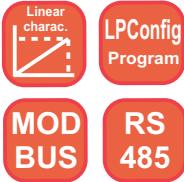


P18D TEMPERATURE AND HUMIDITY TRANSDUCER TEMPERATURE OR HUMIDITY TRANSDUCER

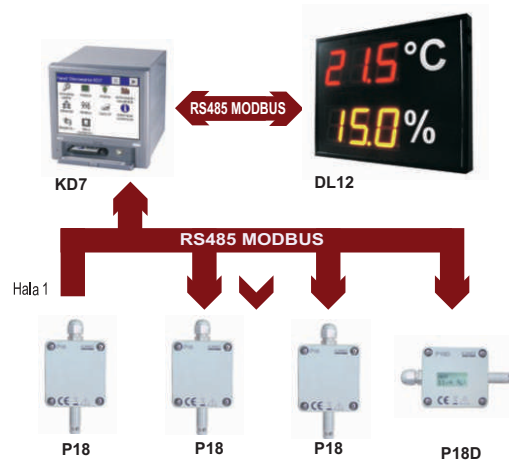
Features



P18, P18D

- Built-in temperature and humidity sensor.
- Calculation of selected physical quantities (dew-point temperature, absolute humidity)
- 2 analog outputs 0/4...20 mA or 0...10 V
- Standard d.c. current or d.c. voltage output signal
- Storage of measured and calculated maximum and minimum values
- Visualisation of measured value on a LCD display (only P18D).

Input



Measurement and recording of temperature and humidity.

Outputs

4...20 mA

0..10 V

P18D

RS 485

P18D

Inputs

| Input type | Measuring range | Error |
|-------------------|--------------------------------|---|
| Temperature | P18D: -40 .. -20 .. 60 .. 85°C | +/- 0.5% |
| Relative humidity | 0 .. 100% | +/- 2% for RH = 10 .. 90% +/- 3% for RH in the remaining range |

Outputs

| Output type | Admissible load resistance | Remarks |
|-------------|----------------------------|---------|
| 4 .. 20 mA | $R_{load} \leq 100 \Omega$ | P18D |
| 0 .. 10 V | $R_{load} \geq k \Omega$ | P18D |

Digital interface (only P18/P18D)

| Interface type | Transmission mode | Baud rate |
|-------------------|--------------------|--|
| RS-485 Modbus RTU | 8N1, 8N2, 8E1, 8O1 | 4,8; 9,6; 19,2; 38,4; 57,6; 115,2 kbit/s |

External features

| | |
|--------------------|-----------------------------|
| Overall dimensions | 38 x 58 x 118 mm |
| Weight | 125 g |
| Protection grade | ensured by the casing: IP65 |
| Fixing | on a wall |

Rated operating conditions

| | | | |
|--------------------|------|---|---|
| Supply voltage | P18D | 9 .. 24 V d.c./a.c | input power < 0.5 VA |
| Temperature | | ambient: -20...23...60°C | |
| Humidity | | < 95% | inadmissible condensation |
| Operating position | | any | in application not exposed to water contact |
| | | sensor chamber towards the earth | in application exposed to water contact |
| Preheating time | | 15 minutes | |
| Air flow rate | | ≥ 0.5 m/s (P18/ P18D) ≥ 2 m/s (P18L) | |

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Safety and compatibility requirements

| | | |
|--|-----------------|----------------------|
| Electromagnetic compatibility | noise immunity | acc. to EN 61000-6-2 |
| | noise emissions | acc. to EN 61000-6-4 |
| Isolation between circuits | basic | acc. to EN 61010-1 |
| Pollution level | 2 | |
| Installation category | III | |
| Maximal phase-to-earth operating voltage | 50 V | |
| Altitude a.s.l. | < 2000 m | |

Connection diagram

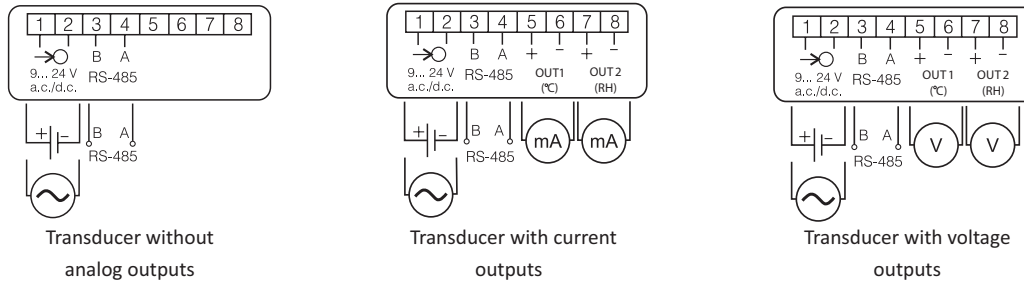


Fig. 1 Connection way of electric signals – P18D.

Ordering

| P18D - | X | XX | X | X |
|--|----|----|---|---|
| Analog outputs: | | | | |
| without outputs | 0 | | | |
| current 4...20 mA | 1 | | | |
| voltage 0...10 V | 2 | | | |
| Version: | | | | |
| standard | 00 | | | |
| custom-made* | XX | | | |
| Language: | | | | |
| Polish | | | P | |
| English | | | E | |
| other* | | | X | |
| Acceptance tests: | | | | |
| without extra quality requirements | | | | 0 |
| with an extra quality inspection certificate | | | | 1 |
| acc. to customer's requirements* | | | | X |

ORDER EXAMPLE:

The code: **P18 - 1 - 00 - 8** means: temperature and humidity transducer of P18 type, with a current analog output: 4...20 mA, standard version, without extra quality requirements. If required, one must additionally order a sensor protection shield acc. to the table 1, eg. shield 08744-490-014 means a filter made of sintered bronze.

* - A?er agreeing with the manufacturer.

Table 1

| Order code | Design | Name | Construction | Features | Typical application |
|--------------|--------|--------------------------------|--|--|---|
| 0874-490-016 | | Membrane filter | Casing made of PCV, membrane of teflon. laminated by a film. Pore size: 1 µm | Mean filtration effect. Maximal temp.: up to 80 °C Response time: t10/90:15 s | Building automation. In rooms with low pollution. |
| 0874-490-015 | | Filter made of teflon | Sintered teflon. Pore size: 50 µm | High chemical resistance Maximal temp.: up to 180 °C Response time: t10/90:14 s | Drying process in chemical applications. |
| 0874-490-014 | | Filter made of sintered bronze | Sintered bronze. Pore size: 60 µm | High mechanical resistance. To co-operate in high pollution environments. Applied at small air humidity Response time: t10/90:10 s | Agricultural applications. |

See also



KD7 recorder.



Interface converter USB/RS-485 - PD10.

OUR OFFER

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