

INDUSTRIAL DIN RAIL RS232 TO RS232 ISOLATOR

OPERATION MANUAL



DECISION
Computer International Co., Ltd.

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CHAPTER 1

INTRODUCTION

The industrial RS232 to RS232 photo isolator allows the input signals to be completely prevent up to 5000Vrms, which offers customers a unique combination of protection, speed, and versatility for DIN-rail mount industrial data communications applications. There are 3 LED indicators correspond to Tx, Rx, and power signals. A 250mA, 24 VDC power input for industrial standard.

The features of the industrial RS232 to RS232 photo isolator are:

- EIA RS232 to EIA RS232 isolator input and output.
- Heavy-duty optical couplers and a transformer isolated DC-to-DC converter to provide significantly higher electrical isolation - 5000V DC surge (1 minute), 5000V rms continuous.
- Support Tx, Rx, RTS, CTS, DTR, DSR, SG Signals.
- Communication speeds up to 230 K bps.
- Three LED indicators correspond to Tx(green), Rx(yellow), and power(red) signals.
- A 250mA, 24 VDC (range from 21.6 to 26.4) power input for industrial standard.
- Provides Din Rail mountable package which uses Polyamide UL94(V0) material, and its types are TS-35, TS-32.
- Life expectancy for relay: 100 million operations at signal level load.
- Allow the photo input signals to be completely floated and prevent the ground loops.
- Operating temperature from 0C° to 70C°.



CHAPTER 2

UNPACKING INFORMATION

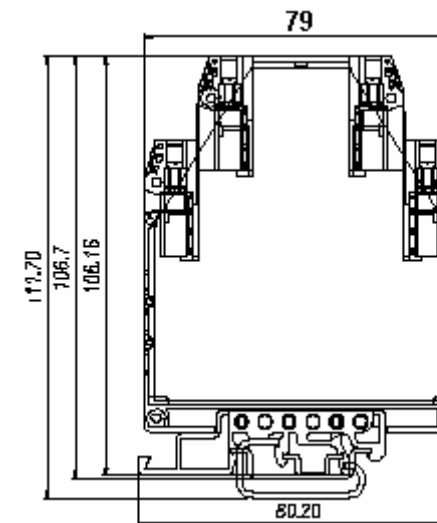
Check that your industrial RS232 to RS232 photo isolator package includes the following items:

- Industrial RS232 to RS232 photo isolator.
- DB9 or DB25 (option) Female expansion cable.
- Shield cable.
- User manual.
- Warranty form.

CHAPTER 3

HARDWARE CONFIGURATION

The industrial RS232 to RS232 photo isolator are shown is the following



1. Signal Assignment for Isolator Box

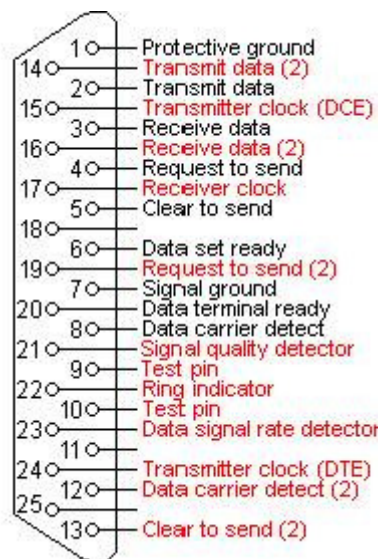
The signal assignment for isolator box is defined as following. Consider the top view of isolator box, there are 17 signals are defined as:

| | | | |
|----------------------|------------------|------------------|----------------------|
| Transmit Data1 | Receive Data1 | | Shield Ground |
| Clear To Send1 | Request To Send1 | | |
| Signal Ground1 | | Data Set Ready2 | Data Terminal Ready2 |
| Data Terminal Ready1 | Data Set Ready1 | Request To Send2 | Signal Ground2 |
| | 0V | Receive Data2 | Clear To Send2 |
| | 24V | | Transmit Data2 |

Please note that the DTR and DSR signals are short by internal circuit of the box.

2. DB25 Connector Assignments

The communication interface follows the EIA RS232 standard. The signal assignments for a standard Data Terminal Equipment (DTE) DB25 connector are shown below:

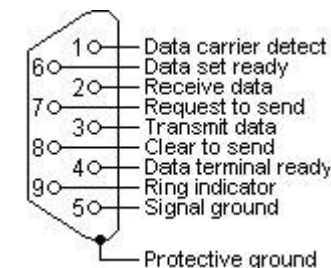


| Pin | # | DB25 Signal Name | RS- 232C Name | Signal Direction | color |
|-----|---|----------------------|---------------------|---------------------|--------|
| 2 | | Transmit Data(TxD) | BA | Output | brown |
| 3 | | Receive Data(RxD) | BB | Input | Red |
| 4 | | Request to Send(RTS) | CA | Output | blue |
| 5 | | Clear to Send(CTS) | CB | Input | yellow |
| 6 | | Data Set Ready(DSR) | CC | Input | green |
| 7 | | Signal Ground(SG) | AB | Common | black |

| | | | | |
|----|--------------------------|----|--------|--------|
| 20 | Data Terminal Ready(DTR) | CD | Output | purple |
|----|--------------------------|----|--------|--------|

3. DB9 Connector Assignments

The signal assignments for a standard Data Terminal Equipment (DTE) DB9 connector are shown below:



| Pin | # | DB9 Signal Name | RS- 232C Name | Signal Direction | color |
|-----|---|--------------------------|---------------------|---------------------|--------|
| 2 | | Receive Data(RxD) | BB | Input | red |
| 3 | | Transmit Data(TxD) | BA | Output | brown |
| 4 | | Data Terminal Ready(DTR) | CD | Output | purple |
| 5 | | Signal Ground(SG) | AB | Common | black |
| 6 | | Data Set Ready(DSR) | CC | Input | green |
| 7 | | Request to Send(RTS) | | Output | Blue |

| | | | | |
|---|--------------------|----|-------|--------|
| | | CA | | |
| 8 | Clear to Send(CTS) | CB | Input | Yellow |
| | | | | |

APPENDIX A

WARRANTY INFORMATION

A.1 Copyright

Copyright 2002, 2003 DECISION COMPUTER INTERNATIONAL CO., LTD. All rights reserved. No part of RS232 to RS232 isolator may be reproduced, transmitted, transcribed, or translated into any language or computer language, in any form or by any means, electronic, mechanical, magnetic, optical, chemical, manual, or otherwise, without the prior written permission of DECISION COMPUTER INTERNATIONAL CO., LTD.

Each piece of RS232 to RS232 isolator package permits user to use only on a single computer, a registered user may use the program on a different computer, but may not use the program on more than one computer at the same time.

Corporate licensing agreements allow duplication and distribution of specific number of copies within the licensed institution. Duplication of multiple copies is not allowed except through execution of a licensing agreement. Welcome call for details.

A.2 Warranty Information

DECISION warrants that for a period of one year from the date of purchase (unless otherwise specified in the warranty card) that the goods supplied will perform according to the specifications defined in the user manual. Furthermore that the RS232 to RS232 isolator product will be supplied free from defects in materials and workmanship and be fully functional under normal usage.



In the event of the failure of an RS232 to RS232 isolator product within the specified warranty period, DECISION will, at its option, replace or repair the item at no additional charge. This limited warranty does not cover damage resulting from incorrect use, electrical interference, accident, or modification of the product.

All goods returned for warranty repair must have the serial number intact. Goods without serial numbers attached will not be covered by the warranty.

Transportation costs for goods returned must be paid by the purchaser. Repaired goods will be dispatched at the expense of RS232 to RS232 isolator.

To ensure that your RS232 to RS232 isolator product is covered by the warranty provisions, it is necessary that you return the Warranty card.

Under this Limited Warranty, DECISION's obligations will be limited to repair or replacement only, of goods found to be defective as specified above during the warranty period. DECISION is not liable to the purchaser for any damages or losses of any kind, through the use of, or inability to use, the RS232 to RS232 isolator product.

DECISION reserves the right to determine what constitutes warranty repair or replacement.

Return Authorization: It is necessary that any returned goods are clearly marked with an RA number that has been issued by DECISION. Goods returned without this authorization will not be attended to.

