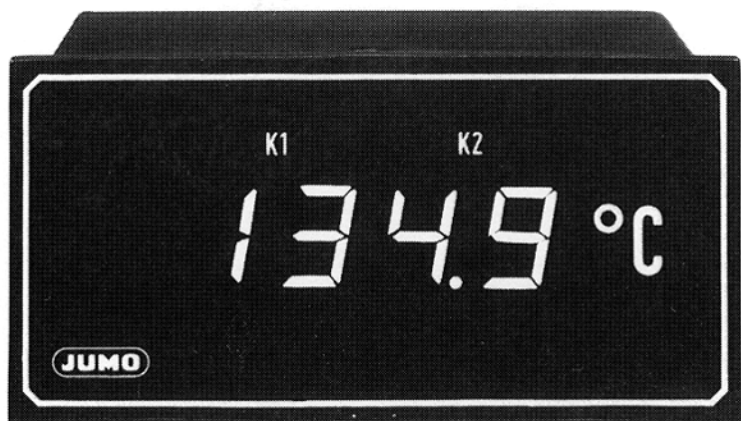


## Digital indicator with linearisation



Type PDA.-48m/umf

All necessary settings and, where appropriate, alterations are described in these Operating Instructions. If, however, any difficulties should arise during start-up, please do not carry out any manipulations on the instrument which are not permitted. You could endanger your rights under the instrument warranty. Please contact the nearest office or the main factory.

### D 91.310.1

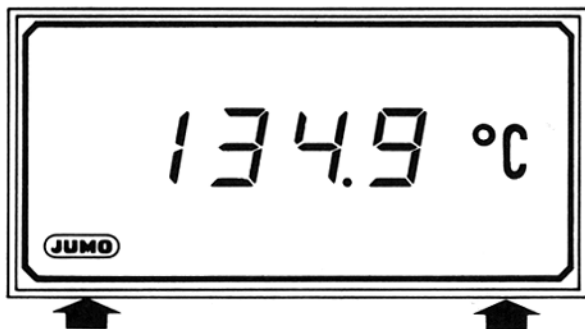
6.91/V

## Operating Instructions

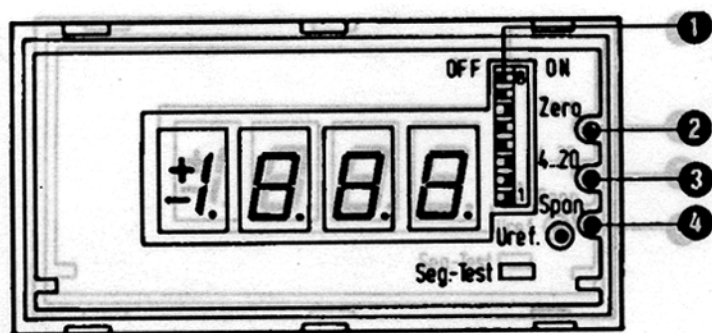
## ADJUSTMENTS INSIDE THE INSTRUMENT

### Opening the instrument

The indicator offers a large number of possible adjustments. They can be made after removing the front panel by inserting a screwdriver into the two cut-outs at the bottom left and right and levering out the panel.



Indicator with front panel removed

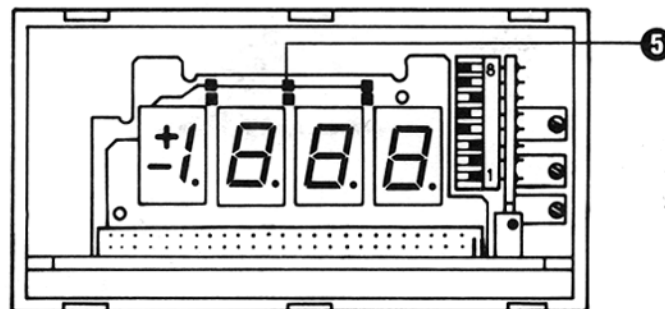


- 1** Switches S1, S2, S3 and S4 for selection of input signal  
Switches S5 and S6 for selection of range span  
Switches S7 and S8 for selection of range shift
- 2** Trimmer for start of range 0 mA/0 V
- 3** Trimmer for start of range 4 mA
- 4** Trimmer for end for range 20 mA/10 V

## ADJUSTMENTS INSIDE THE INSTRUMENT

### Adjusting the decimal point

Indicator with front panel and cover removed



**5** Links for decimal point adjustment

The decimal point can be changed by making or opening the appropriate solder link according to the table alongside. The factory setting depends on the order specification.

1		1.888
2		18.88
3		188.8
		1888

# ADJUSTMENTS INSIDE THE INSTRUMENT

## Adjustment for the input signal

The required selection of the input signal is made with the DIL switches ① S1, S2, S3 and S4; the range with the switches S5 and S6; the range shift with the switches S7 or S8; all according to the table below. The trimmers ② or ③ for the start and ④ for the end provide for fine adjustment.

Input signal	Switch setting			
	S1	S2	S3	S4
0-10 V	OFF	OFF	OFF	OFF
0-20 mA	ON	ON	ON	OFF
4-20 mA	ON	ON	OFF	ON
Span	S5	S6		
1000 digit	OFF	OFF		
2000 digit	ON	OFF		
3000 digit	OFF	ON		
4000 digit	ON	ON		
Range shift	S7	S8		
-2000 digit	OFF	OFF		
-1000 digit	ON	OFF		
+1000 digit	OFF	ON		
+2000 digit	ON	ON		

### Example:

Range of input current: 0 - 20 mA

Indication: -1000 to 1000

Span: 2000 digit

Range shift: -1000 digit

1. Setting the input signal  
Switch S1 = ON, S2 = ON, S3 = ON, S4 = OFF
2. Setting the span  
Switch S5 = ON, S6 = OFF
3. Setting the range shift  
Switch S7 = ON, S8 = OFF
4. Set current source (e.g. DGM-85) to 0 mA and adjust start of range to -1000 with the trimmer ②.
5. Set current source to 20 mA and adjust end of range to 1000 with the trimmer ④.
6. Re-check start and end of range and re-adjust if necessary.

# INFORMATION ON THE INSTRUMENT

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## Identify the instrument type

Check the instrument type on the label in accordance with the type designation and extra Codes listed below.

### Type designation

PDA-48m/umf Modular digital indicator with analogue output and range structure selected from the front, for signals  
0-20 mA, 4-20 mA  
or 0-10 V

### Ordering example

PDA - 48 m / umf  
| | | |  
Digital indicator with analogue output  
| |  
bezel 96x48 mm  
|  
modular design  
range selection from the front  
for standard signals  
0-20mA, 4-20mA or 0-10V

### Extra Codes

DC	supply 12 or 24 V d.c.
AC	supply 24 or 42 V a.c.
IA	analogue output
020	0-20 mA
420	4-20 mA
010	0-10 V
u24	supply output 24 V 30 mA for 2-wire transmitters

specify in full

### Standard accessories

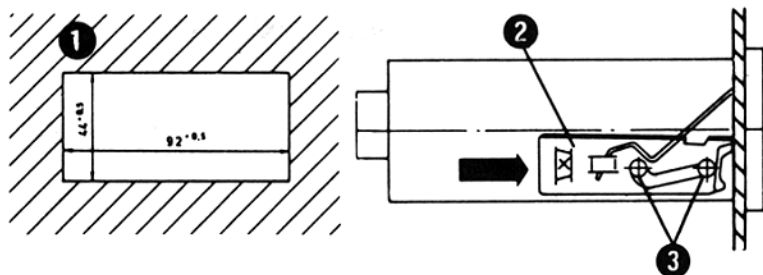
2 Mounting brackets  
to DIN 43 835 Form A  
1 Operating Instructions

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# INSTALLATION

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Insert the instrument from the front into the panel cut-out **1**. Slide the two mounting brackets **2** at the sides over the conical pins **3** on the left and right side of the case and press them from the back against the panel until the brackets engage. The indicator will operate correctly within the ambient temperature range 0 to 55°C at a relative humidity not exceeding 75%.



## Electrical connection

The electrical connection of the indicator is made through faston connectors to DIN 46 244/A 6.3 x 0.8 mm in accordance with the circuit diagram. The appropriate VDE or local regulations have to be observed.

## Fault indication

- underrange -1.... display dark
- overrange 1.... display dark

# CONNECTION DIAGRAM

Connection for	Code	Terminals	Diagram
Supply as on label Loading 7 VA max.		1 L1 line 1U 2 L1 line 2U a.c. supply N neutral  L+ d.c. supply L-	<p>The diagram shows two sets of terminals. The top set consists of three terminals labeled N, 2 L1, and 1 L1, each with a downward-pointing arrow. The bottom set consists of two terminals labeled L+ and L-, each with a downward-pointing arrow.</p>
Current or voltage d.c.	umf	11 + 12 -	<p>The diagram shows two terminals, 11 and 12, each with a downward-pointing arrow. Terminal 11 is marked with a '+' sign. Between the two terminals, there is a label 'Ix' and 'Ux' with a horizontal line connecting them.</p>
Analogue output	IA...	31 + 0-20 mA burden 750 Ω max. 32 - 4-20 mA burden 750 Ω max. 0-10 V burden 2 kΩ min.	<p>The diagram shows two terminals, 31 and 32, each with a downward-pointing arrow. Terminal 31 is marked with a '+' sign. A circle with a tilde symbol (~) is connected between terminals 31 and 32, representing a load.</p>
Display hold		17 external contact 18	<p>The diagram shows two terminals, 17 and 18, each with a downward-pointing arrow. A switch symbol is connected between terminals 17 and 18.</p>
Additional supply output	u24	81 + 24 V, 30 mA 82 -	<p>The diagram shows two terminals, 81 and 82, each with a downward-pointing arrow. Terminal 81 is marked with a '+' sign. A circle with a tilde symbol (~) is connected between terminals 81 and 82, representing a load.</p>