

mV TRANSMITTER



- Load cell amplifier
- mV to current / voltage conversion
- Front-programmable / LED display
- Relative calibration of input span
- NPN / PNP input for external taring
- Supply for standard transducers



SUPPLY:	
Supply voltage:	24 VDC
Transducer supply:	5...13 VDC
INPUT RANGE:	
Measurement range:	-40...100 mV
Taring input:	PNP/NPN/front key
OUTPUT RANGE:	
Current output:	0...20 mA
Voltage output:	0...10 V

Applications: Tank filling and draining
Weighing with a taring function
Measurement of cable tensile force
Level control
Signal conversion / amplification

The 2261 converts bipolar mV signals from transducers supplied directly by the module to standard current / voltage signals. ● The 2261 is suitable for load cell applications. ● By way of the relative calibration function the scale can be tared, i.e. 0% and 100% calibrated without the need of the equivalent load. ● By way of the taring function the measured range is set to either 0% when filling or 100% when draining.

Technical characteristics:

In general:

The 2261 is microprocessor-controlled and basic-calibrated meaning that input and output can be programmed acc. to the requested signal range without any re-adjustment. This guarantees high accuracy and flexibility. The user interface consists of a 3-digit display and 3 front function keys which are used for taring or change of input / output signal range.

Inputs:

Analogue input:

The analogue input can be programmed for voltage in the range -40...100 mVDC with a min. span of 10 mV and max. offset of 70% of max. mV value.

A percentage overrange of the selected measurement range can be defined, thereby making the unit react to an mV input outside the selected 0% and 100% range. The display will show the input percentage.

The output must be scaled in such a way that the selected overrange is within the allowed output signal range.

Digital input:

The digital signal can be selected as either NPN (short circuit to gnd.) or PNP (+24 VDC).

Taring:

Taring can either be by way of the digital input or from the front. At 0% taring, the analogue input will show 0% after taring. At 100% taring, the analogue input will show 100% after taring, corresponding to tara + net weight = gross weight.

The analogue input span is not changed but is kept relative to the new offset value.

The taring function can be disabled at the front.

Standard current / voltage output:

The analogue output can be programmed to current in the range 0...20 mA or voltage in the range 0...10 VDC with a min. span of 5 mA or 250 mVDC with max. offset of 50% of the selected max. value. By short-circuiting pins 2 and 3, the voltage signal is available between pins 2 and 1.

For voltage signals in the range 0...1 VDC, a 50 Ω shunt (DP 2-1) is applied; in the range 0...10 VDC, a 500 Ω shunt (DP 2-2) is applied.

When both voltage and current signals are used simultaneously, the mA loop must go to ground through the internal shunt.

Front error LED:

At an incorrect output, the red LED will flash, e.g. at overrange saturation.

Transducer supply:

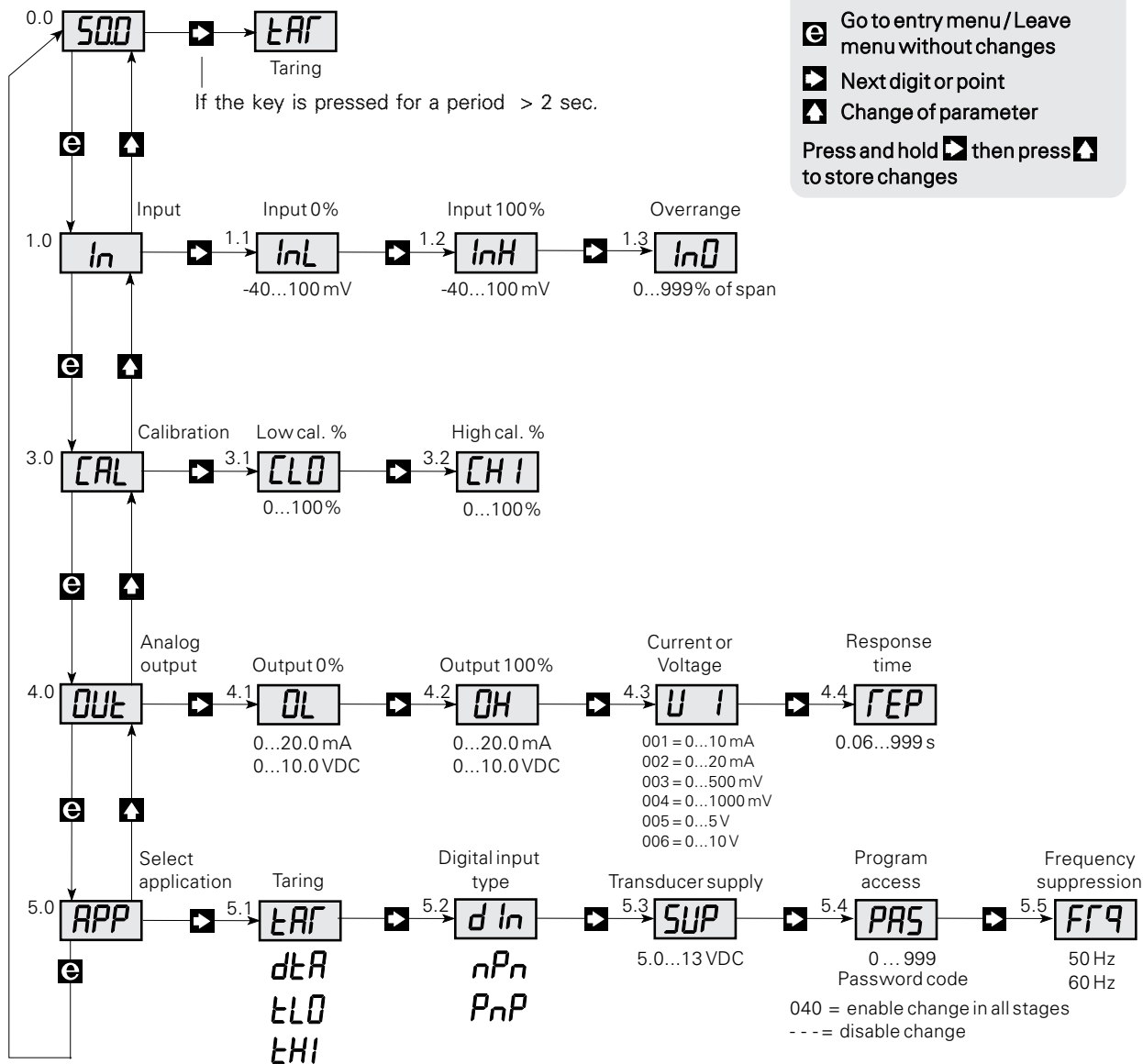
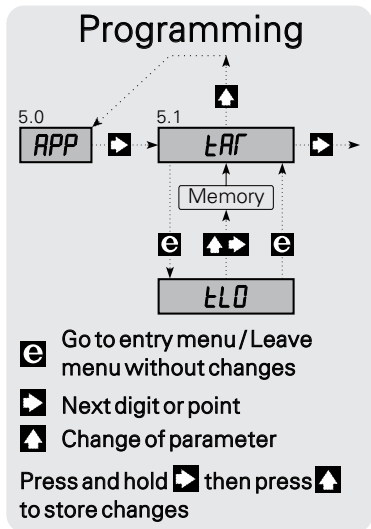
Front-programmable to 5...13 VDC. The supply is short circuit-protected and has a max. load of 230 mA (e.g. 6 parallel 350 Ω load cells).

Sense:

When the transducer supply is applied, the sense input can be used for compensation for cable resistance to the transducer.

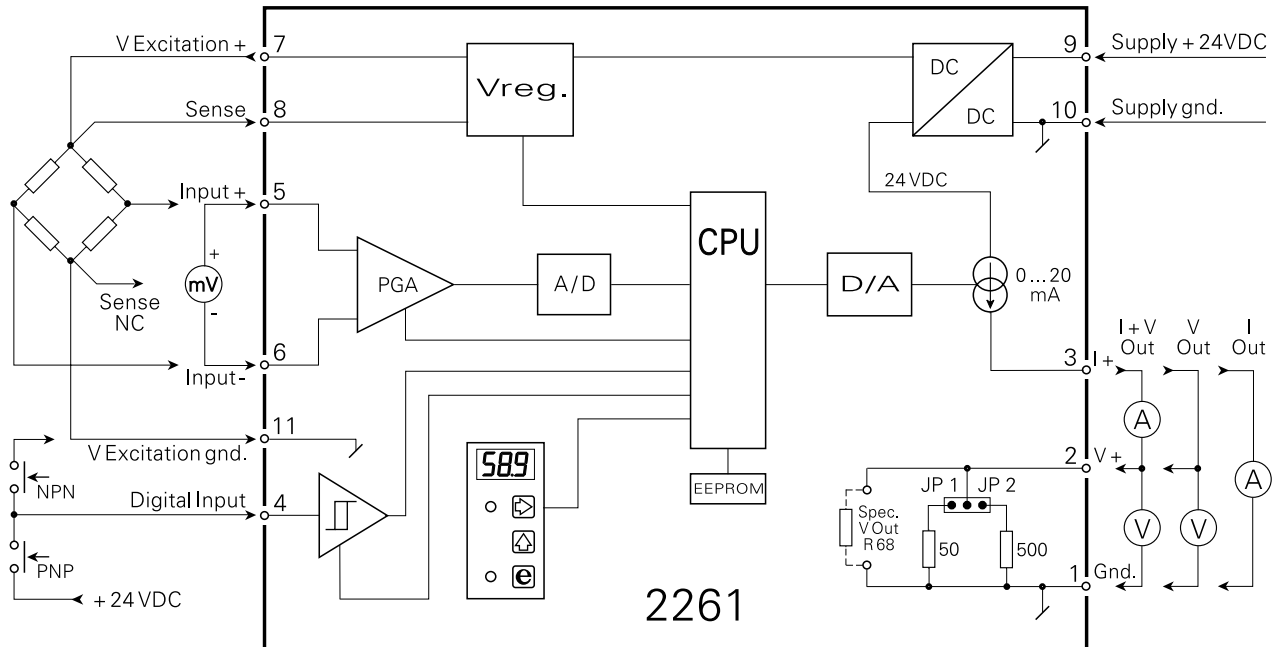
Routing diagram

If no buttons are pressed for a period of 2 minutes, display returns to stage 0.0

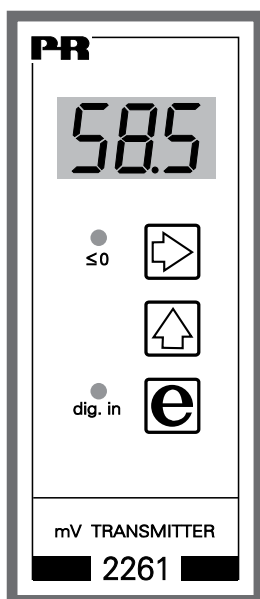


Order: 2261

Block diagram:



Front layout:



Hardware programming:

JP 1	JP 2	Output range	MENU 4.3
OFF	OFF	0...10 mA 0...20 mA	001 002
ON	OFF	0...500 mV 0...1000 mV	003 004
OFF	ON	0...5 V 0...10 V	005 006

Electrical specifications:**Specifications range:**

-20°C to +60°C

Common specifications:

Supply voltage..... 19.2...28.8 VDC
 Internal consumption..... 2.2 W
 Max. consumption..... 7.2 W
 Signal / noise ratio..... Min. 60 dB
 Signal dynamics, input 17 bit
 Signal dynamics, output..... 16 bit
 Updating time..... 20 ms
 Response time, programmable..... 0.06...999 s
 Calibration temperature..... 20...28°C
 Temperature coefficient..... < ±0.01% of span / °C
 Linearity error ≤ ±0.1% of span
 Effect of supply voltage change..... < ±0.002% of span/ %V

Auxiliary voltage:

Transducer supply 5...13 VDC
 Load (max.)..... 230 mA

EMC immunity influence < ±0.5% of span

Humidity < 95% RH (non-cond.)
 Dimensions (HxWxD)..... 80.5 x 35.5 x 84.5 mm
 Protection degree..... IP50
 Weight 130 g

Electrical specifications - Input:**mV input:**

Measurement range -40...100 mV
 Min. measurement range (span)..... 10 mV
 Max. offset..... 70% of selec. max. value
 Input in relation to supply gnd..... > -5 V and < +10 V
 Max. cable resistance per wire..... 15 Ω
 Suppression of
 transducer cable resistance > 300
 Input resistance > 10 MΩ
 Overrange..... 0...999% of selected
 measurement range

Digital input:

NPN Pull up 24 VDC / 6.9 mA
 PNP Pull down 0 VDC / 6.9 mA
 Trig level low < 6 VDC
 Trig level high..... > 10.5 VDC
 Pulse width..... > 30 ms

Electrical specifications - Output:**Current output:**

Signal range 0...20 mA
 Min. signal range (span) 5 mA
 Max. offset..... 50% of selec. max. value
 Load (max.)..... 20 mA / 600 Ω / 12 VDC
 Load stability < ±0.01% of span/100 Ω
 Current limit < 23 mA

Voltage output through internal shunt:

Signal range 0...10 VDC
 Min. signal range (span) 250 mVDC
 Max. offset..... 50% of selec. max. value
 Load (min.)..... 500 kΩ
 Voltage limit < 11.5 VDC

GOST R approval:VNIIM, Cert. no. www.prelectronics.com**Observed authority requirements: Standard:**

EMC 2004/108/EC EN 61326-1

Of span = Of the presently selected range