

## Remote I/O R8 Series

### POWER/NETWORK MODULE

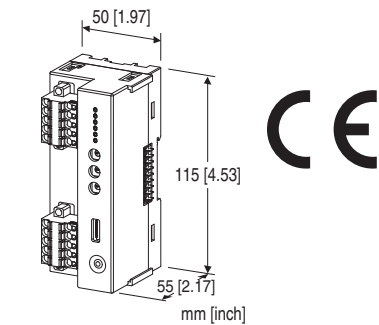
(DeviceNet)

#### 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 M-System's 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 M-System's 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

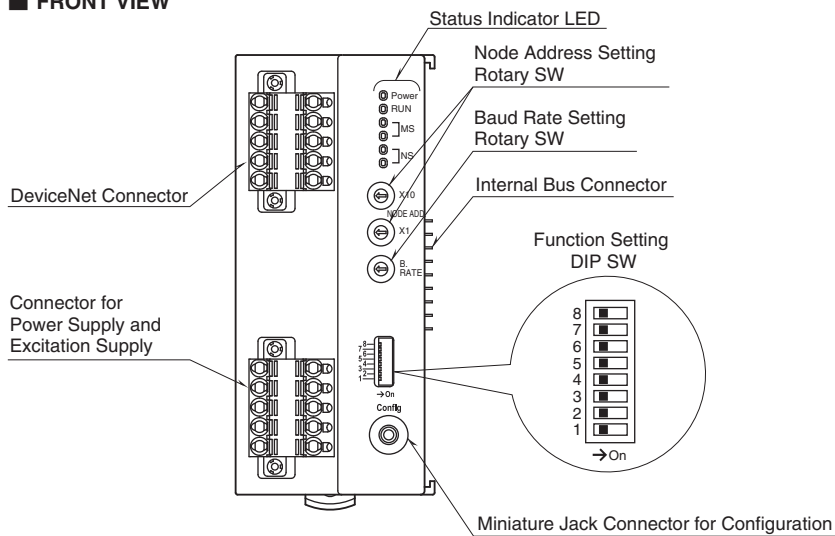
EMI EN 61000-6-4

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

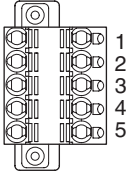
## CONNECTION DIAGRAMS

### ■ 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



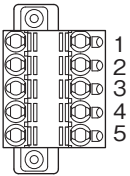
PIN No.	ID	FUNCTION
1	24V	Power supply 24V DC
2	0V	Power supply 0V DC
3	+	Excitation supply 24V DC
4	-	Excitation supply 0V DC
5	FE1	Grounding

### ■ NETWORK CONNECTOR ASSIGNMENT

Printed-circuit board connector (Phoenix Contact)

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

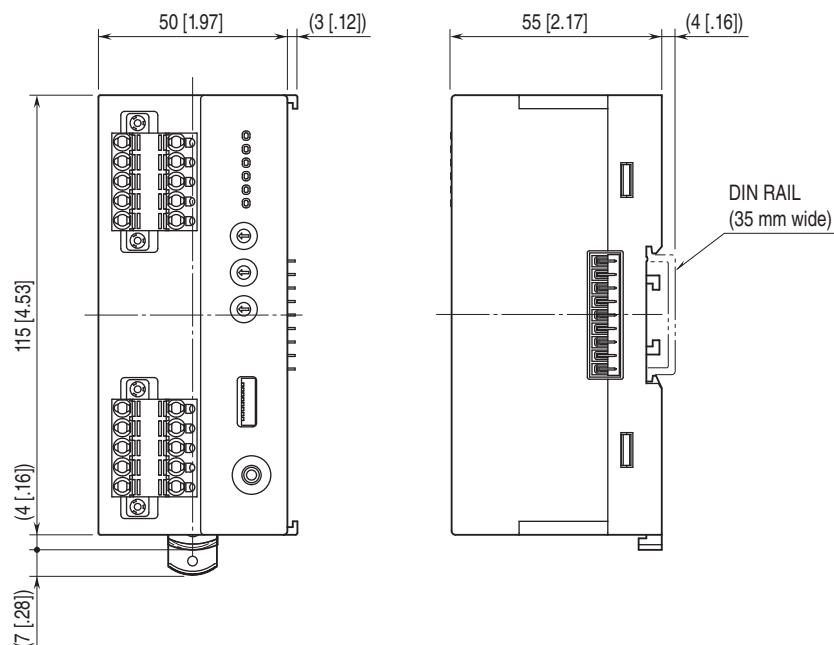
Cable side connector: TFKC2,5/5-STF-5,08AU M



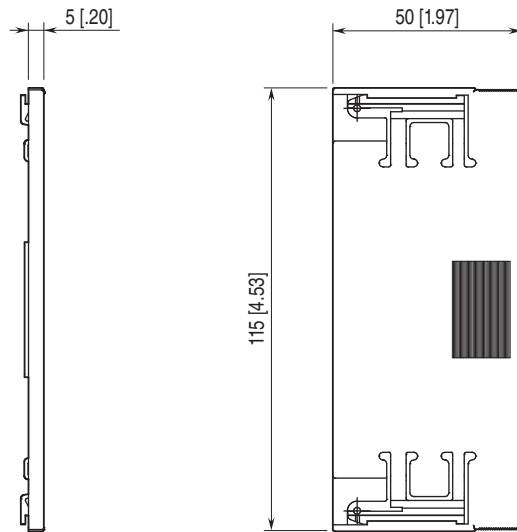
PIN No.	ID	FUNCTION
1	V -	POWER (-)
2	CAN_L	Signal Low
3	Drain	Shield
4	CAN_H	Signal High
5	V +	POWER (+)

## EXTERNAL DIMENSIONS unit: mm [inch]

### ■ UNIT



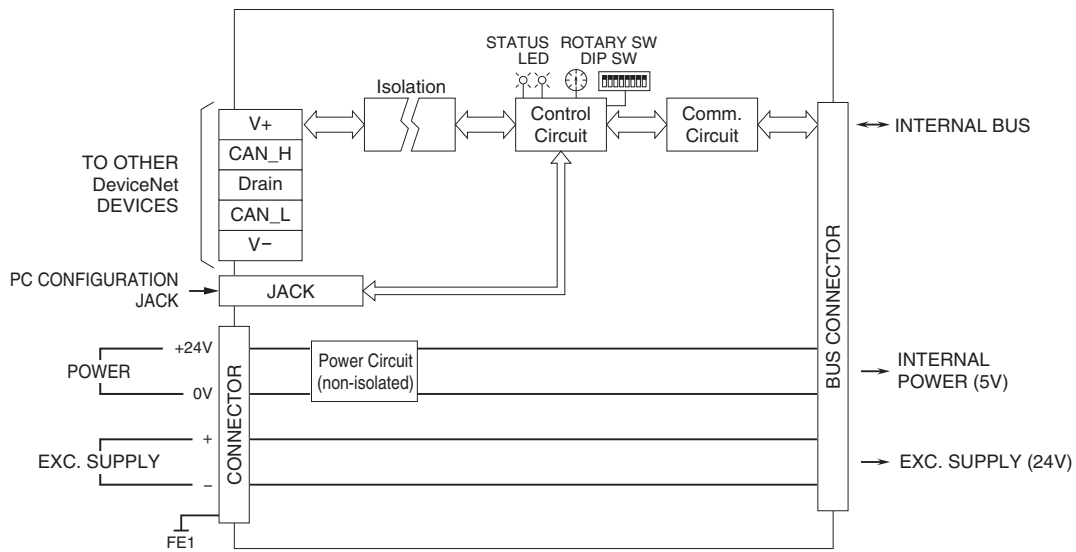
■PROTECTIVE COVER



**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.