

General Specifications

Model SIND (Style R)
Integrator

YEWSERIES 80

GS 01B04M01-02E

■ GENERAL

The SIND Integrator is a voltage-to-pulse converter that converts 1 to 5 V DC inputs to corresponding pulse frequency output. It can be used with a YS80 series SICD counter to totalize flow quantity.

Two integrating modes are available: proportional integration that directly totalizes the input, and square root integration that totalizes square-root values. The JHT200 Handy Terminal*1 is used for setting Alarm Unit parameters. On the SIND model with display setter (SIND-□04), input indication (engineering unit) and alarm settings can be set on the front panel.

- *1:
- The BT200 BRAIN Terminal of YOKOGAWA Electric Corporation can also be connected.
 - The adapter for modular jack (E9786WH) is required for connecting the JHT200 Handy Terminal to the Alarm Unit.

■ STANDARD SPECIFICATIONS

Input Signals

Input: 1 to 5 V DC
Number of inputs: 1
Input resistance: 1 MΩ

Output signal

Output: Transistor contact or SICD counter drive pulse (24 V DC)
Number of outputs: 2
Load current:
Transistor contact 30 V DC, 150 mA or less
SICD counter drive pulse 24 V DC, 150 mA or less
Integration mode: Proportional or square root
Integrating ratio range: 1 to 10000 pph
Pulse ON Time: 30 ms and 60 ms*2

*2: Number of outputs becomes 1 as two outputs are shared.

Low input cutoff:

In proportional integration mode: Input cutoff level set to 0 to 10% of input signal.

In square-root integration mode: Input cutoff level set to 0.3 to 10% of input signal.

BRAIN Communication Function:

Parameters are set and functions specified by the JHT200 Handy Terminal*1.

Indication Setting Function (SIND-□04):

Digital indicator 5-digit 7-segment LED (1 row)

Indication range: -19999 to +32000 (decimal point selectable)

At input value indication LED indicator is out.

LED indicators (PPH, LCT: green)

At integrating ratio (PPH) indication: Lit

At low cutoff level indication (LCT): Lit

Setter Setting (→, ↑, SET, △) switches 4

Setting enable switch 1

Integrating ratio and low input cutoff can be set.



■ MOUNTING AND APPEARANCE

Mounting: Rack mounting
Wiring
Signal Wiring: ISO M4 size (4 mm) screws on terminal block
Power and Ground Wiring
100 V version: JIS C 8303 two-pin plug with earthing contact
200 V version: CEE 7 VII (CENELEC standard) plug
Cable Length: 300 mm
External Dimensions (depth behind panel): 180 (H) x 48 (W) x 300 (D) (mm)
Weight: 1.7 kg (including rack and case)

■ STANDARD PERFORMANCE

Accuracy: ±0.5% of span
Maximum Power Consumption

Integrating ratio	Power Supply		
	24 V DC	100 V AC	220 V AC
1000 pph	100mA	7.3VA	10.2VA
10000 pph	190mA	10.8VA	13.7VA

Insulation Resistance

Between I/O terminals and Ground: 100 MΩ/500 V DC

Between Power and Ground: 100 MΩ/500 V DC

Dielectric Strength

Between I/O terminals and Ground:
500 V AC for 1 minute

Between Power and Ground:

1000 V AC for 1 minute (100 V version)

1500 V AC for 1 minute (220 V version)

NORMAL OPERATING CONDITIONS

Ambient Temperature: 0 to 50°C
 Ambient Humidity: 5 to 90%RH (non-condensing)
 Power Supply: AC/DC both usage
 100 V version: DC drive 20 to 130 V, no polarity
 AC drive 80 to 138 V, 47 to 63 Hz
 220 V version: DC drive 120 to 340 V, no polarity
 (/A2ER) AC drive 138 to 264 V, 47 to 63 Hz

OPTIONS

/A2ER: 220V version with power supply plug
 /NHR: Without case
 /TB: With power supply terminal (for 100V version)

ACCESSORIES

Integrating ratio label: 1 sheet

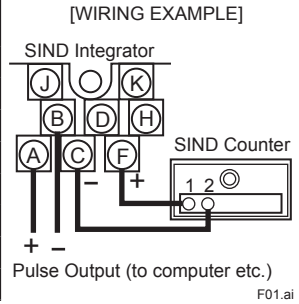
MODEL & SUFFIX CODES

Model	Suffix Codes	Description
SIND	Integrator
Output	-1	Not provided (proportional output)
	-2	Provided (square-root output)*1
Indication setter	00	Not provided
	04	Provided
Style Code	*R	Style R
Option	/A2ER	220V version power supply plug
	/NHR	Without case
	/TB	With power supply terminal (for 100V version)

*1: When square-root output is specified, SIND is shipped as a square-root integrating mode. This mode is changeable to proportional output type by JHT200 Handy Terminal.

TERMINAL CONNECTIONS

Terminal Designation	Description
1	+ } Input (1 to 5 V DC)
2	
3	
4	
5	
6	
7	
8	



Terminal Designation	Description	
	SICD Counter Drive Pulse	Transistor Contact
A	-	+ Transistor contact-1 (*2, 3, 4)
B	-	COM
C	-	+ Transistor contact-2 (*2, 3, 4)
D	-	
F	+	
H		
J		
K		

- *1: Pulse signals can also be used to drive an electromagnetic counter of rating 24 V DC, 150 mA or less.
- *2: Transistor contact output can be used to provide a pulse output signal to a computer or used to drive another counter when combined with an external power supply.
- *3: When terminals A and C are shorted, a pulse signal with ON time of 60 ms is generated across between terminals A-C and F, and terminals A-C and B.
- *4: When a counter other than SICD is used, connect a surge voltage protective diode in parallel with the counter coil.

ORDERING INSTRUCTIONS

1. Model and suffix codes and option codes, if necessary

EXTERNAL DIMENSIONS

