

Humidity and temperature transmitter

DT722



Benefits

- Relative humidity, temperature measurement and dew point
- Designed for accurate measurement in a harsh environment
- Stainless steel housing
- Long term stability: $\pm 1\%$ rh over 12 months
- Withstands temperatures up to 150 °C (300 °F)

Applications

- HVAC
- Heating, ventilation, air conditioning
- Food industry
- Pharmaceutical industry
- Printing and paper industries



Electrical Connections

Connections		
Cable	Pin	
White	Pin 1	Supply + 8...32 VDC
Yellow	Pin 2	Output 2 = Temp 4...20 mA (max. 500 Ω)
Brown	Pin 3	Not connected (for calibration only)
Green	Pin 4	Output 1 = RH 4...20 mA (max. 500 Ω)
	Pin 5	Not connected (for calibration only)

Note: Both RH and T need to be connected in order for the T output to work.



Note: Even though the DT722 has a 5 pin connector, the standard connection cable (A000031) only has four pins/wires. However, only three pins (1, 2 and 4) are needed to connect the DT722.

Accessories and Spare Parts

Order Code	Description
Protection cap	
A000002	19 mm (0.75") Slotted protection cap black
Filter	
A000014	19 mm (0.75") PVDF filter
A000015	19 mm (0.75") PVDF filter w/ protection cap black
A000021	19 mm (0.75") Mesh filter w/ protection cap black
A000025	19 mm (0.75") Arrow 5 μ m SS sintered filter
A000027	19 mm (0.75") connector, no cable, w/screw terminal
Cable	
A000030	Single plug, without cable
A000030-XX	19 mm (0.75") connector / cable (price per meter)
A000031	19 mm (0.75") connector with 2 m (6.5') cable
A000032	19 mm (0.75") connector with 5 m (16') cable
A000040	Metal foil filter 2 μ m with protective cap, black
A000042	Oleophobic foil filter 0.7 μ m with black protective cap
Mounting	
A000110	3/4" NPT SS adj. fitting for SS probes
A000100	Al mounting flange for \varnothing 19 mm (0.75") SS probes (outside \varnothing 80 mm (3.15"))

Order Code

To get an order code that contains all the important information, the relevant features should be selected from the tables below and the ordered in sequence (starting with the basic model): "Feature A" + "Feature B" + "Feature C" + "Feature D" + "Feature E" + "Feature F" + "Feature G"

Example: DT722 + SX + A + T0 + 03 + CA + F02

Relative humidity and temperature transmitter without digital display. Output signals for absolute humidity and temperature (0...100 °C). Probe length is 300 mm. Without mating connector and without cable. 19 mm open protective cap in black.

DT722	SX	A	T0	03	CA	F02
Base Unit {Feature A}						
Relative humidity and temperature	DT722					
Display {Feature B}						
Display	SD					
No display	SX					
Moisture Signal {Feature C}						
Relative humidity	H					
Calculated dp temp (range (Td) -40...60 °C (-40...140 °F))	D					
Calculated absolute humidity (Abs) (range Abs from 0...200 g/m³)	A					
Calculated wetbulb temp (range (Tw) - 40...60 °C (-40...140 °F))	W					
Temperature {Feature D}						
0...100 °C (32...212 °F)	T0					
-40...150 °C (-40...302 °F)	TS					
Other output scaling available on request	TX					
Length {Feature E}						
200 mm (7.87") probe	02					
300 mm (11.81") probe	03					
500 mm (19.69") probe	05					
900 mm (35.43") probe	09					
Filter {Feature G}						
19 mm (0.75") slotted protection cap black	F02					
19 mm (0.75") PVDF filter with protection cap	F15					
19 mm (0.75") mesh filter with protection cap	F21					
19 mm (0.75") arrow SS sintered filter 5 µm	F25					
19 mm (0.75") arrow SS sintered filter 20 µm	F27					
19 mm (0.75") foil filter 2 µm with protection cap, black	F40					
Oleophobic foil filter 0.7 µm with protection cap, black	F42					
Cable {Feature F}						
No Cable	CA					
19 mm (0.75") connector, no cable, w/screw terminal	CB					
19 mm (0.75") connector with 2 m (6.5') cable	CC					
19 mm (0.75") connector with 5 m (16') cable	CD					

Compatibility

- DT722 Transmitters are **not** compatible with Rotronic HC2A probes
- The only compatible accessories and spare parts like filters, protection caps, mounting clips etc. are listed here.
- In case of insecurity, please contact your local Rotronic partner.



Technical Information

Performance	
Measurement range (RH)	0...100 %rh
Measurement range (T)	-40...150 °C (-40...302 °F)
Accuracy @ 25 °C (77 °F) humidity	±2 %rh (5...95 %rh)
Accuracy @ 25 °C (77 °F) temperature	±0.2 °C (±0.36 °F) typical
Stability – RH sensor	±1 %rh/year
Response time – RH sensor	<10 sec typical (for 90 % of the step change)
Electrical specifications	
Output signal	4...20 mA
Supply voltage	8...32 V DC
Supply voltage influence	±0.01 %rh/V typical
Operating humidity	
Operating humidity probe, housing, storage	10...95 %rh (non-condensing)
Operating temperatures	
Probe	-40...150 °C (-40...302 °F)
Housing	-20...70 °C (-4...158 °F)
Storage	-30...75 °C (-22...167 °F)
Mechanical specifications	
Ingress protection	IP65 (NEMA 4 level)
Housing material	Stainless steel
Weight	200 mm/800 g (7.87"/28.22 oz) 300 mm/900 g (11.81"/31.75 oz) 500 mm/1040 g (19.69"/36.68 oz) 900 mm/1412 g (35.43"/49.80 oz)
Electrical connections	5 pin, M12

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