FISCHER MESS- UND REGELTECHNIK

Data sheet

FT61 | Digital damp and temperature measuring device with colour-change LCD

The device is suitable for measuring moisture and temperature of non-aggressive gaseous media. The manufacturer must be consulted before using the device for aggressive media because media-compatible materials are required for the sensors.

Fields of application include:

- Moisture measurement
- Temperature measurement

Design and mode of operation

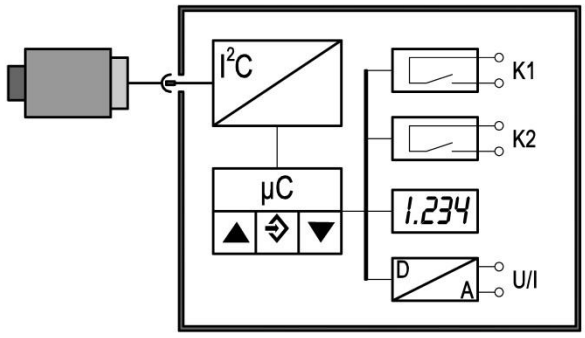
The measuring device comprises a sensor and a display unit. The data measured on the sensor is transferred via I²C bus to the display.

Here the data is converted into two analogue output signals by the microprocessor controlled electronics.

The standard signals 0/4…20 mA and 0…10V are available for the analogue outputs.

Optionally there are additional switch outputs available (cf. order code).

Functional Schematic



Important features

- Sturdy sensor design
- Both display units in one display

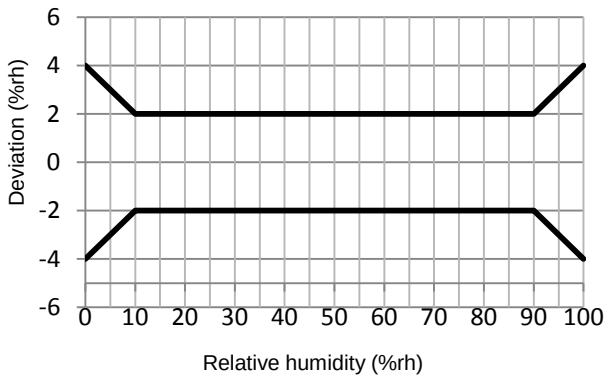
Typical applications

- Display device
- Damp measuring unit
- Temperature measuring unit
- Monitoring of controlled rooms

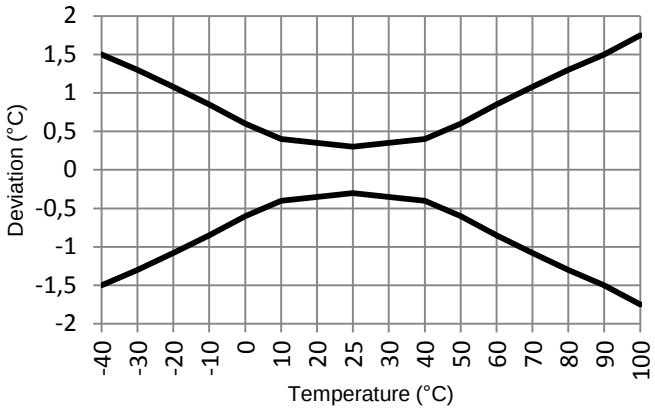
09005643 DB_EN_FT61_LCD Rev.A 10/14

Technical data

%rh - max. deviation at 25°C



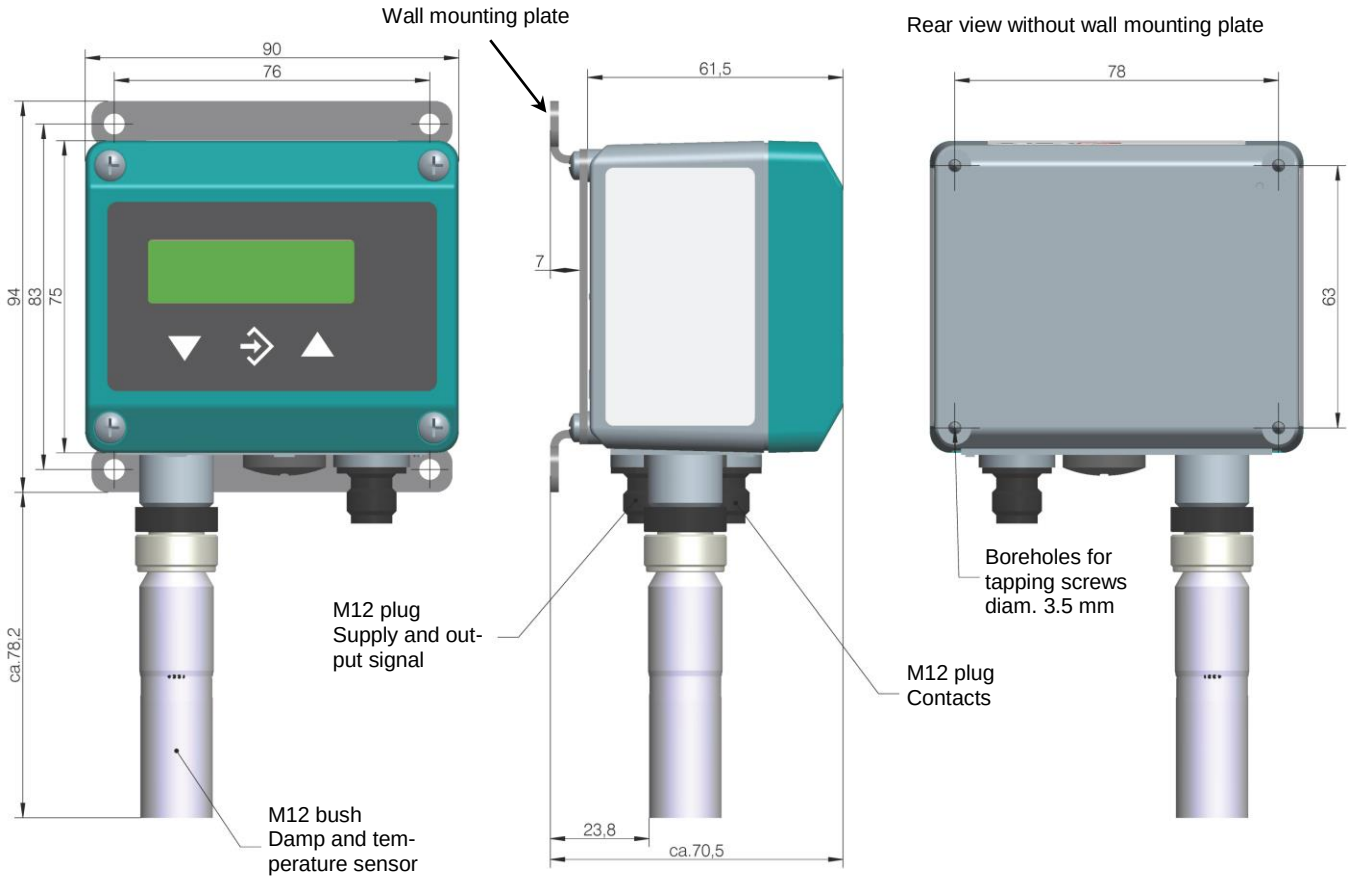
°C - max. deviation



	General points
Admissible ambient temperature	-10 … 70 °C
Admissible media temperature	-20 … 70 °C
Admissible storage temperature	-20 … 70 °C
Enclosure protection class	IP 65 acc. to DIN EN 60529
	Damp and temperature sensor
	Measurement range / Precision
Stainless steel 1.4404	0 … 100 %rF / ± 3 %rF
	-40 … 100 °C / ± 0.5 °C

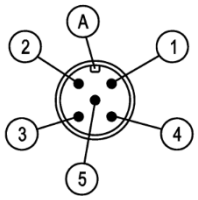
	Electrical data	
Rated Voltage	24 V DC/AC	
Allowed operating voltage U_b	12 … 32 V DC/AC with a PTC fuse approx. 8 Ω	
Electrical connection type	Three-conductor	
Output signal DC	2x 0 … 20 mA 2x 4 … 20 mA	2x 0 … 10 V
Admissible apparent ohmic resistance	U_b ≤ 26V R_L ≤ (U_b - 4 V) / 0.02 A	U_b ≤ 15V R_L ≥ 10 kΩ
	U_b > 26V R_L ≤ 1100 Ω	U_b > 15V R_L ≥ 2 kΩ
Power consumption	approx. 2 W / VA	
Measured Value Display	4-digit LCD, full graphic, colour backlighting	
	Switch contacts	
	2 potential-free semiconductor switch (MOSFET)	2 potential-free relay contacts
Progr. switching function	Open contact (NO) / break contact (NC)	Open contact (NO) / break contact (NC)
Switching voltage	3 … 32 V DC/AC	32 V DC/AC
Max. switching current	0.25 A	2 A
Max. switching output	8 W/VA	64 W/VA
Max. activation resistance	≤ 4 Ω	---
	Ports	
Damp/temperature sensor	5 pin. M12 bush	
Electr. connection	2 x round connectors M12 Connector 1 for power supply and analogue output signal (5-pin, male) Connector 2 for switch contacts (4-pin, male)	
	Materials	
Casing	Polyamide PA 6.6	
	Assembly	
	Wall mounting by means of assembly plate	

Dimensional drawings (All dimensions in mm unless otherwise specified)



Electrical connection

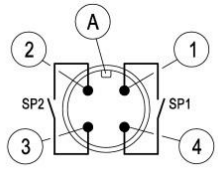
Connector 1: Supply and output signal



Pin	Signal name		Cable colour
1	Supply	$+U_b$	brown
2	Output 2 (Temperature)	- Sig 2	white
3	Supply	$- U_b$	blue
4	Output 1 (damp)	+ Sig 1	black
5	Functional earth	FE ⏚	green/yellow

A Coding

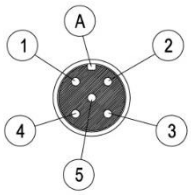
Connector 2: Switching outputs



Pin	Signal name		Cable colour
1	Switch output 1	SP1	brown
2	Switch output 2	SP2	white
3	Switch output 2	SP2	blue
4	Switch output 1	SP1	black

A Coding

Sensor connection (I2C Bus)



Pin	Signal name		Cable colour
1	Supply	GND	brown
2	Supply	5V	white
3	Data	SDA	blue
4	Cycle	SCL	black
5	Functional earth	FE ⏚	green/yellow

A Coding

Order Codes

Digital damp and temperature measuring device

TypeFT61 | | | **0** | **0** | | | | **N** | | | **0** | **0** |

Design
Wall mounting.....> **W 0**

Sensor design

Material	*Measuring range*			*Precision*	
1.4404	0	…	100 %rF	± 3 %rF	
	-40	…	100 °C	± 0,5 °C.....>	**2 0**

Output signal [°C] (3-wire DC)
no output signal.....> **0**
0 … 20 mA.....> **A**
4 … 20 mA.....> **P**
0 … 10 V.....> **C**

Operating voltage
24 V DC/AC.....> **N o**

Output signal [°rH] (3-wire DC)
no output signal.....> **0**
0 … 20 mA.....> **A**
4 … 20 mA.....> **P**
0 … 10 V.....> **C**

Measured Value Display
4-digit colour change LCD – without contacts.....> **0**
4-digit colour change LCD with 2 relay contacts (only wall-mounting).....> **C**
4-digit colour change LCD with 2 semiconductor switches.....> **D**

Accessories

Purchase order number	Designation	No. of Poles	Usage	Length
06401993	Connection cable with M12 connector	4-pole	for switching outputs	2 m
06401994	Connection cable with M12 connector	4-pole	for switching outputs	5 m
06401995	Connection cable with M12 connector	5-pole	for supply / signal	2 m
06401996	Connection cable with M12 connector	5-pole	for supply / signal	5 m
EU03.F300	Transmitter PC Interface incl. PC-Software TransPara			