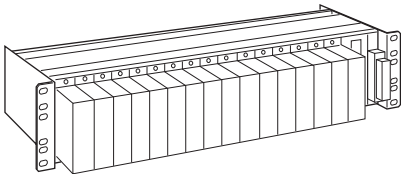


## High-density Signal Conditioners 10-RACK

### STANDARD RACK

#### Functions & Features

- Standard 19" rack for 10-RACK signal conditioners
- 4 - 16 modules mountable
- Line power access at the terminal card, supplied via the rear rack bus
- Direct interface to various DCS with the rack side connector



### MODEL: 10BX-[1][2]

#### ORDERING INFORMATION

- Code number: 10BX-[1][2]
- Specify a code from below for each of [1] and [2].  
(e.g. 10BX-1/W/Q)
- Specify the specification for option code /Q  
(e.g. /C01)

#### [1] CAPACITY & TERMINAL CARD FUNCTION

- 1:** 16 ch.; 24 V DC powered
  - 2-K:** 15 ch.; 85 - 132 V AC powered
  - 2-L:** 15 ch.; 170 - 264 V AC powered
  - 3:** 15 ch.; 24 V DC & 85 - 132 V AC powered  
(two independent power sources)
  - 4:** 16 ch.; 24 V DC (Fujitsu FCN type I/O connector)
  - 7:** 16 ch.; 24 V DC (Yokogawa VMx / PM1 card use)
  - 8:** 16 ch.; 24 V DC (Omron 3G8B2-NA000 / NA001 use)
  - 10:** 16 ch.; 24 V DC (Nippon Shokubai DCS use)
  - 11:** 16 ch.; 24 V DC (Azbil J-HAM50 / J-HMM00 module use)
  - 12:** 16 ch.; 24 V DC (Azbil J-AOM10 module use)
  - 13:** 8 ch.; 24 V DC (Azbil J-PIM00 module use)
  - A:** 4 ch.; 24 V DC powered
  - B:** 4 ch.; 85 - 132 V AC powered
  - C:** 9 ch.; 24 V DC powered
  - D-K:** 8 ch.; 85 - 132 V AC powered
  - D-L:** 8 ch.; 170 - 264 V AC powered
- We guarantee the connecting section.

#### [2] OPTIONS (multiple selections)

Mounting Bracket

**blank:** Rack mounting, standard

**/W:** Surface mounting

Other Options

**blank:** none

**/Q:** Option other than the above (specify the specification)

#### SPECIFICATIONS OF OPTION: Q

COATING (For the detail, refer to our web site.)

Power supply and signal conditioner side of the main PWB are not coated.

**/C01:** Silicone coating

**/C02:** Polyurethane coating

**/C03:** Rubber coating

#### RELATED PRODUCTS

- Blank filler plate (model: P-101)
- Connector terminal block (model: CNT)
- Special cable with 40-pin connector (model: FCN)

#### GENERAL SPECIFICATIONS

**Construction:** Metal plates assembly

**Coating:** Zn-Cr (black), aluminized steel

**Connection**

**Power input:** M4 screw terminals (torque 0.8 N·m)

**Screw terminal:** Nickel-plated brass

**Isolation:** I/O connector to power to FG

#### INSTALLATION

**Power consumption**

• **AC:** 85 - 132 V or 170 - 264 V, 47 - 63 Hz, 130 VA minimum

• **DC:** Operating voltage range 24 V DC  $\pm 10\%$ , 2.5 A minimum (ripple 10 % p-p max.)

**Operating temperature:** -5 to +55°C (23 to 131°F) 0 to 50°C (32 to 122°F) for AC power

**Operating humidity:** 30 to 90 %RH (non-condensing)

**Mounting**

**15, 16-position rack, 10BX-13:** JIS or EIA standard rack or surface

**4, 8, 9-position rack:** Angle bracket or surface

**Weight**

**10BX-1, 4, 7, 8, 10, 11, 12, 13, D:** 1.9 kg (4.2 lb)

**10BX-2, 3:** 2.3 kg (5.1 lb)

**10BX-A:** 1.1 kg (2.4 lb)

**10BX-B:** 1.3 kg (2.9 lb)

**10BX-C:** 1.5 kg (3.3 lb)

## PERFORMANCE

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

Dielectric strength:

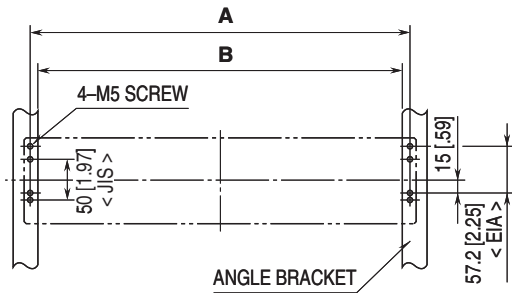
500 V AC @ 1 minute (I/O connector to power)

1500 V AC @ 1 minute (power to FG)

500 V AC @ 1 minute (1000 V for 24 V DC) (I/O connector to

FG)

## MOUNTING REQUIREMENTS

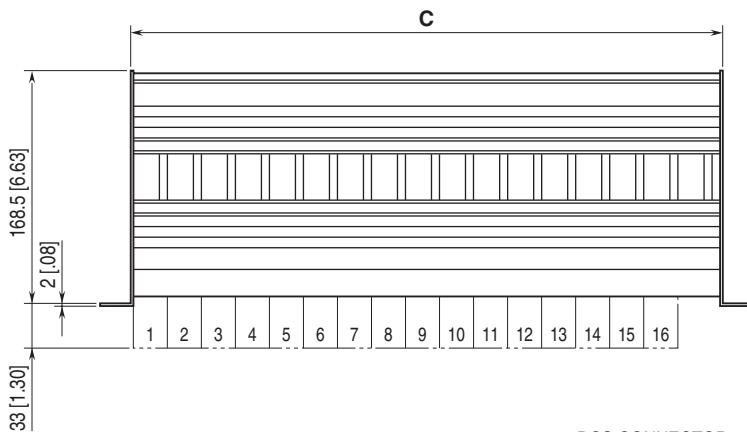


Observe appropriate wiring space under the rack.

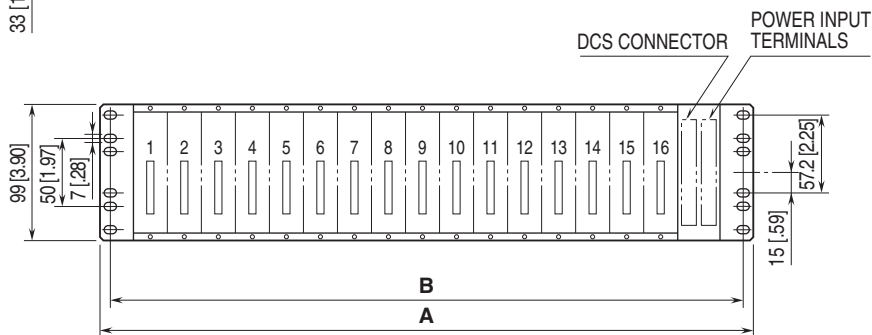
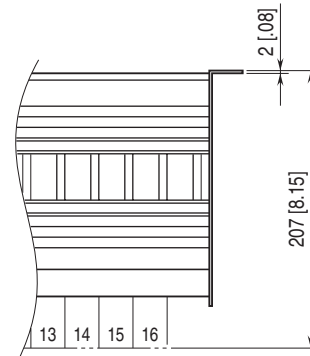
MODEL \ SIZE	A	B
10BX-1, 2, 3, 4, 7, 8 10, 11, 12, 13	465 [18.31]	450 [17.72]
10BX-A, B	165 [6.50]	140 [5.51]
10BX-C, D	290 [11.42]	265 [10.43]

## DIMENSIONS unit: mm (inch)

### ■ RACK



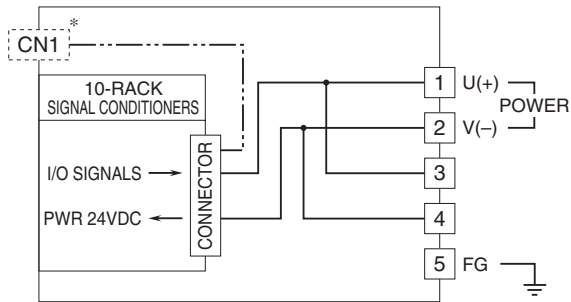
### ■ SURFACE



MODEL \ SIZE	A	B	C
10BX-1, 2, 3, 4, 7, 8 10, 11, 12, 13	480 [18.90]	465 [18.31]	435 [17.13]
10BX-A, B	180 [7.09]	165 [6.50]	135 [5.31]
10BX-C, D	305 [12.01]	290 [11.42]	260 [10.24]

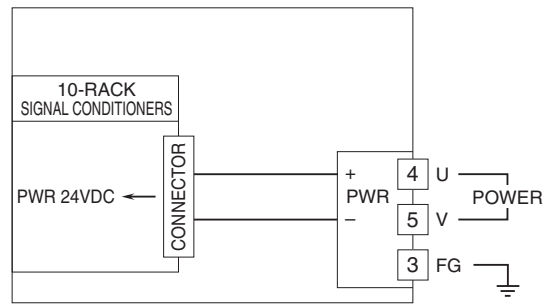
## SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM

### ■ 10BX-1, 4, 7, 8, 10, A, B, C

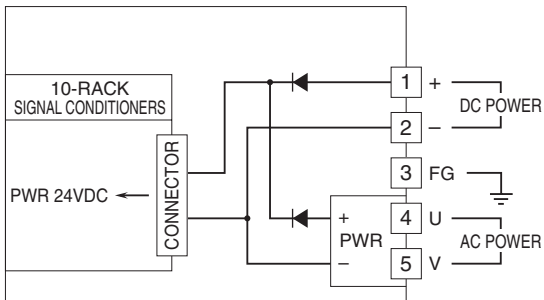


\*The connector is deleted with some models.

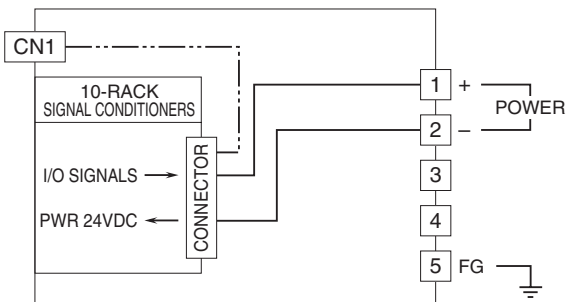
### ■ 10BX-2, D



### ■ 10BX-3



### ■ 10BX-11, 12, 13



## I/O CONNECTOR PIN ASSIGNMENT

### Fujitsu FCN type I/O connector

#### •Connector Pin Assignment

**CN1:** OTAX N365P040AU  
(Fujitsu FCN-365P040-AU...discontinued)

PIN NO.	ASSIGNMENT	PIN NO.	ASSIGNMENT
A 1	ch. 1 +	B 1	ch. 1 -
A 2	ch. 2 +	B 2	ch. 2 -
A 3	ch. 3 +	B 3	ch. 3 -
A 4	ch. 4 +	B 4	ch. 4 -
A 5	ch. 5 +	B 5	ch. 5 -
A 6	ch. 6 +	B 6	ch. 6 -
A 7	ch. 7 +	B 7	ch. 7 -
A 8	ch. 8 +	B 8	ch. 8 -
A 9	ch. 9 +	B 9	ch. 9 -
A10	ch.10 +	B10	ch.10 -
A11	ch.11 +	B11	ch.11 -
A12	ch.12 +	B12	ch.12 -
A13	ch.13 +	B13	ch.13 -
A14	ch.14 +	B14	ch.14 -
A15	ch.15 +	B15	ch.15 -
A16	ch.16 +	B16	ch.16 -

A17 - A20, B17 - B20: Unused

### Yokogawa DCS VMx / PM1 card use

#### •Location

**I/O connector:** PS-40PE-D4LT1-PN1

**CN1:** VMx / PM1 card use (uses KS2 cable)

RACK LOCATION NO.															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
VM1/PM1/VM4 CARD INPUT or OUTPUT CN1															
1 2 3 4 5 6 7 8 VM2 CARD INPUT NO. CN1								1 2 3 4 5 6 7 8 VM2 CARD OUTPUT NO. CN1							

VM1: analog input 16 points

VM2: analog input 8 points / analog output 8 points

VM4: analog output 16 points

PM1: pulse input 16 points

### Omron 3G8B2-NA000 / NA001 use

#### •Location

**CN1:** OTAX N365P024AU  
(Fujitsu FCN-365P024-AU...discontinued)

RACK LOCATION NO.															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 OMRON 3G8B2-NA000 / NA001															

#### •Connector Pin Assignment

PIN NO.	ASSIGNMENT	PIN NO.	ASSIGNMENT
A 1	ch.1 - 8 (-)	B 1	ch.9 - 16 (-)
A 2	ch.1 - 8 (-)	B 2	ch.9 - 16 (-)
A 3	NC	B 3	ch.9 - 16 (-)
A 4	ch.1 - 8 (-)	B 4	ch.9 - 16 (-)
A 5	ch. 8 +	B 5	ch.16 +
A 6	ch. 7 +	B 6	ch.15 +
A 7	ch. 6 +	B 7	ch.14 +
A 8	ch. 5 +	B 8	ch.13 +
A 9	ch. 4 +	B 9	ch.12 +
A10	ch. 3 +	B10	ch.11 +
A11	ch. 2 +	B11	ch.10 +
A12	ch. 1 +	B12	ch. 9 +

### Nippon Shokubai DCS connector

#### •Location

**CN1:** HIF3F-34PA-2.54DS

RACK LOCATION NO.															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 NIPPON SHOKUBAI DCS LOCATION NO.															

#### •Connector Pin Assignment

PIN NO.	ASSIGNMENT	PIN NO.	ASSIGNMENT
1	No Connection	19	ch. 8 -
2	No Connection	20	ch. 8 +
3	ch.16 -	21	ch. 7 -
4	ch.16 +	22	ch. 7 +
5	ch.15 -	23	ch. 6 -
6	ch.15 +	24	ch. 6 +
7	ch.14 -	25	ch. 5 -
8	ch.14 +	26	ch. 5 +
9	ch.13 -	27	ch. 4 -
10	ch.13 +	28	ch. 4 +
11	ch.12 -	29	ch. 3 -
12	ch.12 +	30	ch. 3 +
13	ch.11 -	31	ch. 2 -
14	ch.11 +	32	ch. 2 +
15	ch.10 -	33	ch. 1 -
16	ch.10 +	34	ch. 1 +
17	ch. 9 -		
18	ch. 9 +		

**Azbil J-HAM50 / J-HMM00 module use**

I/O cable: J-RSL / J-RSK  
 J-RRL / J-RRK

•Location

Input connector: 57GE-40500-751

CN1: J-HAM50 / J-HMM00 module use

RACK LOCATION NO.															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
AZBIL DCS AI CONNECTOR															

**Azbil J-AOM10 module use**

I/O cable: J-RSL / J-RSK  
 J-RRL / J-RRK

•Location

Output connector: 57GE-40500-751

CN1: J-AOM10 module use

RACK LOCATION NO.															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
AZBIL DCS AO CONNECTOR															

**Azbil J-PIM00 module use**

I/O cable: J-RSL / J-RSK  
 J-RRL / J-RRK

•Location

Output connector: 57GE-40500-751

CN1: J-PIM00 module use

RACK LOCATION NO.															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	2	3	4	5	6	7	8								
AZBIL DCS PI CONNECTOR															

The internal power supply is used for excitation of the pulse input module.



Specifications are subject to change without notice.