



## ROOM HYGROSTATS

DBZH

### FUNCTION

Relative humidity room control with:

- setpoint adjustment by knob;
- control of 1 or 2 stage humidifiers and dehumidifiers.

### APPLICATIONS

Well-suited in domestic, commercial and industrial areas with light pollution for various applications in air conditioning field:

- office and computer rooms;
- foodstuffs storehouse;
- greenhouses;
- textile, paper and printing industries;
- swimming pools.

TYPE	RANGE r.h.	STAGES	HYSTERESIS IN THE STAGE r.h.	DIFF. BETW. THE STAGES r.h.	SPECIAL VERSIONS
DBZH-101	35...100%	1	4%		U
DBZH-102	35...100%	2	4%	3...15%	U

U knob under the cover

### TECHNICAL FEATURES

**Sensitive element:** several synthetic fabric bands.  
**Contacts:** dust-tight microswitches with SPDT contacts

**Switch capacity:**  
**resistive load** (lifetime 50.000 cycles)  
humidify: 2 A, 250 Vac  
dehumidify: 5 A, 230 Vac  
**Inductive load**  $\cos \phi = 0.8$ : 0.2 A, 230 Vac  
**Inductive load** L/R = 3 ms: 1 A at 50 Vdc  
0.5 A at 75 Vdc

**Hysteresis and differentials:** see schedule

**Working temp.:** 0...+60 °C  
< 95% r.h. (non condensing)  
**Storage:** -20...+70 °C  
< 95% r.h.

**Temp. coeff.:** -0.2% r.h./K at 20 °C  
**Max air speed:** 15 m/s

**t<sub>0.5</sub> at 2 m/s:** 1.2 min

**Housing:** ABS

**Protection:** IP20, class II

**Size:** 115 x 70 x 35 mm

**Weight:** 130 g

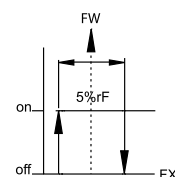
### NOTE

The hygrostats must not be in direct contact with water and should be exposed to air flow.

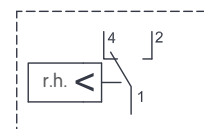
Not suitable for aggressive media.

### LOGIC OF OUTPUTS

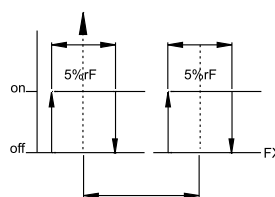
#### DBZH-101/101U



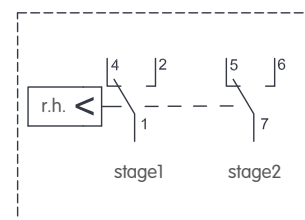
FX > FW ↔ FX < FW



#### DBZH-102/102U



FX > FW ↔ FX < FW



adjustable zone between the 2 stages

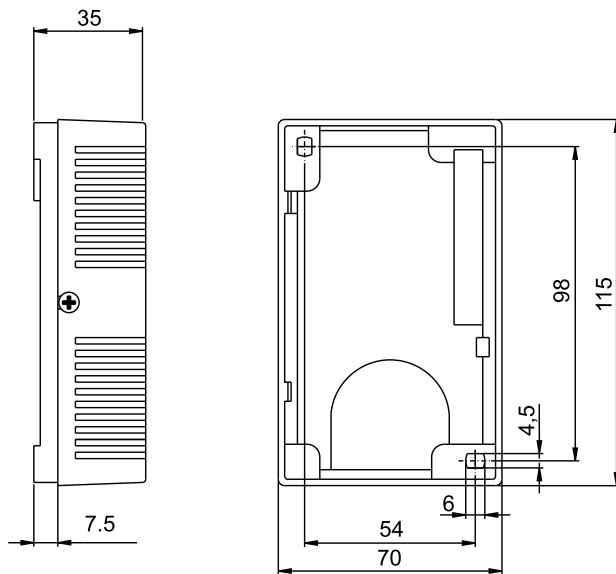
**FX** relative air humidity (actual value)  
**FW** humidity value set with knob

### ELECTRICAL WIRING

The contact 1 - 2 closes and 1 - 4 opens when the relative air humidity drops below the setpoint (see figure).

For the 2 stage version the contacts 1 - 2 and 6 - 7 close and the contacts 1 - 4 and 7 - 5 open when the relative air humidity drops below the setpoint (see figure).

DIMENSIONS (mm)





## DUCT HYGROSTATS

DBKH

### FUNCTION

Relative humidity duct control in air conditioning systems with:

- setpoint adjustment with knob;
- control of 1 or 2 stage humidifiers and dehumidifiers.

### APPLICATIONS

Well-suited in domestic, commercial and industrial areas with light pollution for various applications in air conditioning field:

- office and computer rooms;
- foodstuffs storehouse;
- greenhouses;
- textile, paper and printing industries;
- swimming pools.

TYPE	RANGE r.h.	STAGES	HYSTERESIS IN THE STAGES r.h.	HYSTERESIS BETW. THE STAGES r.h.	SPECIAL VERSION
DBKH-10	30...100%	1	5%		U
DBKH-20	30...100%	2	5%	3...18%	U

U knob under the cover

### TECHNICAL FEATURES

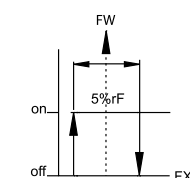
**Sensitive element:** several synthetic fabric bands  
**Contacts:** dust-tight microswitches with SPDT contacts  
**Switch capacity:** 15 (8) A, 24...250 Vac  
**Differentials:** see schedule  
**Working:** -10...+65 °C  
< 95% r.h. (non condensing)  
< 95% r.h.  
**Storage:** -20...+70 °C  
-0.2% r.h./K at 20 °C  
**Temp. coeff.:** 8 m/s  
**Max air speed:** 1.2 min  
**t<sub>0.5</sub> at 2 m/s:** ABS  
**Housing:** IP65, class I  
**Protection:** nickel-plated brass perforated,  
220 mm  
**Tube:** 108 x 70 x 72 mm  
**Size:** 480 g  
**Weight:**

### NOTE

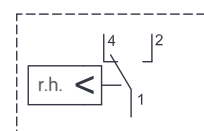
The hygrometers must not be in direct contact with water and should be exposed to air flow.  
Not suitable for aggressive media.

### LOGIC OF OUTPUTS

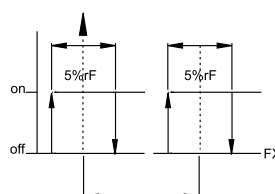
#### DBKH-101/101U



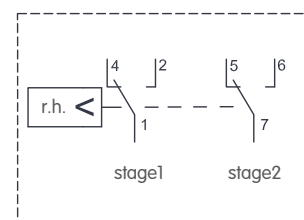
FX > FW ↔ FX < FW



#### DBKH-102/102U



FX > FW ↔ FX < FW



adjustable zone between the 2 stages

**FX** relative air humidity (actual value)  
**FW** humidity value set with knob

### ELECTRICAL WIRING

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For the 2 stage version the contacts 1 - 2 and 6 - 7 close and the contacts 1 - 4 and 7 - 5 open when the relative air humidity drops below the setpoint (see figure).



## DIMENSIONS (mm)

