

NEW-FLOW

**ISO 9001
REGISTERED**

NEW-FLOW

MANUFACTURE OF FIELD MOUNTED
TEMPERATURE TRANSMITTER WITH DISPLAY

T-1000

Instruction Manual



NEW-FLOW TECHNOLOGIES, INC.

No.9 Lane 133, Xing-Hua St., Chien Chen Dist., Kaohsiung 806, Taiwan

TEL: 886-7-8135500 FAX: 886-7-8225588 / 8159758

Email: info@new-flow.com www.new-flow.com

INSTALLATION

Technical Data

Enclosure housing: Aluminum or SS316

Input: Programmable for thermocouple type K, J, R, S, T, N, E, B and RTD pt 100Ω from a PC

Working span range: Programmable from a PC

LCD display: 4 ½ digital

Output: Linearized 4 to 20mA or 20 to 4 mA

Accuracy: pt 100Ω and 0 to 50mV ±0.15% full scale
Thermocouple ±0.25% full scale

Ambient temperature: -40 to +85°C (-40 to 185°F)

Power supply: 12 to 35 VDC

Sensor failure protection: Programmable burnout upscale or downscale

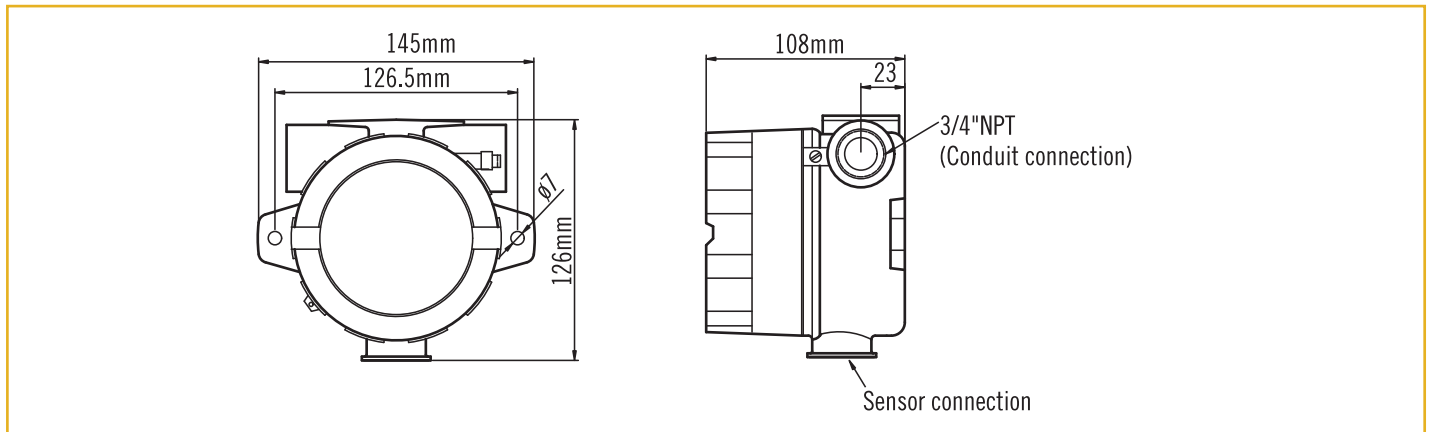
Sensor connection: ½", ¾" available

Conduit connection: ¾" NPT Female

Parts Location



Dimensions



INSTALLATION

Parameter and Default Value

Zero Setting (ZERO mA): 4mA

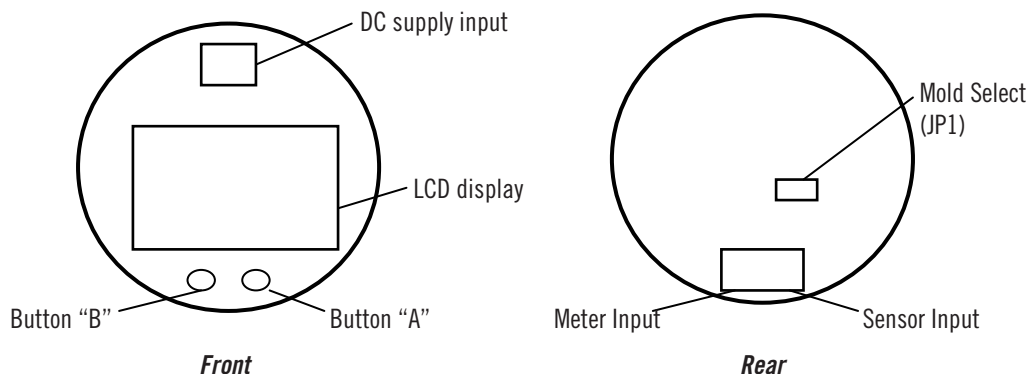
Full Span Setting (SPAN mA): 20mA

Unit Adjust (UNIT mA): mA

Decimal Point (DOT): 2 digits (4.00mA~20.00mA)

DEFAULT recover (DEFAULT):

Control Knob and Input Terminals' Location



Stat Turn On

All segments of LCD light on for about 2.0 seconds, then LCD display “NEW-FLOW” and “88888”, scale indicator “ for 2.0 seconds”. (88888, light on 1st and 2nd digit...till 5th digit sequentially, scale indicator light on from 1st till full scale.)

Parameter Adjustment

1. JP1: Short

Factory mode (there is 5 parameters. ZERO, SPAN, UNIT, DOT, and DEFAULT).

2. JP1: Open

User mode (there is only 4 parameters. ZERO, SPAN, UNIT, and DOT)

“A”: Depress button “A”

“B”: Depress button “B”

“A/B”: Depress button “A” firstly, then depress button “B” (Hold button “A” same time).

“B+A”: Depress button “B” firstly, then button “A” (Hold button “B” same time).

Steps

1. Factory mode (ZERO, SPAN, UNIT, DOT DEFAULT), JP1 with Short Pin.

– **Zero setting (ZERO mA):** Supply “4mA” on the line (or the represented current value for “ZERO”).

Depress “A/B”, LCD display “ZERO mA”, and “004.00”

Depress “B+A” LCD display “004.00” (Digit with under line ___ be flashed, depress button “B” to increase the value),

Depress “B” once for 1 increment “004.01”, depress “B” once again 2, 3, 4, ...9, 0 ...until the number you want.

Depress “A” shift the flashed digit to next left digit. “004.03”.

Depress “B” to adjust the number as requested,

Depress “A” and “B” until get the represented value of “ZERO”.

Depress “B+A”, LCD display “ZERO mA” on lower line and the final number (or 004.00) on upper line.



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Depress “A” for next parameter set (SPAN mA).

If you want to finish parameter set, depress “A/B” return to operation mode. the LCD display “ mA” on lower line and “final set number or 004.00” on upper line.

Note:

Represented “SENSOR ZERO value” (4.0mA) must be supplied into the power line.

- **Full Span setting (SPAN mA):** Supply “20mA” on the line (or the represented current value for “full span”).

Depress “A/B”, LCD display “ZERO mA” on lower line, and “004.00” on upper line.

(or continuously set the parameter from **Zero setting “ZERO mA”**).

Depress “A”, LCD display “SPAN mA” on lower line and “020.00” on upper line.



Depress either one of button “A” or/and “B” with Referring the adjusting procedure of “Zero setting (**ZERO mA**)” to get the represented number of full span.

Depress “B+A”, LCD display “SPAN mA” on lower line and the final number (or 020.00) on upper line.

Depress “A” for next parameter set (Unit Setting).

If you want to finish parameter setting, depress “A/B” return to operation mode. The LCD display “ mA” on lower line and “final set number or 020.00” on upper line.

Note:

Represented “SENSOR full span value” (20mA) must be supplied in to the power line.

Unit Setting (UNIT) : mA

Depress “A/B”, LCD display “ZERO mA” on lower line, and “004.00” on upper line.

Depress “A”, LCD display “SPAN mA” on lower line and “020.00” on upper line.

(or continuously set the parameter from last parameter setting “**Full span setting**”).

Depress A”, LCD display “UNIT mA” on lower and , “---.---” on upper.

Depress “B+A”, LCD display “UNIT mA” (“mA” flashing)

Depress “B”, LCD display “UNIT A”, depress “B” once again the “Unit” will be changed as the following sequence

“mA, A, mV, V, PH, °F, °C, PSI, Pa, Kpa, Mpa, mbar, bar, %, M, cm, BLANK, mA, A,)

Depress “A” and/or “B” until get the right “UNIT” you want.

Depress “A” for next parameter adjustment “Decimal point”).

If you want to finish parameter setting, depress “B+A” and then “A/B” to return to operation mode, the LCD display “ mA” on lower and “015.00” (according to the Sensor input current) on upper line.



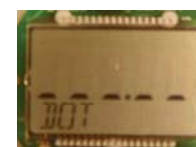
- **Decimal Point (DOT):** 2 digits (4.00mA~20.00mA)

Depress “A/B”, LCD display “ZERO mA” on lower line, and “004.00” on upper line.

Depress “A”, LCD display “SPAN mA” on lower line and “020.00” on upper line.

Depress A”, LCD display “UNIT mA” on lower and , “---.---” on upper.

(or continuously set the parameter from last parameter setting “**UNIT setting**”)



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Depress “A”, LCD display “DOT” on lower and , “----.--” on upper.

Depress “B+A”, LCD upper line “----.--”.flashing display

Depress “B”, the decimal point will be shifted forward to the next left digit“--.----”.

Depress “B” once again, the decimal point shift toward to left. “-.----”.

Depress “B” until what number of decimal point you want.

Depress “B+A” to complete decimal point set. LCD display “DOT” on lower line and “-.----” (decimal point at the last setting).

To complete parameter setting, depress “A/B” for returning to operation mode, the LCD display “ mA” on lower line and “0.0510” (according to the Sensor input current) on upper line..

– Default Value Recovery (DEFAULT):

Depress “A/B” to parameter adjust mode. , LCD (below) “ZERO mA” and , (above) “004.00”



Depress “B”, LCD display “DEFAULT” on lower line and “888.88” on upper line.

(If you do not want to recover to DEFAULT value, you just depress “A” and A/B to return to operation mode).

Depress “B+A”, LCD display “DEFAULT” on lower line and “888.88” (flash) on upper line.

Depress “B”, all parameter recover to original default value. And the meter returns to operation mode. LCD display “ mA” on lower and “005.10” (according to the Sensor input current) on upper line.

Remarks :

“Default recovery” can be done at either one of parameter set (ZERO, SPAN, UNIT, DOT).Just depress “B” with above procedures for recovering to DEFAULT value.

2. JP1: open

USER mode (ZERO, SPAN, UNIT, DOT).

The parameter (ZERO, SPAN, UNIT, DOT) adjustment is same as above steps of factory mode, except no need input represented value of zero or full span (just pass some current between 4 ~ 20mA into the power line).

No need input represented current value for ZERO and SPAN setting..

All 4 parameters adjustment is independent, which is set as per different requirement.

On USER mode, can not recover the PARAMETER to default value, it is to keeping the meter assurance.

– Zero setting (ZERO mA):

Depress “A/B”, LCD display “ZERO mA” on lower line, and “004.00” on upper line.

Depress “B+A”, LCD display “004.00” (Digit with under line be flashed, depress button “B” to increase the value),

Depress “B” once for 1 increment “004.01”, depress “B” once again 2, 3, 4, ...9, 0, 1....until the number you want.



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Depress “A” shift the flashed digit to next left digit. “004. 03”.

Depress “B” to adjust the number of 2nd digit as requested,

Depress “A” and/or “B” until getting the represented value of “ZERO”.

Depress “B+A”, LCD display “ZERO mA” on lower line and the final number (or 004.00) on upper line.

Depress “A” for next parameter set (SPAN mA).

If you want to finish parameter set, depress “A/B” return to operation mode. the LCD display “ mA” on lower line and “real input current (or relative number)” on upper line.

– Full Span setting (SPAN mA):

Depress “A/B”, LCD display “ZERO mA” on lower line, and “004.00” on upper line.

(or continuously set the parameter from last setting “Zero setting”).

Depress “A”, LCD display “SPAN mA” on lower line and “020.00” on upper line.



Depress either one of button “A” or/and “B” with referring to the adjusting procedure of “Zero setting (ZERO mA)” until getting the represented number of full span.

Depress “B+A”, LCD display “SPAN mA” on lower line and the final number (or 020.00) on upper line.

Depress “A” for next parameter set (Unit Setting).

If you want to finish parameter setting, depress “A/B” return to operation mode. The LCD display “ mA” on lower line and “real input current (or relative number)” on upper line.

Unit Setting (UNIT) : mA

Depress “A/B”, LCD display “ZERO mA” on lower line, and “004.00” on upper line.

Depress “A”, LCD display “SPAN mA” on lower line and “020.00” on upper line.

(or continuously set the parameter from last parameter setting “Full span setting”).

Depress A”, LCD display “UNIT mA” on lower and , “---.---” on upper.

Depress “B+A”, the LCD display “UNIT mA” (“mA” flashing)

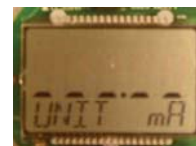
Depress “B”, LCD display “UNIT A”, depress “B” once again the “Unit” will be changed as the following sequence

“mA, A, mV, V, PH, °F, °C, PSI, Pa, Kpa, Mpa, mbar, bar, %, M, cm, BLANK, mA, A,)

Depress “A” and/or “B” until get the right “UNIT” you want.

Depress “A” for next parameter adjustment ”DECIMAL point”).

If you want to finish parameter setting, depress “B+A” and then “A/B” to return to operation mode, the LCD display “last setting % (or mA)” on lower and “035.92” (according to the Sensor input current) on upper line.



INSTALLATION

– Decimal Point (DOT): 2 digits (4.00mA~20.00mA)

Depress “A/B”, LCD display “ZERO mA” on lower line, and “004.00” on upper line.

Depress “A”, LCD display “SPAN mA” on lower line and “020.00” on upper line.

Depress “A”, LCD display “UNIT mA” on lower and , “---.---” on upper.

(or continuously set the parameter from last parameter setting “UNIT setting”)

Depress “A”, LCD display “DOT ” on lower and , “---.---” on upper.

Depress “B+A”, LCD upper line “---.---”.flashing display

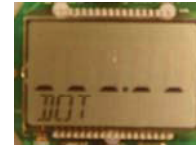
Depress “B”, the decimal point will be shifted toward to the next left digit“--.---”.

Depress “B” once again, the decimal point shift toward to more left. “-.----”.

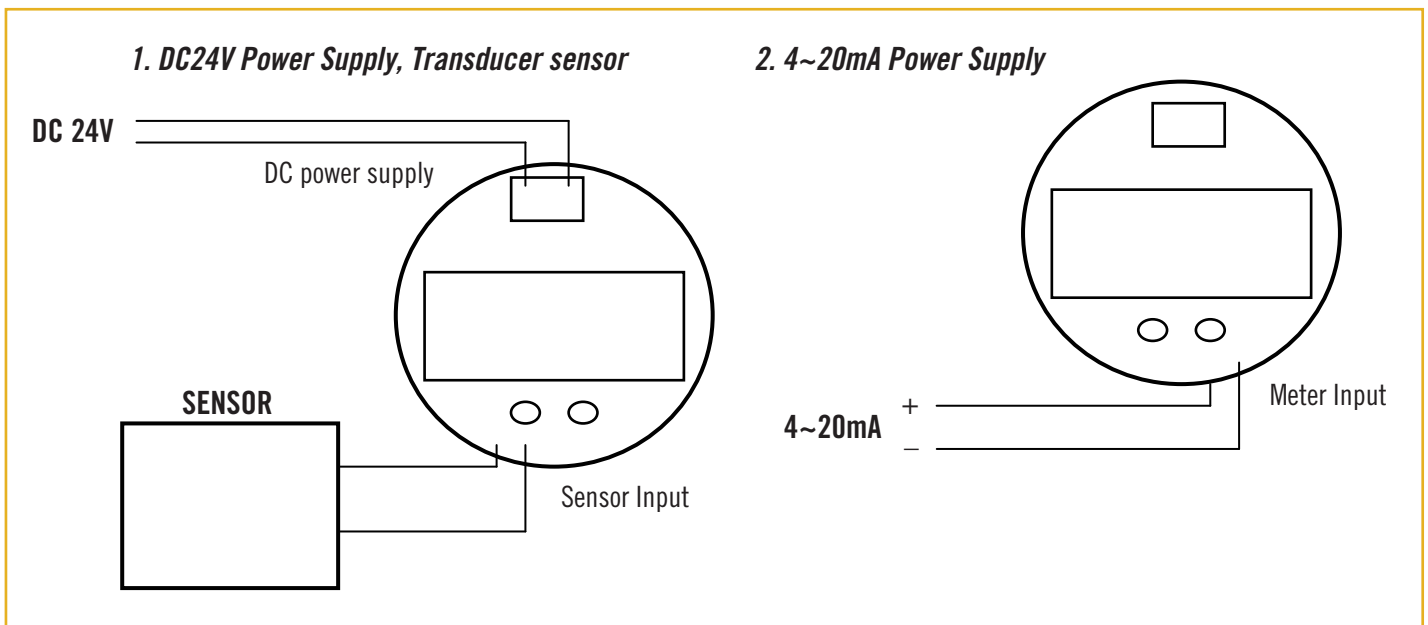
Depress “B” until what number of decimal point you want.

Depress “B+A” to complete decimal point set. LCD display “DOT ” on lower line and “-.----” (decimal point at the last setting).

To complete parameter setting, depress “A/B” for returning to operation mode, the LCD display “ %” on lower line and “0025.0” (according to the Sensor input current) on upper line..



Blocking Diagram



NOTE.

Error Message: 3.75 mA

Over range: 3.75mA \ Element fail: 3.75mA.