

# General Specifications

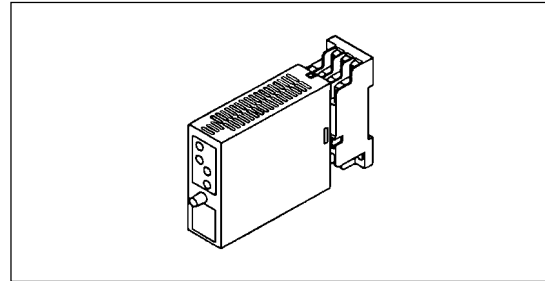
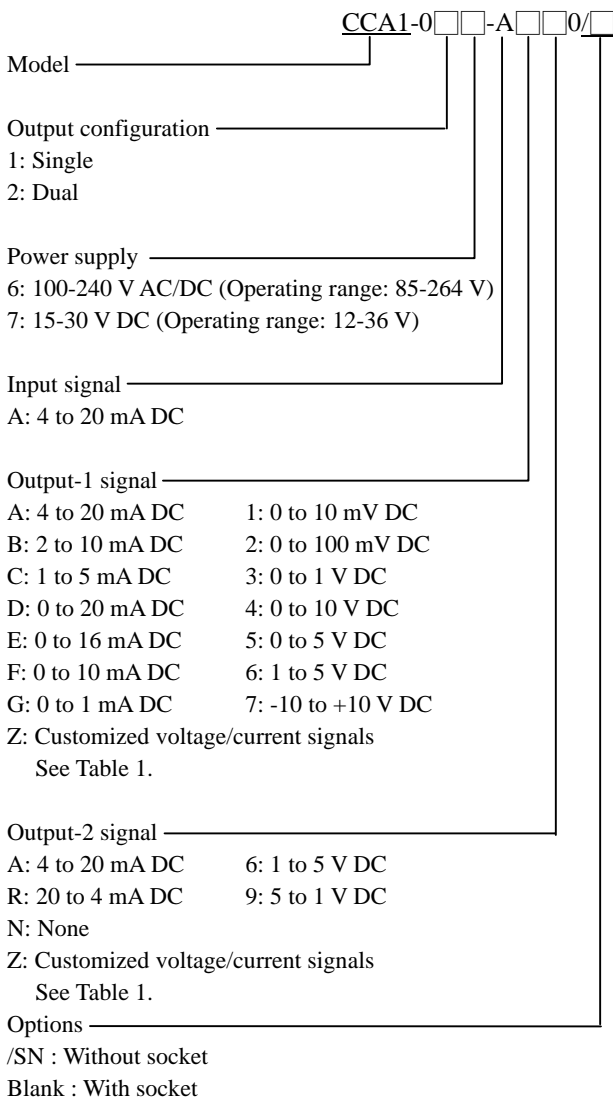
## Model CCA1 Distributor (Isolated Single-output and Isolated Dual-output Types)

SMPSC

### ◆ General

The CCA1 is a compact, plug-in type distributor that is used in combination with a two-wire type transmitter to convert the transmitter's 4 to 20mA DC signals into isolated DC current or DC voltage signals.

### ◆ Model and Suffix Codes



### ◆ Input/Output Specifications

Input single: 4 to 20 mA DC signal from two-wire type transmitter

Input resistance: 250

Transmitter power supply: 24±0.5 V DC

Allowable conductor resistance (RL): Up to [(20-transmitter's minimum operating voltage)/0.02A]Ω

Maximum allowable input current: 40mA DC

Output signal: DC voltage or DC current signal

Allowable load resistance:

Output-1 Range	Allowable Load Resistance	Output-1 Range	Allowable Load Resistance
4 to 20 mA DC	750Ω max.	0 to 10 mV DC	250KΩ min.
2 to 10 mA DC	1500Ω max.	0 to 100 mVDC	250KΩ min.
1 to 5 mA DC	3000Ω max.	0 to 1 V DC	2KΩ min.
0 to 20 mA DC	750Ω max.	0 to 10 V DC	10KΩ min.
0 to 16 mA DC	900Ω max.	0 to 5 V DC	2KΩ min.
0 to 10 mA DC	1500Ω max.	1 to 5 V DC	2KΩ min.
0 to 1 mA DC	15KΩ max.	-10 to +10V DC	10KΩ min.
Output-2 Range	Allowable Load Resistance	Output-2 Range	Allowable Load Resistance
4 to 20 mA DC	350Ω max.	1 to 5 V DC	2KΩ min.
20 to 4 mA DC	350Ω max.	5 to 1 V DC	2KΩ min.

Zero adjustment: -5 to +5%

Span adjustment: 95 to 105%

### ◆ Standard Performance

Accuracy rating: ±0.1% of span; accuracy is not guaranteed for output levels less than 0.5% of the span of a 0 to X mA output range type.

Response speed: 30ms, 63% response (10 to 90%)

Effects of power line regulation: Up to ±0.1% of span for the regulation within allowable range of each supply voltage range.

Effects of ambient temperature variations: Up to ±0.2% of span per 10

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### ◆Conformance to EMC Standards

Applicable EMC standard: EN61326

CE-certified models mean those which are CE certified on condition that they be operated over a supply voltage range of 15~30 V DC ( $\pm 20\%$ ) only.

### ◆Power Supply and Isolation

Supply rated voltage range: 100-240 V AC/DC 50/60Hz or 15-30 V DC

Supply input voltage range: 100-240 V AC/DC (-15, +10%) 50/60Hz or 15-30 V DC ( $\pm 20\%$ )

◆Power consumption: 4W at 24V DC; 4W at 120V DC; 8VA at 115V AC; 10VA at 230 V AC

Insulation resistance: 100 M $\Omega$  minimum at 500V DC between input, output-1,output-2,power supply and grounding terminals mutually

Withstanding voltage: 2000 V AC for one minute between input, (output-1 and output-2), power supply and grounding terminals mutually; 1000 V AC for one minute between output-1 and output-2 terminals

### ◆Environmental Conditions

Operating temperature range: 0 to 50

Operating humidity range: 5 to 90% RH (no condensation)

Operating conditions: Avoid installation in such environments as corrosive gas like sulfide hydrogen, dust, sea breeze and direct sunlight.

Installation altitude: 2000 m or less above sea level.

### ◆Mounting and Appearance

Material: Modified polyphenylene oxide (casing)

Mounting method: Wall or DIN rail

Connection method: M3 screw terminals

External dimensions: 76(H) $\times$ 29.5(W) $\times$ 124.5(D) mm (including a socket)

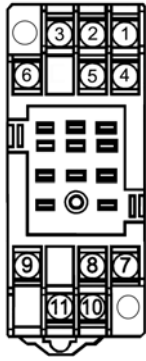
Weight: Approx. 120g (main unit), approx. 51g (socket)

### ◆Customized Signal Specifications

Table 1. Manufacturable Ranges

	Current Signal	Voltage Signal
Output range (DC)	0 to 24 mA	-10 to +10 V
Span (DC)	1 to 24 mA	10mV to 20V
Zero elevation	0 to 200 %	-100 to +200 %

## ◆ Terminal Assignments

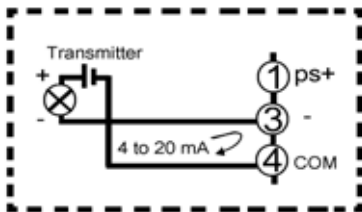


1	INPUT	(PS+)
2	OUTPUT- 2	(+)
3	INPUT	(-)
4	INPUT	(COM)
5	OUTPUT- 2	(-)
6	N.C.	
7	OUTPUT- 1	(+)
8	GND	
9	OUTPUT- 1	(-)
10	SUPPLY	(L+)
11	SUPPLY	(N-)

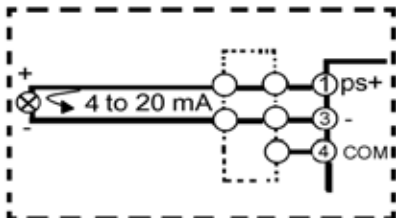
Note: For single-output type, OUTPUT-2 is N.C.

## ◆ Block Diagrams

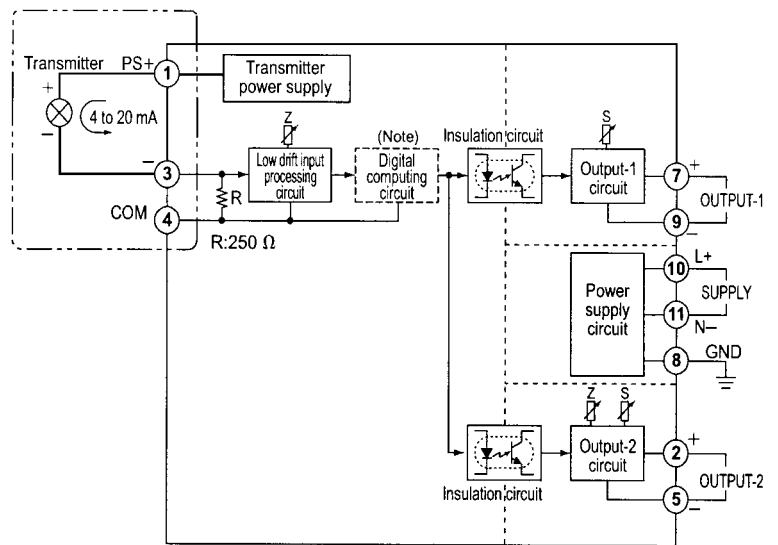
(1) Combination with two-wire type transmitter using external power supply



(2) Example to construct Intrinsically Safe System using Zener Barrier

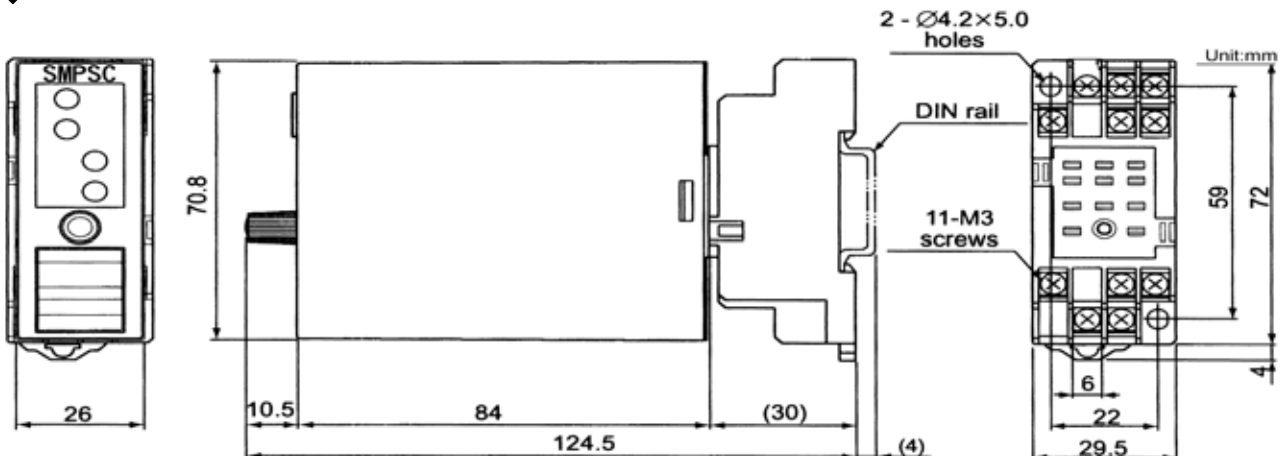


(3) Combination with two-wire type transmitter using internal power supply



Note: Digital computing circuit is added for the input/output suffix codes other than "A" and "6"

## ◆ External Dimensions



The information covered in this document is subject change without notice for reasons of improvements in quality and/or performance.