

Specifications and product availability are subject to change without notice.

## DVT023 TV MODULATOR WITH NICAM STEREO SOUND

### General

DVT023 is a compact TV modulator for the DVX product family. It consists of video and audio IF modulators, a NICAM stereo audio encoder, a high selectivity IF part and an output upconverter from IF to RF.

The DVT023 creates a high quality VSB modulated TV signal with NICAM stereo sound for PAL B/G, D/K and I Systems. Output frequency range is 47...862 MHz.

All parameters of the modulator are fully programmable using the CATVisor™ Commander software or a handheld programmer. The DVT023 is fully compatible with the DVX Headend System and can be installed into a standard DVX001 installation frame.



### Features

- Full spectrum RF output
- Excellent price performance ratio
- Supports both B/G and D/K norms
- Automatic audio mode selection
- High side band suppression
- Highly accurate RF output level and frequency

### Monitoring functions

- Video level
- Audio levels
- Self diagnostic

### Remotely controlled parameters

- Video level, inversion
- Video source (internal/decoder connector)
- Audio level
- TV system
- Sound mode (stereo/dual)
- Audio subcarrier levels
- Output frequency and level

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## Technical specifications

**All specification are typical values unless other mentioned.**

Parameter	Specification	Note
<b>Video input</b>		
Level	1 Vpp	
Impedance	75 Ohm	
Return loss	34 dB	
<b>Video parameters</b>		
Luminance non-linearity	1 %	
Differential gain	2 %	
Differential phase	1 °	
Frequency response	± 0.5 dB	
Group delay response	50 ns	0.1 ... 4.43 MHz
Field time distortion	2 %	
Line time distortion	1 %	
2T K-factor	2 %	
S/N weighted	65 dB	CCIR 567-2
<b>Audio inputs</b>		
Frequency range	40...15000 Hz	
Level	+6 dBm	± 30 kHz deviation
Impedance	25 kOhm	Unbalanced
<b>Mono Audio parameters</b>		
Frequency response	± 0.5 dB	40...15000 Hz
Harmonic distortion	0.3 %	50 kHz dev.
Intermodulation distortion	1 %	
S/N weighted	56 dBqp	CCIR 468-3
<b>Mono Audio subcarrier</b>		
Frequency	4.0 ... 6.5 MHz	0.5 MHz step
Level	-13 dBc	adj. -10...-25 dB
<b>Stereo Audio parameters</b>		
Frequency response	± 1 dB	
Harmonic distortion	0.5 %	50 kHz dev.
Intermodulation distortion	1 %	
S/N weighted	60 dBqp	CCIR 468-3
Channel separation	60 dB	at 1 kHz
<b>Stereo Audio subcarriers</b>		
Frequency	5.850 MHz 6.552 MHz	PAL B/G PAL I
Level	-20 dBc	adj. -15...-30 dB
Frequency accuracy	± 2.5 ppm	Intercarrier
Spectrum roll-off	0.4 1.0	PAL B/G PAL I

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**RF Output**

Frequency range	47...862 MHz	
Level	100 dB $\mu$ V	Adjustable -10 ... +5 dB
Level accuracy	$\pm 1$ dB	
Level stability	$\pm 1$ dB	
Impedance	75 Ohm	
Return loss	>18 dB	at 47 MHz, -1,5 dB/oct
Sideband suppression	-60 dBc	
Spurious attenuation	65 dB	min 60 dB
C/N (BW=4,75 MHz)		
Wideband noise	80 dB	>fc +-100 MHz
CENELEC 42 channels	60 dB	output level 100 dB $\mu$ V

**General**

Supply voltages	+24 V / 12 mA +12,5V / 140 mA +6,3 V / 1150 mA	
Connectors Video	BNC	
Audio/ Alternative video	SUB-MIN D	
RF output	F	
Dimensions	6U*7HP*170 mm	h*w*d
Weight	1 kg	
Operating temperature range	-10 ...+60 °C	
Specifications met	+5...+ 55 °C	
Storage temperature range	-20 ...+70 °C	
EMC compatibility	EN50083-2	

Block diagram

