Schlüter Systems®

PROFILE OF INNOVATION

Schlüter®-DITRA-HEAT-E

Electronic components
for Schlüter-DITRA-HEAT

6.6
Product data sheet

Application and function

Schlüter-DITRA-HEAT-E comprises thermostats, heating cables and testing tools for the installation, monitoring and use of the Schlüter-DITRA-HEAT electrical floor heating system. The components are used in conjunction with the Schlüter-DITRA-HEAT/-HEAT-DUO or Schlüter-DITRA-HEAT-PS/HEAT-DUO-PS uncoupling mats.
Schlüter-DITRA-HEAT-E-R are thermostats for regulating the room temperature. Depending on the model, you can choose between the control options of room air temperature, upper floor temperature or room air temperature with surface temperature limitation.
The DITRA-HEAT-E-R thermostats have standard dimensions so that they can be installed in standard flush-mounted boxes. In addition, the thermostats can be combined with the common mounting frames available from a variety of manufacturers.
The DITRA-HEAT-E-R thermostats are operated with a voltage of 230 V~, have a maximum switch capacity of 16 A, and are therefore ideal for controlling the Schlüter-DITRA-HEAT-E heating cables. The Schlüter-DITRA-HEAT/-HEAT-DUO and -DITRA-HEAT-PS/-HEAT-DUO-PS uncoupling mats, which are designed to accommodate the heating cable, form the basis for a temperature-controlled/heatable surface. In addition to use with Schlüter-DITRA-HEAT-E heating cables, the Schlüter-DITRA-HEAT thermostats can also be used to control the **Schlüter-BEKOTEC-THERM-ESA** actuators.



Schlüter-DITRA-HEAT-E-HK is a heating cable with an output of 12.5 W/m for installation in the Schlüter-DITRA-HEAT/-HEAT-DUO or Schlüter-DITRA-HEAT-PS/HEAT-DUO-PS uncoupling mats.
Schlüter-DITRA-HEAT-E-CHC is a heating cable with an output of 7.5 W/m for installation in the Schlüter-DITRA-HEAT/-HEAT-DUO or Schlüter-DITRA-HEAT-PS/HEAT-DUO-PS uncoupling mats. Using 40% less power than the DITRA-HEAT-E-HK heating cable, it is especially suited to use in energy-efficient buildings, where insulation provision has been calculated.

Schlüter-DITRA-HEAT-E-CT is a cable tester for measuring the resistance of the electrical heating cables DITRA-HEAT-E-HK and DITRA-HEAT-E-CHC and the remote sensors supplied with DITRA-HEAT-E thermostats. The device alerts the installer with an acoustic signal in the event of damage.

Material

The DITRA-HEAT-E-R thermostats are available in different versions.
DITRA-HEAT-E-R6 is an all-in-one thermostat with WiFi connection and optional voice control. It controls floor and wall coverings that are electrically heated with DITRA-HEAT-E. As an alternative, the system can be operated via the 2" (5.1 cm) touchscreen display, with the Schlüter-HEAT-CONTROL app for iOS and Android or by voice control with Amazon Alexa or Google Assistant.
DITRA-HEAT-E-R4 is an analogue thermostat used for simple surface temperature regulation. It has an additional input for connecting an external timer to switch from daytime operation to night-time reduction if required.
DITRA-HEAT-E-R is a touchscreen model with an intuitive 2" colour display, and allows precise setting of temperatures according to a schedule.
The control options can be set to either surface or room air temperature. In room air mode, it is also possible to work with a surface temperature limitation.
DITRA-HEAT-E-R3 has a 3.5" (8.9 cm) touchscreen, which enables more convenient operation thanks to the multi-line display. The mode and area of application is the same as the 2" touchscreen thermostats.
DITRA-HEAT-E-HK is a VDE-tested heating cable and is controlled/operated with a mains voltage of 230 V. The heating cable is waterproof (IP 67 protection class) and approved for use in wet areas. DITRA-HEAT-E-HK is offered in a range of lengths. Depending on the installation spacing, a heating output of 136 W/m² or 200 W/m² can be achieved.
DITRA-HEAT-E-CHC is a heating cable and is controlled/operated with a mains voltage of 230 V. The heating cable is waterproof (XP7 protection class) and approved for use in wet areas. DITRA-HEAT-E-CHC is offered in a range of lengths. Depending on the installation spacing, a heating output of 80 W/m² or 120 W/m² can be achieved.
DITRA-HEAT-E-CT is a cable tester for measuring the resistance of the electrical heating cables DITRA-HEAT-E-HK and DITRA-HEAT-E-CHC and the remote sensors supplied with DITRA-HEAT-E thermostats. The terminal connections for monitoring are colour-coded for reliable identification. DITRA-HEAT-CT is operated with a supplied battery for monitoring/measuring. DITRA-HEAT-CT monitors the resistance of the heating cables during the entire installation phase and alerts the installer with an acoustic signal in the event of damage. The cable tester automatically shuts down 60 minutes after the last key activation (values will not be saved)

Material properties and areas of application:

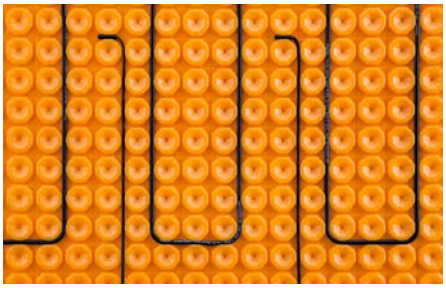
DITRA-HEAT-E is exclusively intended for installation in interior areas.

Application and function

The heating cables of the DITRA-HEAT system may only be operated with DITRA-HEAT-E thermostats.
Note: Heating cables must not be shortened. When selecting the heating cable, please note that the table with the heated space in m² does not specify the room size. To determine the heated space, deduct unheated zones such as perimeter areas and storage space from the room size.

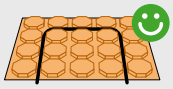
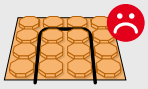
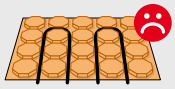
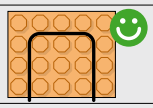
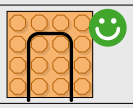
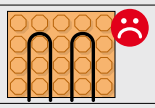
When installing the remote sensor directly in the Schlüter-DITRA-HEAT uncoupling mat, the spare sensor included in the scope of delivery must also be installed there (connect only one sensor to the thermostat).

The transition from the heating cable to the connection pipe (fitting) is marked with an imprint as well as a sticker marked „Connection".
This cold conductor (4 m) must be installed directly in a junction box or connected to the thermostat. The cold conductor may be shortened to a max. length of 1.00 m before the fitting.

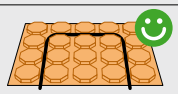
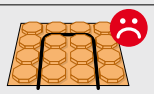
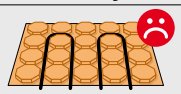

Installation example for remote sensor


"Connection" sticker

Permitted installation spacing of heating cables for Schlüter-DITRA-HEAT/DITRA-HEAT-DUO

	9 cm = 3rd stud	6 cm = 2nd stud	3 cm = every stud
Floor			
DITRA-HEAT-E-HK	≙ 136 W m²	not allowed	not allowed
DITRA-HEAT-E-CHC	≙ 80 W/m²	not allowed	not allowed
Wall			
DITRA-HEAT-E-HK	≙ 136 W m²	≙ 200 W/m²	not allowed
DITRA-HEAT-E-CHC	≙ 80 W/m²	≙ 120 W m²	not allowed

DITRA-HEAT-PS/DITRA-HEAT-DUO-PS

	9 cm = 3rd stud	6 cm = 2nd stud	3 cm = every stud
Floor			
DITRA-HEAT-E-HK	≙ 136 W m²	not allowed	not allowed
DITRA-HEAT-E-CHC	≙ 80 W/m²	not allowed	not allowed

Schlüter®-DITRA-HEAT-E-R6:
Thermostat for floor and wall coverings with properties such as:
- User-friendly colour touchscreen display 2” (5.1 cm)
- WiFi function for integration into a network for remote control via the “Schlüter-HEAT-Control” app
- Optional voice control with a smart home device using Amazon Alexa or Google Assistant
- Selectable room air monitoring
- Mechanical main switch
- Second remote sensor included as spare sensor in the scope of supply
- Background lighting
- Pre-set and adjustable timer programs
- Energy consumption display
- Adjustable operator language
- Suitable for integration in commercial switch programs 5.5 x 5.5 cm
- 16 A switch capacity ≙ for 230 V: 3680 W
- Working aid for easy disassembly of the display included in the scope of supply
- Colours: BW = Brilliant White, DA = Dark Anthracite



Art. No.: DH E RT6 / BW



Art. No.: DH E RT6 / DA

Schlüter®-DITRA-HEAT-E-R:
Thermostat for floor and wall coverings with properties such as:
- User-friendly colour touchscreen display 2” (5.1 cm)
- Selectable room air monitoring
- Mechanical main switch
- Second remote sensor included as spare sensor in the scope of supply
- Background lighting
- Pre-set and adjustable timer programs
- Energy consumption display
- Adjustable operator language
- Suitable for integration in commercial switch programs 5.5 x 5.5 cm
- 16 A switch capacity ≙ for 230 V: 3680 W
- Working aid for easy disassembly of the display included in the scope of supply
- Colours: BW = Brilliant White, DA = Dark Anthracite



Art. No.: DH E RT2 / BW



Art. No.: DH E RT2 / DA

Schlüter®-DITRA-HEAT-E-R3:
Thermostat for floor and wall coverings with properties such as:
- User-friendly colour touchscreen display 3.5” (8.9 cm)
- Selectable room air monitoring
- Mechanical main switch
- Second remote sensor included as spare sensor in the scope of supply
- Background lighting
- Pre-set and adjustable timer programs
- Energy consumption display
- Adjustable operator language
- 16 A switch capacity ≙ for 230 V: 3680 W
- Colour: BW = Brilliant White



Art. No.: DH E RT3 / BW

Schlüter®-DITRA-HEAT-E-R4:
Analogue thermostat for temperature control of floor or wall coverings with properties such as:
- Mechanical switching for on/off operation
- Input for control via external timer
- Second remote sensor included as spare sensor in the scope of supply
- Suitable for integration in commercial switch programs 5 x 5 cm (for switch series of 5.5 x 5.5 cm, an on-site adapter is required)
- 16 A switch capacity ≙ for 230 V: 3680 W
- Colour: BW = Brilliant White



Art. No.: DH E RT4 / BW

Schlüter®-DITRA-HEAT-E-R

Thermostat for controlling floor and wall coverings that are heated with Schlüter-DITRA-HEAT-E.

Overview of the technical properties

				
	DITRA-HEAT-E-R4	**DITRA-HEAT-E-R**	**DITRA-HEAT-E-R3**	**DITRA-HEAT-E-R6**
Touchscreen		x	x	x
Size	2" (5.1 cm)	2" (5.1 cm)	3.5“ (8.9 cm)	2" (5.1 cm)
Background lighting		x	x	x
Mechanical main switch	x	x	x	x
Selectable room air monitoring		x	x	x
Adjustable operator language		x	x	x
WiFi connection				x
Voice control				x
Adjustable time program		x	x	x
Switch capacity for 230 V	16A (3680 W)	16A (3680 W)	16A (3680 W)	16A (3680 W)
Energy consumption display		x	x	x
Timer	Input for external timer	integrated	integrated	integrated
Degree of protection for housing	IP 30	IP 21	IP 21	IP 21
BW = Brilliant White	x	x	x	x
DA = Dark Anthracite		x		x

Schlüter®-DITRA-HEAT-E-HK
Heating cable



Art. No.	m	Heated area in m² 136 W/m²	Heated area in m² 200 W/m² **	W	Total resistance (Ohm) *
DH E HK 4	4.00	0.40	0.25	50	1058.00
DH E HK 6	6.76	0.60	0.43	85	626.00
DH E HK 12	12.07	1.10	0.70	150	352.67
DH E HK 17	17.66	1.60	1.00	225	235.11
DH E HK 23	23.77	2.20	1.50	300	176.33
DH E HK 29	29.87	2.70	1.80	375	141.07
DH E HK 35	35.97	3.30	2.20	450	117.56
DH E HK 41	41.56	3.80	2.60	525	100.76
DH E HK 47	47.67	4.40	2.90	600	88.17
DH E HK 53	53.77	5.00	3.30	675	78.37
DH E HK 59	59.87	5.50	3.70	750	70.53
DH E HK 71	71.57	6.60	4.40	900	58.78
DH E HK 83	83.77	7.70	5.10	1050	50.38
DH E HK 95	95.47	8.80	5.90	1200	44.08
DH E HK 107	107.67	10.00	6.60	1350	39.19
DH E HK 136	136.16	12.70	8.40	1700	31.12
DH E HK 164	164.07	15.00	10.00	2050	25.80
DH E HK 192	192.27	17.70	11.80	2400	22.04
DH E HK 216	216.27	20.00	13.20	2700	19.59
DH E HK 244	244.37	22.70	15.10	3050	17.34

* Resistance tolerance -5% / +10% at 20°C ** For use in wall areas only

Schlüter®-DITRA-HEAT-E-CHC
Heating cable



Art. No.	m	Heated area in m² 80 W/m²	Heated area in m² 120 W/m² **	W	Total resistance (Ohm) *
DH E CHC 4	4.00	0.40	0.25	30	1763.43
DH E CHC 6	6.76	0.60	0.43	50	1046.59
DH E CHC 12	12.07	1.10	0.70	90	585.31
DH E CHC 17	17.66	1.60	1.00	132	399.90
DH E CHC 23	23.77	2.20	1.50	178	297.06
DH E CHC 29	29.87	2.70	1.80	224	236.42
DH E CHC 35	35.97	3.30	2.20	269	196.21
DH E CHC 41	41.56	3.80	2.60	311	170.00
DH E CHC 47	47.67	4.40	2.90	357	148.22
DH E CHC 53	53.77	5.00	3.30	403	131.28
DH E CHC 59	59.87	5.50	3.70	449	117.96
DH E CHC 71	71.57	6.60	4.40	536	98.72
DH E CHC 83	83.77	7.70	5.10	628	84.44
DH E CHC 95	95.47	8.80	5.90	716	74.11
DH E CHC 107	107.67	10.00	6.60	807	65.51
DH E CHC 136	136.16	12.70	8.40	1020	51.64
DH E CHC 164	164.07	15.00	10.00	1230	43.47
DH E CHC 192	192.27	17.70	11.80	1440	36.39
DH E CHC 216	216.27	20.00	13.20	1620	32.61
DH E CHC 244	244.37	22.70	15.10	1830	28.80

* Resistance tolerance -5% / +10% at 20°C ** For use in wall areas only

Schlüter®-DITRA-HEAT-E-CT

Cable tester

Test device for measuring and checking the resistance of the electrical heating cables Schlüter-DITRA-HEAT-E-HK / -CHC and the remote sensors supplied with Schlüter-DITRA-HEAT-E thermostats.



Schlüter®-DITRA-HEAT-E-ZS

Installation set for thermostat:

- Conduit for sensor wire (2.5 m)
- Aluminium sensor sleeve
- Plastic switch box

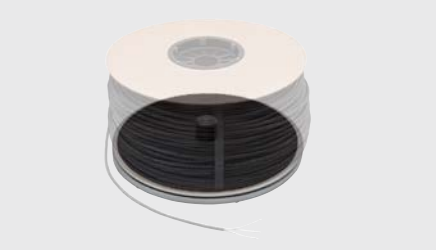


Further properties and information on installing and setting up the thermostats can be found in the respective installation instructions.

Schlüter®-DITRA-HEAT-E-KARO

Heating cable dispenser

Simple, easily transportable working aid for the efficient installation of DITRA-HEAT-E heating cables. It is suitable for all available lengths of DITRA-HEAT heating cable.



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