RS-232 Isolator

Effective Protection against Damage by Overvoltage

THE SOLUTION

The high-performance 4 kV RS-232 Isolator provides efficient protection of your data and equipment against external influences in compliance with the standard IEC 61850-3, based on state-of-the-art iCoupler ® technology.

The new development of this RS-232 Isolator by IPCOMM is the first class when it comes to the effective protection against damage by overvoltage. The isolation has a dielectric strength of 4 kV between the signal wires of the internal and external serial interfaces. The galvanic isolation also comprises the following handshake wires of the 9-pin D-sub connector: RxD, TxD, CTS, DSR, DCD, RTS and DTR.

The isolator was tested according to EMC guidelines and climatic and mechanical requirements in compliance with the standard IEC 61850-3. Moreover, it provides adequate protection against the impact of switching interferences (Burst) and surge voltage. The used RS-232 transceivers have ESD protection up to 15 kV.

A future-oriented development based on iCoupler ® technology ensures outstanding performance features such as significantly higher data rates and insulation voltages than e.g. optocoupler:

- High insulation voltage: 4000 V RMS
- Baud rate: up to 230 kbps

The RS-232 Isolator is specifically designed for the use in the environment of high voltage substations and is mountable on a DIN-rail. The device operates standalone or in series with one or more other isolators supplied by a common 24 V power connection.

TECHNICAL DATA

General	• 4 kV RMS galvanic isolation • 15 kV ESD protection
Serial Interface for the PC	• RS-232 DCE, pin assignment with TxD, RxD, RTS, CTS, DTR, DSR, DCD and GND • 9-pin D-sub female connector • Baud rate: up to 230 kbps • Parity: none, even, odd, mark, space • Data bits: 5,6,7,8 bits • Stop bits: 1, 1.5, 2 bits • Flow control: RTS/CTS, XON/XOFF, none
Serial Interface for the Data Communication Equipment	• RS-232 DTE, pin assignment with TxD, RxD, RTS, CTS, DTR, DSR, DCD and GND • 9-pin D-sub male connector • Baud rate: up to 230 kbps • Parity: none, even, odd, mark, space • Data bits: 5,6,7,8 bits • Stop bit: 1, 1.5, 2 bits • Flow control: RTS/CTS, XON/XOFF, none
Diagnostic LEDs	• Power • Transmit and receive LEDs for the RS-232 interface
Supply Voltage / Power Consumption	• 24 V DC • 1 W max.
Operating Environment	• Extended temperature range from -40°C to +85°C (-40°F to 185°F) • Relative humidity: 5% to 95% non-condensing
Standards	IEC 61850-3
Housing	• Plastic housing, including clip for mounting on a 35 mm DIN-Rail • Internal bus connector (optional)
Dimensions W/H/D	22.5 x 99 x 92 mm
Weight	0.1 kg

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