



# KSC-240



## Industrial Optically Isolated RS-232 to RS-485/422 Converter

### Product Highlights:

- Surge protection
- ESD protection
- Optical isolation
- RTS control for RS-485
- ADC design for RS-485
- DIN-Rail mounting
- Wide temperature range
- Wide power voltage range

DIN-Rail Mounting  
KC-4DR



Panel Mounting Bracket  
PMB-400



The industrial converter is designed to convert RS-232 signals to optically isolated, balanced, full or half-duplex RS-422 or RS-485 signals at baud rate up to 115.2Kbps. It features remote RTS control design, which allows software to control RS-485 transmission. With smart ADC™ (Auto Data Control) design, the converter can use send data signal to control RS-485 transmission automatically so no software control is required in RS-485 mode. The DIN-Rail mountable design makes it ideal for industrial cabinets and enclosures. Further, more designs such as signal protection, wide operating temperature range, wide power voltage range are provided to suit for more industrial applications.

### Key Features:

- Supports RS-232 baud rate up to 115.2Kbps
- Operation with no required configuration
- Provides surge protection (transient voltage) on all interface lines
- Provides high ESD protection on all line signals
- Provides optical isolation between RS-232 and RS-485/422
- Supports RS-422, 2-wire RS-485, and 4-wire RS-485 network
- Supports full-duplex or half-duplex for RS-485/422 interface
- Provides selectable remote RTS control for RS-485 transmission
- Provides ADC™ (Auto Data Control) for RS-485 transmission
- Designed for industrial environments with:
  - Surge, ESD, and isolation protection
  - DIN-Rail and panel mounting support
  - Wide power voltage range support
  - Terminal block and Jack-type power connectors
  - Wide operating temperature range support
  - Alarm relay output for device power failure
  - Industrial-rated emission and immunity performance

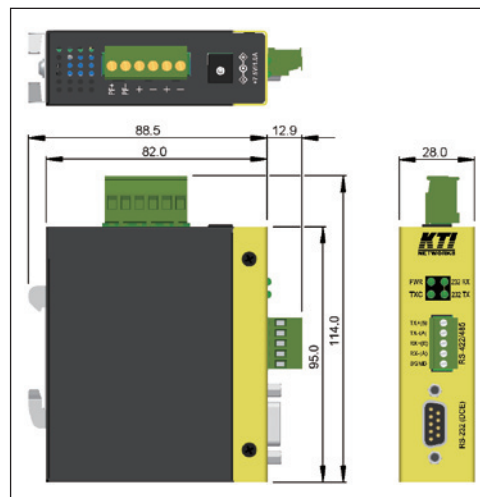
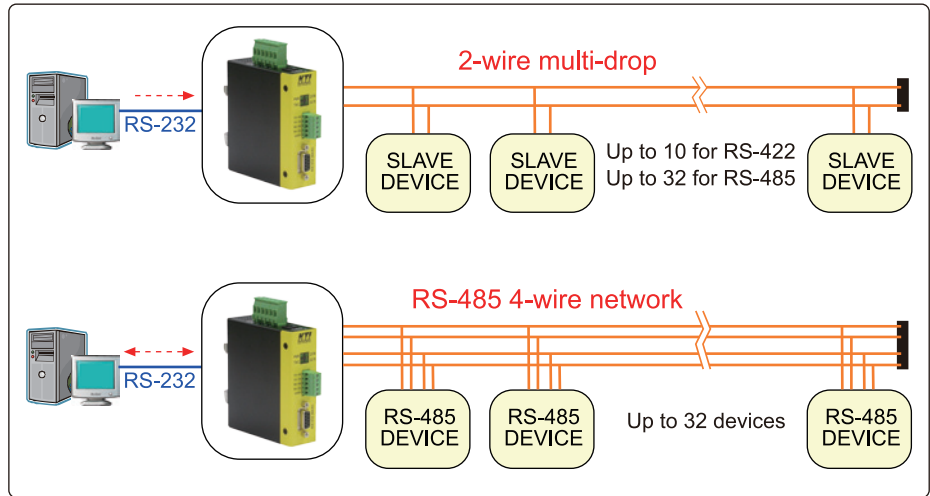
### Specifications:

RS-232 Connector	DB9 Female, DCE
RS-232 Signals	TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND
RS-422/485 Connector	5 positions plug-in screw terminal block
Data Rate	up to 115.2Kbps
Surge Protection	Transient voltage outside +/-28V
Line ESD Protection	+/-15KV
Isolation	Optical isolated between RS-232 and RS-485/422 3000VDC rms
LEDs	Power status, RX-232 Transmission, RS-232 Receiving, RS-485 TX Control

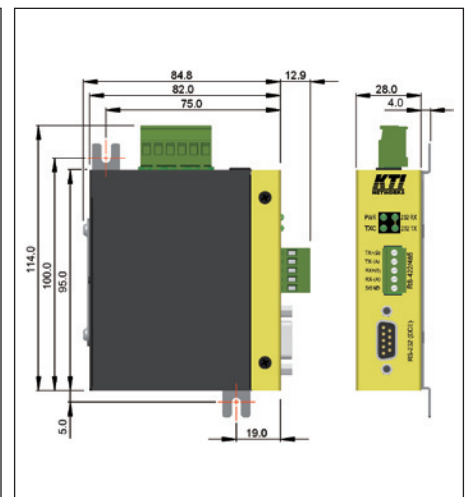
**EMI EMS Safety Environmental Tests:**

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: +/-8KV Air: +/-16KV
RS Test	IEC 61000-4-3	Strength:10V/m
EFT/BURST	IEC 61000-4-4	Power: 4KV Signals: 2KV
Surge Immunity	IEC 61000-4-5	Power: 4KV
CS Test	IEC 61000-4-6	10V Level 3
Magnetic Field Imm.	IEC 61000-4-8	50Hz 40A/m
Voltage Dips Imm.	IEC 61000-4-11	Interruption: C Dips: B
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 +85°C, 40%RH, 96hrs
Vibration Test	IEC 60068-2-64 Fh	10-200Hz, 0.1g <sup>2</sup> /Hz <sup>2</sup> 200-500Hz, 0.03g <sup>2</sup> /Hz <sup>2</sup>

Configuration Switches	RS-422/RS-485 selection 2-wire/4-wire selection Built-in bus termination & bias RS-485 TX/RX control selection ADC control timing settings
RS-485 Bus Control	RTS control (by DTE software RTS control) ADC (by DTE send data) control
DC Power Input	Screwed terminal block: 2 pairs of +/- contacts 1 pair of power alarm relay output contacts DC jack: -D 6.3mm/+D 2.0mm Operating voltage range: +7 ~ +30VDC Power consumption: 0.6W @+7.5V
Dimension	28 x 82 x 95 mm (WxDxH)
Weight	240g
Housing	Enclosed metal with no fan
Mounting Support	DIN-Rail mounting, Panel mounting
Environment	Operating Temperature: -20°C ~ 70°C Storage Temperature: -20°C ~ 85°C Relative Humidity: 5% ~ 95% non-condensing
Approval	FCC Class B, CE mark Class B, EN60950-1 safety



DIN-Rail Dimension



Panel Dimension



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