

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 thermocouples are to be connected.

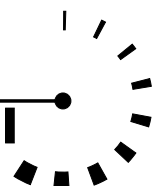
FlexTemp offers 2- or 3-wire connection when used as an RTD transmitter.

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.

**BOURDON
HAENNI**

made to measure



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	$L_i \leq 15 \mu\text{H}$
Internal capacity	$C_i \leq 1 \text{nF}$
Barrier data	$U \leq 28 \text{V}_{dc}; I \leq 0.1 \text{A}; P \leq 0.7 \text{W}$
Temperature class	T1...T5: $-10 < T_{amb} < 60^\circ\text{C}$

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

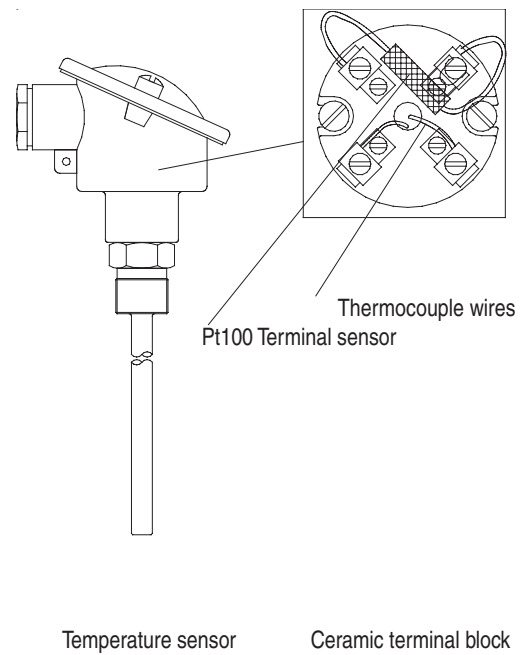
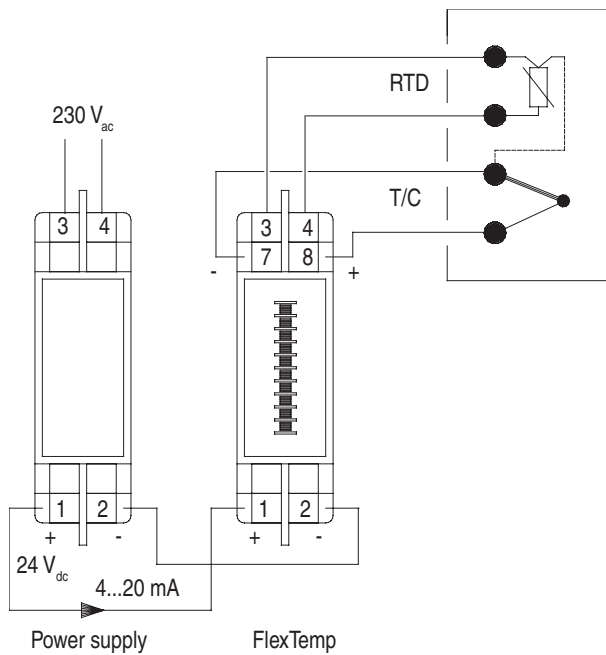
Ordering Details - FlexTemp Temperature Transmitter

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

Measuring Ranges

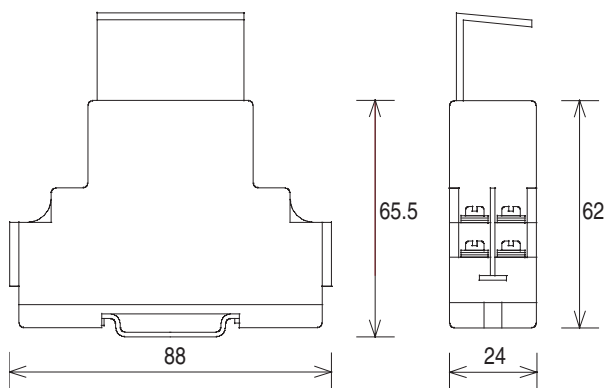
Sensor type	Measuring range	Min. span	Notes
Pt100	-50...450°C	20°C	Measuring range The temperature range which can be configured for both output and LC-display.
Ni100	-50...200°C	20°C	
Cu100	-50...200°C	20°C	Min. span The minimum measuring range which can be configured. E.g. Pt100: Measuring range -20°C...0°C or 430°C...450°C is possible.
Fe-CuNi, type J	-50...800°C	50°C	
NiCr-Ni, type K	-50...1200°C	50°C	
Fe-CuNi, type L	-50...800°C	50°C	
NiCrSi-NiSi, type N	-50...1200°C	50°C	
PtRh13-Pt, type R	-50...1700°C	200°C	Resolution The lowest resolution is 0.1°C. E.g.: Measuring range -10.1°C...9.9°C
PtRh10-Pt, type S	-50...1700°C	200°C	
PtRh30-Pt, type B	600...1800°C	200°C	
			Note The highest temperature in the measuring range must be equal to or higher than 0°C.

Example of Application



Dimensional Drawings

[mm]

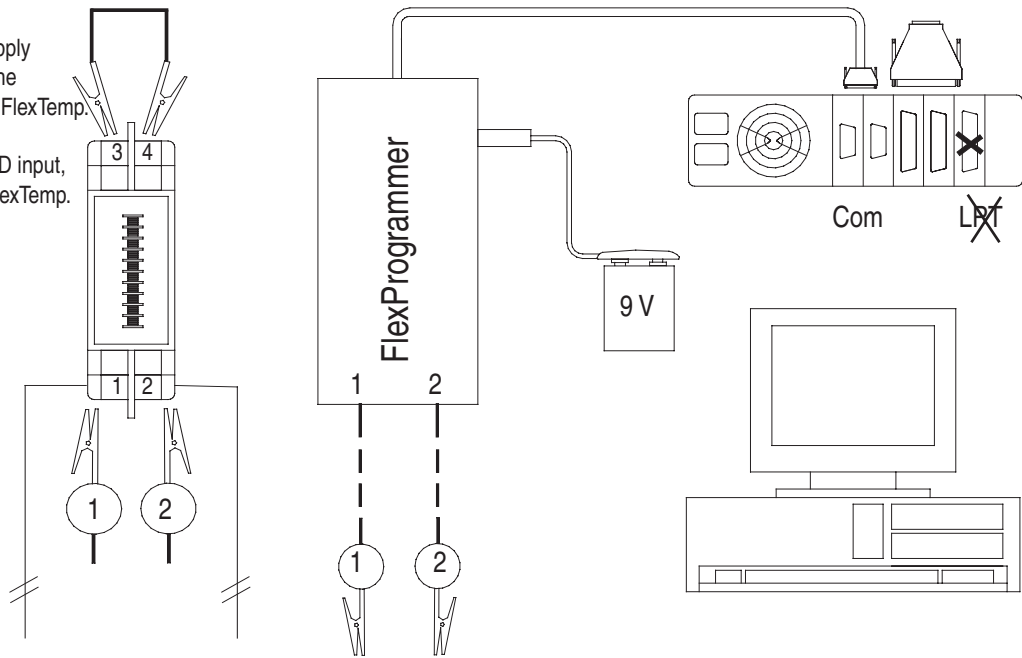


Configuration

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

Pt100 Terminal Sensor



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 for local C/JC-compensation, type number 82 23-910

