

# Fibre Transmission Series 250

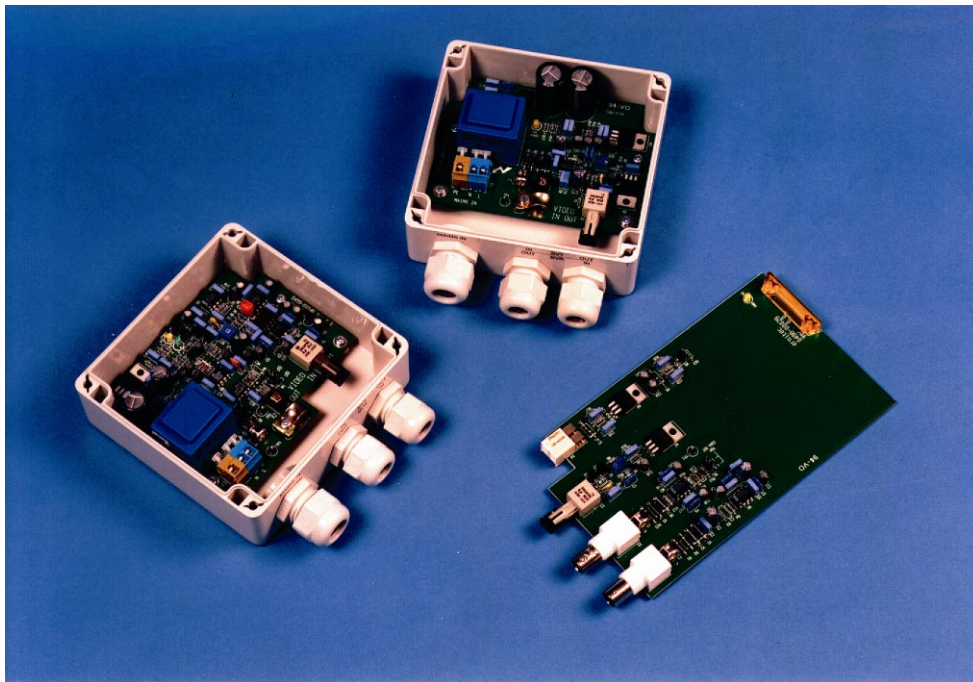


## Description

The Ernitec Series 250 is a range of units capable of transmitting video signals on multimode fibres up to a distance of 3000 m, depending on the fibre

type. The Series 250 consists of a range of transmitter and receiver units, as listed below.

| Type      | Description  |
|-----------|--|
| BVT-250   | Transmitter unit in a box for wall mounting  |
| EVT-250   | Transmitter unit, Euroboard size for installation in the Ernitec RVU 200 Rack Frame                |
| MVT-250   | Miniature Transmitter unit for installation in a camera housing such as the Ernitec CHM/CHN Series |
| MVTPS-255 | Miniature Transmitter unit with power supply for installation in CHM/CHN camera housing            |
| BVR-250   | Receiver unit in a weather-proof box for wall mounting   |
| EVR-250   | Receiver unit, Euroboard size for installation in the Ernitec RVU 200 Rack Frame                   |



*BVR-250*

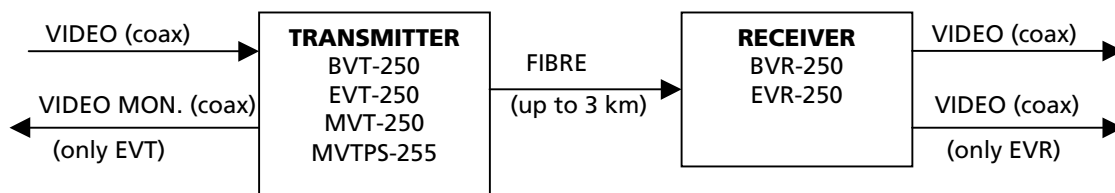
*BVT-250*

*EVT-250*

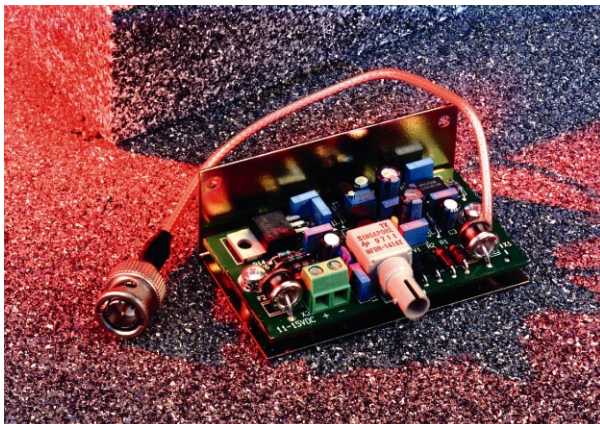
The various types of transmitters and receivers are fully compatible, meaning for example that a BVT transmitter can send to an EVR receiver without any problems.

The transmitter units have a composite video input and a fibreoptic output. In addition, the EVT-250 has a video monitoring coax output with a selectable 1.0 Vpp or 1.2 Vpp video output.

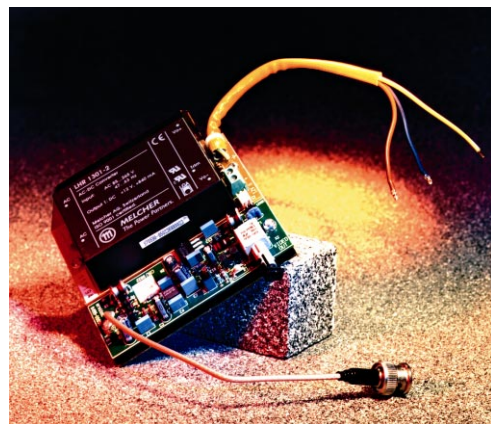
The receiver units have a composite coax video output (two outputs on the EVR-250) and a fibreoptic input. The video output level can be set to 1.0 Vpp or 1.2 Vpp and the frequency response may be lifted by 3 dB @ 5 MHz, all by means of jumper settings. The receivers have built-in AGC which automatically compensates for the loss in the optical fibre, thereby eliminating the need for adjusting the receiver to the length of the optical fibre.



Block diagram of the Fibre Series 250



MVT250



MVTPS-255

# Specifications

| <b>Video Specifications<sup>1</sup> (All types)</b> |   |
|---|---|
| Video type:   | 525 or 625 line composite, colour or monochrome       |
| Connector type:                                     | 75 ohm BNC  |
| Nominal video input level (EVT/BVT/MVT):            | 1 Vpp (max. 1.5 Vpp)                                  |
| Monitor video output level (EVT):                   | 1 Vpp nominal, 1.2 Vpp by jumper setting              |
| Video output level (BVR/EVR):                       | 1 Vpp nominal, 1.2 Vpp by jumper setting              |
| Video output HF boost (BVR/EVR):                    | +3 dB @ 5 MHz by jumper setting                       |
| Number of video outputs:                            |   |
| - BVR   | 1   |
| - EVR   | 2   |
| Bandwidth:  |   |
| 10 Hz to 8 MHz                                      | -1 dB   |
| 8 MHz to 10 MHz                                     | -2 dB   |
| 10 MHz to 15 MHz                                    | -3 dB   |
| Signal to noise ratio, 5 dB attenuation:            | > 55 dB unweighted                                    |
| K-factor:   | < 0.5 %   |
| 2T pulse/bar ratio:                                 | > 93%   |
| Luminance non-linearity:                            | < 3% pp   |
| Field time distortion:                              | < 0.5%  |
| Differential gain @ 4.43 MHz:                       | < 3 %   |
| Differential phase @ 4.43 MHz:                      | < 2 %   |
| Group delay, 100 Hz to 5 MHz:                       | < ± 10 nsec.  |
| <b>Fibreoptic Specifications (All types)</b>        |   |
| Connector type:                                     | ST  |
| Fibre type:   | 62.5/125 µm or 50/125 µm <sup>2</sup>                 |
| Transmitter type:                                   | LED   |
| Wavelength:   | 820 nm nominal  |
| Power budget:                                       | 7 dB  |
| Power supply output (MVTPS)                         |   |
| Output voltage:                                     | 12 VDC  |
| Current:  | 750 mA  |
| <b>General Specifications</b>                       |   |
| Supply voltage and power consumption:               |   |
| - BVT/BVR   | 230 VAC ± 10 %, 45 - 60 Hz (115 VAC optional), < 5 VA |
| - EVT/EVR   | ± 18 VDC unregulated, < 5 VA (supplied from RVU-200)  |
| - MVT   | 11 - 15 VDC unregulated, < 5 W                        |
| - MVTPS   | 85-265 VAC, 45-60 Hz, < 12 VA                         |
| Enclosure:  |   |
| - BVT/BVR   | Boxed, IP65   |
| - EVT/EVR   | To be installed in RVU 200                            |
| - MVT   | To be installed in camera housing                     |
| EMI / EMC:  | EN 50081-1, EN 50130-4                                |
| Safety:   | EN 60950  |
| Humidity:   | < 85 % relative @ 1 bar                               |
| Temperature range:                                  |   |
| - BVT/EVT/MVT                                       | -25° to +55°C   |
| - BVR/EVR   | -15° to +55°C   |
| Size (W x H x D):                                   |   |
| - BVT/BVR   | 120 x 55 x 122 mm                                     |
| - EVT/EVR   | Euroboard   |
| - MVT   | 72 x 28 x 42 mm                                       |
| - MVTPS   | Suitable for installation in CHM/CHN housing          |

<sup>1</sup> All video specifications are for the equipment installed back-to-back, except where noted.

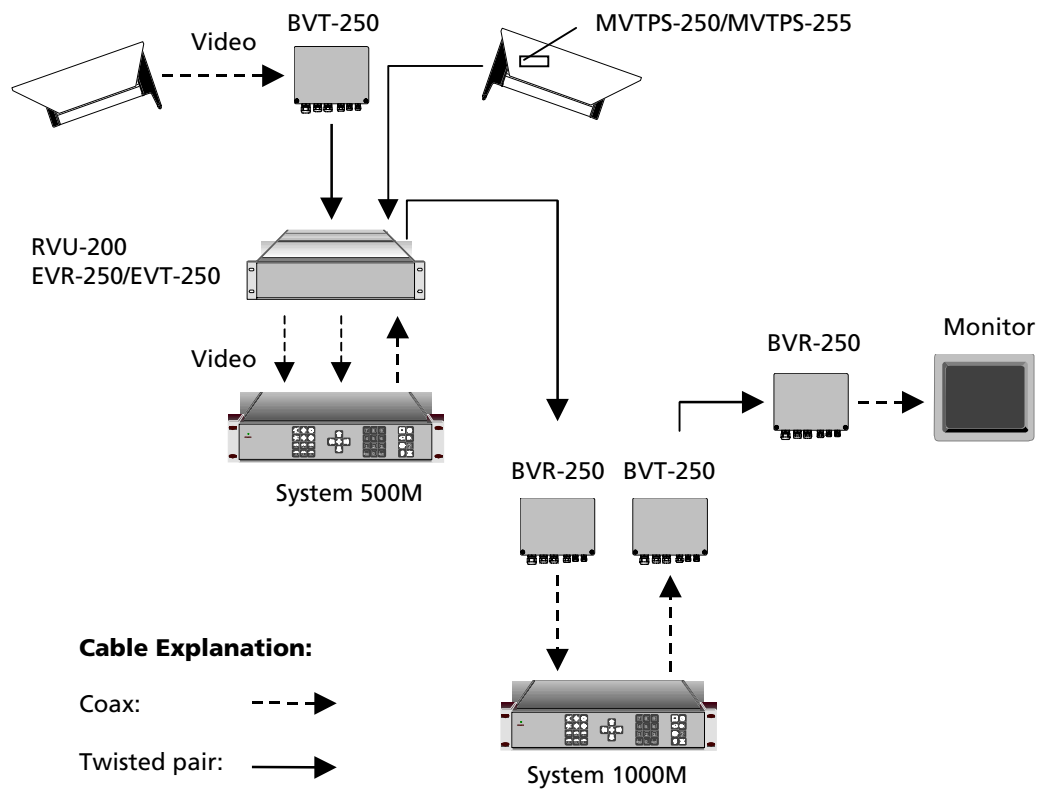
<sup>2</sup> When using 50/125 µm fibre, the power budget must be reduced by 3 dB.

Due to Ernitec's continuous improvement of products, the specifications are liable to change without notice.

## Applications

The series 250 fibre transmission equipment can be used in a variety of applications, such as linking a camera to a matrix, transmitting video from a remote matrix to a main matrix or from a matrix to

a remote monitor. Some of these typical applications are shown below, but please note that other applications and configurations are also possible.



Application diagram for the Fibre Series 250

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