

## VIDEO SWITCHING

The range comprises a complete series of products for management of CCTV systems: from simple sequential switchers to quad compressors, from small matrix - directly or remote controlled through keyboard, to matrix ideal for mid-size installation. The range is complete and versatile.

<b>SR4C</b>	<b>149</b>
<b>SW41SK-81SK</b>	<b>151</b>
<b>SM42A-82A</b>	<b>153</b>
<b>SM84A-164A</b>	<b>155</b>
<b>SM328A</b>	<b>157</b>



- Possibility of selecting PAL/NTSC
- 4 video inputs
- 1 monitor output
- 4 alarm inputs with possibility of NC or NO configuration
- Image display in quad or single format
- Optional hard disk

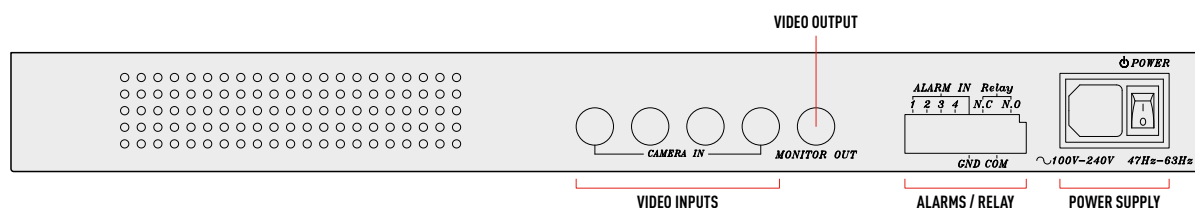


A solution for small applications with the possibility of displaying four cameras simultaneously on a single monitor or one camera on full-screen.

The DVR records either the quad or full-screen signal.

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VIDEO SWITCHING



### TECHNICAL DATA

#### GENERAL

Max 4 cameras
1 monitor output
Possibility of switching each input video to output channel
Possibility of displaying video inputs in quad format
Possibility of installing a hard disk for storing recordings: 2IDE (max 400GB each)
OSM setup
Password for protecting setup menu
Input titling and display of date and time
Possibility of modifying date and time format
Motion Detection can be programmed for each channel
Videoloss for each input
Channel adjustment: for each channel it is possible to adjust contrast, brightness, tone and colour

#### 2 Recording modes

- QUAD format with the screen divided into 4 shots
- MUX full-screen format for each input

Setup for recording in time bands
Event log
How to use the configurable hard disk
Supplied with instruction manual, pair of adapters for rack assembly, power supply cable

#### MECHANICAL

Iron box
Painted using grey epoxy powder
Keyboard on front panel
Dimensions: 432x280x44mm (17x11x1.7in)
ON/OFF switch
4 BNC connectors for video inputs
1 BNC connector for video output
Alarm connector, relays
Iron box

#### ELECTRICAL

Power supply 90-260V AC, 56-60Hz
Consumption 50W max
4 inputs 75 Ohm 1 Vpp
1 output 75 Ohm 1 Vpp
4 alarm inputs (can be configured N.O./ N.C.)
Output contacts: 1 N.O. and 1 N.C.
Max voltage applicable to relay 50V, 1A
PAL- or NTSC-type signal can be selected
Recording format M-Jpeg
Recording speed: 1x, 4x, 8x, 16x

#### Display resolution

- PAL 750x256 max
- NTSC 720x480 max

#### Recording resolution

- PAL 640x576 max
- NTSC 640x224 max

#### Display

- PAL 25fps
- NTSC 30fps

Selectable recording resolution in case of alarm (number of frames per second)

Selectable recorded image quality (degree of image compression)

#### ENVIRONMENT

Indoor
Operating temperature: 0°C / +40°C (+32°F / +107°F)

#### COMPLIANCE TO

CE Standard



Unit Weight:  
SR4C 4kg / 8.8lb

Package Weight:  
SR4C 5kg / 11lb

Package Dimensions (BxHxL):  
SR4C 43.2x4.4x28cm / 17x1.7x11in

Master Carton:  
SR4C -

- 4/8 video inputs - 1 video output
- Adjustable switching time
- Skip function



SW41SK and SW81SK units are sequential switchers constructed of sturdy aluminium, equipped respectively with 4 and 8 video inputs and 1 video output. The selection of the video input can be performed manually or in automatic switching.

In automatic mode, the switching time can be adjusted by means of a potentiometer (from 0.5 to 30 seconds).

The active video input and the automatic mode are signalled by red LEDs built-in on the push-buttons.



# SW41SK-81SK

## LOW COST SEQUENTIAL SWITCHERS



### TECHNICAL DATA

#### GENERAL

Max 4-8 cameras  
Ability to switch each video input to the output channel  
Ability to display on the outlet channel a switching cycle of the video inputs present  
Switching time adjustable by the operator (from 0.5 up to 30 seconds)  
Supplied with instruction manual

#### MECHANICAL

Made of aluminium  
Painted with epoxypolyester powder grey colour  
Local keyboard in polycarbonate  
Dimensions: 230x190x50mm (9x7.4x1.9in)  
Power supply jack connector  
Potentiometer TIME  
1 BNC video outputs  
4/8 BNC video inputs

#### ELECTRICAL

4/8 inputs, 750hms 1 Vpp  
1 output 750hms 1 Vpp  
Band width: >6MHz  
Cross-talk: -50dB  
Power supply: 230V AC, 50Hz  
Power consumption: 4W  
Fuse: 50 mA 250V

#### ENVIRONMENT

Indoor  
Operating temperature: 0° C / +45°C (+32°F / +113°F)

#### COMPLIANCE TO

CE according to EN 61000-6-3, EN 60065, EN 50130-4

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VIDEO SWITCHING



#### Unit Weight:

**SW41SK** 1.1kg / 2.4lb  
**SW81SK** 1.1kg / 2.4lb

#### Package Weight:

**SW41SK** 1.3kg / 2.8lb  
**SW81SK** 1.3kg / 2.8lb

#### Package Dimensions (BxHxL):

**SW41SK** 25x6.5x25cm / 9.8x2.5x9.8in  
**SW81SK** 25x6.5x25cm / 9.8x2.5x9.8in

#### Master Carton:

**SW41SK** 20 units  
**SW81SK** 20 units

- Video programming "On Screen Menu"
- 4 video inputs expandable to 8
- 2 video outputs
- Remote control by max 2 operators + one local
- Telemetry line
- Privacy video-masking function



The SM42A-SM82A microprocessor-controlled matrix with remote or local control allows the switching of 4 (8) cameras on 2 video outputs.

The matrix can be controlled by two remote keyboards, by the local keyboard or by the innovative infrared remote control DCIR in RS485.

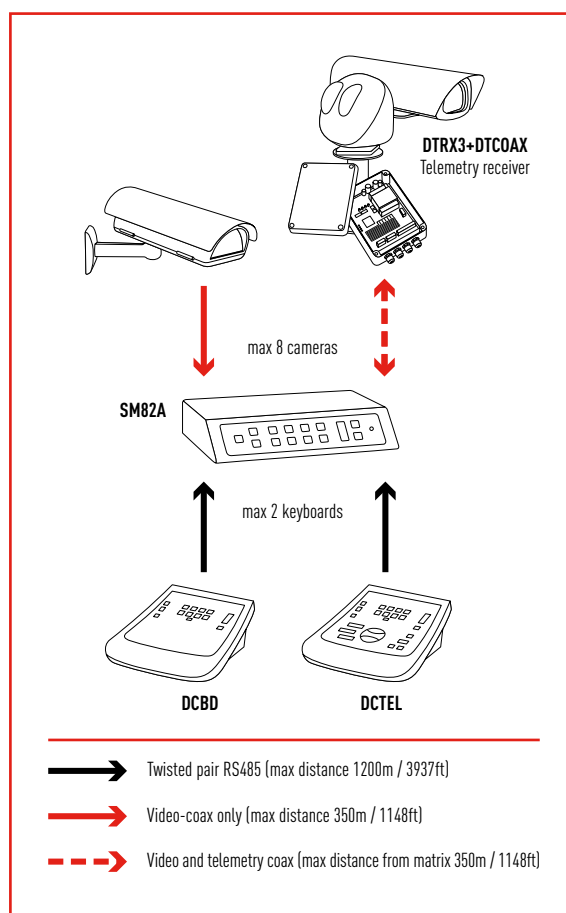
The keyboards, located at a maximum of 1200m (3937ft) from the cycle matrix, allow the video switching and matrix set-up, in four languages, "On screen Menu" and telemetry control through the matrix itself.

One alarm contact can be associated with the corresponding video input. In case of alarm, the alarmed video input can be displayed on the video output. The alarm contacts are independent and configured as normally open (NO) or normally closed (NC). The reset of an alarm situation is performed through keyboard, external contact or time-out.

A programmable password ensures protection from improper use of the matrix.

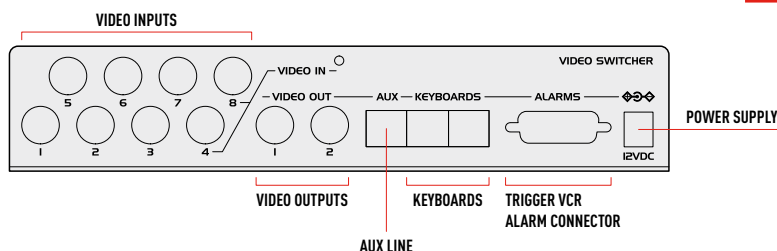
The telemetry control can be performed over the coax cable or by RS485.

By a VCR trigger it is possible to control the video sequence to be taped.



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VIDEO SWITCHING



# SM42A-82A

## SMALL VIDEO MATRIX



### TECHNICAL DATA

#### GENERAL

Max 4-8 cameras  
 Max 2 remote keyboards and a local keyboard  
 On screen display video programming  
 Menu in four languages (Italian, English, French and German)  
 Different switching sequences for each output video  
 Identification texts for each output  
 Types of alarm reset: manual from keyboard, external, timed automatically  
 Completely configurable alarm input for each 4 (8) video input  
 VCR trigger management  
 Alarm condition warning buzzer  
 Relay can be activated by each alarm  
 Telemetry control on RS485 auxiliary line and on coaxial cable  
 Local keyboard for complete matrix control  
 Video signal masking on fixed camera for privacy purposes  
 Input 75 Ohm load disconnectable  
 Supplied with instructions manual, wide range power supply, 3 power cables, 2 RJ11 telephone cables, 2 jack shunt boxes RJ11, 1 DB15 connector

#### MECHANICAL

Metal enclosure  
 Painted with epoxypolyester powder RAL7036  
 Keyboard made of polycarbonate with 15 keys  
 Dimensions: 167x230x47mm [6.5x9x1.8in]  
 1 connector 15 poles  
 3 connectors RJ11  
 Power supply jack connector  
 4-8 BNC video inputs  
 2 BNC video outputs

#### ELECTRICAL

Power supply: IN 100-240V AC - OUT 12V DC, 47/63Hz, 1A  
 Power consumption: 15W max  
 4-8 inputs 75 Ohm 1Vpp (PAL/NTSC)  
 2 outputs 75 Ohm 1Vpp (PAL/NTSC)  
 Bandwidth: >6MHz  
 Lower cut off frequency (-3dB): 9Hz  
 Signal / noise ratio: > 48dB@5.5MHz  
 Relay contact: 50V AC, 0.3A

#### COMMUNICATIONS

Telemetry transmission on coax cable on the 4-8 video inputs (min distance 5m [16.4ft] and max 350m [1148ft])  
 Telemetry data transmission on serial output RS485 for a max distance of 1200m [3937ft]  
 Two serial inputs RS485 for the reception of data from 2 remote keyboards for a max distance of 1200m [3937ft]

#### PROTOCOL

##### Telemetry Line

VIDEOTEC (1200, 9600 baudrate)  
 MACRO (1200, 9600, 19200, 38400 baudrate)  
 PELCO D (2400, 4800, 9600, 19200 baudrate)

*Pelco D is registered trademark.*

*Because SM42A-SM82A may be interfaced with equipment not manufactured by Videotec, it is possible that the interface protocols have changed or are in a different configuration from earlier tested units from us. Because Videotec recommends a bench test prior to installation, Videotec will not be liable for any installation costs or lost revenues in the event a compatibility problem will occur.*

#### RELATED PRODUCTS

DCBD	Matrix Control Keyboard
DCTEL	Matrix and Telemetry Control Keyboard
DCIR	Infrared Remote Control
DCK	Matrix and Mux Control Keyboard
DCJ	Matrix, Mux and Telemetry Control Keyboard with three axis joystick
DCT	Matrix, Mux, DVR and Telemetry Control Keyboard touch screen equipped with three axis joystick
MICRODEC485	Mini telemetry receiver 8 functions, 24V AC
DTMRX224	Telemetry receiver 12 functions, 24V AC
DTMRX2	Telemetry receiver 12 functions, 230V AC
DTRX324	Telemetry receiver 17 functions, 24V AC
DTRX3	Telemetry receiver 17 functions, 230V AC
DTCOAX	Over the coax board for DTRX3 only trough matrix series SM
DTRXDC	Telemetry receiver 13 functions, for PTH355P
ULISSE	Positioning Unit
MISTRAL	Dome Camera

*Retrofit on discontinued products; contact Videotec for further specifications.*

#### ENVIRONMENT

Indoor  
 Operating temperature: 0°C / +40°C (32°F-105°F)

#### COMPLIANCE TO

CE according to EN 61000-6-3, EN 60950, EN 55022 Class B, EN 50130-4  
 FCC according to Part. 15 Class B



**Unit Weight:**  
**SM42-82A** 1.8kg / 3.9lb

**Package Weight:**  
**SM42-82A** 2.4kg / 5.3lb

**Package Dimensions (BxHxL):**  
**SM42-82A** 26x19x16cm / 10.2x7.5x6.3in

**Master Carton:**  
**SM42-82A** 10 units





- Video programming "On Screen Menu"
- 8-16 video inputs
- 4 video outputs
- Remote control by max 4 operators
- Telemetry line
- Controllable by PC
- Privacy video-masking function

The SM84/SM164A matrix is a microprocessor remote-controlled video matrix which allows the video switching of 8-16 cameras on 4 outputs.

The "On Screen" programming can be done in four languages. A programmable password ensures protection from improper use of the matrix.

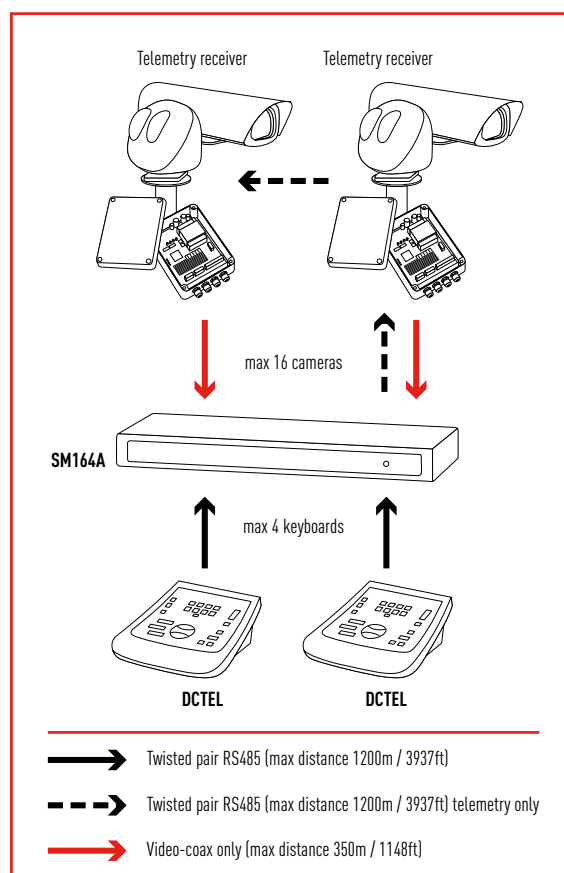
The switching is controlled by a maximum of 4 remote keyboards in RS485.

The keyboards, remote up to maximum distance of 1200m (3937ft), allows the video switching and matrix set-up, in four languages, on screen and telemetry control through the same matrix.

8-16 alarm contacts can be associated with the corresponding video inputs. In case of alarm, the alarmed video input can be displayed on the video output. The alarm contacts are independent and configured as Normally Open (NO) or Normally Closed (NC). The reset of an alarm situation is performed through keyboard, external contact or time-out.

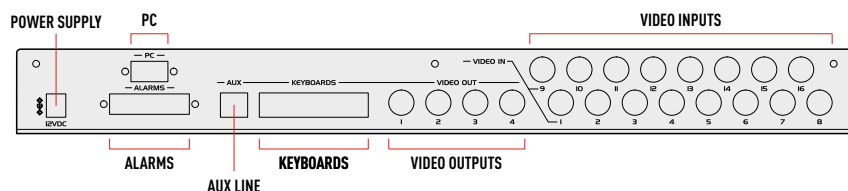
The telemetry control can be performed on coax cable on the 8-16 video inputs and on the RS485 serial output.

Furthermore, it is possible to control the video switching by a VCR trigger signal.



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### TECHNICAL DATA

#### GENERAL

Max 8-16 cameras  
Max 4 remote keyboards  
Menu in four languages (Italian, English, French and German)  
On screen display video programming  
Different switching sequences for each output video  
Identification texts for each output  
Date and time management  
Types of alarm reset: manual from keyboard, external, timed automatically  
Completely configurable alarm input for each 8-16 video input  
VCR trigger management  
Alarm condition warning buzzer  
Relay can be activated by each alarm  
Video signal masking on fixed camera for privacy purposes  
Input 75 Ohm load disconnectable  
Supplied with instruction manual, wide range power supply, 3 power cables, 2 RJ11 telephone cables, 2 jack shunt boxes RJ11, 1 DB25 connector

#### MECHANICAL

Metal enclosure  
Painted with epoxypolyester powder RAL7036  
Dimensions: Rack 19", 1U (436.6x163x445mm)  
1 connector 25 pole  
5 connectors RJ11 (4 for keyboards and 1 for telemetry line)  
Power supply jack connector  
Female connector DB9  
8-16 BNC video inputs  
4 BNC video outputs

#### ELECTRICAL

Power supply: IN 100-240V AC - OUT 12V DC, 47/63Hz, 1A  
Power consumption: 15W max  
8-16 inputs 75 Ohm 1Vpp (PAL/NTSC)  
4 outputs 75 Ohm 1Vpp (PAL/NTSC);  
Bandwidth: > 6MHz  
Lower cut-off frequency [-3dB]: 9Hz  
Signal/noise ratio: >48dB@5.5MHz  
Relay contact: 50V AC, 0.3A

#### COMMUNICATIONS

Telemetry transmission on coax cable on the 8-16 video inputs (min distance 5m (16.4ft) and max 350m (1148ft))  
Telemetry data transmission on serial output RS485 for a max distance of 1200m (3937ft)  
Four serial inputs RS485 for the reception of data from max 4 remote keyboards from a max distance of 1200m (3937ft)  
Serial input RS232 for firmware update and PC control from a max distance of 15m (49ft)

#### PROTOCOL

##### Telemetry Line

VIDEOTEC (1200, 9600 baudrate)  
MACRO (1200, 9600, 19200, 38400 baudrate)  
PELCO D (2400, 4800, 9600, 19200 baudrate)

*Pelco D is registered trademark.*

*Because SM84A-164A may be interfaced with equipment not manufactured by Videotec, it is possible that the interface protocols have changed or are in a different configuration from earlier tested units from us. Because Videotec recommends a bench test prior to installation, Videotec will not be liable for any installation costs or lost revenues in the event a compatibility problem will occur.*

#### RELATED PRODUCTS

DCBD	Matrix Control Keyboard
DCTEL	Matrix and Telemetry Control Keyboard
DCIR	Infrared Remote Control
DCK	Matrix and Mux Control Keyboard
DCJ	Matrix, Mux and Telemetry Control Keyboard with three axis joystick
DCT	Matrix, Mux, DVR and Telemetry Control Keyboard touch screen equipped with three axis joystick
MICRODEC485	Mini telemetry receiver 8 functions, 24V AC
DTMRX224	Telemetry receiver 12 functions, 24V AC
DTMRX2	Telemetry receiver 12 functions, 230V AC
DTRX324	Telemetry receiver 17 functions, 24V AC
DTRX3	Telemetry receiver 17 functions, 230V AC
DTCOAX	Over the coax board for DTRX3 only trough matrix series SM
DTRXDC	Telemetry receiver 13 functions, for PTH355P
ULISSE	Positioning Unit
MISTRAL	Dome Camera

*Retrofit on discontinued products; contact Videotec for further specifications.*

#### ENVIRONMENT

Indoor  
Operating temperature: 0°C / +40°C (32°F / +105°F)

#### COMPLIANCE TO

CE according to EN 61000-6-3, EN 60950, EN 55022 Class B, EN 50130-4  
FCC according to Part. 15 Class B



Unit Weight:  
SM84-164A 3.4kg / 7.5lb

Package Weight:  
SM84-164A 3.7kg / 8.1lb

Package Dimensions (BxHxL):  
SM84-164A 51.5x18.5x11.5cm / 20.2x7.3x4.5in

Master Carton:  
SM84-164A -

- 32 video inputs and 8 video outputs
- Windows 98/2000/XP PC or "On Screen Menu" configuration
- Master/Slave and Parallel systems layout
- Videoloss detector
- 32 sequences (32 steps each)
- 32 alarm inputs



The full cross point video matrix switcher SM328A is a global solution for the collection and management of images. The matrix is capable of switching 32 video inputs to 8 independent outputs. This product can activate 32 different synchronized sequences among several monitors, with day, night or holidays cycles.

The matrix provides 32 alarm inputs and 8 relays controlled by events or alarm contacts (alarm groups). Alarms can be reset through a keyboard, external contacts or automatic timed reset. The SM328A can be easily configured through an On-Screen Menu or through a PC operating with Windows 98/2000/XP.

In applications like shopping malls, department stores and banks where monitors are shown to the public as a deterrent, an important feature of the matrix is the camera exclusion. If the operator recalls a video input or acts on a PTZ camera, the selected camera can be excluded and/or replaced by another video input from the switching sequence of any public monitor.

Following an alarm condition, in addition to a buzzer or on screen text, the SM328A is capable of intelligent actions: we can program on alarm actions on monitors (sequences and cameras) and on telemetry (scan on home position). For privacy reasons the video inputs can also be masked on fixed cameras.

The matrix is equipped with 2 RS485 serials outputs.

Through these outputs we can perform telemetry or other matrix control. It is also possible to connect additional matrixes in Master/Slaves or Parallel systems.

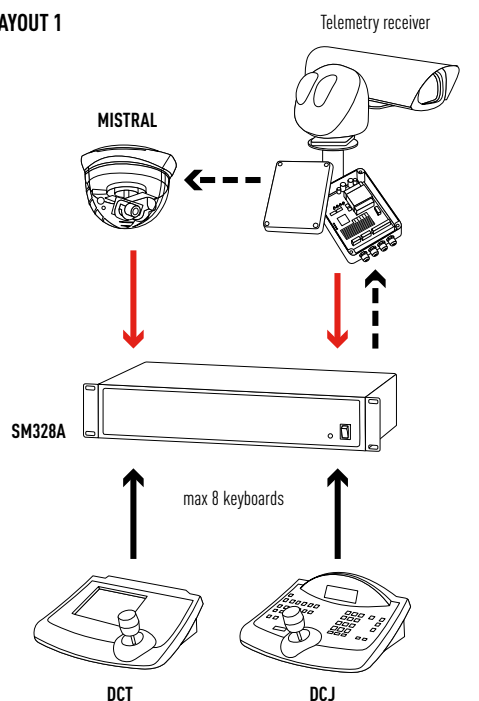
In a Master/Slave system the master matrix can receive 4 outputs from every Slave (max 4). See layout 2.

In a Parallel system, up to 9 matrixes can be connected together. See layout 3.

In a Master/Slave system, Master keyboards can control all system cameras; Slave keyboards control only local cameras. In a Parallel system each keyboard can control all system cameras.

DCK, DCJ and DCT keyboards, microprocessor controlled, allow you to directly control cameras, switching sequences and alarm conditions.

### LAYOUT 1



- Twisted pair RS485 (max distance 1200m / 3937ft)
- - - → Twisted pair RS485 (max distance 1200m / 3937ft) telemetry only
- Video-coax only (max distance 350m / 1148ft)

### TECHNICAL DATA

#### GENERAL

Max 32 video inputs  
28 character text identification for each camera  
Max 8 video outputs; one of these is optionally used for controlling the switching from video recorder  
32 independent automatic 32-step sequences  
Max 8 keyboards  
Complete setup On Screen Display video or by PC software on Windows 98/2000/XP  
Setup menu in four languages (Italian, English, French and German)  
Video signal masking on fixed camera for privacy purposes  
Camera exclusion feature if monitor is displayed in public areas  
On alarm: actions on monitors (sequences and cameras recall) and telemetry (scan on Home position or Patrol)  
Complete event log channel  
Easy matrix control by PC

#### Management of date and time

3 time ranges: day, night or holidays  
At a weekly level, single days show 4 different time of starting/ending the daily sequence  
Management of 16 days for variable holidays  
Management of 8 closing terms  
Automatic management of daylight saving time (automatic for Europe/America/etc. and user defined)

#### Time events

64 time events max within 24 hours which allows:  
- enable/disable keyboards  
- enable/disable alarm contacts  
- enable/disable single relays

#### Alarms

28 character alarm message per contact out of 32 contacts  
32 alarm contacts, which can be configured one by one, 4 types of reset per contact:  
- Time automatic reset, from 1 second to 1 hour from the contact enabling  
- Reset from keyboard, after the authorised operator has entered a password  
- External reset, after closing one contact  
- Automatic reset for continual type alarm contacts, when the alarm signal stops

When an alarm is enabled, every output can independently proceed to acknowledge it (by selecting a cycling sequence or a fixed camera) or neglect it

Alarm contacts are selectable as NO or NC and are acknowledged based the enabling time range (day, night, or their combination)

The alarm contacts can be enabled/disabled even from a time event. Priority management based on the acknowledgement order, in case of multiple alarms. Warning buzzer and management of 8 relays on alarm  
On alarm action on monitors (sequences and cameras) and on telemetry receivers (scan on home position)

#### System security

Optional management of videoloss and videotape video recorder  
Keyboards can be time enabled/disabled based on the prescriptions of the matrix configuration

Trigger VCR and some DVR management

Supplied with instruction manual, 1 power cable, 1 serial cable 9 pins, 2 DB25 connectors, set-up disk, power supply

#### MECHANICAL

Metal enclosure  
Epoxypolyester powder painted RAL9006 and black colour  
Dimensions: 180x430x94mm (7x17x3.7in) Rack 19", 2U (HE)  
2 DB25 connectors (alarms and relays)  
6 RJ11 connectors (4 RJ11 for keyboards and 2 RJ11 for telemetry line)  
1 DB9 male connector (PC and serial printer)  
Power supply jack-connector  
32 BNC video inputs  
8 BNC video outputs  
2 BNC connectors (VCR trigger and alarms reset)

#### ELECTRICAL

##### External wide range power supply

- IN 100-240V AC - OUT 12V DC, 47/63Hz, 2A

Consumption: 24W

32 inputs 75 Ohm 1Vpp (PAL/NTSC)

8 outputs 75 Ohm 1Vpp (PAL/NTSC)

Bandwidth: > 6MHz

Lower cut-off frequency: [-3dB]: 9Hz

Signal/noise ratio: >47dB@5.5MHz

Relay contacts: 50V AC/DC 0.5A max

#### PROTOCOL

##### Telemetry Line

VIDEOTECH (1200, 9600 baudrate)

MACRO (1200, 9600, 19200, 38400 baudrate)

PELCO D (2400, 4800, 9600, 19200 baudrate)

*Pelco D is registered trademark.*

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#### COMMUNICATIONS

Four serial inputs RS485 for the reception of data from max 8 remote keyboards at a max distance of 1200m (3900ft)

Two auxiliary RS485 lines outputs for telemetry and other devices control at a max distance of 1200m (3900ft). Auxiliary A can be used to connect more matrixes in master-slaves or parallel systems

Serial input PC RS232 at a max distance of 15m (49ft) for matrix set-up, loading configuration from matrix to PC for analyzing the current settings and matrix control

#### RELATED PRODUCTS

<b>DCK</b>	Matrix and Mux Control Keyboard
<b>DCJ</b>	Matrix, Mux and Telemetry Control Keyboard with three axis joystick
<b>DCT</b>	Matrix, Mux, DVR and Telemetry Control Keyboard touch screen equipped with three axis joystick
<b>MICRODEC485</b>	Mini telemetry receiver 8 functions, 24V AC
<b>DTMRX224</b>	Telemetry receiver 12 functions, 24V AC
<b>DTMRX2</b>	Telemetry receiver 12 functions, 230V AC

# SM328A

## SYSTEM VIDEO MATRIX



DTRX324	Telemetry receiver 17 functions, 24V AC
DTRX3	Telemetry receiver 17 functions, 230V AC
DTCOAX	Over the coax board for DTRX3 only trough matrix series SM
DTRXDC	Telemetry receiver 13 functions, for PTH355P
ULISSE	Positioning Unit
MISTRAL	Dome Camera

### ENVIRONMENT

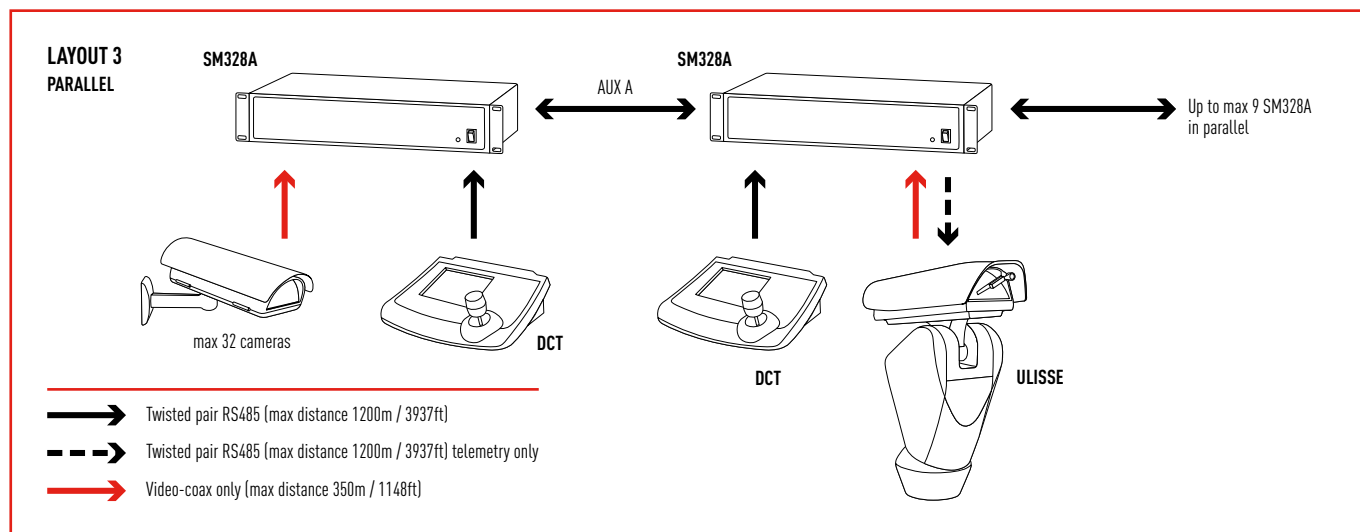
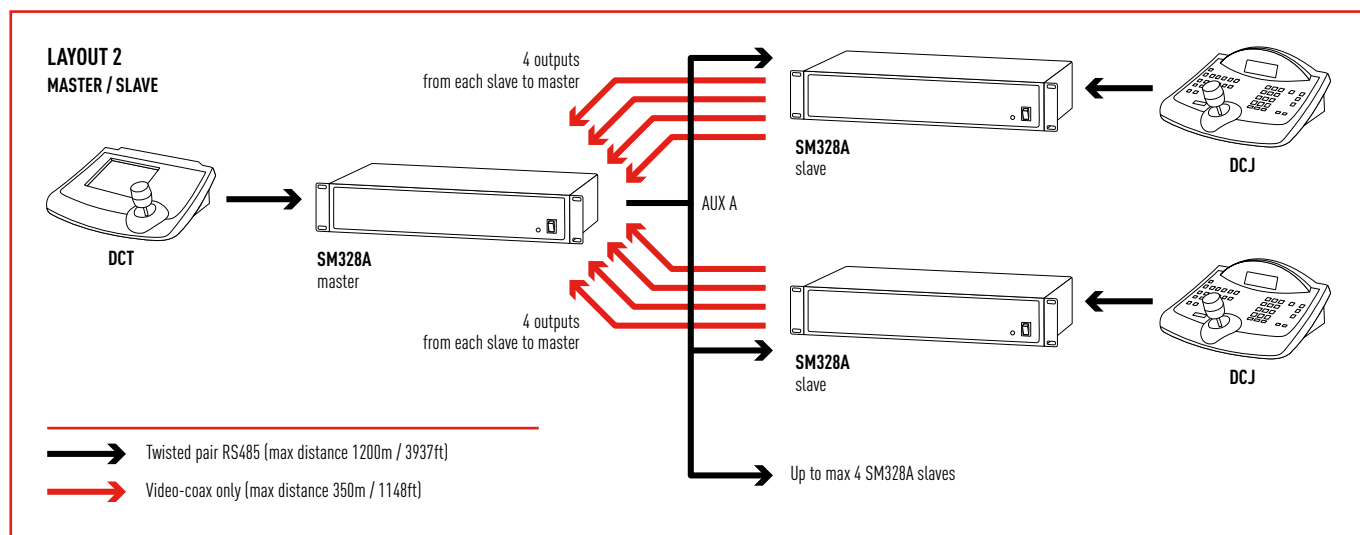
Indoor

Operating temperature: 0°C / +45°C (32°F / +113°F)

### COMPLIANCE TO

CE according to EN 60065, EN 55022 Class A, EN 50130-4

FCC according to Part. 15 Class B



**Unit Weight:**  
SM328A 4.8kg / 10.6lb

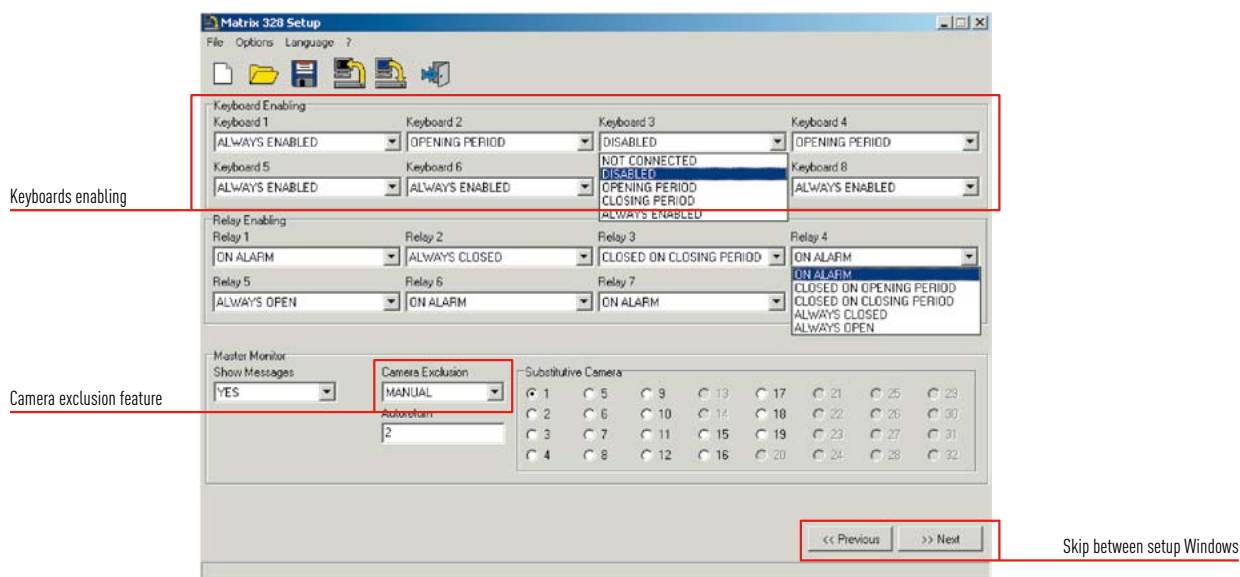
**Package Weight:**  
SM328A 5.2kg / 11.5lb

**Package Dimensions (BxHxL):**  
SM328A 26.5x17.5x49cm / 10.4x6.9x19.3in

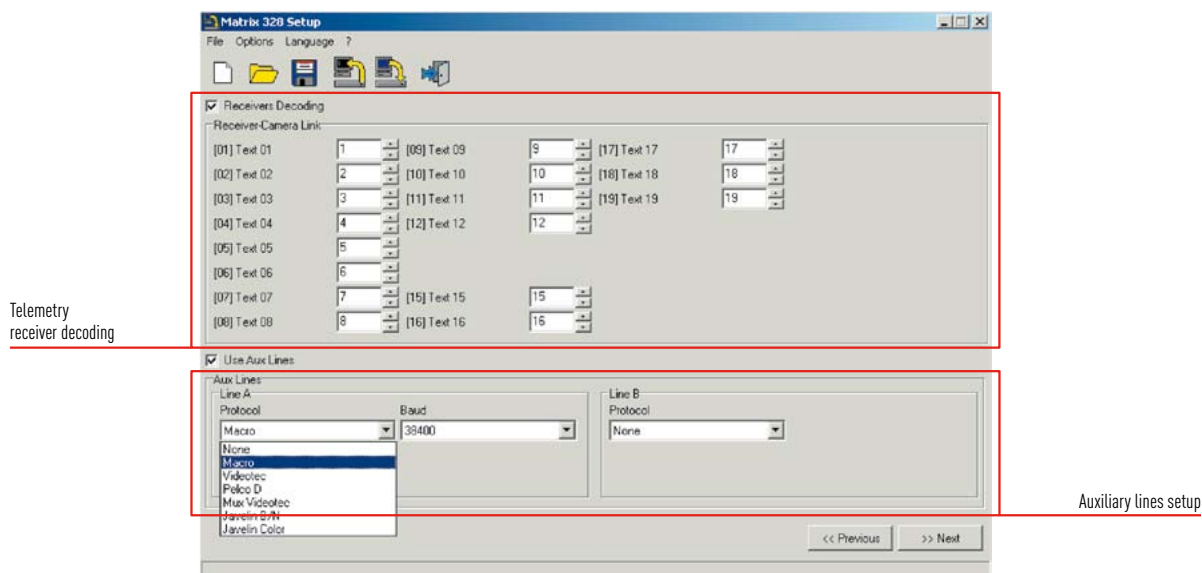
**Master Carton:**  
SM328A -

### MATRIX SETUP

#### Example: Keyboard enabling



#### Example: Telemetry and AUX setup



### MATRIX SETUP

Example: Alarms setup

