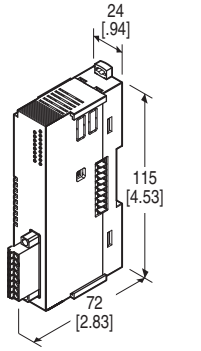
Remote I/O R80 Series

DC CURRENT OUTPUT MODULE, 4 points

(4 points, non-isolated, Tension clamp terminal block)

Functions & Features

- 4 points DC current output remote I/O module
- Non-isolated
- Tension clamp terminal block



MODEL: R80YST4N[1]

ORDERING INFORMATION

- Code number: R80YST4N[1]

Specify a code from below for [1].
(e.g. R80YST4N/Q)

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

[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 software (model: R80CFG)

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

GENERAL SPECIFICATIONS

Connection
Output: Separable tension clamp terminal
Internal bus, internal power: Connected to internal bus connector
Housing material: Flame-resistant resin (black)
Isolation: Output 1-4 to excitation supply to internal bus or internal power to FE
Output setting: Scaling is configurable individually for each 4 points with configurator software (model: R80CFG)
Module address: With DIP switch
Terminating resistor: Built-in (DIP Switch, default: disable)
Status indicator: Bi-color (red/green) LED; Refer to the instruction manual.
Output status indicators: Red LED; Refer to the instruction manual.

OUTPUT

Output range: Selectable between 0 – 20mA DC
Operational range: -5 – +105 % (in percentage of output range) ≤ 0 mA DC
Load resistance: ≤ 350Ω

INSTALLATION

Max. current consumption: 100 mA
Exc. supply current consumption: 90 mA
Operating temperature: -10 to +55°C (14 to 131°F)
Storage temperature: -10 to +55°C (14 to +131°F)
Operating humidity: 10 to 90 %RH (non-condensing)
Atmosphere: No corrosive gas or heavy dust
Mounting: DIN rail
Weight: 120 g (0.26 lb)

PERFORMANCE

Conversion accuracy (in percentage of output range)
±0.08 % (@ output range 0 - 20 mA)
Conversion accuracy is inversely proportional to output span.
Conversion rate: 1 msec.
Output circuit time constant: ≤ 1 msec. (0 → 90 %)
Data range: 0 – 10000 of the output range
(Scaling of converted data is configurable with the configurator software)
Temp. coefficient: ±0.015 %/°C (±0.008 %/°F)
Insulation resistance: ≥ 100 MΩ with 500 V DC
Dielectric strength:
1500 V AC @ 1 minute (output1 - 4 to exc. supply to internal bus or internal power to ground)

CALCULATION EXAMPLES OF CONVERSION ACCURACY

When output range is 4 - 20 mA: conversion accuracy = output span standard value (20 mA) ÷ output span (16 mA) × 0.08(%) = 0.1 (%).
output span standard value is the same as the span at

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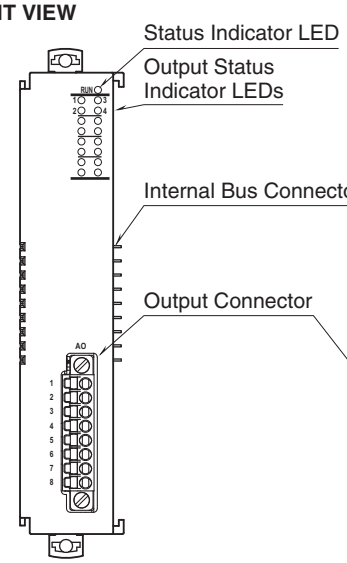
output range 0 - 20 mA DC.

STANDARDS & APPROVALS

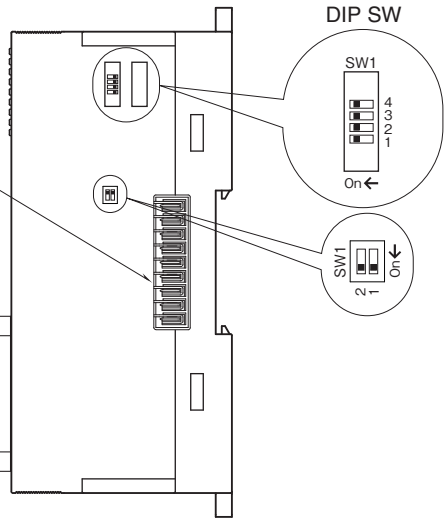
EU conformity:
EMC Directive
EMI EN 61000-6-4
EMS EN 61000-6-2
RoHS Directive

EXTERNAL VIEW

■ **FRONT VIEW**



■ **SIDE VIEW**



CONNECTION DIAGRAMS

■ **Tension clamp terminal block**

Unit side connector: MC1,5/8-GF-3,5 (Phoenix Contact)
Applicable connector: FMC1,5/8-STF-3,5 (Phoenix Contact)
Applicable wire size: 0.2 − 1.5 mm^2
Stripped length: 10 mm
Recommended solderless terminal

- AI0,25−10YE 0.25 mm^2 (Phoenix Contact)
- AI0,34−10TQ 0.34 mm^2 (Phoenix Contact)
- AI0,5−10WH 0.5 mm^2 (Phoenix Contact)
- AI0,75−10GY 0.75 mm^2 (Phoenix Contact)
- A1−10 1.0 mm^2 (Phoenix Contact)
- A1,5−10 1.5 mm^2 (Phoenix Contact)

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OPERATING MODE SETTING

(*) factory default setting

Note: Be sure to set unused SW 2-2 to OFF.

• Module Address Setting

Configurate the module address with DIP Switch.

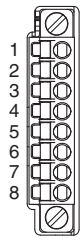
0 - 15 are available for module address.

MODULE ADDRESS	SW1			
	1	2	3	4
0(*)	OFF	OFF	OFF	OFF
1	ON	OFF	OFF	OFF
2	OFF	ON	OFF	OFF
3	ON	ON	OFF	OFF
4	OFF	OFF	ON	OFF
5	ON	OFF	ON	OFF
6	OFF	ON	ON	OFF
7	ON	ON	ON	OFF
8	OFF	OFF	OFF	ON
9	ON	OFF	OFF	ON
10	OFF	ON	OFF	ON
11	ON	ON	OFF	ON
12	OFF	OFF	ON	ON
13	ON	OFF	ON	ON
14	OFF	ON	ON	ON
15	ON	ON	ON	ON

• Terminator Setting

Terminator	SW2-1
Disabled (*)	OFF
Enabled	ON

TERMINAL ASSIGNMENTS



PIN NO.	ID	FUNCTION
1	Ao1+	Output 1 (+)
2	Ao1–	Output 1 (–)
3	Ao2+	Output 2 (+)
4	Ao2–	Output 2 (–)
5	Ao3+	Output 3 (+)
6	Ao3–	Output 3 (–)
7	Ao4+	Output 4 (+)
8	Ao4–	Output 4 (–)

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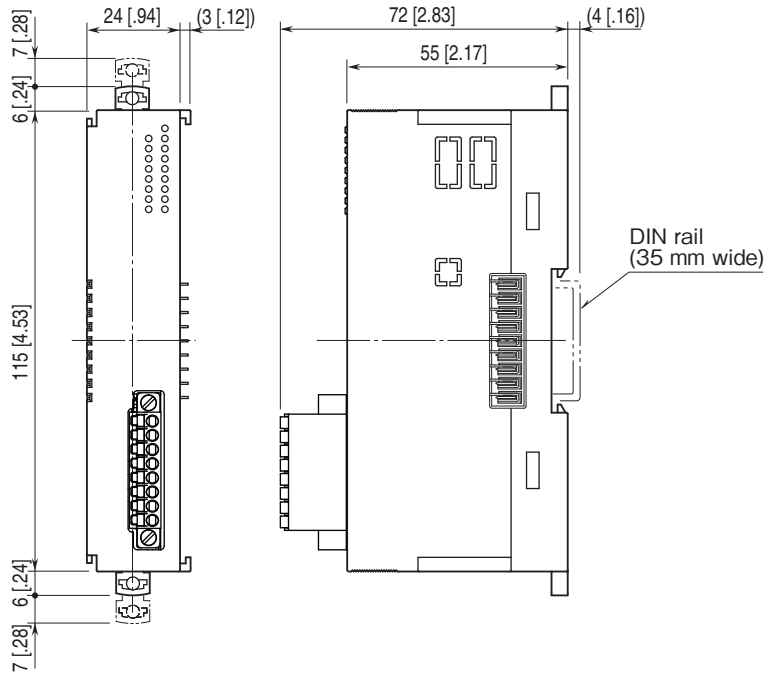
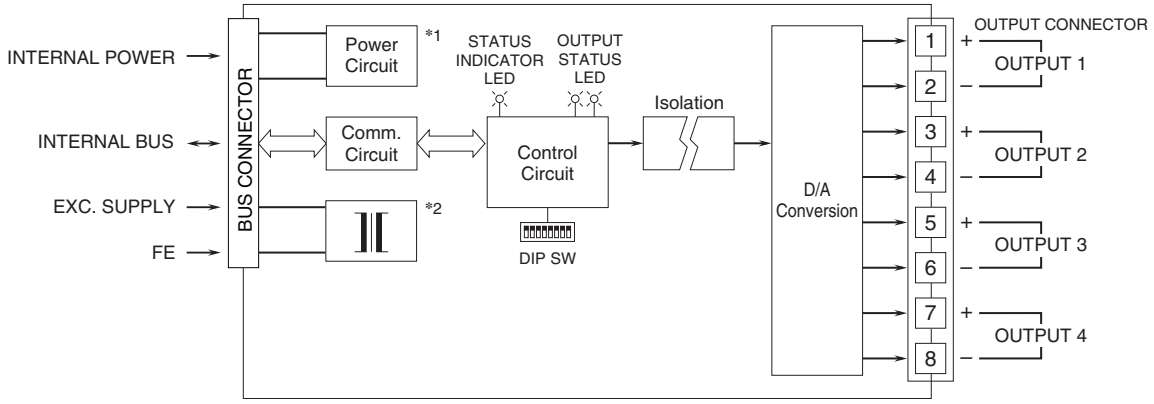
EXTERNAL DIMENSIONS unit: mm [inch]



SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



*1. The power supply for control circuit, which is non-isolated from internal power.
*2. The power supply for output 1 through output 4, which is isolated from the Exc. supply and the internal power.

⚠ Specifications are subject to change without notice.

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