Refers to WB, PW, MS, UR, VR and RS series etc.

Phenomenon	Possible Causes	Solutions
The output voltage is lower than rating	1. Start-up failure resulted from insufficient input power 2. low input voltage 3. Large resistance of input filtering inductor 4. Large wire loss caused by very or very thin input lead wire. 5. No filtering capacitors are connected at the input end. 6. A large voltage drop of diode to block reverse current.	1. Use a higher-power input power supply 2. Use a suitable power source that is appropriate to the available input voltage range of MORNSUN DC-DC converter module instead, or re-select the model. 3. Reduce the filtering inductance or resistance of inductor. 4. Enlarge the sectional area of lead or shorten lead length to reduce resistance, or raise input voltage. 5. Connect sufficient capacitors closely to the two ends of power supply. 6. Use a diode with low voltage drop or enlarge the input voltage a little.
	1. Overload at the output end. 2. No capacitors are connected, deviating from what the datasheet indicates. 3. The wire loss is too large at the output. The connection of voltmeter is incorrect. 4. Loaded with excessive capacitive loading	1. Check the external output circuit. If it consumes power over rating or is short-circuited, use a higher output power MORNSUN DC-DC converter module instead. 2. The specification of external output capacitor should respect what is indicated on the datasheet. Capacitance is determined by the output current, according to the principle 1uF/100mA. The capacitor should be connected closely to the input end of power supply. 3. Connect the voltmeter correctly. 4. Test voltage directly at converter terminals, or change to UR series products.
The module is destroyed when powering.	1. Reverse polarity connection at the input end. 2. The input voltage is much above the input voltage range. 3. The rise time of input voltage is too long.	1. Connect a diode with low voltage drop to block reverse current in series at the input end. 2. Adjust the input voltage into the recommend input voltage range. 3. The rise time of input voltage is the shorter the better.
The module can not start-up normally.	1. Too large an external capacitor. 2. The insertion loss of the filtering inductor is too large at the input end. 3. The power of input power source is not high enough. 4. The set current limit of input source is too low.	1. The output external capacitor should be not larger than indicated on the datasheet. 2. Use a filtering inductor with lower interior impedance. 3. Use a power source with higher power instead. 4. Set the current limit knee correctly.
The module fails after a certain period of operation.	1. Lightning strike, surge or a pulse shocks the input power source. 2. No filtering capacitors are	1. Connect a TVS in parallel and a common-mode choke at the input end of module. 2. Connect sufficient capacitors closely to the two

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Phenomenon	Possible Causes	Solutions
	connected at the input end. 3. Too low an output external capacitor. 4. The breakdown voltage of output external filtering capacitor is not large enough.	ends of power supply. 3. The specification of external output capacitor should respect what is indicated on the datasheet. Capacitance is determined by the output current, according to the principle 1uF/100mA. The capacitor should be connected closely to the output end of power supply. 4. The breakdown voltage of the capacitor must be no less than 2 times of the voltage of the power source.
The output voltage is higher than rating	1. The output end is disconnected or without load 2. The output load is too light.	Make sure at least 10% of rated load is connected to the output end when operating. If there is no load in the circuit, connect in parallel 10% of rated load at the output end to ensure the load of module is up to 10% minimum.
The output noise is quite large.	1. The module resonated with output circuit. 2. The output end is disconnected or without load 3. The output load is too light, or even lighter than 10% of the rated load. 4. The output noise interferes normal operation despite the above problem doesn't exit.	1. Adjust the specifications of inductors or capacitors in the output circuit. 2. Make sure at least 10% of rated load is connected to the output end when operating. 3. If there is no load or the load is too light in the circuit, connect in parallel 10% of rated power at the output end to ensure the load of module is no less than 10% of the rated load. 4. Connect a common mode choke at the input end or connect a 4.7-100pF safety capacitor between GND and 0V (the breakdown voltage is determined by actual demand, 1000VDC-3000VDC in general)
The short-circuit current is large.	1. The input voltage is a lot beyond the normal input voltage range. 2. The resistance of lead at the output end is too large.	This is natural. Long-term short-circuit under this condition should be avoided as much as possible.
The input fuse is vulnerable to burn out	The margin of fusing current value is too small.	Choose a fuse with its fusing current value as high as three times of the rated input current of the module.

NOTE: Any other question, please feel free to contact our FAE department.
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