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Relevant instructions for external power supply and wiring of 2-wire video intercom products (2020-1-20)

Involved model:

Device Model	Indoor Station	DS-KH6320-WTE2
	Modular Door Station	DS-KD8003-IME2
	Distributor	DS-KAD706
		DS-KAD704

Power description:

(1) 2-Wire Distributor

	CH6	CH1-5
KAD706	16W	6W
	CH4	CH1-3
KAD704	8W	6W

(2) Modular Door Station:

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

	Stable power consumption
DS-KD8003-IME2	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

	Stable power consumption
DS-KH6320-WTE2	6W

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.

2-wire				
Model	DS-KD8003-IME2	DS-KD-DIS	DS-KD-KP	/	/
Quantity	1	1	1	/	/
Power	4W	2.5W	1W		Total: 7.5W

Because 7.5W < 8W, we can support powering this device through KAD706 channel 6 or KAD704 channel 4.

2-wire			
Model	DS-KD8003-IME2	DS-KD-M	DS-KD-KK	/
Quantity	1	1	12	/
Power	4W	0.8W	9.6W	Total: 14.4W

Because 8W < 14.4W < 16W, we can support powering this device through KAD706 channel 6.

Wire testing standards:

(1) When there are multiple cores in one parallel line, only one pair of closed cores are allowed to transmit signal. It is not allowed to use multiple pair of cores in one cable to transmit signal;

(2) When using parallel lines, it is suggested to use those with shielding layer. If dual core or multiple core parallel lines without shielding layer are routed, stability of signal transmission can be effected. You need to run a test before installation;

(3) Impedance of twist pair in network cable are over 42Ω/100m, so network cable cannot transmit enough power to indoor station. Network cable is not allowed to use during installation;

(4) Strong electricity and weak electricity cannot be wired in the same route, they need to be wired separately and the distance should be more than 0.5 meter;

Table A

Routing Path	Twisted Pair: 24AWG ($0.2mm^2$)	Twisted Pair: 20AWG ($0.5mm^2$)	Twisted Pair: 18AWG ($0.8mm^2$)	Twisted Pair: 16AWG ($1mm^2$)	Parallel lines ($0.5mm^2 \sim 0.8mm^2$)
DS-KAD706-S-DS-KAD706	Transmission Distance≤60m	Transmission Distance≤60m	Transmission Distance≤60m	Transmission Distance≤50m	Transmission Distance≤35m
DS-KAD706-DS-KAD706	Transmission Distance≤60m	Transmission Distance≤60m	Transmission Distance≤60m	Transmission Distance≤50m	Transmission Distance≤35m
DS-KAD706-DS-KD8003-IME2	Transmission Distance≤35m	Transmission distance≤60m	Transmission distance≤60m	Transmission distance≤50m	Transmission distance≤35m
DS-KAD706-DS-KH6320-WTE2	Transmission Distance≤35m	Transmission Distance≤100m	Transmission Distance≤100m	Transmission Distance≤100m	More parameters in Table B

Table B

Routing Path	Parallel lines:	Parallel lines:	Parallel lines:	Parallel lines:

	24AWG (0.2mm^2)	20AWG (0.5mm^2)	18AWG (0.8mm^2)	16AWG (1mm^2)
DS-KAD706- DS- KH6320-WTE2	Transmission Distance≤50m	Transmission Distance≤100m	Transmission Distance≤100m	Transmission Distance≤100m

Device Installation

(1) Installation environment (temperature, moisture etc.) need to follow requirements in specification or power output can be effected

(2) Power consumption of modular door station (main module and sub modules) should be less than 12W. Please reach local technical support if you are not sure about power consumption of each module. Door station should be connected to CH6 of the video/audio distributor. If modular door station is connected to any terminal of CH1 to CH5, up to 3 sub modules can be connected;

(3) Indoor station should be connected to any terminal of CH1 to CH5 of the video/audio distributor;

(4) Up to 15 video/audio distributor can be cascaded. If more distributors are needed, you should cascade network switch supporting 1000Mbps. The whole 2-wire system can have up to 500 devices.

(5) Power supply must be certified by Hikvision;

(6) Indoor station needs to use firmware released after October, 2019

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