USER GUIDE

Isolation Card V1.00

UASAGE NOTICE

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1. INTRODUCTION

Eight channel digital isolation modules are useful in industry where digital signals from sensors, PLC or other input devices need to be galvanically isolated. Isolation provides protection from hazardous potential differences and high voltage transients for delicate and costly devices. Four options available cover almost all type of applications in industry.

2. FEATURES

- Source Type (PNP) or sink type (NPN) input
- Source type (PNP) or sink Type (NPN) output
- High-voltage isolation on all channels (up to 2500V)
- Wide signal input range for PNP type (5V to 30V DC)
- For PNP type input, input signal voltage can be larger than input side power supply without causing any damage to card
- Independent power supplies for input and output side
- Wide power supply range (12V to 24V DC) on either side
- High-Sink current on isolated output channels (200mA max./channel)
- Red LEDs for status indication of each channel
- Standard 72mm RAIL mount form factor
- Covered with acrylic protection sheet

Ordering code	Input type	Output type	Typical application	Max op freq
ISO8PL8UN	+24V active high	+5V/+12V/+24V PLC to other digital device Fixed.	active high Other digital device to PLC	Sourcing type
ISO8UN8UN	+5V to +24V	+5V/+12V/+24V Can be used for level shifting.	active high If input is +5V and output is +12V or vice versa Weak signal from uC etc	Sourcing type
ISO8NK8NK	Potential free	Potential free	(OC type)	(OC type)
ISO8NK8UN	Potential free	+5V/+12V/+24V	(OC type)	inverted, sourcing type

3. SPECIFICATIONS

Isolated Digital Input

- **Channels** 8-CH/group
- **Output Type** Sink (NPN)Source (PNP)
- **Isolation Protection** 2,500 VDC
- **Output Voltage** 5~24 V_{DC}
- **Sink/SourceCurrent** 100mA max./channel
- **Frequency** Up to 22 KHz for standard speed
  Up to 1 MHz for high speed
- **Channel Response** 100 µs for standard speed option
  10uSec for high speed option

4. GENERAL

- **I/O Connectors** 2 x 2-pin 3.5mm screw terminal block
- **Dimensions (L x H)** 70x160mm
- **Power Consumption** Typical :5V @ 230m
  Max.: 5 V @ 500 mA
- **Operating Temperature** 0~60^0 C (32~140^{0}F)
- **Storage Temperature** -20~70^{0}C(-4~158^{0}F)
- **Storage Humidity** 5~95%, RH non-condensing

5. APPLICATIONS

- Industrial Automation
- Factory Automation
- Product Test

6. ORDERING NOTES

1. If rail mountable channel is required, add -RAIL suffix to ordering code.

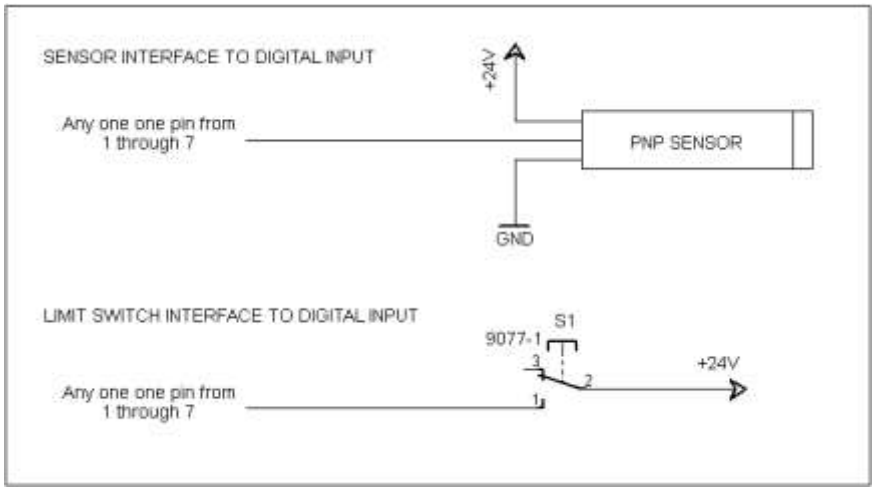
2. If you need only 4 channels instead of 8, specify 4 in place of 8 while ordering.

CONNECTION DIAGRAM FOR INPUT

1. UN - Universal input (5V to 24V)

2. PL - Sourced from PLC (24V)

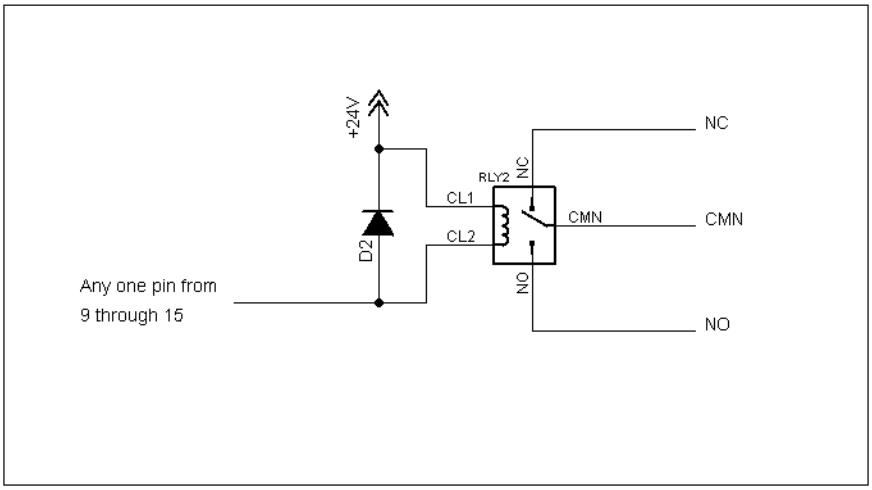
3. NK - Open collector (Potential free)



CONNECTION DIAGRAM FOR OUTPUT

1. UN - Sourced positive (Voltage same as supplied power on output side. Can be +5V to +24V DC) Approx 100mA source capacity per channel

2. NK - Open collector (Potential free) Approx 150mA sink capacity per channel



WARRANTY STATEMENT

Product specified in this document is covered under warranty for a period of 12 months against manufacturing defects, workmanship and malfunction under normal operating conditions. The warranty is subject to the terms and conditions mentioned below.

1. The warranty commences from the date of sale for a period of 12 months irrespective of the actual installation date.
2. The warranty is against manufacturing defects and any subsequent malfunction of the instrument during the normal operation. The warranty shall not be applicable in case of accidental damage, damage due to wrong operation, connection or conditions that are out of normal operating specifications.
3. KARL PL, at its discretion may repair or replace the product depending on the condition of instrument, availability of spare parts and type of failure.
4. In case of warranty claim, the warranty period will not be extended and remains same as stated earlier from the date of sale.
5. Maximum liability of KARL PL remains up to repair or replacement of the product only. Any damages or losses raised out of use of the instrument are not covered by this warranty. In any case, cost of the product will not be refunded.
6. In case of warranty claim, the product should be sent over to KARL PL immediately after noticing the defect or failure. A detailed note of operating conditions in which fault occurred will be helpful in rectifying the defect.
7. Do not try to open or repair the instrument on your own. Warranty will stand null and void in such case. Products with tampered warranty seal will not be considered for warranty claims and regular service charges will be applicable.
8. In all claims, the company's decision will be final and legally binding.
9. Any and all disputes are subject to pune jurisdiction only.

Kurolikar Automation Research Labs Ltd
#226, Laxmi colony, Behind manish market,
Hadpasar, Pune- 411028
www.AutomationResearchLabs.com
Email:sales@AutomationResearchLabs.com