**FDVA1-DB1 Series**

**One Channel Video with Bi-Directional Data, Point-to-Point Transmission**

**Product Description**

The KBC FDVA1-DB1 series uses the most advanced digital technologies to provide excellent, repeatable performance for today’s CCTV systems. It supports transmission of one analogue composite video channel and one bi-directional data channel over either one or two multimode or singlemode optical fibres. PAL, NTSC and SECAM video standards are fully supported, and the data channel supports all standard 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. This series is available in either compact, wall mount or 3U chassis card configurations.

**Product Features**

- 8 bit or 10 bit digitally encoded non-compressed video transmission
- Directly compatible with NTSC, PAL and SECAM CCTV camera systems
  - Wide optical dynamic range. No adjustment is required
- LED indicators provide quick diagnosis of all important system parameters
- Singlemode & multimode models
- Switchable 120Ω termination and biasing
- Up to 14 receivers in one 3U chassis
- Compact, wall mount and 3U chassis card configurations

**Typical System Configuration**
Specifications

VIDEO
No of Channels 1
Format PAL / NTSC / SECAM
Input/Output 1.0V p-p typical, 75Ω
Bandwidth 5Hz – 10MHz
Digital Encoding (non Compressed) 8 bit, 10 bit
Differential Gain (10-90% APL) < 2% < 2%
Differential Phase (10-90% APL) < 2° < 0.7°
Signal to Noise Ratio (SNR) weighted > 60dB > 67dB

DATA*
Data Formats RS232, RS422, RS485 (2W & 4W)
Two Way Channels 1
RS-232 Data Rate DC ~ 115.2kbps
RS-422/485 Data Rate DC ~ 250kbps
Bit error rate < 1 x 10⁻¹²
Encoding schemes Manchester, Bi-Phase, NRZ, NRZI

OPTICAL
Wavelength 1310nm/1550nm
Fibre Multimode or Singlemode
Number of Fibres 1 or 2

POWER
Power Input Compact +12Vdc
Power Input Wall Mount +12Vdc +5Vdc
Power Supply Input: 100~240VAC; Output: +12Vdc or +5Vdc
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
Number of 3U Chassis Card Slot

MECHANICAL
Dimensions (compact, L x W x H) 60mm x 28.5mm x 26mm / 2.36" x 1.12" x 1.02"
Dimensions (Wall Mount, L x W x H) 135mm x 116mm x 36mm / 5.32" x 4.57" x 1.42"

CONNECTORS
Video BNC 75Ω
Data Screw Block Terminal
Fibre ST or FC (ST fitted as standard)
Power** Screw Block Terminal (for compact and wall mount)

DIP SWITCH SETTINGS
Data Switch selectable
Biasing On / Off

Optical Budget

<table>
<thead>
<tr>
<th>Part Code</th>
<th>Fibre Type</th>
<th>No.</th>
<th>Optical Budget</th>
<th>Wavelength</th>
<th>Approximate Transmission Distance</th>
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<tbody>
<tr>
<td>FDVA1-DB1-M*</td>
<td>Multimode</td>
<td>2</td>
<td>15dB</td>
<td>1310</td>
<td>0<del>4km / 0</del>2.5miles</td>
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<tr>
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<td>Multimode</td>
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<td>15dB</td>
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<tr>
<td>FDVA1-DB1-S*</td>
<td>Singlemode</td>
<td>1</td>
<td>15dB</td>
<td>1310/1550</td>
<td>0<del>42km / 0</del>26miles</td>
</tr>
</tbody>
</table>

1 RS232, RS422 and RS485 are field selectable.
2 Please select the power plug from US Standard, Euro 2 Circular or UK 3 Pin Square when placing order.
3 Support maximum up to 14 cards for 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 fibre and loss introduced by connectors, splices and patch panels. Fibre bandwidth also limits the transmission distance.

Due to ongoing technological improvements, product specifications are subject to change without notice.