NITTOSEIKO
Taking new steps forward together

CONVERTER K F 3

SPECIFICATION

SSD11351 25.07

■ Out line

This converter measures rotation time of flow meter's rotor, calculates flow rate, and output analogue signal by pulse signal proportionate to flow rate.

Also, it output distribution pulse synchronized with input pulse and output unit pulse scaled input pulse.

■Feature

- ●Respond to flow rate change immediately, and output flow rate as an analog signal.
- ●Possibility of selection of various kinds of analogue signals.
- ●Apply wide range of AC power supply.
- ●This is easy maintenance by plug-in system.

■Specification

Input pulse Select from no-contact input (Voltage or Open collector input) or contact input

●No-contact input

Frequency 500Hz or less

Signal width 0.5ms or more

・Voltage no-contact input

Signal level H : 4～30V L : 0～2V

Input resistance Approx.10kΩ

・Open collector input

Voltage & current Approx.7.8V Approx.2.5mA

●Contact signal

Frequency 40Hz or less

Signal width 10ms or more

Voltage & current Approx.7.8V Approx.2.5mA

Indication Indication of pulse input: Green LED 3φ

Flow rate calculation

Method Calculation by periodical flow rate.
Measure rotation time of rotor per 1 pulse, and calculate flow rate.

Full Scale frequency 1.000～500.0Hz

Nos. of pulse per period 1～100

Calculation range: From 1/500 (Low-cut: Available change 1/10～1/500) to Approx. 1.02 time of Full scale.

Forecasting calculation: It detectslow flowrate, and does forecasting calculation.

Analogue output Select one of below signal

4～20mADC Allowable load resistance 500Ω or less

1～5VDC Allowable load resistance 100kΩ or over

0～5VDC Allowable load resistance 100kΩ or over

0～10mVDC Allowable load resistance 100kΩ or over

0～100μADC Allowable load resistance 100kΩ or less

Conversion accuracy ±0.5% Full scale

Resolution 1/1000

Warm-up period Approx. 5 min

Divided pulses output

Kind of signal select from 12V no-contact (Std.) or open collector

12 V No contact signal

Signal level H:Approx. 12V (at no load)
L:1V or less (at no load)

Output resistance Approx. 1KΩ

Open collector signal

Voltage & current: 30V DC, 30mA

Voltage at ON time:1V or under

Unit pulse output

Input pulse signal is scaled by meter factor, and is divided and output.

Meter factor 0.1000～1.0000

Dividing 1/1～1/10000

Kind of signal select from 12V no-contact (Std.) or open collector.

Signal width 1～500ms (Standard: Approx. 5ms)

Signal logic select from Positive logic (Std.) or Negative logic

12 V No contact signal

Signal level H:Approx. 12V (at no load)

L:1V or less (at no load)

Output resistance Approx. 1KΩ

Open collector signal

Voltage & current: 30V DC, 30mA

Voltage at ON time:1V or under

Power source for generator 12 V DC ±10% 50mA

Insulation resistance 500V DC 20 MΩ or more

(Between casing and power supply terminal)

Withstand voltage 1500 V AC, 1minute

(Test point is same as that of insulation resistance)

Noise resistance Square wave noise 1,000 V by noise simulator (Noise width 1μs; Polarity ±;

Synchronized power application; Phase 0~360°)

Power supply 85～264 V AC 50/60 Hz

Power consumption Approx. 5VA

Ambient temperature 0～45℃

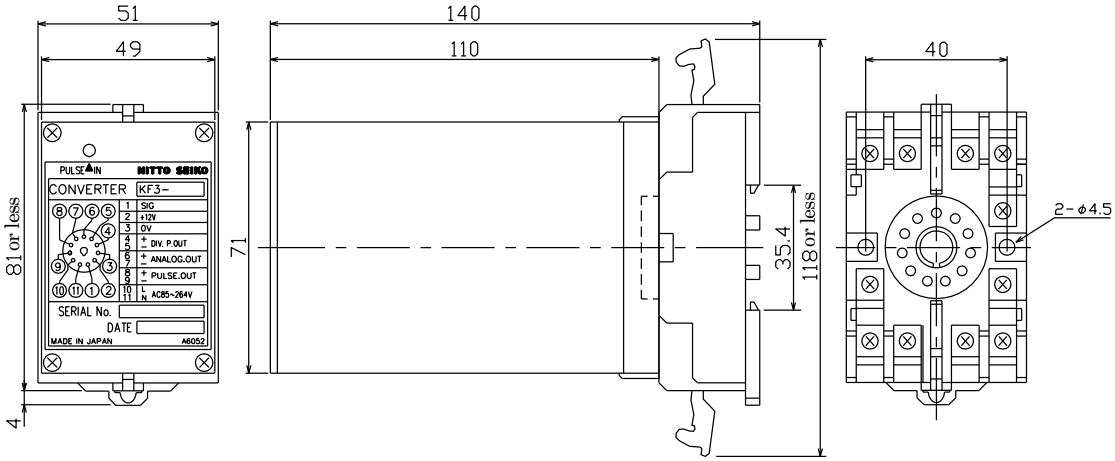
Weight Approx. 360g

Casing Aluminum case with plastic bases.

■ Operation

- It measures rotation time by input signal proportionate to flow rate, and calculate flow rate. It output this calculated flow rate as analogue signal.
- When flow rate decline, it can reduce flow rate by forecasting calculation.
- It output analogue signal as flow rate being zero, when actual flow rate is less than range of flow rate calculation.
- Averaging function makes output signal smoothing.
- As for divided pulse, it output pulse signal synchronized with input signal.
- It output unit pulse signal by scaling input pulse signal.
- Selectable function shall be set at factory.

■ External & mounting dimension



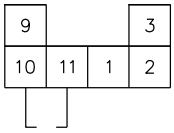
It can also be mounted on DIN rail (width 35mm).

■ Terminal arrangement

No.	Signal name
1	S I G Pulse input
2	＋１２Ｖ
3	０Ｖ
4	＋
5	－(0V) Divided pulse
6	＋
7	－ Analogue
8	＋
9	－(0V) Unit pulse output
１０	85-264 V AC Power
１１	

■ Wiring

■Wiring of power source



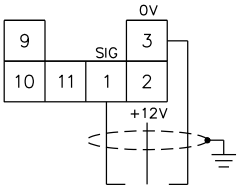
Analog signal

■ Wiring of pulse signal input

(Use shielded cable)

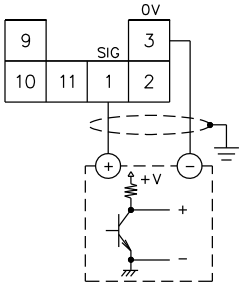
●Voltage input

12V no-contact signal from flow meter.



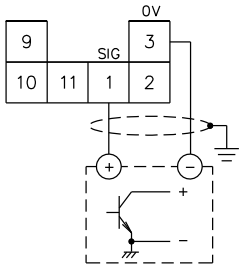
12V no contact signal from flow meter

Voltage no-contact signal



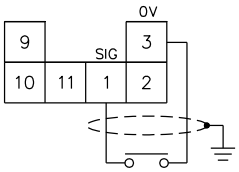
12V no-contact signal

●Open collector input



Open collector signal

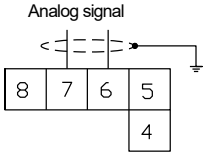
●Contact pulse input



Flow meters with reed switch or contact signal

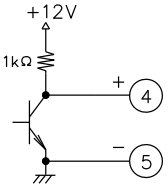
■ Wiring of analogue signal output

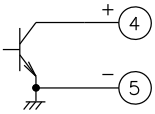
(Use shielded cable)



■ Divided pulse output

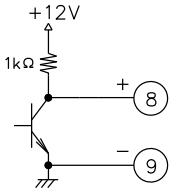
●12 V no-contact output ● Open collector output

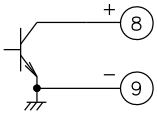




■Unit pulse output

●12 V no-contact output ● Open collector output





■Model

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● Input pulse

1	No-contact pulse input
2	Open collector input
3	Contact pulse output

● Analogue output

1	4～20mADC
2	1～5VDC
3	0～5VDC
4	0～10mVDC
5	0～100μADC

● Output pulse unit

1	1 mL/P	5	0.01 m^3/P
2	0.01 L/P	6	0.1 m^3/P
3	0.1 L/P	7	1 m^3/P
4	1 L/P		

▼The contents given here are subject to change without notice.

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