

# Thermo-Signal Conditioners

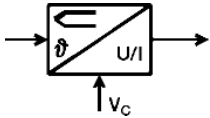
## WAVEANALOG Thermo

- Thermocouples  
K, J, T, E, N, R, S, B configurable
- Temperature range  
-200°C...+1820°C
- No adjustment necessary after range selection
- Cold junction compensation
- Configurable output signal
- Cross-connectable voltage supply  
via cross-connectors

## Approvals:



### Block diagram



### Ordering data

Screw connection
Tension clamp connection
Input/output

### Technical data\*

#### Input signal

Types

#### Output signal

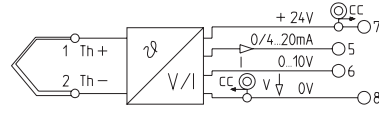
Load resistance
<b>Output signal</b>
Load resistance
<b>Output signal</b>
Load resistance
Accuracy at Tu = 23°C

Temperature coefficient
Response time without filter
Response time with filter

<b>General</b>
Voltage supply
Power consumption
Current carrying capacity of cross-connection
Open circuit recognition
Operating temperature
Storage temperature
Standards/specifications
EMC standards
Dimensions W/L/H
Approvals
Dimensions and accessories see

## Thermo Select

°C/0...20 mA,  
4...20 mA, 0...10 V



<b>Type</b>	<b>Part No.</b>
WTS4 Thermo Select	843230000
WTZ4 Thermo Select	843231000

°C/0...20 mA
°C/4...20 mA
°C/0...10 V

#### Thermocoupler acc. to IEC584 (fully insulated)

K -200°C...+1372°C
J -200°C...+1200°C
T -200°C...+400°C
E -200°C...+1000°C
N -200°C...+1300°C
R -50°C...+1760°C
S -50°C...+1760°C
B +50°C...+1820°C

0...20 mA
≤ 500 Ω
4...20 mA
≤ 500 Ω
0...10 V
≥ 1 kΩ

Type K	-200°C...-150°C ± (5K + 0.1% of set range)
	-150°C...+1200°C ± (3K + 0.1% of set range)
	+1200°C...+1372°C ± (4K + 0.1% of set range)
Type J	-200°C...-150°C ± (4K + 0.1% of set range)
	-150°C...+1200°C ± (3K + 0.1% of set range)
Type T	-200°C...-150°C ± (5K + 0.1% of set range)
	-150°C...+400°C ± (3K + 0.1% of set range)
Type E	-200°C...-150°C ± (4K + 0.1% of set range)
	-150°C...+1000°C ± (3K + 0.1% of set range)
Type N	-200°C...-150°C ± (6K + 0.1% of set range)
	-150°C...+1300°C ± (3K + 0.1% of set range)
Type R	-50°C...+200°C ± (10K + 0.1% of set range)
	+200°C...+1760°C ± (6K + 0.1% of set range)
Type S	-50°C...+200°C ± (10K + 0.1% of set range)
	+200°C...+1760°C ± (6K + 0.1% of set range)
Type B	+50°C...+250°C ± (25K + 0.1% of set range)
	+250°C...+500°C ± (10K + 0.1% of set range)
	+500°C...+1820°C ± (6K + 0.1% of set range)

± (200 ppm v. Span
+ 0.075 K)/K
1.1 s
6 s

24 VDC ±20% (19.2...28.8 VDC)
< 38 mA at I <sub>out</sub> = 20 mA
≤ 2 A
LED blinks (output value: > 20 mA and. > 10 V)
0°C...+55°C
-20°C...+85°C
EN 50178, IEC584
EN 50081, EN 50082, EN 55011
12.5/92.4/112.5 (.49/3.64/4.43)
CE, UL, CSA
Page 356 + 366
* Tu = 23°C single module

## Switch position/setting options

SW 1			SW 2						
Type	1	2	3	Span	1	2	3	4	5
K	■	■	■	+100°C	■	■	■	■	■
J	■	■	■	+150°C	■	■	■	■	■
T	■	■	■	+200°C	■	■	■	■	■
E	■	■	■	+250°C	■	■	■	■	■
N	■	■	■	+300°C	■	■	■	■	■
R	■	■	■	+350°C	■	■	■	■	■
S	■	■	■	+400°C	■	■	■	■	■
B	■	■	■	+450°C	■	■	■	■	■
				+500°C	■	■	■	■	■
				+550°C	■	■	■	■	■
				+600°C	■	■	■	■	■
				+650°C	■	■	■	■	■
				+700°C	■	■	■	■	■
				+750°C	■	■	■	■	■
				+800°C	■	■	■	■	■
				+850°C	■	■	■	■	■
				+900°C	■	■	■	■	■
				+950°C	■	■	■	■	■
				+1000°C	■	■	■	■	■
				+1050°C	■	■	■	■	■
				+1100°C	■	■	■	■	■
				+1150°C	■	■	■	■	■
				+1200°C	■	■	■	■	■
				+1250°C	■	■	■	■	■
				+1300°C	■	■	■	■	■
				+1350°C	■	■	■	■	■
				+1400°C	■	■	■	■	■
				+1450°C	■	■	■	■	■
				+1500°C	■	■	■	■	■
				+1600°C	■	■	■	■	■
				+1700°C	■	■	■	■	■
				+1800°C	■	■	■	■	■

SW 1			SW 2	
Tmin	4	5	6	7
0°C	■	■	■	■
-10°C	■	■	■	■
-20°C	■	■	■	■
-30°C	■	■	■	■
-40°C	■	■	■	■
-50°C	■	■	■	■
-100°C	■	■	■	■
-150°C	■	■	■	■
-200°C	■	■	■	■
+50°C	■	■	■	■
+100°C	■	■	■	■
+150°C	■	■	■	■
+200°C	■	■	■	■
+250°C	■	■	■	■
+500°C	■	■	■	■

SW 2		
Output	6	7
0 - 10 V	■	■
0 - 20 mA	■	■
4 - 20 mA	■	■

Filter 8	
off	■
on	■

■ = on  
□ = off