

Relevant instructions for external power supply and wiring of IP video intercom products (2020-1-20)

Involved model:

Device Model	Indoor Station	DS-KH6320-TE1
		DS-KH6320-WTE1
		DS-KH8350-TE1
		DS-KH8350-WTE1
		DS-KH8520-WTE1
	Villa Door Station	DS-KV6103-PE1
		DS-KV6113-PE1
		DS-KV6113-WPE1
		DS-KV8113-WME1
		DS-KV8213-WME1
	Modular Door Station	DS-KV8413-WME1
		DS-KD8003-IME1

Power description:

(1) POE:

The maximum output power of single port of POE switch in 802.af standard protocol is about 10.8W after deducting cable loss.

(2) Modular Door Station:

The main module & the sub-module maximum power consumption:

	Stable power consumption
DS-KD8003-IME1	4W
DS-KD-KK	0.8W
DS-KD-KP	1W
DS-KD-DIS	2.5W
DS-KD-E	0.8W
DS-KD-M	0.8W
DS-KD-INFO	1.5W

(3) Indoor Station & Villa door station:

	Stable power consumption
DS-KH6320-TE1	6W
DS-KH6320-WTE1	6W
DS-KH8350-TE1	7W
DS-KH8350-WTE1	7W

DS-KH8520-WTE1	6W
DS-KV6103-PE1	10W
DS-KV6113-PE1	10W
DS-KV6113-WPE1	10W
DS-KV8113-WME1	10W
DS-KV8213-WME1	10W
DS-KV8413-WME1	10W

Example of the calculation model of the modular door station sub-module

The sum of the power consumption of each module must be less than the total power consumption of the power supply.

POE					
Model	DS-KD8003-IME1	DS-KD-DIS	DS-KD-KP	DS-KD-M	/
Quantity	1	1	1	1	/
Power	4W	2.5W	1W	0.8W	Total: 8.3W

Because $8.3W \leq 10.8W$, we can support powering this device through POE.

POE				
Model	DS-KD8003-IME1	DS-KD-M	DS-KD-KK	/
Quantity	1	1	6	/
Power	4W	0.8W	4.8W	Total: 9.6W

Because $9.6W \leq 10.8W$, we can support powering this device through POE.

Note: Under 12v power supply, the modular door station can support up to 16w

12v power supply					
Model	DS-KD8003-IME1	DS-KD-DIS	DS-KD-KP	DS-KD-M	/
Quantity	1	1	2	2	/
Power	4W	2.5W	2W	1.6W	Total: 10.1W

Because $10.1W \leq 16W$, we can support powering this device through 12v power supply.

12v power supply				
Model	DS-KD8003-IME1	DS-KD-M	DS-KD-KK	/
Quantity	1	1	12	/
Power	4W	0.8W	9.6W	Total: 14.4W

Because $14.4W \leq 16W$, we can support powering this device through 12v power supply.

Wire testing standards:

(1) Powered by 12v power supply

Wire specifications	18AWG	20AWG	24AWG
DS-KH6320 series	50m	30m	15m
DS-KH8350 series	50m	30m	15m
DS-KH8520 series	50m	30m	15m
DS-KD8003 FULL LOAD	15m	25m	8m

DS-KV6103 series	15m	25m	8m
DS-KV6113 series	15m	25m	8m
DS-KV8X13 series	15m	25m	8m

Note: The network transmission distance is up to 100m

(2) Powered by standard POE:

Wire specifications	1LN5EU-G/CCA	1LN5E-S	1LN6-UU
DS-KH6320 series	100m	100m	100m
DS-KH8350 series	100m	100m	100m
DS-KH8520WTE1	100m	100m	100m
DS-KD8003 FULL LOAD	60m	80m	100m
DS-KV6103 series	15m	25m	8m
DS-KV6113 series	60m	80m	100m
DS-KV8X13 series	60m	80m	100m

Note: The switch model tested was Hikvision DS-3E2326P (301801048). Due to the code stream limitation of the switch, the distance needs to be reduced in the case of multi-door stations or indoor stations, otherwise it will occur network packet loss.

Installation Notes:

- (1) Reserve enough wires with enough length (1.5m-2.0m). The wires must be clearly marked to facilitate equipment wiring;
- (2) It is forbidden to run wires in the same pipe or in the same slot for strong and weak current. The wires must be separated and the spacing shall not be less than 0.5m
- (3) When the indoor station connect alarm devices, such as detector, need a separate power supply to the detector.
- (4) When the door station is connected to a door lock, the door lock needs to be powered separately in series by a 12V power supply separated in the loop;
- (5) During installation, please make sure that the equipment is powered off.

See Far Go Further

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