

FANOUT CUM BUFFER UNIT

MPN #JNJBUF001,

Technical specifications of Buffer unit

1. Technical specification of Buffer out unit are appended below:-

(a) **Two independent user-configurable input ports as follows:-**

(i) **Input 02 ports - RS 422/232** (Switchable with dip switch)

(b) **Eight user-configurable output ports as follows: -**

(i) **Output 08 ports (O/P 1 to 8) for RS 422/232** (switchable) taking input.

(c) **10 DIP switches** for selecting the format of RS 422/232 signals.

(d) **+/- 10 KV Electronics Discharge protection.**

(e) **Short Circuit protection** on Data lines.

(f) **Enclosure** made up of **Powder coated Aluminium and Stainless steel** material having anti rust and anti-vandal properties in table mount configuration.

(g) **Compact Size, light weight and portable** not exceeding **190mm x 240mm x 100mm**. One **LED** should be mounted in front indicating availability of power supply to the unit.

(h) The **schematic diagram, Bill of material** to achieve the interface **Gerber file** used to print PCBs and drawing of proposed interface units is required to be shared with WESEE and post validation/ concurrence by WESEE, the units are required to be developed.

(j) **Connector Details.** Connectors made up of **Aluminium/ Nickel/ Bronze Alloy** to provide protection against corrosion and additional ruggedness (Amphenol / Allied/ equivalent make). The input connectors will be **five pin female chassis mount** and output connectors will be **five pin male chassis mount**.

(k) **Power Supply.** The interface unit should be able to operate on **220 Volts, 50 Hz, 1 phase power supply**. The power supply should have suitable range of operation in addition to having over-current, over voltage protections and capability to provide electrical isolation in case of high Voltage surges.

(l) **Environmental specifications.** Interface units should confirm to **IEC 60945 standards**. Certificate of compliance of the same is required to be provided by the supplier.

(m) **Technical Details.** The unit will receive input in **RS 232/ RS422 format on 02 input ports**. Outputs in RS232 and/ or RS422 on **04 output ports** are to be available from 1st input and on other **04 ports** from the 2nd input. The detailed specifications of both these formats vis-a-vis the unit are tabulated below:

Specifications	RS232	RS422
Maximum Driver Voltage	+/- 25V	-0.25 V to +6V
Driver Output Signal Level (Loaded Min.)	+/- 5V to +/- 15V	+/- 2V to +/-6V
Driver Output Signal Level (Unloaded Max)	+/- 25V	+/- 6V
Driver Load Impedance (Ohms)	3000-7000	100
Max. Driver Current in High Z State	+/- 6 mA @ +/- 2V	+/- 5uA
Slew Rate (Max.)	30 V/uS	N/A
Receiver Input Voltage Range	+/- 15V	0 to 0.8V - 02 to 06 V
Receiver Input Sensitivity	+/- 3V	+/- 200 mV

(p) **Operating Procedure.** Serial inputs should be connected to the input connectors provided on the Rear Panel. Input port should be independently configurable by the user to accept data in RS232 and/ or RS422 formats using the DIP switches in the Front Panel. The following are the sample connection details that may be followed for configuring the input in different combinations:-

(i) **Configuring input port in RS232:-**

Connector	Pin A	Pin E	Dip Switch No	Switch Position
I/P 1	RS232	Signal Gnd	9	UP
I/P 2	RS232	Signal Gnd	10	UP

(ii) **Configuring input port in RS422:-**

Connector	Pin A	Pin B	Dip Switch No	Switch Position
I/P 1	RS422 +ve	RS422 -ve	9	DOWN
I/P 2	RS422 +ve	RS422 -ve	10	DOWN

(q) The unit should have **08 user-configurable output circular connectors** (O/P 1 to O/P 8 on the Rear Panel) to provide serial data in either RS232 or RS422 format. This selection is to be made using **DIP switches on the front panel**. All ports should have the same pin configuration. Further, **cable end connectors** are also required to be supplied along with the interface units. The following are the sample connection details that may be followed for configuring the output in different combinations:-

(i) Configuring all output ports in RS-232:-

Connector	Pin A	Pin E	DIP Switch No	Switch Position
O/P1	RS232	Signal Gnd	1	UP
O/P2	RS232	Signal Gnd	2	UP
O/P3	RS232	Signal Gnd	3	UP
O/P4	RS232	Signal Gnd	4	UP
O/P 5	RS232	Signal Gnd	5	UP
O/P 6	RS232	Signal Gnd	6	UP
O/P 7	RS232	Signal Gnd	7	UP
O/P 8	RS232	Signal Gnd	8	UP

(iii) Configuring all output ports in RS-422

Connector	Pin A	Pin B	Pin E	DIP Switch No	Switch Position
O/P1	RS422 +ve	RS422 -ve	Signal Gnd	1	DOWN
O/P2	RS422 +ve	RS422 -ve	Signal Gnd	2	DOWN
O/P3	RS422 +ve	RS422 -ve	Signal Gnd	3	DOWN
O/P4	RS422 +ve	RS422 -ve	Signal Gnd	4	DOWN
O/P 5	RS422 +ve	RS422 -ve	Signal Gnd	5	DOWN
O/P 6	RS422 +ve	RS422 -ve	Signal Gnd	6	DOWN
O/P 7	RS422 +ve	RS422 -ve	Signal Gnd	7	DOWN
O/P 8	RS422 +ve	RS422 -ve	Signal Gnd	8	DOWN

2. Man-Machine Interface (MMI). Figure 1 and 2 below depict sample front and rear view of the unit.

