

Humidity Control System

Complete System Including Sensor

RH98



Product Description

The RH98 is a complete system equipped with a control unit and a sensor for controlling the capacity of Munters dehumidification systems. The normal display setting indicates the actual relative humidity in % RH. Furthermore, the control unit can be pre-adjusted to the desired relative humidity, control parameters, or alarm parameters. There is a separate contact for connection to an external alarm. The RH98 can be factory installed in the dehumidifier or is available in a wall-mounted housing.

The control unit receives a continuous signal from the humidity sensor and controls the capacity of the dehumidifier's reactivation heater in one or two steps. Two stage electric heaters obtain one base

step for 2/3 of the reactivation power after which 1/3 of the reactivation power will be controlled by the subsequent step.

The humidity sensor is installed where the relative humidity will be controlled and observed, either in the actual location (room sensor) or directly in the air duct (duct sensor). The wall-mounted housing may be placed at an optional location in order to facilitate access to the adjustments and/or display.

The pre-calibrated sensor and preset parameters ensure that the system is fully operational.

The RH98 conforms to both Harmonised European Standards and to CE marking specifications.

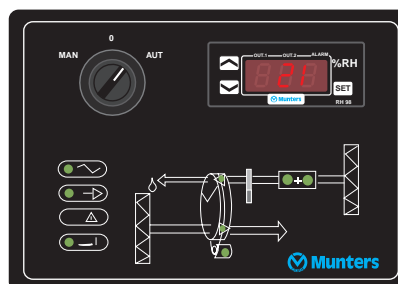
Operators Panel

The only additional equipment required with a factory installed control unit is the connection of an external humidity sensor to the dehumidifier's electrical terminal. The control unit operators panel is easily accessible for making adjustments and viewing directly on the dehumidifier's control panel.

Push buttons on the operators panel allow the operator to view and change pre-set adjustments for the relative humidity, control parameters, or alarm parameters.

The push buttons perform the following control functions:

- SET Display/change the parameter value and reset alarm
- ▲ Increase setpoint
- ▼ Reduce setpoint
- %RH Display status for the three outputs that guide function relay 1, function relay 2, and the external alarm



Complete Control System

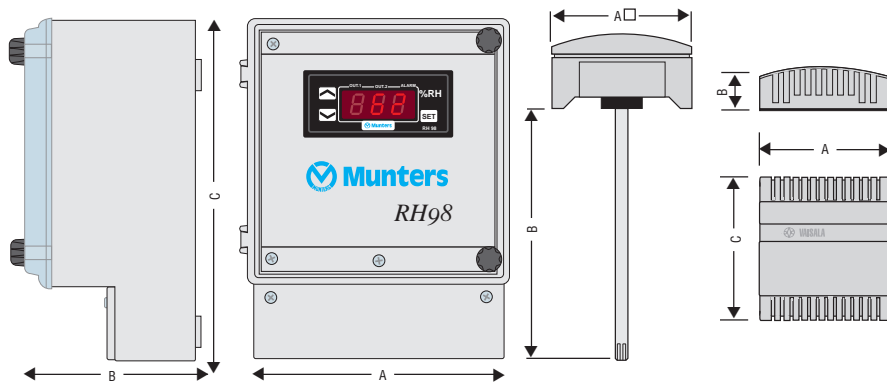
- Reduced energy consumption – improved efficiency vs. a humidistat
- Highly accurate reliable components – capacity control with precision
- Operator panel compliance IP54 – controls multiple installation environments
- Wall-mounted housing includes relay for external alarm – all in one

Easy Installation and Operation

- Wall-mounted housing – optional placement of operator panel
- Factory installed control unit – requires a low voltage connection for the sensor only
- Factory installed, preset parameters and pre-calibrated sensor – reliable startup
- Push buttons and display – simple adjustment and viewing
- Remote alarm – eases detection of failure or deviation

RH98 Humidity Control System

Diagram dimensions are for reference only.



	Width (A)	Depth (B)	Height (C)	Weight
Control unit in wall-mounted housing	136 mm	105 mm	183 mm	0,795 kg
Duct sensor	99 mm	250 mm		0,580 kg
Room sensor	83 mm	32 mm	108 mm	0,063 kg

Technical Specifications

Control Unit RH98-CW

Range	0–100 %RH; per 1 %RH
Accuracy	±0,5 % of the range
Display	3 digit, digital with 7 segments
Electrical requirement	1~200–240 VAC 50/60Hz
Fuse	T2AL, 250V
Outputs	RY1 SPST(NO) 250V/8A (cosφ=1) of 250V/5A (cosφ=0,4) RY2 SPDT (NO/NC) 250V/8A (cosφ=1) of 250V/5A (cosφ=0,4) Open collector, max. 500mA/50VDC
Sensor input	4–20 mA (0–100 %RH)
Material, wall-mounted enclosure	– window Polycarbonate – housing Polystyrol
Protective class	IP54
EMC-standards	EN50082-1, EN50082-2
General standard	EN45014
Operation temp.	-20 °C / +50 °C
Storage temp.	-20 °C / +60 °C
Operation humidity	10-90% RH (not condensing)
Other	Self test function Automatic sensor failure detection function

Sensor

Measurement range	0–100 %RH
Accuracy at +20 °C	±2 %RH (0–90 %RH) ±3 %RH (90–100 %RH)
–20 °C	±3,5 %RH (0–90 RH)
Response time (90%) at +20 °C in still air	15 seconds
Humidity sensor	HUMICAP® 180
Filter	Membrane filter
Material	– housing, aluminium – sensor head, stainless steel
Protective class, housing	IP65
Connections	Screw terminals, 0,5–1,5 mm ²
Supply voltage	10–35 VDC (R _L =0Ω) 20–35 VDC (R _L =500Ω)
Output signal	4–20 mA
Operating temperature	
Operating range	– electronics -20 °C / +55 °C – sensor head -40 °C / +80 °C
Storage range, not connected	-40 °C / +80 °C
Long-term application, humidity range	0–85 %RH

Duct Sensor RH98-SD

Measurement range	0–100 %RH
Accuracy at +20 °C	±2 %RH (0–90 %RH) ±3 %RH (90–100 %RH)
–20 °C	±3,5 %RH (0–90 RH)
Response time (90%) at +20 °C in still air	15 seconds
Humidity sensor	HUMICAP® 180
Filter	Membrane filter
Material	– housing, aluminium – sensor head, stainless steel
Protective class, housing	IP65
Connections	Screw terminals, 0,5–1,5 mm ²
Supply voltage	10–35 VDC (R _L =0Ω) 20–35 VDC (R _L =500Ω)
Output signal	4–20 mA
Operating temperature	
Operating range	– electronics -20 °C / +55 °C – sensor head -40 °C / +80 °C
Storage range, not connected	-40 °C / +80 °C
Long-term application, humidity range	0–85 %RH

Room Sensor RH98-SW

Measurement range	0–95 %RH (output signal corresponds to 0–100 %RH)
Accuracy at +20 °C	±2 %RH (0–90 %RH) ±3 %RH (90–95 %RH)
–20 °C	±4 %RH (0–90 RH)
Response time (90%) at +20 °C in still air	15 seconds
Humidity sensor	HUMICAP® 180
Filter	–
Material	– cover, ABS – base plate, PA
Protective class, housing	IP30
Connections	Screw terminals, 0,5–1,5 mm ²
Supply voltage	10–35 VDC (R _L =0Ω) 20–35 VDC (R _L =500Ω)
Output signal	4–20 mA
Operating temperature	
Operating range	– electronics -20 °C / +55 °C – sensor head -20 °C / +55 °C
Storage range, not connected	-40 °C / +80 °C
Long-term application, humidity range	0–85 %RH

EMC-standards 50081-1 and 50082-1, Emission EN55022 class B, Immunity IEC801-2:1991 criteria B, IEC801-4:1988 criteria B, IEC801-3:1984 criteria A, ENV50204:1995 criteria A



HEADQUARTERS:
Munters Europe AB
P O Box 434
S-191 24 Sollentuna
Tel +46 8 626 63 00
Fax +46 8 626 63 65

AUSTRIA
Munters Ges.m.b.H
Wien
Tel +43 (0) 1 616 42 98
Fax +43 (0) 1 616 42 98 98

BELGIUM
Munters N.V
Aartselaar
Tel +32 (0) 3 458 2434
Fax +32 (0) 3 458 2433

DENMARK
Munters A/S
Farum
Tel +45 44 95 3355
Fax +45 44 95 3955

FINLAND
Munters OY
Helsingfors
Tel +358 (0) 9 8386 0330
Fax +358 (0) 9 8386 0336

FRANCE
Munters France SA
Colombes Principal Cedex
Tel +33 (0) 1 41 19 24 42
Fax +33 (0) 1 41 19 00 32

GERMANY
Munters GmbH
Hamburg
Tel +49 (0) 40 73416 01
Fax +49 (0) 40 73416 131

ITALY
Munters S.R.L
Assago (MI)
Tel +39 (0)02 488 6781
Fax +39 (0)02 488 1171

NETHERLANDS
Munters Vochtbeheersing
Alphen a/d Rijn
Tel +31 (0) 172 43 32 31
Fax +31 (0) 172 44 29 60

NORWAY
Contact Sweden

POLAND
Munters Poland Sp zoo
Gdansk
Tel +48 (8) 58 305 35 17
Fax +48 (8) 58 346 34 53

SAUDI ARABIA
Hawa Munters
Riyadh
Tel +966 (1) 477 1514
Fax +966 (1) 476 0936

SOUTH AFRICA
Munters (Pty) Ltd
Johannesburg
Tel +27 (0) 11 455 2550 /1/2
Fax +27 (0) 11 455 2553

SPAIN
Munters Spain SA
Madrid
Tel +34 (9) 1 640 0902
Fax +34 (9) 1 640 1132

SWEDEN
Munters Europe AB
Sollentuna
Tel +46 (0) 8 626 6300
Fax +46 (0) 8 754 8594

SWITZERLAND
Munters Trocknungs Service AG
Zürich
Tel +41 (0) 1 271 1013
Fax +41 (0) 1 271 1019

UNITED KINGDOM
Munters UK Ltd
Huntingdon
Tel +44 (0) 1480 432 243
Fax +44 (0) 1480 413 147

Ordering Instructions

Each RH98 humidity control system includes a control unit and one sensor. Refer to the following list to define the article number with its corresponding function and humidity sensor type.

NOTE: A standard alarm contact is provided for control units which are installed in wall-mounted housings. A separate alarm relay must be ordered with factory installed control units.

Art. No. 43152/5 RH98-CB/SW

Installed control unit and room sensor

Art. No. 43152/5R RH98-CBA/SW

Same as above and includes alarm relay

Art. No. 43152/6 RH98-CB/SD

Installed control unit and duct sensor

Art. No. 43152/6R RH98-CBA/SD

Same as above and includes alarm relay

Art. No. 43154/5 RH98-CW/SW

Wall-mounted control unit and room sensor

Art. No. 43154/6 RH98-CW/SD

Wall-mounted control unit and duct sensor