Duct Humidity and Temperature Sensor LCN-FTK AA

Product overview

Duct sensor for measuring relative humidity and temperature in gaseous media of heating, cooling and air-conditioning systems (e.g. in fresh air / exhaust air ducts). Designed for locking on control and display systems. Additionally, the device can be supplied with a passive temperature sensor e.g. PT100, PT1000, NTC10k etc.

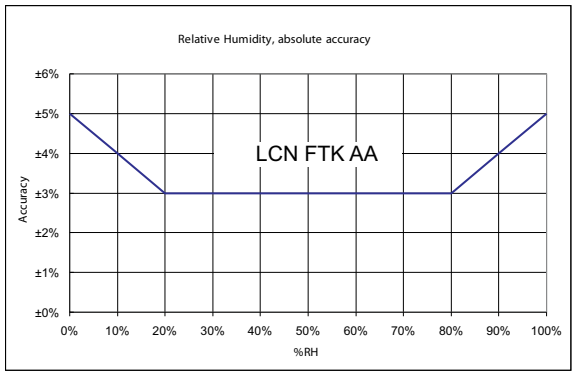
Types available

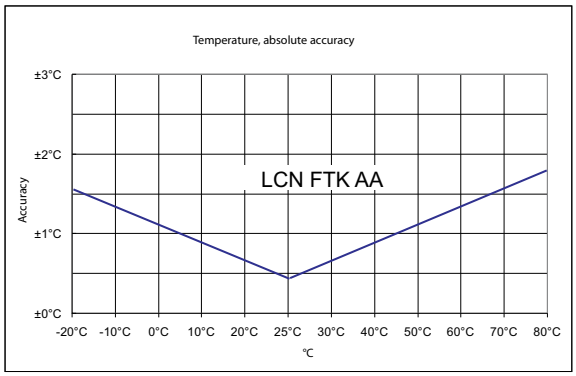
Type code	Type	Description
EXT-TN-1072327	LCN-FTK140AS PT1000	Duct sensor 140mm, 4...20mA for humidity, PT1000
EXT-TN-1072303	LCN-FTK140AS NTC10k	Duct sensor 140mm, 4...20mA for humidity, NTC10k
EXT-TN-1072310	LCN-FTK140AS NTC10kPRE	Duct sensor 140mm, 4...20mA for humidity, NTC10k Precon
EXT-TN-1066722	LCN-FTK140AA	Duct sensor 140mm, 2x 4...20mA for humidity and temperature

Technical data

Standards	CE conformity	- 2004/108/EG electromagnetic compatibility - 2001/95/EG Product safety
	EN conformity	- EN60730-1:2002 EMC - EN60730-1:2002 Product safety
General data	Power supply	DC 15-24V(±10%)
	Power consumption	Max. 40mA
	Measuring range	Humidity : 0...100% RH Temperature : -20...+80°C
	Output	Humidity : 4...20mA, load<500Ω at DC 24V Temperature : 4...20mA, load<500Ω at DC 24V (Optional type AS: resistance NTC/PTC)
	Clamps	Terminal screw max. 1.5mm²
	Mounting length L	140mm
	Sensor pipe	Material PA6, colour black
	Filter element	Material stainless-steel, mesh size 80µm
	Connection head	Material PA6, colour white
	Protection	Connection head IP65
	Cable entry	Single entry M16 for cable max. D=8mm
	Ambient temperature	-20...+70°C
	Weight	120g

Accuracy





Security advice ⚠

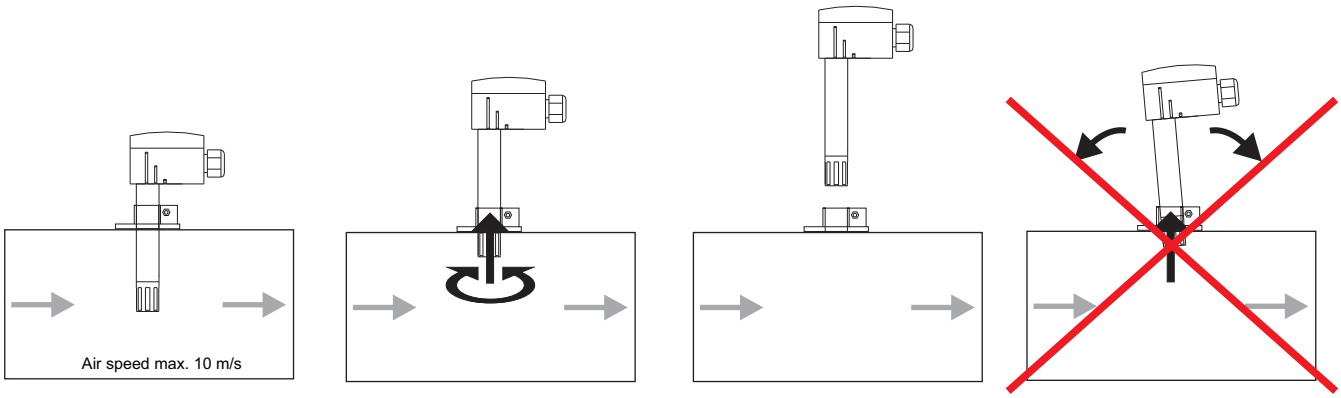
The installation and assembly of electrical equipment may only be performed by a skilled electrician.
The modules must not be used with equipment that supports, directly or indirectly, human health or life or with applications that can result in danger for people or animals.

Electrical connection

The devices are constructed for the operation of protective low voltage (SELV). For the electrical connection, the technical data of the corresponding device is valid. With regard to passive sensors (e.g. PT100 etc.) in 2 wire conductor versions, the wire resistance of the supply wire has to be considered. It is likely that the same has to be compensated by the following electronics. Due to the self heating, the wire current affects the accuracy of the measurement. Therefore it same should not exceed 1mA.
The devices must be operated at a constant supply voltage (±0.2V). When switching the supply voltage on/off, power surges must be avoided on site.

Mounting advice

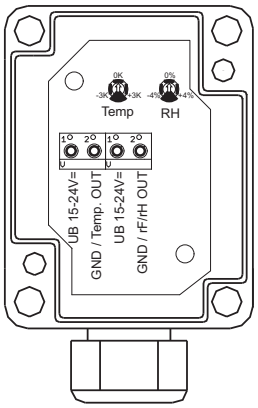
The sensor is directly mounted to the ventilation duct by means of a mounting flange or by screws.



Application notice

Due to air circulation dirt and dust particles can be piled up in the course of time on the sintered filter which is protecting the sensor. Thus, the function of the sensor can be affected. After having dismantled the filter, this can be cleaned by blowing it out with oil-free and filtered compressed air, super-clean air or nitrogen or by washing it out with distilled water. If the filter is too dirty, this should be replaced.
Refrain from touching the sensitive humidity sensor. Any tampering will result in an expiration of the warranty.
With normal environmental conditions we recommend a recalibration interval of around 1 year to maintain the indicated accuracy.
At high ambient temperatures and high humidity, or when using the sensor in aggressive gases, an early recalibration or a change of the humidity sensor can become necessary. Such a recalibration or a probable sensor change do not come under the general warranty.

Terminal connection plan



If only the humidity output is used, terminal “UB 15-24V= (Temp)” has to be bridged to “UB 15-24V= (rH/rF)”, and terminal temperature output “GND/Temp. OUT 4-20mA” has to be bridged to “GND” of the power supply.

Dimensions (mm)