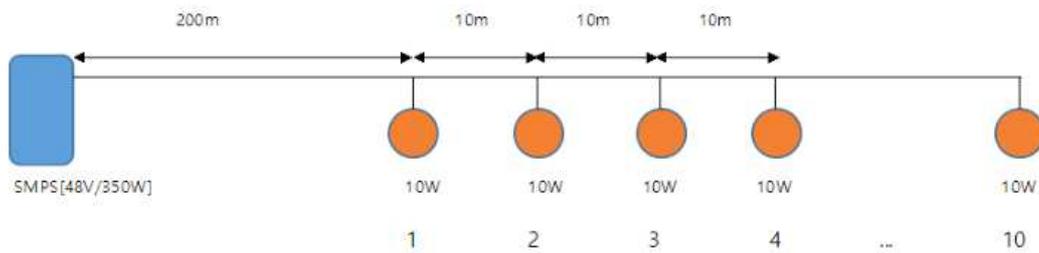


Project outline

- The lighting control is applied to DMX lighting protocol (RS-485)
- 10 main devices control 70 lights each
- DC Power Supply to lights in main device SMPS(48V, 350W)
- The line between the main unit and the lamp, the lamp and the lamp is used by AWG16 2C
- Calculate the voltage drop of the output AWG16 line of SMPS 48V/350W to efficiently position the lights

Trial installation



Test result

	1	2	3	4	5	6	7	8	9	10
lighting load[W]	10	20	30	40	50	60	70	80	90	100
lighting votage[V]	46.0	44.7	43.0	41.2	39.3	37.1	34.5	31.1	24.2	11.8
power consumption[W]	10.5	21.7	33.3	45.8	59.4	74.6	92.8	116.0	162.3	253.3

- used power meter to measure
- Record whenever 10m wire and light were added.

Question

- Power consumption is linearly proportional until approximately 70W of load is applied, but it is increasing rapidly over 80W of load.
- The wire has a lot of heat with a increase in power consumption.