

# HMD60UO/YO Outdoor Humidity and Temperature Transmitter & Solar Radiation Shield



*Vaisala HUMICAP® Humidity and Temperature Transmitter HMD60YO, combined with Vaisala Solar Radiation Shield DTR503B is easy to install and ideal for outdoor applications.*

## Features/Benefits

- Full 0...100 %RH measurement
- Vaisala Solar Radiation Shield DTR503B provides excellent ventilation while blocking direct and reflected solar radiation, and precipitation
- True two-wire transmitter with 4 to 20 mA loop powered output: compatible with most energy management systems
- Electromagnetically compatible
- Temperature compensated
- Excellent long-term stability
- Negligible temperature coefficient
- ±2% accuracy (0...90 %RH), ±3% (90%...100 %RH)
- NEMA 4 (IP65) housing

## Stable performance in demanding outside environments

The duct-mount Vaisala HUMICAP® Humidity and Temperature Transmitters HMD60UO and HMD60YO utilize Vaisala HUMICAP® Sensor. The Vaisala HUMICAP® Sensor is known for its excellent reliability, long-term stability, and reliable operation in humidity measurement. In addition, the sensors are insensitive to dust and most chemicals, and are not damaged by condensation. The transmitters feature two wire connections that make retrofitting, upgrading and installations easy.

## Fast, on-site calibration

The accuracy of the transmitters is easy to check by using Vaisala HUMICAP® Hand-Held Humidity Meter HM70. The calibration can be done in seconds with a single potentiometer – without disturbing the operation, thus ensuring accuracy and saving hours of maintenance time.

## Shield protects sensor

The maintenance-free, 12 plate Vaisala Solar radiation Shield DTR503B is naturally ventilated, and protects the sensors from scattered, as well as, direct solar radiation and rain.

The plates are composed of a special plastic material that offers excellent thermal characteristics and UV stabilized construction. The white outer surface reflects radiation, while the black inside absorbs accumulated heat, resulting in more accurate measurement.

## Easy-to-install

The easy-to-install DTR503B is suitable for a wide range of applications. It can be mounted on a vertical pole, horizontal beam or flat surface.

## HMD70UO/YO

Versatile alternatives to the HMD60UO/YO transmitters for outdoor applications are the HMD70UO/YO transmitters. These instruments feature selectable output signals of 0...1V, 0...5V, or 0...10V or 0...20mA. Powered by either AC or DC voltage, they are available with relative humidity only, or relative humidity and temperature sensors. They are also equipped with the radiation/precipitation shield.

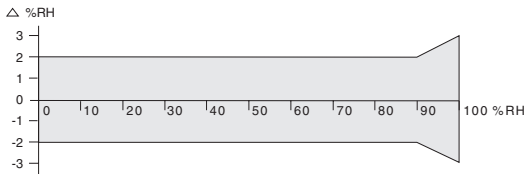
# Technical Data

## General

Supply voltage	10...35 VDC ( $R_L = 0$ ohms) 20...35 VDC ( $R_L = 500$ ohms)
Output signal	4...20 mA
Operating temperature range:	
electronics	-40... +60 °C (-40...+140 °F)
sensor head	-40...+60 °C (-40 ...+140 °F)
Storage temperature range	-40...+80 °C (-40...+176 °F)
Connections	screw terminals 0.5...1.5 mm <sup>2</sup>
Housing:	
sensor head	stainless steel
electronics housing	cast aluminum
Sensor protection	membrane filter
optional	stainless steel sintered filter

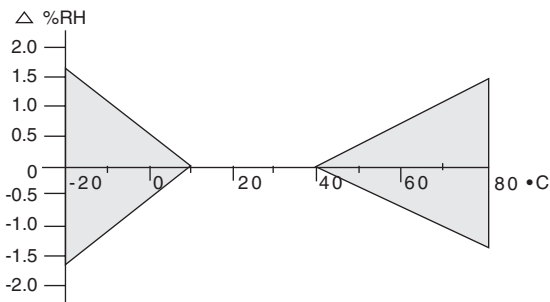
## Relative humidity

HMD60U and HMD60Y	
Measurement range	0...100 %RH
Accuracy at +20 °C (+68 °F)	



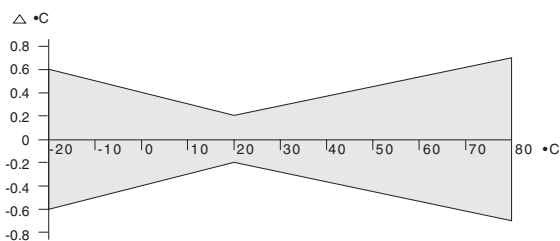
## Temperature dependence

Response time at +20 °C (+68 °F)	15 s with membrane filter
Sensor	HUMICAP® 180



## Temperature (Y and T models only)

Operating range	-40...+60 °C (-40...+140 °F)
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Output signal	-40...+60 °C (-40...+140 °F)
Accuracy	
Linearity	better than 0.1 °C (0.18 °F)
Sensor	PT 1000 IEC 751 class B

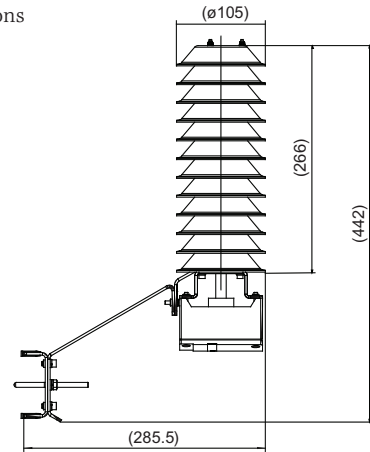
## PRICE:

2-Wire:	Output signals
HMD60UO	RH only
HMD60YO	RH & Temp.
3-Wire:	
HMD70UO	RH only
HMD70YO	RH & Temp.

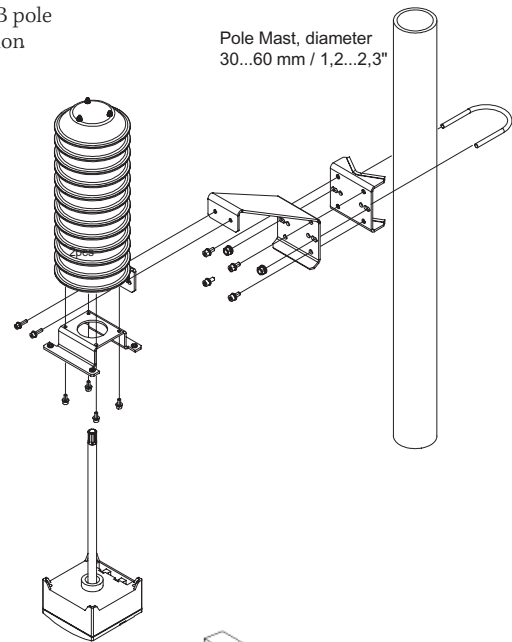
## Dimensions

Dimensions in mm

DTR503B dimensions



DTR503B pole installation



DTR503B horizontal beam installation.

