

# E-Pro



**Electronic Radiator Controller**  
Time adaptor with E-Pro Stick for  
thermostatic valves

Engineering  
**GREAT** Solutions

# E-Pro

E-Pro is used in conjunction with IMI Heimeier thermostatic heads to control the temperature of individual rooms corresponding to set times. Its task is to lower the room temperature and raise it again to the normal value at certain times.



## Key features

- > No time-consuming programming
- > E-Pro stick for programming on PC
- > Ideal for retrofitting. Existing thermostatic heads can still be used
- > Optional day-program or weekprogram

## Technical description

E-Pro time adaptor for timedependent room temperature control.

The unit is installed between the valve and thermostatic head. Existing IMI Heimeier thermostatic heads can still be used.

E-Pro consists of a control unit with cover and a connecting piece for all IMI Heimeier thermostatic valve bodies and integrated valve radiators with the M 30 x 1.5 connection.

Corresponding adapters enable installation on other-make thermostatic valve bodies.

Two batteries LR6 (AA) are included in

delivery. The batteries have a service life of up to 5 years.

The control panel features buttons for programming "Start of heating time" (red) and "End of heating time" (blue), an operational status indicator and a sliding switch **I** (ON) / **O**(OFF).

A light emitting diode (LED) lights up to confirm time programming.

The LED flashes to indicate following statuses: battery discharged, summer time/winter time changeover, deletion of time program, frost guard function and activation of automatic "open window" recognition.

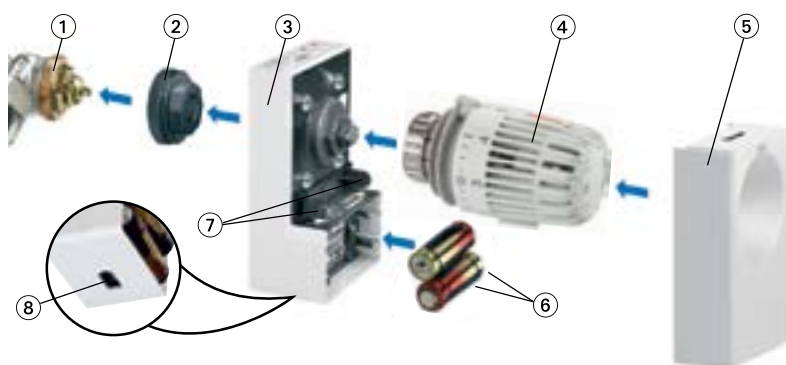
E-Pro can be changed over from day-program to week-program with an internal sliding switch.

The compact body made from high-quality plastic encloses the motor, gears and an integrated microprocessor control.

**E-Pro Stick** for conveniently transferring a timer program created on the PC to the E-Pro. Ideal for apartments and buildings with several E-Pro units. Programming can be carried out quickly and easily for the customer, even during initial installation.

## Construction

### E-Pro installation



1. Valve
2. Connecting piece
3. Control unit
4. Thermostatic head K (not included in delivery)
5. Cover
6. Batteries LR 6 (AA) alkaline
7. Stop lever
8. Connection for E-Pro stick

## Application

E-Pro is used in conjunction with IMI Heimeier thermostatic heads to control the temperature of individual rooms corresponding to set times. Its task is to lower the room temperature and raise it again to the normal value at certain times. It is ideal for rooms that are used only occasionally or at

certain times such as bathrooms, kitchens, living rooms and bedrooms.

The saving potential in office rooms is outstanding as central night-time heating set-back is rather the exception in buildings with miscellaneous uses.

## Function

E-Pro is installed between the thermostatic head and valve. When active, E-Pro uses its motor to cut off the water supply to the radiator via the valve. The room temperature drops at different rates depending on the length of the programmed heating times and the construction details of the building. The thermostatic head opens the valve only when the temperature drops below the room temperature set at the thermostatic head by about 4 °C. The room temperature is now controlled by the thermostatic head. It is designed as an automatically operating temperature controller that requires no outside power source.

If the room temperature increases, e.g. through the heat given off by sunlight, electrical devices or persons in the room, the thermostatic head will activate the valve via a transmission element in the E-Pro and reduce the supply of water to the radiator.

The procedure is reversed if the room temperature drops. E-Pro starts an automatic setback period of 15 minutes in response to the room being aired with a sudden, intense drop in room temperature at the E-Pro (open window recognition).

## Operation

### Pushbutton programming

In principle, E-Pro has two buttons which you can use to carry out individual time programming practically in passing. A simple push of a button replaces the task of manually adjusting the thermostatic head - a task that is often forgotten.

The programming principle is simple: As soon as you switch on E-Pro the first time after installation the temperature set at the thermostatic head is **reduced by about 4 °C**.

Program your heating times by setting the start and end of a heating period at the E-Pro control panel with the push of a button. E-Pro remembers these set times and from now on will repeat them automatically. For comfort reasons, the heating periods are started 30 minutes before the set time.

### Programming heating times

Program the **start of the heating time** by pressing the **red button**. The thermostatic head assumes the set temperature. Program the **end of the heating time** by pressing the **blue button**. This is also the start of the cut-back time. E-Pro reduces the temperature set at the thermostatic head by about 4 °C. In this way, you can program up to four heating times per day in the day-program or week-program.

### Operational status indicator

You can read off the current operating status of E-Pro from the operational status indicator:

- Red = Heating time**
- Blue = Set-back time**

### OFF / normal function of thermostatic head

The thermostatic head functions normally when you set the sliding switch to **O** (OFF).

The programmed heating times are activated by switching back to **I** (ON).

### Switch between day-program/week-program

E-Pro can be switched over from day-program to week-program with the internal day/week-program sliding switch (1/1...7). This therefore gives you the option of programming individual heating times every day. You can carry out this programming conveniently with the E-Pro stick.

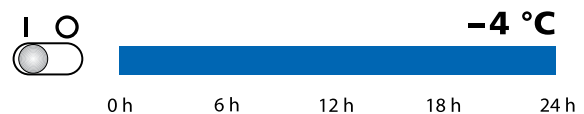
## Diagrams

### Set temperature is regulated

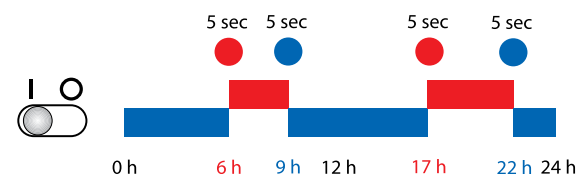


### Set temperature is reduced

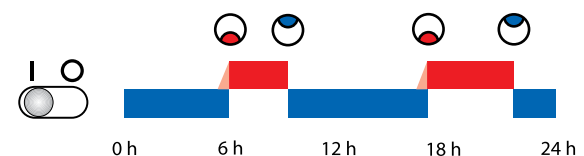
No heating times programmed



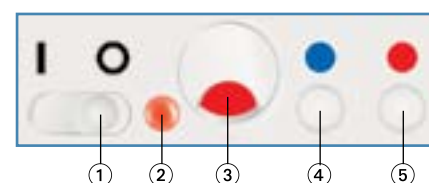
### Program heating times (max. 4/day)



### The stored program



### Control panel



1. Sliding switch ON/OFF
2. Light emitting diode (LED)
3. Operational status indicator
4. Button for "End of heating time" (-4 °C)
5. Button for "Start of heating time"

## Changing the program

### Changing a heating time:

To change **start** of heating time:

Press the red button for 5 seconds until LED comes on.

To change **end** of heating time:

Press the blue button for 5 seconds until LED comes on.

### Deleting a heating/set-back time:

Press the **blue and red** button for 5 seconds until the LED comes on during the heating or cut-back time to be deleted.

### RESET/Delete all heating times

Press the **blue and red** button for 15 seconds until LED flashes rapidly.

### Summer/winter time changeover

Changeover from **summer time to winter time** (-1 hour):

Press the **blue** button for 15 seconds until LED comes on.

Changeover from **winter time to summer time** (+1 hour):

Press the **red** button for 15 seconds until LED comes on.

With the E-Pro stick, time programming can also be performed on the PC.

### E-Pro on the integrated valve radiator



1. Control panel
2. Thermostatic head for setting normal temperature

## Technical data – E-Pro

<b>Battery type:</b>	2x 1.5V, LR6 (AA) alkaline
- Service life, power reserve	Up to 5 years; approx. 10 minutes during battery change
<b>Number of programmable heating times:</b>	Up to 4 per day; max. 28 per week
- Programming time interval	2 minutes
<b>Temperature setting range of thermostatic head K:</b>	approx. 6 °C – 28 °C in heating mode
- During set-back operation by E-Pro	Up to 4 °C below heating mode
<b>Open window recognition:</b>	Automatic set-back operation for approx. 15 minutes
<b>Frost guard function:</b>	Automatic heating operation at temperature < 7 °C
<b>Function of sliding switch:</b>	<b>I</b> (ON = Operation - time programming); <b>O</b> (OFF = Party)
- Party function in position O (OFF)	Continuous heating operation
<b>Function of internal sliding switch:</b>	<b>1</b> = Day-program / <b>1...7</b> = Week-program
<b>Function of buttons:</b>	Blue button = Cut-back operation; Red button = Heating operation
- Program heating and set-back time	Press the blue <b>or</b> red button >5 seconds
- Delete current heating time	Press the blue <b>and</b> red button for >5 seconds
- Reset/delete all heating times	Press the blue <b>and</b> red button for >15 seconds
- Changeover from summer time to winter time	Press the blue button >15 seconds [-1 hour]
- Changeover from winter time to summer time	Press the red button >15 seconds [+1 hour]
<b>Function light emitting diode (LED):</b>	Switch or button operation; open window recognition
- LED lights after pressing button >5 sec.	Programming or deleting a heating/set-back time
- LED flashes rapidly after pressing button >15 sec.	Resetting/deleting all heating times; time changeover +/-1 hour
- LED flashes 1x within 8 sec.	Sliding switch <b>I</b> (ON) / <b>O</b> (OFF) was operated
- LED flashes 1x every 8 sec.	Open window recognition is activated
- LED flashes 2x every 8 sec.	Frost guard function is activated
- LED flashes rapidly 3x every 8 sec.	Batteries exhausted
<b>Operational status indicator:</b>	Blue = set-back time/red = heating time
<b>CE certification (EMC):</b>	CE in accordance with DIN EN 60730-1:2000
<b>RoHS conformity:</b>	In accordance with Directive 2002/95/EC dated 27.01.2003
<b>Protection category:</b>	IP20 as per EN 60529
<b>Ambient temperature:</b>	0 °C to +50 °C in operation
<b>Fluid temperature:</b>	max. 85 °C
<b>Storage temperature:</b>	-20 °C – +70 °C
<b>Humidity:</b>	max. 95 %, non-condensating
<b>Body, colour:</b>	ABS; white RAL 9016
<b>Dimensions, weight (not including thermostatic head):</b>	approx. 64 x 105 x 46 (W x H x D [mm]), approx. 200 g (including battery)
<b>Installation:</b>	On thermostatic valve M 30 x 1.5 (see Accessories for adapters)

## E-Pro Stick

### Description

The E-Pro stick is used for transferring a time program created on the PC to the E-Pro time adapter.

It is ideal for apartments and buildings with several E-Pro units or wherever E-Pro is to be programmed with a week-program.

You simply load a special program on to the PC for efficient time programming. The clearly arranged program environment quickly enables you to set the required heating times. Then simply plug the E-Pro stick into a USB port (see functional principle). Transfer data by a click of the mouse. Then plug the E-Pro stick connector into the connection port provided on the underside of the E-Pro. Press the button on the stick for

E-Pro to adopt the individual time programming (see functional principle).

The E-Pro stick can be additionally used to activate a button inhibit function (e.g. child safety lock) for E-Pro.

The E-Pro Stick has an internal battery that is charged via the USB port of your PC. No batteries are required.

A fully charged battery will give you 8 hours time to transfer the time program stored in the E-Pro stick to the time adapter.

The E-Pro stick comes with a CD-ROM with the special program.

### Functional principle



#### Time program

- Create
- Save
- Charge battery

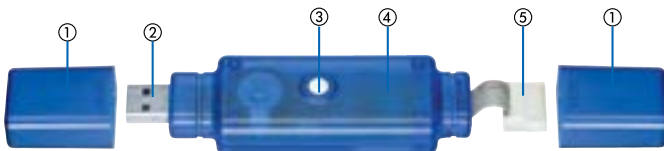
#### Time program

- Buffer
- Transfer

#### Time program

- Read in
- Execute

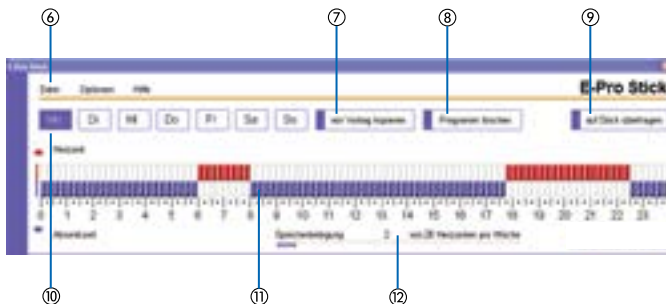
### Construction



1. Protective cap
2. USB connector
3. Programming button
4. Red/green LED
5. E-Pro connector

## E-Pro Stick Software

Program environment



#### 6. Menu bar

- File
- Options
- Help

#### 7. Button

Copy time program from previous day

#### 8. Button

Delete complete time program

### System requirements

- Intel® Pentium® III (or compatible processor) at least 700 MHz or higher
- Min. 256 MB RAM
- Min. 300 MB of free hard disk space
- Display resolution at least 1024 x 768, 256 colours
- CD-ROM or DVD-ROM drive
- USB 1.1 port or higher
- Microsoft® Windows® 2000 or higher

#### 9. Button

Transfer time program to E-Pro stick

#### 10. Button, week days

#### 11. Tab

Time interval 15 minutes

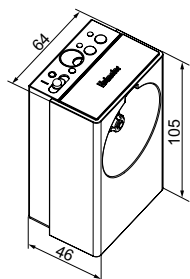
#### 12. Memory allocation

Number of programmed heating times

## Technical data – E-Pro Stick

<b>Operating voltage:</b>	5V DC, max. 100 mA; via USB port
– Internal battery (type; charging/data storage time)	Gold-Cap; max. 7 min./approx. 8 hours;
<b>Interfaces; compatibility:</b>	
– PC	USB 2.0; USB 1.1 port or higher
– E-Pro / Art. No. 1950-09.500	E-Pro connector; manufacturer-specific
<b>System requirements:</b>	See above
<b>Number of programmable heating times:</b>	max. 28 heating times (switching cycles) per week
– Programming time interval	15 minutes
<b>Function of buttons:</b>	
– Transfer time program to E-Pro	Press button > 5 sec. until green LED flashes 1x
– Reset transmission error on E-Pro	Briefly press button, red LED goes out
– Reset time program in E-Pro stick	Press button > 15 sec. until red LED flashes
<b>Function LEDs ...</b>	<b>Connection to PC:</b>
– Red LED flashes	Time program is transferred
– Red LED ON	Charging internal battery
– Green LED ON	Internal battery is charged
<b>Function LEDs ...</b>	<b>Connection to E-Pro:</b>
– Red LED flashes	Time program is transferred
– Red LED ON	Transfer error
– Green LED flashes 1x after pressing button > 5 sec.	Start of time program transfer
– Green LED flashes 2x after pressing button > 10 sec.	Currently not assigned
– Green LED lights for 5 sec.	Transfer of time program finished
CE certification (EMC):	CE in accordance with DIN EN 60730-1:2000
<b>RoHS conformity:</b>	In accordance with Directive 2002/95/EC dated 27.01.2003
<b>Protection category:</b>	IP30 as per EN 60529
<b>Ambient temperature (in operation):</b>	0 °C – +50 °C
<b>Storage temperature:</b>	-20 °C – +70 °C
<b>Humidity:</b>	max. 95 %, non-condensating
<b>Body, colour:</b>	PC, blue transparent
<b>Housing dimensions; weight:</b>	approx. 130 x 30 x 18 mm (W x H x D [mm]); approx. 38 g

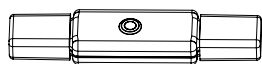
## Articles



### E-Pro

Time adapter.  
Including 2 LR6 batteries (AA)

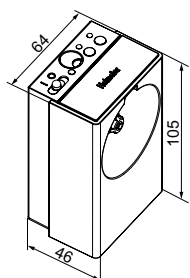
EAN	Article No
4024052568314	1950-09.500



### E-Pro Stick

for transferring a timer program created on a PC to E-Pro.  
Including software on CD ROM and USB extension cable.

EAN	Article No
4024052572311	1950-09.160



### E-Pro Starter kit

consists of: 1 x E-pro and 1 x E-Pro-Stick.

EAN	Article No
4024052560912	1950-00.800

## Accessories



### Connecting to other brands

Adapter for installing the E-Pro on thermostatic valve bodies of makes listed opposite.

Threads M30x1.5 factory standard.

Manufacturer	EAN	Article No
Danfoss RA (Ø≈20 mm)	4024052297016	9702-24.700
Danfoss RAV (Ø≈34 mm)	4024052300112	9800-24.700
Danfoss RAVL (Ø≈26 mm)	4024052295913	9700-24.700
Vaillant (Ø≈30 mm)	4024052296019	9700-27.700
TA (M28x1,5)	4024052336418	9701-28.700
Herz (M28x1,5)	4024052296316	9700-30.700
Markaryd (M28x1,5)	4024052296514	9700-41.700
Comap (M28x1,5)	4024052296712	9700-55.700
Oventrop (M30x1,0)	4024052428519	9700-10.700
Giacomini (Ø≈22,6 mm)	4024052429714	9700-33.700
Ista (M32x1,0)	4024052511419	9700-36.700

**Note:** 9702-24.700 cannot be used for radiators with integrated valves.



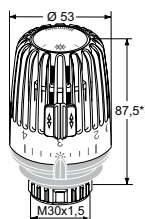
### Connecting to radiators with integrated valves

Adapter for installing the E-Pro with M30x1.5 connection on thermostatic insert for **Series 2 or Series 3** clamping joint.

M30x1.5 threading, factory standard

Radiator manufacturers: thermostatic head prospectus.

Model	EAN	Article No
<b>Series 2</b>	4024052297214	9703-24.700
<b>Series 3</b>	4024052313518	9704-24.700



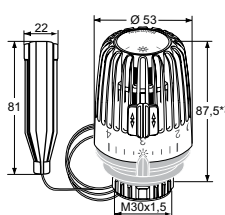
### Thermostatic head K with built-in sensor

Graduation cap, white RAL 9016.

With two economy clips.

For further thermostatic heads and information see "Thermostatic heads" brochure.

Setting range		EAN	Article No
6°C – 28°C	Number on dial 1-5	4024052248711	6000-00.500
6°C – 28°C	Setting scale with temperature values	4024052561612	6000-00.600



### Thermostatic head K with remote sensor

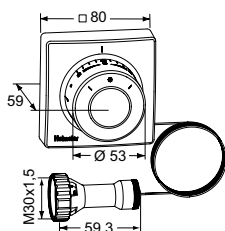
Capillary tube length – 2 m

Graduation cap, white RAL 9016.

With two economy clips.

For further thermostatic heads and information see "Thermostatic heads" brochure

Setting range		EAN	Article No
6°C – 28°C	Number on dial 1-5	4024052260515	6002-00.500
6°C – 28°C	Setting scale with temperature values	4024052561810	6002-00.600



### Thermostatic head F

Remote dial with built-in sensor.

Capillary tube length – 2 m.

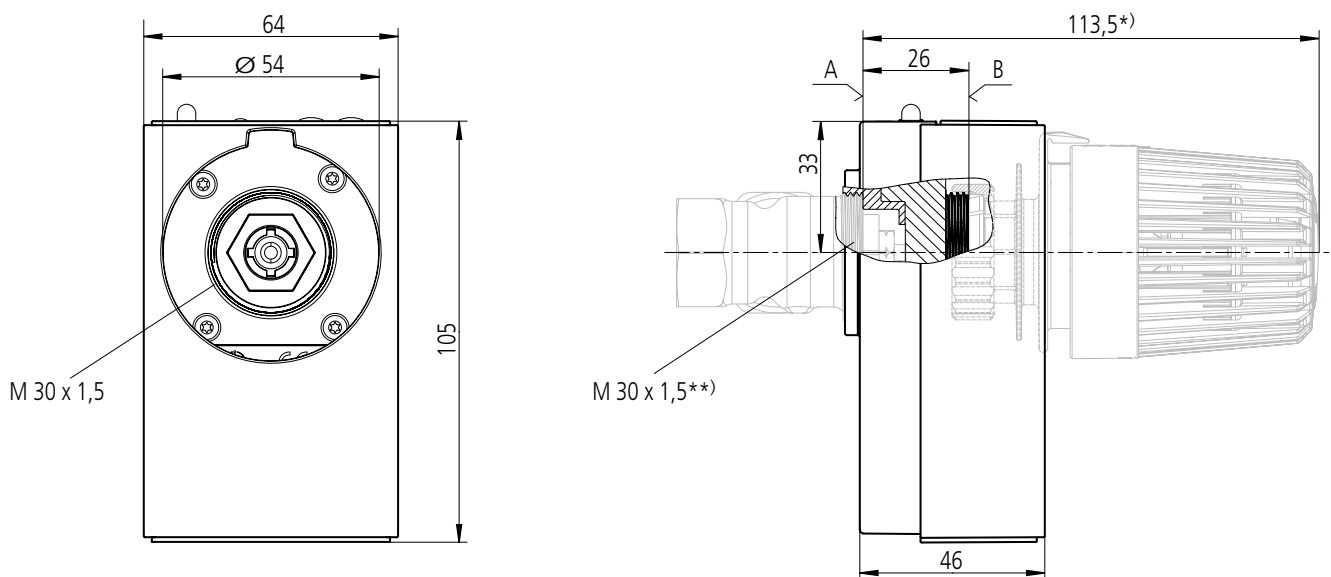
Setting scale with numbers 1 – 5.

Graduation cap, white RAL 9016.

For further thermostatic heads and information see "Thermostatic heads" brochure.

Setting range	EAN	Article No
0°C – 27°C	4024052191017	2802-00.500

## Dimensions



A. Valve support surface

B. Thermostatic head support surface

\*) when thermostatic head K is set to position 3

\*\*\*) Adapters for installation on other-make thermostatic valve bodies, see Accessories.

1 mm = 0,0394 inch