

PROGRAMMABLE 2- WIRE DEWPOINT TRANSMITTER

type DPT-21



- dewpoint temperature measurement
- measurement range **-100 ... +20 °Cdp**, scaleable
- operating temperature **-40 ... +60 °C**
- ceramic capacitive sensor
- fast response to the changing humidity
- sensor fault indication
- 4-20mA current loop powered
- programming in units: **°Cdp, °Fdp, ppm** (by volume)

DPT-21 is a microprocessor-based electronic device which converts the capacitance of the integrated dewpoint sensor to standard current signal 4-20 mA. Its design allows for quick and easy installation on site makes monitoring dewpoints as easy as measuring temperature or pressure.

Transmitter is factory calibrated and configured, but some parameters as measurement unit and range may be adapted by user for specific requirements of his measuring system.

DPT-21 is programmed using a personal computer with USB port via **IF-2013U-DPT** interface which is also offered.

TECHNICAL DATA

Dewpoint measurement range:

Measurement accuracy

Thermal drift

Conversion range

Response time T95

Output signal

Linear region of output signal

Output signal delay after power on

Sensor failure indication

Power supply V_s

Maximal load resistance [Ω]

Operating temperature range

Maximal operating pressure

Housing material / filter

Ingress protection

Process connection

Dimensions with connector (diameter x length) / weight

Accessories (ordered separately) - details at www.czaki.pl

Default values are underscored

-100 ... +20 °Cdp or -148 ... +68 °Fdp or 0,01 ... 23000 ppm(v)

± 2 °Cdp

compensated across operating temperature range

10 % ... 100 % of measurement range - programmable

1 min (dry to wet)

4 ... 20 mA or 20 ... 4 mA - programmable

3,8 ... 20,5 mA

ca. 5 s

23 mA or 3,5 mA - programmable

8 ... 36 V DC / 24 mA (from current loop)

(Vs[V] - 8) / 0,024

-40 ... +60 °C

40 MPa

stainless steel / 5 μm stainless steel sintered guard

IP65

external thread 5/8"-18 UNF

31 x 129 mm / 150 g

interface **IF-2013U-DPT**

process connection adapter **G1/2"-DPT**

sampling block **SB-DPT**

ORDERING CODE

(1) (2) (3) (4) (5)

DPT-21 / / / / /

- (1) Lower range value (for 4 mA output)
- (2) Upper range value (for 20 mA output)
- (3) Physical unit
- (4) Measured gas pressure if ppm
- (5) Sensor fault indication

value in units declared in (3), default **-100**
 value in units declared in (3), default **+20**
°Cdp, °Fdp, ppm, default **°Cdp**
 value in [hPa], default **1013,25**
H - by 23 mA output, **L** - by 3,5 mA output, default **H**

Example for order: DPT-21 denotes dewpoint transmitter for measurement range from -100 to +20 °Cdp with 4...20 mA signal output.
 DPT-21 / 0,01 / 23000 / ppm denotes dewpoint transmitter for measurement range from 0,01 to 23000 ppm (pressure 1013,25 hPa) with 4...20 mA signal output.