

Digital Display dem-27, dem-37, dem-37-pt

General Function

Digital displays **dem-27-gs** and **dem-37-...** have been designed to measure and display industrial measured variables. The digital displays are supplied with a supply voltage of 24V DC and can be adapted to the respective input signal (0-20, 4-20mA or 0-10V) by means of plug-in jumpers which are located at the back of the display. The display's wide range can be assigned to the chosen input. Display **dem-37-pt** includes a Pt100-input (3- or 4-wire) and is therefore used as temperature indicator.

The 3 1/2-digit 7-segment display has been fitted into a DIN-standard housing and is protected by a filter screen which is almost free from reflexions.

Features

- space-saving structural shape
- measurement input freely adjustable
- zero and gain freely adjustable
- decimal point adjustable
- supply voltage 24V DC, decoupled
- on request: printing of unit of measurement
- printing of individual company's name possible
- plug-in terminal blocks



dem-37-gs



dem-27-gs

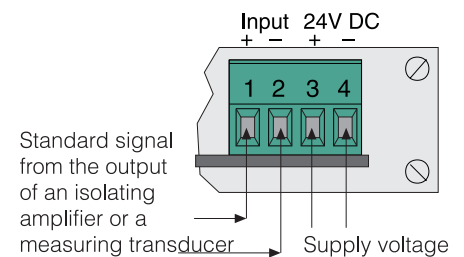
Specification

Housing	dem-27-gs	72x24x75mm ³	
	Cutout size	Opening 66x21,5mm, Tol.-0,5mm	
	dem-37-(gs/pt)	72x36x75mm ³	
	Cutout size	Opening 66x33mm, Tol.-0,5mm	
Fixing		2 side mounting clips	
Type of protection	front / rear	IP54/IP20 (IP65 on request)	
Ambient temp.	Working temp.	0...+50°C	
	Storing temperature	-20...+70°C	
	Humidity	0...95% no condensate	
Input	Current	0/4-20mA	R _i =50Ω
	Voltage	0-10V	R _i =100kΩ
	Voltage	0-1V	R _i =10kΩ
Pt100-Input	dem-37-pt3/pt4	Range -100...+200°C, 3- or 4-wire	
Accuracy	Display	±0,1% ±1Digit	
Display	7-segment	-1999...+1999, 13mm height	
	Range	can be chosen individually	
Supply voltage	DC	24V DC ±10% max. 0,15A	

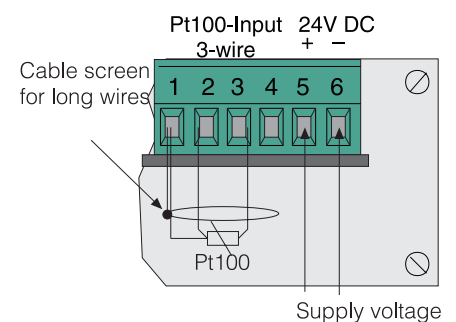
Product Type and Designation

Size / Input	0/4-20mA, 0-10V	Pt100, 3-wire	Pt100, 4-wire
72x24x75mm ³	dem-27-gs	—	—
72x36x75mm ³	dem-37-gs	dem-37-pt3	dem-37-pt4

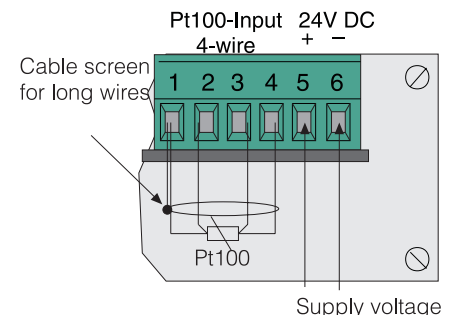
Connection dem-27-gs, dem-37-gs



Connection Diagram dem-37-pt3



Connection Diagram dem-37-pt4



Trimmer

Type	Function	Setting Range
N	zero point	±500 Digit
V	gain	80...120 Digit / mA

Functions Jumper

Type	Function	Setting
N-	zero offset negative	-1999...-310
N+	zero offset positive	+310...+1999
V1	decreasing of gain, factor 10	Trimmer V x0,1
V3	increasing of gain, factor 1.5	Trimmer V x1,5
V4	increasing of gain, factor 10	Trimmer V x10
S1	plugged at input	0-1V, 0/4-20mA
S2	plugged at current input	0/4-20mA
DP1	decimal point tens digit	100,0
DP2	decimal point hundreds digit	10,00
DP3	decimal point thousands digit	1,000

Set-up and Calibration with dem-27-gs und dem-37-gs

1. Remove plug-in jumpers N- and N+.
2. Put DP-jumper decimal point at desired place.
3. Apply input signal 0V/0mA.
4. Using trimmer „N“ set output to „000“.
5. Choose desired input and output range from opposite table and plug-in of jumpers.
6. Feed maximum input signal (20mA,16mA with 4-20mA input, 10V, 1V).
7. Using trimmer „V“ set display to the desired display range (full scale less initial value).
8. Feed zero signal (0V/0mA, 4mA with 4-20mA-input).
9. Using trimmer „N“ set display to desired beginning of display range. (if necessary plug in N+ resp. N-)

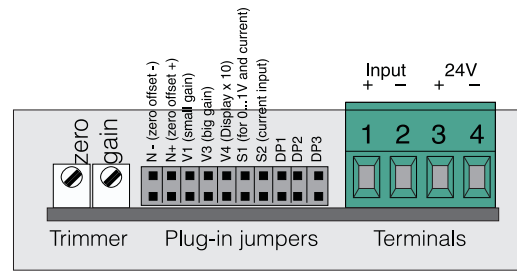
Calibration dem-37-pt3 and dem-37-pt4

With these displays no calibration necessary!

Setting Examples (see diagram)

1. Input **4-20mA** = Display **0-100,0%**
 - plug in of jumper DP1
 - feed 0mA, set display to „00,0“
 - plug in of jumpers V1, S1, S2 (table plug-in jumpers)
 - feed 16mA, set display to „100,0“ with „V“
 - feed 4mA, set display to „00,0“ with „N“
 - check correct function
2. Input **-5V...+5V** = Display **0-15,00**
 - plug in of jumper DP2
 - feed 0V, set display to „00,0“
 - plug in of jumper V1 (table plug-in jumpers)
 - feed 10V, set display to „15,00“ with „V“
 - feed -5V, set display to „00,0“ with „N“
 - check correct function
3. Input **0-10mA** = Display **500-1999**
 - no plug-in of jumper DP
 - feed 0mA, set display to „00,0“
 - plug in of jumpers S1, S2 (table plug-in jumpers)
 - feed 10mA, set display to „1499“ with „V“
 - feed 0mA, set display to „500“ with „N“
 - check correct function

dem-27-gs and dem-37-gs back view



dem-37-pt3 and dem-37-pt4 back view

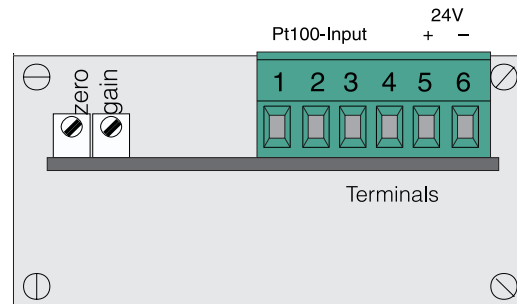


Table Configuration of Plug-in Jumpers

Input	Display Range V-Trimmer	Plug-in Jumpers						
		N-	N+	V1	V3	V4	S1	S2
0-20mA	90...1800	-	-	x	-	-	x	x
	1600... 1999	-	-	-	-	-	x	x
4-20mA = (0-16mA)	70...1400	-	-	x	-	-	x	x
	1300...1999	-	-	-	-	-	x	x
0-10V	90...1800	-	-	x	-	-	-	-
	1600...1999	-	-	-	-	-	-	-
0-1V	90...1800	-	-	x	-	-	x	-
	1600...1999	-	-	-	-	-	x	-

Diagram

