

MODEL: R7I4DEIP-DA32A-1

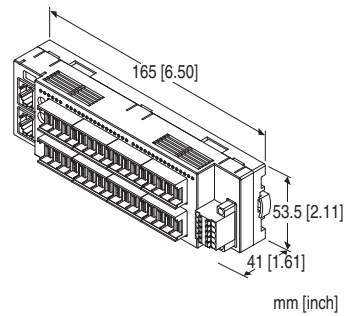
Remote I/O R7I4D Series

EtherNet/IP I/O MODULE

(NPN discrete input, 32 points, e-CON connector)

Functions & Features

- 32 points NPN discrete input module for EtherNet/IP
- Supports DLR (Device Level Ring) to form a ring topology



MODEL: R7I4DEIP-DA32A-1-R[1]

ORDERING INFORMATION

- Code number: R7I4DEIP-DA32A-1-R[1]
Specify a code from below for [1].
(e.g. R7I4DEIP-DA32A-1-R/Q)
- Specify the specification for option code /Q
(e.g. /C01/SET)

I/O TYPE

DA32A: NPN discrete input, 32 points

TERMINAL BLOCK

- 1: Tension clamp terminal block for power supply
RJ-45 Modular jack for communication
e-CON connector for input

POWER INPUT

DC Power

R: 24 V DC

(Operational voltage range 24 V $\pm$ 10 %, ripple 10 %p-p max.)

[1] OPTIONS

blank: none

/Q: With options (specify the specification)

SPECIFICATIONS OF OPTION: Q (multiple selections)

COATING (For the detail, refer to our web site.)

/C01: Silicone coating

/C02: Polyurethane coating

/C03: Rubber coating

EX-FACTORY SETTING

/SET: Preset according to the Ordering Information Sheet
(No. ESU-7745-A)

RELATED PRODUCTS

- PC configurator software (model: R7CFG)
- EDS file

The EDS files and configurator software are downloadable at our web site.

For connecting to PC, use commercially available Mini-B type USB cable. (provided by user)

GENERAL SPECIFICATIONS

Connection

EtherNet/IP: RJ-45 Modular Jack

Power & Sensor excitation: Separable screwless spring terminal

Input: e-CON connector

Housing material: Flame-resistant resin (gray)

Isolation: Input or exc. supply to EtherNet/IP or FE to power

Status indicator LED: PWR, LNK1, LNK2

(Refer to the instruction manual)

Discrete input status indicator LED: Green LED turns on with input ON

Read rate: Selectable with R7CFG

EtherNet/IP COMMUNICATION

Communication Standard: IEEE 802.3u

Transmission: 10BASE-T, 100BASE-TX

Baud rate: 10/100 Mbps (Auto Negotiation function)

Protocol: EtherNet/IP

Max. number of socket connections: 3

Connection type: Exclusive owner / Listen only / Input only

Transmission media: 10BASE-T (STP, Category 5), 100BASE-TX (STP, Category 5e)

Network topology: Line, star and ring

Max. length of fieldbus segment: 100 meters

IP address: 192.168.0.250 (factory setting);

Only host address in IP address is configurable via rotary switches, the other items via PC configurator software (model: R7CFG)

DLR supported

Port No.: 2222, 44818

I/O data size: Two (2) words

Status indicator LEDs: MS, NS (Refer to the instruction manual for details)

INPUT SPECIFICATIONS

Common: Positive common (NPN) per 32 points
Maximum inputs applicable at once: No limit (at 24V DC)
Sensor excitation: 24 V DC $\pm 10\%$; ripple 5 %p-p max.,
 ≤ 5 A (including discrete input load charge); rated current
8 A
ON voltage / current: ≥ 18 V DC (X0 through X1F to +24V) /
 ≥ 2.0 mA
OFF voltage / current: ≤ 9 V DC (X0 through X1F to +24V) /
 ≤ 1.0 mA
Input current: ≤ 3.0 mA per point at 24 V DC
Input resistance: Approx. 8.6 k Ω
ON delay: ≤ 0.5 msec.
OFF delay: ≤ 0.5 msec.

INSTALLATION

Current consumption: Approx. 50 mA (rated current 8 A)
Operating temperature: -10 to +55°C (14 to 131°F)
Storage temperature: -20 to +65°C (-4 to +149°F)
Operating humidity: 30 to 90 %RH (non-condensing)
Atmosphere: No corrosive gas or heavy dust
Mounting: Surface or DIN rail (35 mm rail)
Weight: 180 g (0.40 lb)

PERFORMANCE

Insulation resistance: ≥ 100 M Ω with 500 V DC
Dielectric strength: 1500 V AC @ 1 minute
(input or exc. supply to EtherNet/IP or FE to power)

STANDARDS & APPROVALS

EU conformity:
EMC Directive
EMI EN 61000-6-4
EMS EN 61000-6-2
RoHS Directive

PC CONFIGURATOR

The following parameters can be set with using PC Configurator Software (model: R7CFG)
Refer to the users manual for the R7CFG for detailed operation of the software program.

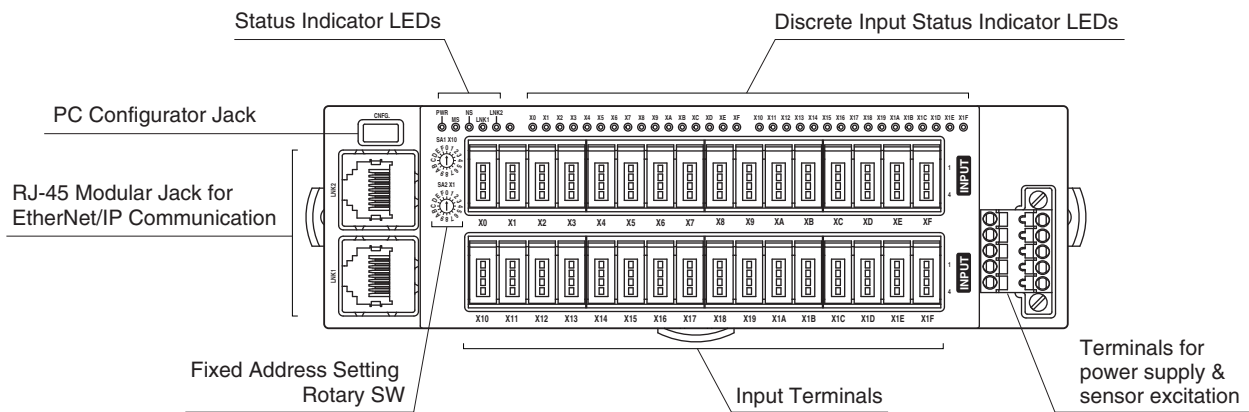
■ CHANNEL BATCH SETTING

PARAMETER	SETTING RANGE	DEFAULT
Read cycle	1 ms, 5 ms, 10 ms, 20 ms, 50 ms, 70 ms, 100 ms, 200 ms	10 ms

■ ETHERNET SETTING

PARAMETER	SETTING RANGE	DEFAULT
IP Address	0.0.0.0 - 255.255.255.255	192.168.0.250
Subnet Mask	0.0.0.0 - 255.255.255.255	255.255.255.0
Default Gateway	0.0.0.0 - 255.255.255.255	192.168.0.1
TimeOut	0 - 32767 (0.1 sec.)	30 (0.1 sec.)

EXTERNAL VIEW



TERMINAL ASSIGNMENTS

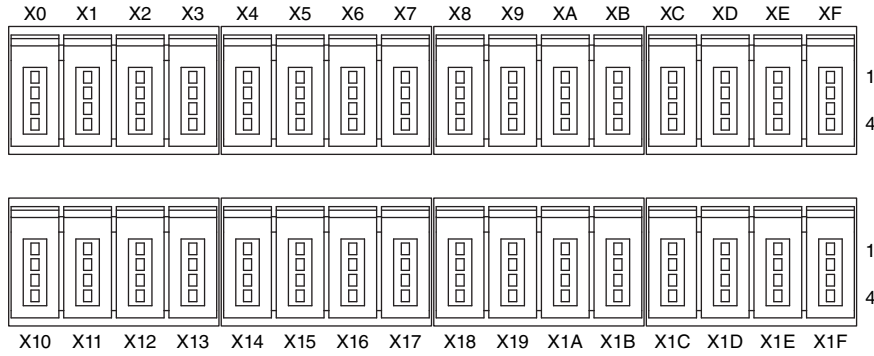
■ INPUT TERMINAL ASSIGNMENT

• e-CON connector

Recommended cable connector: 37104-()-000FL (3M Company)

(The cable connector is not included in the package.)

Specify wire size instead of (); refer to the specifications of the product.)



PIN No.	ID	FUNCTION	PIN No.	ID	FUNCTION
X0	1	+24V	X8	1	+24V
	2	NC		2	NC
	3	GND		3	GND
	4	X0		4	X8
X1	1	+24V	X9	1	+24V
	2	NC		2	NC
	3	GND		3	GND
	4	X1		4	X9
X2	1	+24V	XA	1	+24V
	2	NC		2	NC
	3	GND		3	GND
	4	X2		4	XA
X3	1	+24V	XB	1	+24V
	2	NC		2	NC
	3	GND		3	GND
	4	X3		4	XB
X4	1	+24V	XC	1	+24V
	2	NC		2	NC
	3	GND		3	GND
	4	X4		4	XC
X5	1	+24V	XD	1	+24V
	2	NC		2	NC
	3	GND		3	GND
	4	X5		4	XD
X6	1	+24V	XE	1	+24V
	2	NC		2	NC
	3	GND		3	GND
	4	X6		4	XE
X7	1	+24V	XF	1	+24V
	2	NC		2	NC
	3	GND		3	GND
	4	X7		4	XF

PIN No.	ID	FUNCTION	PIN No.	ID	FUNCTION
X10	1	+24V	X18	1	+24V
	2	NC		2	NC
	3	GND		3	GND
	4	X10		4	X18
X11	1	+24V	X19	1	+24V
	2	NC		2	NC
	3	GND		3	GND
	4	X11		4	X19
X12	1	+24V	X1A	1	+24V
	2	NC		2	NC
	3	GND		3	GND
	4	X12		4	X1A
X13	1	+24V	X1B	1	+24V
	2	NC		2	NC
	3	GND		3	GND
	4	X13		4	X1B
X14	1	+24V	X1C	1	+24V
	2	NC		2	NC
	3	GND		3	GND
	4	X14		4	X1C
X15	1	+24V	X1D	1	+24V
	2	NC		2	NC
	3	GND		3	GND
	4	X15		4	X1D
X16	1	+24V	X1E	1	+24V
	2	NC		2	NC
	3	GND		3	GND
	4	X16		4	X1E
X17	1	+24V	X1F	1	+24V
	2	NC		2	NC
	3	GND		3	GND
	4	X17		4	X1F

■ POWER SUPPLY, SENSOR EXCITATION

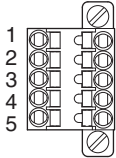
Cable connector: TFMC1,5 / 5-STF-3,5

(Phoenix Contact) (included in the package)

Applicable wire size: 0.2 – 1.5 mm²; stripped length 10 mm

Recommended solderless terminal

- AI0,25–10YE 0.25 mm² (Phoenix Contact)
- AI0,34–10TQ 0.34 mm² (Phoenix Contact)
- AI0,5–10WH 0.5 mm² (Phoenix Contact)
- AI0,75–10GY 0.75 mm² (Phoenix Contact)
- A1–10 1.0 mm² (Phoenix Contact)
- A1,5–10 1.5 mm² (Phoenix Contact)



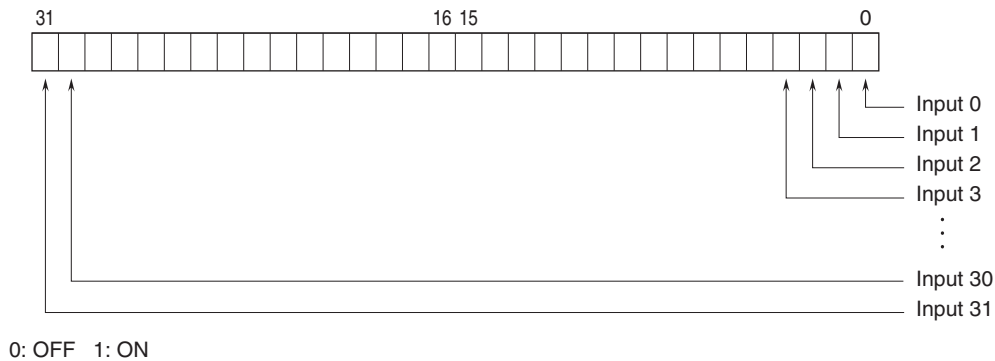
- | | |
|--------------|-------------------|
| 1. PWR+ | Power Supply |
| 2. PWR– | Power Supply |
| 3. FE | Functional earth |
| 4. SNSR.EXC+ | Sensor excitation |
| 5. SNSR.EXC– | Sensor excitation |

Note: The numbers marked on the connector have no relationship to the pin number of the unit.

Wire according to the instruction manual of the unit.

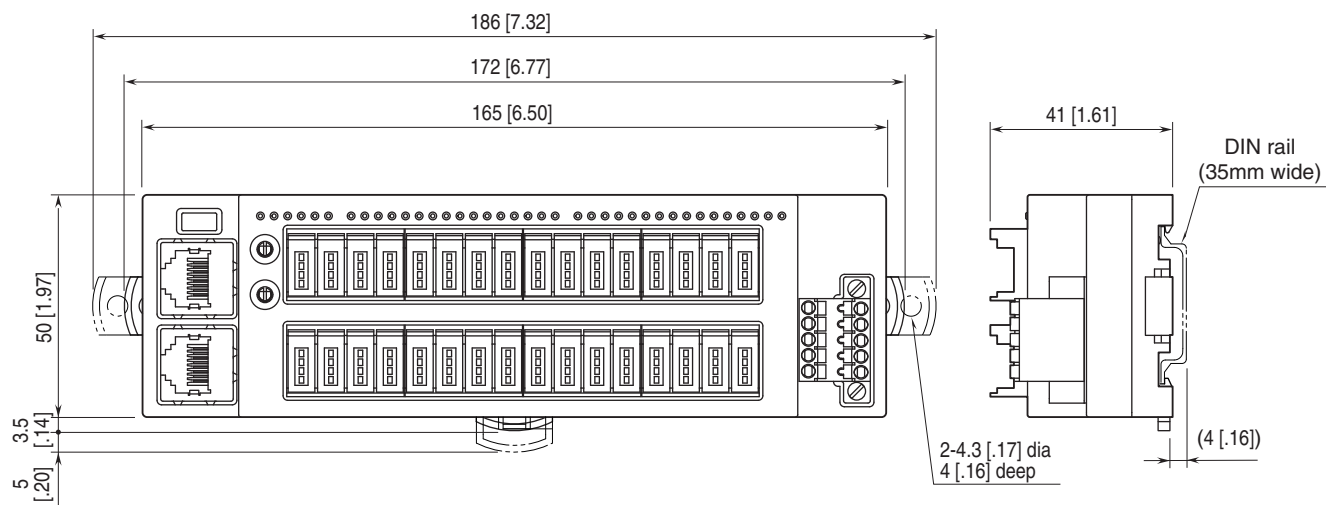
I/O DATA DESCRIPTIONS

■ DISCRETE INPUT

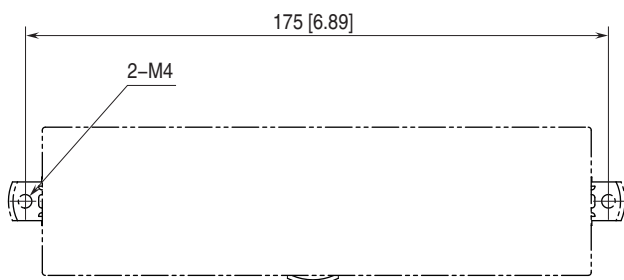


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EXTERNAL DIMENSIONS unit: mm [inch]



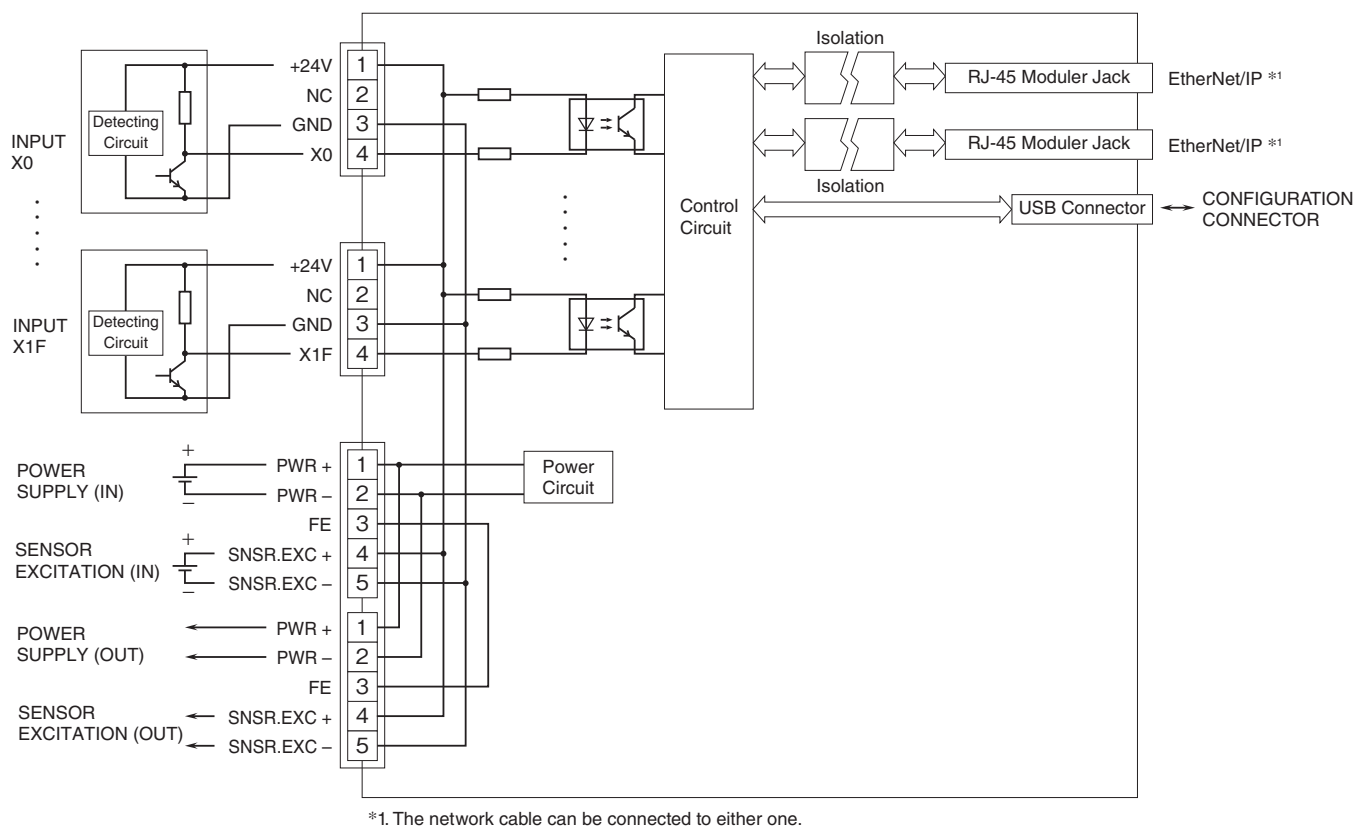
MOUNTING REQUIREMENTS unit: mm [inch]



SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM

Note: In order to improve EMC performance, bond the FE terminal to ground.

Caution: FE terminal is NOT a protective conductor terminal.



Specifications are subject to change without notice.