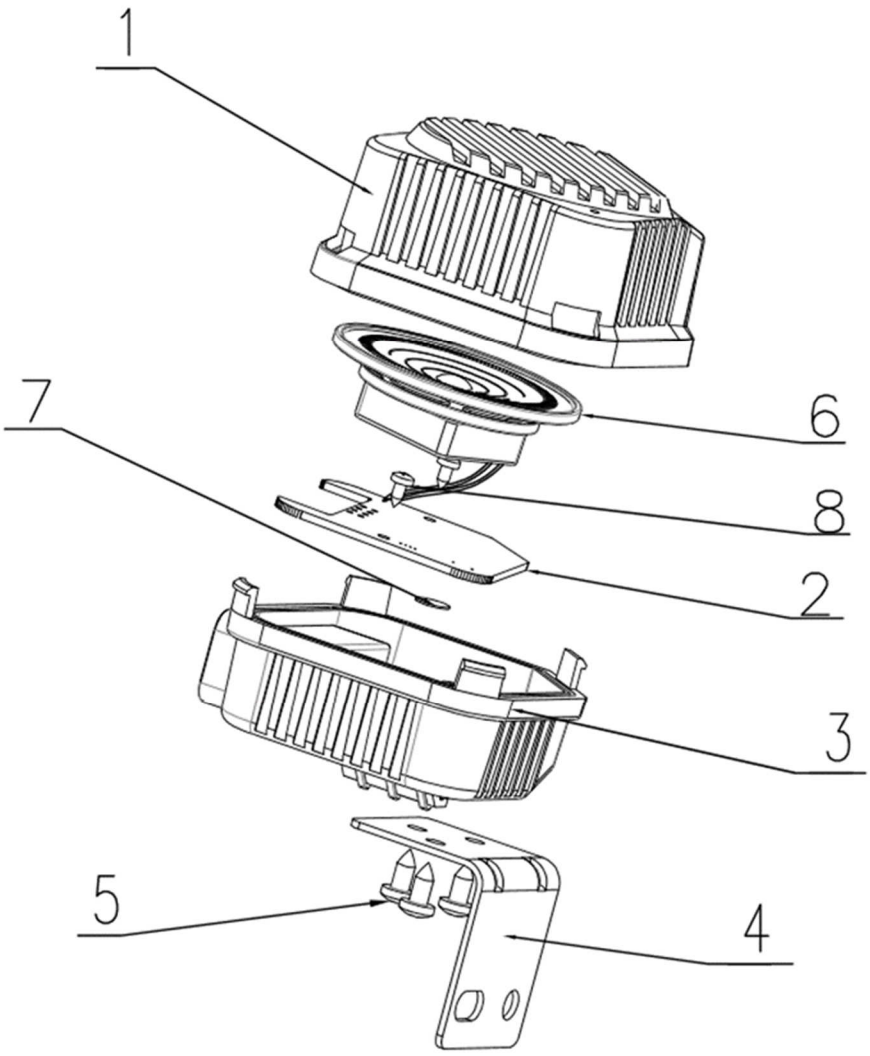
Remark:

Sound pressure is the reference value. The final sound pressure standard of the product shall be subject to the actual calibrated sample on site or the sample confirmed by the customer.

DESIGNED BY	Rabea Richter	DATE	2019.04.01	PART NO.	INDEX
RELEASED BY	Ralf Hinnerichs	DATE	2019.04.01	SOU12V90CAN001	A
CHANGED BY	Rabea Richter	DATE	2019.09.11		
DRAWING NO.	435564885				

2. DRAWING

2.2 ASSEMBLY DRAWING

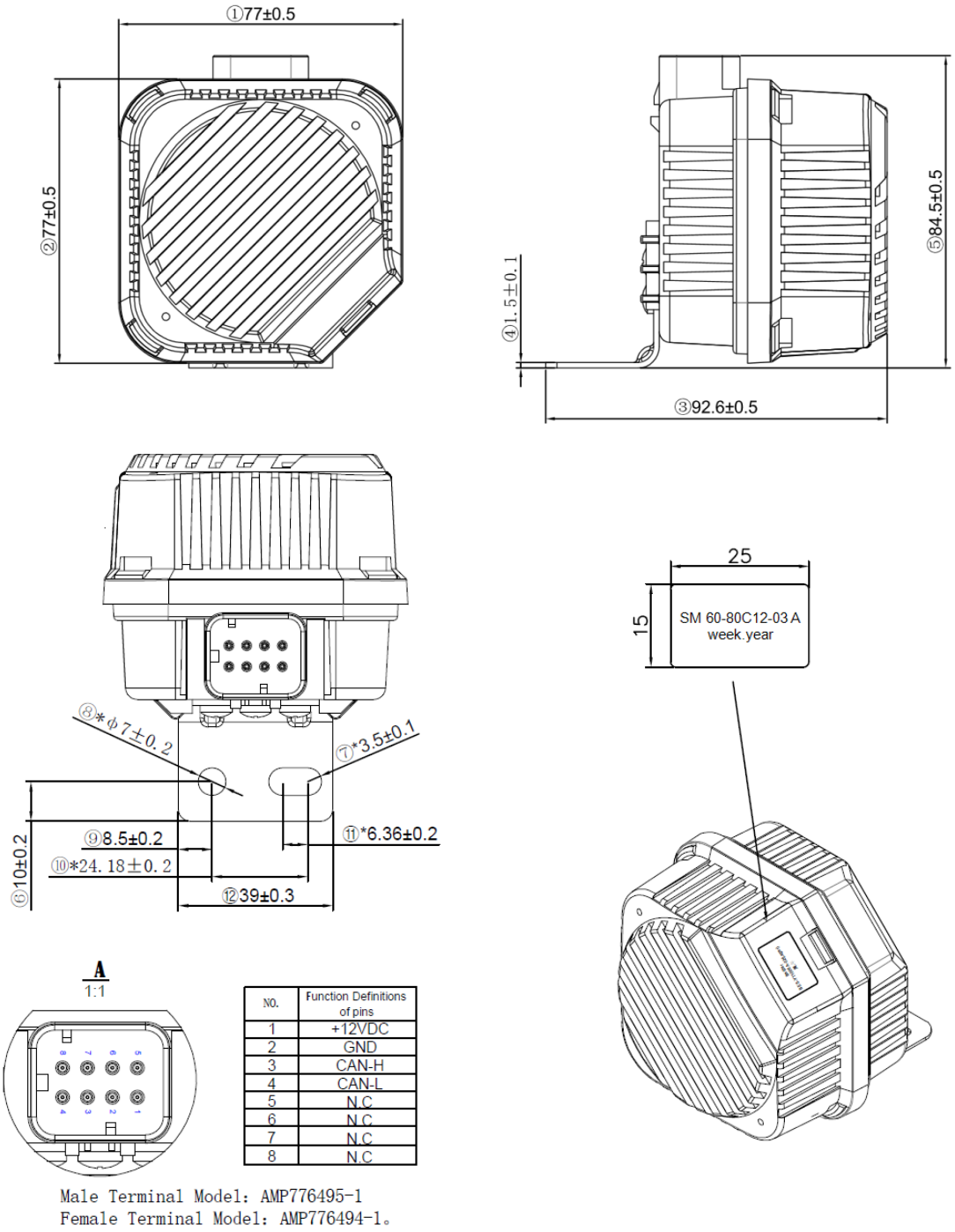


number	part name	quantity
8	Self tapping screw	2
7	Waterproof breathable membrane	1
6	Speaker	1
5	Self tapping screw	3
4	Bracket	1
3	lower housing	1
2	PCBA	1
1	Upper housing	1

Note: this product is hazardous waste after being scrapped

DESIGNED BY	Rabea Richter	DATE	2019.04.01	PART NO.	INDEX
RELEASED BY	Ralf Hinnerichs	DATE	2019.04.01	SOU12V90CAN001	A
CHANGED BY	Rabea Richter	DATE	2019.09.11		
DRAWING NO.	435564885				

2.3 DIMENSION



NO.	Function Definitions of pins
1	+12VDC
2	GND
3	CAN-H
4	CAN-L
5	N.C
6	N.C
7	N.C
8	N.C

Male Terminal Model: AMP776495-1
Female Terminal Model: AMP776494-1。

Undeclared tolerance: See the table below

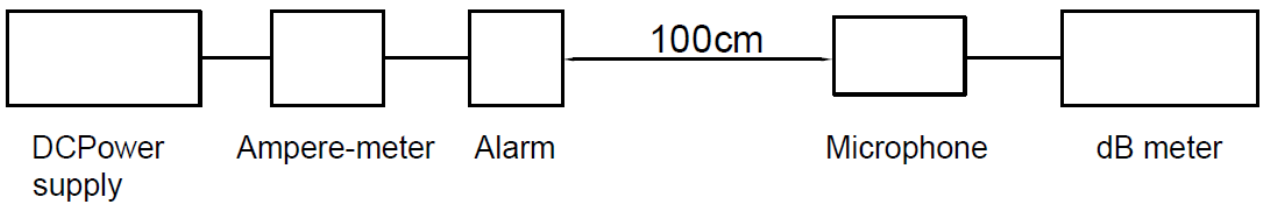
Size Range	0.5~3	>3~6	>6~30	>30~120	>120~400	>400~1000	>1000~2000	>2000~4000
Tolerance	±0.1	±0.1	±0.2	±0.3	±0.5	±0.8	±1.2	±2

DESIGNED BY	Rabea Richter	DATE	2019.04.01	PART NO.	INDEX
RELEASED BY	Ralf Hinnerichs	DATE	2019.04.01	SOU12V90CAN001	A
CHANGED BY	Rabea Richter	DATE	2019.09.11		
DRAWING NO.	435564885				

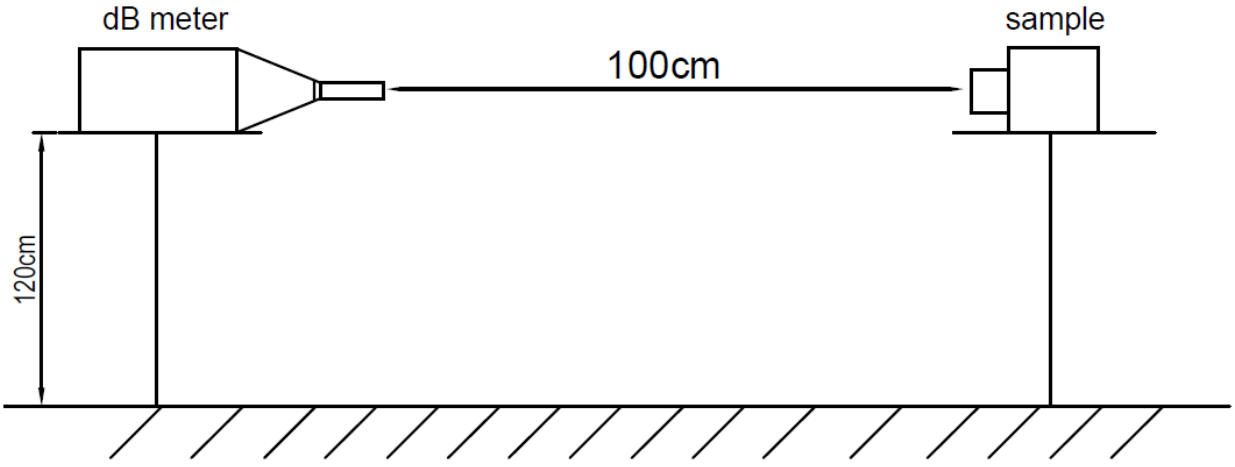
3. FUNCTION DESCRIPTION

Basic Function
The device will automatically emit the sound of the simulation engine when the vehicle is driving from 0 to 20km/h.
The sound pressure gradually increases when the speed of vehicle is 0-20km/h
The sound is not emitted when the speed is above 21km/h
The sound pressure increases or decreases when the speed of the vehicle changes.

4. TEST METHOD

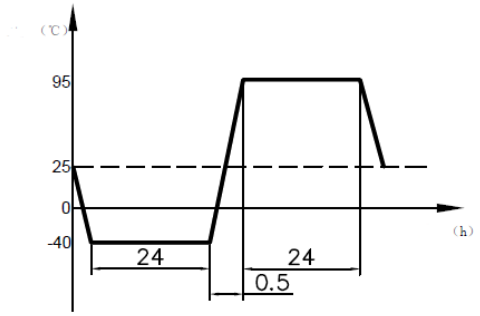


In the measuring test,the alarm are placed as follows:



5. RELIABILITY TEST

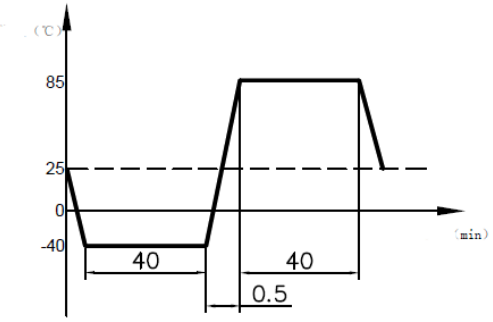
5.1 High and Low Temperature Storage Test



5.2 Rapid Change of Temperature

Cycles 100

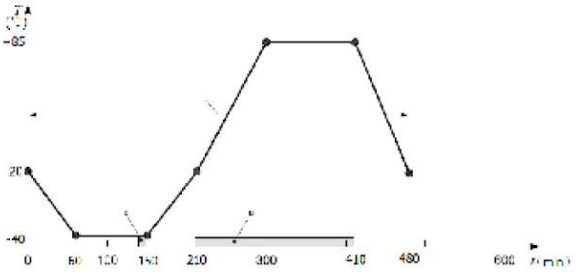
One cycle



5.3 Temperature Cycling

Operating Voltage 12VDC

Cycles 30



5.4 High Temperature with Operation

Operating Voltage 12VDC

Temperature +85°C

Duration 96 hours

5.5 Low Temperature with Operation

Operating Voltage 12VDC

Temperature -40°C

Duration 24 hours

5.6 Damp Heat Steady State Test

Test Duration 21 days

Severity (40 ±2) °C and (93 ±3) % Humidity

Operating Voltage 12VDC

Operation At the last hour of the test.

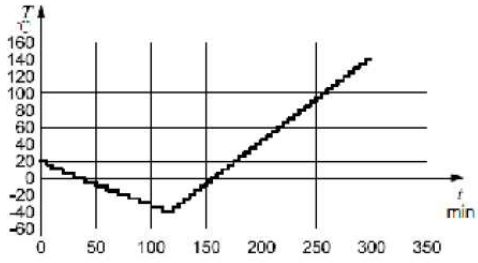
5.7 Temperature Step Test

Install the DUT in a temperature chamber, decrease the temperature in steps of 5°C from 20 °C to -40°C and then increase the temperature in steps of 5°C from -40°C to +85°C

Wait at each step until the DUT has reached the new temperature.

Perform functional tests operating mode 5.2 in accordance with ISO 16750-1 at minimum supply voltage (9VDC) and at maximum supply voltage (16VDC) in accordance with the specified ISO 16750-2 code letter at each new temperature step.

Switch the DUT off during transition to the next temperature.



5.8 High Temperature Life Test

Temperature +85°C

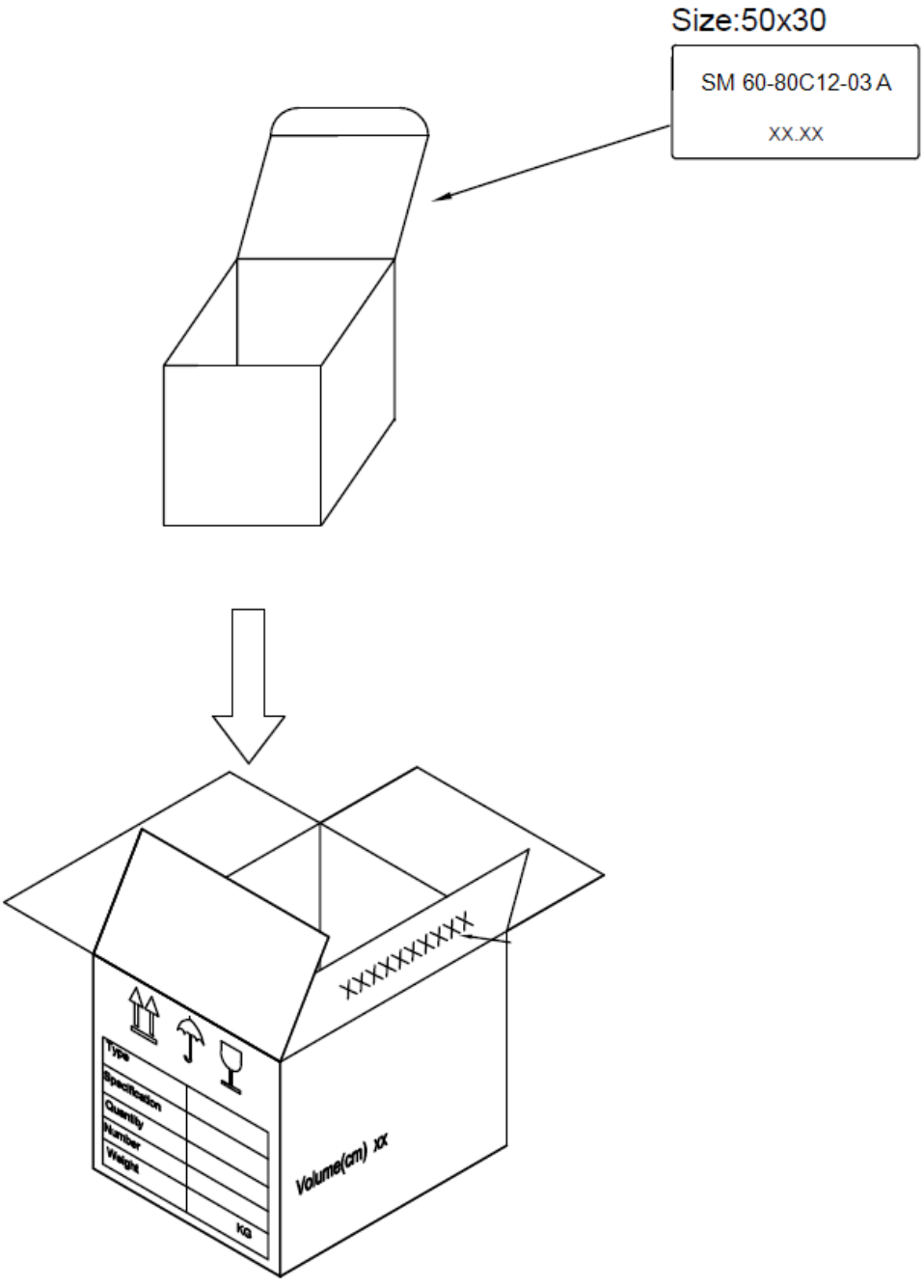
Operating Voltage 16VDC

Duration 1200 hours

DESIGNED BY	Rabea Richter	DATE	2019.04.01	PART NO.	INDEX
RELEASED BY	Ralf Hinnerichs	DATE	2019.04.01	SOU12V90CAN001	A
CHANGED BY	Rabea Richter	DATE	2019.09.11		
DRAWING NO.	435564885				

6. PACKING

6.1 PACKING DRAWING



6.2 PACKING QUANTITY

1pc per small box
Box size 103x94x110mm
50pcs/carton in total
Carton size 56x24x48cm

DESIGNED BY	Rabea Richter	DATE	2019.04.01	PART NO.	INDEX
RELEASED BY	Ralf Hinnerichs	DATE	2019.04.01	SOU12V90CAN001	A
CHANGED BY	Rabea Richter	DATE	2019.09.11		
DRAWING NO.	435564885				

7. HISTORY CHANGE RECORD

REV	CHANGE ITEMS		DATE
	BEFORE CHANGE	AFTER CHANGE	
1.		Update the drawing, add optional functions	2019.03.01
2.		SOU12V90CAN001	2019.04.01
3.	Old Layout	New Layout, delete optional functions	2019.09.10

CVEP GmbH
Taubenweg 4
92353 Postbauer-Heng

Tel.: +49 9188 30582-33
Mail: info@cvep.de
Homepage: www.cvep.de