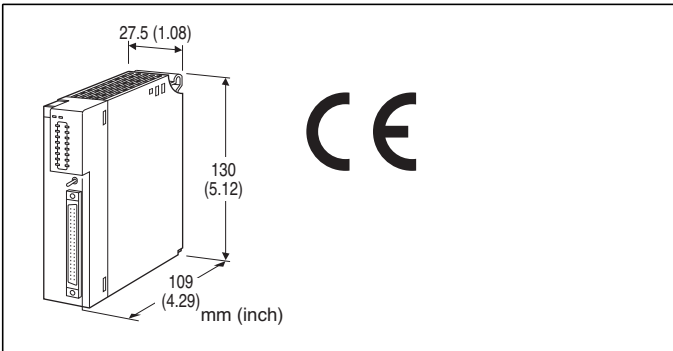


Remote I/O R3 Series

BCD CODE INPUT MODULE

(7-digit BCD)



MODEL: R3-BA32A[1][2]

ORDERING INFORMATION

- Code number: R3-BA32A[1][2]
- Specify a code from below for each [1] and [2]. (e.g. R3-BA32AW/CE/Q)
- Specify the specification for option code /Q (e.g. /C01)

NO. OF CHANNELS

32: BCD code, 7 digits (4 channels/digit)

EXCITATION SUPPLY

A: External excitation, 24 V DC

[1] COMMUNICATION MODE

S: Single
W: Dual

[2] OPTIONS (multiple selections)

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 FCN-365P040-AU)

Internal power: Via the Installation Base (model: R3-BSx)

Isolation: Di 11 thru 28 to Di 31 thru 48 to Di 51 thru 68 to Di 71 thru 88 to internal bus or internal power

Strobe signal control: Selectable with the side DIP switch.

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: Bi-color (red/green) LED;

Green in normal operating conditions.

Input status indicator: Red LED; turns on with the inputs supplied.

Group selector: Switches the status LED channels 1A to 16A or 1B to 16B.

Read rate: 5 / 10 / 50 / 100 msec. selectable with DIP SW

INPUT SPECIFICATIONS

Number of digits: 7 with strobe signal, 8 without it

Data: 2 words

Data description example

Input data: $\frac{1\ 2\ 3\ 4}{4\ \text{high digits}}\ \frac{5\ 6\ 7\ 8}{4\ \text{low digits}}$

Address 1: 5678 (4 low digits)

Address 2: 1234 (4 high digits)

Input signal: 24 V DC, 32 points (4 points/digit)

Input resistance: 6 k Ω

Isolation: Optical isolator

Common: 4 positive/negative commons, per 8 points

Contact detecting: 24 V DC $\pm 10\%$, approx. 4 mA

ON current/resistance: $\geq 2\ \text{mA}$, $\leq 2\ \text{k}\Omega$

OFF current/resistance: $\leq 1\ \text{mA}$, $\geq 18\ \text{k}\Omega$

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: 150 g (0.33 lb)

PERFORMANCE

Data allocation: 4

Current consumption: 90 mA



Insulation resistance: $\geq 100 \text{ M}\Omega$ with 500 V DC
Dielectric strength: 2000 V AC @ 1 minute
 (Di 11 thru 28 to Di 31 thru 48 to Di 51 thru 68 to Di 71 thru 88 to internal bus or internal power)
 2000 V AC @ 1 minute (power input to FG; isolated on the power supply module)

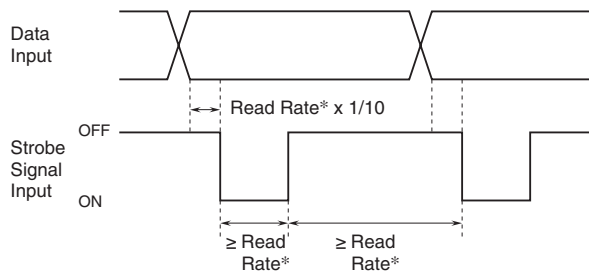
STANDARDS & APPROVALS

CE conformity:
 EMC Directive (2004/108/EC)
 EMI EN 61000-6-4: 2007/A1: 2011
 EMS EN 61000-6-2: 2005

FUNCTIONS

■ STROBE SIGNAL CONTROL
 Controls the timing of reading data. Data is read in when the strobe signal is ON. No data read while it is OFF, even if there is a status change.

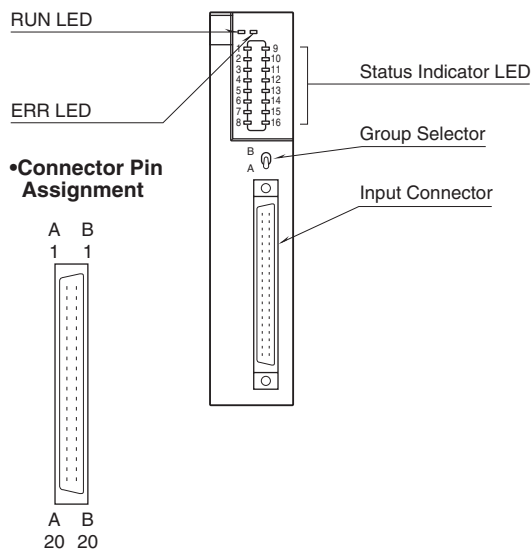
■ STROBE SIGNAL TIMING CHART



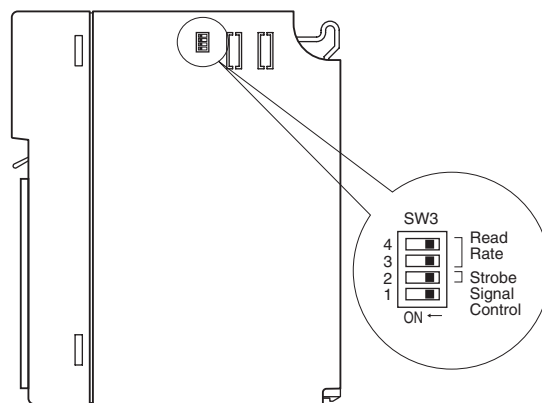
*Read rate is selectable with SW3.

EXTERNAL VIEW

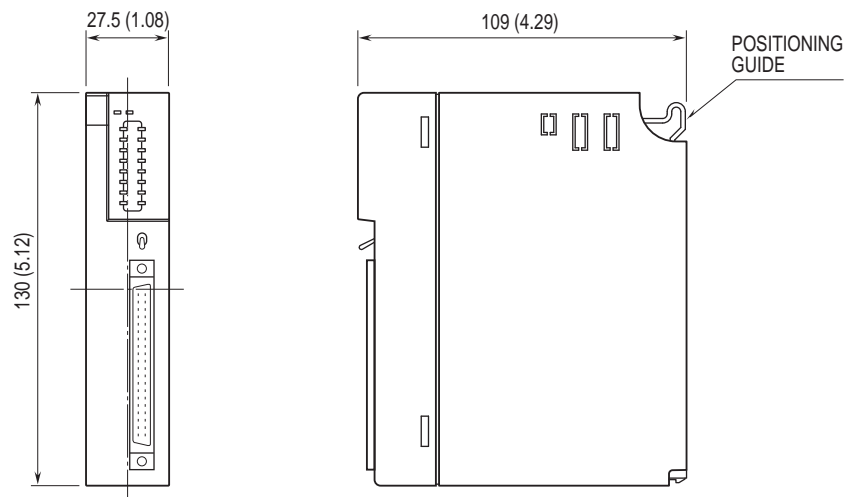
■ FRONT VIEW



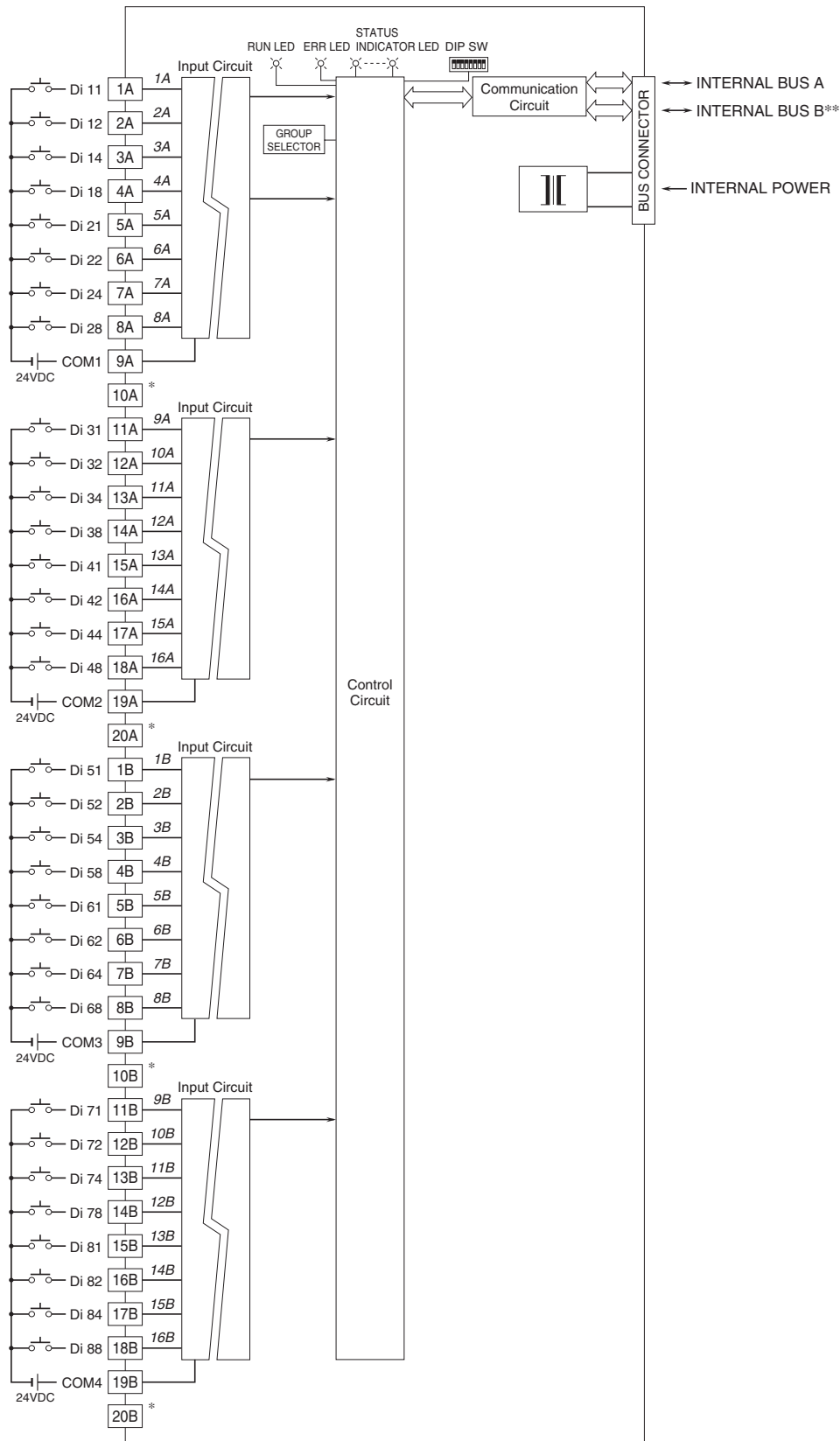
■ SIDE VIEW



DIMENSIONS unit: mm (inch)



SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



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

Two groups A or B selected with the front switch.

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

**For dual redundant communication.



INPUT CONNECTOR (40-pin)

PIN NO.	ASSIGNMENT	PIN NO.	ASSIGNMENT
1A	Di 11	1B	Di 51
2A	Di 12 ($\times 10^0$)	2B	Di 52 ($\times 10^4$)
3A	Di 14	3B	Di 54
4A	Di 18	4B	Di 58
5A	Di 21	5B	Di 61
6A	Di 22 ($\times 10^1$)	6B	Di 62 ($\times 10^5$)
7A	Di 24	7B	Di 64
8A	Di 28	8B	Di 68
9A	COM1	9B	COM3
10A	No Connection	10B	No Connection
11A	Di 31	11B	Di 71
12A	Di 32 ($\times 10^2$)	12B	Di 72 ($\times 10^6$)
13A	Di 34	13B	Di 74
14A	Di 38	14B	Di 78
15A	Di 41	15B	Di 81
16A	Di 42 ($\times 10^3$)	16B	Di 82 ($\times 10^7$)
17A	Di 44	17B	Di 84
18A	Di 48	18B	Di 88 / Strobe
19A	COM2	19B	COM4
20A	No Connection	20B	No Connection



Specifications are subject to change without notice.

