YAMATAKE **Specification**

SystempaK (Analog Type) Isolator Module

Model J-SSD 50/55

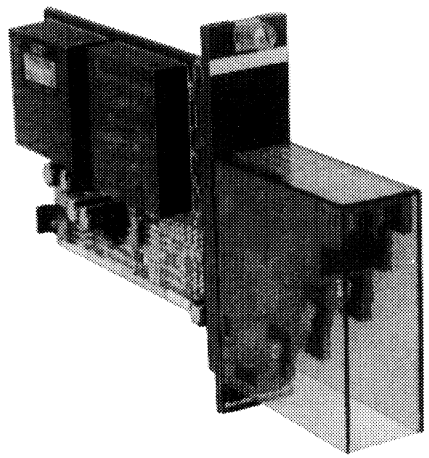
Introduction

The Isolator Modules (J-SSD50/55) accept a 1 to 5V DC or 4 to 20mA DC input and converts it into an isolated 1 to 5V DC or 4 to 20mA DC output signal. The Isolator Modules are available for one-output (J-SSD50) or two-output (J-SSD55) model. The Isolator Module with integrated power supply also available.

Complete isolation is employed between the power, input, and output circuits.

Specification

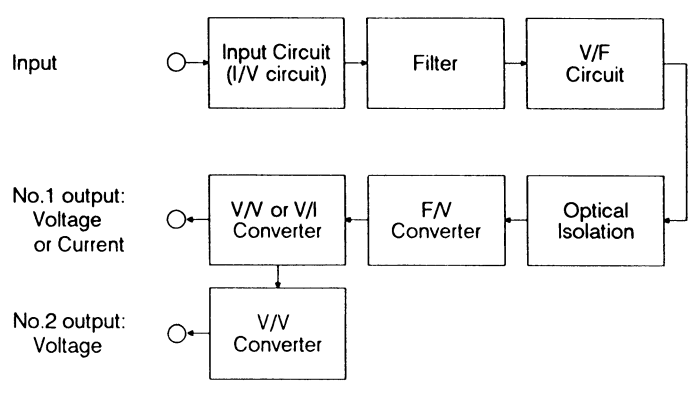
Input signal:
1 to 5V DC or 4 to 20mA DC
Input bias current:
-1μA or less (voltage)
Input impedance: 250Ω (current)
Output signal:
No.1 output; 1 to 5V DC or 4 to 20mA DC
No.2 output; 1 to 5V DC
Between No.1 and No.2 outputs is not isolated. (minus common)
Edge connector output;
1 to 5V DC (No.1 ouput must be 1 to 5V DC when connecting the signal with the A-MC I/O cable.)
Output impedance:
Voltage output; 250Ω or less (No.1 and No.2 outputs)
Current output; 250kΩ or more (No.1 output)
Load: 0 to 600Ω (current output)
Accuracy (No.1 and No.2 outputs):
±0.25%FS
Common mode rejection ratio:
100dB (at 50Hz)
Power supply: 24V DC $^{+15}_{-10}$%
Transmitter power supply:
24V DC±10%, 25mA
(w/ current-limiting circuit 35mA)
Current consumption:
w/o transmitter power supply...
140mA max. (at 24V)
w/ transmitter power supply...
160mA max. (at 24V)
Ambient temperature: −5 to +55°C
Ambient humidity: 0 to 90%RH
Mounting: File
Front mask color: Black
Weight: 300g



Operating influence:
Supply voltage effect;
±0.1%FS/24V DC $^{+15}_{-10}$%
Temperature effect;
±0.2%FS/±10°C

Theory of Operation

An input is converted into an appropriate mV (for amplification) by the Measuring circuit, and the Filter circuit removes any AC noise. The input voltage (converted into a rippleless DC voltage) is converted again into 1 to 5V DC by the ultra-low drift high performance amplifier. The 1 to 5V DC (passing through the V/I and F/V converters) is isolated by the photocoupler and is V/V- or V/I- converted for voltage or current output.



(J-SSD 55, two-output)

Model Number Table

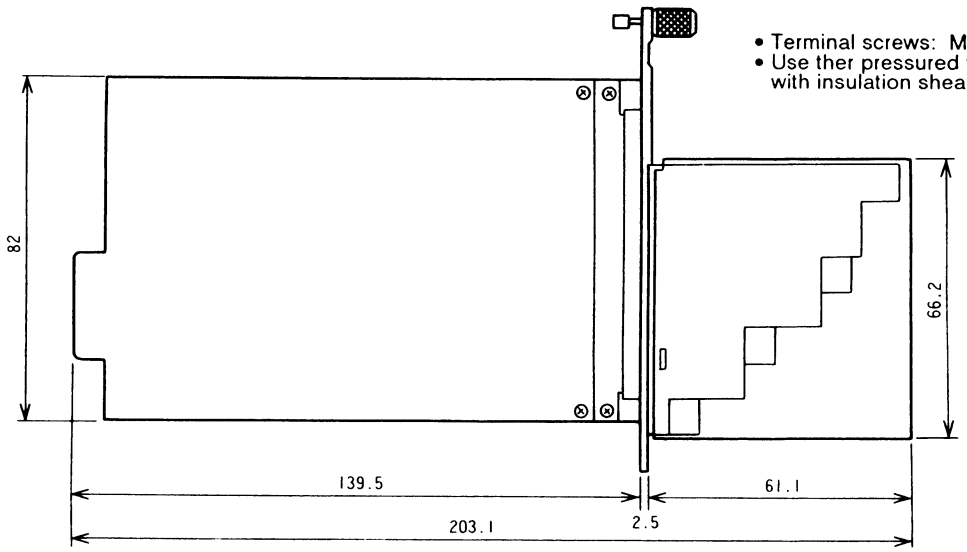
One-output module:

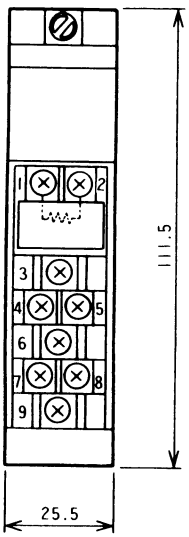
Basic Model Number	Selections I	Selections II	Description
J-SSD 50			Isolator Module
	-1		1 to 5V DC input
	-2		4 to 20mA DC input
	-3		4 to 20mA DC input (w/ transmitter 24V DC power supply)
		1	1 to 5V DC output
		2	4 to 20mA DC output

Two-output module

Basic Model Number	Selections I	Selections II	Description
J-SSD55			Isolator Module
	-1		1 to 5V DC input
	-2		4 to 20mA DC input
	-3		4 to 20mA DC input (w/ transmitter 24V DC power supply)
		1	No.1 output : 1 to 5V DC No.2 output : 1 to 5V DC
		2	No.1 outupt : 4 to 20mA DC No.2 output : 1 to 5V DC

Dimensions and Wirings





Without transmitter power supply

No.	Description
1*2	Input (−)
2*2	Input (+)
3	——
4	No.1 output (+)
5	No.1 output (−)
6	No.2 output (+)
7	No.2 output (−)
8	——
9	GND

With transmitter power supply

No.	Description
1*2	——
2*2	Transmitter input (−)
3	Transmitter input (+)
4	No.1 output (+)
5	No.1 output (−)
6	No.2 output*1 (+)
7	No.2 output*1 (−)
8	——
9	GND

*1 : For two-output molel.
*2 : 250Ω resistor is added for current input.

Specifications are subject to change without notice.

YAMATAKE

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