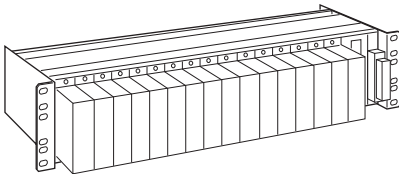


High-density Signal Conditioners 10-RACK

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 [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
- M-System guarantees 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 M-System's 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:

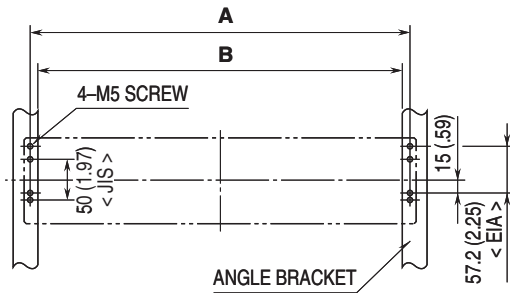
500 V AC @ 1 minute (I/O connector to power)

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

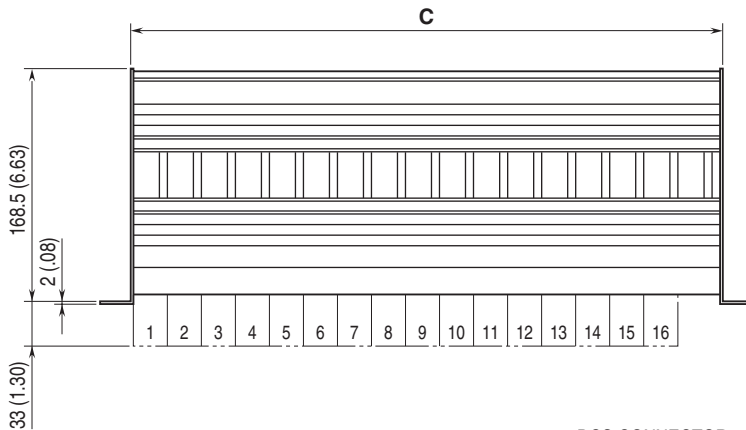


Observe appropriate wiring space under the rack.

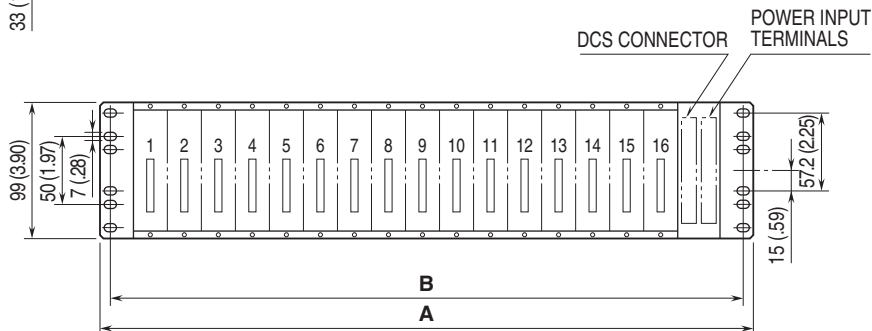
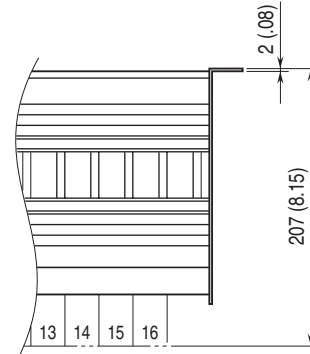
MODEL \ SIZE	A	B
10BX-1, 2, 3, 4, 7, 8 10, 11, 12, 13	465 (18.31)	450 (17.72)
10BX-A, B	165 (6.50)	140 (5.51)
10BX-C, D	290 (11.42)	265 (10.43)

DIMENSIONS unit: mm (inch)

■ RACK



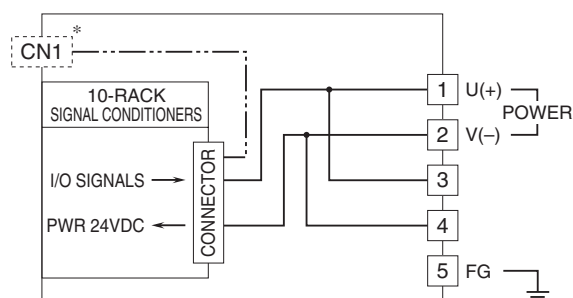
■ SURFACE



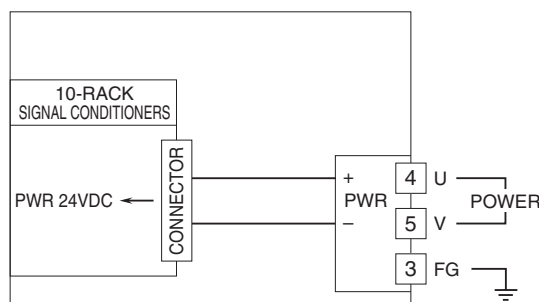
MODEL \ SIZE	A	B	C
10BX-1, 2, 3, 4, 7, 8 10, 11, 12, 13	480 (18.90)	465 (18.31)	435 (17.13)
10BX-A, B	180 (7.09)	165 (6.50)	135 (5.31)
10BX-C, D	305 (12.01)	290 (11.42)	260 (10.24)

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM

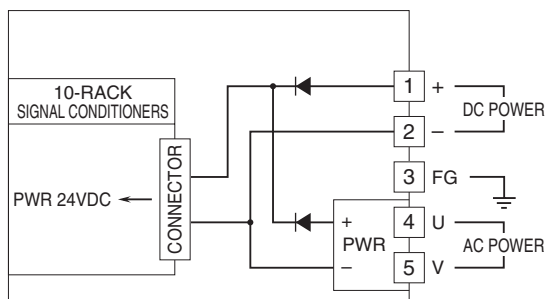
■ 10BX-1, 4, 7, 8, 10, A, B, C



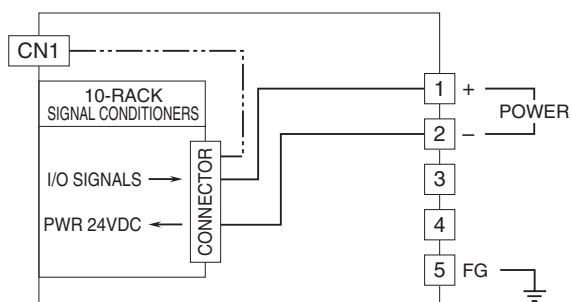
■ 10BX-2, D



■ 10BX-3



■ 10BX-11, 12, 13



I/O CONNECTOR PIN ASSIGNMENT

Fujitsu FCN type I/O connector

•Connector Pin Assignment

CN1: Fujitsu FCN-365P040-AU

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
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
VM1/PM1/VM4 CARD INPUT or OUTPUT															
CN1								CN1							
1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
VM2 CARD INPUT NO.								VM2 CARD OUTPUT NO.							
CN1								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:** Fujitsu FCN-365P024-AU

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.