

# CONV Pelco <-> Kalatel rev 3.6

Pelco to Kalatel, Kalatel to Pelco code translator  
**USER GUIDE**



The CONV Pelco<-> Kalatel is microprocessor based device which allows operate Cyber Dome cameras, or keyboard of Kalatel company, by keyboard, matrix switchers, Digital Video Recorders, or cameras, using popular Pelco-D or Pelco-P protocol. Translator supports a lot cameras in address range 1-255.

Device are bidirectional, and working with Pelco, or Kalatel device works as an input or output signal.

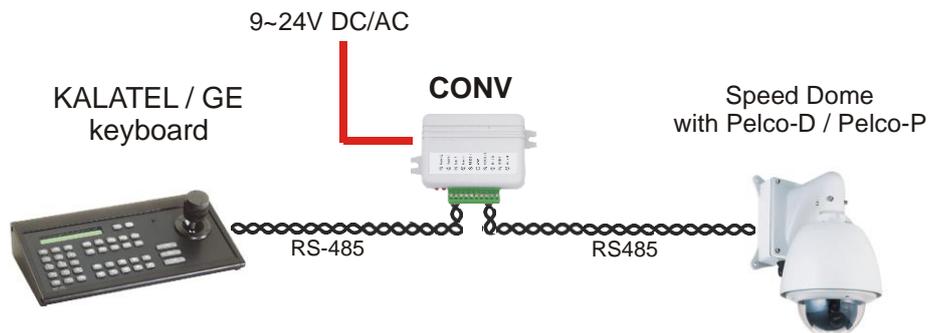
Code translator software running in multitasking mode, which provide quick response to emerging data and ensures stable operation.

Version 3.6 supports software upgrade via RS-485 interface and software Ewimar Upgrader.

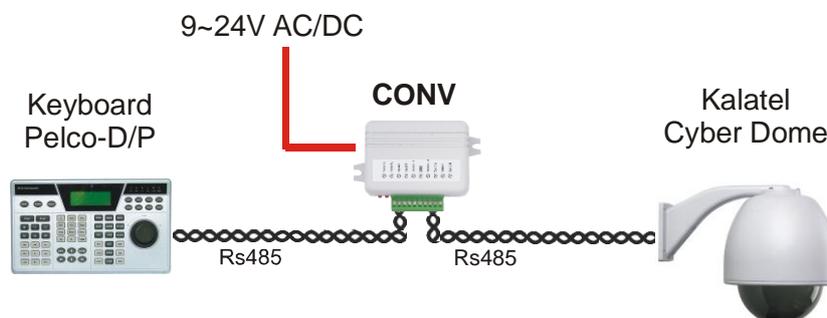
## Główne cechy:

- 1) Accurate representation of joystick movement with keyboard, which working in modes of Pelco-D, Pelco-P or Kalatel.
- 2) Simultaneous processing of many movement command: Pan, Tilt, Zoom, Iris, Focus.
- 3) Support of software and launch PRESET, PATTERN, SCAN function.
- 4) Support of camera menu
- 5) Support up to 255 speed dome cameras by one translator, or 512 using two translators.
- 6) Double extension of RS-485 bus distance: 1200m before translator and 1200m after translator.
- 7) Adjusted transmission speed.

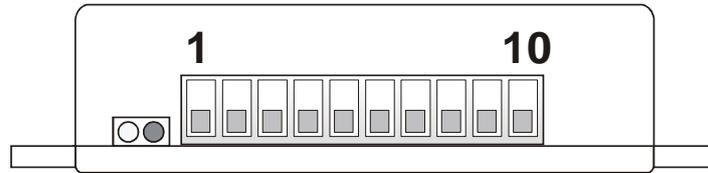
### 1. Description of structure of connectivity Kalatel to Pelco



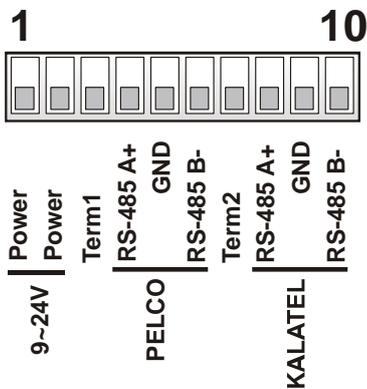
### 2. Description of structure of connectivity Pelco to Kalatel



### 3. Connection terminal



- **LED1** – receiving data from the control device (keyboard)
  - In conversion mode Pelco on Kalatel flashes to indicate data reception.
  - In conversion mode Kalatel on Pelco lights all the time, indicating receive data
- **LED2** – signaling translation and sending data to cameras
  - In conversion mode Pelco on Kalatel regularly blinks, when operated irregularly flashes a bright light.
  - In conversion mode Kalatel on Pelco flashes during operation.



**Power:** 9~24V DC / AC

**Pelco A/B:** RS-485, designed to connect Pelco keyboard or camera device

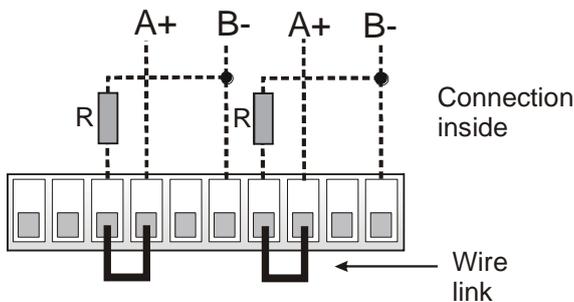
**Term1:** Terminating resistor 120Ω for RS-485 (Pelco)

**Kalatel A/B:** RS-485, designed to connect Kalatel a keyboard or camera device

**Term2:** Terminating resistor 120Ω for RS-485 (Kalatel)

**GND:** Ground connectors (cable shield)

RS-485 bus must be connected into camera and drivers properly with RS-485 bus rules ( **A** to **A** or **B** to **B**).



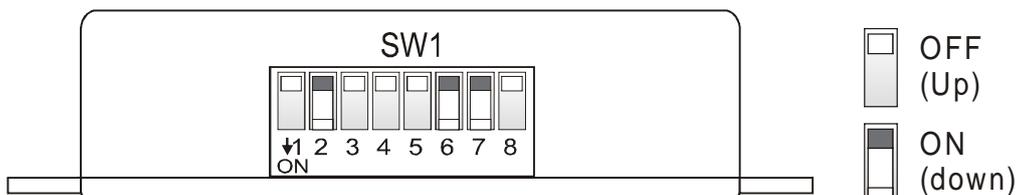
For longer cables of bus, both RS-485 interface should be included by terminating resistor. This will prevent wave reflections in cables, which are cause of transmission errors.

Terminating resistors should be connected only in devices, which are of ends of the bus. Larger number of resistors will cause an excessive burden of transmission.

The CONV1 already have build in termination resistors on the PCB.

Switching resistors in translator consists in the combination wire clamp **TERM1** with **A+(Pelco)** and **TERM2** with **A+(Kalatel)**

### 4. Description of configuration switches :



Transmission speed (Pelco)	2400baud	4800baud	9600baud	19200baud
DIP 1	OFF	ON	OFF	ON
DIP 2	OFF	OFF	ON	ON

Transmission speed defined only for Pelco, Kalatel have constant transmission speed :

**Baudrate: 4800, 1 bit start, 1 bit stop, 8 bits data, odd**

Type of translation	Kalatel to Pelco	Pelco to Kalatel
DIP 3	OFF	ON

Switch No. 3, is used to select the direction of translation data. Depending on the settings, used a different type of connection. See Point 1 and 2.

Type of Pelco protocol	Pelco D	Pelco P
DIP 4	OFF	ON

Switch No. 4, used to determine the type of Pelco - D or Pelco Pelco P. setting is important for any mode of translation (Pelco for Kalatel or Kalatel on Pelco)

Number of cameras	0-255	256-511
DIP 5	OFF	ON

Switch 5 determines the range of supported cameras when translating from Kalatel at Pelco. The range of cameras systems Pelco is 1~255 for Pelco-D and 0~255 for Pelco-P and the Kalatel system supports up to 512 cameras with addresses 0~511.

**If DIP switch 5 is set to OFF:** Orders for cameras 0-255 are translated without any change of address, while orders for cameras 256-511 are completely ignored

**If DIP switch 5 is set to ON:** Orders for cameras 0-255 are ignored, while orders for cameras 256-511 are translated but address the cameras to Pelco is reduced by the value of 256.

Change address	Disactive	Active
DIP 6	OFF	ON

The switch 6 is used to change the address of the controlled devices by the value of +/- 1. This allows for a better adjustment of camera address to the keypads. The change on to "+" or "-" indicates DIP switch 6

Change direction	Change +1	Change na -1
DIP 7	OFF	ON

If the DIP-7 is turned off, the address of the camera is reduced by the value of 1 when translating commands.

**If the DIP-7 is turned off,** the camera address is incremented by a value of 1 when translating commands.

**If the DIP-6 is turned off,** set DIP-7 do not matter.

## 5. How to start

All connections and switch configurations should be performed without the power . Pay attention to the correct polarity RS-485.

The correctness of the converter can be determined by observing the LEDs. If the device is properly configured and connected, the LED will blink properly or continuous light.

## 6. List of translated functions:

Number	Keyboard Kalatel	Functions Pelco camera
1	Move up	Move up
2	Move down	Move down
3	Move right	Move right
4	Move left	Move left
5	Zoom in	Zoom in
6	Zoom out	Zoom out
7	Focus +	Focus +
8	Focus -	Focus -
9	Iris +	Iris +
10	Iris -	Iris -
11	Call Preset 1~61	Call Preset 1~61
12	[FIND] + Set preset 1~61	Set preset 1~61
13	[FIND]+ [AUX1]	Autopan
14	[STORE] + [ ◀ ] + [STORE]	Left scan limit
15	[STORE] + [ ▶ ] + [STORE]	Right scan limit
16	[FIND]+ [ ◀ ] lub [FIND]+ [ ▶ ]	Scan start
17	[STORE] + [AUX2] + [STORE]	Record pattern
18	[STORE] + [AUX3] + [STORE]	Stop record
19	[FIND]+ [AUX3]	Run pattern
20	[STORE] + [AUX4] + [STORE]	Menu camera (preset 95)

Number	Keyboard Pelco	Functions Kalatel camera
1	Move up / down / left / right	Move up / down / left / right
2	Zoom in / Zoom out	Zoom in / Zoom out
3	Focus Far / Focus Near	Focus Far / Focus Near
4	Iris open / Iris close	Iris open / Iris close
5	Call Preset 1~61 / Set preset 1~61	Call Preset 1~61 / Set preset 1~61
6	Set Left / Set Right lub Set Preset 62~63	Left/Right function Auto Pan limit
7	Call Preset 81~84	Start preset 1~4 (Depending on the camera, route 1 and 2 are created as patterns, while Route 3 and 4 are created with presets - details are available in the original instructions camera)
8	Scan Zone	Scan (left, right limits on)
9	Start Record Pattern	Start Record Pattern
10	End Record Pattern	End Record Pattern
11	Start Pattern	Start Pattern
8	Set Preset 95  <b>Active function in camera menu:</b> Call preset 1 ~ 9 Call preset 10 Call preset 11 Call preset 12 Call preset 13 Call preset 14 Call preset 15 Focus Far Focus Near Iris Close (-) Iris Open (+)	Camera Menu  <b>Keyboard KTD-405 equivalent</b> Button „1” ~ „9” Button „0” Button „Clear” (ESC) Button „Set” (ENTER) Button „Prev” (◀◀) Przycis „Seq” (▶▶) Button „Alarm” Button „↑” Button „↓” Button „←” Button „→”
9	Call Preset 95	Exit camera menu

**Producer:** Ewimar Sp. z o.o., ul. Konarskiego 84, 01-355 Warsaw, Poland,  
Phone: +48 (22) 6919065, email: [handel@ewimar.pl](mailto:handel@ewimar.pl), [www.ewimar.pl](http://www.ewimar.pl)