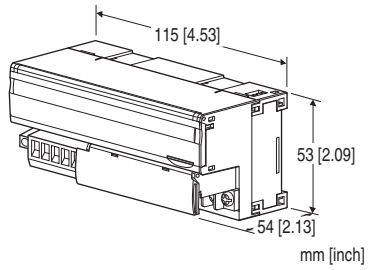
Remote I/O R7 Series

DeviceNet® I/O MODULE

(relay contact output, 8 points)

Functions & Features

• 8 points relay contact output module for DeviceNet



MODEL:R7D–DC8C[1]

ORDERING INFORMATION

• Code number: R7D-DC8C[1]

Specify a code from below for [1].

(e.g. R7D-DC8C/Q)

• Specify the specification for option code /Q

(e.g. /C01/SET)

I/O TYPE

DC8C: Relay contact output, 8 points

[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-7802-G)

CAUTION

• Extension modules cannot be connected.

RELATED PRODUCTS

• PC Configurator cable (model: MCN-CON or COP-US)

• PC configurator software (model: R7CON)

• EDS file

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

GENERAL SPECIFICATIONS

Connection

DeviceNet: Euro type connector terminal

(applicable wire size: 0.2 to 2.5 mm^2, stripped length 7 mm)

Output: M3 separable screw terminal (torque 0.5 N·m)

Solderless terminal: Refer to the drawing at the end of the section.

Recommended manufacturer: Japan Solderless Terminal MFG. Co., Ltd., Nichifu Co., Ltd.

Applicable wire size: 0.25 to 1.65 mm^2 (AWG 22 to 16)

Screw terminal: Nickel-plated steel

Housing material: Flame-resistant resin (gray)

Isolation: Output to DeviceNet

Output at the loss of communication:

Hold the output (*), Reset the output

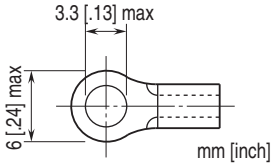
Selectable with the front DIP SW

(*) Factory default setting

Discrete output status indicator LED: LED turns on with output ON

Configurator connection: 2.5 dia. miniature jack

■**Recommended solderless terminal**



DeviceNet COMMUNICATION

Network cable: Approved for DeviceNet

Baud rate setting: 125 kbps (default), 250 kbps, 500 kbps, auto-tracking (rotary switch)

(Refer to the instruction manual.)

Status indicator LEDs: MS, NS

(Refer to the instruction manual for details.)

Node address setting: 1 - 63 (rotary switch, default:00)

(Refer to the instruction manual.)

Communication: Supports poll and cyclic

(Bit-strobe and COS (change of state) are not suported)

OUTPUT SPECIFICATIONS

Common: 1 common per 4 points (4 terminals)

Maximum load current: 2.0 A per point

Common current: Max. 8 A (4 terminals total)

Maximum outputs applicable at once: No limit (at 24 V DC)

Output supply voltage/current: 24 V DC ±10 %/ approx. 60 mA

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Rated load: 250 V AC[*1] @ 2 A (cos ø = 1)
30 V DC @ 2 A (resistive load)
*1. When it is used as a product relevant to EU directive, it should be used under the Installation Category I, 125 V AC or less.
Maximum switching voltage: 250 V AC, 30 V DC
Maximum switching power: 500 VA (AC), 60 W (DC)
Minimum applicable load: 24 V DC @ 5 mA
Mechanical life: 2×10^7 cycles (300 cycles per min.)
When driving an inductive load, external contact protection and noise quenching recommended.
ON delay time: ≤ 10 msec.
OFF delay time: ≤ 10 msec.

INSTALLATION

Supply voltage to network: 11 – 25 V DC supplied through the network terminal block
Current Consumption:
Approx. 50 mA @ 24 V DC
Approx. 90 mA @ 11 V DC
Relay driving current: Approx. 60 mA
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: DIN rail (35 mm rail)
Weight: 200 g (0.44 lb)

PERFORMANCE

Insulation resistance: ≥ 100 MΩ with 500 V DC
Dielectric strength: 1500 V AC @ 1 minute (output to DeviceNet)

STANDARDS & APPROVALS

Refer to the manuals to comply with the standards.
EU conformity:
EMC Directive
  EMI EN 61000-6-4
  EMS EN 61000-6-2
Low Voltage Directive
  EN 61010-1, EN 61010-2-201
  Measurement Category II (output)
  Pollution Degree 2
  Output to communication: Basic insulation (150 V)
RoHS Directive

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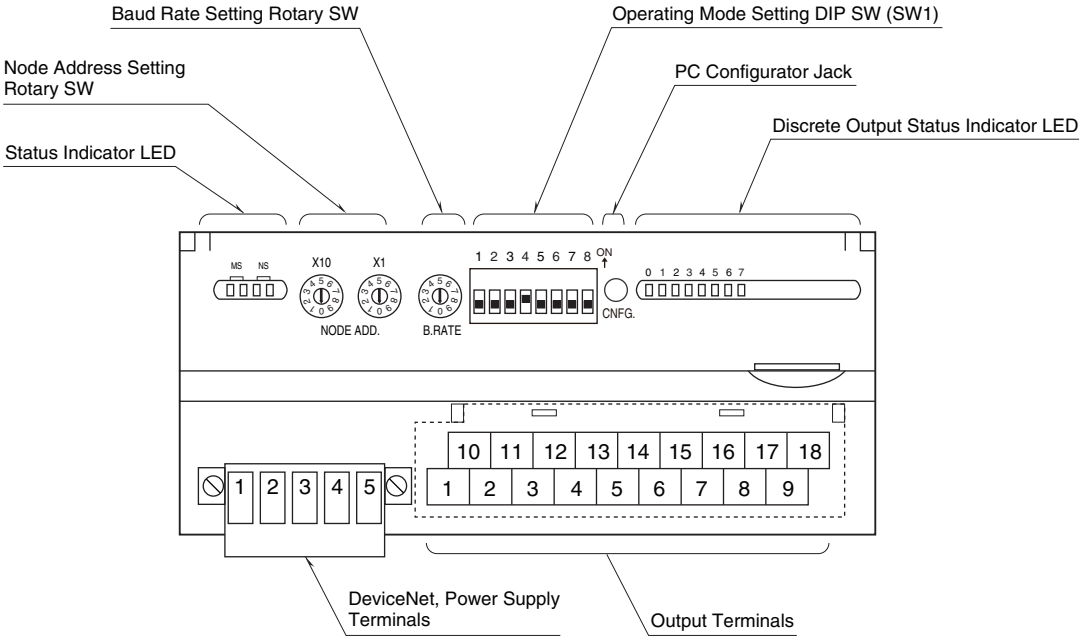
EXTERNAL VIEW

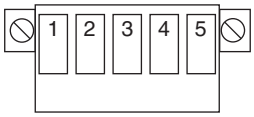


TERMINAL ASSIGNMENTS

■ OUTPUT TERMINAL ASSIGNMENT

NO.	ID	FUNCTION	NO.	ID	FUNCTION
1	0V	0V	10	+24V	24V DC
2	COM0	Common 0	11	Y0	Output 0
3	COM0	Common 0	12	Y1	Output 1
4	COM0	Common 0	13	Y2	Output 2
5	COM0	Common 0	14	Y3	Output 3
6	COM1	Common 1	15	Y4	Output 4
7	COM1	Common 1	16	Y5	Output 5
8	COM1	Common 1	17	Y6	Output 6
9	COM1	Common 1	18	Y7	Output 7

■ DeviceNet TERMINAL ASSIGNMENT



PIN NO.	COLOR	ID	FUNCTION
1	Red	V+	Network power supply +
2	White	CAN_H	Network data High
3	–	Drain	Shield
4	Blue	CAN_L	Network data Low
5	Black	V–	Network power supply –

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DATA ALLOCATION

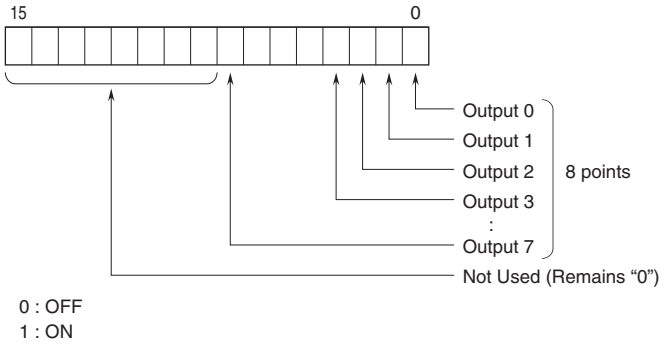
'Begin' address is determined by the R7D's node address and the master setting.

• Example. R7D-DC8C

Output Data	Input Data
None	Begin +0

I/O DATA DESCRIPTIONS

■ DISCRETE OUTPUT



TRANSMISSION DATA DESCRIPTIONS

■ BASIC MODULE

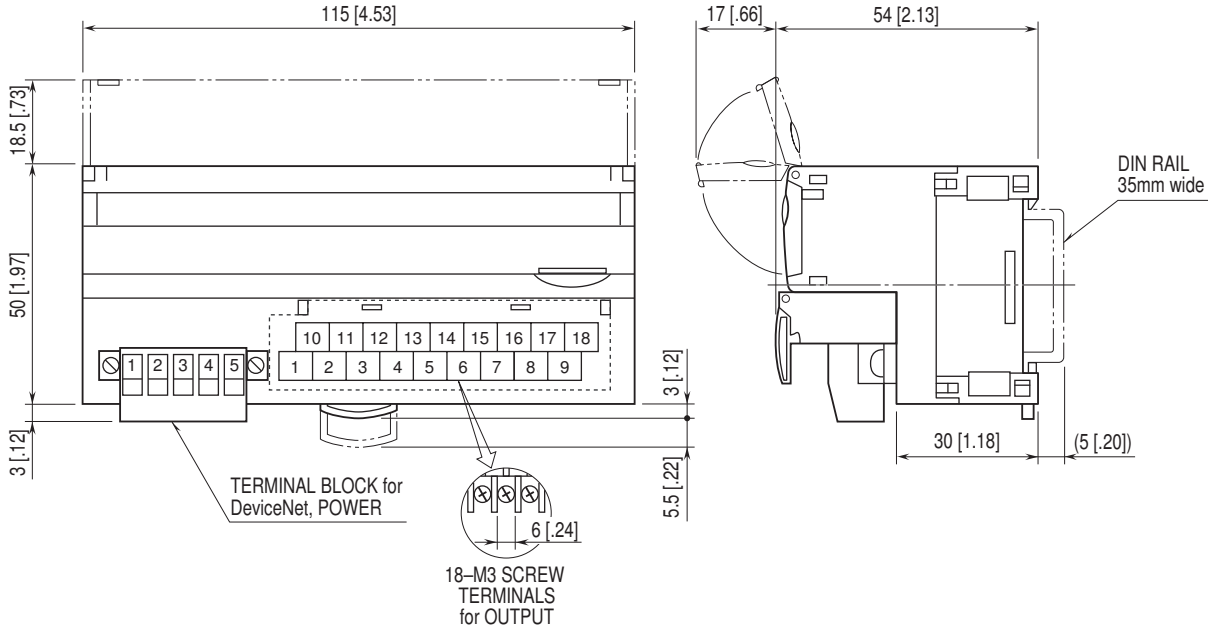
Transmitted data (word) depends upon the modules types.

MODEL	OUTPUT DATA*1 (R7D to Master)	INPUT DATA*2 (Master to R7D)
R7D-DC8C	0	1

*1. Output Data means those sent to the master.

*2. Input Data means those received from the master.

EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm [inch]



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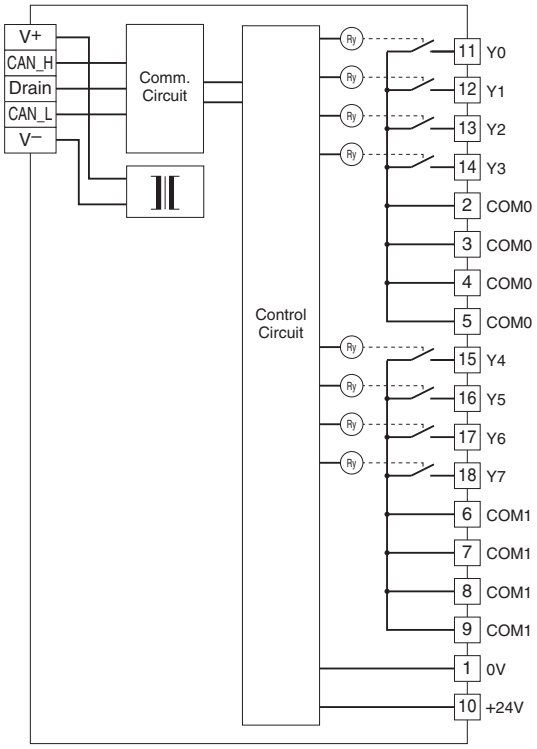
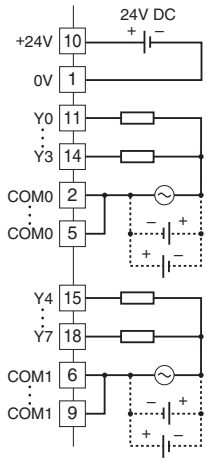
SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM

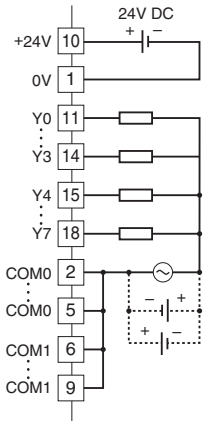


■ **Output Connection Example**

4 points / common



8 points / common



⚠ Specifications are subject to change without notice.

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