NITTOSEIKO
Taking new steps forward together

Digital Flow Rate Indicator TM81

SPECIFICATIONS

SSF10351 19.06

■General

Performs either I／D conversion or V／F conversion of analogue signal proportional the flow rate to, and numerically indicates instantaneous flow rate and integrated flow rate.

■Features

- ●Can set it's functions with the switch on the front face.
- ●Can automatically change it's measuring range.
- ●Having large segment LED:14.2mm-hight.
- ●Power source: AC90～264V

■Specifications

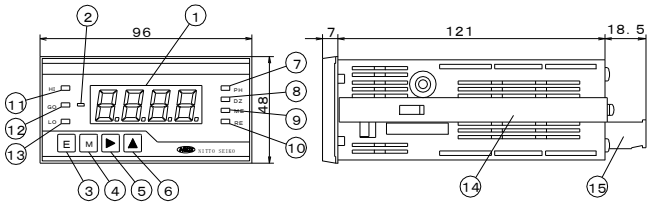
Analogue input ●DC current input
4～20mADC input resistance 10Ω
●DC voltage input
1～5VDC input resistance 1MΩ

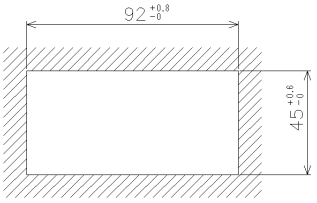
Instantaneous flow rate
Indication of flow rate
Display unit：Red 7-segment LED
14.2H 4-digit
Indication polarity：Automatically indicate with negative value.
Indication range： -9999～9999
Overflow range：Indicate [-OL] or [OL] with out of range input signal.
Indication of zero： Zero-suppress
Indication cycle： Approx.0.08～6.4s
（standard Approx.0.08s）
Decimal point：Possibility of setting of unit
Indication accuracy :±0.2%F.S±1digit（25℃）
Temperature coefficient : Approx .100ppm／℃
Units of indication: L/min, L/h, mL/min
Operation time : approx.80ms（sampling time）
Average times : 1,2,4,8,10,20,40,80(standard 1)
Moving average: 1,2,4,8,16,32（standard 1）

External Input ●Hold Input （HOLD）
Type of signal: No-voltage contact or open collector signal
Voltage & current: Approx. 5V, Approx. 0.5mA
Display: Red-LED (HOLD)
●DZ Input（Digital zero）
Type of signal: No-voltage contact or open collector signal
Voltage & current: Approx. 5V, Approx. 0.5mA
Display: Red-LED (DZ)
●PH Input（PEAK HOLD）
Type of signal: No-voltage contact or open collector signal

Display Red-LED (PH)
Insulation resistance DC500V 100MΩ（or over）
Between exposed metallic parts, power supply,terminals and alarm output terminals
Withstand voltage AC1000V for 1minute
Test points: Same as those for insulation resistance
Noise resistance Square wave noise by noise simulator 1000V
(Noise width 1μs, Polarity ±,Synchronous 0～360°)
Power source AC90～264V
Power consumption Approx.2.5VA
Ambient temperature 0～50℃
Mass Approx. 240g

■Configuration & panel cut





Board thickness of panel 0.8～5.0mm

No.	Designation
1	Flow rate display（8.8.8.8.）
2	Polarity display（－）
3	Enter key（E）
4	Mode key（M）
5	Shift key（▶）
6	Increment key（▲）
7	Peak hold display（PH）
8	Digital zero display（DZ）
9	Digital zero backup display（ME）
10	RE display（RE）
11	HI display （HI）
12	GO display（GO）
13	LO display（LO）
14	Mounting fixture
15	Terminal connections

■Operations

■ At closing of power

● When power is on, ready to operation mode after segment check and indication of unit number.

■ Indication of instantaneous flow rate

● Performs either I／D conversion or V／D conversion of analogue signal 4～20mA or 1～5V proportional to flow rate, and numerically indicates instantaneous flow rate.

● When exceeding display range, over range (OL) is indicated.

■ External Input

● Hold input

By making short-circuit between input terminals HOLD and COM, the last indication is fixed.

● DZ input

By making short-circuit between input terminals ZD and COM, the last input value is last indicated as zero, and from then it indicates fluctuation band from last input value.

● Peak hold input

By making short-circuit between input terminals PH and COM, either setup content of UPPER/LOWER/UPPER-LOWER is indicated.

■Terminal arrangement

● Signal input

No.	Item	Signal name
1	V-IN	(+) 1～5V input
2	A-IN	(+) 4～20mA input
3	LO	(-) Common

● Control input

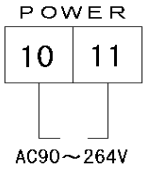
No.	Item	Signal name
6	HOLD	Hold input
7	DZ	Digital zero input
8	PH	Peak hold input
9	COM	Common

● Power supply

No.	Item	Signal name
10	POWER	AC power source, AC90～264V
11	POWER	

■Connections

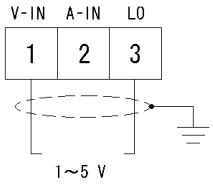
■ Connections of power source



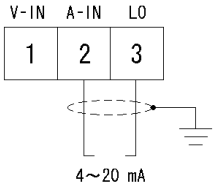
■ Connection of analogue output signal

Use shielded cable.

● 1～5V input



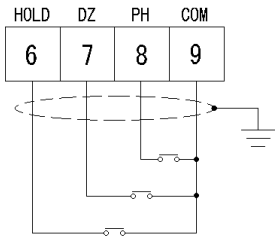
● 4～20mA input



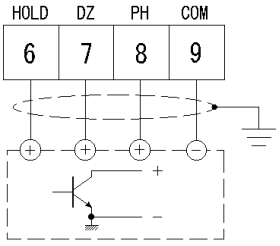
■ Connection of control input signal

Use shielded cable.

● Case of voltage contact signal



● Case of open collector signal



■Model type

TM81－□－□□

● Analogue output

1	4～20mADC
2	1～5VDC

● Decimal position of momentary flow rate

1	0．001
2	0．01
3	0．1
4	1

● Unit of indication of momentary flow rate

1	L／min
2	L／h
3	mL／min
9	Other

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

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