



Product Description

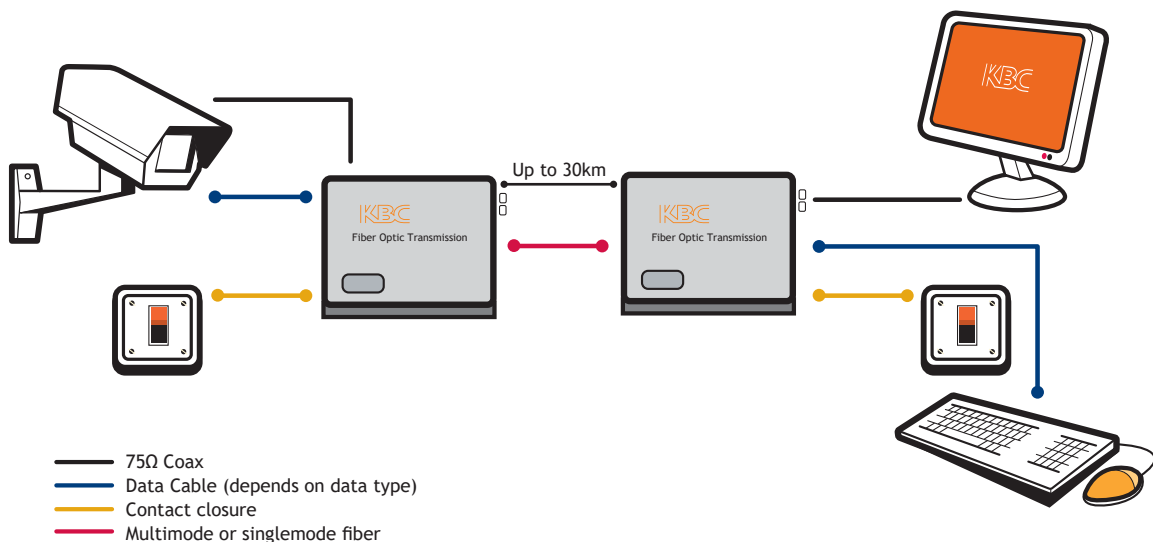
The KBC FDVA-DB1-IB1 series uses the most advanced digital technologies to provide excellent repeatable performance for today's CCTV systems. It supports transmission of one analog composite video channel, with one bi-directional data channel and one bi-directional contact closure signal over one multimode or singlemode optical fiber. 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. The series is available in compact or 3U chassis card.



Product Features

- 8 or 10 bit digitally-encoded, non-compressed video transmission
- Fully independent, bi-directional contact closure circuit
- Up to 14 receivers in one 3U chassis
- Cost effective WDM single fiber solution
- Switchable 120Ω termination and line biasing
- LED indicators provide quick diagnosis of all important system parameters
- Multimode and singlemode models
- Compact and 3U chassis card configurations

Typical System Configuration



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⁽¹⁾

| | |
|------------------------------------|---------------------------------|
| Data Formats | RS232, RS422, RS485 (2W & 4W) |
| Number of Two-way Channels | 1 |
| RS232 Data Rate | DC - 115.2 kbps |
| RS422/485 Data Rate ⁽²⁾ | DC - 250 kbps |
| Bit Error Rate | <1 x 10 ⁻¹² |
| Encoding Schemes | Manchester, Bi-Phase, NRZ, NRZI |

Contact Closure

| | |
|-----------------|-----------------------------------|
| No. of Channels | 1 Duplex |
| Response Time | 500µs |
| Input | Dry Contact Closure, TTL |
| Output | SPST Relay, Normally Open |
| Switch Rating | 0.8A @ 25Vdc 0.4A @ 110Vac max |

Optical

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

Power

| | | |
|-----------------------------|---------|---|
| Power Input | Compact | 12-24 Vac/dc @ 200mA |
| Power Supply ⁽³⁾ | | Input: 100 - 240 Vac Output: +12 Vdc UL and cUL listed PSU Supplied from FR3 PSU |
| Chassis Card | | |

Environmental

| | |
|----------------------------------|--------------------------------|
| Operating Temperature | -40° - +74° C / -40° - +165° F |
| Storage Temperature | -40° - +74° C / -40° - +165° F |
| Operating Humidity | 0 to 95% non-condensing |
| Mean Time Between Failure (MTBF) | >100,000 Hours |

Mechanical

| | |
|---|---|
| Dimensions (Compact L x W x H) ⁽⁷⁾ | 70mm x 61mm x 44mm (2.8" x 2.4" x 1.7") |
| Number of 3U Chassis Card Slot ⁽⁴⁾ | 1 |

Connectors

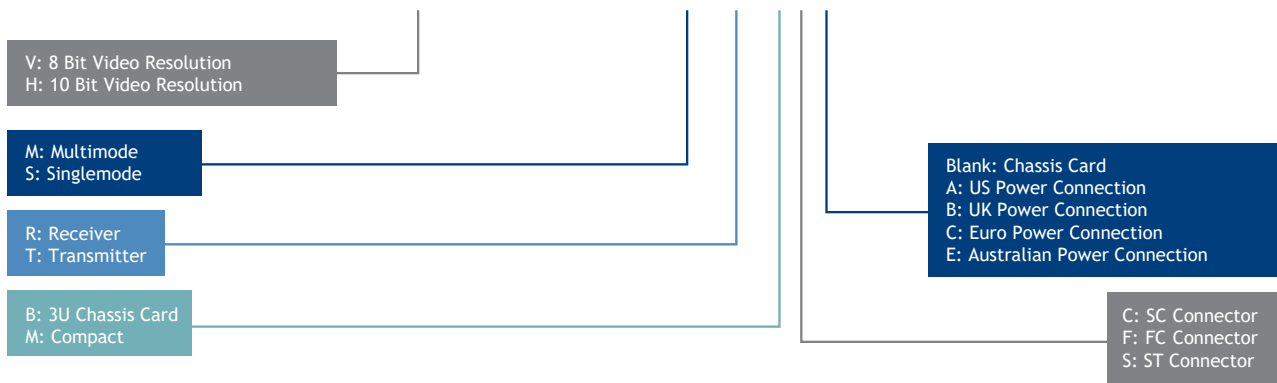
| | |
|----------------------|--------------------------------------|
| Video | BNC 75Ω |
| Data | Screw Block Terminal |
| Contact Closure | Screw Block terminal |
| Fiber | ST, SC or FC (ST fitted as standard) |
| Power ⁽⁵⁾ | Compact Screw Block Terminal |

DIP Switch Settings

| | |
|------------------|-------------------|
| Data | Switch Selectable |
| 120Ω Termination | On / Off |
| Biasing | On / Off |

Part Number Configurator

FDVA1-DB1-IB1- M1T-MSB



Optical Budget

| Part Code | Fiber Type | No. | Optical Budget | | | Wavelength nm | Approximate Transmission Distance ⁽⁶⁾ |
|-------------------|------------|-----|----------------|--------|------|---------------|--|
| | | | 50µm | 62.5µm | 9µm | | |
| FDVA1-DB1-IB1-M1* | Multimode | 1 | 8dB | 12dB | | 1310/1550 | 0-4km |
| FDVA1-DB1-IB1-S1* | Singlemode | 1 | | | 15dB | 1310/1550 | 0-30km |

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

- RS232, RS422 and RS485 are field selectable
- Data rates up to 1Mbps available, please consult factory.
- Please select the power plug from US Standard, Euro 2 Circular or UK 3 Pin square when placing order.
- Supports maximum of up to 14 single slot cards in each 3U Chassis.
- Power lines are crimped and fitted to screw block connector in factory.
- 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.
- Product body dimensions. Please contact KBC Networks for product drawing and dimensions of mount.
- The "W" (wall mount) enclosure option may be available. Please consult the factory for model number confirmation.

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