



**TESTING AND MEASURING EQUIPMENT/ALLOWED SUBCONTRACTING**  
**Utility-interconnected photovoltaic inverters – Test procedure of islanding prevention measures**  
**IEC 62116:2014**

R = Required by Lab  
S = May be subcontracted

Clause	Testing	Testing / measuring equipment / material needed	Subcontracting
6.1	Anti-islanding test	<ul style="list-style-type: none"> <li>- <b>AC power source:</b> (4 quadrant, variable voltage / frequency) THD &lt; 1%, rating: min 0 - 300V / phase, 20A (3 phase, min 5kVA / phase) appropriate long-term stability</li>   <li>- <b>DC power sources "A":</b> SAS – (Solar Array Simulator) adjustable characteristic, rating: min 15kW, 30A, 0 - 300V, response time &lt; 1ms (5% load change, 10% final, regulated output value) appropriate long-term stability</li>   <li>or</li>   <li><b>DC power sources "B":</b> DC power supply, with series and shunt resistors - adjustable, resolution min 8 bit Same or more power as "A" (SAS) above appropriate long-term stability</li> </ul>	R



**TESTING AND MEASURING EQUIPMENT/ALLOWED SUBCONTRACTING**  
**Utility-interconnected photovoltaic inverters – Test procedure of islanding prevention measures**  
**IEC 62116:2014**

Clause	Testing	Testing / measuring equipment / material needed	Subcontracting
6.1	Anti-islanding test	<ul style="list-style-type: none"> <li>- <b>Artificial load</b> (RLC array):               <ul style="list-style-type: none"> <li>- Inductor, adjustable, resolution min 8 bit*</li> <li>- capacitor, adjustable, resolution min 8 bit*</li> <li>- resistor, adjustable, resolution min 8 bit*</li> </ul>               (3 phase, min 5kVA (5kW for resistor) /phase for all devices above, min 300V, 20A and for 50/60Hz – cooled/ventilated) appropriate thermal stability, THD &lt; 2%                * The resolution must be fulfilled in all cases compared to EUT nominal power             </li> <li>- <b>3 phase contactor</b> (S1, S2), with trigger contact rating min &gt; 30 A, 300V AC</li> <li>- <b>Power analyser</b> with data recording capability resolution &lt;100 micro s, accuracy &lt; 0,5% 3 phase, rating min: 0 - 500V, 30A, &gt; 10kHz / phase</li> <li>- <b>VOM or similar device (or power analyser)</b> – shall indicate the DC input (V and A) of inverter measurements rating min 0 - 500V DC, accuracy &lt; 1%</li> <li>- Current transducers to 30 A (for three phase), accuracy &lt;1%</li> <li>- Resistive shunts, serial resistors, appropriate loadable and resolution, long-term stability</li> <li>- <b>VOM or similar device</b> – shall indicate RMS value for AC measurements rating: min 0 - 500V DC/AC, accuracy &lt; 1%</li> <li>- <b>Digital storage oscilloscope or data acquisition system</b> with standard probes, min 3 channel, &gt; 1MHz, rating min: 0 – 500V, resolution &lt;100 micro s, accuracy &lt;1%,</li> </ul>	R