

What is an under-voltage lockout (UVLO) function?

DC/DC Switching Regulators Switch ICs LED Driver Controller ICs Protection

A UVLO is a kind of protection which stops IC's operation in order for the IC not to become under malfunction caused by the lower input voltage than the minimum operating voltage.

It stops the internal operation if the input voltage becomes lower than the detection voltage (VUVLO1), and restarts it after the input exceeds the release voltage (VUVLO2). Of course, during the internal operation being stopped, the switching control unit and the reference voltage circuit, as well as the output voltage, are stopped. To prevent the UVLO itself from going wrong, this function has hysteresis between the VUVLO1 and the VUVLO2.

The UVLO works even at the start-up of power supply, and is therefore capable of preventing malfunction during the input voltage starting up. Also, products with a latch-type protection circuit can be released from the latched state not only by the reset method using the EN(CE,CONTROL) pin but also by the UVLO release condition.

Most of our DC/DC converters are equipped with this UVLO function for safe and stable operation; however, some of our converters are not, such as products designed for low-voltage demands.