

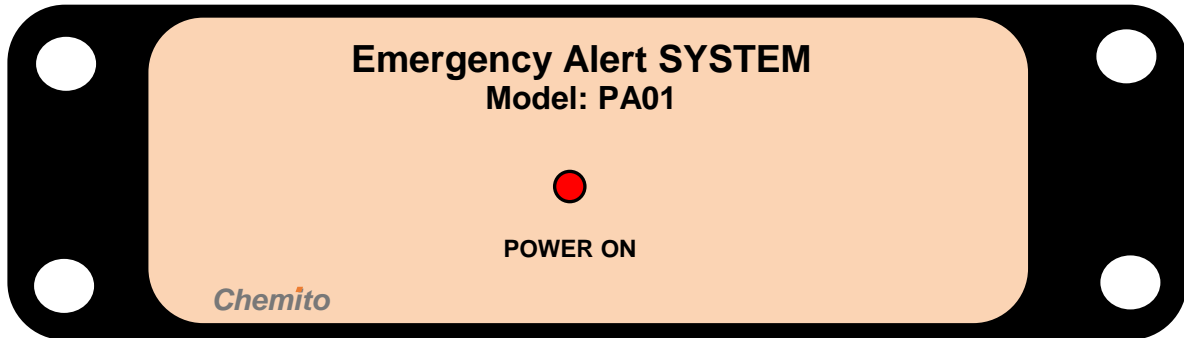
Technical Specifications of OBU-2.1: Emergency Alert System as per AIS 052

Document Title	Technical Specifications
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Revision No	1.0.0R08
Subject	Technical Specifications for Emergency Alert System as per AIS 052
Purpose	Emergency Alert System as per AIS 052
From	Chemito Infotech Pvt. Ltd
To	
Date	08/02/2018

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Document Revision No	Date	Title or Brief Description of Changes	Prepared by	Reviewed by	Approved by
1.0.0R01	31/12/2015	Original Document	Yunoos Desai	Naresh Panchal	Vishwas Puneekar
1.0.0R02	02/01/2016	<ul style="list-style-type: none"> • Chemito Standards Added • Connectors changed to Water proof • Volume control Knob removed for IP • Water proof fuse added • Temp range changed to -15°C to +80°C 	Yunoos Desai	Naresh Panchal	Vishwas Puneekar
1.0.0R03	04/05/2016	<ul style="list-style-type: none"> • Over voltage protection circuit removed • All connectors changed to standard Automotive connector • Special features added • Front panel panic button removed. 	Yunoos Desai	Naresh Panchal	Vishwas Puneekar
1.0.0R04	20/11/2016	<ul style="list-style-type: none"> • Removed panic switch on front panel • Specifications updated for separate 12 V & 24 V models 	Shital Ujjainkar	Naresh Panchal	Vishwas Puneekar
1.0.0R05	02/02/2017	<ul style="list-style-type: none"> • Change wordings at some places • Temperature range updated 	Shital Ujjainkar	Naresh Panchal	Vishwas Puneekar
1.0.0R06	29/08/2017	<ul style="list-style-type: none"> • Frequency 5~55 Hz change in vibration • Excursion -1.65mm 	Shital Ujjainkar	Naresh Panchal	Vishwas Puneekar
1.0.0R07	08/09/2017	<ul style="list-style-type: none"> • Cabinet size updated to 234 x 57 x 127 mm 	Shital Ujjainkar	Naresh Panchal	Vishwas Puneekar
1.0.0R08	08/02/2018	<ul style="list-style-type: none"> • Added new nomenclature OBU-2.1 	Shital Ujjainkar	Naresh Panchal	Vishwas Puneekar

OBU-2.1: Emergency Alert System as per AIS 052



Note: This image is only for reference

Introduction:

OBU-2.1: Emergency Alert System is designed for manual Passenger Announcement system as well as provides emergency declaration for passengers. It will accept input from Emergency declaration switch (mounted in bus). On pressing this switch, it will activate Audio Hooter through speaker & blinker as a visual indication, to declare an emergency for speedy evacuation of the passengers. Audio hooter automatically goes off when MIC switch is pressed to make announcement to passengers and resumes when the MIC switch is off.

A) INPUT – OUTPUT CONNECTIONS ON REAR SIDE CABLE:

Audio Output	2 Channel -20 W – 4 or 8 Ohms
MIC Input	External MIC with switch
Power Indication	LED indication on Front Panel
Panic Button	External Input
Blinker Output	Operating voltage (50 watt max) output with 1 sec on 0.5 sec off (without fuse)
Hooter output	On Speaker

B) ELECTRICAL PRAMETERS:

Operating Voltage	Nominal: 12 V DC / 24V DC (\pm 25%)
	Optional : Extended Supply 9 V to 36 V DC
Power Consumption	0.5 A @ 24V DC only announcement 2.5 A @ 24V DC with Blinker
Protection	Power supply input is protected against Reverse Polarity, Cranking voltage, Load Dump
	PTC Fuse

C) STRUCTURE:

1.	Cabinet of size 234 x 57 x 131 mm with Powder coating.
2.	Weight : 700 g (Approx.)
3.	Mounting arrangement by wall mounting or panel

D) QUALITY:

EMC/EMC	Test complied as per – AIS 004 Part 3
Ambient Environment	Operating temperature: -25°C to +85°C
Humidity	95% RH (Max.)
AIS 012/AIS 062 Vibration	Frequency 5~55 Hz and return to 5 Hz at a linear sweep period of 1 min/ complete sweep cycle and 10 G at max frequency Excursion - 1.65mm peak to peak over the specified frequency range Test Duration 60 minutes Direction of Vibration –X, Y, Z axis of Device as it is mounted on the vehicle.
Ingress protection	IP 66 as per IS / IEC 60947-1:2004 in conjunction with IS / IEC 60529:2001
Performance Parametric Test	Nine point, Tri voltage, Tri Temp: For 12 V Model: 9 V, 13.5 V, 16V, at -25° C, room temperature, +85° C. For 24 V Model: 18 V, 27 V, 32 V, at -25° C, room temperature, +85° C.
Cold Test	During testing DUT shall be kept inside test chamber in power ON condition and Ramp down the chamber temperature to -25 °C. Operate DUT at -25 °C, for 2 hours with continuous monitoring
High Temperature Operating Endurance	During testing DUT shall be kept inside test chamber in power ON condition and Ramp up the chamber temperature to 85 °C. Operate DUT at 85 °C for 16 hours with continuous monitoring
Damp Heat cyclic	During testing DUT shall be kept inside test chamber in power off condition IS 9000 (Part V/Sec 2)1981 at +25° C /+55°C, Humidity 95%, 24 hours for 6 Cycles in off Condition. Functional test with Power in 'On' condition at start of 2nd, 4th and 6th cycle
Fire Resistant	All cables used BIS marked, Copper conductor with fire retardant PVC insulated and withstand working temperature up to 70° C
Short Circuit Protection	All input/ output are short circuit protected except MIC
Supply reverse polarity protection	For 24 V Supply: Reverse voltage of 27.0 V to power lines for 120 Seconds ISO 16750-2:2010 For 12 V Supply: Reverse voltage of 13.5 V to power lines for 120 Seconds ISO 16750-2:2010
Insulation Resistance Test	500 V DC for 60 seconds between terminals of galvanic isolation, terminals and housing with conductive surface, terminals and electrode wrapped around the housing No arcing or puncturing of insulation allowed Insulation Resistance shall be > 1 MΩ. ISO 16750-2:2010
Cranking Voltage	As per ISO 7637-2:2004/ISO 16750-2:2010
Load Dump Test	As per ISO 16750-2:2010
ESD Protection	As per ISO 10605:2008

E) Special Features

1. Inbuilt Preamplifier for MIC.
2. Inbuilt Amplifier for passenger announcement.
3. Inbuilt blinker driving circuit.
4. AIS004 part 3 compliant.
5. Siren gets paused automatically when driver starts announcement through MIC and resume after announcement is finish.

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