



**Relevant instructions for external power supply and wiring  
of 2-wire video intercom**

**Involved model:**

Device Model	Indoor Station	DS-KH6320Y-WTE2, DS-KH6320EY-WTE2, DS-KH6320-WTE2
	Modular Door Station	DS-KD8003Y-IME2, DS-KD8003-IME2
	Distributor	DS-KAD706Y, DS-KAD706
DS-KAD704Y, DS-KAD704		

**Note: The models without “Y” is EOL, and they are not compatible with models contain “Y”**

**Power description:**

(1) 2-Wire Distributor

KAD706Y, KAD706	<b>CH6</b>	<b>CH1-5</b>
	16W	6W
KAD704	<b>CH4</b>	<b>CH1-3</b>
	8W	6W
KAD704Y	8W	4W

(2) Modular Door Station:

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

Model	Stable power consumption
DS-KD8003Y-IME2 ( <b>EOL</b> ) , DS-KD8003-IME2	4 W
DS-KD-KK, DS-KD-E, DS-KD-M	0.8 W
DS-KD-KP	1 W
DS-KD-DIS ( <b>EOL</b> )	2.5 W
DS-KD-INFO	1.5 W
DS-KD-TD, DS-KD-TDM, DS-KD-TDE DS-KD-MFB, DS-KD-AL8	4 W
DS-KD-K12, DS-KD-IN	2 W
DS-KD-ALJ5	6 W
DS-KD-PMR	4 W, 6 W or 8 W (optional)

(3) Indoor Station

	Stable power consumption
DS-KH6320(E)Y-WTE2	4 W
DS-KH6320-WTE2, DS-KH6320-WTE2(B) ( <b>EOL</b> )	6 W

**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.

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2-wire					
Model	DS-KD8003-IME2 DS-KD8003Y-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-KD8003Y-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/KAD706Y 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  $42\Omega/100m$ , 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-KAD706Y-S-DS-KAD706Y/704Y  DS-KAD706-S-DS-KAD706	Transmission Distance $\leq 60$ m	Transmission Distance $\leq 60$ m	Transmission Distance $\leq 60$ m	Transmission Distance $\leq 50$ m	Transmission Distance $\leq 35$ m
DS-KAD706Y/704Y-DS-KAD706Y/704Y  DS-KAD706-DS-KAD706	Transmission Distance $\leq 60$ m	Transmission Distance $\leq 60$ m	Transmission Distance $\leq 60$ m	Transmission Distance $\leq 50$ m	Transmission Distance $\leq 35$ m
DS-KAD706Y/704Y-DS-KD8003Y-IME2  DS-KAD706-DS-KD8003-IME2	Transmission Distance $\leq 35$ m	Transmission distance $\leq 60$ m	Transmission distance $\leq 60$ m	Transmission distance $\leq 50$ m	Transmission distance $\leq 35$ m

### External power supply and wiring instruction of 2-wire video intercom

DS-KAD706Y/704Y-DS-KH6320(E)Y-WTE2	Transmission Distance $\leq 35$ m	Transmission Distance $\leq 100$ m	Transmission Distance $\leq 100$ m	Transmission Distance $\leq 100$ m	More parameters in Table B
DS-KAD706-DS-KH6320-WTE2					

**Table B**

Routing Path	Parallel lines: 24AWG ( $0.2mm^2$ )	Parallel lines: 20AWG ( $0.5mm^2$ )	Parallel lines: 18AWG ( $0.8mm^2$ )	Parallel lines: 16AWG ( $1mm^2$ )
DS-KAD706Y/704Y-DS-KH6320(E)Y-WTE2	Transmission Distance $\leq 50$ m	Transmission Distance $\leq 100$ m	Transmission Distance $\leq 100$ m	Transmission Distance $\leq 100$ m
DS-KAD706-DS-KH6320-WTE2				

### 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 CH1 to CH5 (or CH1 to CH3) 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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