General Specifications

Model VJA4
Distributor (Non-isolated)
(1-channel and 2-channel Types)

NTXUL

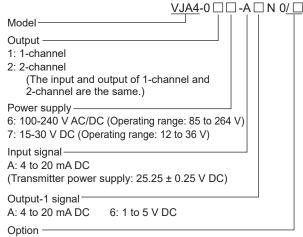
GS 77J01A04-01E

■ General

This plug-in type distributor is used in combination with 2-wire type transmitters and converts 4 to 20 mA DC signals into DC current or DC voltage signals. The input/output signal is non-isolated.

- 1-channel or 2-channel type can be selected.
- Supports BARD-800.

■ Model and Suffix Codes



/SN: No socket (with socket if not specified)

/C0: Coating *1

/FB: Fuse bypass *1

*1 When option code /C0 or /FB is specified, the conformity to the safety and EMC standards is excluded. CE marking is not applicable.

Note 1: "/C0" option: Polyurethane coating. The "/C0" option does not guaranteed the coating effect though it is expected that the corrosion resistance for electric circuit is reinforced. And it is not able to submit coating test data.

Note 2: "/FB" option: The primary power supply fuse is deleted, short circuit and ship it.

Ordering Information

• Model and Suffix Codes: e.g. VJA4-026-AAN0

■ Input/Output Specifications

Input signal: 4 to 20 mÅ DC from 2-wire transmitter, 1 point

Input resistance: 250 Ω (for 1 to 5 V DC output) Transmitter power supply: 25 to 25.5 V DC (COM standard) (provided with a current limiter to keep the current between 25 and 35 mA)

Allowable conductor resistance:

RL \leq (20 - transmitter minimum operating voltage) V/0.02 A (Ω)

Maximum allowable input current: 40 mA DC or less Output signal: 4 to 20 mA DC or 1 to 5 V DC



Allowable load resistance:

For 4 to 20 mA DC output:

Up to [(24 V – Transmitter's minimum operating voltage)(*1) /20 mA] – Input wiring resistance

*1: 24 V = Transmitter's minimum operating voltage – Internal diode(Vf)

For 1 to 5 V DC output: 250 kΩ or more

■ Standard Performance

Accuracy rating: ±0.1% of span (for voltage output)
Effect of power supply voltage fluctuation: Within the
accuracy range of span for power supply
voltage fluctuation.

Effect of ambient temperature change: ±0.15% of span for change of 10°C (for voltage output)

■ Safety and EMC Standards

CE:

EMC directive

EN 61326-1 Class A Table 2 *1 compliance

EN 61326-2-3 compliance

EN 61000-3-2 compliance

EN 61000-3-3 compliance

EN 55011 Class A Group 1 compliance

Low voltage directive:

EN 61010-1, EN 61010-2-030

Overvoltage category II *2, Pollution degree 2 *3, Measurement category O (other)

CSA: CAN/CSA C22.2 No. 61010-1

CAN/CSA C22.2 No. 61010-2-030

Overvoltage category II *2, Pollution degree 2 *3, Measurement category O (other)

UL: UL 61010-1 (CSA NRTL/C)

UL 61010-2-030 (CSA NRTL/C)

Overvoltage category II *2, Pollution degree 2 *3,

Measurement category O (other)

RCM: EN 55011 Class A Group 1 compliance

KC: Electromagnetic wave interference prevention standard, electromagnetic wave protection standard compliance

*1 The instrument continues to operate at a measurement accuracy of within ±20% of the range during testing.



- Overvoltage category II: Describes a number which defines a transient overvoltage condition. Implies the regulation for impulse withstand voltage. "II" applies to electrical equipment which is supplied from the fixed installation like a distribution board.
- Pollution degree 2: Describes the degree to which a solid, liquid, or gas which deteriorates dielectric strength or surface resistivity is adhering. "2" applies to normal indoor atmosphere. Normally, only non-conductive pollution occurs.

However, if optional code /C0 or /FB is specified, the conformity to the safety and EMC standards is excluded.

Environment Standard

EU RoHS directive: EN IEC 63000

(However, when option code /C0 or /FB is specified, CE marking is not applicable because the product does not comply with the Safety and EMC standards.)

Power Supply and Isolation

Power supply rated voltage:

100-240 V AC/DC ≂ 50/60 Hz or

15-30 V DC ...

Power supply input voltage:

100-240 V AC/DC = (-15, +10%) 50/60 Hz or 15-30 V DC ... (±20%)

Power consumption:

2.2 W at 24 V DC; 2.3 W at 110 V DC; 3.8 VA at 100 V AC; 4.7 VA at 200 V AC

Insulation resistance:

 $100~\text{M}\Omega$ minimum at 500~V DC between channel 1, channel 2, power supply and grounding terminals mutually

Withstand voltage:

2000 V AC for one minute between (channel 1 and channel 2), power supply and grounding terminals mutually; 1000 V AC for one minute between channel 1 and channel 2

■ Environmental Conditions

Temperature: -10 to 55°C (45°C or less for side-byside close installation*)

If the previous model (style S3.xx earlier) is installed together, the ambient temperature is 0 to 40°C.

Humidity: 5 to 90% RH (no condensation) Ambient Condition: Avoid installation in such

environments as corrosive gas like sulfide hydrogen, dust, sea breeze and direct sunliaht.

Magnetic field: 400 A/m or less.

Continuous vibration (at 5 to 9 Hz) Half amplitude of 3 mm or less (at 9 to 150 Hz) 4.9 m/s² or less, 1 oct/min for 90 minutes each in the 3-axis directions.

Impact: 98 m/s² or less, 11 msec, 3-axis 3 times each in 6 directions.

2000 m or less. Altitude: Installation location: Indoors

Warm-up time: At least 30 minutes after power on.

■ Transport and Storage Conditions

Ambient temperature: -25 to 70°C Temperature change rate: 20°C per hour or less Ambient humidity: 5 to 95%RH (no condensation)

Mounting and Appearance

Construction: Compact plug-in type Material: Modified polyphenylene oxide (casing) Mounting method: Wall, DIN rail or dedicated VJ

mounting base (VJCE) mounting Connection method: M3 screw terminals

External dimensions:

76 (H) × 29.5 (W) × 124.5 (D) mm

(including a socket)

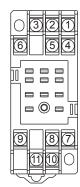
Main unit: 100 g or less Weight:

Socket: 50 g or less

Accessories

Tag number label: 1 sheet

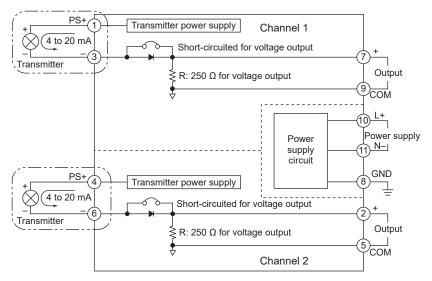
■ Terminal Arrangement



1	Input (PS+) for channel 1
2	Output (+) for channel 2
3	Input (-) for channel 1
4	Input (PS+) for channel 2
5	COM for channel 2
6	Input (-) for channel 2
7	Output (+) for channel 1
8	GND
9	COM for channel 1
10	Supply (L+)
11	Supply (N-)
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Do not use channel 2 for the 1-channel type.

■ Block Diagram



■ External Dimensions

