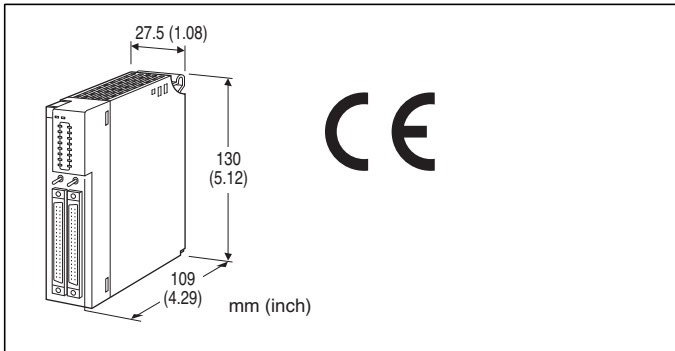


Remote I/O R3 Series

DISCRETE INPUT MODULE

(Di 64 points; with external excitation supply)



MODEL: R3-DA64A[1][2]

ORDERING INFORMATION

- Code number: R3-DA64A[1][2]
Specify a code from below for each of [1] and [2].
(e.g. R3-DA64AW/12/CE/Q)
- Specify the specification for option code /Q
(e.g. /C01)

NO. OF CHANNELS

64: 64

EXCITATION SUPPLY

A: External excitation

[1] COMMUNICATION MODE

S: Single
W: Dual

[2] OPTIONS (multiple selections)

External Excitation

blank: 24 V DC
/12: 12 V DC
/5: 5 V DC

Standards & Approvals

blank: Without CE
/CE: CE marking

Other Options

blank: none
/Q: Option other than the above (specify the specification)

SPECIFICATIONS OF OPTION: Q

COATING (For the detail, refer to M-System's web site.)

- /C01: Silicone coating
- /C02: Polyurethane coating
- /C03: Rubber coating

RELATED PRODUCTS

- Connector terminal block (model: CNT)
- Special cable with 40-pin connector (model: FCN)

GENERAL SPECIFICATIONS

Connection

Internal bus: Via the Installation Base (model: R3-BSx)
Input: 40-pin connector (Fujitsu Model FCN-365P040-AU)
Internal power: Via the Installation Base (model: R3-BSx)
Isolation: Di 11 thru 18 to Di 21 thru 28 to Di 31 thru 38 to Di 41 thru 48 to Di 51 thru 58 to Di 61 thru 68 to Di 71 thru 78 to Di 81 thru 88 to internal bus or internal power
RUN indicator: Bi-color (red/green) LED;
 Red when the bus A operates normally;
 Green when the bus B operates normally;
 Amber when both buses operate normally.
ERR indicator: Green LED turns on in normal operating conditions.

Input status indicator: Red LED; turns on with the input ON.

Group selector: Switches the input status indicator
 CN1:

- A. 1 - 8: Di11 - Di18, 9 - 16: Di21 - Di28
- B. 1 - 8: Di31 - Di38, 9 - 16: Di41 - Di48

CN2:

- A. 1 - 8: Di51 - Di58, 9 - 16: Di61 - Di68
- B. 1 - 8: Di71 - Di78, 9 - 16: Di81 - Di88

Read rate: 3 / 5 / 10 / 20 / 50 / 70 / 100 / 200 msec.
 selectable with DIP SW

INPUT SPECIFICATIONS

Number of input: 64 points

Isolation: Optical isolator

Input resistance:

- Approx. 9 k Ω (24 V DC)
- Approx. 4 k Ω (12 V DC)
- Approx. 1.5 k Ω (5 V DC)

Common: Positive or negative common (NPN/PNP) per 8 points

Rated input voltage

- 24V exc.: 24 V DC ± 10 % (ripple 5 %p-p max.)
- 12V exc.: 12 V DC ± 10 % (ripple 5 %p-p max.)
- 5V exc.: 5 V DC ± 10 % (ripple 5 %p-p max.)

Rated input current: Approx. 3 mA

ON current/resistance:

≥ 2 mA, ≤ 3 k Ω (24 V DC)

$\geq 2 \text{ mA}$, $\leq 1.5 \text{ k}\Omega$ (12 V DC)

$\geq 2 \text{ mA}$, $\leq 500 \Omega$ (5 V DC)

OFF current/resistance:

$\leq 1 \text{ mA}$, $\geq 6 \text{ k}\Omega$ (24 V DC)

$\leq 1 \text{ mA}$, $\geq 3 \text{ k}\Omega$ (12 V DC)

$\leq 1 \text{ mA}$, $\geq 1.5 \text{ k}\Omega$ (5 V DC)

Detection levels

ON:

$\geq 18 \text{ V}$ (24 V DC)

$\geq 8 \text{ V}$ (12 V DC)

$\geq 3 \text{ V}$ (5 V DC)

OFF:

$\leq 9 \text{ V}$ (24 V DC)

$\leq 4 \text{ V}$ (12 V DC)

$\leq 1.5 \text{ V}$ (5 V DC)

INSTALLATION

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: Installation Base (model: R3-BSx)

Weight: 200 g (0.44 lb)

PERFORMANCE

Data allocation: 4

Current consumption: 100 mA

Insulation resistance: $\geq 100 \text{ M}\Omega$ with 500 V DC

Dielectric strength: 500 V AC @ 1 minute

(Di 11 thru 18 to Di 21 thru 28 to Di 31 thru 38 to Di 41 thru 48 to Di 51 thru 58 to Di 61 thru 68 to Di 71 thru 78 to Di 81 thru 88)

2000 V AC @ 1 minute (input to internal bus or internal power)

2000 V AC @ 1 minute (power input to FG; isolated on the power supply module)

STANDARDS & APPROVALS

EU conformity:

EMC Directive

EMI EN 61000-6-4

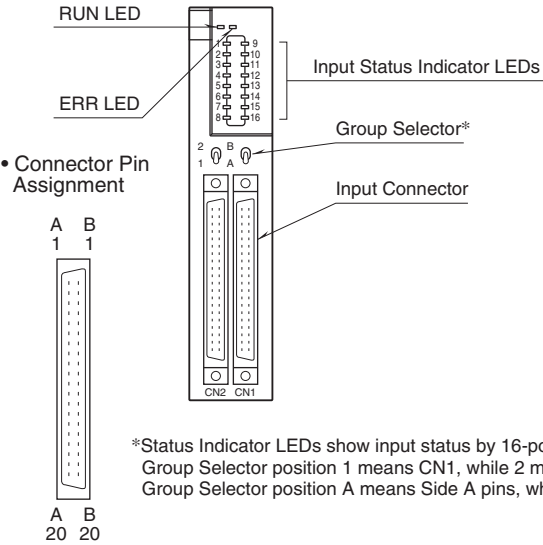
EMS EN 61000-6-2

RoHS Directive

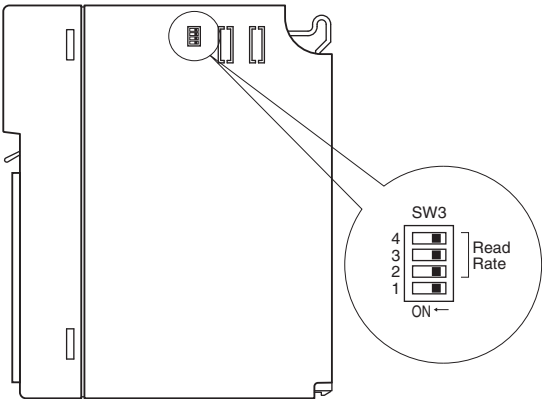
EN 50581

EXTERNAL VIEW

FRONT VIEW

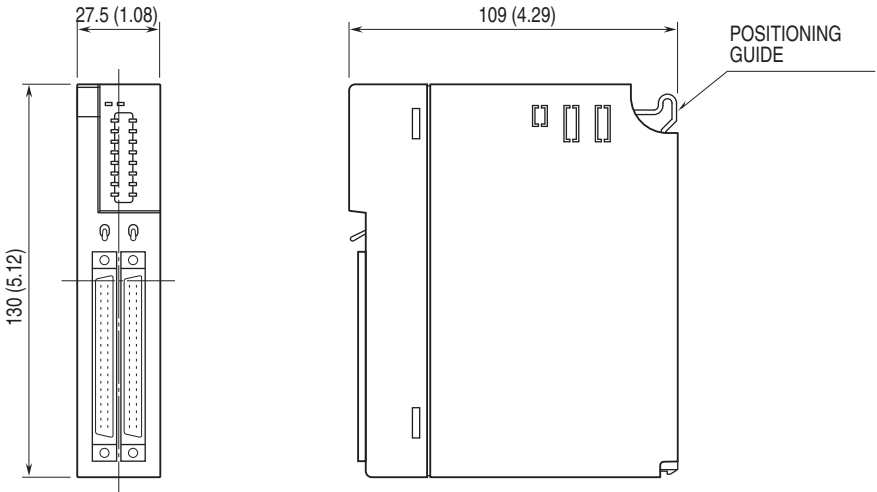


SIDE VIEW

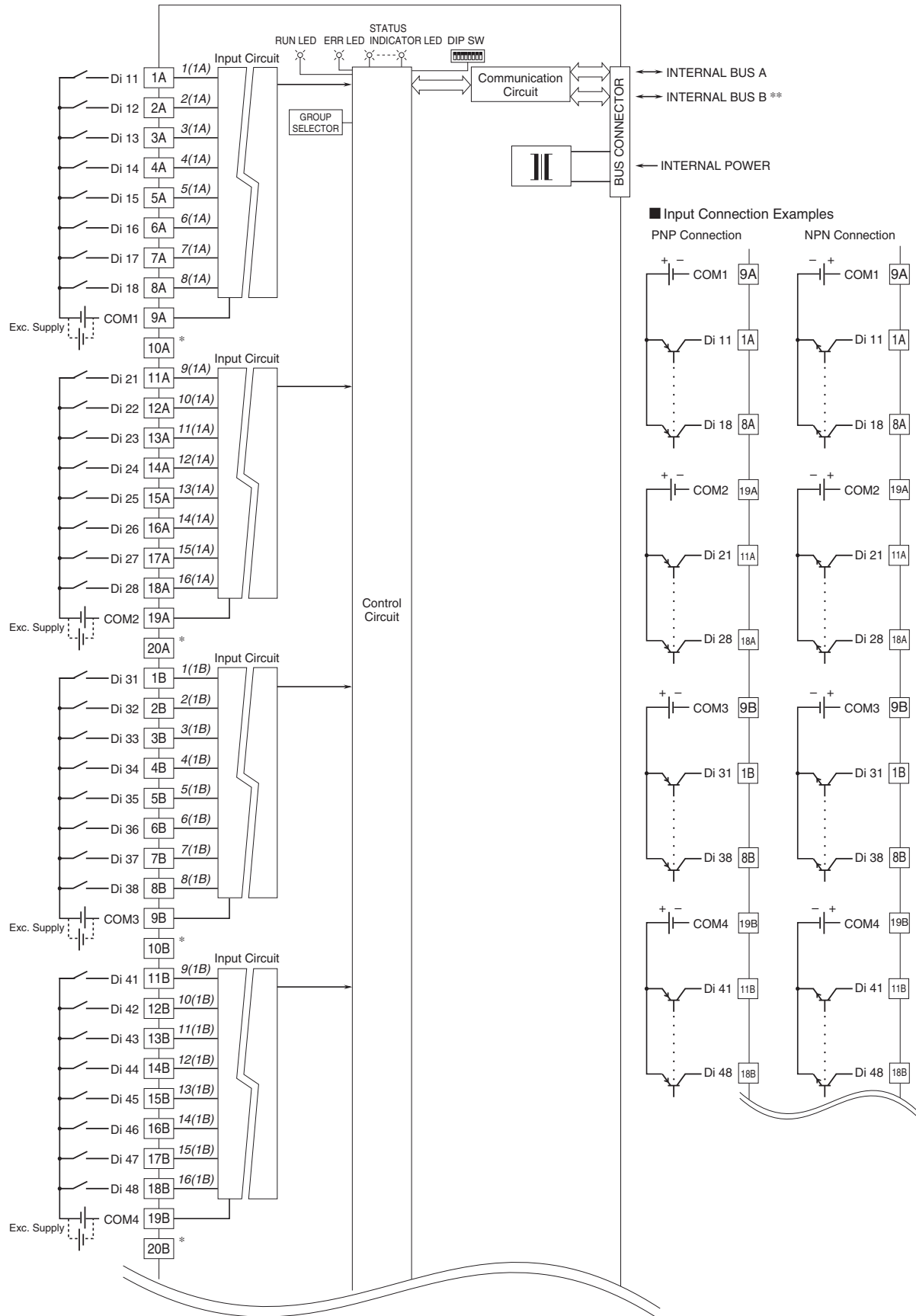


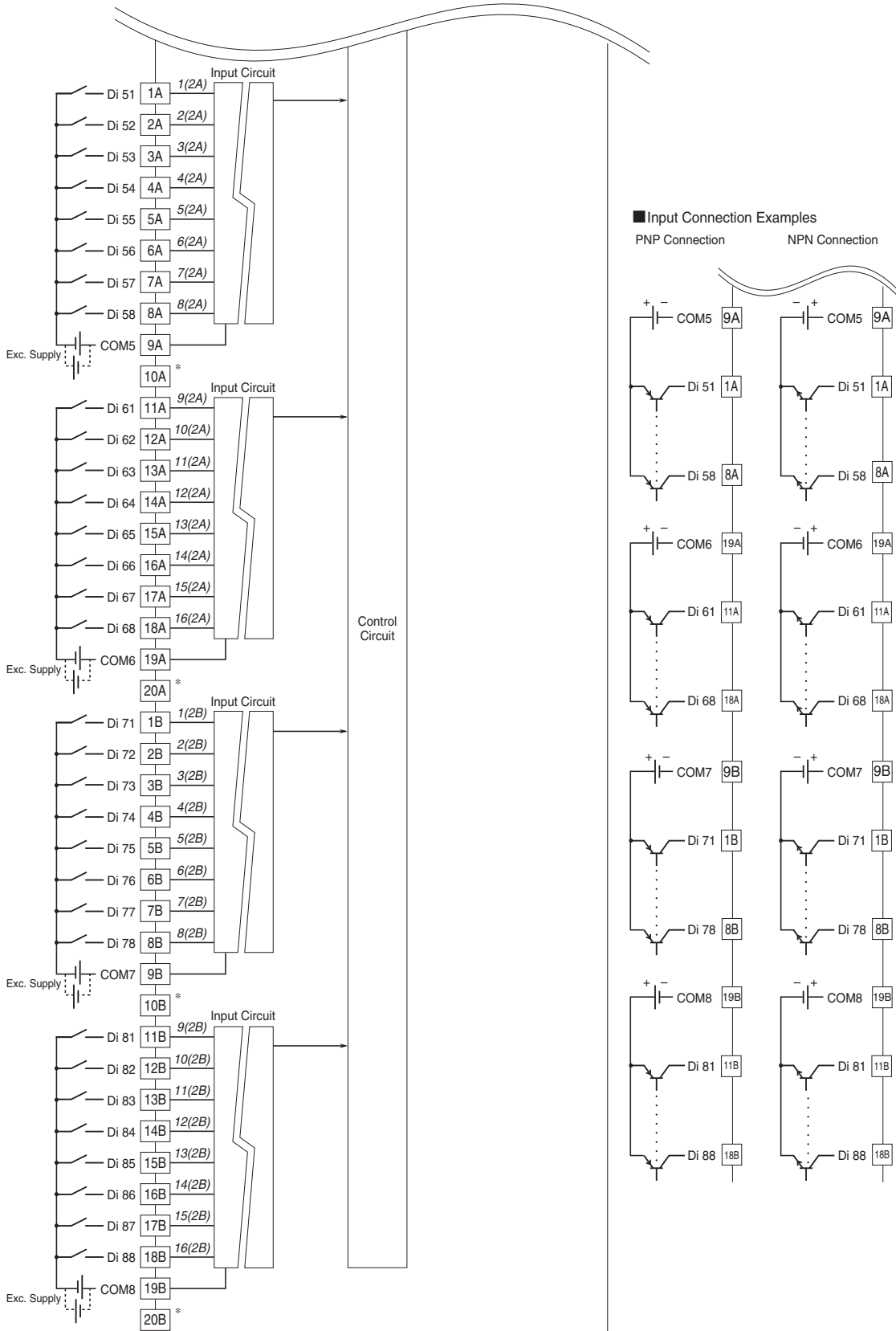
*Status Indicator LEDs show input status by 16-point group specified with Group Selector.
Group Selector position 1 means CN1, while 2 means CN2.
Group Selector position A means Side A pins, while B means Side B pins.

EXTERNAL DIMENSIONS unit: mm (inch)



SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM





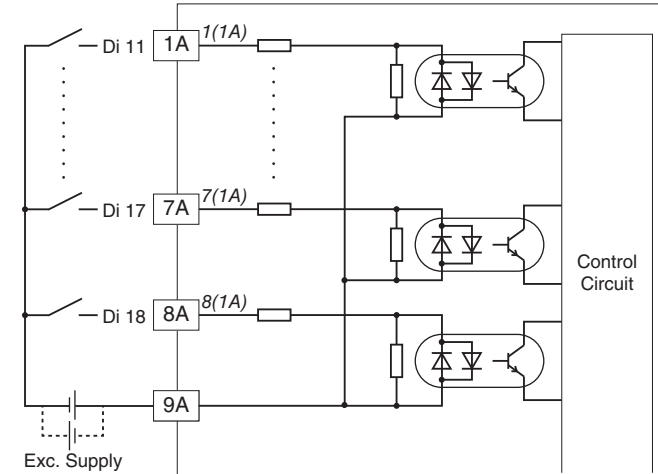
Numbers in italic indicate LED No.s assigned to the front panel LEDs.

Indicator groups 1A, 1B, 2A or 2B selected with the front switches.

* Do not use pins 10A, 20A, 10B, 20B.

** For dual redundant communication.

Input Circuit



INPUT CONNECTOR (40-pin)

■CN1

PIN NO.	ASSIGNMENT	PIN NO.	ASSIGNMENT
1A	Di 11	1B	Di 31
2A	Di 12	2B	Di 32
3A	Di 13	3B	Di 33
4A	Di 14	4B	Di 34
5A	Di 15	5B	Di 35
6A	Di 16	6B	Di 36
7A	Di 17	7B	Di 37
8A	Di 18	8B	Di 38
9A	COM1	9B	COM3
10A	N.C.	10B	N.C.
11A	Di 21	11B	Di 41
12A	Di 22	12B	Di 42
13A	Di 23	13B	Di 43
14A	Di 24	14B	Di 44
15A	Di 25	15B	Di 45
16A	Di 26	16B	Di 46
17A	Di 27	17B	Di 47
18A	Di 28	18B	Di 48
19A	COM2	19B	COM4
20A	N.C.	20B	N.C.

■CN2

PIN NO.	ASSIGNMENT	PIN NO.	ASSIGNMENT
1A	Di 51	1B	Di 71
2A	Di 52	2B	Di 72
3A	Di 53	3B	Di 73
4A	Di 54	4B	Di 74
5A	Di 55	5B	Di 75
6A	Di 56	6B	Di 76
7A	Di 57	7B	Di 77
8A	Di 58	8B	Di 78
9A	COM5	9B	COM7
10A	N.C.	10B	N.C.
11A	Di 61	11B	Di 81
12A	Di 62	12B	Di 82
13A	Di 63	13B	Di 83
14A	Di 64	14B	Di 84
15A	Di 65	15B	Di 85
16A	Di 66	16B	Di 86
17A	Di 67	17B	Di 87
18A	Di 68	18B	Di 88
19A	COM6	19B	COM8
20A	N.C.	20B	N.C.



Specifications are subject to change without notice.