FRONT LED DISPLAY: BD216139

A) 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 Lens
Color	Amber
Wavelength	591 to 595 nm Dominant Wavelength as per AIS-012 Std.
Intensity	Non-multiplexed design with intensity more than 700 mCd at 20 mA
Viewing angle	120°H / 80°V
UV Resistant	Yes

C) DISPLAY CHARACTERISTICS:

No. of Sides	Single sided
Pitch	12.5 (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

D) ELECTRICAL PRAMETERS:

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

E) QUALITY:

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

F) STRUCTURE:

Aluminum Cabinet , Powder Coated finish with toughened glass fixed with UV resistant adhesive in front at front
Weight – 14 kg
Mounting arrangement by roof hanging, wall mounting.
Conformal coated PCBA and ROHS Compliant & with automotive grade components
Power to signs is supplied through bus multiplex wiring system

G) TECHNICAL SPECIFICATION:

Displays Bus number and Destination in alphanumeric and in fixed, scrolling and flashing modes, with fixed route number up to 6 characters.
Display can 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 on each   signs (front, rear, side and inner)
Capability to display special signs like signs for 'PWD enable bus', 'ladies special'.
Capability to show special characters like (, ' " . ! + - * : ?)
Display in English and local languages using Microsoft fonts via window based software package
Sign should be able to store 'diagnostic trouble codes' (DTC)', 'parameters identifiers (PID) and data should be retrievable
Performance of display does not get affected even if one or more signs get disconnected or malfunction, (including fresh communication from ICU)
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
Ability to retain the last message displayed in the memory of the sign even in the event of power failure and without the message being reloaded (to be added in all)

SIDE/REAR LED DISPLAY – BD21691

A) DIMENSIONS:

Display Size	985 x 290 x 53 mm
Display Area	911 x 212 mm
Character Height	205 mm

B) LED PARAMETERS:

Type of LED	Oval, 4.3 x 5.1mm dia. Diffused lens
Color	Amber
Wavelength	591 to 595 nm Dominant Wavelength as per AIS-012 Std.
Intensity	Non-multiplexed design with intensity more than 700 mCd at 20 mA
Viewing angle	120°H / 80°V
UV Resistant	Yes

C) DISPLAY CHARACTERISTICS:

No. of Sides	Single sided
Pitch	9.5 (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

D) ELECTRICAL PRAMETERS:

Operating Voltage	Nominal: + 24V DC/+ 12 V DC. Supply Range 9 V to 36 V DC
Power Consumption	0.8 Amp. @ 24V DC
Protection	Reverse Polarity, Over voltage, Cranking voltage, Load Dump. Fuse inside the cabinet for over current.
	Communication lines are protected against ESD

E) QUALITY:

EM/EMC	Test complied as per – AIS 004 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

F) STRUCTURE:

Aluminum Cabinet , Powder Coated finish with toughened glass fixed with UV resistant adhesive in front at front
Weight – 8 kg
Mounting arrangement by roof hanging, wall mounting.
Conformal coated PCBA and ROHS Compliant & with automotive grade components
Power to signs is supplied through bus multiplex wiring system

G) TECHNICAL SPECIFICATION:

Displays Bus number and Destination in alphanumeric and in fixed, scrolling and flashing modes, with fixed route number up to 6 characters.
Display can 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 on each   signs (front, rear, side and inner)
Capability to display special signs like signs for 'PWD enable bus', 'ladies special'.
Capability to show special characters like (, ' " . ! + - * : ?)
Display in English and local languages using Microsoft fonts via window based software package
Sign should be able to store 'diagnostic trouble codes' (DTC)', 'parameters identifiers (PID) and data should be retrievable
Performance of display does not get affected even if one or more signs get disconnected or malfunction, (including fresh communication from ICU)
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
Ability to retain the last message displayed in the memory of the sign even in the event of power failure and without the message being reloaded

IN-BUS DISPLAY: IBD216112

A) DIMENSIONS:

Cabinet Size	912 x 180 x 53 mm
Display Area	842 x 120 mm
Character Height	120 mm

B) LED PARAMETERS:

Type of LED	Dot Matrix
Color	Amber Colored
Wavelength	591 to 595 nm Dominant Wavelength as per AIS-012 Std.
Intensity	>40 mCd
Viewing angle	45° all around
UV Resistant	Yes

C) DISPLAY CHARACTERISTICS:

No. of Sides	Single sided
Pitch	7.62 (H) x 7.62 (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	15 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

D) ELECTRICAL PRAMETERS:

Operating Voltage	Nominal: + 24V DC/+ 12 V DC. Supply Range 9 V to 36 V DC
Power Consumption	0.4 Amp. @ 24V DC
Protection	Reverse Polarity, Over voltage, Cranking voltage, Load Dump. Fuse inside the cabinet for over current.
	Communication lines are protected against ESD

E) QUALITY:

EMI/EMC	Test complied as per – AIS 004 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

F) STRUCTURE:

Aluminum Cabinet , Powder Coated finish with poly glass /acrylic/ toughened glass at front
Weight - 5 kg
Mounting arrangement by roof hanging, wall mounting
Power to signs is supplied through bus multiplex wiring system
Conformal coated PCBA and ROHS Compliant

A) TECHNICAL SPECIFICATION:

Displays Bus number and Destination in alphanumeric and in fixed, scrolling and flashing modes, with fixed route number up to 6 characters.
Display can 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 on each signs (front, rear, side and inner)
Capability to display special signs like signs for 'PWD enable bus', 'ladies special'.
Capability to show special characters like (, ' " . ! + - * : ?)
Display in English and local languages using Microsoft fonts via window based software package
Sign should be able to store 'diagnostic trouble codes' (DTC)', 'parameters identifiers (PID) and data should be retrievable
Performance of display does not get affected even if one or more signs get disconnected or malfunction, (including fresh communication from ICU)
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
Ability to retain the last message displayed in the memory of the sign even in the event of power failure and without the message being reloaded