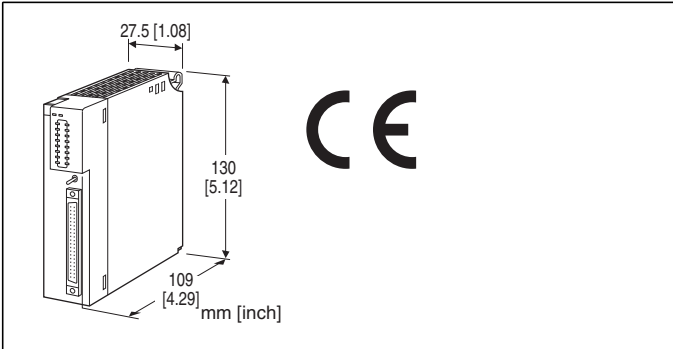


Remote I/O R3 Series

BCD CODE OUTPUT MODULE

(7-digit BCD; open collector)



MODEL: R3-BC32A[1][2]

ORDERING INFORMATION

- Code number: R3-BC32A[1][2]
Specify a code from below for each [1] and [2].
(e.g. R3-BC32AW/CE/Q)
- Specify the specification for option code /Q
(e.g. /C01)

NO. OF CHANNELS

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

OUTPUT

A: Open collector

[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)

Output: 40-pin connector (OTAX N365P040AU
(Fujitsu FCN-365P040-AU...discontinued))

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

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

Output hold setting: Setting for communication error with
side DIP SW

Strobe signal control: Selectable with the side DIP switch.

Strobe signal output time: 5 ms, 10 ms, 50 ms and 100 ms
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: Green LED turns on in normal operating
conditions.

Output status indicator: Red LED; turns on with the output
ON.

Group selector: Switches the output status indicator

A. 1 - 8: Do11 - Do28

9 - 16: Do31 - Do48

B. 1 - 8: Do51 - Do68

9 - 16: Do71 - Do88

OUTPUT SPECIFICATIONS

Output signal: Open collector, 32 points (4 points/digit)

Isolation: Optical isolator

Common: All 4 points (8 terminals)

Common current: Max. 1 A per common

External excitation: 24 V DC $\pm 10\%$, approx. 0.04 A

Rated load voltage: 24 V DC $\pm 10\%$

Maximum load current: 0.1 A per point

Maximum rush current: 0.5 A for max. 10 msec.

Maximum leak current at OFF: 0.1 mA

Maximum voltage drop at ON: 0.1 V DC typical; 1.2 V DC
max.

(When driving an inductive load, connect a diode in parallel
with the load.)

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

Data: 2 words

Data description example

Input data: 1 2 3 4 5 6 7 8
 high digits low digits

Address 1: 5678 (4 low digits)

Address 2: 1234 (4 high digits)

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: 150 mA
Response time: ≤ 2 msec.
Insulation resistance: ≥ 100 MΩ with 500 V DC
Dielectric strength:
 500 V AC @ 1 minute
 (Do 11 thru 28 to Do 31 thru 48 to Do 51 thru 68 to Do 71 thru 88)
 2000 V AC @ 1 minute
 (Output 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

FUNCTIONS

■ OUTPUT HOLD or OUTPUT OFF

In normal conditions, the module outputs the signal from the preferred bus A.

When an error is detected, the output is switched to the data from the bus B.

- **Output Hold**

If both are in error, the module holds the signal and stands by until one of the communications recovers.

- **Output OFF**

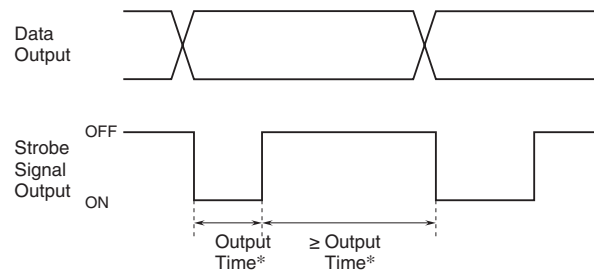
If both are in error, the module outputs OFF signals and stands by until one of the communications recovers.

At the startup, it outputs OFF until the communication is established and normal data is received.

■ STROBE SIGNAL CONTROL

Controls the timing of reading data. Strobe signal is output at every data output. Strobe signal cannot be supplied independently without data output.

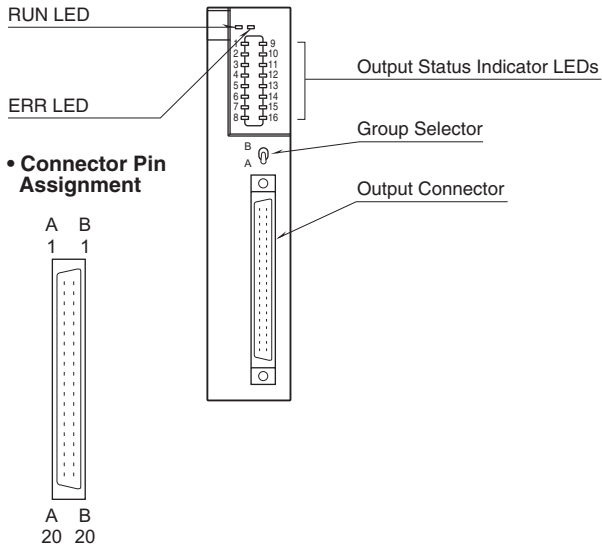
■ STROBE SIGNAL TIMING CHART



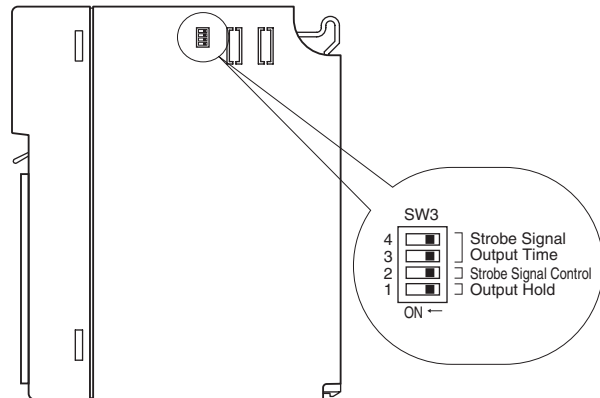
*Strobe signal output time is selectable with SW3.

EXTERNAL VIEW

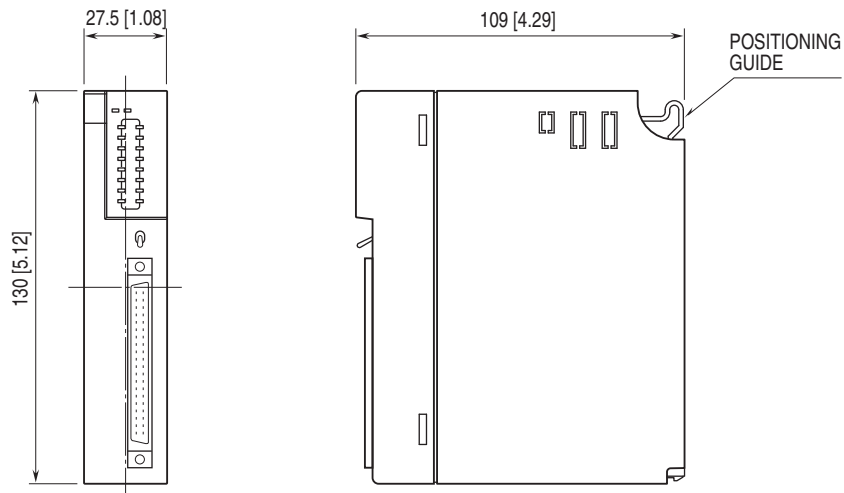
FRONT VIEW



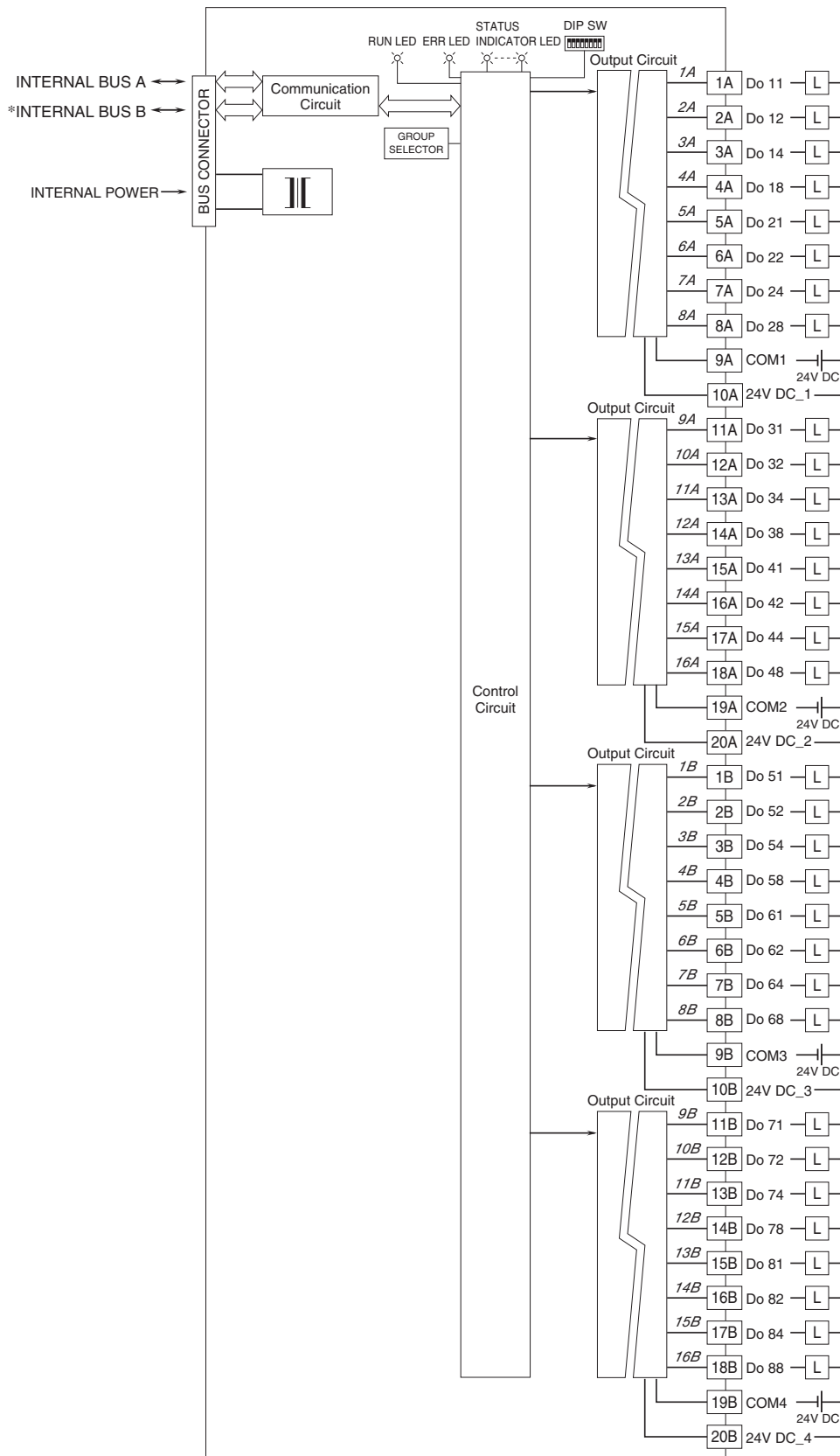
SIDE VIEW



EXTERNAL DIMENSIONS unit: mm [inch]



SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



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

Two groups selected A or B with the front switch.

*For dual redundant communication.

OUTPUT CONNECTOR (40-pin)

PIN NO.	ASSIGNMENT	PIN NO.	ASSIGNMENT
1A	Do 11	1B	Do 51
2A	Do 12 ($\times 10^0$)	2B	Do 52 ($\times 10^4$)
3A	Do 14	3B	Do 54
4A	Do 18	4B	Do 58
5A	Do 21	5B	Do 61
6A	Do 22 ($\times 10^1$)	6B	Do 62 ($\times 10^5$)
7A	Do 24	7B	Do 64
8A	Do 28	8B	Do 68
9A	COM1	9B	COM3
10A	24V DC_1	10B	24V DC_3
11A	Do 31	11B	Do 71
12A	Do 32 ($\times 10^2$)	12B	Do 72 ($\times 10^6$)
13A	Do 34	13B	Do 74
14A	Do 38	14B	Do 78
15A	Do 41	15B	Do 81
16A	Do 42 ($\times 10^3$)	16B	Do 82 ($\times 10^7$)
17A	Do 44	17B	Do 84
18A	Do 48	18B	Do 88/ Strobe
19A	COM2	19B	COM4
20A	24V DC_2	20B	24V DC_4



Specifications are subject to change without notice.