FDVA1-DC1 Series

One Channel Video with Return Simplex Data,
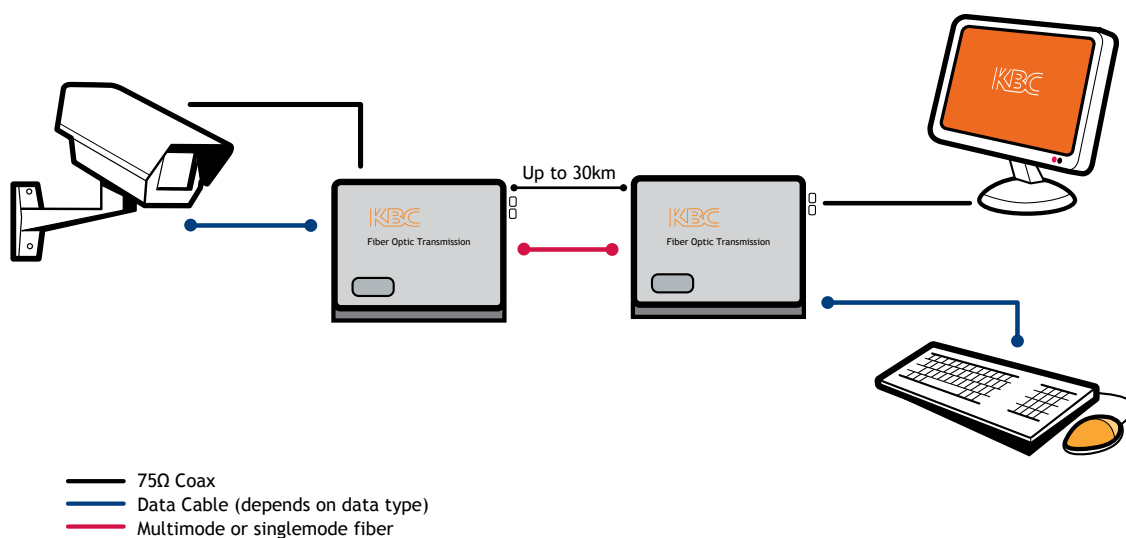Point-to-Point Transmission

Product Description

The KBC FDVA-DC1 series uses the most advanced digital technologies to provide excellent repeatable performance for today's CCTV systems. It supports transmission of one analog composite video channel and one simplex data channel over one multimode or singlemode optical fiber. PAL, NTSC and SECAM video standards are fully supported and the data channel supports simplex RS422 PTZ (Pan-Tilt-Zoom) control signals. The plug-and-play design ensures ease of installation with no electrical or optical adjustment needed. LED indicators are provided to clearly show the operational status of the unit. The series is available in compact or 3U chassis card.

Product Features

- 8 or 10 bit digitally-encoded, non-compressed video transmission
- Simplex RS422 data
- Cost effective WDM single fiber solution
- LED indicators provide quick diagnosis of all important system parameters
- Multimode and singlemode models
- Compact and 3U chassis card configurations

Typical System Configuration

Up to 30km

75Ω Coax
Data Cable (depends on data type)
Multimode or singlemode fiber

Specifications

Video

No. of Channels	1	
Format	PAL / NTSC / SECAM	
Input/Output	1.0V pk-pk typical, 75Ω	
Bandwidth	5 Hz ~ 6.5 MHz	
Digital Encoding (non compressed)	8 bit	10 bit
Differential Gain (10-90% APL)	<2.0%	<2.0%
Differential Phase (10-90% APL)	<2.0°	<1.0°
SNR	>60dB	>67dB

Data

Data Formats	RS422
One Way Channel	1
RS422 Data Rate[1]	DC – 250 kbps
Bit Error Rate	$<1 \times 10^{-12}$
Encoding Schemes	Manchester, Bi-Phase, NRZ, NRZI

Optical

Wavelength	1310nm / 1550nm
Fiber	Multimode or Singlemode
Number of Fibers	1

Power

Power Input	Compact	12-24 Vac/dc @ 150mA
Power Supply[2]		Input: 100 ~ 240 Vac
		Output: +12 Vdc
		UL and cUL listed PSU
Chassis Card		Supplied from FR3 PSU

Environmental

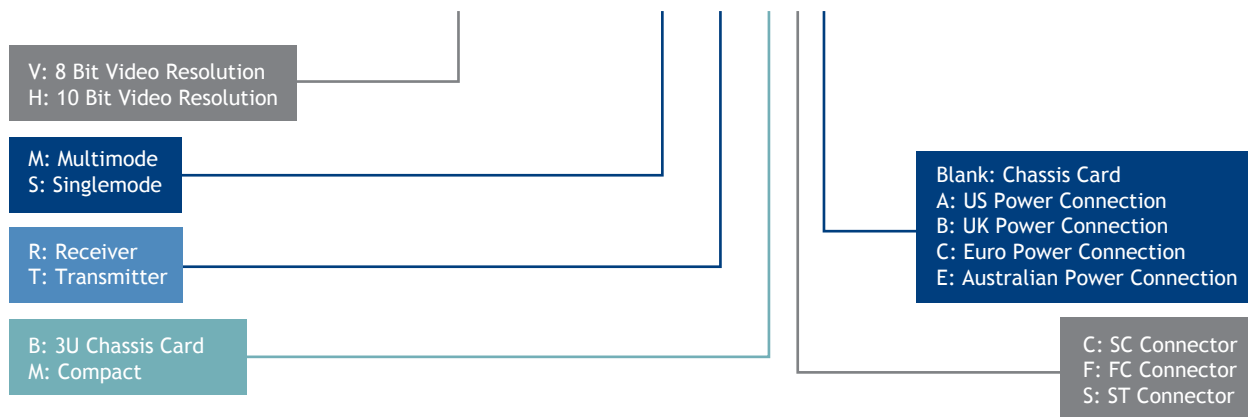|	
Operating Temperature	-40°~+70°C / -40°~+158°F
Storage Temperature	-40°~+70°C / -40°~+158°F
Operating Humidity	0 to 95% non-condensing
Mean Time Between Failure (MTBF)	>100,000 Hours

Mechanical

Dimensions (Compact L x W x H)[6]	70mm x 58mm x 28mm (2.8" x 2.3" x 1.1")
Number of 3U Chassis Card Slot[3]	1

Connectors

Video BNC		75Ω
Data		Screw Block Terminal
Fiber		ST, SC or FC (ST fitted as standard)
Power[4]	Compact	Screw Block Terminal

Part Number Configurator

FDVA1-DC1-M1T-MSB

- V: 8 Bit Video Resolution
- H: 10 Bit Video Resolution

- M: Multimode
- S: Singlemode

- R: Receiver
- T: Transmitter

- B: 3U Chassis Card
- M: Compact

- Blank: Chassis Card
- A: US Power Connection
- B: UK Power Connection
- C: Euro Power Connection
- E: Australian Power Connection

- C: SC Connector
- F: FC Connector
- S: ST Connector

Optical Budget

Part Code	Fiber Type	No.	Optical Budget			Wavelength	Approximate
			50µm	62.5µm	9µm	nm	Transmission Distance[5]
FDVA1-DC1-M1*	Multimode	1	8dB	12dB		1310/1550nm	0~4km
FDVA1-DC1-S1*	Singlemode	1			15dB	1310/1550nm	0~30km

Transmission distances up to 120km are available please contact KBC Networks for details. All KBC Networks optical transmitters are LASER based.

1. Data rates up to 1Mbps available, please consult factory.
2. Please select the power plug from US Standard, Euro 2 Circular or UK 3 Pin square when placing order.
3. Supports maximum of up to 14 single slot cards in each 3U Chassis.
4. Power lines are crimped and fitted to screw block connector in factory.
5. Transmission distance is limited by optical loss of the fiber and loss introduced by connectors, splices and patch panels. Fiber bandwidth also limits the transmission distance.
6. Product body dimensions. Please contact KBC Networks for product drawing and dimensions of mount

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