HESC-T-028

Photoelectric Isolated RS-232 to RS-485/422 Converter

Features:

- Operating Temperature: -40°C to 85°C
- ±15 kV ESD Protection, 600 W Lighting and Surge Protection per wire
- Isolation Voltage: 2,500 Vrms, 500 VDC (Continuous)
- Supports Connection of up to 128 RS-485 or RS-422 Devices

Introduction:

The HESC-T-028 is an industrial-grade converter featuring photoelectric isolation. It is fully compliant with RS-232C, RS-485, and RS-422 standards, enabling the conversion of single-ended RS-232 signals into balanced differential RS-485 or RS-422 signals. The integrated photoelectric isolator provides an isolation voltage of up to 2,500 Vrms, while advanced Transient Voltage Suppressors (TVS) protect the RS-485/RS-422 interfaces against electrical spikes.

The converter features zero-delay automatic transceiver switching and a unique I/O circuit that manages data flow direction without the need for handshake signals (such as RTS or DTR). It eliminates the need for jumper settings when switching between full-duplex (RS-422) and half-duplex (RS-485) modes, ensuring a true plug-and-play experience. These features make the HESC-T-028 compatible with all existing communication software and hardware, allowing for a seamless transition from RS-232-based systems without requiring software modifications.

The HESC-T-028 serial converter provides reliable connectivity for both point-to-point and point-to-multipoint configurations. In multipoint mode, the converter supports up to 128 RS-485 or RS-422 devices, with data transfer rates ranging from 300 to 115,200 bps.

Specification:

Hardware	
Standard	EIA/TIA RS-232C, RS-485/422
Connector	DB9 Female Connector (RS-232), 10-pin Terminal Block (RS-485/422)
Interface Protection	±15 kV ESD Protection (RS-232) and 600 W Lighting and Surge Protection per wire (RS-485/422)
Isolation Voltage	2,500 Vrms, 500 VDC (Continuous)
Operating Mode	Asynchronous Half-duplex or Full-duplex
Node Support	Supports Connection of up to 128 RS-485 or RS-422 Devices in Point-to-multipoint Mode
Signal Indicators	Three LEDs for Power (PWR), Transmit (TXD) and Receive (RXD)
Transmission Media	Twisted-pair (UTP) or Shielded Cable (STP)
Baud Rate	300 - 115,200 bps
Transmission Distance	5,000m (at 9,600 bps)
Dimension	117 × 80 × 25 mm
Operating Temperature	-40°C to 85°C
Relative Humidity	5% to 95 % (Non-condensing)

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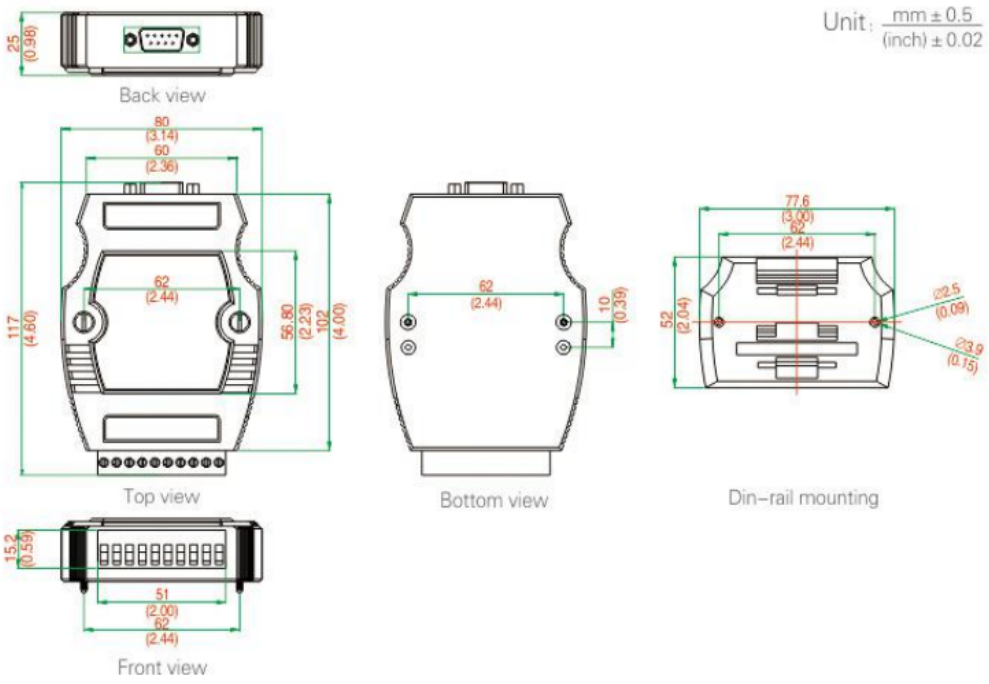
Dimension Drawing:



Ordering Information:

HESC-T-028	Industrial RS-232 to RS-485/422 Converter with Optical Isolation, Baud Rate: 300 - 115,200 bps, Transmission Distance: 5,000m (at 9,600 bps), Isolation Voltage: 2,500 Vrms, 500 VDC (Continuous), ±15 kV ESD Protection (RS-232), 600 W Lighting and Surge Protection per wire (RS-485/422), Operating Temperature: -40°C to 85°C.
Other Models Are Available Upon Request.	

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