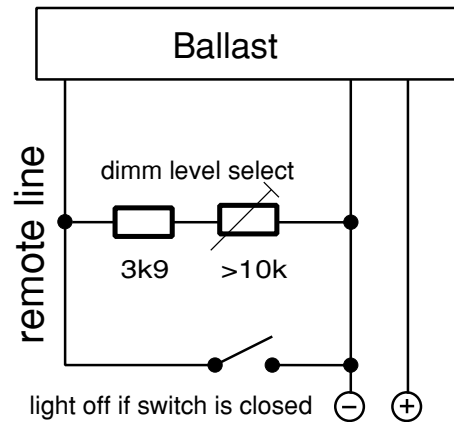# step dimming

The ballasts remote line is internal connected to an ADC input line with internal voltage devider powered by 5V. The remote line is internaly protected by SI diode to block external plus voltages. The remote line is able to read out external connected resistors to GND / ballast housing GND or negative supply wire.

Function	ADC Ticks level remote line	resistor remote
On Off	< 300	0 Ohm / switch
full power	> 900	non connected or > 15k
mid power	< 900	10k approx 838 ticks
low power	< 770	3k9 approx 710 ticks

 Full power and low power is set in EEPROM, and mid power is the calculated middle.

Off longer than 10 seconds brings the ballast into idle mode with 2mA current consumption. A rising signal at the remote will cause a reset (if an error ocurred) and a new start of the ballast.

LED slow blinking	50% ON 50% OFF cycle	indicates error
LED fast blinking	50% ON 50% OFF cycle	indicates low volt auto restart active
LED flash blinking	5% ON 95% OFF cycle	indicates idle mode.

The maximum output power is for safety reasons limited with falling battery input voltage by the following formular:

$$P_{MAX\ BATTERY} = \frac{1}{2}\ (Volt\ Battery)^2$$

Note you need a battery voltage higher than 12V at the ballast side for beeing able to get 70W light output. A voltage drop in between ballast and battery for instance caused by long cables will limit the maximum power output.