

OPERATING INSTRUCTION

Commutator **BK-4AV** (the device hereinafter) is intended for operation within **VIZIT** video doorphones as a commutation device between the doorstation / control unit and subscriber devices (monitors and apartment handsets UKP). The device is also applied to connect monitors to the video line.

The device is recommended for use with monitors powered from individual switching adaptors.

FEATURES

- Simple apartment number coding similar to BK-4MV
- Enhanced noise resistance for video signal distribution

PARTS LIST

Commutator BK-4AV	1 pc.
Jumpers	13 pcs.
Operating instruction	1 pc.

SAFETY INSTRUCTIONS

The device does not contain voltage above **30 V**.
Do not make any connections or repair when the power is on.

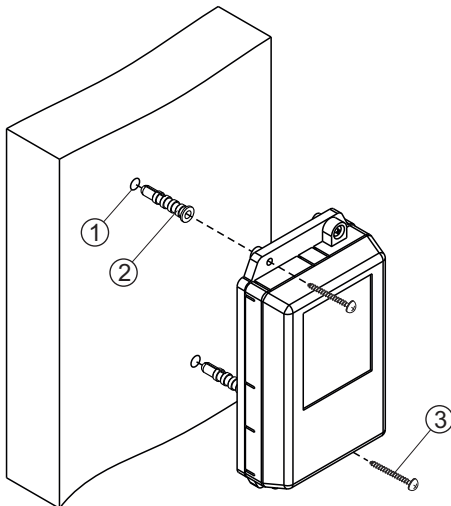
Caution. Protective earthing connection for the device shall be carried out to remove voltage from terminals of the device, which appears due to leakage current flowing from mains-operated switching adaptors that supply monitors connected to the device.

Protective earthing connection is performed following the instructions given in the sections **CONNECTIONS** and **EXAMPLE OF WIRING DIAGRAMS**.

Before getting started, make sure that all monitors are disconnected from the mains ~ 220V.

INSTALLATION

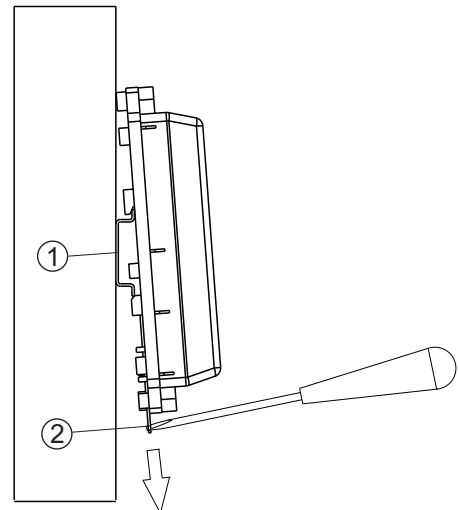
For qualified installation, wiring and servicing refer to technical and commercial partners of **VIZIT TM**. The list of companies is given on **VIZIT.EU** (<http://vizit.eu/eurounion/>).



- Drill two holes (1) in a wall, with diameter 6mm and depth 30 mm.
- Drive anchors 6x30 (2) into the holes.
- Fix the device by fastening 2 screws 3.5x25 (3) in the anchors.

Note. Fasteners are not supplied.

Figure1 - **Mounting on a wall**



- (1) - DIN-rail, width 35 mm, depth 1-2 mm
- (2) - Holder for fixing on a DIN-rail

Figure 2 - **Mounting on a DIN-rail**

CONNECTIONS

- Take off the device cover to access the PCB.
Video doorphone cables are connected to the terminals on the PCB.
Apartment number coding is carried out by setting jumpers on the PCB.

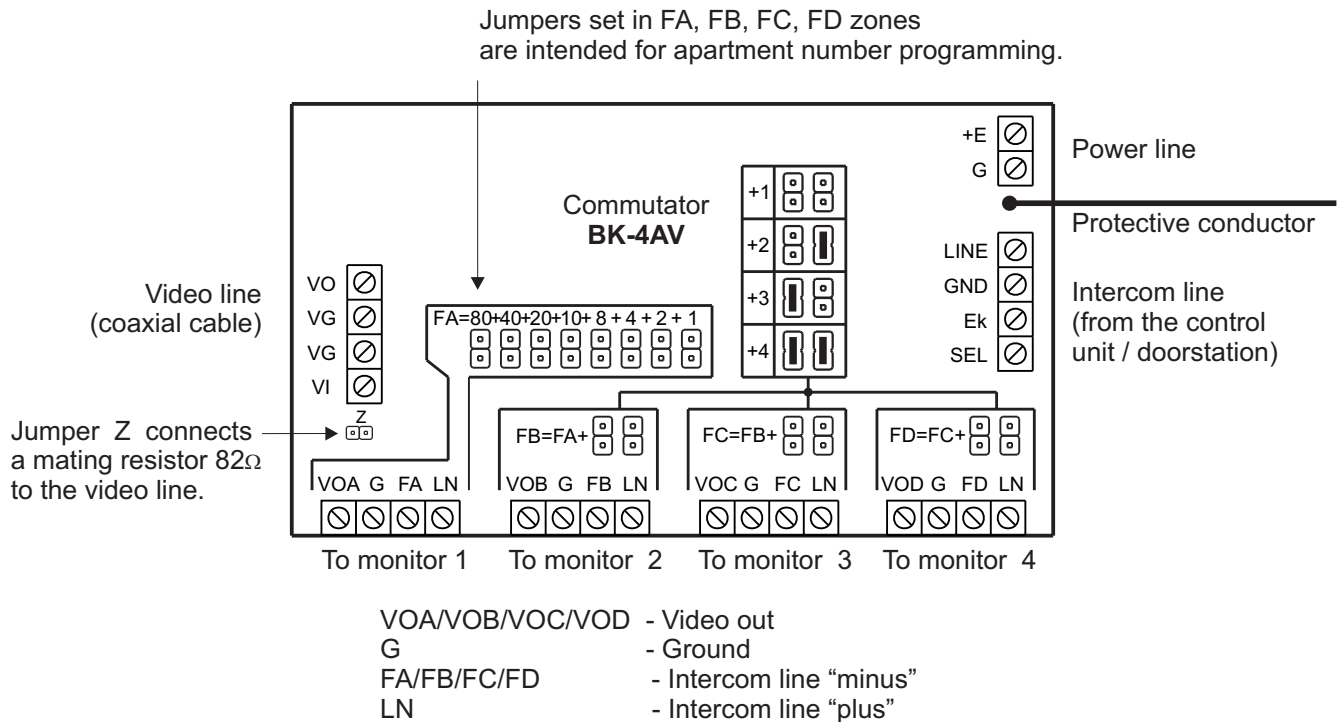


Figure 3 - Terminals layout and destinations, jumpers purpose

- Jumper **Z** connects an 82 Ohms resistor to **match wave impedance** of the coaxial cable. The jumper shall be set up only in the top device in the diagram, i.e. in the **last BK-4AV in the video circuit**.
In **all the rest BK-4AV** devices jumper **Z** shall be removed.
- Program apartment numbers by setting the jumpers. Apartment numbers may be of the same decade or of different decades.

The number of apartment connected to the terminals in **FA** zone is set by **1 to 8** jumpers, and shall be equal to the **sum of numbers** above the jumpers.

The number of apartment connected to the terminals in **FB** zone is equal to: number **FA + figure** (from **1 to 4**), set by 2 jumpers in **FB** zone according to the table on the PCB.

The number of apartment connected to the terminals in **FC** zone is equal to: number **FB + figure** (from **1 to 4**), set by 2 jumpers in **FC** zone according to the table.

The number of apartment connected to the terminals in **FD** zone is equal to: number **FC + figure** (from **1 to 4**), set by 2 jumpers in **FD** zone according to the table.

The example of wiring diagrams (Fig. 6) shows how to connect monitors and apartment handsets UKP from apartments No **1, 2, 3, 4** to the first commutator, and apartments No **5, 7, 10, 14** to the last commutator.

Note that in the picture the **first** commutator has **no jumpers** in **FB, FC** and **FD** zones, because in case of adding "**1**" (when the apartment numbers are **successive**) no jumper is required.

- Connect cables following the examples of wiring diagrams (refer to the section **EXAMPLE OF WIRING DIAGRAMS**). For connections, use cables with copper wires. The requirements to connecting cables between the doorstation / control unit, commutator and monitors are given in operating instructions on a corresponding doorstation / control unit of your multi-apartment video doorphone.

The main video line from the doorstation to the device shall be coaxial cable RG-59 or similar, which has a copper central core and copper-wire braid. Cables with an iron central core and aluminum foil braiding are not recommended.

- Carry out **protective earthing connection** as described below:

1. Lay a trunk protective conductor with yellow-green insulation and copper wire cross-section of 1.5 mm from the main protective conductor of the building to the last BK-4AV device in the video circuit, which has connected monitors powered from switching adaptors.

2. Connect the trunk protective conductor to the main protective conductor of the building.

3. Connect protective conductors of those BK-4AV devices which have connected monitors powered from switching adaptors to the trunk protective earthing conductor (see the sections **EXAMPLE OF CONFIGURATION DIAGRAM** and **EXAMPLE OF WIRING DIAGRAMS**).

Connection of the protective conductors is recommended to be carried out by means of a t-tap nylon insulated female terminal and mating red nylon insulated male tab (for wires with cross-section from 0.5 to 1.5mm²). The male tab is fastened to the protective conductor of the commutator by crimping. The procedure of connecting the protective conductors is shown on Figure 4.

The t-tap nylon insulated female terminal and nylon insulated male tab are not supplied with the device. These parts are available upon request.

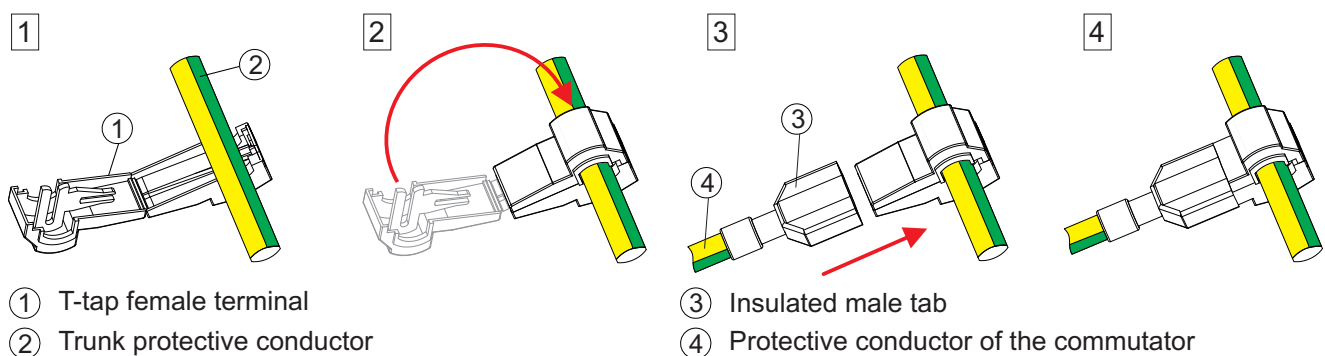


Figure 4 - Connection of protective conductors

- Put the device cover back on its place.

EXAMPLE OF CONFIGURATION DIAGRAM

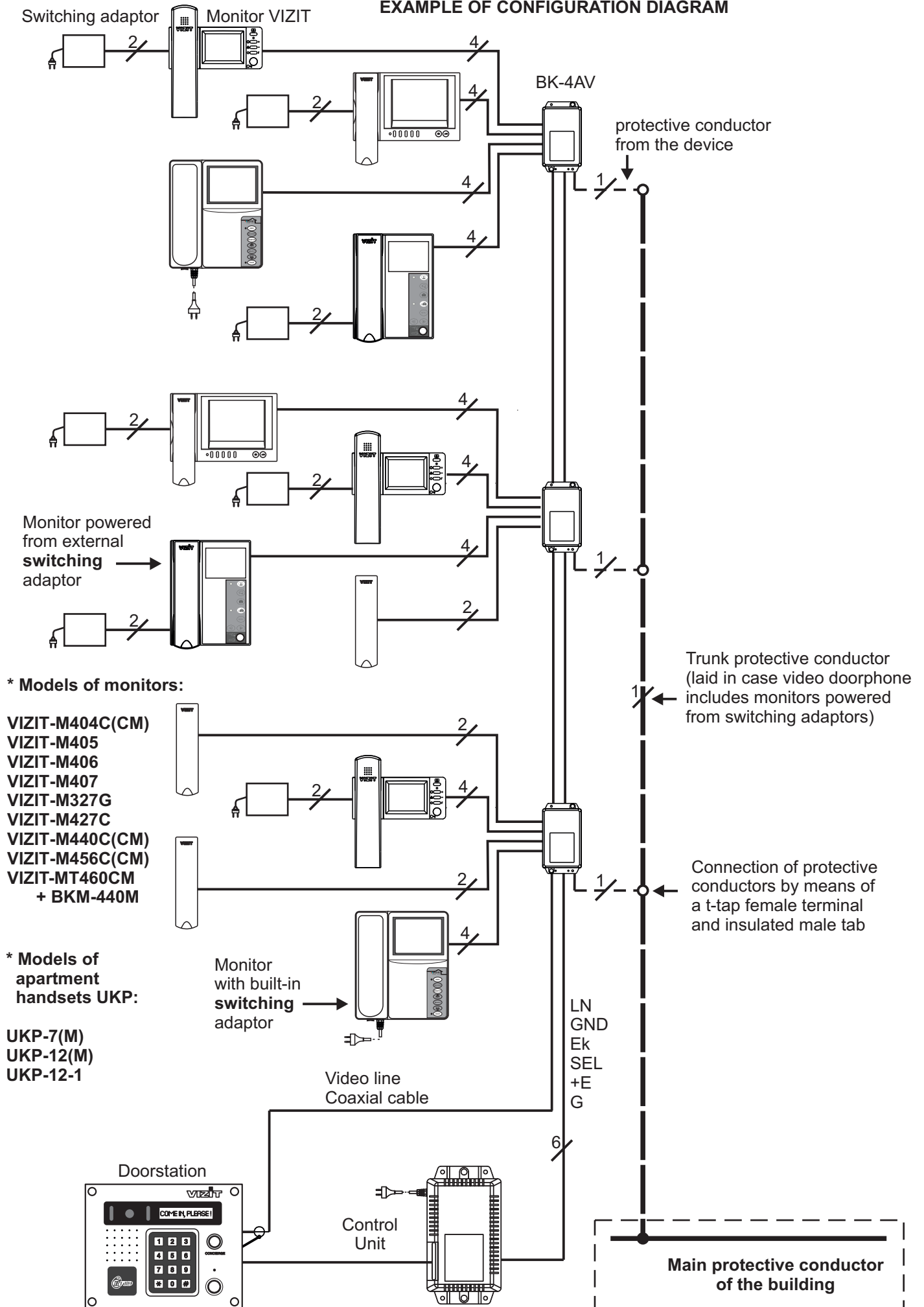


Figure 5 - Example of configuration diagram

EXAMPLE OF WIRING DIAGRAMS

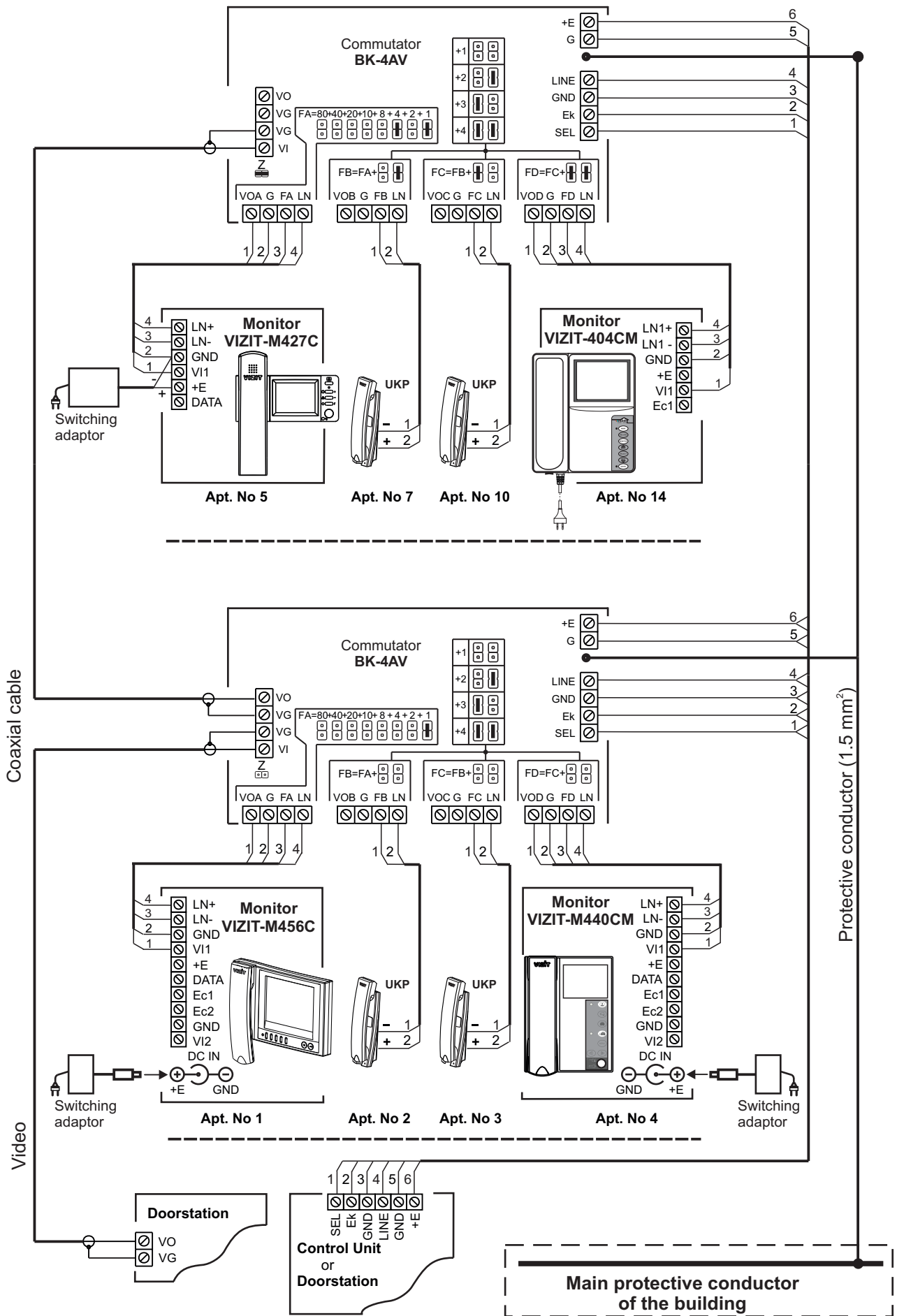


Figure 6 - Video doorphone with application of Commutators BK-4AV

SPECIFICATIONS

Max. number of connected monitors or apartment handsets UKP	4 pcs.
Operating voltage	15...28 VDC
Current consumption at +E circuit, no more than	4 mA
Dimensions (W)x(H)x(D)	75x135x35 mm
Weight	0.2 kg

OPERATING CONDITIONS

Ambient temperature range:	+ 1°C to +40°C
Relative humidity of air:	up to 93% at 25°C