



V1411 Matrix Switcher

- **Telemetry control over Vicoax II (coaxial cable) or NOVA (twisted pair)**
- **8 × 2 or 16 × 4 video configurations**
- **8 or 16 local alarm inputs with global alarm output**
- **8 or 16 receiver alarm inputs via the telemetry**
- **Compact size for easy installation**
- **Control via V1411X-DVC keypad with variable speed**

The V1411 video switcher has been designed to work with the V1411X-DVC, V1400X-DVC-G or V1300X-DVC/RVC keypads to switch either 8 video inputs to two monitor outputs or, with the V1411-EXP expander module installed, 16 video inputs to four monitor outputs.

Additionally, each video input can transmit telemetry commands to a Surveyor2000 camera dome, providing fully functional control of all dome features, including variable speed, tours and presets, and to Vicon receivers (V1311RB and V1305R-DC).

The primary telemetry system employed is over the coaxial cable (Vicoax II, enhanced), eliminating the need to run additional cables

to the dome. The V1411 also offers twisted pair telemetry transmission for those situations where coaxial telemetry is inappropriate. Both coaxial cable and twisted pair telemetry are standard features of the V1411 and a combination of both can be used on the same installation for total flexibility.

Up to four operator keypads, V1411X-DVC, V1400X-DVC-G, V1300X-DVC/RVC or a PC equipped with the ProTech PAC software, can be connected to the V1411 via an RS-422 port on the unit. The RS-422 port also provides duplex communications to Vicon's range of NOVA telemetry receivers, plus Surveyor2000 camera domes. The keypad or receiver data can be wired in either a star or daisy chain configuration. A V1400X-IDL (DL or IDL) is required for star configuration.

The V1411 has 8 looping inputs (16 with V1411-EXP) that can be looped to a multiplexer or VCR. The monitor output can be connected to a VCR and the VCR output fed back in as camera input. There is an alarm output relay contact to trigger an alarm on a VCR (or other device).

Each video channel has a hardwired alarm input to automatically display the video picture from the associated camera onto monitor number 1 in the event of an alarm. Alarms can also be received via the telemetry path with the same effect. Both manual and automatic alarm acknowledgement is supported.

The V1411 is constructed to allow installation on a desktop, in an equipment rack or fixed to a wall. The V1411 is equipped with a power supply for 120 VAC, 60 Hz or for 230 VAC, 50 Hz input. The fuse tray must be inserted correctly to select input voltage.

The V1411 complies with FCC requirements for a Class A device and with European Community EMC Directive 89/336 EEC and amendments 92/31/EEC. The product was subjected to the testing outlined in European Normalization Standard (Safety) EN60950, (Emissions) EN 55022, A1: 1995 and A2: 1997 Class B, (Harmonic Emissions) EN61000-3-2: 1995, A1: 1998 and A2: 1998, (Flicker) EN61000-3-3: 1995 and (Immunity) EN50130-4: 1995 and A1: 1998.

Contractors' Specification

Matrix Switcher with Telemetry Control

The matrix switcher shall control 8 camera inputs and 2 monitor outputs; with an optional expansion unit, it shall be able to control 16 camera inputs and 4 monitor outputs. The primary telemetry system employed is over coaxial cable (enhanced). It shall also offer twisted pair telemetry transmission. Both coaxial cable and twisted pair telemetry shall be able to be used in an installation. The switcher must be used with a keypad; up to four keypads shall be able to be used with the switcher. The switcher shall have looping outputs for connection to a multiplexer or VCR. It shall have alarm capability. The switcher shall

have installation flexibility, desktop, rack-mounted or fixed to a wall. The switcher shall be available in 120 VAC or 230 VAC versions.

The maximum dimensions of the switcher shall not exceed: height, 3.5 in. (88 mm); desktop width, 17.5 in. (445 mm); rack mount width, 19 in. (483 mm); depth, 4.5 in. (115 mm). Weight shall not exceed 7.1 lb (3.2 kg).

The matrix switcher shall be Vicon model V1411 (120 VAC) or V1411-230 (230 VAC); the expansion unit shall be V1411-EXP.

Technical Information

VIDEO

- Video Input Level:** 1.0 V p-p nominal.
- Input/Output Impedance:** Terminated: 75 ohms.
Looping: High impedance (15 kohm).
- Input to Output Isolation:** 60 dB at 4.2 MHz.
- Video Gain:** Unity, ± 0.3 dB.
- Video Frequency Response:** 100 KHz to 8MHz ± 0.5 dB.
- Total Bandwidth:** 20 Hz to 14 MHz, -3dB.
- Tilt:** Less than 1%.
- Field/Line Short-Time Distortion:** Less than 1%.
- Chrominance to Luminance Delay:** Less than 50 nsec.
- Crosstalk Isolation:** Typically 60 dB at 4.2 MHz between two adjacent input channels routed to two adjacent output channels.
- Hum and Noise:** 60 dB below 1 V p-p up to 5 MHz.
- Signal-to-Noise Ratio:** Greater than 65 dB.
- Operation:** Manual or automatic alarm acknowledgement/reset.
Auto acknowledge time: 20 seconds or 60 seconds.

OPERATION

- Keypad Functions:** Monitor selection.
Camera selection.
Preset store/recall.
Alarm acknowledge.
Autoiris, on/off.
Autopan.
Sequential switching, selection and programming.
Zoom.
Focus.
Manual iris.
Pan and tilt with variable speed.
Lens speed.
- Alarm:** Manual or automatic alarm acknowledgement/reset.
Auto-acknowledge time: 20 or 60 seconds, selectable.

ELECTRICAL

- Input Voltage:** 120 or 230 VAC, 50/60Hz.
- Power Consumption:** 10 W.
- Heat Equivalent :** 0.6 btu/min (0.14 kg-cal/min).
NOTE: These figures represent the conversion of 100% of the electrical energy to heat. Actual percentage of the heat generated will be less and will vary from product to product. These figures are provided as an aid in determining the extent of cooling required for an installation.
- Alarm Inputs:** Active High or Low compatible.
8 (or 16 with V1411-EXP) from receivers,
8 (or 16 with V1411-EXP) direct alarm inputs.

- Alarm Output:** Single pole changeover (SPCO) relay provides operation of remote units, such as VCRs, under alarm conditions.
Relay related at 0.5A, 30 V.
- Line Cord:** Detachable IEC320 three conductor cable with grounded plug.
- Fuse:** 20 mm, 250 mA, delay HRC. When replacing the fuse, ensure that the fuse holder is replaced in the correct orientation for the supply voltage being used.

Radio Frequency Emission Rating: FCC Class A.

- European Community (CE) Standards:** Emissions: EN 55022: 1994+A1: 1995+A2: 1997.
Harmonic Emissions: EN61000-3-2: 1995+A1: 1998+A2: 1998.
Flicker: EN61000-3-3: 1995.
Immunity: EN 50130-4: 1995+A1: 1998.
- Safety:** EN 60950

CONNECTORS

- Power:** IEC320 recessed three-pin male connector with built-in fuse tray.
- Video Input:** 8 (or 16 with V1411-EXP) BNC connectors.
- Looping Video Output:** 8 (or 16 with V1411-EXP) BNC connectors.
- Video (Monitor) Outputs:** 2 (or 4 with V1411-EXP) BNC connectors.
- Alarm Input:** Input either via receivers at the camera stations or directly via screw terminal connectors on the V1411.
- Remote Operator Keypads:** 9-pin D-shell connector.
- Receivers:** NOVA: 9-pin D-shell connector.
Vicoax II: BNC connectors.
- Auxiliary Alarm Output:** Detachable 3-pin screw terminal.

MECHANICAL

- Dimensions:** Height (H): 3.5 in. (88 mm).
Width (W):
Rack Mount: 19.0 in. (483 mm).
Desk-Top: 17.5 in. (445 mm).
Depth (D): 4.5 in. (115 mm).
- Weight:** 7.1 lb (3.2 kg).
- Construction:** Steel chassis.
- Finish:** Painted black.

ENVIRONMENTAL

- Operating Temperature Range:** 32 to 122° F (0 to 50° C).
- Operating Humidity Range:** Up to 90% relative, non-condensing.
- Storage Temperature Range:** -20 to 140° F (-29 to 60° C).
- Storage Humidity:** Up to 85% relative, noncondensing.