1 PRODUCT SPECIFICATION FOR DISPLAY BOARD

1.1 BD1800 LED Display: Model No.BD216139

(Used as Front LED Sign for Standard Bus a per UBS II)

A) DISPLAY DIMENSIONS:

Display Size	1880 x 290 x 53 mm
Display Area	1805 x 212 mm
Character Height	205 mm

B) LED PARAMETERS:

Type of LED	Oval, 4.3 x 5.1mm dia. Diffused.
Color	Amber
Wavelength	591 to 595 nm Dominant Wavelength as per AIS-012 standard
Intensity	Multiplexed design (4:1) with 1560-2180 mCd at 20 mA
Viewing angle	120°H / 60°V
UV Resistant	Yes

C) ELECTRICAL PRAMETERS:

Operating Voltage	Nominal + 24V DC/+ 12 V DC
	Optional : Extended Supply Range 9 V to 36 V DC
Power Consumption	1 Amp. @ 24V DC
Protection	Reverse Polarity, Over voltage, Cranking voltage, Load Dump
	Resettable fuse inside the cabinet for over current
	Communication lines are protected against high voltage application and ESD

D) QUALITY: (Complied with ITS Annexure II of UBS II Specifications)

EM/EMC	Test complied as per – AIS004 Part 3
Ambient Environment	Operating temperature: -15°C to 80°C
Humidity	95% RH for +25°C/+55°C ,24 Hrs. for 6 cycles in off condition
Vibrations	10g as per AIS 012
Ingress protection	IP 66 as per IS / IEC 60947-1:2004 in conjunction with IS / IEC 60529:2001

E) DISPLAY CHARACTERISTICS:

No. of Sides	Single sided
Line Matrix	16 Rows x 139 Columns
Pitch	13.0 (H) x 13.4 (V)mm
Intensity of display	In-built light sensor with continuously variable brightness control to enable the display intensity to change based on ambient light conditions.
Viewing distance	50 meters minimum, for single line text in both Day and Night
Data interface	Via RS 485
Memory	Ability to retain the last message displayed in event of power failure without the message being reloaded from Controller

F) STRUCTURE:

Aluminum Cabinet , Powder Coated finish with toughened glass at front
Weight – 14 kg
Mounting arrangement by roof hanging, wall mounting.
Automotive grade components used , with conformal coated PCB boards
Power to signs is supplied through bus multiplex wiring system

G) TECHNICAL SPECIFICATION:

To display Bus number and Destination in Fixed, Scrolling and flashing mode formats with the help of SCU / Bus Controller with fixed route number up to 6 characters with capability to show customized graphics
Display in English (2 lines) / Hindi(1 line) / Regional (1 line) Language
Total display height is capable to accommodate two lines in English language and the Individual heights of each line are adjustable to enable one line to be larger/smaller than the second line.
Possible to display, concurrently, different messages
Able to display special signs like signs for ‘PWD enable bus’, ‘ladies special’.
Display in English and local languages using Microsoft fonts via window based software package
Possible to change/choose/select a ‘route’ remotely over the air from back office and provide current route information to back office through SCU
Back office is able to check, via SCU, the version of firmware loaded on the display.
Able to store Diagnostic trouble codes (DTC) , Parameters identifiers (PID) as per Annex-3 and data retrievable through SCU

H) PART NO. DESCRIPTION:

BD216139	F – when used as front	2 – 2 pin 250 series connector for P/S	L –Left cable entry
		3 – 3 pin 90 series connector for P/S	R – Right cable Entry

BD216139 Available with Part Number:

BD216139-F3L	Bus Display, J2 type, with 16 rows & 139 columns, used as front, with 3 pin, 90 series power supply connector and with cable entry on Left side.
BD216139-F2L	Bus Display, J2 type, with 16 rows & 139 columns, used as front, with 2 pin, 250 series power supply connector and with cable entry on Left side.

TECHNICAL DRAWING REFERENCE: MM_14_003 REV.6