Digital video intercom system

A **DF6000** digital video intercom system is realised with only 5 wires, that it:

LP positive line
LN negative line
H +15Vdc power supply
X negative video signal
Y positive video signal

2 or 4 wires with suitable cross-section (see table) must be added from the power supply to the door station.

+ positive voltage
- ground

For door lock release and name plate lights
~ alternate voltage
~ alternate voltage

Operating current of digital units

The operating current of each unit (+15V voltage) must be known in order to determine the number of power supply units in a digital system.

Article	Operating current in Ampere	
	stand-by	in operation
TD6100MA	0.12	0.3
TD6100	0.12	0.3
RD4120	0.05	0.05
CD6130	0.25	0.35
EX3160	0	0.4
KM8162W	0	0.4
PT5162W	0	0.4
MA43ED	0.3	0.3
MA10ED÷MA12ED	0.07	0.07
MD41D	0.3	0.3
MD10D÷MD12D	0.07	0.07
6273	0.08	0.08

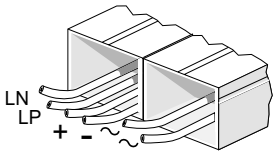
Maximum current delivered by power supply units

6220	1.2A

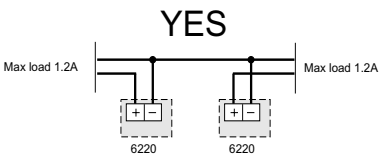
Conductors

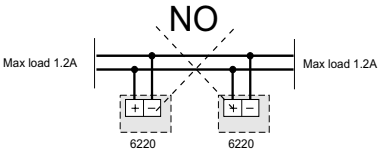
The type of wires used in the system deeply influences the functionality of the digital system. The cross section of the wires depends on the distance between the units and on the number of modules to be connected.
Make sure not to use more wires in parallel to reach the required cross section (i.e. multi-pair telephone cables). Only use one wire with suitable cross section.
To avoid possible noise on the audio line, place the power supply in the proximity of the door station to avoid a long distance for the two alternate voltage wires of the electrical door release button. Alternatively, use separate raceways for the alternate voltage wires.

The cable runs in intercom and video intercom systems must be kept separate from the electrical or industrial installation as required by the International Standards.



Each power supply must power a separate group of push-button panels. The only connection to be made between power supply units is the ground reference (- wire). **Never connect the + output between power supply units.**





WIRE CROSS-SECTION

Digital intercom systems

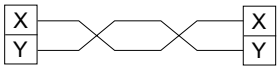
Distance		Terminals					
		LP; LN; DB; EB			**+; -; ~ (*)**		
m.	Ft	mm² S	mm Ø	AWG	mm² S	mm Ø	AWG
50	165	0.25	0,5	21	0.75	1	18
100	330	0.35	0,7	20	1	1,2	16
200	660	0.5	0,8	18	2	1,6	14
400	1310	0.75	1	16	-	-	-
600	1970	1	1,2	15	-	-	-

Digital video intercom systems

Distance		Terminals											
		DB; EB			**LP; LN; H; F**			**+; -; ~ (*)**			**X; Y** (1)		
m.	Ft	mm² S	mm Ø	AWG	mm² S	mm Ø	AWG	mm² S	mm Ø	AWG	mm² S	mm Ø	AWG
50	164	0.35	0,7	21	0.75	1	18	1.5	1,4	15	0.25	0,5	21
100	330	0.35	0,7	21	1	1,2	16	2.5	1,8	13	0.25	0,5	21
200	660	0.5	0,8	20	1.5	1,4	15	-	-	-	0.25	0,5	21

(*) Wires in **bold**.

(1) **Notice.** Use twisted cable for distances higher than 100m-*330Ft* (max 200m-*660Ft*) for wires **X** and **Y**.

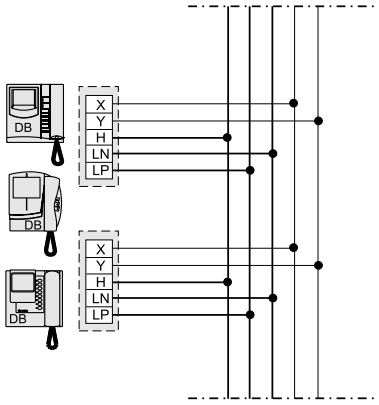


VIDEO SIGNAL DISTRIBUTION

The following modes are possible for the connection of the video signal:
- star connection
- serial connection (input and output)
- connection with floor distributor

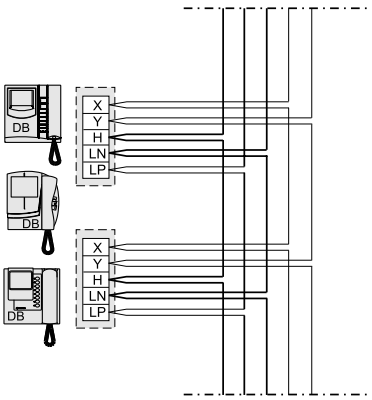
STAR CONNECTION

This connection allows for distributing all wires in the floor junction box.
Because of the signal loss introduced by each connection, the maximum number of video intercoms that can be connected in a star way is 20.
2x75Ω resistor must be connected between X and LN and Y and LN in the last video intercom. The maximum connection distance between the video intercoms and the junction box is 2.5 meters *(8.2Ft)*.



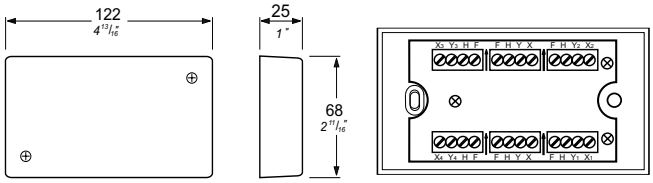
SERIAL CONNECTION

In the serial connection, connections are all made on the video intercom brackets, and not in the junction boxes. Because of the signal loss introduced by each connection, the maximum number of video intercoms that can be connected in series way is 20.
2x75Ω resistor must be connected between X and LN and Y and LN in the last video intercom.



CONNECTION WITH FLOOR DISTRIBUTOR

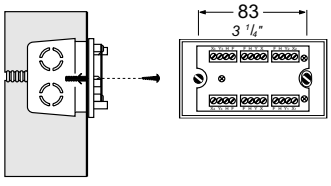
This connection allows for separate the video signal of each video intercom from the riser. Connections are all made on the **DV2D** or **DV4D** video distributors.



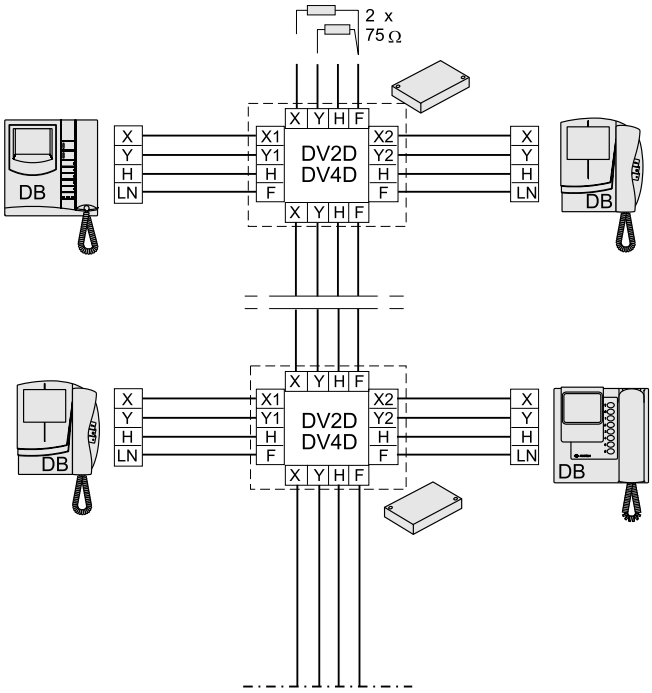
DV2D-DV4D. FLOOR VIDEO DISTRIBUTORS.
They allow for the distribution of the video signal from the riser on 2 or 4 outputs. It can be installed on the wall, on a wall box, with expansion plugs or it can be placed in the junction box.

Technical data

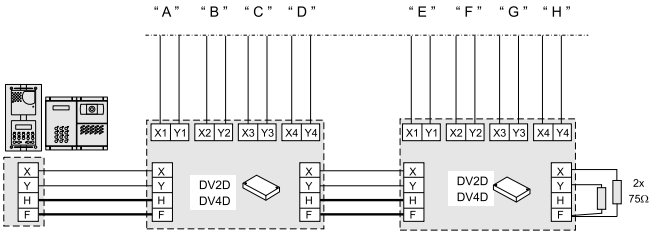
Power supply	15÷21Vdc
Operating current	60mA
Maximum input signal	2Vpp
Insertion loss	0.8dB
Bandwidth	>5MHz



Connection of the video signal to a single riser
Terminals X and Y of the last distributor must be closed with 75Ω resistor supplied in the kit. Do not close unused outputs.



Connection of the video signal with distribution to multiple risers
One or more video distributors art. **DV2D** or **DV4D** must be used in video installations with multiple risers.
Terminals X and Y of the last distributor must be closed with 75Ω resistor supplied in the kit. Do not close unused outputs.



Example of connection to 8 risers

Note
In large installations it is advisable to power the monitors locally or to separate the ground connection as shown on the pages 220 and 221.