BOURDON HAENNI
made to measure

instruments for industry

FlexTemp Temperature Transmitter

Input: Pt100, Ni100, Cu100 and thermo-couple (J-K-L-N-R-S-B)

Output: 4...20 mA and LCD bar graph with zoom feature

Configurable via a standard PC

Accuracy < 0.25°C (Pt100)

Local or remote CJC-compensation

Input and output are polarity protected

Demko EEx ia IIC T5, ATEX II 1G

Description

FlexTemp comprises two independent signal inputs.

It has a millivolt input for thermocouples J, K, L, N, R, S and B.

The resistance input for Pt100, Ni100 and Cu100 resistance elements (RTD) can also be used to compensate for "cold junction" if thermo-couples are to be connected.

FlexTemp offers 2- or 3-wire connection when used as an RTD transmitter.

Using a PC and a FlexProgrammer kit, the temperature range and the display can be configured easily and quickly, providing a high degree of flexibility.

FlexTemp can be used for most temperature measuring applications.

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Technical Data

Input

Sample time	< 0.5 sec.
RTD measuring current	< 0.2 mA, pulsating
Cable resistance	≤ 10 Ohm per wire (3-wire)

Accuracy

Pt100	< 0.25°C
Ni100	
Cu100	
Type J	< 1.0°C
Type K	
Type L	
Type N	
Type R	< 2.0°C
Type S	
Type B	

Output

Signal type	4...20 mA, 2-wire
Supply range	6.5...35 V_{dc}
Load equation	$R_L \leq (V_{cc} - 6.5)/22$ (kOhm)
Current limiting	3.8 mA/22 mA
Accuracy	< 0.1% of prevailing span
Temperature drift	Typ. 0.003% per °C
	Max. 0.01% per °C
Overrange	22 mA
Underrange	3.8 mA

Power supply

Supply drift	Max. 0.005% per V
Ripple immunity	3 V_{rms}

Approval (Demko) EEx ia IIC T5, ATEX II 1G

Supply	6.5...28 V_{dc}
Internal inductivity	$L_i \leq 15$ µH
Internal capacity	$C_i \leq 1$ nF
Barrier data	$U \leq 28\ V_{dc}$; $I \leq 0.1$ A ; $P \leq 0.7$ W
Temperature class	T1...T5: $-10 < T_{amb} < 60$°C

Environmental conditions

Operating temperature	-10...60°C
Storage temperature	-35...85°C
Humidity	< 90% RH, non-condensing
Vibrations	Lloyds Register, test 2

EMC data

Immunity	EN 50082-2
Emission	EN 50081-1

Mechanical data

Dimensions	62 x 88 x 24 mm
DIN-rail mounting	DIN 46277
Protection class	Housing: IP 30
	Terminals: IP 10
Weight	0.12 kg
Approval	Det Norske Veritas

Display data

Display	LCD bar graph with 51 segments
Resolution	1%

Disposal of product and packing

According to national laws or by returning to Bourdon-Haenni

Ordering Details - FlexTemp Temperature Transmitter

	4´digit	82 2x - 51x
Type		
Standard version		3
Demko EEx ia IIC T5, ATEX II 1G		4
Configuration	7´digit	
Not configured		4
Configured according to customer specifications		5

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Cu100	
Type J	< 1.0°C
Type K	
Type L	
Type N	
Type R	< 2.0°C
Type S	
Type B	

Output

Signal type	4...20 mA, 2-wire
Supply range	6.5...35 V_{dc}
Load equation	$R_L \leq (V_{cc} - 6.5)/22$ (kOhm)
Current limiting	3.8 mA/22 mA
Accuracy	< 0.1% of prevailing span
Temperature drift	Typ. 0.003% per °C
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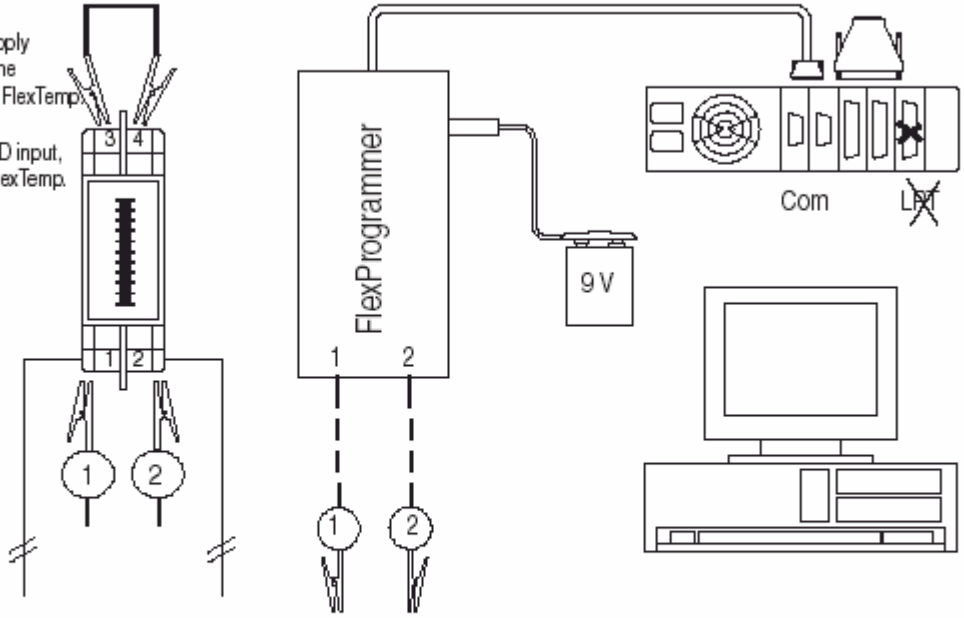
Configuration

Note:
Disconnect loop supply before connecting the FlexProgrammer to FlexTemp.

Short-circuit the RTD input, when configuring FlexTemp.



Status-indications

1. Normal mode
   The basic scale is visible and the measured temperature is indicated by the relevant number of visible segments.
2. Prevailing temperature exceeds the selected range
   11 segments at the top of the display are flashing. The basic scale is not visible.
3. Prevailing temperature is lower than the selected range
   11 segments at the bottom of the display are flashing. The basic scale is not visible.
4. Prevailing temperature exceeds display range, but is below the permitted maximum
   11 segments at the top of the display are visible. The basic scale is not visible.
5. Prevailing temperature is lower than display range, but over the permitted minimum
   11 segments at the bottom of the display are visible. The basic scale is not visible.
6. System error, programming mode
   11 segments in the middle of the display are flashing. The basic scale is not visible.
7. Module has not been configured
   All segments, including the basic scale, are flashing.
8. Program memory not installed
   All segments, including the basic scale, are visible.

Accessories

FlexProgrammer configuration set,
type number 82 23-903 comprises:

FlexProgrammer with 9 pole RS232C cable
3.5" Program diskettes
Battery plug
Cable with test plugs

Pt100 Terminal Sensor

Pt100 terminal sensor
for local CJC-compensation,
type number 82 23-910