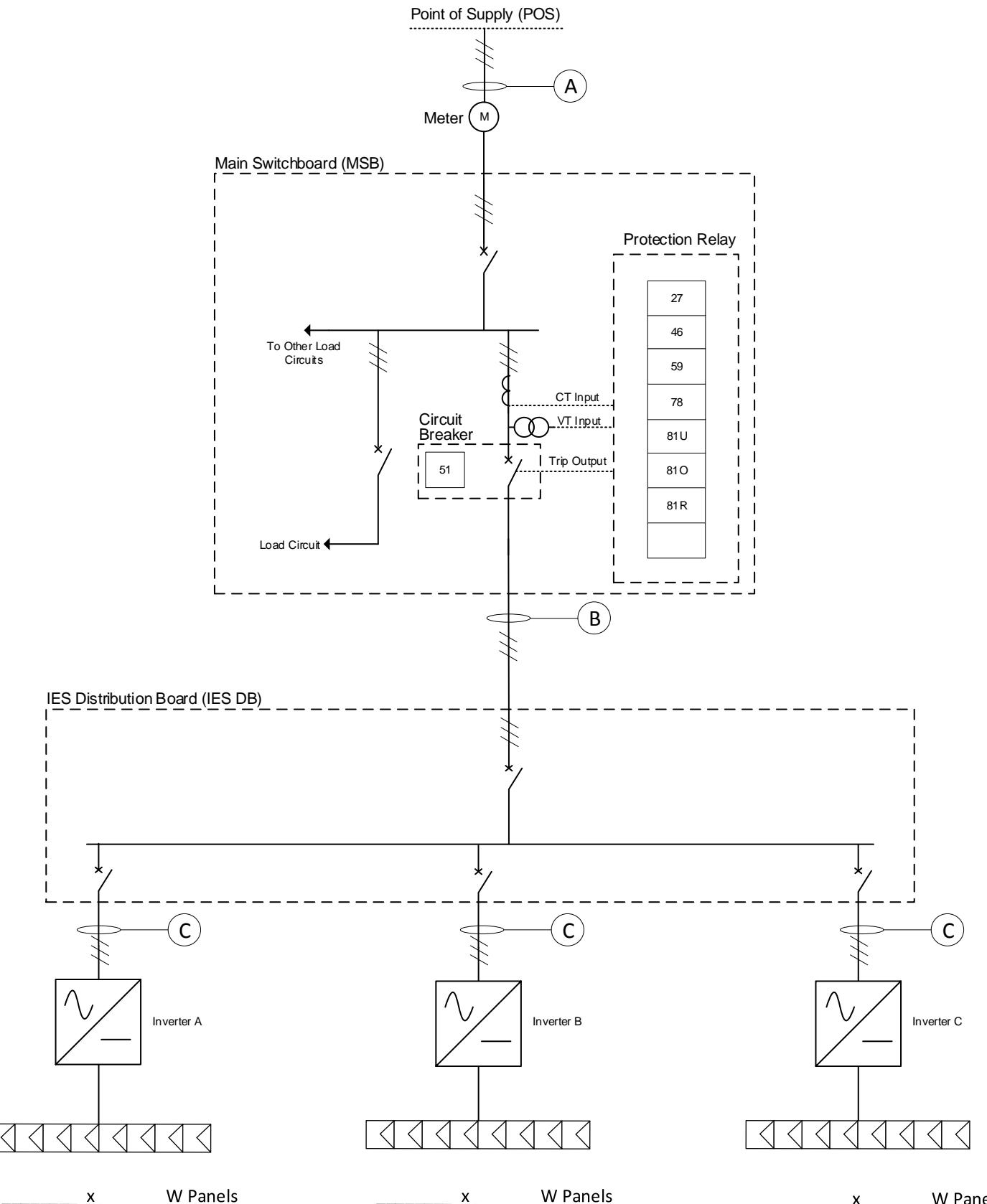


# EMBEDDED GENERATOR - SINGLE LINE DIAGRAM (FOR CONSTRUCTION)

Equipment Schedule				
<b>Total System Capacity (kW)</b> (Rating of all Inverters)				
Inverter A Details				
Manufacturer				
Model Name				
Model Number				
Rating (kW)				
Quantity				
Inverter B Details				
Manufacturer				
Model Name				
Model Number				
Rating (kW)				
Quantity				
Inverter C Details				
Manufacturer				
Model Name				
Model Number				
Rating (kW)				
Quantity				
Panel Details				
Manufacturer				
Model Name				
Model Number				
Total Number of PV Panels				
Individual Panel Rating (W)				
Total Panel Rating (kW)				
Interconnection Protection Relay Details				
Manufacturer				
Model Name				
Model Number				
Cable Schedule				
Section	Description	Cable Size (mm <sup>2</sup> )	Longest Run (m)	Voltage Rise (%)
C	IES TO IES DB			
B	IES DB TO MSB			
A	MSB TO POS			
Total Voltage Rise (%)				



AusNet Services Mandatory Settings		
Volt-Watt Response Set-Point Values		
Reference	Voltage (V)	Power % Rated Power
V1	207	100%
V2	220	100%
V3	253	100%
V4	259	20%
Volt-VAr Response Set-Point Values		
Reference	Voltage (V)	VAr % Rated VA
V1	208	44% (exporting VAr)
V2	220	0%
V3	241	0%
V4	253	44% (sinking VAr)

Interconnection Protection Relay Settings <sup>1</sup>		
Parameter	Setting	Disconnection Time
Overvoltage (59)	260 V	2 sec
Undervoltage (27)	180 V	2 sec
Over Frequency (81O)	52 Hz	2 sec
Under Frequency (81U)	47.5 Hz	2 sec
RoCoF (81R)	2 Hz/s	1 sec
Vector Shift (78)	8 Deg	1 sec
Phase Balance (46) <sup>2</sup>	21.7 A	2 sec
Reconnection Delay	60 sec	

<sup>1</sup> Refer to SOP 11-16 - Protection Requirements of Embedded Generators <5 MVA  
<sup>2</sup> Not applicable when using ONLY AS4777.1 approved three phase inverters

Inverter Protection Settings		
Parameter	Setting	Disconnection Time
Over-voltage 1 (V>)	260 V	2 sec
Over-voltage 2 (V>>)	265 V	0.2 sec
Sustained operation for voltage variations (V <sub>nom-max</sub> )	258 V	3 sec
Under-voltage (V<)	180 V	2 sec
Over Frequency	52 Hz	0.2 sec
Under Frequency	47 Hz	2 sec
Active anti-islanding or loss of mains (LoM)	-	2 sec
Reconnection Delay	60 sec	

## NOTES:

1. This Single Line Diagram is for AusNet Services purposes only. It is not intended for any other purposes and no liability is accepted for any items included or not included as required to meet Statutory or Regulatory compliance.

2. All installation works shall comply with; AS3000, AS3008, AS5033, AS4777, CEC Guidelines, Victorian Service & Installations Rules and all AusNet Services Standard Operating Procedures.

Installation Company	Project Name
Address	Customer Name
Contact Number	Supply Address
Email	Town
Registered Electrical Contractor	NMI
	Date
	Rev