

*Technical Specifications  
of  
EB/DG Interlocking System*



*SPSENSE (332,221)*

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## **General Specifications**

### **1) GENERAL:**

Meter indicates Power ON/OFF status of EB , DG and Bus Coupler incomer  
Works according to truth table (as per application it varies)

332 indicates 3 EB, 3 DG and 2 BC,

221 indicates 2 EB, 2 DG and 1 BC,

Output relay connections are based on the load conditions, since this is of potential free type it can be used as DG sense for Dual source energy meters. Casings are of Strong plastic molded material and for this EARTHING not required.

Data collection is possible through RS485 Communication with MODBUS RTU to PC and can also be done through Power Line Communication.

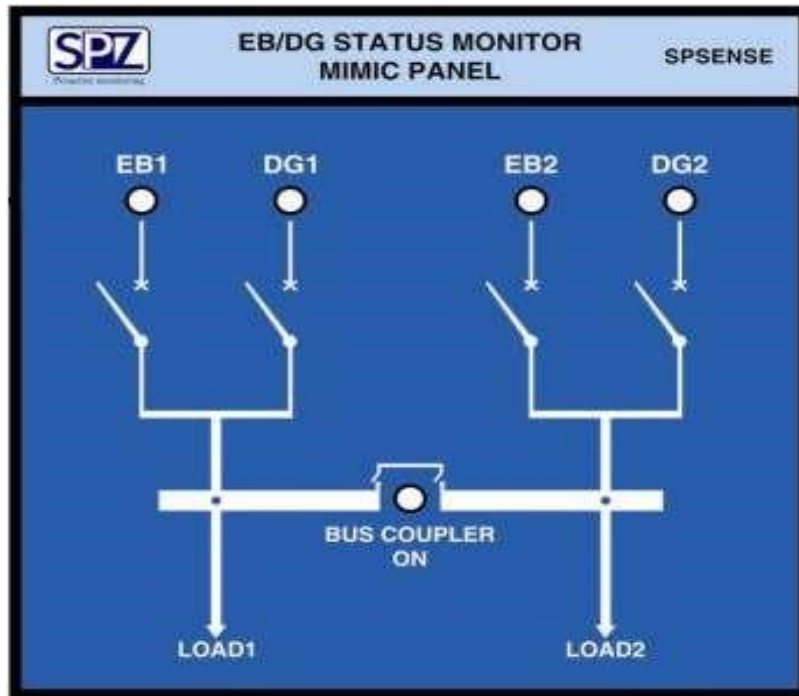
### **2) METER FEATURES:**

#### ***2.1) Display Details:***

Indicated through LED with three different colours,

Red color indicates EB is ON,

Green color indicates DG is ON, Yellow  
color indicates BC is ON.



Front Display



Rear Sticker

**2.2) Communication Interface:**

Through RS485 Communication with MODBUS RTU,  
Baud rate : 9600

Power Line Communication using Power Line Node and Concentrator.

**2.3) Truth Table\*\*:**

<b>EB/DG INTERLOCKING - TRUTH TABLE</b>							
<b>Inputs</b>						<b>Relay Outputs</b>	
<b>S.no</b>	<b>EB-1</b>	<b>DG-1</b>	<b>BC</b>	<b>EB-2</b>	<b>DG-2</b>	<b>A</b>	<b>B</b>
1	ON	OFF	OFF	ON	OFF	EB-1	EB-2
2	ON	OFF	ON	OFF	OFF	EB-1	EB-1
3	OFF	OFF	ON	ON	OFF	EB-2	EB-2
4	OFF	ON	OFF	OFF	ON	DG-1	DG-2
5	OFF	ON	ON	OFF	OFF	DG-1	DG-1
6	OFF	OFF	ON	OFF	ON	DG-2	DG-2
7	ON	OFF	OFF	OFF	ON	EB-1	DG-2
8	OFF	ON	OFF	ON	OFF	DG-1	EB-2
9	OFF	ON	OFF	OFF	OFF	DG-1	-
10	ON	OFF	OFF	OFF	OFF	EB-1	-
11	OFF	OFF	OFF	ON	OFF	-	EB-2
12	OFF	OFF	OFF	OFF	ON	-	DG-2

\*\* Truth table will be different according to the site conditions

### ***Safety Precautions:***

#### ***HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH***

Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices.

Only qualified electrical workers should install this equipment. Such work should be performed only after reading this entire set of instructions.

If the equipment is not used in a manner specified by the manufacturer, the protection provided by the equipment may be impaired.

NEVER work alone.



Before performing visual inspections, tests, or maintenance on this equipment, disconnect all sources of electric power.

Pay particular attention to the design of the power system.

Consider all sources of power, including the possibility of back feeding.

Turn off all power supplying the SPSENSE meter and the equipment in which it is installed before working on it.

Always use a properly rated voltage sensing device to confirm that all power is off.

Before closing all covers and doors, inspect the work area for tools and objects that may have been left inside the equipment.

The successful operation of this equipment depends upon proper handling, installation, and operation.

Neglecting fundamental installation requirements may lead to personal injury as well as damage to electrical equipment or other property.

Since this is of only 230VAC range (Inputs and Aux. supply), High voltage testing may damage electronic components contained in this meter.

Ensure that no wiring strands are straying outside after connecting wires.

**Failure to follow these instructions will result in death or serious injury**

### **Technical Specifications**

Auxiliary Supply : 85-265 VAC @ 50 Hz.

Nominal Voltage for Inputs : 230 VAC

Output : Potential free relay (C, NO terminals)

Starting Current : 0.5% Ib

Frequency : 50Hz,  $\pm 5\%$

Display : LED (with three different colors)

Communication : RS485 with MODBUS RTU

Temperature : Operating Temp. – (-10 to 55)°C  
Storage Temp. – (-20 to 70)°C  
Humidity 5 to 95% RH at 50°C  
(Non-Condensing)

Case Material : Strong Plastic molded type

Mounting : Panel Mounting

Dimension : (144x144x48)mm

Weight : 400gms. (app.)