



## FL 510 - Industrial humidity transmitter

The FL 510 is equipped with a capacitive humidity sensor that provides long-term stable, accurate measurement results. Two analog outputs are available for the output of relative humidity and process temperature.



### Special Advantages:

- Stable and accurate measurement results over the long term
- High-precision measurement of relative humidity and process temperature, as well as calculation of various humidity variables such as absolute humidity [g/m<sup>3</sup>]; moisture content [g/kg], or moisture content [ppmV/V]
- Two freely configurable analog outputs, 4...20 mA
- Modbus-RTU (RS 485)
- Media-independent measurement, in non-corrosive gases

### Typical application is the measurement of residual moisture in:

- Measurement of humidity in gas pipes or storage tanks
- Moisture from phase change processes (evaporation)
- Measurement of humidity in inert gas environments (e.g., nitrogen or argon)
- Electronics production in an inert gas atmosphere
- Laboratories with special gas requirements

Example order code FL 510:

0699 0200\_A1\_B1\_C1

Process connection	
A1	G 1/2"
A2	1/2" NPT
Scaling analog output 1	
B1	Relative humidity [%rF]
Scaling analog output 2	
C1	Temperature T (°C)
C2	Temperature T (°F)

Example order code cable for FL 510:

0553 0145\_A1

Cable 8-pin	
A1	5 m
A2	10 m
A3	variable on request

ACCESSORIES	ORDER -NR.
CS service software FL 510 incl. interface cable to the PC (USB) and plug-in power supply - for configuration / parameterization of the FL 510	0554 2010

TECHNICAL DATA FL 510	
<b>Humidity measuring range:</b>	0...100 % rH
<b>Accuracy (0...90 %rH):</b>	±1.8%rF at +23 °C
<b>Accuracy (90...100 %rH):</b>	typical ± 2 % rH at +23 °C
<b>Temperature measuring range:</b>	0...125 °C
<b>Temperature accuracy:</b>	±0,2 °C
<b>Process temperature:</b>	-20...+125 °C
<b>Ambient temperature:</b>	-20...+70 °C
<b>Maximum pressure:</b>	Up to 300 bar
<b>Interfaces:</b>	2 x analogue output 04...20 mA (3-wire-technology), Modbus RTU (RS 485)
<b>Power supply:</b>	24 VDC (10...36 VDC)
<b>Protection class:</b>	IP 66
<b>EMV:</b>	To DIN EN 61326-1
<b>Thread material:</b>	1.4404
<b>Material perforated cap:</b>	1.4301
<b>Connection:</b>	M12, 8-pin