

## Remote I/O R8 Series

### POWER/NETWORK MODULE

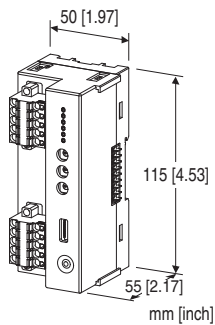
(DeviceNet)

#### Functions & Features

- Free combination of analog and discrete I/O
- Space-saving

#### Typical Applications

- Remote I/O for DCS and PLC



## MODEL: R8-ND1-R[1]

### ORDERING INFORMATION

- Code number: R8-ND1-R[1]

Specify a code from below for [1].

- (e.g. R8-ND1-R/Q)
- Specify the specification for option code /Q (e.g. /C01)

### MODULE TYPE

ND1: DeviceNet

### POWER INPUT

DC power

R: 24 V DC

(Operational voltage range:  $\pm 10\%$ ; ripple 10 %p-p max.)

### [1] OPTIONS

blank: none

/Q: With options (specify the specification)

### SPECIFICATIONS OF OPTION: Q

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

/C01: Silicone coating

/C02: Polyurethane coating

### RELATED PRODUCTS

- PC Configurator cable (model: COP-US)
- PC configurator software (model: R8CFG)
- EDS file

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

### PACKAGE INCLUDES...

- Protective cover

### GENERAL SPECIFICATIONS

#### Connection

- **Power input, excitation supply:** Tension clamp (Front Twin connection)

**Applicable wire size:** 0.2 - 2.5 mm<sup>2</sup>

**Stripped length:** 10 mm

- **DeviceNet:** Tension clamp (Front Twinconnection)

- **Internal bus or internal power or excitation supply:** Via connector

**Max. number of I/O modules:** 16

(Max. consumption current of I/O modules: 1.6 A)

**Isolation:** DeviceNet to internal bus or internal power or power input to exc. supply to FE1

**Status indicators:** Power, RUN, NS, MS

**Data allocation:** Mode 1, 2

### DeviceNet COMMUNICATION

**Node address setting:** Set with rotary switch; 00 - 63

**Baud rate setting:** Set with rotary switch; 125 kbps, 250 kbps, 500 kbps

**Transmission cable:** Approved for DeviceNet

Stripped length 10 mm

**I/O data allocation size:** 8 to 64 words (variable)

### INSTALLATION

#### Power consumption

- **DC:** Approx. 12 W 24 V DC (@ internal power max. current 1.6 A)

**Internal power supply (power supply for I/O module):**

- DC power supply: 5 V DC
- Current capacity: 1.6 A

**Excitation supply output (excitation for I/O module)**

- **DC:** 24 V DC  $\pm 10\%$
- **Operational current:** 10 A

(From power supply (excitation supply) connector, via connector for internal bus, supplied to each I/O module.

Power output current consumption must be under operational current.)

**Supply voltage to network:** 11 - 25 V DC supplied through the network terminal block

**Supply current to network:** 50 mA max.  
**Operating temperature:** -10 to +55°C (14 to 131°F)  
**Operating humidity:** 30 to 90 %RH (non-condensing)  
**Atmosphere:** No corrosive gas or heavy dust  
**Mounting:** DIN rail  
**Weight:** 180 g (0.40 lb)

## PERFORMANCE

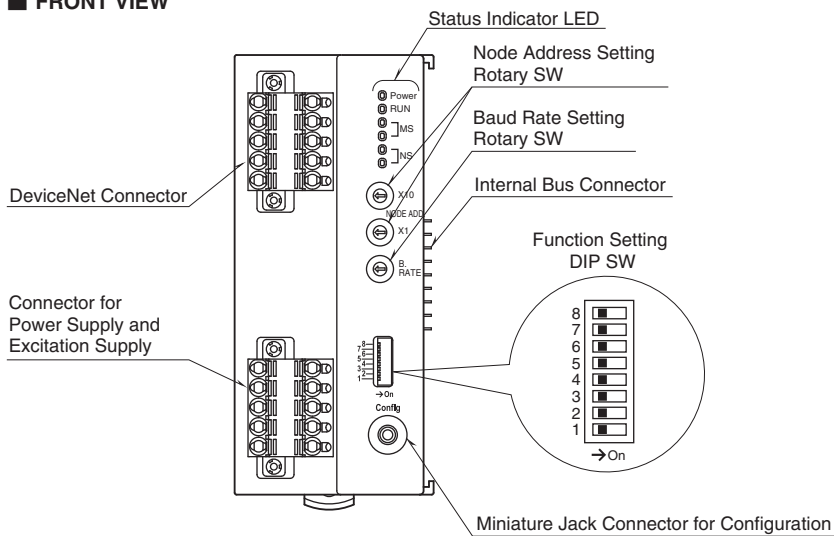
**Insulation resistance:**  $\geq 100 \text{ M}\Omega$  with 500 V DC  
**Dielectric strength:** 1500 V AC @ 1 minute  
 (DeviceNet to internal bus or internal power or power input to exc. supply to FE1)

## STANDARDS & APPROVALS

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

## EXTERNAL VIEW

### FRONT VIEW



LED	STATE	COLOR	TO INDICATE
Power	ON	Green	Power supplied
RUN	ON / Blink	Green	Turns on or blinks depending on the status
MS	ON	Green	Normal operation
	ON / Blink	Red	Critical failure / Minor failure
NS	ON	Green	Connections are established
	Blink	Green	Connections are not established
	ON	Red	Critical Link failure
	Blink	Red	Minor Link failure

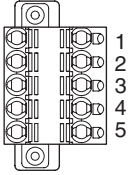
## CONNECTION DIAGRAMS

### ■ POWER SUPPLY, EXCITATION SUPPLY CONNECTOR TERMINAL ASSIGNMENT

Printed-circuit board connector (Phoenix Contact)

Unit side connector: MSTBV2,5/5-GF-5,08AU

Cable side connector: TFKC2,5/5-STF-5,08AU



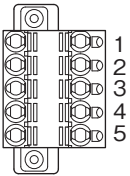
PIN No.	ID	FUNCTION
1	24V	Power supply 24V DC
2	0V	Power supply 0V DC
3	+	Excitation supply 24V DC
4	-	Excitation supply 0V DC
5	FE1	Grounding

### ■ NETWORK CONNECTOR ASSIGNMENT

Printed-circuit board connector (Phoenix Contact)

Unit side connector: MSTBV2,5/5-GF-5,08AU

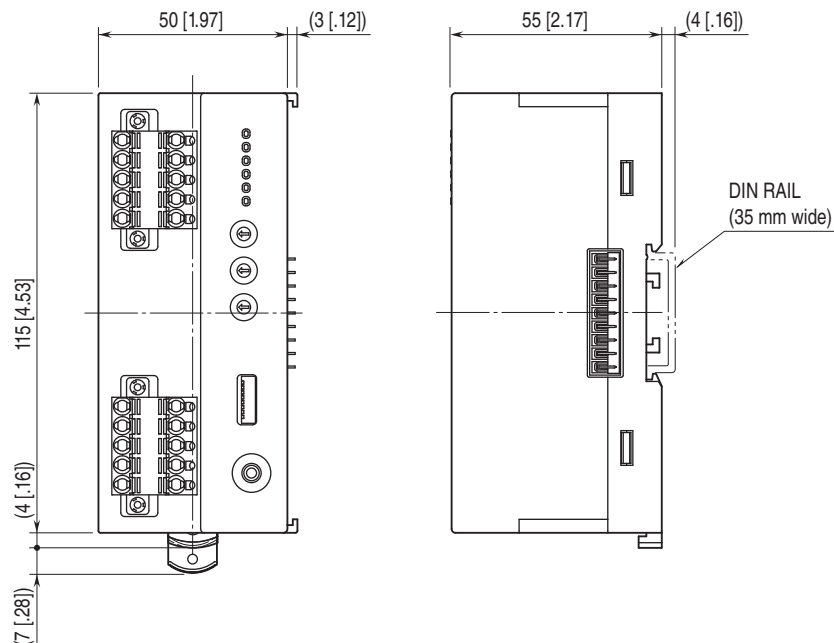
Cable side connector: TFKC2,5/5-STF-5,08AU M



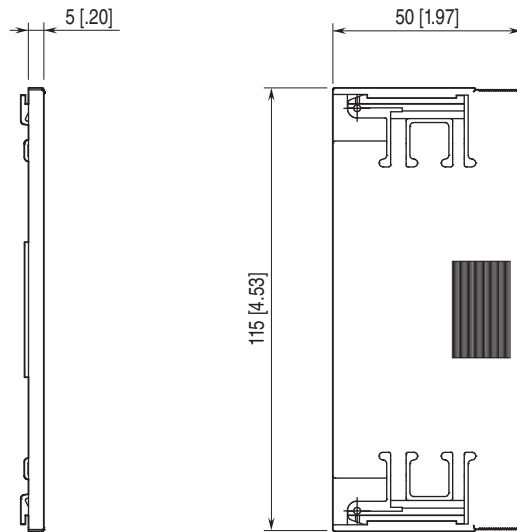
PIN No.	ID	FUNCTION
1	V -	POWER (-)
2	CAN_L	Signal Low
3	Drain	Shield
4	CAN_H	Signal High
5	V +	POWER (+)

## EXTERNAL DIMENSIONS unit: mm [inch]

### ■ UNIT



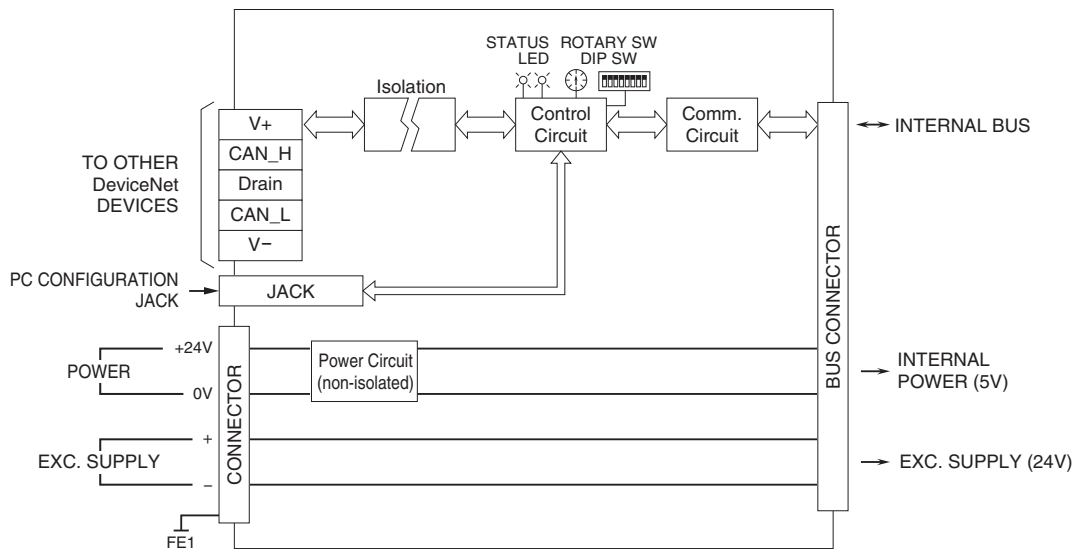
## PROTECTIVE COVER



## SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM

Note: In order to improve EMC performance, bond the FE1 terminal to ground.

Caution: FE1 terminal is NOT a protective conductor terminal.



Specifications are subject to change without notice.