



Application

When the level must be determined exactly, the limit values set precisely, when simple operation and high-levels of operating reliability are a must then the programmable pump control PGS - P featuring an integrated pressure sensor is utilised as a simple, intelligent and decentralised method of control in all fields of drinking water and waste water technology.

Description

The programmable pump control PGS-P assigns from the pneumatic pressure sensor PNA and bubble tube supplied pressure to a level with the unit m.

The zero point (0.00 m water column) can be programmed in accordance with submerged sensor.

Scaling for the level, is either via the maximum value from the transducer (2.50, 5.00 or 9.99 m) or via the actual value (momentary value). The scaling is defined in steps of tenths or hundredths.

The indicator value is calculated according to the input power and the scaling that is set.

It is also possible to provide a scaled percentage indicator.

The value of the analogue output changes in accordance with this scaling whereby 100% corresponds to 20 mA or 5/10 V at the output.

All the limited values can be determined with the measuring range. For all three limited value pairs the turn-on value can be above or below the turn-off value (fill or empty tanks).

A cyclic variation, whereby two or three limited value contacts are changed, ensures balanced wear and tear of the connected pumps.

If voltage is applied to one of the fault inputs 16, 17 or 18, operations are switched to a fault-free output.

A high degree of operational safety is ensured by the measuring system being continuously supervised.

Errors, corresponding to the lower deviation from the programmed zero point or the permissible input power being exceeded, are indicated in clear text and also as a potential-free fault.

The parameter setting for all functions does not require additional programming equipment and is carried out with 3 keys. For the sake of easy operation it is fully menu guided.

Allgemein:

- Plain text display of measurement values, system status and configuration
- Menu-driven operation
- Pressure sensor with integrated measurement range 0... 2.5 mWS or 0... 10 mWS
- Fault response
- Analogue output 0/4... 20 mA or 0- 5/10 V
- 4 relay outputs
- Uninterrupted monitoring of measurement
- Retains the set parameters if mains supply fails
- Fault messages logged
- Mounts in front panel or onto mounting plate (DIN - top-hat rails)
- Membrane keyboard and lockable front panel

Limit value/scaling:

- Limit values can be set exactly
- User adjustable scaling of the actual value (instantaneous value)
- Percent value scaling
- User-definable zero point
- Programmable opening and closing of contacts
- LEDs indicate control state of the relays
- Optional alternating operations (cyclical or operating hours)

Control and timer functions:

- Level and tendency recognition can be combined with a limit contact
- Operating hours counter of relay outputs
- Start counter (number of start signals)
- On and OFF delay
- Operating time monitor
- Compelled signalling
- Maintenance intervals

Technical Information

Power:

Supply: 230 V / 50 Hz or
24 V DC (acc. to equipment
type)

Consumption: approx. 12 VA
Measuring ranges: 0... 2.50 mWS (standard)
0... 5.00 mWS and
0... 9.99 mWS (Option)

A/D-Converter: 10 bit resolution
3dB cut-off frequency: 21 Hz

Outputs:

Current: 0/4... 20 mA, load max. 500Ω
Voltage: 0... 5/10 V, load min. 100 kΩ
D/A transformer: 10 bit resolution
Contacts: 3 make contacts for 6 limit
values
1 change-over contact, "fault"
Breaking capacity: 250 V/50 Hz, 2 A max. 200 VA

Display:

LCD: Alphanumeric, 2 rows,
8 figures, illuminated
Figure height: 5 mm
Measured value
update: every 2 s
Display range: 0...9.99 m water column /
0...99.9 m water column
alternatively: 0...9.99 bar / 0...99.9 bar
0...9.99 l/s / 0...99.9 l/s
Percentage display: 0...99.9 %

CPU:

Accuracy: <+/-1%
Temperature drift: approx. 10 ppm / K
Data storage: EEPROM

Housing:

Material: Synthetic, ABS
Type of protection: IP 20 (front with door: IP 54)

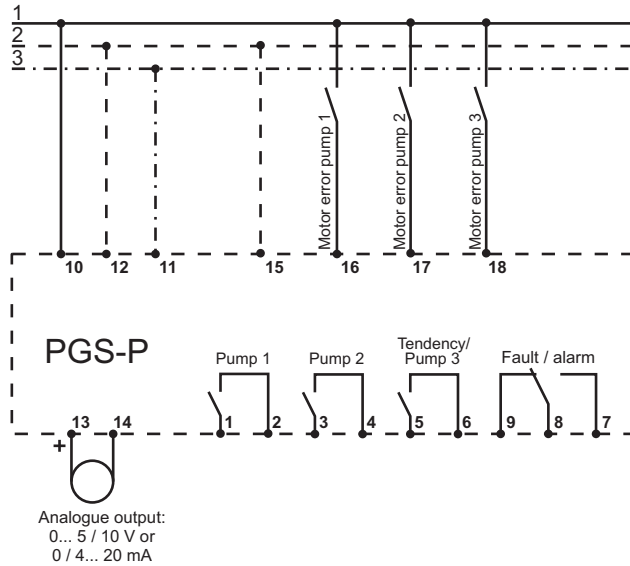
Electrical connection

Supply voltage 230V/50Hz:

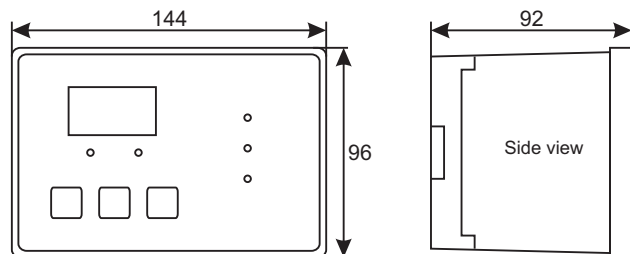
10 = L
11 = PE
12 = N

Supply voltage 24V/DC:

10 = L+
11 = PE
12 = L-



Dimensions



*This equipment can also be supplied as PGS including an
integrated current input 0/4... 20 mA and sensor supply 24 VDC!*