



# RESOL heating controllers



#### DeltaTherm® HC

Controls a weather-compensated heating circuit (up to 6 with EM Extension Modules), the DHW loading and the afterheating demand for both

Temperature controls class: VIII



#### DeltaTherm® HC mini

Controls a weather-compensated heating circuit and its afterheating demand

Temperature controls class: VIII



#### DeltaTherm® FK

Especially developed for systems with biomass boilers, water heating stoves or pellet stove heating systems









# RESOL heating controllers – simply more

- Solutions for different DHW and space heating systems
- Suitable for small systems in private households up to large, multivalent heating installations
- Intuitive commissioning menu
- Room thermostats from all manufacturers can be connected (HC and HC mini)
- Many accessories such as Alarm modules, Dataloggers and Communication modules can be connected via RESOL VBus®
- Remote parameterisation via RPT software possible

- PWM outputs for the speed control of high-efficiency pumps
- RESOL VBus.net Internet portal for data visualisation and evaluation over the Internet
- Data logging and storing via SD memory card (HC and HC mini) and/or Datalogger
- User-friendliness and efficiency at an attractive price
- OEM versions on request

www.resol.com

# Survey of heating controllers

Customised and OEM versions available also for small-batch series





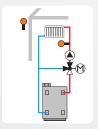


DeltaTherm® FK DeltaTherm® HC mini DeltaTherm® HC

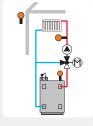
Sensor type         Pt1000         Pt10000         Pt10000         Pt10000         Pt100000         Pt10000         Pt100000         Pt100000	Temperature sensor inputs	4	5	8 (9 <sup>2</sup> )
Potential-free relay         1         1           PWH/10-10V outputs         2         2         2           Software         Software         8         4         30           Mixed heating circuits         -         1         61           Mixer control weather-compensated         -         1         61           Mixer control with target temperature         -	Sensor type	Pt1000	Pt1000	Pt1000, Pt500, KTY
PWH/10-10V outputs         2         2         2           Software         Pre-configured systems         8         4         30           Mixed heating circuits	Semiconductor relays	2	3	4
Software         Pre-configured systems         8         4         30           Mixed heating circuits         -         -1         6¹           Mixer control weather-compensated         -         -         -           Mixer control with target temperature         -         -         -           Operating modes         -         -         -         -           O-10V boiler control         -         -         -         -           Room control         -         -         -         -           Remote access with VBus <sup>o</sup> Touch HC         -         -         -         -           Remote access with RCP12         -         -         -         -           Remote access with RCP12         -         -         -         -           Heating circuit chimney sweeper function         -         -         -         -           Screed drying function         -         -         -         -           Room thermostats         -         -         -         -           Thermal disinfection         -         -         -         -           DHW heating         -         -         -         -           Circulation	Potential-free relay	-	1	1
Pre-configured systems         8         4         30           Mixed heating circuits         -         1         6¹           Mixer control weather-compensated         -         -         -           Mixer control with target temperature         -         -         -           Operating modes         -         -         -         -           0-10V boiler control         -         -         -         -           Room control         -         -         -         -           Remote access with VBus*Touch FK         -         -         -         -           Remote access with RCP12         -         -         -         -           Heating circuit chimney sweeper function         -         -         -         -           Screed drying function         -         -         -         -         -           Room thermostats         -         -         -         -         -         -           Screed drying function         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -	PWM/0-10 V outputs	2	2	2
Pre-configured systems         8         4         30           Mixed heating circuits         -         1         6¹           Mixer control weather-compensated         -         -         -           Mixer control with target temperature         -         -         -           Operating modes         -         -         -         -           0-10V boiler control         -         -         -         -           Room control         -         -         -         -           Remote access with VBus*Touch FK         -         -         -         -           Remote access with RCP12         -         -         -         -           Heating circuit chimney sweeper function         -         -         -         -           Screed drying function         -         -         -         -         -           Room thermostats         -         -         -         -         -         -           Screed drying function         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -	Software			
Mixer control weather-compensated         -		8	4	30
Mixer control with target temperature         v         v         v           Operating modes         -         5         6           0-10V boiler control         -         v³         v           Room control         -         v³         v           Remote access with VBus*Touch HC         -         v         v           Remote access with RCP12         -         v³         v           Heating circuit antifreeze function         -         v²         v           Heating circuit chimney sweeper function         -         v²         v²           Screed drying function         -         v²         v²           Room thermostats         -         3         5           Thermal disinfection         -         v²         v²           DHW heating         v²         -         v²           Circulation         -         v²         v²           Solid fuel boiler         v²         -         v²           Heating circuit return preheating         v²         -         v²           Return mixing function         v²         -         v²           Weather-compensated backup heating         v²         v²         v²           M	Mixed heating circuits	-	1	6 <sup>1</sup>
Operating modes         -         5         6           0-10V boiler control         -	Mixer control weather-compensated	-	✓	✓
0.10V boiler control         -	Mixer control with target temperature	✓	✓	<b>√</b>
Room control         -         -3         -3         -7           Remote access with VBus®Touch HC         -<	Operating modes	-	5	6
Remote access with VBus®Touch HC         -         ✓         ✓           Remote display via VBus®Touch FK         ✓         -         ✓           Remote access with RCP12         -         ✓³         ✓           Heating circuit antifreeze function         -         ✓         ✓           Heating circuit chimney sweeper function         -         ✓         ✓           Screed drying function         -         ✓         ✓           Room thermostats         -         3         5           Thermal disinfection         -         -         ✓           DHW heating         ✓         -         ✓           Circulation         -         -         ✓           Solid fuel boiler         ✓         -         ✓           Heating circuit return preheating         ✓         -         ✓           Return mixing function         ✓         -         ✓           Weather-compensated backup heating         -         ✓         ✓           Night correction         -         ✓         ✓           Start-up/Overrun         -         -         ✓           Backup heating suppression         -         -         ✓           Heat exchange <td>0-10 V boiler control</td> <td>-</td> <td>√³</td> <td><b>√</b></td>	0-10 V boiler control	-	√³	<b>√</b>
Remote display via VBus®Touch FK         Y         -         Y           Remote access with RCP12         -         x³         Y           Heating circuit antifreeze function         -         Y         Y           Heating circuit chimney sweeper function         -         Y         Y           Screed drying function         -         Y         Y           Room thermostats         -         3         5           Thermal disinfection         -         -         Y¹           DHW heating         Y         -         Y¹           Circulation         -         -         Y¹           Solid fuel boiler         Y         -         -           Heating circuit return preheating         Y         -         -           Return mixing function         Y         -         -           Weather-compensated backup heating         -         Y         Y           Night correction         -         Y         Y           Start-up/Overrun         -         -         Y           Backup heating suppression         -         -         -           Heat exchange         Y         -         -	Room control	-	√³	✓
Remote access with RCP12         - <td>Remote access with VBus®Touch HC</td> <td>-</td> <td>✓</td> <td>✓</td>	Remote access with VBus®Touch HC	-	✓	✓
Heating circuit antifreeze function         -         ✓         ✓           Heating circuit chimney sweeper function         -         ✓         ✓           Screed drying function         -         ✓         ✓           Room thermostats         -         3         5           Thermal disinfection         -         -         -         ✓           DHW heating         ✓         -         -         ✓           Circulation         -         -         -         ✓           Solid fuel boiler         ✓         -         -         ✓           Heating circuit return preheating         ✓         -         -         ✓           Return mixing function         ✓         -         -         ✓           Weather-compensated backup heating         -         ✓         ✓         ✓           Night correction         -         ✓         ✓         ✓           Start-up/Overrun         -         -         ✓         ✓           Backup heating suppression         -         -         -         ✓           Heat exchange         -         -         -         -         -	Remote display via VBus®Touch FK	✓	-	✓
Heating circuit chimney sweeper function  Screed drying function  Room thermostats  Thermal disinfection  Ther	Remote access with RCP12	-	√³	✓
Screed drying function  Room thermostats  Thermal disinfection  DHW heating  Circulation  Circulation  Colid fuel boiler  Heating circuit return preheating  Return mixing function  Weather-compensated backup heating  Night correction  Circulation  Circ	Heating circuit antifreeze function	-	✓	✓
Room thermostats  Thermal disinfection  DHW heating  Circulation  Circulation  Colid fuel boiler  Heating circuit return preheating  Return mixing function  Weather-compensated backup heating  Night correction  Circulation  Ci	Heating circuit chimney sweeper function	-	✓	✓
Thermal disinfection	Screed drying function	-	✓	✓
DHW heating  Circulation	Room thermostats	-	3	5
Circulation \frac{1}{2}  Solid fuel boiler \frac{1}{2}  Heating circuit return preheating \frac{1}{2}  Return mixing function \frac{1}{2}  Weather-compensated backup heating \frac{1}{2}  Night correction \frac{1}{2}  Start-up/Overrun \frac{1}{2}  Backup heating suppression \frac{1}{2}  Heat exchange \frac{1}{2}	Thermal disinfection	-	-	√¹
Solid fuel boiler  Heating circuit return preheating  Return mixing function  Weather-compensated backup heating  Night correction  Boiler protection  Start-up/Overrun  Backup heating suppression  Heat exchange	DHW heating	✓	-	✓
Heating circuit return preheating  Return mixing function  ✓ Weather-compensated backup heating - Wight correction - Start-up/Overrun - Backup heating suppression - Heat exchange  ✓ - ✓ - ✓ - ✓ - ✓ - ✓ - ✓ - ✓ - ✓ - ✓	Circulation	-	-	√¹
Return mixing function  Veather-compensated backup heating  Night correction  Boiler protection  Veather-compensated backup heating  Veath	Solid fuel boiler	✓	-	✓
Weather-compensated backup heating       -       ✓       ✓         Night correction       -       ✓       ✓         Boiler protection       ✓       ✓       ✓         Start-up/Overrun       -       -       ✓         Backup heating suppression       -       -       ✓         Heat exchange       ✓       -       ✓	Heating circuit return preheating	✓	-	√¹
Night correction - ✓ ✓ ✓ Boiler protection ✓ ✓ ✓ ✓ Start-up/Overrun ✓ Backup heating suppression ✓ Heat exchange ✓ - ✓¹	Return mixing function	✓	-	-
Boiler protection  Start-up/Overrun	Weather-compensated backup heating	-	✓	✓
Start-up/Overrun \footnote{}  Backup heating suppression \footnote{}  Heat exchange \footnote{} - \footnote{}	Night correction	-	✓	✓
Backup heating suppression \sqrt{ Heat exchange \sqrt{1}	Boiler protection	✓	✓	✓
Heat exchange ✓ - ✓¹	Start-up/Overrun	-	-	✓
	Backup heating suppression	-	-	✓
Mixer ✓ - √¹	Heat exchange	✓	-	√¹
	Mixer	✓	-	√1
Parallel relay \(\sigma^1\)	Parallel relay	-	-	√1
Error relay √¹	Error relay	-	-	√1
Function block √¹	Function block	-	-	√¹
HQM √	HQM	-	-	✓

#### DeltaTherm® HC mini

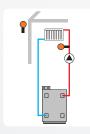
#### Examples



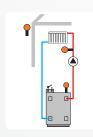
1 mixed heating circuit



1 mixed heating circuit with afterheating (demand)

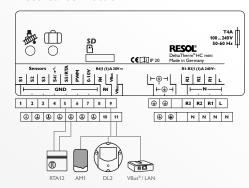


1 static heating circuit



1 static heating circuit with afterheating (demand)

#### Electrical connection



### DeltaTherm® HC

#### Examples



1 mixed heating circuit with external heat source (e.g. district heating)



1 mixed heating circuit with afterheating (demand)



1 mixed heating circuit with afterheating (demand and boilder loading pump)



1 mixed heating circuit with external heat source (e.g. district heating)



1 mixed heating circuit with DHW heating and afterheating (demand for heating circuit and DHW)



1 mixed heating circuit with external heat source (e.g. heat pump)

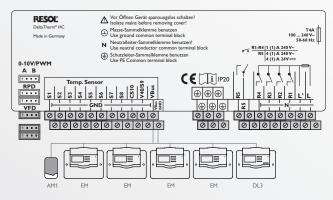


1 mixed and one unmixed heating circuit with afterheating (demand)



1 mixed heating circuit with solid fuel boiler

#### Electrical connection



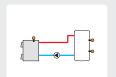
1 mixed heating circuit with solid fuel boiler and afterheating (demand)



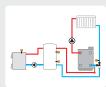
1 mixed heating circuit with DHW heating (3-port valve)

### DeltaTherm® FK

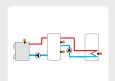
#### Examples



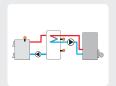
Solid fuel boiler



Solid fuel boiler with heating circuit return preheating

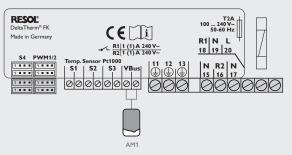


Solid fuel boiler with heat exchange control



Solid fuel boiler with heat exchange control

#### Electrical connection



## **VBus®Touch HC**

Adjust your heating via app



This easy-to-use app enables you to make adjustments on your RESOL heating controller from a mobile device.

Thus, e.g. the operating mode can be set via the app. Additionally, the system data are displayed in a clearly arranged graphic.

OEM versions with your design – contact us!







VBus® is a registered trademark of RESOL GmbH.

Google Play is a trademark of Google Inc.

Apple, the Apple logo, iPad, and iPhone are trademarks of Apple Inc., registered in the U.S. and other countries. App Store is a service mark of Apple Inc.

# Survey of accessories







DeltaTherm® HC mini DeltaTherm® HC DeltaTherm®	<sup>®</sup> FK
--	-----------------

RESOL AM1 Alarm Module Price bracket B   Article no.: 180 008 70	✓	✓	<b>√</b>
RESOL DL2 Datalogger Price bracket A   Article no.: 180 008 70  RESOL KM1 Communication Module Price bracket A   Article no.: 180 011 30	✓	✓	<b>√</b>
RESOL DL3 Datalogger  Price bracket A   Article no.: 180 009 90	✓	<b>√</b>	<b>√</b>
RESOL SDFK Smart Display Price bracket A   Article no.: 180 010 80	-	-	<b>√</b>
RESOL EM Extension Module Price bracket A   Article no.: 145 440 80	-	✓	-
RESOL RTA12 remote control Price bracket A   Article no.: 136 000 40  RESOL RCP12 Room control unit Price bracket A   Article no.: 136 000 50	<b>√</b> *	<b>√</b> *	-

\* RCP12 for controller version 2.0 or higher