

Pendulum sensor for relative humidity  
 FP... FTP...



**Mounting Advice**

Please also note the general remarks in our INFORMATION SHEET THK.

**Terminal Connection Plan / Dimensions (mm)**

braun brown	GND	weiss white	Out rF 0...10V	grün green	UV 15-24V= 24V~
weiss white	rF- 4...20mA	braun brown	rF+ UV 15...24V=	braun brown	
gelb yellow	T- 4...20mA	grün green	T+ UV 15...24V=	weiss white	braun brown
braun brown	rF- 4...20mA	weiss white	rF+ UV 15...24V=	braun brown	
gelb yellow	Out Temp. 0...10V	braun brown	GND	weiss white	grün green

FP V

FP A

FTP AA

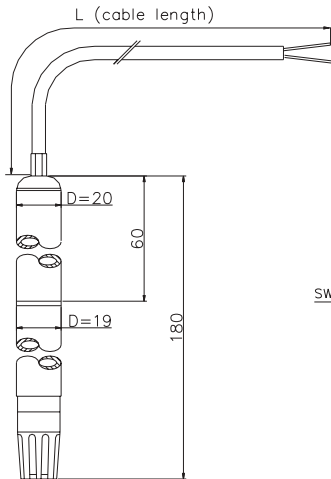
FTP VV

gelb yellow	Sensor	grau grey	Sensor	braun brown	GND	weiss white	Out rF 0...10V	grün green	UV 15-24V= 24V~
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FTP VS

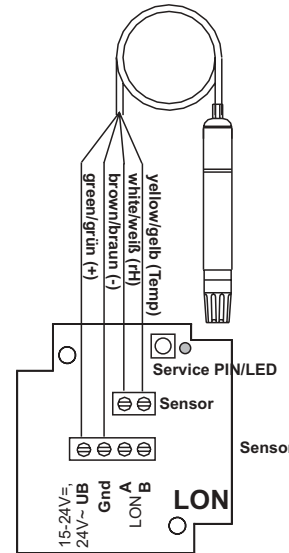
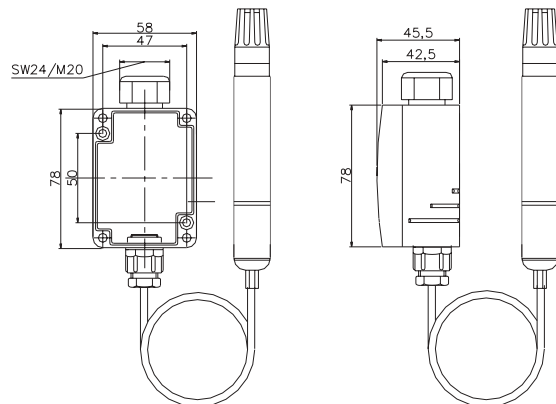
gelb yellow	Sensor	grün green	Sensor	weiss white	rF- 4...20mA	braun brown	rF+ UV 15...24V=	braun brown
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FTP AS



Type A, V, AS, VS, AA, VV

Type LON



17600...



FP/FTP

Pendulum sensor for relative humidity  
 FP... FTP...



**Application**

Pendulum sensor for sectional measurement of relative humidity (model FP), respectively for sectional measurement of relative humidity and temperature (model FTP) in large rooms (e.g. open-plan offices, galleries, production plants etc.) Designed for locking-on control and display systems.

**Types Available**

Model	Type	Method of measurement (output)
FP	A	active, 4...20mA
	V	active, 0...10V
	LON	active, FTT10
FTP	AS	rel. H.: active, 4...20mA Temp.: passive, resistance
	VS	rel. H.: active, 0...10V Temp.: passive, resistance
	AA	active, 4...20mA
	VV	active, 0...10V
	LON	active, FTT10

### Norms and Standards

<b>Product safety:</b>	EN60730-1 Automatic electr. control devices for domestic use and similar applications
<b>EMV:</b>	EN50082-1 Interference resistance EN50081-2 Emitted interference
<b>CE-Conformity:</b>	89/336/EWG Electromagnetic compatibility

### Technical Data

#### Type AS:

**Measuring element:** Rel. humidity: capacitive, Temperature: sensor according to customer's request, e.g. PTC, NTC...

**Measuring range<sup>1)</sup>:** Rel. humidity: 5...95% (working range 0...100%)  
Temperature: depending on sensor used

**Accuracy<sup>2)</sup>:** Rel. humidity: Typ. +/-2% in the range 35%rF...75%rF  
Temperature: depending on sensor used e.g. DIN KL.B+

**Measuring current:** Temperature: Typ. <1mA

**Operating voltage:** 15-24V=

**Power consumption:** max. 20mA/24V=

**Load:** <800 Ohm

**Mounting length:** 1m/2m/4m/6m, other lengths on request  
Cable ends with conductor sleeves as standard,  
Conductor cross-section 0,25mm<sup>2</sup>

**Sensor bushing:** PVC, colour black, stainless steel weight

**Filter element:** Teflon, permeability 30%

#### Type VS:

**Measuring element:** Rel. humidity: capacitive; Temperature: sensor according to customer's request e.g. PTC, NTC...

**Measuring range<sup>1)</sup>:** Rel. humidity: 5...95% (working range 0...100%)  
Temperature: depending on sensor used

**Accuracy<sup>2)</sup>:** Rel. humidity: Typ. +/-2% in the range of 35%rF...75%rF  
Temperature: depending on sensor used, e.g. DIN KL.B+

**Measuring current:** Temperature: Typ. <1mA

**Operating voltage:** 15-24V=/24V-

**Power consumption:** max. 6mA/24V=

**Load:** min. 10kOhm

**Mounting length L:** 1m/2m/4m/6m, other lengths on request  
Cable ends with conductor sleeves as standard,  
Conductor cross-section 0,25mm<sup>2</sup>

**Sensor bushing:** PVC, colour black, stainless steel weight

**Filter element:** Teflon, permeability 30%

#### Type A, AA:

**Measuring element:** Rel. humidity: capacitive; Temperature (only model FTP): PTC

**Measuring range<sup>1)</sup>:** Rel. humidity: 5...95% (working range 0...100%)  
Temperature (only model FTP): -20°C...+80°C

**Accuracy<sup>2)</sup>:** Rel. humidity: Typ. +/-2% in the range 35%rF...75%rF  
Temperature (only model FTP): Typ. +/-0,3% of measuring range

**Operating voltage:** 15-24V=

**Power consumption:** max. 40mA/24V=

**Load:** <800 Ohm

**Mounting length L:** 1m/2m/4m/6m, other lengths on request  
Cable ends with conductor sleeves as standard,  
Conductor cross-section 0,25mm<sup>2</sup>

**Sensor bushing:** PVC, colour black, stainless steel weight

**Filter element:** Teflon, permeability 30%

#### Type V, VV:

**Measuring element:** Rel. humidity: capacitive; Temperature (only model FTP): PTC

**Measuring range<sup>1)</sup>:** Rel. humidity: 5...95% (working range 0...100%)  
Temperature (only model FTP): -20°C...+80°C

**Accuracy<sup>2)</sup>:** Rel. humidity: Typ. +/-2% in the range 35%rF...75%rF  
Temperature (only model FTP): Typ. +/-0,3% of measuring range

**Operating voltage:** 15-24V=/24V-

**Power consumption:** max. 12mA/24V=

**Load:** min. 5kOhm

**Mounting length L:** 1m/2m/4m/6m, other lengths on request  
Cable ends with conductor sleeves as standard,  
Conductor cross-section 0,25mm<sup>2</sup>

**Sensor bushing:** PVC, colour black, stainless steel weight

**Filter element:** Teflon, permeability 30%

#### Type LON:

**Measuring element:** Rel. humidity: capacitive; Temperature (only model FTP): PTC

**Measuring range<sup>1)</sup>:** Rel. humidity: 5...95% (working range 0...100%)  
Temperature (only model FTP): -20°C...+80°C

**Accuracy<sup>2)</sup>:** Rel. humidity: Typ. +/-2% in the range 35%rF...75%rF  
Temperature (only model FTP): Typ. +/-0,3% of measuring range

**Operating voltage:** 15-24V=/24V-

**Power consumption:** max. 40mA/24V=

**Sensor wire L:** 1m/2m/4m/6m, other lengths on request  
Cable ends with conductor sleeves as standard  
Conductor cross-section 0,25mm<sup>2</sup>

**Sensor bushing:** PVC, colour black, stainless steel weight

**Filter element:** Teflon, permeability 30%

**Clamps:** 4pole (four-wire)  
Terminal screw max 1,5mm<sup>2</sup>

**Housing:** (78mm) Polyamide, Colour white

**Temperature max<sup>2)</sup>:** <70°C

**Protection :** IP65

**Cable entry:** Single cable entry, M20 for wire conductor with max. D=8mm  
Double cable entry, M20 for 2-wire conductor with max. D=7mm

<sup>1)</sup> Maximum permissible operative temperature of sensor prod 60°C.

<sup>2)</sup> Operating voltage 24V= and 21°C (+/-5K) ambient temperature. Please take care, that the transducer should generally be operated in the measuring range centre, as increased deviation could occur on the measuring range end points. In addition, the ambient temperature of the transducer electronics should be kept constant.