

Digital Process Transmitter



MP 25

- Full Digital Signal Processing with up to 20,000 divisions internal Resolution
- Supplies up to 4 Load Cells of 350 Ω
- Analogue output 0/4...20 mA, 0/2...10 V, fully galvanically isolated from supply
- Direct calibration and configuration via front keys without weights
- Configuration also via PC-Engineering Tool MP 25/10
- Supply voltage 230 V (24 V Option)
- Protection class IP 30, DIN-Rail or wall mounting

PRODUCT PROFILE

The MP25 series of Digital Process Transmitters is designed to combine reliable weight information from process vessels with extremely easy operation and setup. A wide range of strain gauge load cells can be connected and output is provided in the common 4...20 mA signal format.

Direct access to all configuration and operation levels via the front keys. The MP25/10 engineering tool provides the same level of access via a comfortable PC-Program.

DESCRIPTION

The transmitter is designed for the use in typical control cabinets. It combines convenient DIN rail mounting with the option for direct wall mounting in a very simple way.

Multiple instruments can be easily lined up in the cabinet and the full galvanical isolation of input circuit and the analogue output from the supply make the instrument especially easy and safe to integrate.

The direct-access front end interface and the optional PC-Tool MP25/10 make the instrument ideal for all applications where ease of use and a simple but effective data acquisition of weight values is required.

The built-in Zero-set function allows for simple adaptation of Zero to changing dead loads.

The standard input control circuit and the limit/alarm function can be combined and provide in conjunction with the built-in relay simple direct process control.

Pass word protection

User selectable pass code to prevent unauthorised access to parameters or zero set function.

Input circuit control

Continuous control of input circuit and input signal range.

Zero set function

To suppress changing dead loads via the front keys or an external switch.

Input signal filter

Intelligent first order low pass filter to suppress unwanted signal deviation caused by external disturbances. Adjustable time constant and tolerance band.

Signal changes that exceed the set tolerance band will by-pass the filter directly for speedy response.



TECHNICAL DATA

Input

Sensor input circuit and sensor supply galvanically isolated from supply voltage and output circuit.

Load cell supply

12 V_{DC} max. 150 mA ($\approx 80 \Omega$)
4-wire-circuit

Three user selectable input ranges:

-3 ... 23 mV, -11 ... 69 mV, 0 ... 160 mV
Resolution: appr. 20,000 div.

Smallest possible signal range (for digitising error: $\leq 0.1 \%$, $\pm 1d$):

2.5 mV, 9 mV, 15 mV

Measuring cycle: 100 ms

Output: direct or inverted

Range: -0.3 ... 23 mA (-0.15 ... 11.5 V)
Response time: appr. 600 ms
(for input change from 10 % to 90 %)

Load: 0 ... 700 Ω (optimal 350 Ω)
Load influence: $\leq 0.1 \%$ / 100 Ω
Resp. > 2k Ω (for Voltage output)

Alarm output:
configurable Relay for input circuit control and/or limit detection (user selectable)

Power rating: max. 250 V_{AC} 1 A
(min. 5 V, 0.1 A)

Display

4- digit, LCD 7 mm, display range
-9999 ... 0 ... 9999

LED green: on/off indication
LED red: indicates input control or active limits, flashes during active zero set function

Serial Interface:
RS 232C with active adapter for the Engineering Tool MP25/10

Supply

90 ... 265 V_{AC} 50/60 Hz, 7.7 VA
18 ... 32 V_{DC} / 24 V_{AC} (Option)

Environmental conditions

Nominal temperature range: 0 ... 55° C
Operation: -10 ... +60° C
Storage: -20 ... +70° C
Humidity: 90 % RH, non-condensing
Vibration acc. to DIN IEC 68-2-6/Fc and DIN 68.2.29/Eb

Conformity

Instrument complies with
EN 50081-1, EN 50082-2 and EN 61010-1 (VDE 0411-1)

Miscellaneous

Dimensions: 93 x 111 x 40 mm
Protection: housing /terminals IP30
Mounting: 35 mm DIN rail (DIN46277) or Wall mounting
All electrical connections via screw terminals for 2.5 mm² max.
Weight: 0.23 kg net

Output

Range: 0/4 ... 20 mA, 0/2 ... 10 V

Output circuit fully galvanically isolated from input and supply.

Current and voltage output are always available simultaneously (max. deviation: $\leq \pm 0.5 \%$).

Non-Linearity: $\leq 0.25 \%$ f.s.d.

Repeatability: $\leq 0.03 \%$ f.s.d.

Resolution: 13 bit (9000 div.)

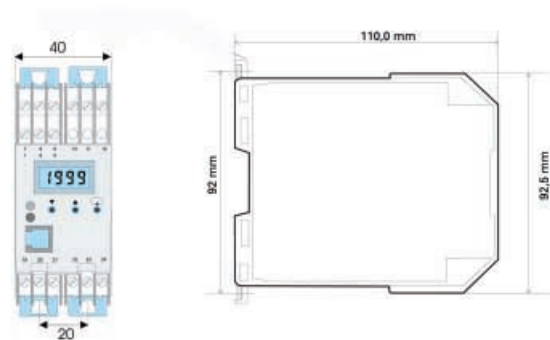
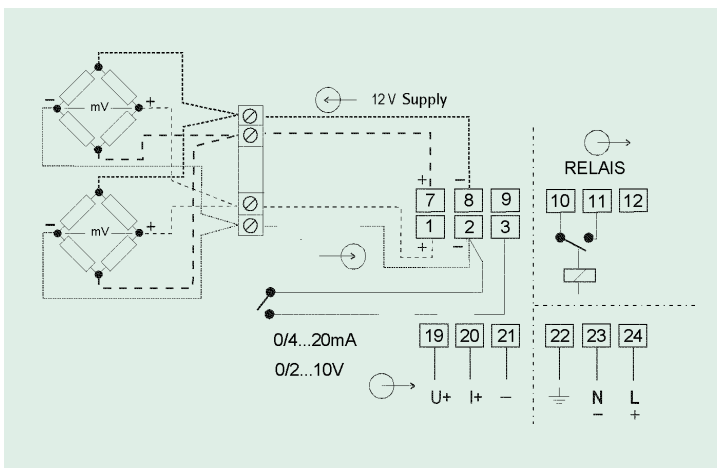
Temperature effect:

Zero: $\leq 0.04 \%$ / 10K

Span : $\leq 0.06 \%$ / 10K

ORDER INFORMATION

Digital Process Transmitter	MP25/00
(24 V-Version)	MP25/01
Engineering Tool	MP25/10



The technical data given here serve only as a product description and must not be interpreted as guaranteed characteristics in the legal sense.

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