

## PROGRAMMABLE 2- WIRE DEWPOINT TRANSMITTER

### type DPT-NS



- dewpoint temperature measurement
- measurement range **-80 ... +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) and **%RH**

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

### TECHNICAL DATA

Dewpoint measurement range:  
 Relative humidity 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  $[\Omega]$   
 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](http://www.czaki.pl)

Default values are underscored

-80 ... +20 °Cdp or -112 ... +68 °Fdp or 0,5 ... 49000 ppm(v)  
 0 ... 100% (calculated on the basis dewpoint and gas temperature)  
 $\pm 2 \text{ °Cdp}$   
 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)  
 $(V_s[V] - 8) / 0,024$   
 -40 ... +60 °C  
 40 MPa  
 stainless steel / 5  $\mu\text{m}$  stainless steel sintered guard  
 IP65  
 external thread 5/8"-18 UNF  
 31 x 129 mm / 150 g  
 interface **DPT-IF-2013U**  
 process connection adapter **DPT-G1/2"**  
 sampling block **DPT-SB**

### ORDERING CODE

(1) (2) (3) (4) (5)  
 DPT-NS /  /  /  /  /

- |     |                                      |  |
|-----|--------------------------------------|--|
| (1) | Lower range value (for 4 mA output)  | value in units declared in (3), default -80                        |
| (2) | Upper range value (for 20 mA output) | value in units declared in (3), default +20                        |
| (3) | Physical unit                        | <b>°Cdp, °Fdp, ppm, %RH</b> , default °Cdp                         |
| (4) | Measured gas pressure if ppm         | value in [hPa], default 1013,25                                    |
| (5) | Sensor fault indication              | <b>H</b> - by 23 mA output, <b>L</b> - by 3,5 mA output, default H |

**Example for order:** DPT-NS denotes dewpoint transmitter for measurement range from -80 to +20 °Cdp with 4...20 mA signal output.  
 DPT-NS / 1 / 10000 / ppm denotes dewpoint transmitter for measurement range from 1 to 10000 ppm (pressure 1013,25 hPa) with 4...20 mA signal output.