

## Large Panel Displays 910E5-2021 and 920E4-2021

- Thermoelements B,C, D,E,G,J,K,L,N,R,S and T
- Pt100/1000, Ni100, 0/4..20 mA, 0..5/10 V, potentiom.
- Scalable display 5 digits 57 mm and 4 digits 100 mm
- Galvanically isolated output 0/4..20 mA, 0/10V
- 2 - 4 alarm relays
- Serial signal RS-485 and RS-232
- Linearity for process input < 0.01% of span
- Power supply 24 VDC
- Front panel protection IP54



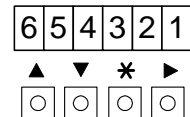
Large panel displays 910E5-2021 and 920E6-2021 are designed especially for thermocouples and the most common process inputs. In the mother card of the display there are three card slots, one for input signal and two for output signal, alarms or serial signals. By changing the input card the display can be changed to operate for other types of sensors, such as pulse (-2051) or strain-gauge sensors (-2041) etc. The change of the input card also changes the model number of the display. Each meter model has its own data sheet. There are plenty of additional optional cards available and they can be placed in any of the two card slots. For example if 4 alarm relays are needed, it is possible to choose 2 relay cards or 4 logic alarms in one card, so that the other card slot remains available for other outputs. When the input card is changed no recalibration is required, it is only the sensor settings and other corresponding ones that must be done bconfiguration keys. Power supply 24 VDC is galvanically

isolated from inputs and outputs. The meter generates 24 VDC, 40 mA power supply for sensors.

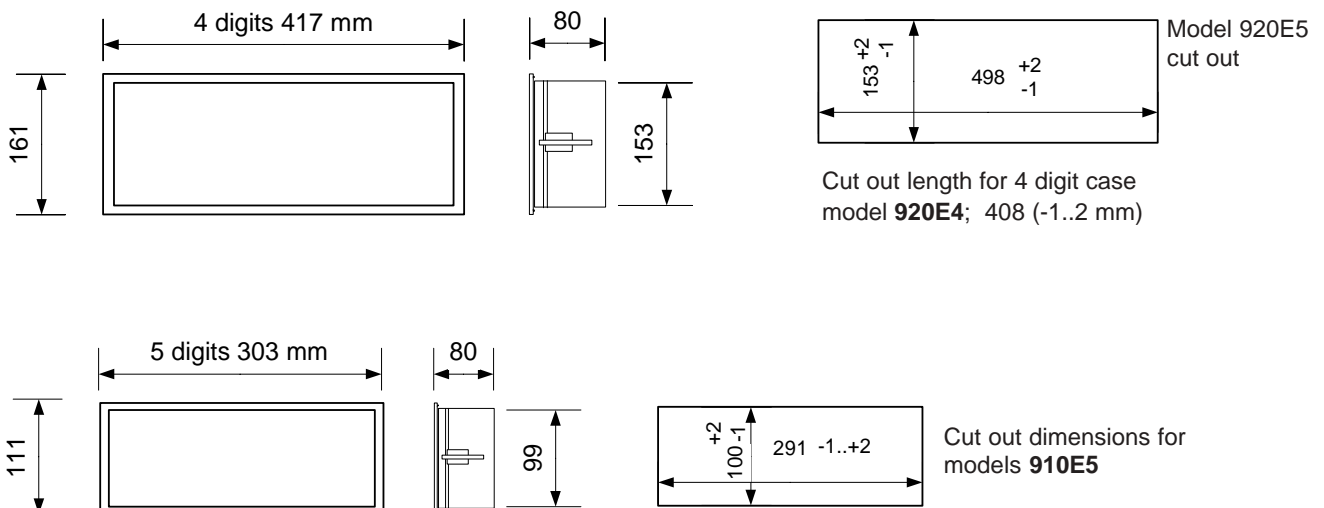
### Configuration keys of display

Display configuration is done by rear panel keys (4). Separate 6-digit minidisplay on the back helps in the task. Configuration is fast and easy to use because of the menu based programming procedure.

Four keys are used to select the input and scaling.



### Case dimensions for models 910E5-2021 and 920E4-2021:



# Technical specifications:

**Process inputs:** 0/4..20 mA, 0..5/10 V, -10..+10 V  
 Display scaling On whole display range  
 Input resistance current input 50 Ω, voltage input >1 MΩ  
 Accuracy 0.02% FS  
 Linearity 0.005% FS  
 Sensor supply 24 VDC, max. 40 mA

**RTD-sensors:** Pt100 3- and 4-wire, (Pt1000, Ni100)  
 Measuring range -200..700°C (Pt100)  
 Measuring current 0.3 mA  
 Accuracy 0.05 % FS  
 Linearity error < 0.03°C (-200..700°C)

## Thermocouple inputs:

Type	Range and linearity	Linearity for limited range
E	-100.....900°C ±0.3°C	
J	-150.....900°C ±1°C	-50.....900°C ±0.3°C
K	-150.....1300°C ±0.5°C	
L	-100.....900°C ±0.5°C	
T	-150.....400°C ±0.2°C	
N	0.....1300°C ±0.2°C	
R	0.....1700°C ±1°C	400.....1700°C ±0.4°C
S	0.....1700°C ±1°C	300.....1700°C ±0.3°C
C (W5)	0.....2200°C ±0.4°C	400.....2200°C ±0.2°C
D (W3)	0.....2200°C ±1°C	500.....2200°C ±0.3°C
B	400.....1700°C ±0.3°C	
G (W)	1000....2200°C ±3°C	1000...1700°C ±0.5°C

Calibration accuracy <0.1 % of span or <1°C  
 Cold junction effect <0.05 °C /°C  
 Wire resistance effect <1kohm, no effects

**mV-inputs:** 25, 55, 100, 1000 and 2500 mV  
 Selectable scaling multiplier for span  
 Accuracy 0.02% of span, 0.05% of span < 100 mV  
 Input resistance <10 kΩ, no effect

**Potentiometer:** range 100..4 kΩ, connection 2-wire  
**Output:** 0/4..20 mA, max. load 700 Ω  
 0..10V, linearity 0.02 % FS  
 Output freely scaleable

**Alarms:** 2, 3 or 4 alarms, relays max. 240 V, 2 A  
 selectable hysteresis 0..100%,  
 automatic or manual reset  
 4 I/O ports, max. 60 VDC, 100 mA

**Serial output:** RS-232 and RS485 (multi drop)  
 Serial output only for measurement reading  
 Baud rate and address selectable

## General

Input filter Digital, freely selectable  
 A/D-converter 16 bit (64 000), unipolar or bipolar  
 Temperature effect 0.001°C/°C for voltage inputs  
 Front panel indicators Alarms 1..4, min. and max. value  
 Power 24VDC, max 10W  
 Consumption: max. 10 W

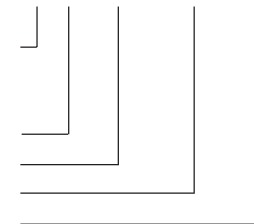
Display 910E5-2021 5-digit bright red LED, height 57 mm  
 Display 920E4-2021 4-digit bright red LED, height 100 mm,

## How to order:

### Model:

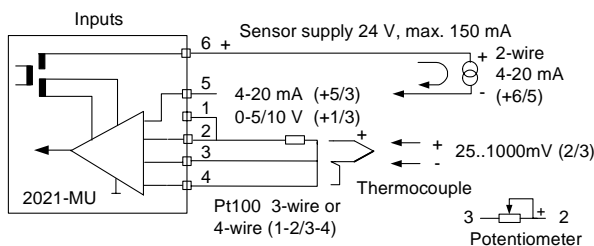
**910E5-2021-REL2-24VDC**

Digit size:  
 920 = 100 mm  
 910 = 57 mm  
 Number of digits: 4-5 digits  
 Input card 2021-IN  
 Optional cards (REL2)  
 Power supply 24 VDC

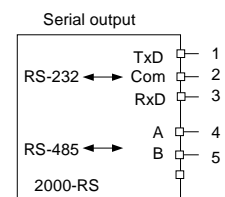
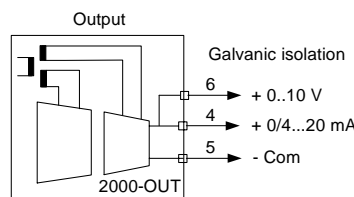


## Connections:

### Input and output cards



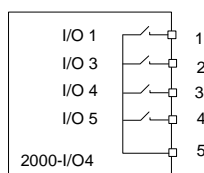
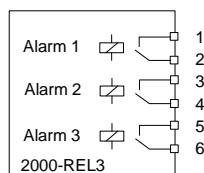
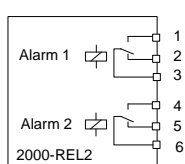
### Output cards for slot B (or C)



2000-OUT

2000-232/485

### Alarm cards for slot C (or B)



#### 2000-REL2

- 2 relays
- Change over contacts
- max. 230 VAC/ 2 A

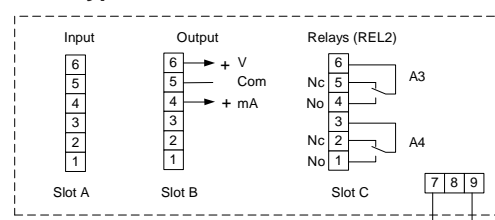
#### 2000-REL3

- 3 relays
- Change over contacts
- max. 230 VAC, 2 A

#### 2000-I/O4

- 4 I/O-ports
- 60 V, 100 mA
- Selectable direction
- Common ground

### 2021 typical combination



Slot A is for sensor input and slots B and C for optional cards.

Power supply 24 VDC