



REAL OPTIC



# KCD-400



## Industrial 1000Base-T to 1000Base-X Gigabit Media Converters

DIN-Rail Mounting  
KC-4DR



Panel Mounting Bracket  
PMB-400



The industrial KCD-400 media converter series provides industrial strength Gigabit Ethernet copper-to-fiber media conversion, allowing for 1000Base-T-to-1000Base-X over multi-mode or optional single-mode fiber optical media. With the SFP (Mini-GBIC) connector design, the media converter not only supports existing variety of multimode and single mode fibers, but also preserves the flexibility to adapt to any change of your fiber network in the future.

### Benefits:

- Plug and play design with no configuration setting
- Wide operating temperature range for temperature critical environment
- Support DIN-Rail mounting and panel mounting
- Provide two power input types to meet more application needs
- Accept wide power input voltage range for application flexibility
- Industrial-rated Emission and Immunity performance

### Key Features:

- Comply with IEEE 802.3ab 1000Base-T, IEEE 802.3z 1000Base-SX/LX standard
- Provide direct media conversion for Gigabit copper and Gigabit fiber
- Support full wire speed conversion
- Support transparent conversion of any packet types with no packet length limitation
- Support auto-negotiation with link partners
- Provide link fault pass through between copper and fiber link
- Provide SFP on fiber port for mounting variety of fiber options
- Low power consumption
- Two power interface types: screw terminal block and DC Jack
- Support DIN-Rail mounting and optional screwed plane mounting

### Specifications:

|                |                                                                                                                                                                                         |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Standard       | IEEE 802.3au, 802.3z                                                                                                                                                                    |
| Conversion     | Direct 1000BASE-T to 1000BASE-X with minimum latency                                                                                                                                    |
| Packet Types   | Transparent conversion with no modification to: <ul style="list-style-type: none"><li>- Standard IEEE 802.3 Ethernet packet frames</li><li>- IEEE 802.1Q tagged packet frames</li></ul> |
| Copper Port    | Shielded RJ-45, 1000Mbps<br>Auto-negotiation capable<br>Auto-MDI/MDI-X crossover function                                                                                               |
| Fiber Port     | SFP connector with pre-configured SFP fiber transceiver<br>support remote fault indication                                                                                              |
| Network Cables | Copper port: Cat.5e recommended or higher up to 100m<br>Fiber port: MMF 50/125µm, 62.5/125µm, SMF 9/125µm                                                                               |
| LEDs           | Power status, SFP ON status<br>Link status, Optical link status                                                                                                                         |

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#### EMI EMS Safety Environmental Tests:

| Test                  | Standard            | Specifications                                                     |
|-----------------------|---------------------|--------------------------------------------------------------------|
| FCC/EMI               | FCC Rule Part 15    | Class B                                                            |
| CE/EMC/EMI            | EN55022, CISPR 22   | Class B                                                            |
| CE/EMC/Harmonic       | EN 61000-3-2        | < 75 W                                                             |
| CE/EMC/VFF            | EN 61000-3-3        | Clause 5                                                           |
| CE/EMC/EMS            | EN 55024            |                                                                    |
| ESD Test              | IEC 61000-4-2       | Contact: +/-6kV<br>Air: +/-8kV                                     |
| RS Test               | IEC 61000-4-3       | Strength: 10V/m                                                    |
| EFT/BURST             | IEC 61000-4-4       | DC IN: +/-3kV<br>TP: +/-4kV                                        |
| Surge Immunity        | IEC 61000-4-5       | DC IN: +/-1kV<br>AC IN: +/-4kV<br>TP: +/-1kV                       |
| CS Test               | IEC 61000-4-6       | Level 3                                                            |
| Magnetic Field Imm.   | IEC 61000-4-8       | 50Hz 40A/m                                                         |
| Voltage Dips Imm.     | IEC 61000-4-11      | Interruption: C<br>Dips: A                                         |
| Safety                | EN 60950, IEC 60950 |                                                                    |
| Dielectric Voltage    | IEEE 802.3          | TP, 1500VAC/60sec.                                                 |
| Insulation Resistance | IEEE 802.3          | TP, 500VDC/10Mohm                                                  |
| Cold Test             | IEC 60068-2-1 Ad    | -20°C, 96hrs                                                       |
| Dry Heat Test         | IEC 60068-2-2 Bd    | +70°C, 40%RH, 96hrs                                                |
| Damp Heat Test        | IEC 60068-2-3 Ca    | +60°C, 90%RH, 96hrs                                                |
| Storage Test          | IEC 60068-2-48      | -20°C, 96hrs<br>+85°C, 40%RH, 96hrs                                |
| Vibration Test        | IEC 60068-2-64 Fh   | 10-200Hz 0.1g <sup>1</sup> /Hz<br>200-500Hz 0.03g <sup>1</sup> /Hz |
| Shock Test            | IEC 60068-2-27 Ea   | 50G                                                                |

#### Ordering Information:

| Model<br>KCD-400-xxx | Fiber<br>Mode      | Connector | Ref.<br>Distance |
|----------------------|--------------------|-----------|------------------|
| -SX                  | 62.5/125<br>50/125 | LC        | 200m<br>500m     |
| -LX                  | MM<br>SM           | LC        | 550m<br>10km     |
| -LX20                | SM                 | LC        | 20km             |
| -LX110               | SM                 | LC        | 110km            |



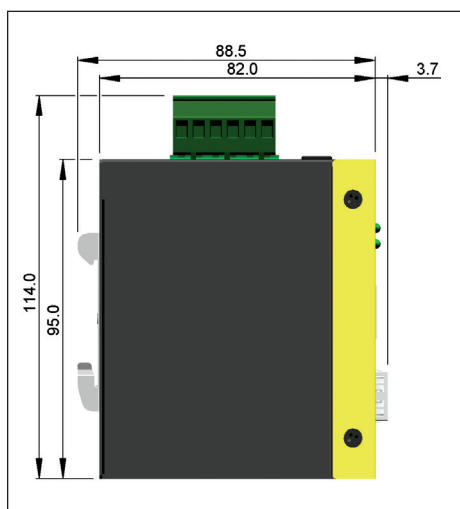
Katron Technologies Inc.

|                   |                                                                                                                                                                           |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DC Power Input    | Screwed terminator block: 2 pairs of +/- contacts<br>1 pair of power alarm relay output contacts<br>DC jack:<br>Operating voltage range: -D 6.3mm/+D 2.0mm<br>+7 ~ +30VDC |
| Power Consumption | 2W max. @30VDC power input                                                                                                                                                |
| Dimension         | 28 x 82 x 95 mm (WxDxH)                                                                                                                                                   |
| Weight            | 240 g                                                                                                                                                                     |
| Housing           | Enclosed metal with no fan                                                                                                                                                |
| Mounting Support  | DIN-Rail mounting, Panel mounting                                                                                                                                         |
| Environment       | Operating Temperature: -20°C ~ 70°C<br>Storage Temperature: -20°C ~ 85°C<br>Relative Humidity: 5% ~ 95% non-condensing                                                    |
| Approval          | FCC Class B, CE mark Class B, EN 60950-1 safety                                                                                                                           |

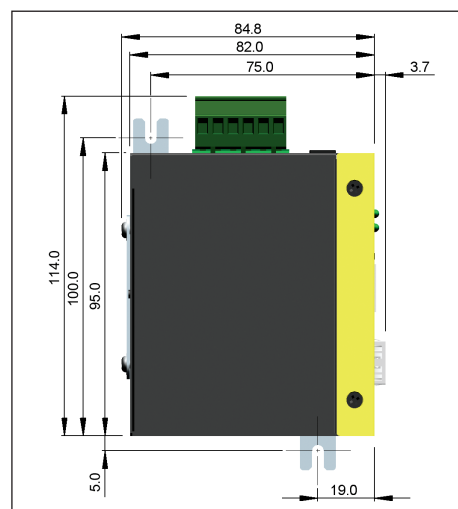
#### Fiber Optical Specifications:

| Model  | Fiber                         | Wavelength | Tx Power*    | Rx Sens. | Rx Max. | Distance     |
|--------|-------------------------------|------------|--------------|----------|---------|--------------|
| -SX    | LC 62.5/125 MMF<br>50/125 MMF | 850nm      | -9.5 ~ -4dBm | -18dBm   | 0dBm    | 220m<br>500m |
| -LX    | LC MMF<br>SMF                 | 1310nm     | -9.5 ~ -3dBm | -20dBm   | -3dBm   | 550m<br>10km |
| -LX20  | LC SMF                        | 1310nm     | -8 ~ -2dBm   | -23dBm   | -1dBm   | 20km         |
| -LX110 | LC SMF                        | 1550nm     | 0 ~ +5dBm    | -30dBm   | -8dBm   | 110km        |

\* Data for 62.5/125µm MMF; 9 /125µm SMF



Din-Rail Mount Dimension



Panel & Wall Mount Dimension

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Importado y Distribuido por Real Optic Limitada

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