

*Technical Specifications
of
EB/DG Interlocking System*



SPSENSE (332,221)

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General Specifications

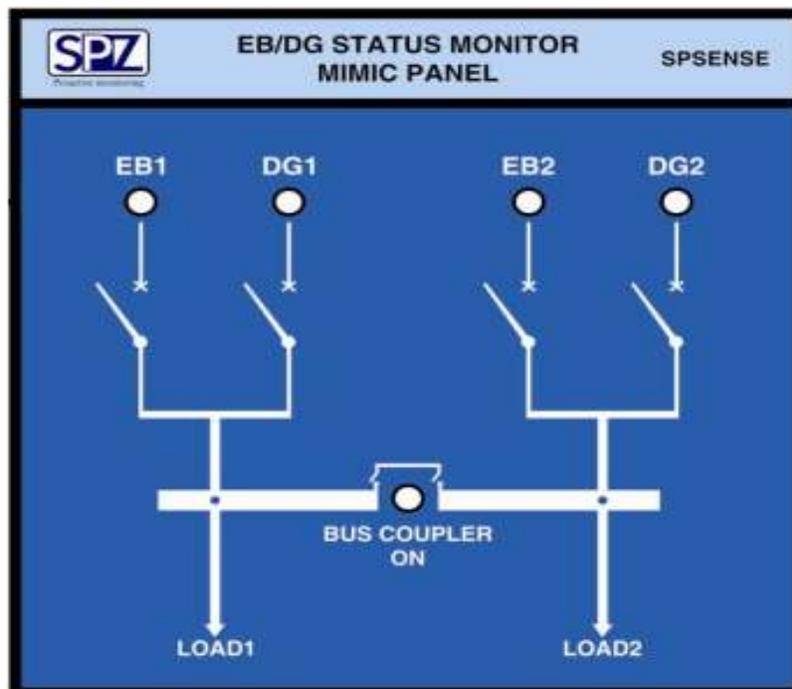
1) GENERAL:

- 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**:

EB/DG INTERLOCKING - TRUTH TABLE							
Inputs						Relay Outputs	
S.no	EB-1	DG-1	BC	EB-2	DG-2	A	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.)