

**FUNCTIONAL DESCRIPTION**

OF

**DMC400 and DMT400**

4 -Digit LED Microprocessorbased Panel instrument  
With 2 relay outputs

Dimensions: 48 X 96mm. according to DIN 43700.

# FUNCTION 4-DIGIT CONTROLLER

## NORMAL MODE:

Display shows the input according to the calibration.

LED, relay 1: Shows the status of relay 1.

LED, relay 2: Shows the status of relay 2.

LED "ON" = relay "ON".

Key-functions:

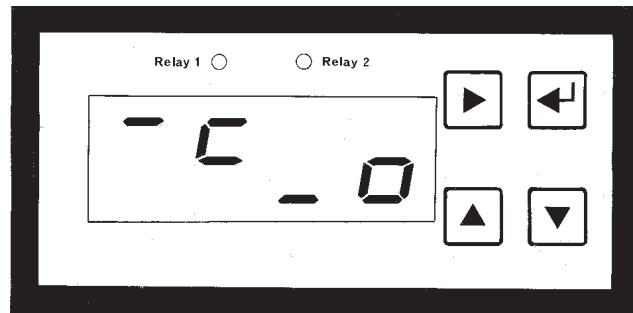
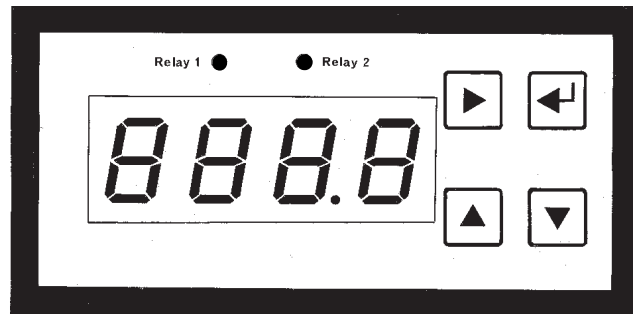
"▲" : LED test.

"▼" : Show relay functions.

"◀": 1. pressure: Shows set point 1.  
2. pressure: Shows set point 2.

"◀" + "▶" for 3 secs.:  
PROGRAMMING OF SET POINTS AND  
HYSTERESIS'S.

"▲" + "▼" + "▶" for 3 secs.:  
PROGRAMMING OF OTHER  
FUNCTIONS.



Relay(1)  
MAX NC

Relay(2)  
MIN NO

# FUNCTION 4-DIGIT CONTROLLER

## PROGRAMMING OF SET POINTS AND HYSTERESIS'S:

In NORMAL MODE you push "←" + "→" for 3 secs.  
The programme version is showed until the keys are caught.

Display, until keys are released after max. 3 secs.  
"Relay 1" flashes.

After this set point 1 is showed.  
"Relay 1" flashes.

Set point 1 is changed with "▲" or "▼"

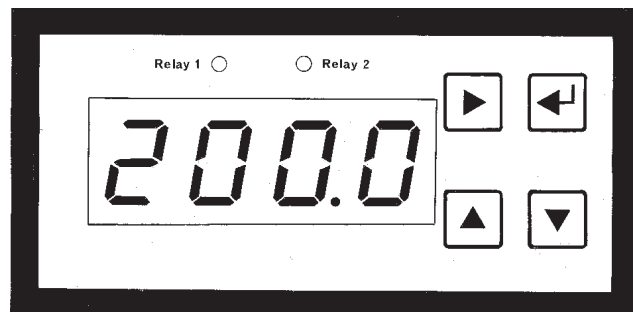
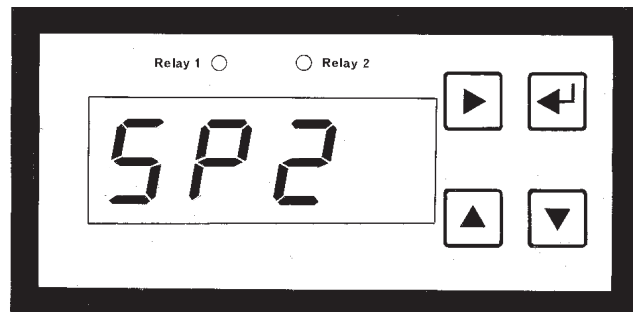
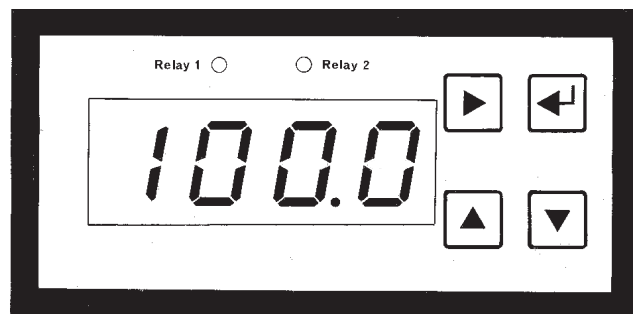
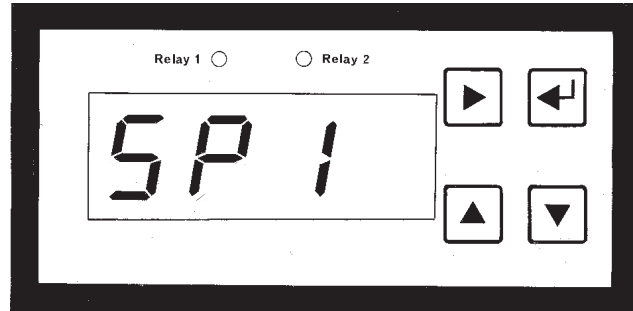
"←" saves set point 1 and proceeds to set point 2.  
"→" saves nothing but proceeds to set point 2.

Display, until "←" or "→" is released after max. 3 secs.  
"Relay 2" flashes.

After this set point 2 is showed.  
"Relay 2" flashes.

Set point 2 is changed with "▲" or "▼"

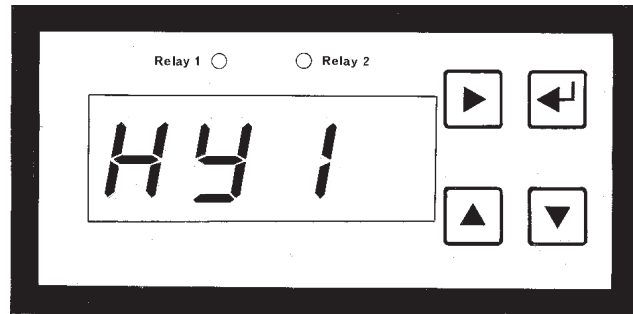
"←" saves set point 2 and proceeds to hysteresis 1.  
"→" saves nothing but proceeds to hysteresis 1.



## FUNCTION 4-DIGIT CONTROLLER

Display, until "" or "" is released after max. 3 secs.

"Relay 1" flashes.



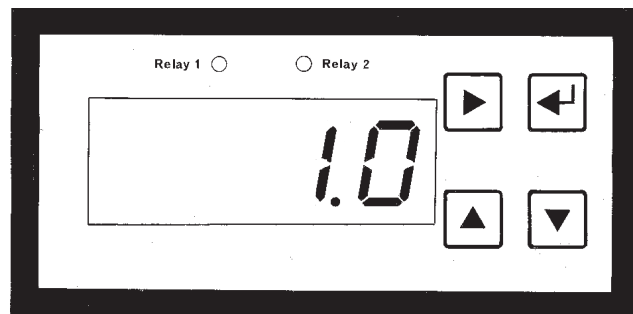
After this hysteresis 1 is showed.

"Relay 1" flashes.

Hysteresis 1 is changed with "" or ""

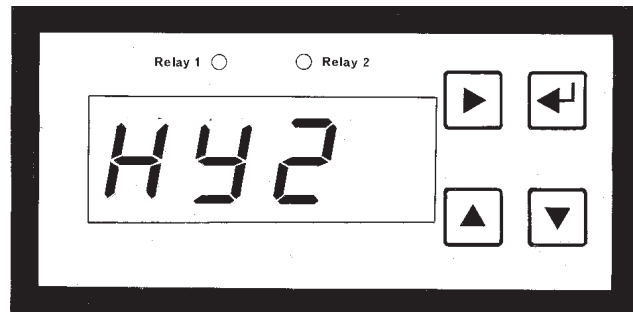
"" saves hysteresis 1 and proceeds to hysteresis 2.

"" saves nothing but proceeds to hysteresis 2.



Display, until "" or "" is released after max. 3 secs.

"Relay 2" flashes.



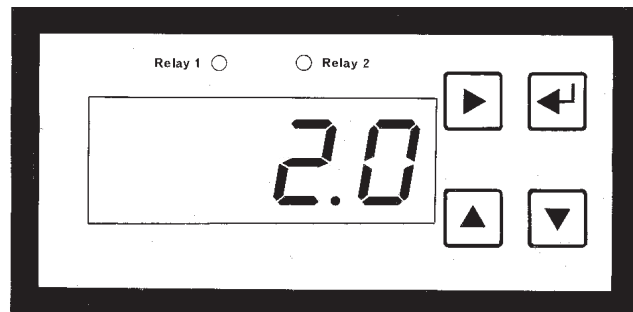
After this hysteresis 2 is showed.

"Relay 2" flashes.

Hysteresis 2 is changed with "" or ""

"" saves hysteresis2 and returns to NORMAL MODE.

"" saves nothing but returns to NORMAL MODE.



# FUNCTION 4-DIGIT CONTROLLER

## PROGRAMMING OF OTHER FUNCTIONS:

In NORMAL MODE "**▲**" + "**▼**" + "**▶**" are pushed for 3 secs.  
The programme version is showed until the keys are "caught".

Display shows relay functions.

"**▲**" chooses the function for relay 1 in 4 steps.

"**▼**" chooses the function for relay 2 in 4 steps.

"**◀**" saves relay functions and proceeds to scale ZERO.

"**▶**" saves nothing but proceeds to scale ZERO.

Display, until "**◀**" or "**▶**" is released after max. 3 secs.

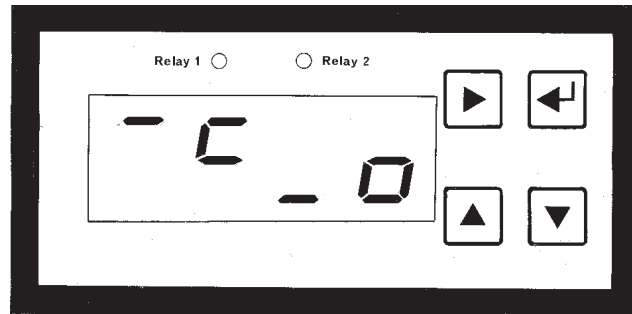
After this the actual ZERO is showed.

ZERO is changed with "**▲**" or "**▼**"

"**◀**" saves ZERO and proceeds to scale FSD\*.

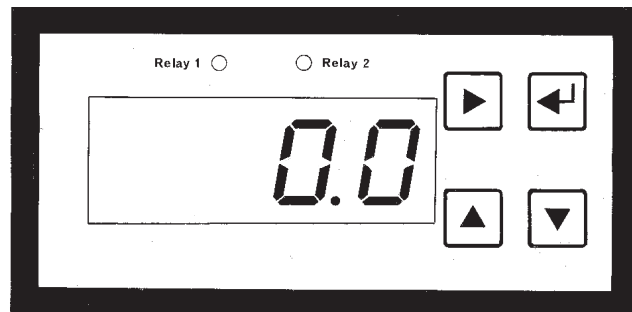
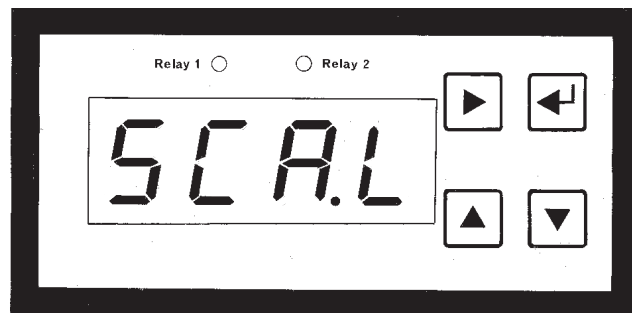
"**▶**" saves nothing but proceeds to scale FSD.

\*FSD: Full Scale Display.



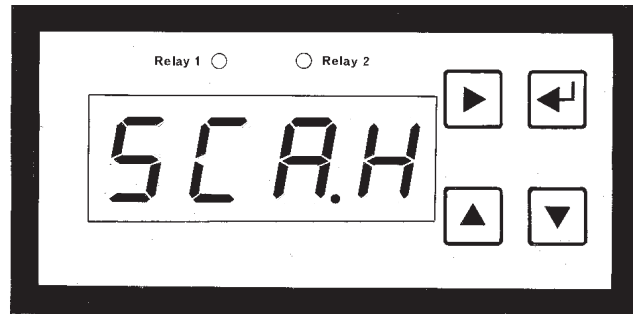
Relæ(1)  
MAX NC

Relæ(2)  
MIN NO



## FUNCTION 4-DIGIT CONTROLLER

Display, until "←" or "→" is released after max. 3 secs.

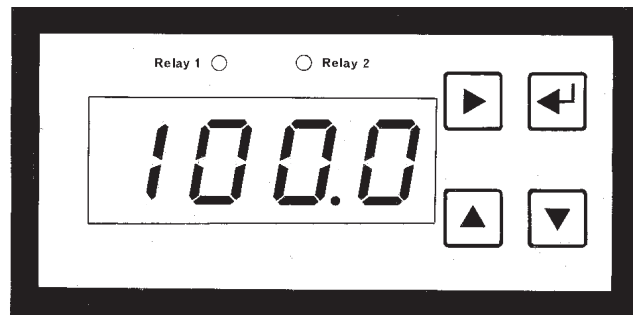


After this the actual FSD is showed.

FSD is changed with "▲" or "▼"

"←" saves FSD and proceeds to the placing of decimal point.

"→" saves nothing but proceeds to the placing of decimal point.

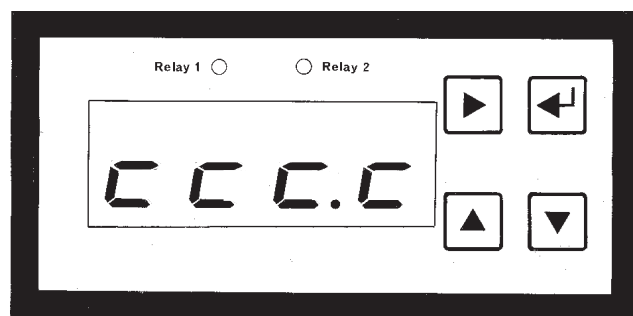


Display, until "←" or "→" is released after max. 3 secs.

The placing of the point is changed with "◉" or "▼"

"←" saves the placing of the point and proceeds to sampling time.

"→" saves nothing but proceeds to sampling time.



# FUNCTION 4-DIGIT CONTROLLER

Display, until "←" or "→" is released after max. 3 secs.

After this the actual sampling time is showed.

The sampling time is changed with "▲" or "▼"

"←" saves the sampling time and proceeds to delay on operate time (relay 1).

"→" saves nothing but proceeds to delay on operate time (relay 1).

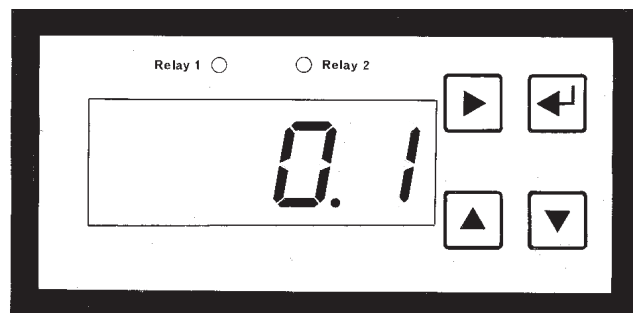
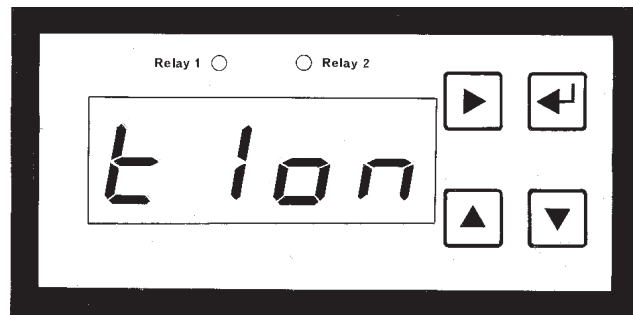
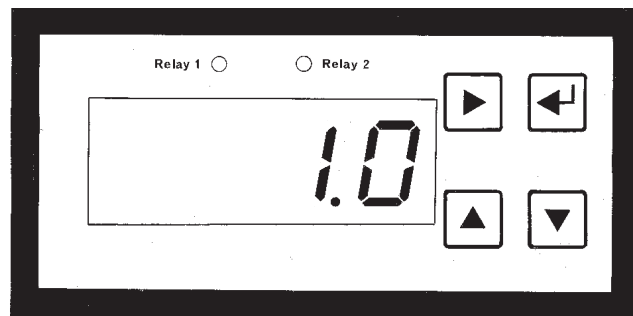
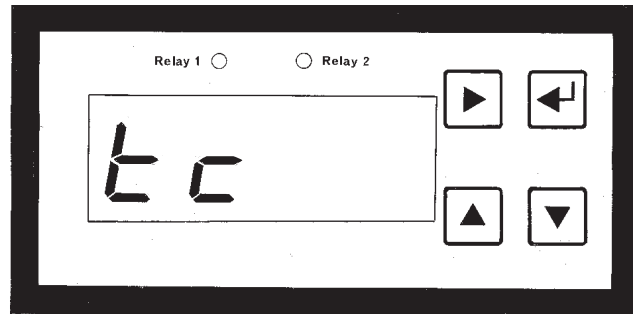
Display, until "←" or "→" is released after max. 3 secs.

After this the actual delay on operate time (relay 1) is showed.

Delay on operate time (relay 1) is changed with "▲" or "▼"

"←" saves the delay on operate time (relay 1) and proceeds to delay on release time (relay 1).

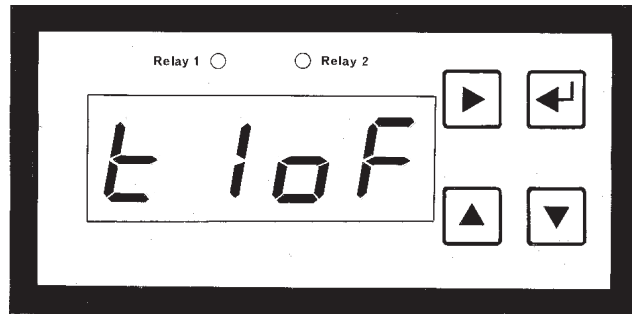
"→" saves nothing but proceeds to delay on release time (relay 1).



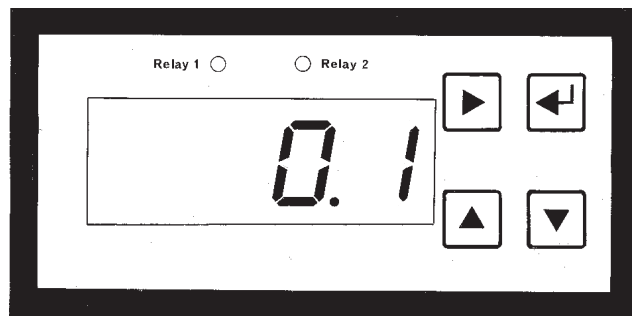
## DIGITAL CONTROLLER

## FUNCTION 4-DIGIT CONTROLLER

Display, until "←" or "▶" is released after max. 3 secs.



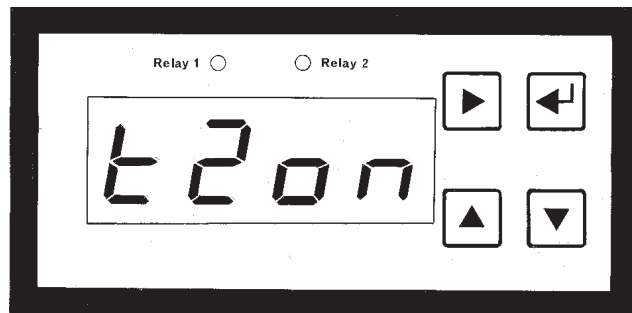
After this the actual delay on release time (relay 1) is showed.



Delay on release time (relay 1) is changed with "▲" or "▼"

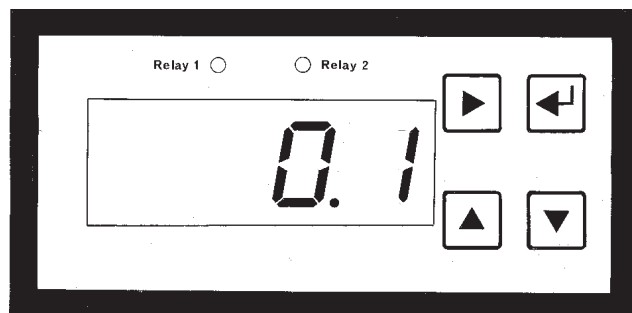
"←" saves the delay on release time (relay 1) and proceeds to delay on operate time (relay 2).

"▶" saves nothing but proceeds to delay on operate time (relay 2).



Display, until "←" or "▶" is released after max. 3 secs.

After this the actual delay on operate (relay 2) is showed.



Delay on operate time (relay 2) is changed with "▲" or "▼"

"←" saves the delay on operate time (relay 2) and proceeds to delay on release time (relay 2).

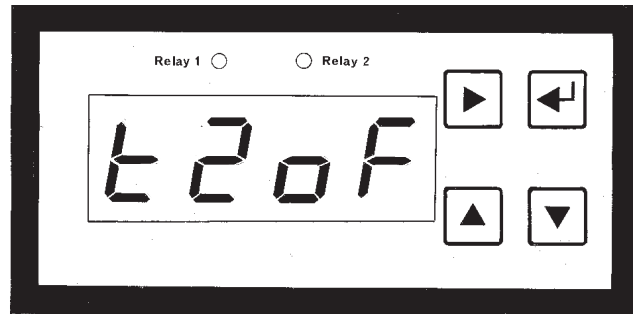
"▶" saves nothing but proceeds to delay on release time (relay 2).

## DIGITAL CONTROLLER

## FUNCTION 4-DIGIT CONTROLLER

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Display, until "←" or "→" is released after max. 3 secs.

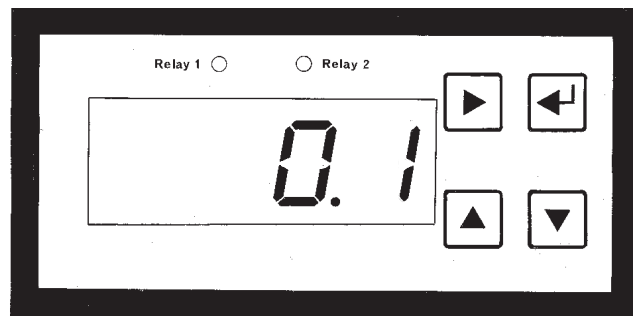


After this the actual delay on release time (relay 2) is showed.

Delay on release time (relay 2) is changed with "▲" or "▼"

"←" saves the delay on release time (relay 2) and returns to NORMAL MODE.

"→" saves nothing but returns to NORMAL MODE.



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### GENERAL INFO. FOR PROGRAMMING:

You can leave the programming by pushing the "→" key for 5 secs.

If the keys are not activated for 1 min., the module will automatically return to NORMAL MODE.

**For the instrument DMT400 SCA.H and SCA.L is programmed from factory.**

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## DIGITAL CONTROLLER

# FUNCTION 4-DIGIT CONTROLLER

## TECHNICAL SPECIFICATIONS

<b>Supply</b>	12 -48V AC/DC <sup>1</sup> 24 / 48V DC <sup>2</sup> 24 / 48 / 110 / 220V AC <sup>3</sup>
<b>Power consump- tions</b>	1 VA
<b>Isolation</b>	4kV AC (IEC class II)
<b>Display</b>	4 digit LED, height 13,5mm.
<b>Range</b>	-1999-0-9999
<b>*Accuracy</b>	0,1 % FSD +/- 1 digit
<b>Output</b>	2 relay outputs
<b>Operating temperature</b>	-10-+50°C
<b>Front size</b>	48 x 96mm.
<b>Cutting size</b>	43 x 91mm.
<b>Weight</b>	350g.
<b>Terminals</b>	1,5mm. plug-in screw terminals.

\* For AC Current / Voltage, 0,3% FSD +/- 1 digit

<sup>1</sup> No isolation between supply and input

<sup>2</sup> Isolation 500V AC

<sup>3</sup> Isolation IEC class II, 4kV AC

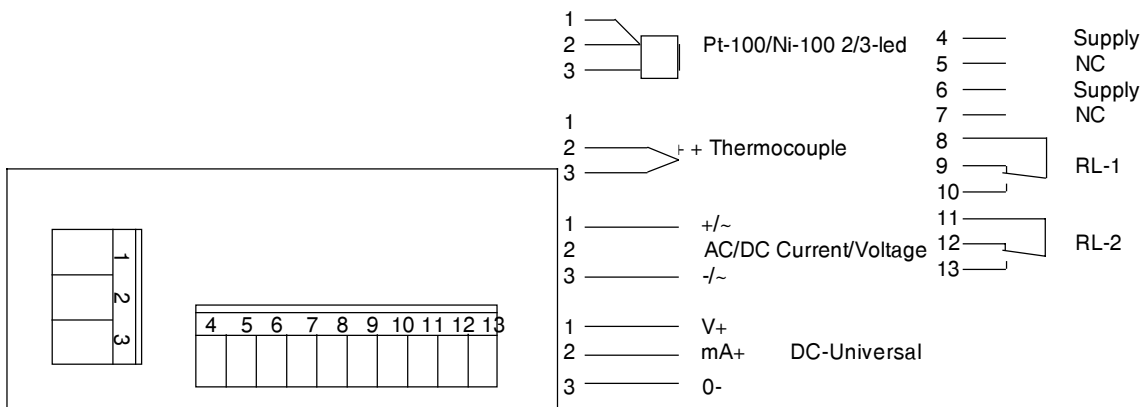
## INPUT

<b>TEMPERATURE:</b>	<b>DMT400</b>	
<b>Pt-100/Ni-100</b>	-50,0-300,0°C	-50-800°C
<b>Thermocouple</b>	<b>J</b> FeCo	0-1400°C
	<b>K</b> NiCr-Ni	0-1400°C
	<b>S</b> PtRh-Pt 10%	0-1800°C
	<b>R</b> PtRh-Pt 13%	0-1800°C
<b>VOLTAGE/CURRENT:</b>	<b>DMC400</b>	
<b>Current DC</b>	0-60mV (ext. shunt) 0-200,0mA 0-5,000A	
<b>Current AC</b>	0-200,0mA 0-5,000A	
<b>Voltege AC / DC</b>	0-19,99V 0-100,0V 0-500,0V	
<b>DC Universal</b>	0-20mA / 0-10V	

Above-mentioned are standard ranges.

Speical ranges can be made on request.

## CONNECTION DIAGRAM



KTES21007