GRÄSSLIN
by INTERMATIC

PRODUCT CATALOGUE TEMPERATURE CONTROL

Grässlin products for individual control of temperature

Temperature control: Feel good at any time of year

Product range
thermio™

Excellent products

Our precise room thermostats and timers as well as our extensive accessories, consisting of wiring centres, zone valves and water treatment solutions, allow for simple, need-based and safe temperature control in residential, office, commercial and industrial buildings. They help to individually control the desired temperature with energy efficiency and thus increase comfort - in every season.

Impressive benefits

Whether wired, with radio communications or with the smart control version via Bluetooth: Grässlin products for temperature control can be easily installed or retrofitted and adapted to request. Their high functionality, intelligent features, ease of use and reliability are impressive.

Feel good and save costs: easy and reliable with the precise room thermostats and heating time switches from Grässlin.


GRÄSSLIN
DANGER! DISCONNECT THE MAINS SUPPLY BEFORE REMOVING THIS COVER
low battery
4h
3h
2h
1h
water treatment
500ml
famoso
ECOsave
BOOST TIME
PUSH ON/OFF

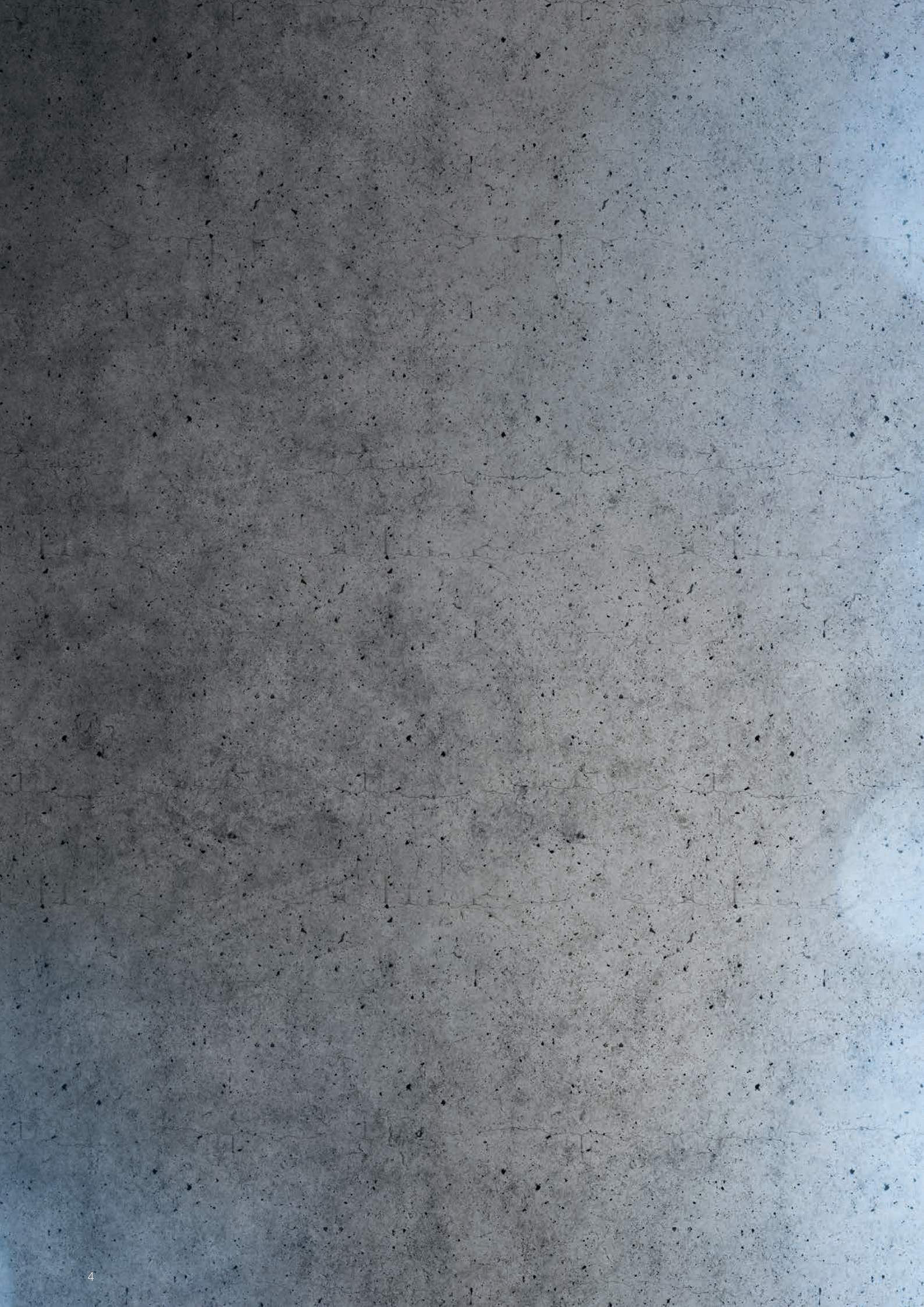


Table of Contents

Digital and analogue timer: The easy solution for controlling the heating time

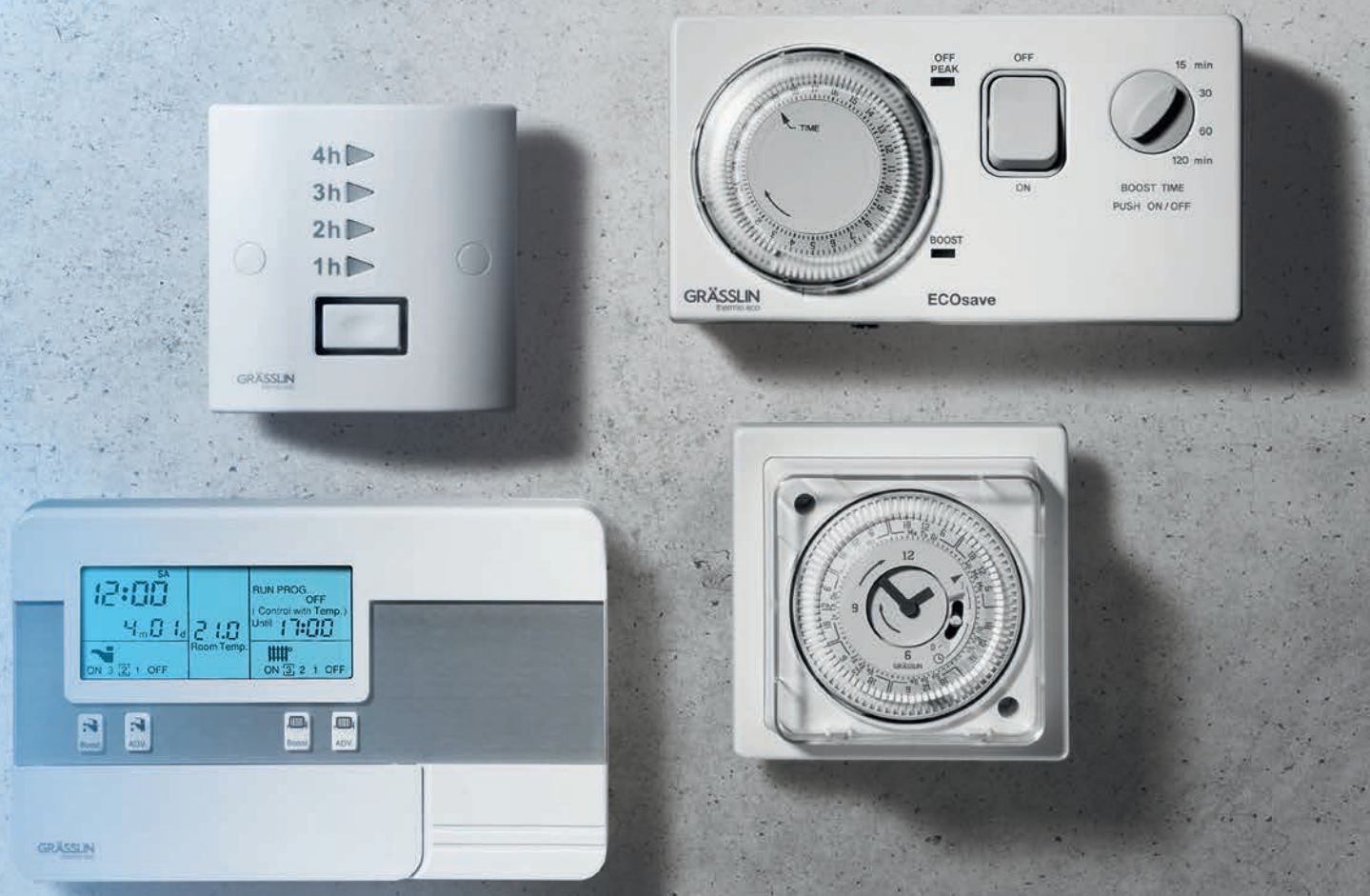
RELIABLE TECHNOLOGY, EASY OPERATION

Product line
thermio™ eco

The thermio™ eco programme includes selected and affordable products for heating control that enable users to control the temperature in a quick, effective and above all simple manner to suit their individual needs. Whether you choose a multi-tariff timer or a countdown timer, a heating timer or immersion heater timer or just a simple universal timer: You will not only significantly reduce your spending on heating and hot water, but also contribute significantly to the reduction of CO2 emissions and thereby to the preservation of the environment.

The energy-saving timers from the thermio™ eco product line meet all applicable standards and specifications and are suitable both for renovation projects and new builds. Multi-tariff timers also ensure that water can be heated outside cost-intensive peak times.

Available in digital and analogue versions, the timers in the thermio™ eco product line are the perfect choice if you are looking for a reliable, economic and eco-friendly solution for controlling heating times.



The digital and analogue timers from the thermio™ eco product line are synonymous with simple and reliable heating control.

Timer

Economy 7 timer

Boost timer

Programmer

Immersion heater timer

General purpose timer

Economy 7 timer – Selection guide

	thermio™ eco C1B
	
Item no.	04.08.0005.1
Battery life	40 days (depending on the switching frequency)
Switching output	Normally open contact, not potential-free
Load of halogen lamp	750 W (AC)
Load of fluorescent lamps	500 W
Load of compact fluorescent lamp	100 W
Load of LED lamp	200 W
Accuracy	± 1.5 seconds/day at 20 °C
Power reserve	40 days Programs saved in EEPROM
Fuse	BS1362 (1“ x 1/4“) changeable
Device	Screw terminal with wire protection, max. 2.5 mm²
Operating mode	Reset function Advance mode
Manual switch	Advance mode
Tampering protection	–
Programs	Daily Program Individual programming (max. 4 ON/OFF switching times)
Resolution	Time of day: 1 minute
Display update	every 30 seconds
Display lighting	Light blue
Shortest switching time	ON/OFF 1 minute Program Time 1 minute Boost: 1, 2 Hours
Summer/winter time	Automatic summer/winter time adjustment
Time	Digital
Installation	Flush mounting BS 4662 On-wall BS 5733
Protection class	II, when installed accordingly
Page	**10**

thermio™ eco C7SB	ECOsave
	
04.08.0006.1	04.33.0020.1
40 days (depending on the switching frequency)	–
Normally open contact, not potential-free	Changeover contact, potential-free, opening width < 3 mm
750 W (AC)	–
500 W	–
100 W	–
200 W	–
± 1.5 seconds/day at 20 °C	± 2.5 seconds/day at 20 °C
40 days Programs saved in EEPROM	> 72 Hours
BS1362 (1“ x 1/4“) changeable	–
Screw terminal with wire protection, max. 2.5 mm²	Screw terminal with wire protection 1.5 mm² to 4 mm²
Reset function Advance mode	–
Advance mode	–
–	Plastic cover
7 days 5-2 days 1-7 days Daily Program Weekly program Individual programming (max. 4 ON/OFF switching times)	Daily Program
Time of day: 1 minute	15 minutes
every 30 seconds	–
Light blue	–
ON/OFF 1 minute Program Time 1 minute Boost: 1, 2 Hours	Manual Boost 15, 30, 60, 120 minutes Program Time 15 minutes
Automatic summer/winter time adjustment	–
Digital	Analogue
Flush mounting BS 4662 On-wall BS 5733	On-wall
II, when installed accordingly	I, when installed accordingly
10	**12**

Economy 7 timer – thermio™ eco

thermio™ eco C1B

thermio™ eco C7SB

PRODUCT DESCRIPTION

The electronic economy 7 timers C1B and C7SB are an excellent choice if you want to implement a variety of applications outside cost-intensive peak times. Programmable over 24 hours or 7 days and with up to 28 ON/OFF programmes per week, they control a variety of applications safely and thereby help save energy and money. Both timers feature an additional boost function that enables need-based operation for 1 or 2 hours.

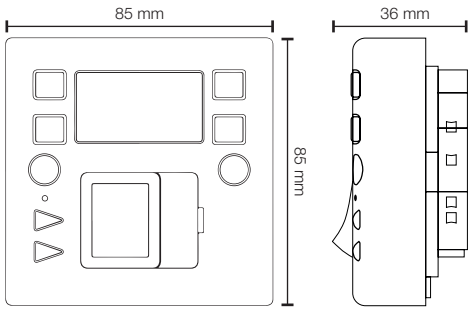
- Convenient, automatic change from summer to winter time
- Utilisation of economy 7 rates for devices such as immersion heaters and storage heater up to 13 A
- Individual Programs are saved and continue to be available even after a power failure
- Simple, quick and flexible installation thanks to simple electrical connections, external cable feed-through and integrated strain relief
- Convenient and simple reading of information thanks to the back-lit display, even in low-light conditions
- 2 selectable Boost periods allow for rapid and needs-based operating times of 1 or 2 Hours that temporarily override the Programs

CE

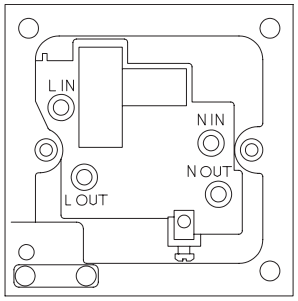
APPLICATION AREAS

- Electric radiators and heating elements
- Oil fired radiators
- Electric towel rails
- Panel heaters
- Fan heaters
- Lighting (not discharge lamps)
- Single immersion heater to 3.000 watts

DIMENSIONAL DRAWING



DIAGRAM



TECHNICAL DATA

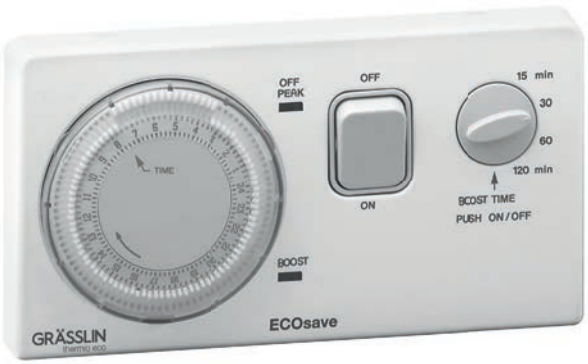
Electrical data	
Supply voltage	AC 230 V ± 10% 50 Hz
Battery life	40 days (depending on the switching frequency)
Switching output	Normally open contact, not potential-free
Switching capacity – resistive load	13 A (3000 W)
Switching capacity – inductive load cos. phi 0.6	5 A/ 250 V AC
Load of halogen lamp	750 W (AC)
Load of fluorescent lamps	500 W
Load of compact fluorescent lamp	100 W
Load of LED lamp	200 W
Power consumption	1 VA
Accuracy	± 1.5 seconds/day at 20 °C
Power reserve	40 days, Programs saved in EEPROM
Fuse	BS1362 (1“ x 1/4“) changeable
Electrical connection	
Device	Screw terminal with wire protection max. 2.5 mm^2
Operating data	
Operating mode	Reset function, advance mode, Boost mode
Manual switch	Boost Time, ON/OFF (double-pole switch), ON/OFF/AUTO, Advance
Channels	1
Display and format	
Resolution	Time of day: 1 minute
Refresh display	every 30 seconds
Display lighting	Light blue
Time display format	24-hour format
Shortest switching time	ON/OFF 1 minute, Program Time 1 minute, Boost 1, 2 Hours
Summer/winter time	Automatic summer/winter time adjustment
Time	Digital
Status display	Operation mode, switching state display
Ambient conditions	
Humidity (operating)	20% to 60% relative humidity, condensation-free
Temperature (operating)	±0 °C to +40 °C
General data	
Colour	White
Weight	158 g
Material	High-temperature resistant, self-extinguishing thermoplastics
Installation	Flush mounting BS 4662, on-wall BS 5733
Compliance with standards	
Protection type	IP20
Protection class	II, when installed accordingly
Approvals	CE

PRODUCT VARIANTS

	thermio™ eco C1B	**thermio™ eco C7SB**
Item no.	04.08.0005.1	04.08.0006.1
EAN code	4010940045081	4010940045098
Operating data		
Programs	Boost, daily Program, individual programming (max. 4 ON/OFF switching times)	7 days, 5-2 days, 1-7 days, Boost, daily Program, weekly Program, individual programming (max. 4 ON/OFF switching times)

Economy 7 timer – ECOsave

ITEM NO. 04.33.0020.1 / EAN CODE 4010940044633



PRODUCT DESCRIPTION

ECOsave is a mechanical economy 7 time switch designed for use with economy 7 off peak rate overnight electricity. It allows individual adjustment of the heating period within 24 hours every 15 minutes in order to avoid expensive peak hours. ECOsave features a boost function with which hot water is quickly processed within 15, 30, 60 or 120 minutes. The time switch enables the control of electric immersion heaters with a capacity of up to 3.000 watts. The ECOsave is distinguished by a simple and modern design, with low profile and easy mounting on flush-mounted boxes.

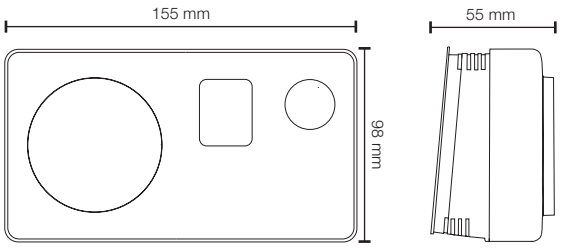
- Short-term and need-based hot water preparation through boost function
- Tamper-proof through transparent plastic cover

CE

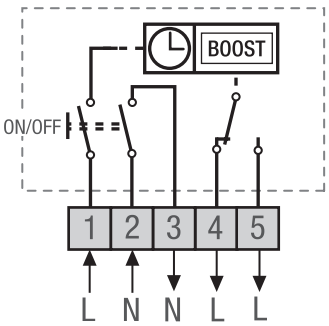
APPLICATION AREAS

- Single immersion heater to 3000 watts
- Twin immersion heater to 3000 watts
- Dual immersion heater to 3000 watts
- Storage heater

DIMENSIONAL DRAWINGS



DIAGRAMS



TECHNICAL DATA

Electrical specifications	
Supply voltage	AC 230 V ± 10% 50 Hz
Current output	Changeover, potential-free, opening width < 3 mm
Switching capacity – resistive load	13 A (3000 W)
Accuracy	± 2.5 seconds/day at 20 °C
Power reserve	> 72 hours
Electrical connection	
Device	Screw terminal with wire protection 1.5 mm^2 ... 4 mm^2
Operating data	
Hand switch	Boost time ON/OFF
Channels	1
Tampering protection	Plastic cover
Programs	Boost, Daily program
Display and format	
Shortest switching time	Boost 15, 30, 60, 120 minutes, Program time 15 minutes
Time	Analogue hands
Status display	Operation mode, Status display heating
Environmental conditions	
Humidity (operating)	10% ... 90% relative humidity, non-condensing
Temperature (operation)	-10 °C ... +35 °C
General data	
Colour	White/grey
Mounting	Surface mounting
Standard compliance	
Protection type	IP20
Protection class	I, after appropriate mounting
Approvals	CE

Boost timer – thermio™ eco

thermio™ eco B2B

thermio™ eco B4B

PRODUCT DESCRIPTION

Push & Forget: Probably the most accurate description of countdown timers B2B and B4B from the thermio™ eco product line. Both models offer four boost times for a variety of applications that you can read easily thanks to the large and illuminated LEDs. Timers switch off automatically and thereby help you save energy and money.

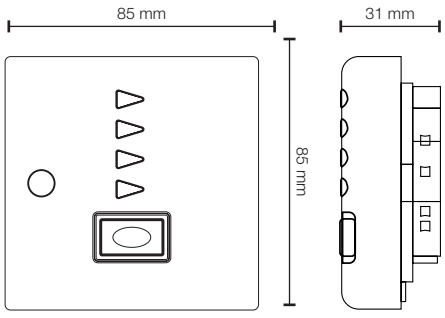
- Very easy to operate thanks to an illuminated Boost button – Push, Run & Forget
- Indication of the system state and remaining system runtime through the system state LEDs
- 4 selectable Boost times allow additional operating periods of 15, 30, 60 or 120 minutes or 1, 2, 3 or 4 hours for a variety of applications
- Simple, quick and flexible installation thanks to simple electrical connections, cable selection on the front and integrated strain relief
- Suitable for installation in 25 mm standard on-wall or flush mounting sockets
- No visible screws thanks to plastic cladding

CE

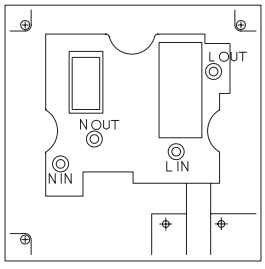
APPLICATION AREAS

- Electric radiators and heating elements
- Oil fired radiators
- Electric towel rails
- Panel heaters
- Fan heaters
- Lighting (not discharge lamps)
- Single immersion heater to 3000 watts

DIMENSIONAL DRAWINGS



DIAGRAM



TECHNICAL DATA

Electrical data	
Supply voltage	AC 230 V ± 10% 50 Hz
Switching output	Normally open contact, not potential-free
Switching capacity – resistive load	13 A (3000 W)
Switching capacity – inductive load cos. phi 0.6	5 A/ 250 V AC
Load of halogen lamp	1000 W (AC)
Load of fluorescent lamps	500 W
Power consumption	1 VA
Accuracy	± 1.5 seconds/day at 20 °C
Electrical connection	
Device	Screw terminal with wire protection max. 2.5 mm^2
Operating data	
Operating mode	Boost mode
Manual switch	Boost time
Channels	1
Display and format	
Status display	Operating mode
	Switching state display
Ambient conditions	
Humidity (operating)	20% to 60% relative humidity, condensation-free
Temperature (operating)	±0 °C to +45 °C
General data	
Colour	White
Weight	114 g
Material	High-temperature resistant, self-extinguishing thermoplastics
Installation	Flush mounting BS 4662, on-wall BS 5733
Compliance with standards	
Protection type	IP20
Protection class	II, when installed accordingly
Approvals	CE

PRODUCT VARIANTS

	thermio™ eco B2B	**thermio™ eco B4B**
Item no.	04.08.0001.1	04.08.0002.1
EAN code	4010940045043	4010940045050
Display and format		
Shortest switching time	Boost: 15, 30, 60, 120 minutes	Boost: 1, 2, 3, 4 Hours
	ON/OFF: 15 minutes	ON/OFF: 1 hour

Programmer – Selection guide

	thermio™ eco C1	thermio™ eco C2
		
Item no.	04.07.0005.1	04.07.0006.1
Supply voltage	AC 230 V ± 10% 50-60 Hz	AC 230 V ± 10% 50-60 Hz
Battery replacement Time (power reserve)	> 30 days (Programs saved in EEPROM)	> 30 days (Programs saved in EEPROM)
Switching capacity – resistive load	3 A / 250 V AC	3 A / 250 V AC
Switching capacity – inductive load cos. phi 0.6	1 A / 250 V AC	1 A / 250 V AC
Control function	Heating	Heating
Control type	Two-point (ON/OFF)	Two-point (ON/OFF)
Control range	+5 °C to +35 °C +10 °C (+5 °C to +20 °C frost protection)	+5 °C to +35 °C +10 °C (+5 °C to +20 °C frost protection)
Electrical connection of the device	Screw terminal with wire protection, max. 2.5 mm²	Screw terminal with wire protection, max. 2.5 mm²
Manual switch	Boost Time + Advance	Boost Time + Advance
Channels	1	2
Programs	7 days 5-2 days 1-7 days Advance Boost Holiday Program Individual programming (max. 3 ON/OFF switching times) Daily Program Weekly Program	7 days 5-2 days 1-7 days Advance Boost Holiday Program Individual programming (max. 3 ON/OFF switching times) Daily Program Weekly Program
Resolution	Room temperature 0.1 °C Temperature setpoint 1 °C Time of day 1 minute	Room temperature 0.1 °C Temperature setpoint 1 °C Time of day 1 minute
Display lighting	Light blue	Light blue
Time display format	12-hour format (AM/PM) 24-hour format	12-hour format (AM/PM) 24-hour format
Shortest switching time	Boost 1, 2, 3 Hours ON/OFF 10 minutes Program Time 10 minutes	Boost 1, 2, 3 Hours ON/OFF 10 minutes Program Time 10 minutes
Room temperature display	+10 °C to +50 °C	+10 °C to +50 °C
Summer/winter time	Automatic summer/winter time adjustment	Automatic summer/winter time adjustment
Time	Digital	Digital
ErP class	I	I
ErP function	ON/OFF room thermostat	ON/OFF room thermostat
ErP contribution to seasonal characteristic space heating energy efficiency	1%	1%
Page	**18**	**18**

thermio™ eco C3	thermio™ eco B1	thermio™ eco B2
		
04.07.0007.1	04.07.0008.1	04.07.0009.1
AC 230 V ± 10% 50-60 Hz	AC 220-240 V ± 10% 50 Hz	AC 220-240 V ± 10% 50 Hz
> 30 days (Programs saved in EEPROM)	–	–
3 A / 250 V AC	5 A/ 250 V AC	5 A/ 250 V AC
1 A / 250 V AC	2 A / 250 V AC	2 A / 250 V AC
Heating	–	–
Two-point (ON/OFF)	–	–
+5 °C to +35 °C +10 °C (+5 °C to +20 °C frost protection)	–	–
Screw terminal with wire protection, max. 2.5 mm²	Screw terminal with wire protection, max. 4 mm²	Screw terminal with wire protection, max. 4 mm²
Boost Time + Advance	ON/OFF/AUTO	ON/OFF/AUTO
3	1	2
7 days 5-2 days 1-7 days Advance Boost Holiday Program Individual programming (max. 3 ON/OFF switching times) Daily Program Weekly Program	Daily Program	Daily Program
Room temperature 0.1 °C Temperature setpoint 1 °C Time of day 1 minute	–	–
Light blue	–	–
12-hour format (AM/PM) 24-hour format	24-hour format	24-hour format
Boost 1, 2, 3 Hours ON/OFF 10 minutes Program Time 10 minutes	ON/OFF 15 minutes Program Time 15 minutes	ON/OFF 15 minutes Program Time 15 minutes
+10 °C to +50 °C	–	–
Automatic summer/winter time adjustment	Manual summer/winter time adjustment	Manual summer/winter time adjustment
Digital	Analogue	Analogue
I	–	–
ON/OFF room thermostat	–	–
1%	–	–
18	**20**	**20**

Digital programmer – thermio™ eco

thermio™ eco C1

thermio™ eco C2

thermio™ eco C3

PRODUCT DESCRIPTION

The digital programmer in product line C are available in three versions: Model C1 enables simultaneous control of central heating and hot water through a single switching output. The two independent switching outputs of model C2 enable individual control of central heating and hot water. Multi-channel model C3 even features three independent switching outputs and thereby enables individual control of two separate heating zones and hot water.

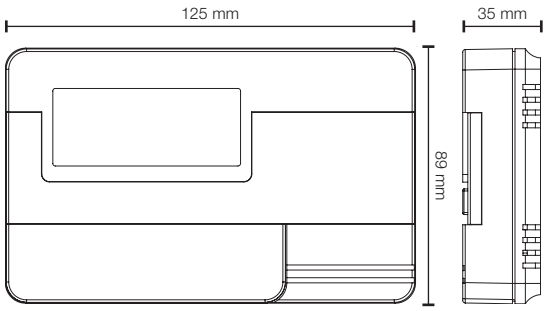
- Cost savings through integrated temperature control and frost protection function as no additional room thermostat for the control of the central heating is required
- Increased comfort through wide temperature control range
- Short-term and need-based heating through Boost function
- Up to 3 ON/OFF commands (selectable in pairs) per day provide a comfortable room climate
- Easy and fast installation
- Convenient, automatic change from summer to winter time
- Individual Programs are saved and continue to be available even after a power failure
- Convenient and simple reading of information thanks to the back-lit display, even in low-light conditions

CE ErP I (1%)

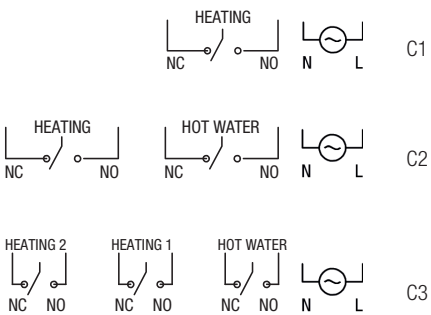
APPLICATION AREAS

- Boiler & combination boiler
- Domestic heating systems for heating and hot water
- Pump-controlled central heating systems
- Gravity heating systems

DIMENSIONAL DRAWINGS



DIAGRAMS



TECHNICAL DATA

Electrical data	
Supply voltage	AC 230 V ± 10% 50-60 Hz
Battery replacement Time (power reserve)	> 30 days (Programs saved in EEPROM)
Curret output	Changeover, potential free
Switching capacity – resistive load	3 A / 250 V AC
Switching capacity – inductive load cos. phi 0.6	1 A / 250 V AC
Accuracy	±1 second /day at 20 °C
Battery	CR2032
Control function	Heating
Control type	Two-point (ON/OFF)
Hysteresis	±0.5 K / ±1 K
Control range	+5 °C to +35 °C +10 °C (+5 °C to +20 °C frost protection)
Control accuracy	±0.5 °C
Electrical connection	
Device	Screw terminal with wire protection max. 2.5 mm^2
Operating data	
Operating mode	RUN/AUTO
Manual switch	Boost Time + Advance
Programs	7 days, 5-2 days, 1-7 days, Advance, Boost, holiday Program, individual programming (max. 3 ON/OFF switching times), daily program, weekly program
Display and format	
Resolution	Room temperature 0.1 °C, target temperature 1 °C, day time 1 minute
Display lighting	Light blue
Time display format	12-hour format (AM/PM), 24-hour format
Shortest switching time	Boost 1, 2, 3 Hours, ON/OFF 10 minutes, Program Time 10 minutes
Room temperature display	+10 °C to +50 °C
Summer/winter time	Automatic summer/winter time adjustment
Time	Digital
Status display	Operating mode, status display for heating
Ambient conditions	
Humidity (operating)	10% to 90% relative humidity, condensation-free
Temperature (operating)	±0 °C to +50 °C
General data	
Colour	White/grey
Weight	330 g
Material	ABS plastic
Installation	On-wall
Compliance with standards	
ErP class	I
ErP function	ON/OFF room thermostat
ErP contribution to seasonal characteristic space heating energy efficiency	1%
Protection type	IP20
Protection class	II, when installed accordingly
Approvals	CE, Energy Saving Trust

PRODUCT VARIANTS

	thermio™ eco C1	**thermio™ eco C2**	**thermio™ eco C3**
Item no.	04.07.0005.1	04.07.0006.1	04.07.0007.1
EAN code	4010940045012	4010940045029	4010940045036
Operating data			
Channels	1	2	3

Analogue programmer – thermio™ eco

thermio™ eco B1

thermio™ eco B2

PRODUCT DESCRIPTION

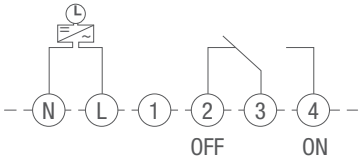
The B1 is an analogue single-channel programmer, the B2 an analogue two-channel programmer. Daily programming with a very short switching time of 15 minutes is very simple using the tappet of the mechanical time switch. Switching between the operating modes automatic, fixed ON and OFF can be made using a manual hand switch. The time switches are distinguished by a simple and modern design, with a low profile and easy installation through a universal mounting plate.

- On-wall mounting for easy and quick installation
- Simultaneous control of central heating and hot water through a single switching output (B1)
- Individual control of central heating and hot water through two independent switching outputs (B2)

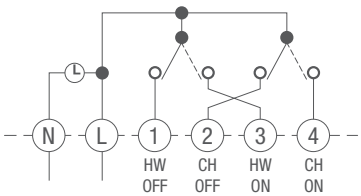
APPLICATION AREAS

- Boiler & combination boiler
- Domestic heating systems for heating and hot water
- Pump-controlled central heating systems
- Gravity heating systems

DIAGRAMS

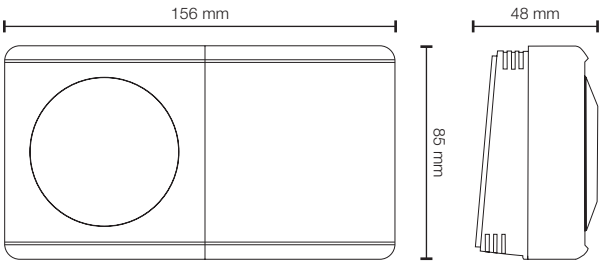


B1



B2

DIMENSIONAL DRAWINGS



TECHNICAL DATA

Electrical data	
Supply voltage	AC 220-240 V 50 Hz
Switching output	Changeover contact, potential-free
Switching capacity – resistive load	5 A/ 250 V AC
Switching capacity – inductive load cos. phi 0.6	2 A / 250 V AC
Time basis	Synchronous (network frequency)
Electrical connection	
Device	Screw terminal with wire protection max. 4 mm^2
Operating data	
Manual switch	ON/OFF/AUTO
Programs	Daily Program
Display and format	
Shortest switching time	Programme Time 15 minutes
Status display	Status display for heating
Ambient conditions	
Humidity (operating)	10% to 90% relative humidity, condensation-free
Temperature (operating)	-10 °C to +50 °C
General data	
Colour	White/grey
Installation	On-wall
Compliance with standards	
Protection type	IP20
Protection class	II, when installed accordingly
Approvals	CE, Energy Saving Trust

PRODUCT VARIANTS

	thermio™ eco B1	thermio™ eco B2
Item no.	04.07.0008.1	04.07.0009.1
EAN code	4010940045470	4010940045487
Operating data		
Channels	1	2

Immersion heater timer – Selection guide

	thermio™ eco BI1S
	
Item no.	04.33.0023.1
Switching capacity – resistive load	16 A / 250 V AC
Switching capacity – inductive load cos. phi 0.6	8 A / 250 V AC
Load of incandescent/halogen lamp	1300 VA
Switching capacity – DC	–
Power consumption	1 VA
Accuracy	Mains synchronised
Time basis	Synchronous (network frequency)
Power reserve	–
Battery	–
Programs	Daily Program
Memory spaces	–
Time display format	24-hour format
Shortest switching time	ON/OFF 15 minutes Program Time 15 minutes
Time	Analogue
Status display	–
Page	24

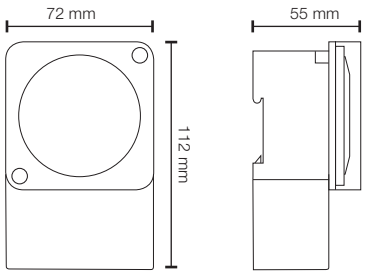
thermio™ eco BI7S	thermio™ eco CI7
	
04.33.0024.1	04.33.0025.1
16 A / 250 V AC	16 A / 250 V AC
8 A / 250 V AC	4 A / 250 V AC
1300 VA	1000 VA
–	3 A / 60 V DC 10 A / 24 V DC
1 VA	4.4 VA
Mains synchronised	±1 second /day at 20 °C
Synchronous (network frequency)	Synchronous (network frequency)
–	3 years
–	CR2032
Weekly Program	7 days 5-2 days 1-7 days Free weekday block formation Daily Program Weekly Program
–	20
24-hour format	12-hour format 24-hour format
ON/OFF 2 Hours Program Time 2 Hours	ON/OFF 1 minute Program Time 1 minute
Analogue	Digital
–	Switching state display
24	**26**

Analogue immersion heater timer – thermio™ eco

thermio™ eco BI1S

thermio™ eco BI7S

DIMENSIONAL DRAWINGS



PRODUCT DESCRIPTION

The BI1S and the BI7S are immersion heater timer with daily or weekly program. They allow individual adjustment of the heating period within 24 hours, every 15 minutes or every day in 24 hours, as well as every 2 hours in order to avoid expensive peak hours. They are suitable for wall mounting and offer timed control for every fixed wiring device such as an electronic immersion heater with a performance of up to 3000 watts.

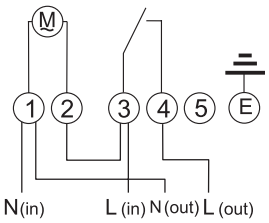
- On-wall mounting for easy and quick installation
- Optimal manipulation protection through sealable housing
- 96 or 84 tappets allow the system to be switched ON/OFF at the current time with up to 48 or 42 ON/OFF switching times

CE

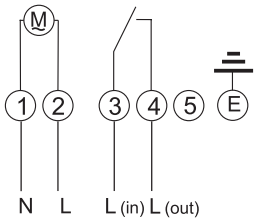
APPLICATION AREAS

- Single immersion heater to 3000 watts
- Heating systems
- Pumps
- Motors
- Machines
- Universally usable

DIAGRAMS



Mains switching



Volt Free Switching

TECHNICAL DATA

Electrical data	
Supply voltage	AC 230 V ± 10% 50-60 Hz
Switching output	Changeover contact, potential-free, opening width < 3 mm
Switching capacity – resistive load	16 A / 250 V AC
Switching capacity – inductive load cos. phi 0.6	8 A / 250 V AC
Load of incandescent/halogen lamp	1300 VA
Power consumption	1 VA
Accuracy	Mains synchronised
Time basis	Synchronous (network frequency)
Electrical connection	
Device	Screw terminal with wire protection max. 2.5 mm^2
Operating data	
Manual switch	ON/OFF/AUTO
Channels	1
Tampering protection	Sealable
Display and format	
Time	Analogue hands
Ambient conditions	
Humidity (operating)	10% to 90% relative humidity, condensation-free
Temperature (operating)	-20 °C to +85 °C
General data	
Colour	White/grey
Weight	160 g
Material	High-temperature resistant, self-extinguishing thermoplastics
Installation	On-wall
Compliance with standards	
Protection class	I, when installed accordingly
Approvals	CE

PRODUCT VARIANTS

	thermio™ eco BI1S	**thermio™ eco BI7S**
Item no.	04.33.0023.1	04.33.0024.1
EAN code	4010940045142	4010940045159
Operating data		
Programs	Daily Program	Weekly Program
Display and format		
Shortest switching time	ON/OFF: 15 minutes Programme Time 15 minutes	ON/OFF 2 Hours Program Time 2 Hours

Digital immersion heater timer – thermio™ eco CI7

ITEM NO. 03.62.5000.1 / EAN CODE 4010940033811

PRODUCT DESCRIPTION

The C I7 is a digital immersion heater timer with 20 storage spaces and 3 different time periods (daily, 5 days plus 2 or 7 day programming) or free block formation. It has a very short switching time of just one minute and enables need-based control. Switching between the operating modes automatic, fixed ON and OFF can be made using a hand switch.

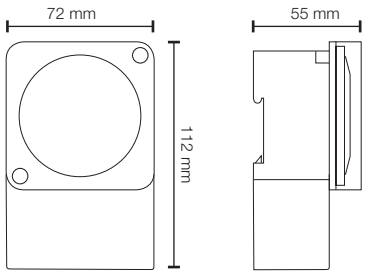
- On-wall mounting for easy and quick installation
- Optimal manipulation protection through sealable housing

CE

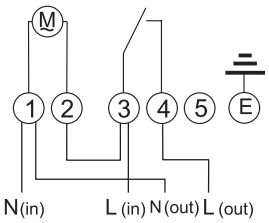
APPLICATION AREAS

- Single immersion heater to 3000 watts
- Heating systems
- Pumps
- Motors
- Machines
- Universally usable

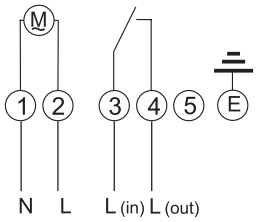
DIMENSIONAL DRAWINGS



CIRCUIT DIAGRAMS



Mains switching



Volt Free Switching

TECHNICAL DATA

Electrical data	
Supply voltage	AC 230 V ± 10% 50-60 Hz
Switching output	Changeover contact, potential-free, opening width < 3 mm
Switching capacity – resistive load	16 A / 250 V AC
Switching capacity – inductive load cos. phi 0.6	4 A / 250 V AC
Load of incandescent/halogen lamp	1000 VA
Switching capacity – DC	1 A / 100 V DC 3 A / 60 V DC 10 A / 24 V DC
Power consumption	4.4 VA
Accuracy	± 1 second /day at 20 °C
Time basis	Synchronous (network frequency)
Power reserve	3 years
Battery	CR2032
Electrical connection	
Device	Screw terminal with wire protection max. 2.5 mm^2
Operating data	
Manual switch	ON/OFF/AUTO
Channels	1
Tampering protection	Sealable
Programs	7 days, 5-2 days, 1-7 days, free block formation, daily Program, weekly Program
Memory spaces	20
Display and format	
Time display format	12-hour format (AM/PM) 24-hour format
Shortest switching time	ON/OFF 1 minute, Program Time 1 minute
Summer/winter time	Manual summer/winter time adjustment
Time	Digital
Status display	Switching state display
Ambient conditions	
Humidity (operating)	10% to 90% relative humidity, condensation-free
Temperature (operating)	-10 °C to +55 °C
General data	
Colour	White/grey
Weight	170 g
Material	High-temperature resistant, self-extinguishing thermoplastics
Installation	On-wall
Compliance with standards	
Protection class	I, when installed accordingly
Approvals	CE

General purpose timer – Selection guide

	thermio™ eco BG1S
	
Item no.	04.36.0009.1
Supply voltage	AC 230 V ± 10% 50-60 Hz
Switching capacity – resistive load	16 A / 250 V AC
Switching capacity – inductive load cos. phi 0.6	8 A / 250 V AC
Load of incandescent/halogen lamp	1300 VA
Switching capacity – DC	–
Power consumption	1 VA
Accuracy	Mains synchronised
Time basis	Synchronous (network frequency)
Power reserve	–
Battery	–
Programs	Daily Program
Memory spaces	–
Time display format	24-hour format
Shortest switching time	ON/OFF 15 minutes Program Time 15 minutes
Time	Analogue
Status display	–
Page	**30**

thermio™ eco BG7S	thermio™ eco BG1Q	thermio™ eco CG7
		
04.36.0010.1	04.36.0011.1	04.36.0012.1
AC 230 V ± 10% 50-60 Hz	DC 24-36 V 45-60 Hz	AC 230 V ± 10% 50-60 Hz
16 A / 250 V AC	16 A / 250 V AC	16 A / 250 V AC
8 A / 250 V AC	8 A / 250 V AC	4 A / 250 V AC
1300 VA	1300 VA	1000 VA
–	–	1 A / 100 V DC 3 A / 60 V DC 10 A / 24 V DC
1 VA	2 VA	4.4 VA
Mains synchronised	± 1.5 seconds/day at 20 °C	±1 second /day at 20 °C
Synchronous (network frequency)	Quartz	Synchronous (network frequency)
–	> 72 Hours	3 years
–	–	CR2032
Weekly Program	Daily Program	7 days 5-2 days 1-7 days Free weekday block formation Daily Program Weekly Program
–	–	20
24-hour format	24-hour format	12-hour format 24-hour format
ON/OFF 2 Hours Program Time 2 Hours	ON/OFF 15 minutes Program Time 15 minutes	ON/OFF 1 minute Program Time 1 minute
Analogue	Analogue	Digital
–	–	Switching state display
30	**30**	**32**

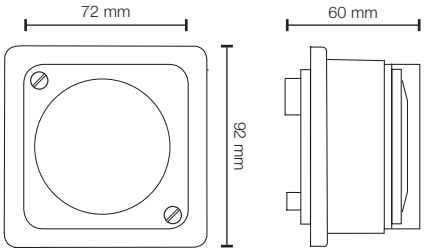
Analogue general purpose timer – thermio™ eco

thermio™ eco BG1S

thermio™ eco BG7S

thermio™ eco BG1Q

DIMENSIONAL DRAWINGS



PRODUCT DESCRIPTION

The BG1S, BG7S and the BG1Q are analogue, single-channel general purpose timer. Using the tappets of the mechanical clock, the daily or weekly programming is very easy with a very short switching time of 15 minutes and 2 hours. Switching between the operating modes automatic, fixed ON and OFF can be made using a manual hand switch. These versions are distinguished by a simple and modern design with a low profile and easy mounting on flush boxes.

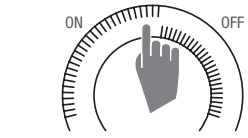
- Easy and fast installation
- Optimal manipulation protection through sealable housing
- 96 or 84 tappets allow the system to be switched ON/OFF at the current time with up to 48 or 42 ON/OFF switching times

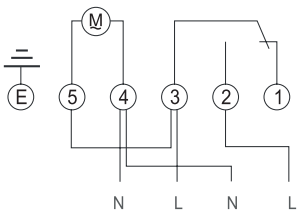
CE

APPLICATION AREAS

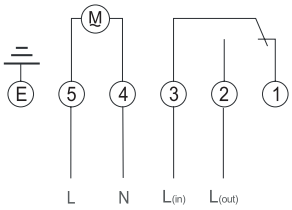
- Single immersion heater to 3000 watts
- Heating systems
- Pumps
- Motors
- Machines
- Universally usable

CIRCUIT DIAGRAMS

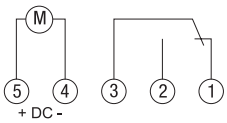




Mains Switching
BG1S
BG7S



Volt Free Switching
BG1S
BG7S



DC circuit diagram
BG1Q

TECHNICAL DATA

Electrical data	
Switching output	Changeover contact, potential-free, opening width < 3 mm
Switching capacity – resistive load	16 A / 250 V AC
Switching capacity – inductive load cos. phi 0.6	8 A / 250 V AC
Switching capacity – minimal	100 mA / 20 V AC/DC
Load of incandescent/halogen lamp	1300 VA
Electrical connection	
Device	Screw terminal with wire protection max. 2.5 mm^2
Operating data	
Manual switch	ON/OFF/AUTO
Channels	1
Tampering protection	Sealable
Display and format	
Time	Analogue hands
Ambient conditions	
Humidity (operating)	10% to 90% relative humidity, condensation-free
General data	
Colour	White/grey
Material	High-temperature resistant, self-extinguishing thermoplastics
Installation	Flush mounting BS 4662, on-wall BS 5733
Compliance with standards	
Protection class	I, when installed accordingly
Approvals	CE

PRODUCT VARIANTS

	thermio™ eco BG1S	thermio™ eco BG7S	thermio™ eco BG1Q
Item no.	04.36.0009.1	04.36.0010.1	04.36.0011.1
EAN code	4010940045104	4010940045111	4010940045128
Electrical data			
Supply voltage	AC 230 V ± 10% 50-60 Hz	AC 230 V ± 10% 50-60 Hz	DC 24-36 V 45-60 Hz
Power consumption	1 VA	1 VA	2 VA
Accuracy	Mains synchronised	Mains synchronised	± 1.5 second /day at 20 °C
Time basis	Synchronous (network frequency)	Synchronous (network frequency)	Quartz
Power reserve	–	–	> 72 Hours
Operating data			
Programs	Daily Program	Weekly Program	Daily Program
Display and format			
Shortest switching time	ON/OFF: 15 minutes Programme Time 15 minutes	ON/OFF 2 Hours Program Time 2 Hours	ON/OFF: 15 minutes Programme Time 15 minutes
Ambient conditions			
Temperature (operating)	-20 °C to +85 °C	-20 °C to +85 °C	-20 °C to +55 °C
General data			
Weight	160 g	160 g	170 g

Digital general purpose timer – thermio™ eco CG7

ITEM NO. 03.62.5001.1 / EAN CODE 4010940035174

PRODUCT DESCRIPTION

The CG7 is a digital general purpose timer with 20 storage spaces and 3 different time periods (daily, 5 days plus 2 or 7 day programming) or free block formation. The very short switching time of just one minute enables demand-oriented control of, for example, a heating system. Switching between the operating modes automatic, fixed ON and OFF can be made using a manual hand switch. The CG7 is distinguished by a simple and modern design, with a low profile and easy installation.

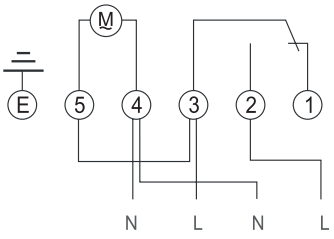
- Easy and fast installation
- Optimal manipulation protection through sealable housing

CE

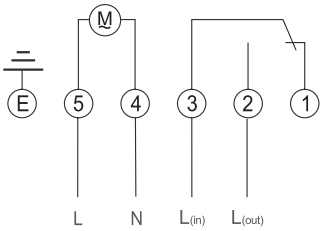
APPLICATION AREAS

- Single immersion heater to 3000 watts
- Heating systems
- Pumps
- Motors
- Machines
- Universally usable

CIRCUIT DIAGRAM

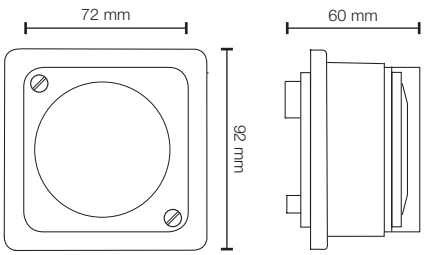


Mains Switching



Volt Free Switching

DIMENSIONAL DRAWINGS



TECHNICAL DATA

Electrical data	
Supply voltage	AC 230 V ± 10% 50-60 Hz
Switching output	Changeover contact, potential-free, opening width < 3 mm
Switching capacity – resistive load	16 A / 250 V AC
Switching capacity – inductive load cos. phi 0.6	4 A / 250 V AC
Load of incandescent/halogen lamp	1000 VA
Switching capacity – DC	1 A / 100 V DC 3 A / 60 V DC 10 A / 24 V DC
Power consumption	4.4 VA
Accuracy	± 1 second /day at 20 °C
Time basis	Synchronous (network frequency)
Power reserve	3 years
Battery	CR2032
Electrical connection	
Device	Screw terminal with wire protection max. 2.5 mm^2
Operating data	
Manual switch	ON/OFF/AUTO
Channels	1
Tampering protection	Sealable
Programs	7 days, 5-2 days, 1-7 days, free block formation, daily Program, weekly Program
Memory spaces	20
Display and format	
Time display format	12-hour format (AM/PM), 24-hour format
Shortest switching time	ON/OFF 1 minute, Program Time 1 minute
Summer/winter time	Manual summer/winter time adjustment
Time	Digital
Status display	Switching state display
Ambient conditions	
Humidity (operating)	10% to 90% relative humidity, condensation-free
Temperature (operating)	-10 °C to +55 °C
General data	
Colour	White/grey
Weight	170 g
Material	High-temperature resistant, self-extinguishing thermoplastics
Installation	Flush mounting BS 4662, on-wall BS 5733
Compliance with standards	
Protection class	I, when installed accordingly
Approvals	CE

Thermostats and room thermostats: The reliable solution for controlling the temperature

LARGE SELECTION, HIGH OPERATING EFFICIENCY

Product line thermio™ essential

The Cylinder & Pipe thermostat, frost thermostat and room thermostats of the thermio™ essential product line are characterised by their ease of use and user friendliness for temperature control. Whether as a practical version for installation on a cylinder or hot water pipe or an elegant solution for use in residential and business premises: The products from the thermio™ essential product line offer users entirely new options for need-based temperature control thanks to innovative features such as integrated Bluetooth functionality.

All models meet the requirements of ErP class I and thereby not only make an important contribution to the preservation of the environment but also help reduce costs. The thermio™ essential smart model even has ErP class IV and features an extended scope of functions that can be operated and programmed easily and conveniently via a free app. Excellent user guidance via the graphic user interface of a mobile device allows even more precise and simpler control of the perfect temperature.

Whether in digital or analogue version, via rf, classically wired or smart applications via convenient remote access using bluetooth technology. In the thermio™ essential product line you are guaranteed to find the right solution for controlling your individual perfect temperature.

The right solution for every need: The user-friendly and tried-and-tested thermostats and room thermostats from the thermio™ essential product line.

Thermostats and room thermostats

▶ Thermostats

▶ Room thermostats

▶ Receiver

Cylinder & pipe thermostats – thermio™ essential BCP

ITEM NO. 04.47.0001.1 / EAN-CODE 4010940020149

PRODUCT DESCRIPTION

The thermio™ essential BCP is an ErP class I thermostat that can be fastened to a cylinder or a pipe:
The spring wire required for installation on a pipe, or the wire strap required for installation on a hot water cylinder, are both supplied by Grässlin as part of the contents. The water temperature is measured directly on the surface of the cylinder or pipe by means of a contact. When the thermostat detects a drop in temperature, the heating system is switched on and then switched off again when the target value is reached, unless the boiler is controlled by other products such as a timer, for example.

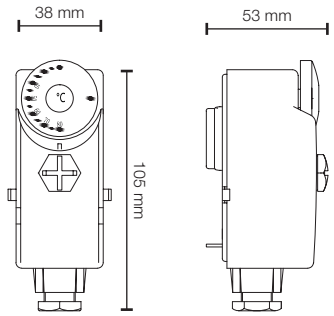
- Flexible, simple and quick installation due to a spring wire and a wire strap (dual use)
- Wide temperature control range of ±0 °C to +80 °C allows for safe and energy-efficient water heating
- Very simple operation through a large temperature adjustment knob with a precise clearly marked dial and indicator marker

CE ErP I (1%)

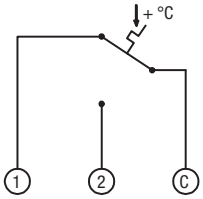
APPLICATION AREAS

- Cylinder with a diameter of up to 470 mm
- Pipes with a diameter of up to 75 mm
- Actuation of zone valves
- Pump-controlled central heating systems
- Boiler
- Gravity heating

DIMENSIONAL DRAWINGS



CIRCUIT DIAGRAM



TECHNICAL DATA

Electrical data	
Equipment operating voltage	AC 230 V ± 10% 50-60 Hz
Switching output	Changeover contact, potential-free
Switching capacity – resistive load	16 A / 250 V AC 6 A / 400 V AC
Switching capacity – inductive load cos. phi 0.6	4 A / 250 V AC 1 A / 400 V AC
Control function	Heating
Control type	Two-point (ON/OFF)
Measuring range	+0 °C to +110 °C
Control range	+0 °C to +80 °C
Electrical connection	
Device	Cable gland PG11, screw terminal with wire protection max. 2.5 mm²
Display and format	
Resolution	Temperature setpoint 1 °C
Ambient conditions	
Humidity (operating)	10% to 90% relative humidity, condensation-free
Temperature (operating)	±0 °C to +55 °C
General data	
Colour	White
Weight	159 g
Material	ABS plastic
Installation	Hot-water pipe, cylinder
Compliance with standards	
ErP class	I
ErP function	ON/OFF room thermostat
ErP contribution to seasonal characteristic space heating energy efficiency	1%
Protection type	IP40
Protection class	I, when installed accordingly
Approvals	CE, Energy Saving Trust

SCOPE OF DELIVERY

- **Spring wire (24 cm)**
- **Plastic-sheathed wire strap 1.5 m**

Frost thermostats – thermio™ essential BFT

ARTICLE NO. 04.11.0004.1 / EAN-CODE 4010940039974

PRODUCT DESCRIPTION

The thermio™ essential BFT is a mechanical frost thermostat of ErP class I that offers automatic and energy-efficient frost protection and is used in central heating systems as well as pipes in areas prone to freezing. Its tamper-proof temperature adjustment knob for the temperature setpoint allows optional limitation of the temperature range and serves as a lock for the set temperature and as protection against unauthorised access by third parties.

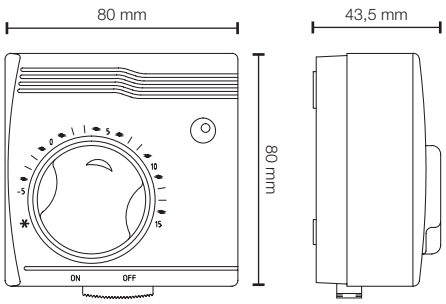
- On-wall mounting for easy and quick installation
- Very easy to use due to the large temperature adjustment knob with a precise clearly marked dial and precise indicator markers as well as a manual ON/OFF switch
- A broad temperature control range of -5 °C to + 15 °C ensures that the system is activated in frost conditions
- Offers automatic, energy-efficient frost protection for central heating systems and pipes in locations at risk of frost damage, and for general building protection

CE ErP I (1%)

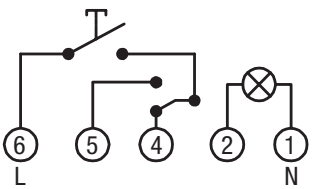
APPLICATION AREAS

- Boiler
- Pipes
- Water pipes
- Cylinder

DIMENSIONAL DRAWINGS



CIRCUIT DIAGRAM



TECHNICAL DATA

Electrical data	
Equipment operating voltage	AC 230 V ± 10% 50-60 Hz
Switching output	Changeover contact, potential-free
Switching capacity – resistive load	10 A / 250 V AC
Switching capacity – inductive load cos. phi 0.6	4 A / 250 V AC
Power consumption	0.25 W
Control function	Heating
Control type	Two-point (ON/OFF)
Control range	-5 °C to +15 °C
Operating data	
Manual switch	ON/OFF
Tampering protection	Adjustable temperature adjustment knob
Display and format	
Resolution	Temperature setpoint 1 °C
Status indicator	Status display heating (LED)
Ambient conditions	
Humidity (operating)	10% to 90% relative humidity, condensation-free
Temperature (operating)	-15 °C to +50 °C
General data	
Colour	White/black
Weight	126 g
Material	High-temperature resistant, self-extinguishing thermoplastics ABS plastic
Installation	On-wall
Compliance with standards	
ErP class	I
ErP function	ON/OFF room thermostat
ErP contribution to seasonal space heating energy efficiency	1%
Protection type	IP20
Protection class	I, when installed accordingly
Approvals	CE, Energy Saving Trust

SCOPE OF DELIVERY

- **Bezel**

Analogue programmable room thermostats – Selection guide

	thermio™ essential B	thermio™ essential C
		
Item no.	04.46.0020.1	04.46.0021.1
Supply voltage / equipment operating voltage	AC 24 V to 230 V 50-60 Hz	DC 3 V (2 x 1.5 V AA LR6 alkaline battery)
Battery life	–	2 years (depending on the switching frequency)
Switching capacity – resistive load	6 A / 250 V AC	8 A / 250 V AC
Switching capacity – inductive load cos. phi 0.6	3 A / 250 V AC	3 A / 250 V AC
Control type	Two-point (ON/OFF)	Two-point (ON/OFF)
Control range	+10 °C to +30 °C	+5 °C to +35 °C
Heating cycle	–	–
Electrical connection of the device	Screw terminal with wire protection, max. 2.5 mm²	Screw terminal with wire protection, max. 2.5 mm²
Radio signal	–	–
Range	–	–
Operating mode	Temperature reduction mode/AUTO	Reset function Temperature reduction mode/AUTO
Manual switch	ON/OFF	ON/OFF
Tampering protection	–	–
Offset	–	–
Programs	–	–
Programming	–	–
Resolution	Temperature setpoint 1 °C	Room temperature: 0.1 °C, temperature setpoint 0.2 °C
Shortest switching time	–	–
Display update	–	every 60 seconds
Room temperature display	–	±0 °C to +50 °C
Summer/winter time	–	–
Time	–	–
Status display	–	Battery condition Status display for heating
ErP class	I	I
ErP function	ON/OFF room thermostat	ON/OFF room thermostat
ErP contribution to seasonal characteristic space heating energy efficiency	1%	1%
Page	**42**	**44**

thermio™ essential Srf	thermio™ essential Brf	thermio™ essential smart
		
04.46.0024.1	04.46.0025.1	04.46.0023.1
DC 3 V (2 x 1.5 V AA LR6 alkaline battery) AC 230 V ± 10% 50-60 Hz	DC 3 V (2 x 1.5 V AA LR6 alkaline battery) AC 230 V ± 10% 50-60 Hz	DC 3 V (2 x 1.5 V AA LR6 alkaline battery)
2 years (depending on the switching frequency)	2 years (depending on the switching frequency)	1 year (depending on the switching frequency)
16 A / 250 V AC	16 A / 250 V AC, 20 A / 125 V AC, 16 A / 30 V DC	8 A / 250 V AC
3 A / 250 V AC	8 A / 250 V AC, 8 A / 125 V AC	3 A / 250 V AC
Two-point (ON/OFF)	Two-point (ON/OFF)	PID (factory setting), 2-point (ON/OFF)
+5 °C (frost protection), +5 °C to +35 °C	+5 °C (frost protection), +5 °C to +35 °C	+5 °C (frost protection), +5 °C to +35 °C
–	–	6 times per hour (3 to 12 times per hour
Screw terminal with wire protection, max. 2.5 mm²	Screw terminal with wire protection, max. 2.5 mm² Flat plug DIN 6.3	Screw terminal with wire protection, max. 2.5 mm²
868.3 MHz	868.3 MHz	Bluetooth 4.0 / 2,4 GHz
30 m (inside building)	30 m (inside building)	10 m
OFF mode (5 °C frost protection), reset function, temperature reduction mode/AUTO	OFF mode (5 °C frost protection), reset function, temperature reduction mode/AUTO	Manual mode, OFF mode (5 °C frost protection), reset function, key lock, override mode, Boost mode, temperature reduction mode/AUTO, holiday mode
ON/OFF	ON/OFF	ON/OFF/AUTO
–	–	PIN code
–	–	-3 °C to +3 °C
–	–	7 days, 5-2 days, 1-7 days, Boost, manual, individual programming (max. 4 or 6 ON/OFF switching times)
–	–	Smartphone/tablet
Room temperature: 0.1 °C, temperature setpoint 0.2 °C	Room temperature: 0.1 °C, temperature setpoint 0.2 °C	Room temperature: 0.1 °C, temperature setpoint 0.5 °C, Time of day 1 minute
–	–	Boost 1, 2, 3 Hours ON/OFF 10 minutes Program Time 10 minutes
every 60 seconds	every 60 seconds	
±0 °C to +50 °C	±0 °C to +50 °C	-10 °C to +50 °C
–	–	Automatic summer/winter time adjustment
–	–	Digital
Battery condition Operating mode Radio signal strength indication Status display for heating LED	Battery condition Operating mode Radio signal strength indication Status display for heating LED	Battery condition Operating mode Radio signal strength indication Status display for heating Temperature profile
I	I	I, IV
ON/OFF room thermostat	ON/OFF room thermostat	ON/OFF room thermostat; TPI room thermostat for use with on/off heaters
1%	–	1%, 2%
46	**48**	**50**

Analogue room thermostats – thermio™ essential B

ITEM NO. 04.46.0020.1 / EAN-CODE 4010940044961

PRODUCT DESCRIPTION

The thermio™ essential B is an analogue room thermostat of ErP class I for convenient control of the room temperature. Its simple, individual and automatic temperature control as well as its analogue technology contribute to a significant reduction in energy costs. The thermio™ essential B features a toggle switch that is used to switch the thermostat on and off. An additional mounting plate not only enables quick and easy on-wall mounting, but also contributes towards an elegant appearance.

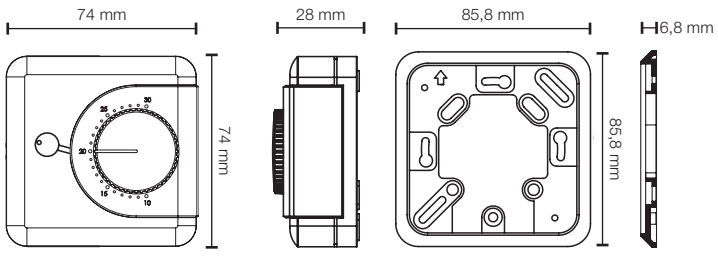
- Easy, individual and automatic temperature control and energy conservation through analogue technology
- Increased comfort through a wide temperature control range of +10 °C to +30 °C
- Very easy to use due to the large temperature adjustment knob with a precise clearly marked dial and precise indicator markers as well as a manual ON/OFF switch
- Fast, simple and safe installation through on-wall mounting

CE ErP I (1%)

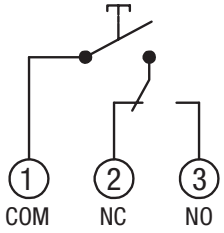
APPLICATION AREAS

- Heating systems
- Heat pump
- Circulating pump
- Electric heating
- Motorised valves
- Actuators

DIMENSIONAL DRAWINGS



CIRCUIT DIAGRAM



TECHNICAL DATA

Electrical data	
Equipment operating voltage	AC 24 V to 230 V 50-60 Hz
Switching output	Changeover contact, potential-free
Switching capacity – resistive load	6 A / 250 V AC
Switching capacity – inductive load cos. phi 0.6	3 A / 250 V AC
Control function	Heating
Control type	Two-point (ON/OFF)
Control range	+10 °C to +30 °C
Electrical connection	
Device	Screw terminal with wire protection, max. 2.5 mm²
Operating data	
Manual switch	ON/OFF
Display and format	
Resolution	Temperature setpoint 1 °C
Ambient conditions	
Humidity (operating)	10% to 90% relative humidity, condensation-free
Temperature (operating)	-10 °C to +50 °C
General data	
Colour	White/grey
Weight	159 g
Material	High-temperature resistant, self-extinguishing thermoplastics ABS plastic
Installation	On-wall (4-hole installation on flush-mounted socket), on-wall, flush mounting BS 4662, on-wall BS 5733
Compliance with standards	
ErP class	I
ErP function	ON/OFF room thermostat
ErP contribution to seasonal space heating energy efficiency	1%
Protection type	IP20
Protection class	II, when installed accordingly
Approvals	CE, Energy Saving Trust

SCOPE OF DELIVERY

- **Bezel**

Digital room thermostats – thermio™ essential C

ITEM NO. 04.46.0021.1 / EAN-CODE 4010940044978

PRODUCT DESCRIPTION

The thermio™ essential C is a digital room thermostat of ErP class I for convenient control and monitoring of the room temperature. A display shows the target and temperature setpoint as well as the state of the system. Its high control accuracy and low power consumption contribute to a significant reduction in energy costs. The thermio™ essential C features a toggle switch that is used to switch the thermostat on and off. An additional mounting plate not only enables quick and easy on-wall mounting, but also contributes towards an elegant appearance.

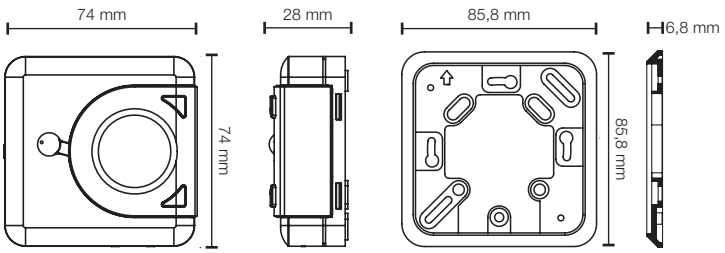
- Long battery life through efficient energy management
- Monitoring of the battery status and display when a battery change is required
- Very easy and convenient to use through large LC display, manual ON/OFF switch and reset button
- Cost reduction and efficient energy management through high level of control accuracy
- Increased comfort through a wide temperature control range of +5 °C to +35 °C
- Fast, simple and safe installation through on-wall mounting

CE ErP I (1%)

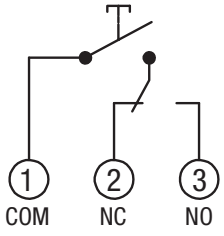
APPLICATION AREAS

- Heating systems
- Heat pump
- Circulating pump
- Electric heating
- Motorised valves
- Actuators

DIMENSIONAL DRAWINGS



CIRCUIT DIAGRAM



TECHNICAL DATA

Electrical data	
Supply voltage	DC 3 V (2 x 1.5 V AA LR6 alkaline battery)
Battery life	2 years (depending on the switching frequency)
Switching output	Changeover contact, potential-free
Switching capacity – resistive load	8 A / 250 V AC
Switching capacity – inductive load cos. phi 0.6	3 A / 250 V AC
Power consumption	5 VA
Control function	Heating
Control type	Two-point (ON/OFF)
Control range	+5 °C to +35 °C
Electrical connection	
Device	Screw terminal with wire protection, max. 2.5 mm²
Operating data	
Operating mode	Reset function
Manual switch	ON/OFF
Display and format	
Resolution	Room temperature 0.1 °C, temperature setpoint 0.2 °C
Display update	every 60 seconds
Room temperature display	±0 °C to +50 °C
Status display	Battery condition
Ambient conditions	
Humidity (operating)	10% to 90% relative humidity, condensation-free
Temperature (operating)	-10 °C to +50 °C
General data	
Colour	White/grey
Weight	158 g
Material	High-temperature resistant, self-extinguishing thermoplastics ABS plastic
Installation	On-wall (4-hole installation on flush-mounted socket), on-wall, flush mounting BS 4662, on-wall BS 5733
Compliance with standards	
ErP class	I
ErP function	ON/OFF room thermostat
ErP contribution to seasonal space heating energy efficiency	1%
Protection type	IP20
Protection class	II, when installed accordingly
Approvals	CE, Energy Saving Trust

SCOPE OF DELIVERY

- **Bezel**

Digital wireless room thermostats – thermio™ essential Srf

ITEM NO. 04.46.0024.1 / EAN-CODE 4010940045371

PRODUCT DESCRIPTION

The thermio™ essential Srf is a digital room thermostat of ErP class I. Its wireless radio technology allows it to be placed anywhere in the room without laying electrical cables and thereby enables extremely convenient control and monitoring of the room temperature. Its integrated frost protection function is activated automatically as soon as ambient temperatures drop below the saved temperature setpoint. Up to 16 receivers can be connected to the transmitter. In case of poor radio communication, manual operation is possible using an ON/OFF switch. An additional mounting plate not only enables quick and easy on-wall mounting, but also contributes towards an elegant appearance.

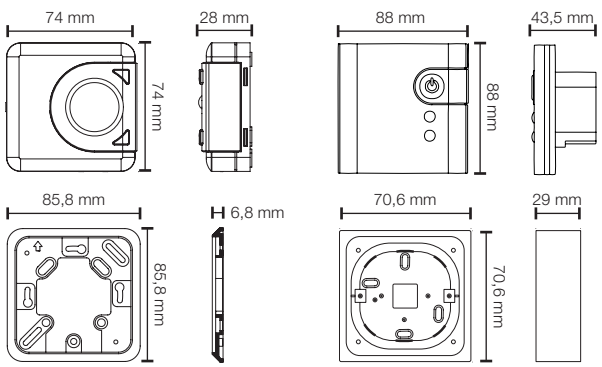
- The wireless radio technology allows individual placement in rooms without laying electric cables
- Signalling and control accuracy ensured through high frequency radio signal range of up to 30 metres inside buildings
- Long battery life through efficient energy management
- Monitoring of the battery status and display when a battery change is required
- The frost protection function prevents the freezing of radiators or icing of piping, even when switched OFF
- Cost reduction and efficient energy management through high level of control accuracy
- Very easy and convenient to use through large LC display, manual ON/OFF switch and reset button
- High flexibility – up to 16 receivers can be connected to the device
- Increased comfort through a wide temperature control range of +5 °C to +35 °C
- Fast, simple and safe installation through on-wall mounting

CE ErP I (1%)

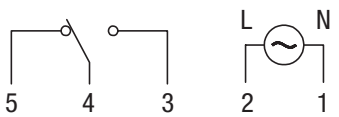
APPLICATION AREAS

- Heating systems
- Electric heating
- Motorised valves
- Actuators

DIMENSIONAL DRAWINGS



CIRCUIT DIAGRAM



RecUno/2 rf– Receiver

TECHNICAL DATA

Electrical data	
Supply voltage	DC 3 V (2 x 1.5 V AA LR6 alkaline battery)
Battery life	2 years (depending on the switching frequency)
Power consumption	5 VA
Control function	Heating
Control type	Two-point (ON/OFF)
Control range	+5 °C to +35 °C, +5 °C (frost protection)
Electrical connection	
Device	Screw terminal with wire protection, max. 2.5 mm²
Communication type	
Radio signal	868.3 MHz
Range	30 m (inside building)
Operating data	
Operating mode	OFF mode (5 °C frost protection), reset function, temperature reduction mode/AUTO
Manual switch	ON/OFF
Display and format	
Resolution	Room temperature: 0.1 °C, temperature setpoint 0.2 °C
Display update	every 60 seconds
Room temperature display	±0 °C to +50 °C
Status display	Battery condition, operating mode, radio signal strength indication, status display for heating
Ambient conditions	
Humidity (operating)	10% to 90% relative humidity, condensation-free
Temperature (operating)	-10 °C to +50 °C
General data	
Colour	White/grey
Weight	178 g
Material	High-temperature resistant, self-extinguishing thermoplastics ABS plastic
Installation	On-wall (4-hole installation on flush-mounted socket), on-wall, flush mounting BS 4662, on-wall BS 5733
Compliance with standards	
ErP class	I
ErP function	ON/OFF room thermostat
ErP contribution to seasonal characteristic space heating energy efficiency	1%
Protection type	IP20
Protection class	II, when installed accordingly
Approvals	CE, Energy Saving Trust

SCOPE OF DELIVERY

- **thermio™ essential H rf – transmitter + Bezel**
- **RecUno/2 rf – receiver + Wall mounting housing**

REPLACEMENT PART / ACCESSORY

- **thermio™ essential H rf – transmitter + Bezel**
  item no. 04.46.0022.1
  EAN Code 4010940044985

- **RecUno/2 rf – receiver + wall mounting housing**
  item no. 04.52.0013.1
  EAN Code 4010940040697

- **RecFM/2 rf – receiver**
  item no. 04.52.0011.1
  EAN Code 4010940039714

You will find the technical data for the RecUno/2 rf receiver and the RecFM/2 rf receiver on page 52.

Digital wireless room thermostats – thermio™ essential Brf

ITEM NO. 04.46.0025.1 / EAN-CODE 4010940045388

PRODUCT DESCRIPTION

The thermio™ essential Brf is a digital radio room thermostat of ErP class I. Its wireless radio technology allows it to be placed anywhere in the room without laying electrical cables and thereby enables extremely convenient control and monitoring of the room temperature. Its integrated frost protection function is activated automatically as soon as ambient temperatures drop below the saved temperature setpoint. Up to 16 receivers can be connected to the transmitter. In case of poor radio communication, manual operation is possible using an ON/OFF switch. An additional mounting plate not only enables quick and easy on-wall mounting, but also contributes towards an elegant appearance.

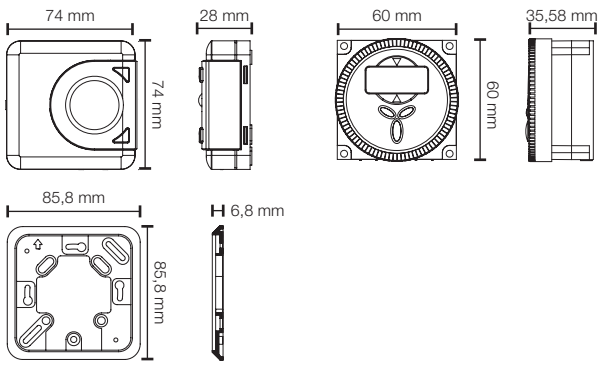
- The wireless radio technology allows individual placement in rooms without laying electric cables
- Signalling and control accuracy ensured through high frequency radio signal range of up to 30 metres inside buildings
- Long battery life through efficient energy management
- Monitoring of the battery status and display when a battery change is required
- The frost protection function prevents the freezing of radiators or icing of piping, even when switched off
- Cost reduction and efficient energy management through high level of control accuracy
- Very easy and convenient to use through large LC display, manual ON/OFF switch and reset button
- High flexibility – up to 16 receivers can be connected to the device
- Increased comfort through a wide temperature control range of +5 °C to +35 °C
- Fast, simple and safe installation through on-wall mounting

CE ErP I (1%)

APPLICATION AREAS

- Installation integrated in a gas boiler

DIMENSIONAL DRAWINGS



CIRCUIT DIAGRAM

RecFM/2 rf– receiver

TECHNICAL DATA

Electrical data	
Supply voltage	DC 3 V (2 x 1.5 V AA LR6 alkaline battery)
Battery life	2 years (depending on the switching frequency)
Power consumption	5 VA
Control function	Heating
Control type	Two-point (ON/OFF)
Control range	+5 °C to +35 °C, +5 °C (frost protection)
Communication type	
Radio signal	868.3 MHz
Range	30 m (inside building)
Operating data	
Operating mode	OFF mode (5 °C frost protection), reset function, temperature reduction mode/AUTO
Manual switch	ON/OFF
Display and format	
Resolution	Room temperature: 0.1 °C, temperature setpoint 0.2 °C
Display update	every 60 seconds
Room temperature display	±0 °C to +50 °C
Status display	Battery condition, operating mode, radio signal strength indication, status display for heating
Ambient conditions	
Humidity (operating)	10% to 90% relative humidity, condensation-free
Temperature (operating)	-10 °C to +50 °C
General data	
Colour	White/grey
Weight	178 g
Material	High-temperature resistant, self-extinguishing thermoplastics ABS plastic
Installation	On-wall (4-hole installation on flush-mounted socket), on-wall, flush mounting BS 4662, on-wall BS 5733
Compliance with standards	
ErP class	I
ErP function	ON/OFF room thermostat
ErP contribution to seasonal space heating energy efficiency	1%
Protection type	IP20
Protection class	II, when installed accordingly
Approvals	CE, Energy Saving Trust

SCOPE OF DELIVERY

- **thermio™ essential H rf – transmitter + Bezel**
- **RecFM/2 rf – receiver**

REPLACEMENT PART / ACCESSORY

- **thermio™ essential H rf – transmitter + Bezel**
  item no. 04.46.0022.1
  EAN Code 4010940044985

- **RecFM/2 rf – receiver**
  item no. 04.52.0011.1
  EAN Code 4010940039714

- **RecUno/2 rf – receiver + wall mounting housing**
  item no. 04.52.0013.1
  EAN Code 4010940040697

You will find the technical data for the RecUno/2 rf receiver and the RecFM/2 rf receiver on page 52.

Digital room thermostats – thermio™ essential smart

ITEM NO. 04.46.0023.1 / EAN-CODE 4010940044992

PRODUCT DESCRIPTION

The thermio™ essential smart is a digital room thermostat of ErP class IV that can be programmed and operated easily and conveniently with a free app. Thanks to the integrated Bluetooth functionality, temperature profiles and schedules created on a mobile device can be transmitted and adapted easily and simply to the thermio™ essential smart via Bluetooth. This allows individual temperature profiles to be implemented easily, lowered automatically and thereby significantly reduce heating costs – without any loss of convenience. Of course the thermio™ essential smart can also be operated without the app: A large LC display and a manual ON/OFF switch make the room thermostat easy to operate.

- Extended scope of functions and excellent user guidance via the graphic user interface on a mobile device
- Intuitive and simple operation as well as fast and convenient programming with the free app
- Short-term and need-based heating through Boost function
- Optimal manipulation protection through PIN code protection for service interval settings
- Effective security against unauthorised operation, e.g. in public spaces
- Needs-based and fast temperature regulation without deviation ensures high energy efficiency

CE ErP IV (2%) I (1 %) ON BOARD TECHNOLOGY Bluetooth

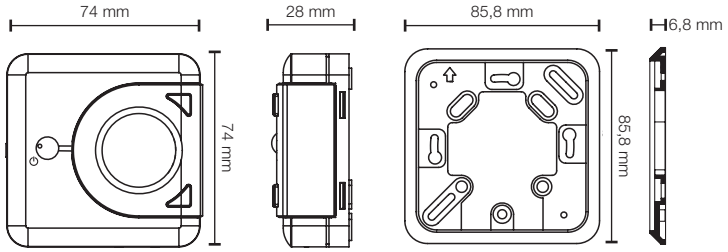
APPLICATION AREAS

- Heating systems
- Heat pump
- Circulating pump
- Electric heating
- Motorised valves
- Actuators

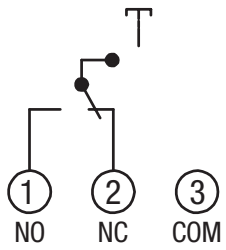
GET IT ON Google play

Available on the App Store

DIMENSIONAL DRAWINGS



CIRCUIT DIAGRAM



TECHNICAL DATA

Electrical data	
Supply voltage	DC 3 V (2 x 1.5 V AA LR6 alkaline battery)
Battery life	1 year (depending on the switching frequency)
Switching output	Changeover contact, potential-free
Switching capacity – resistive load	8 A / 250 V AC
Switching capacity – inductive load cos. phi 0.6	3 A / 250 V AC
Power consumption	5 VA
Power reserve	Programs saved in EEPROM
Control function	Heating
Control type	PID (factory setting), 2-point (ON/OFF)
Control range	+5 °C to +35 °C, +5 °C (frost protection)
Heating cycle	6 times per hour (3 to 12 times per hour)
Electrical connection	
Device	Screw terminal with wire protection, max. 2.5 mm²
Communication type	
Radio signal	Bluetooth 4.0, 2.4 GHz
Range	10 m
Output power	< 1 mW
Status display	Bluetooth symbol
Operating data	
Operating mode	Manual mode, OFF mode (5 °C frost protection), reset function, key lock, override mode, Boost mode, temperature reduction mode/AUTO, holiday mode
Manual switch	ON/OFF/AUTO
Tampering protection	PIN code
Offset	-3 °C to +3 °C
Programs	7 days, 5-2 days, 1-7 days, Boost, manual, individual programming (max. 4 or 6 ON/OFF switching times)
Programming	Smartphone/tablet
Display and format	
Resolution	Room temperature 0.1 °C, temperature setpoint 0.5 °C, Time of day 1 minute
Shortest switching time	Boost 1, 2, 3 Hours, ON/OFF 10 minutes, Program Time 10 minutes
Room temperature display	-10 °C to +50 °C
Summer/winter time	Automatic summer/winter time adjustment
Time	Digital
Status display	Battery condition, operating mode, status display for heating, temperature profile
Ambient conditions	
Humidity (operating)	10% to 90% relative humidity, condensation-free
Temperature (operating)	-10 °C to +50 °C
General data	
Colour	White/grey
Weight	282 g
Material	High-temperature resistant, self-extinguishing thermoplastics, ABS plastic
Installation	On-wall (4-hole installation on flush-mounted socket), on-wall, flush mounting BS 4662, on-wall BS 5733
Compliance with standards	
ErP class	I, IV
ErP function	ON/OFF room thermostat TPI room thermostat for use with on/off heaters
ErP contribution to seasonal characteristic space heating energy efficiency	1%, 2%
Protection type	IP20
Protection class	II, when installed accordingly
Approvals	CE, Energy Saving Trust

SCOPE OF DELIVERY

- **Bezel**

Receiver room thermostats

RecUno/2 rf

RecFM/2 rf

PRODUCT DESCRIPTION

RecUno/2 rf and RecFM/2 rf are radio receivers for use with Grässlin radio room thermostats of the thermio™ essential product line. The wireless radio technology allows individual placement in rooms without laying electric cables. The signal and control accuracy is ensured by the high radio range of up to 30 metres inside buildings.

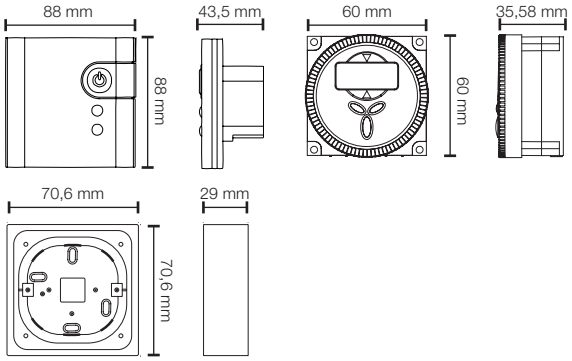
- The wireless radio technology allows individual placement in rooms without laying electric cables
- Signalling and control accuracy ensured through high frequency radio signal range of up to 30 metres inside buildings
- Indication of the system state through the system state and radio signal strength LEDs
- Flexible, simple and fast installation on a flush-mounted socket or on-wall through use of the wall mounting housing (RecUno/2 rf)
- Easy and fast integration in the boiler control panel through standardised construction and DIN 6.3 flat plug (RecFM/2 rf)
- Manual operation through ON/OFF manual switch if radio communication is bad

APPLICATION AREAS

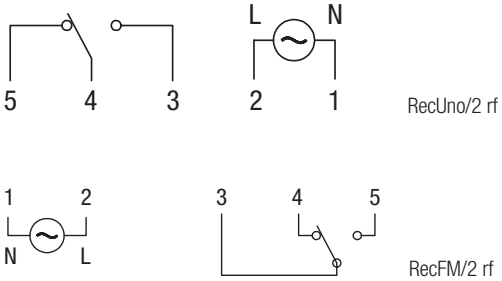
RecUno/2 rf:
- Heating systems
- Electric heating
- Motorised valves
- Actuators

RecFM/2 rf:
- Installation integrated in a gas boiler

DIMENSIONAL DRAWINGS



CIRCUIT DIAGRAM



TECHNICAL DATA

Electrical data	
Supply voltage	AC 230 V ± 10% 50-60 Hz
Switching output	Changeover contact, potential-free
Power consumption	5 VA
Communication type	
Wired	2-wire
Radio signal	868.3 MHz
Range	30 m (inside building)
Status display	LED
Operating data	
Manual switch	ON/OFF
Programs	Manual
Display and format	
Status display	Operating mode, radio signal strength indication, status display for heating
Ambient conditions	
Humidity (operating)	10% to 90% relative humidity, condensation-free
Temperature (operating)	±0 °C to +50 °C
General data	
Material	High-temperature resistant, self-extinguishing thermoplastics
Compliance with standards	
Protection type	IP20
Protection class	II, when installed accordingly
Approvals	CE, Energy Saving Trust

SCOPE OF DELIVERY

- **Wall mounting housing RecUno/2 rf**

REPLACEMENT PART / ACCESSORY

- **Installation base**
  item no. 01.79.0002.2
  EAN Code 4010940002831

PRODUCT VARIANTS

	RecUno/2 rf	**RecFM/2 rf**
Item no.	04.52.0013.1	04.52.0011.1
EAN code	4010940040697	4010940039714
Electrical data		
Switching capacity – resistive load	16 A / 250 V AC	16 A / 250 V AC, 20 A / 125 V AC, 16 A / 30 V DC
Switching capacity – inductive load cos. phi 0.6	3 A / 250 V AC	8 A / 250 V AC, 8 A / 125 V AC
Electrical connection		
Device	Screw terminal with wire protection, max. 2.5 mm²	Flat plug DIN 6.3
General data		
Colour	White/grey	White
Weight	266 g	110 g
Installation	Flush mounting, on-wall	Installation (boiler)

Programmable room thermostats: The comfortable solution for the heating time & temperature control

MODERN DESIGN, MAXIMUM COMFORT

Product line
thermio™ comfort

The programmable room thermostats of the thermio™ comfort product line guarantee outstanding comfort when controlling the room temperature in the private and commercial sector. Whether as a wired solution for use in individual rooms or as a combination of rf room thermostat and receiver for individual placement in rooms without laying electric cables: Grässlin offers you a wide selection of ingenious products for need-based, energy-saving and above all convenient control of the heating period and comfort temperature.

A special highlight in our thermio™ comfort product line is the feeling D201 OT model. It has an OpenTherm interface through which control of modulating heating systems is made possible.

Whether digital or analogue, for use in new buildings or for retrofitting: The programmable room thermostats from the thermio™ comfort product line are the ideal solution for anyone wishing to lower heating costs without foregoing convenience.

The programmable room thermostats from the thermio™ comfort product line enable quick, need-based and above all convenient individual room control.

Programmable room thermostats

Programmable room thermostats

Receiver

Programmable room thermostats – Selection guide

	famoso 500	famoso 550	famoso 601 rf
			
Item no.	04.34.0001.1	04.34.0002.1	04.53.0005.1
Interface	–	–	–
Supply voltage	AC 230 V ± 10% 50-60 Hz	AC 230 V ± 10% 50-60 Hz	DC 3 V (2 x 1.5 V AA LR6 alkaline battery)
Battery life	–	–	1 year (depending on the switching frequency)
External inputs	–	–	–
Communication type	Two-wire	Two-wire	Radio 868.3 MHz
Operating mode	Auto mode (Program dependent), night temperature mode	Auto mode (Program dependent), night temperature mode	Auto mode (Program dependent), night temperature mode
Manual switch	Auto temperature, control temperature 1, control temperature 2	Auto temperature, control temperature 1, control temperature 2	Auto temperature, control temperature 1, control temperature 2
Offset	–	–	–
Programs	Daily Program	Weekly Program	Daily Program
Hour meter	–	–	–
Time display format	24-hour format	24-hour format	24-hour format
Shortest switching time	Programme Time 15 minutes	Program Time 2 Hours	Programme Time 15 minutes
Room temperature display	–	–	–
Summer/winter time	Manual	Manual	Manual
Time	Analogue hands	Analogue hands	Analogue hands
Status display	–	–	Battery condition, radio signal strength indication
ErP class	I	I	I
Page	**58**	**58**	**60**

feeling D101	feeling D101 rf	feeling D201 OT
		
04.10.0001.1	04.11.0004.1	04.12.0005.1
–	–	OpenTherm interface V3.0
DC 3 V (2 x 1.5 V AA LR6 alkaline battery)	DC 3 V (2 x 1.5 V AA LR6 alkaline battery)	OpenTherm BUS (optionally 2 x 1.5 V AA LR6 alkaline battery)
2 years (depending on the switching frequency)	2 years (depending on the switching frequency)	2 years (depending on the switching frequency)
–	–	●
Two-wire	Radio 868.3 MHz	Two-wire
Auto mode (Program dependent), anti-legionella function, countdown mode (OFF mode after Hours), holiday mode (auto mode after days), manual eco fix mode (program dependent Ø temperature), OFF mode (5 °C frost protection, party mode (auto mode after Hours), cleaning mode (OFF mode after 2 Hours), key lock	Auto mode (Program dependent), anti-legionella function, countdown mode (OFF mode after Hours), holiday mode (auto mode after days), manual eco fix mode (program dependent Ø temperature), OFF mode (5 °C frost protection, party mode (auto mode after Hours), cleaning mode (OFF mode after 2 Hours), key lock	Temperature reduction mode (auto mode after one day), auto mode (Program dependent), anti-legionella function, holiday mode (auto mode after days), comfort temperature mode (auto mode after one day), OFF mode (5 °C frost protection), Optimum Start, key lock
–	–	–
-5 °C to +5 °C	-5 °C to +5 °C	-5 °C to +5 °C
7 days, 5-2 days, 1-7 days, free weekday block formation, individual Programming	7 days, 5-2 days, 1-7 days, free weekday block formation, individual Programming	7 days, 5-2 days, 1-7 days, free weekday block formation, individual Programming
–	–	●
12-hour format, 24-hour format	12-hour format, 24-hour format	12-hour format, 24-hour format
Programme Time 30 minutes	Programme Time 30 minutes	Programme Time 30 minutes
±0 °C to +50 °C	±0 °C to +50 °C	±0 °C to +50 °C
Automatic	Automatic	Automatic
Digital	Digital	Digital
Battery condition, operating mode, status display for heating, temperature profile	Battery condition, operating mode, radio signal strength indication, status display for heating, temperature profile	Battery condition, operating mode, OTC (weather-dependent control), status display for heating, temperature profile
I, IV	I, IV	V, VI
62	**64**	**66**

Analogue room programmable thermostats – famoso

famoso 500

famoso 550

PRODUCT DESCRIPTION

The famoso 500 and 550 are programmable room thermostats with electronic temperature controller and analogue time switch with daily or weekly program and a very short switching time of just 15 minutes and 2 hours. Individual comfort temperatures can be set via two room temperature controls, which can be selected via a selector dial. These two versions are distinguished by a simple and modern design, by which they can be optimally integrated into any room.

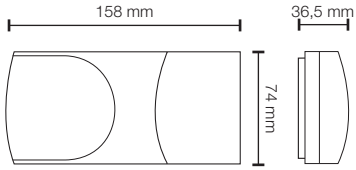
- Increased comfort through wide temperature control range
- The frost protection function prevents the freezing of radiators or icing of piping, even when switched OFF
- Surface mounting for easy and quick installation
- Utilisation efficiency by high control accuracy

CE ErP I (1%)

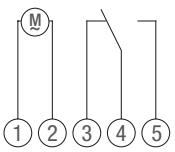
APPLICATION AREAS

- Heating systems
- Underfloor heating
- Electric heaters
- Motorised valves
- Actuators

DIMENSIONAL DRAWINGS



CIRCUIT DIAGRAM



Receiver

TECHNICAL DATA

Electrical specifications	
Supply voltage	AC 230 V ± 10% 50-60 Hz
Current output	Changeover, potential-free, opening width < 3 mm
Switching capacity – resistive load	5 A / 250 V AC
Switching capacity – inductive load cos. phi 0.6	1 A / 250 V AC
Control function	Heating
Control type	2-point (ON/OFF)
Hysteresis	±0.25 K ... ±0.5 K
Control range	+5 °C (frost protection)
	+5 °C ... +30 °C
Control accuracy	± 2.5 seconds/day at +25 °C
Control period	5 ... 30 minutes
Electrical connection	
Device	Screw terminal with wire protection max. 2.5 mm²
Communication type	
Wired	2-wire
Operating data	
Operating mode	Auto mode
	Night temperature mode
Hand switch	Auto temperature
	Control temperature 1
	Control temperature 2
Display and format	
Format time display	24-hour format
Clock	Analogue hands
Environmental conditions	
Humidity (operating)	10% ... 90% relative humidity, non-condensing
Temperature (operation)	-5 °C ... +45 °C
General data	
Colour	White
Weight	250 g
Material	Plastic ABS
Mounting	Surface mounting (4-hole mounting on flush-mounted box)
Standard compliance	
ErP class	I
ErP function	ON/OFF room thermostat
ErP contribution to seasonal characteristic space heating energy efficiency	1%
Protection type	IP20
Protection class	II, after appropriate mounting
Approvals	CE

PRODUCT VARIANTS

	famoso 500	famoso 550
Item no.	04.34.0001.1	04.34.0002.1
EAN Code	4010940020231	4010940020224
Operating data		
Programs	Daily program	Weekly program
Display and format		
Shortest switching time	Program time 15 minutes	Program time 2 hours

Analogue programmable room thermostat – famoso 601 rf

ITEM NO. 04.53.0005.1 / EAN CODE 4010940040505

CE ErP I (1%)

APPLICATION AREAS

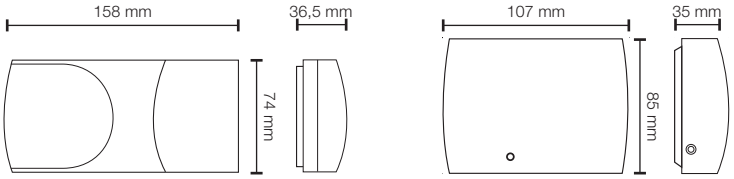
- Heating systems
- Underfloor heating
- Electric heaters
- Motorised valves
- Actuators

PRODUCT DESCRIPTION

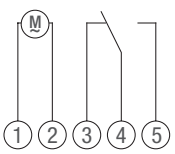
The famoso 601 rf is a programmable room thermostat with electronic temperature controller and analogue time switch with day program and a very short switching time of just 15 minutes. The wireless technology enables individual placement in the room without the laying of electrical cables and is especially suitable for use in new buildings or for retrofitting. The signal and control accuracy is ensured by the high radio range of up to 30 metres inside buildings. Individual comfort temperatures can be set via two room temperature controls, which can be selected via a dial. The battery status is monitored and displayed by a status LED with the required battery change. The famoso 601 rf is distinguished by a simple and modern design, which allows it to be easily integrated into any room.

- Monitoring the battery status and display with the required battery change
- Increased comfort through wide temperature control range
- Long battery life through efficient energy management
- Surface mounting for easy and quick installation
- The wireless technology individual placement in the room without laying electrical cable
- Ensuring signalling and control accuracy by high frequency radio signal range of up to 30 metres inside buildings
- Signalling of system status via LEDs
- Simple and modern design

DIMENSIONAL DRAWINGS



CIRCUIT DIAGRAM



Receiver

TECHNICAL DATA

Electrical specifications	
Supply voltage	DC 3 V (2 x 1.5 V AA LR6 alkaline battery)
Battery life	1 year (depending on switching frequency)
Control function	Heating
Control type	2-point (ON/OFF)
Hysteresis	±0.25 K ... ±0.5 K
Control range	+5 °C (frost protection) +5 °C ... +30 °C
Control accuracy	± 2.5 seconds/day at +25 °C
Control period	5 ... 30 minutes
Communication type	
Radio signal	868.3 MHz
Range	30 m (inside building)
Coding	> 16.8 mil.
Output power	< 1 mW
Operating data	
Operating mode	Auto mode (program dependent) Night temperature mode
Hand switch	Auto temperature Control temperature 1 Control temperature 2
Programs	Daily program (ON/OFF)
Display and format	
Format time display	24-hour format
Shortest switching time	Program time 15 minutes
Clock	Analogue hands
Status display	Battery state
Environmental conditions	
Humidity (operating)	10% ... 90% relative humidity, non-condensing
Temperature (operation)	-5 °C ... +45 °C
General data	
Colour	White
Weight	250 g
Material	Plastic ABS
Mounting	Surface mounting (4-hole mounting on flush-mounted box)
Standard compliance	
ErP class	I
ErP function	ON/OFF room thermostat
ErP contribution to seasonal characteristic space heating energy efficiency	1%
Protection type	IP20
Protection class	II, after appropriate mounting
Approvals	CE, Energy Saving Trust

SCOPE OF DELIVERY

- **famoso 601 rf - transmitter**
- **RecUno rf - receiver**

REPLACEMENT PARTS / ACCESSORIES

- **famoso 601 rf - transmitter**
  Item no. 04.53.0002.1
  EAN-Code 4010940037444

- **RecUno rf - receiver**
  Item no. 04.52.0001.1
  EAN-Code 4010940031220

- **RecFM/1 rf - receiver**
  Item no. 04.52.0012.1
  EAN-Code 4010940040680

Specifications for the RecUno rf - transmitter and RecFM/1 rf - transmitter can be found on page 42.

Digital programmable room thermostat – feeling D101

ITEM NO. 04.10.0001.1 / EAN CODE 4010940039578

PRODUCT DESCRIPTION

The feeling D101 is a digital, programmable room thermostat. It enables fast, suitable and energy-saving individual room control with legionella protection. The high control accuracy also enables efficient utilisation of the system. The chronostat has various operating modes, which allow a comfortable indoor climate according to the individual needs. User-friendly programming and operation is ensured with its large display. The feeling D101 has up to 48 different time-temperature programs to increase room comfort. The feeling D101 stands for simple and modern design and can be integrated perfectly into the interior design.

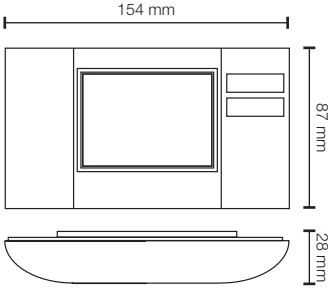
- Convenient, automatic change from summer to winter time
- Effective security against unauthorised operation, e.g. in public spaces
- Long battery life through efficient energy management
- Individual programs are saved and continue to be available even after a power failure
- Monitoring the battery status and display with the required battery change
- Child-proof lock as system security for children and elderly

CE ErP IV (2%) I (1 %)

APPLICATION AREAS

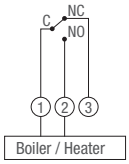
- Heating systems
- Underfloor heating
- Electric heaters
- Motorised valves
- Actuators

DIMENSIONAL DRAWINGS

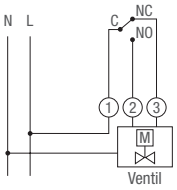


CIRCUIT DIAGRAMS

wiring diagram for boiler / heater



wiring diagram for motorized valves



TECHNICAL DATA

Electrical specifications	
Supply voltage	DC 3 V (2 x 1.5 V AA LR6 alkaline battery)
Battery life	2 years (depending on switching frequency)
Battery replacement time (power reserve)	> 10 minutes, (programs saved in EEPROM)
Current output	Changeover, potential-free, opening width < 3 mm
Switching capacity – resistive load	6 A / 250 V AC
Switching capacity – inductive load cos. phi 0.6	2 A / 250 V AC
Control function	Heating
Control type	PID (factory setting), 2-point (ON/OFF)
Hysteresis	±0.4 K (±0.1 K ... ±0.9 K)
Control range	+5 °C ... +32 °C, +5 °C (+3 °C ... +7 °C frost protection)
Control accuracy	±0.5 °C (20 K/hour)
Sensor (thermistor)	100 K (at 25 °C) NTC
Heat measurement (heating system)	3 K/hour
Electrical connection	
Device	Screw terminal with wire protection max. 1.5 mm²
Communication type	
Wired	2-wire
Operating data	
Operating mode	Auto mode, Anti-Legionella function, countdown mode, holiday mode, manual eco-fix mode, OFF mode, party mode, cleaning mode, key lock
Offset	-5 °C ... +5 °C
Programs	7 days, 5-2 days, 1-7 days, free weekday block formation, individual programming (max. 7 programs with 48 switching times)
Display and format	
Resolution	Room temperature 0.1 °C, target temperature 0.5 °C, day time 1 minute
Display update	every 10 seconds
Format time display	24-hour format (factory setting), 12-hour format (AM/PM)
Shortest switching time	Program time 30 minutes
Room temperature display	+0 °C ... +50 °C
Summer/winter time	Automatic summer/winter time change
Status display	Battery status, operating mode, status display heating (flame symbol), temperature profile
Environmental conditions	
Humidity (operating)	10% ... 90% relative humidity, non-condensing
Temperature (operation)	±0 °C ... +45 °C
General data	
Colour	White
Weight	200 g
Material	Plastic ABS
Mounting	Surface mounting (4-hole mounting on flush-mounted box)
Standard compliance	
ErP class	I, IV
ErP function	ON/OFF room thermostat TPI room thermostat for use with on/off heaters
ErP contribution to seasonal characteristic space heating energy efficiency	1%, 2%
Protection type	IP40
Protection class	II, after appropriate mounting
Approvals	CE, Energy Saving Trust

Digital programmable room thermostat – feeling D101 rf

ARTICLE NO. 04.11.0004.1 / EAN-CODE 4010940039974

PRODUCT DESCRIPTION

The feeling D101 rf is a digital, programmable room thermostat. It enables fast, suitable and energy-saving individual room control with legionella protection. The high control accuracy also enables efficient utilisation of the system. The chronostat has various operating modes, which allow a comfortable indoor climate according to the individual needs. User-friendly programming and operation is ensured with its large display. It has up to 48 different time-temperature programs to increase room comfort. The feeling D101 rf stands for simple and modern design and can be integrated perfectly into the interior design. The wireless technology enables individual placement in the room without laying electrical cables and is especially suitable for use in new buildings or for retrofitting. The signal and control accuracy is ensured by the high radio range of up to 30 metres inside buildings.

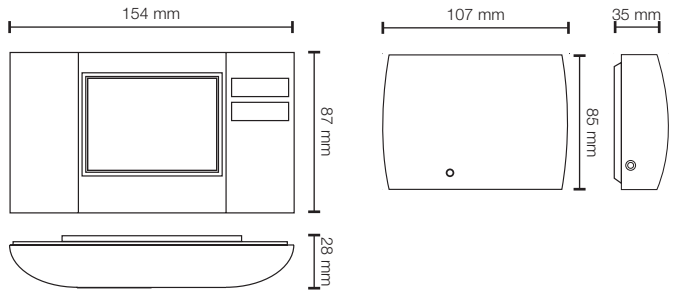
- Long battery life through efficient energy management
- Convenient, automatic change from summer to winter time
- Monitoring the battery status and display with required battery change
- Effective protection against unauthorised use e.g. in public places
- Individual programs are saved and continue to be available even after a power failure
- Child-proof lock as system security for children and elderly
- The wireless technology allows individual placement in rooms without laying electric cable
- Ensuring signalling and control accuracy through high frequency radio signal range of up to 30 metres inside buildings
- Signalling of system status via LEDs

CE ErP IV (2%) I (1%)

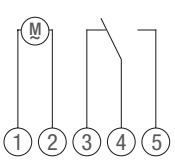
APPLICATION AREAS

- Heating systems
- Underfloor heating
- Electric heating
- Motorised valves
- Actuators

DIMENSIONAL DRAWINGS



CIRCUIT DIAGRAM



RecUno rf - Receiver

TECHNICAL DATA

Electrical specifications	
Supply voltage	DC 3 V (2 x 1.5 V AA LR6 alkaline battery)
Battery life	2 years (depending on switching frequency)
Battery replacement time (power reserve)	> 10 minutes, (programs saved in EEPROM)
Control function	Heating
Control type	PID (factory setting), 2-point (ON/OFF)
Hysteresis	±0.4 K (±0.1 K ... ±0.9 K)
Control range	+5 °C ... +32 °C, +5 °C (+3 °C ... +7 °C frost protection)
Control accuracy	±0.5 °C (20 K/hour)
Sensor (thermistor)	100 K (at 25 °C) NTC
Heat measurement (heating system)	3 K/hour
Electrical connection	
Device	Latching screw with wire protection max. 1.5 mm²
Communication type	
Radio signal	868.3 MHz
Range	30 m (inside building)
Coding	> 16.8 mil.
Output power	< 1 mW
Operating data	
Operating mode	Auto mode, anti-Legionella function, countdown mode, holiday mode, manual eco-fix mode, OFF mode, party mode, cleaning mode, key lock
Offset	-5 °C ... +5 °C
Programs	7 days, 5-2 days, 1-7 days, free weekday block formation, individual programming (max. 7 programs with 48 switching times)
Display and format	
Resolution	Room temperature 0.1 °C, target temperature 0.5 °C, day time 1 minute
Display Update	every 10 seconds
Format time display	24-hour format (factory setting) and 12-hour format (AM/PM)
Shortest switching time	Program time 30 minutes
Room temperature display	+0 °C ... +50 °C
Summer/winter time	Automatic summer/winter time change
Status display	Battery status, operating mode, radio signal strength indication, status display heating (flame symbol), temperature profile
Environmental conditions	
Humidity (operating)	10% ... 90% relative humidity, non-condensing
Temperature (operation)	±0 °C ... +45 °C
General data	
Colour	White
Weight	200 g
Material	Plastic ABS
Mounting	Surface mounting (4-hole mounting on flush-mounted box)
Standard compliance	
ErP class	I, IV
ErP function	ON/OFF room thermostat TPI room thermostat for use with on/off heaters
ErP contribution to seasonal characteristic space heating energy efficiency	1%, 2%
Protection type	IP40
Protection class	II, after appropriate mounting
Approvals	CE, Energy Saving Trust

SCOPE OF DELIVERY

- **feeling D101 rf - transmitter**
- **RecUno rf - receiver**

REPLACEMENT PARTS / ACCESSORIES

- **feeling D101 rf - transmitter**
  Item no. 04.11.0001.1
  EAN-Code 4010940039943

- **RecUno rf - receiver**
  Item no. 04.52.0001.1
  EAN-Code 4010940031220

- **RecFM/1 rf - receiver**
  Item no. 04.52.0012.1
  EAN-Code 4010940040680

Specifications for the RecUno rf - transmitter and RecFM/1 rf - transmitter can be found on page 42.

Digital programmable room thermostat – feeling D201 OT

ITEM NO. 04.12.0005.1 / EAN CODE 4010940041472

PRODUCT DESCRIPTION

The feeling D201 OT is a digital, programmable room thermostat with OpenTherm interface. The modulating control enables fast, need-based and energy-saving individual room control and flow optimisation, and to domestic water heating with legionella protection. The high control accuracy also enables efficient utilisation of the plant. The chronostat has various operating modes, which allow a comfortable indoor climate according to the individual needs. With the large, backlit display, user-friendly programming and operation is ensured, even in low light conditions. The display of the system operating hours enables monitoring of energy consumption and helps save energy. To increase the energy balance, the feeling D201 OT has external inputs that, for example, can realise the weather-dependent control system with an outdoor temperature sensor. The feeling D201 OT stands for simple and modern design and can therefore be optimally integrated into the interior design.

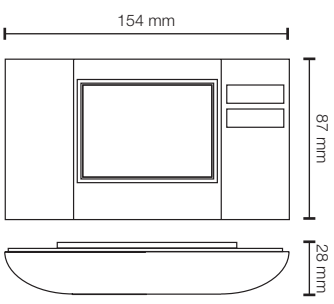
- Individual programs are saved and continue to be available even after a power failure
- Display of the operating hours enables conclusions on energy consumption
- Increasing the energy balance through external inputs connected to motion or presence detectors, temperature sensors, floor sensors, window contact or telephone remote switch
- Need-based and energy-saving individual room control, flow optimisation, and domestic water heating through OpenTherm interface
- Effective security against unauthorised operation, e.g. in public spaces
- Child-proof lock as system security for children and elderly

CE ErP V (3%) VI (4%) SP OpenTherm®

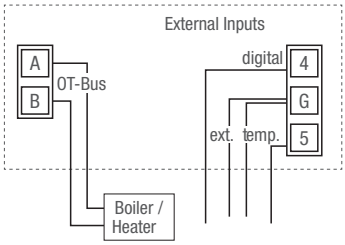
APPLICATION AREAS

- Modulating heating systems with OpenTherm interface

DIMENSIONAL DRAWING



CIRCUIT DIAGRAM



TECHNICAL DATA

Electrical specifications	
Interface	OpenTherm interface V3.0
Supply voltage	OpenTherm BUS (optional 2 x 1.5 V AA LR6 alkaline battery)
Battery life	2 years (depending on switching frequency)
Battery replacement time (power reserve)	> 1 hour, (programs saved in EEPROM)
Control function	Heating
Control type	PID (factory setting), 2-point (ON/OFF)
Hysteresis	±0.4 K (±0.1 K ... ±0.9 K)
Control range	+5 °C ... +32 °C, +5 °C (+3 °C ... +7 °C frost protection)
Control accuracy	±0.5 °C (20 K/hour)
Sensor (thermistor)	100 K (at 25 °C) NTC
Heat measurement (heating system)	3 K/hour
Electrical connection	
Device	Latching screw with wire protection max. 1.5 mm²
External inputs	Plug-in terminal with wire protection
Communication type	
Wired	2-wire
External inputs	
Analogue	Potential free
Digital	Outside temperature sensor NTC 100 kΩ
Operating data	
Operating mode	Temperature reduction mode, auto mode, anti-Legionella function, holiday mode, comfort temperature mode, optimum start, keylock
Offset	-5 °C ... +5 °C
Programs	7 days 5-2 days, 1-7 days, free weekday block formation Individual programming (max. 7 programs with 48 switching times)
Counter	Hour meter
Display and format	
Resolution	Room temperature 0.1 °C, target temperature 0.5 °C, day time 1 minute
Display update	every 10 seconds
Display lighting	White
Format time display	24-hour format (factory setting), 12-hour format (AM/PM)
Shortest switching time	Program time 30 minutes
Room temperature display	+0 °C ... +50 °C
Summer/winter time	Automatic summer/winter time change
Status display	Battery status, operating mode, OTC (weather-dependent control) Status display heating (flame symbol), temperature profile
Environmental conditions	
Humidity (operating)	10% ... 90% relative humidity, non-condensing
Temperature (operation)	±0 °C ... +45 °C
General data	
Colour	White
Weight	200 g
Material	Plastic ABS
Mounting	Surface mounting (4-hole mounting on flush-mounted box)
Standard compliance	
ErP class	V, VI
ErP function	Modulating room thermostat for use with modulating heaters Weather-dependent controller and room temperature sensor for use with modulating heaters
ErP contribution to seasonal characteristic space heating energy efficiency	3%, 4%
Protection type	IP40
Protection class	II, after appropriate mounting
Approvals	CE, OpenTherm Protocol Specification V3.0

▶ The perfect combination for better energy balance

The feeling D201 OT can also be used for energy-efficient control of, for example, weather-dependent systems. For this purpose, the external inputs enable the connection of required products, such as e.g .:

- motion and presence detectors
- temperature sensors
- floor sensors
- window contacts
- telephone remote switching

Detailed information about the motion and presence detectors can be found in our lighting control product catalogue.

Receiver programmable room thermostats

RecUno rf

RecFM/1 rf

PRODUCT DESCRIPTION

The RecUno rf and the RecFM/1 rf are radio receivers for use with wireless controllers from Grässlin. The wireless technology enables individual placement in the room without laying electrical cables and is especially suitable for use in new buildings or for retrofitting. The signal and control accuracy is ensured by the high radio range of up to 30 metres inside buildings.

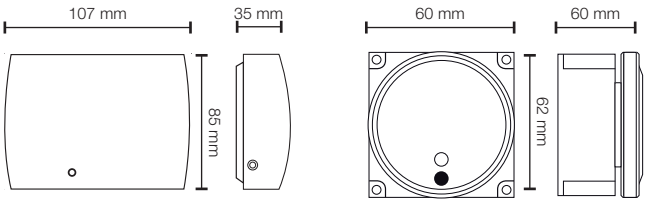
- The wireless technology enables individual placement in rooms without laying electric cable
- Ensuring signalling and control accuracy by high frequency radio signal range of up to 30 metres inside buildings
- Signalling of system status via LEDs
- Simple and modern design

CE

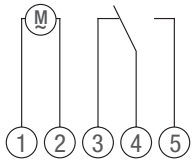
APPLICATION AREAS

- Heating systems
- Electric heaters
- Motorised valves
- Actuators
- Gas-Boiler

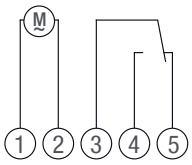
DIMENSIONAL DRAWINGS



CIRCUIT DIAGRAMS



RecUno rf - receiver



RecFM/1 rf - receiver

TECHNICAL DATA

Electrical specifications	
Supply voltage	AC 230 V ± 10% 50-60 Hz
Current output	Changeover, potential-free, opening width < 3 mm
Switching capacity – resistive load	5 A / 250 V AC
Switching capacity – inductive load cos. phi 0.6	1 A / 250 V AC
Electrical connection	
Device	Screw terminal with wire protection max. 1.5 mm²
Communication type	
Wired	2-wire
Radio signal	868.3 MHz
Range	30 m (inside building)
Coding	> 16.8 mil.
Output power	< 1 mW
Status display	LED
Display and format	
Status display	Status display heating (LED)
Environmental conditions	
Humidity (operating)	10% ... 90% relative humidity, non-condensing
Temperature (operation)	-5 °C ... +45 °C
General data	
Colour	White
Weight	113 g
Material	Plastic ABS
Standard compliance	
Protection type	IP20
Protection class	II, after appropriate mounting
Approvals	CE

REPLACEMENT PARTS / ACCESSORIES

► **Mounting socket**
Item no. 01.79.0002.2
EAN-Code 4010940002831

PRODUCT VARIANTS

	RecUno rf	RecFM/1 rf
Item no.	04.52.0001.1	04.52.0012.1
EAN-Code	4010940031220	4010940040680
Electrical connection		
Device	Screw terminal with wire protection max. 1.5 mm²	Flat DIN 6,3
General data		
Weight	113 g	67 g
Mounting	Surface mounting (4-hole mounting on flush-mounted box)	Built-in (Boiler)

Valves, wiring centres, water compliance solutions: The perfect accessories for heating and plumbing systems

APPROVED QUALITY, USER-FRIENDLY PRODUCTS

The Grässlin range of accessories for heating and plumbing facilities offers everything that heating systems specialists and users need to operate heating and hot water systems safely and reliably. Whether motorised zone valves, wiring centres or solutions for water treatment: All Grässlin products impress with their proven quality, user-friendliness and long service life.

But our accessory range also impresses in terms of flexibility: You can, for example, obtain Grässlin zone valves either as a complete package or, if you prefer, only the valve motor. Our wiring centre WC16 features pre-assigned joint terminals, enabling professional, safe and convenient installation and troubleshooting. And the compliance pack for water treatment contains everything you need for the cleaning and long-term protection of central heating systems.

Whether during installation or service tasks: The accessories range is perfect for installation professionals who want to work quickly and efficiently on location and offer their customers a reliable solution with a long service life.

The Grässlin accessories for the temperature control area impress with well-thought-out details that make the work of the specialist for heating systems noticeably easier.

Accessories

Motorized zone valves

Wiring centres

Water treatment

Motorized zone valves

2PV2 / 2PV8

3PV2 / 3PV8

PRODUCT DESCRIPTION

2PV2 and 2PV8 are two-way valves with spring-loaded return and motorised actuator. They are attached via the inlet and outlet sides according to the direction of flow indicator and can be set to manual or automatic by means of the adjusting lever.
To allow the heating pipeline system to be filled, drained or bled manually, the adjusting lever is pushed down with slight pressure into the locked position. Automatic adjustment is enabled by a control signal that is sent along the wire. For this purpose, the adjusting lever is released from the locked position once the heating pipeline system has been filled and bled.

3PV2 and 3PV8 are three-way valve with spring-loaded return to the middle position and actuator. They are attached via the inlet side and the 2 outlets according to the direction of flow indicator and can be set to manual or automatic by means of the adjusting lever. The inlet side provides the supply of fresh water and the 2 outlets provide the inflows for central heating (A) and for water heating (B).

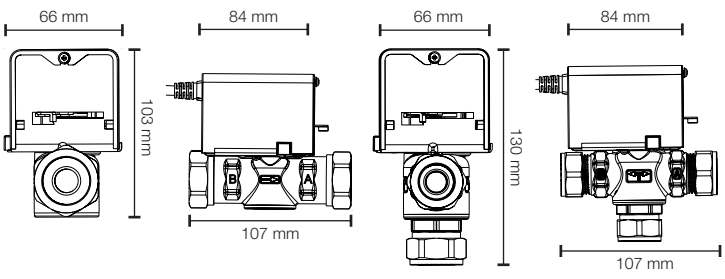
- Quick and simplified installation due to a 1.2 mtrs length cable with wires with standard colour coding, a potential-free auxiliary switch and a manual lever for filling and draining the pipe system
- Flexible installation through compact construction for use in cramped ambient conditions
- Easy to replace in the event of a fault without draining the pipe system due to a valve motor that can be removed at the push of a button

CE

AREAS OF APPLICATION

- Controlling and shutting OFF hot water through a heating system (2PV2 / 2PV8)
- Controlling the flow of fresh water through a heating system for central heating or hot water (3PV2 / 3PV8)

DIMENSIONAL DRAWINGS



2PV2 / 2PV8 3PV2 / 3PV8

TECHNICAL DATA

Electrical data	
Supply voltage	AC 230 V ± 10% 50-60 Hz
Switching capacity – resistive load	3 A / 230 V AC
Switching capacity – inductive load cos. phi 0.6	1 A / 250 V AC
Power consumption	5 VA
Control type	Two-point (ON/OFF)
Electrical connection	
Device	Cable length 1.2 m (heat-resistant and flexible)
Operating data	
Manual switch	ON/OFF/AUTO
Display and format	
Shortest switching time	Opening 12 seconds, closing 5 seconds
Ambient conditions	
Humidity (operating)	10% to 90% relative humidity, condensation-free
Temperature (operating)	±0 °C to +50 °C
General data	
Drive type	Synchronous
Material	Brass
Installation	Heating pipeline system
Medium	Hot water, cold water
Temperature of medium (in operation)	+5 °C to +100 °C
Compliance with standards	
Protection type	IP20
Protection class	I, when installed accordingly
Approvals	CE

REPLACEMENT PART / ACCESSORY

▶ **Replacement Head VRMH2**
item no. 17.32.0001.1
EAN Code 4010940045234

▶ **Replacement Head VRMH3**
item no. 17.32.0002.1
EAN Code 4010940045425

PRODUCT VARIANTS

	2PV2	2PV8	3PV2	3PV8
Item no.	17.30.0001.1	17.30.0002.1	17.31.0001.1	17.31.0002.1
EAN code	4010940045197	4010940045203	4010940045210	4010940045227
General data				
Weight	900 g	1100 g	1100 g	1200 g
Connection diameter	22 mm	28 mm	22 mm	28 mm
Flow factor	3.5 m³/h	4.6 m³/h	3.5 m³/h	4.6 m³/h
Maximum differential pressure	0.7 bar	0.45 bar	0.7 bar	0.45 bar
Maximum static pressure	8.6 bar	8 bar	8.6 bar	8 bar
Maximum operating pressure	0.7 bar	0.45 bar	0.7 bar	0.45 bar

Wiring centres

Junction Box JB12

Wiring Centre WC16

PRODUCT DESCRIPTION

The wiring centres JB12 and WC16 are used to simplify the wiring of electrical installations or central heating systems, for example. Pre-assigned joint terminals allows better testing of the control paths and wiring and allows faults to be detected and rectified more quickly.
Junction box JB12 features 12 large terminals, 15 possible cable inlets, a large voltage warning sign and strain relief clamps and thereby guarantees professional, safe and conform installation and troubleshooting.
Wiring centre WC16 features 16 large terminals, 5 possible cable inlets and a large voltage warning sign. The WC16 was specially designed for use with a 2- or 3-way central heating system. For a better overview of the incoming and outgoing cables, the contents include cable indentification labels that can be attached to the cables of various control components for clear identification.

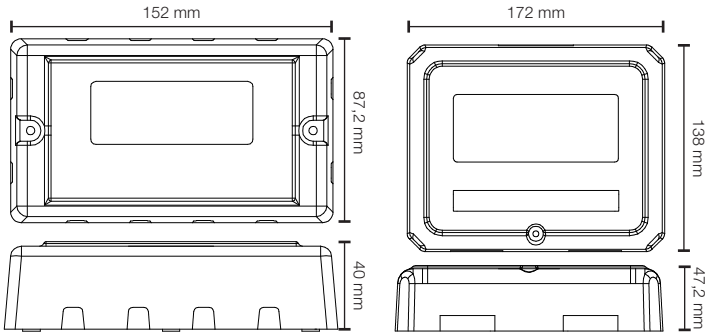
- A professional and safe design is indicated by a voltage warning sign and cable identification labels for S plan and Y plan wiring diagrams
- Pre-assigned joint terminals allow for quick installation
- Shortened switching test and troubleshooting through professional wiring of the electrical installation
- On-wall mounting for easy and quick installation

CE

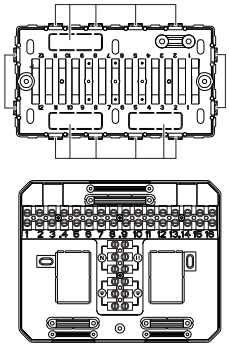
APPLICATION AREAS

- Electrical installations
- Central heating systems
- S and Y Plan

DIMENSIONAL DRAWINGS



CIRCUIT DIAGRAMS



JB12

WC16

TECHNICAL DATA

Electrical data	
Equipment operating voltage	AC 230 V ± 10% 50 Hz
Terminal current	10 A
Electrical connection	
Device	Screw terminal with wire protection max. 1.5 mm^2
Ambient conditions	
Humidity (operating)	10% to 90% relative humidity, condensation-free
Temperature (operating)	-15 °C to +55 °C
General data	
Colour	White
Material	ABS plastic
Installation	On-wall
Compliance with standards	
Protection type	IP20
Protection class	II, when installed accordingly
Approvals	CE
Standards and directives	BS6220

SCOPE OF DELIVERY

- **Cable identification labels**
- **Joint terminals (WC16, pre-assigned)**

PRODUCT VARIANTS

	Junction Box JB12	**Wiring Centre WC16**
Item no.	09.30.0001.1	09.30.0002.1
EAN code	4010940045289	4010940045296
Electrical connection		
Cable inlet	4 x top, 4 x bottom, 3 x back, 2 x left, 2 x right	1 x top, 2 x bottom, 2 x back
Communication type		
Wired	12-way	16-way
General data		
Weight	224 g	276 g

Water treatment compliance pack – ComPack

ITEM NO. 09.21.0001.1 / EAN-CODE 4010940045432

PRODUCT DESCRIPTION

The compliance pack for water treatment from Grässlin is used to clean central heating systems and protects heaters and heat distributors in heating systems reliably from sediments, encrustations, scale formation and corrosion. The ComPack meets the requirements of the Domestic Building Services Compliance Guide. The contents of the ComPack include:

MAGNETIC FILTER MF2

The magnetic filter integrated in the pipe system completely removes iron oxide sludge and thereby not only extends the operating service life of the central heating system but also reduces maintenance costs and heating costs by up to 6% per year. It also reduces CO2 emissions.

- Removes water impurities in the system
- Quick and easy to install
- Immediate system protection
- Reduces maintenance and servicing costs
- Extends the system's service life
- No running operating costs
- Compact design for installation in narrow spaces

AREAS OF APPLICATION

- Central heating systems
- Open vented systems
- Sealed systems

INHIBITOR INH 0.5L

The phosphate-free Grässlin Inhibitor is suitable for all water hardness levels and prevents both corrosion and lime scale deposits in the system and is suitable for sealed or open central heating systems. In addition, it prevents the development of magnetite and reduces the frequency of component failures in pumps and heat exchangers, thereby making an essential contribution towards maintaining system efficiency and reducing heating costs.

- Reduces the occurrence of component failures (pumps and heat exchangers) and the resulting repair costs
- Maintains comfortable room temperatures and prevents cold spots on radiators
- For all water hardness levels
- Suitable for all metals and other materials that are usually used in heating installations

AREAS OF APPLICATION

- Central heating systems
- For open vented systems fill via header tank
- For sealed systems fill via a radiator
- For use in indirect systems only
- For use in accordance with BS7593:2006
- Classified as non-hazardous while delivering effective protection against corrosion and limescale - non-toxic and biodegradable

CLEANER CLE 0.5L

This highly effective and 100% biodegradable universal cleaner quickly removes corrosion and rust sludge deposits and is suitable for both sealed and open central heating systems. The concentrate is highly economical for the treatment of 100 litres of water and restores the efficiency of existing systems even during normal heating operation.

- Removes rust sludge and deposits and restores the efficiency of existing systems
- Restores the efficiency of existing systems even during normal heating operation
- Suitable for all heating systems and water types
- Suitable for all metals and other materials that are usually used in heating installations

ELECTROLYTIC INHIBITOR ESI15 15MM

This eco-friendly and maintenance-free water conditioner changes the crystal structure of the lime scale and thereby prevents lime scale from settling on pipes or other surfaces for up to 10 years. The ESI15 does not require a power supply.

WRAS

AREAS OF APPLICATION

- Comprehensive house protection
- Protects against lime scale deposits in individual devices

TECHNICAL DATA – MAGNETIC FILTER MF2

General data	
Weight	600 g
Material	Glass fibre reinforced nylon
Connection diameter	22 mm
Maximum static pressure	10 bar
Magnet	4 element neodymium magnet arrangement, hermetically sealed in stainless steel 304 11000 Gauss
Valve body	Inlet and outlet, 360 ° swivelling valves
Drain valve	1/2" BSP drain valve with key
Container capacity	500 ml
Dirt trap	304 Stainless steel dirt trap for non-magnetic particles

Ambient conditions	
Temperature (operating)	±0 °C to +82 °C

TECHNICAL DATA – INHIBITOR INH & CLEANER CLE

	Inhibitor IHN	Cleaner CLE
Ambient conditions		
Packing, transport and storage	Safe, but should be kept inaccessible to children like all household chemicals. Avoid eye or skin contact. Store at temperatures above 0 °C Store in a cool and well-ventilated place. Keep container sealed Store only in its original packaging	
Physical and chemical properties		
Type	Inhibitor	Cleaner
Use	Water treatment for the heating system	System cleaner for heating systems
Colour	Straw	Brown
pH (concentrated solution)	8	4
Relative density	1.13	1.01 – 1.04
Appearance	Liquid	
Odour	Mild aromatic	
Solubility (water)	Soluble in cold and hot water	
Yield	100 litres of water, 10 radiators	
Content	500 ml	
Compliance with standards		
Approvals	BuildCert CIAS	
Standards and directives	BS7593:2006	

TECHNICAL DATA – ELECTROLYTIC INHIBITOR ESI15 15MM

General data	
Weight	510 g
Material	Copper body with zinc anode inside
Dimension	190 mm x Ø 35 mm
Connection diameter	15 mm
Maximum static pressure	10 bar

Compliance with standards	
Standards and directives	WRAS

SCOPE OF DELIVERY

- **Inhibitor test strip according to benchmark**
  for quick determination of water hardness (ESI15)

- **Gas boiler system commissioning checklist**
  according to the benchmark

- **Spanner for magnetic filter MF2**

GRÄSSLIN Services

Technology in plain text

You can obtain additional information about our products in the area of “Technology in plain text” at:
http://qrc.graesslin.de/glossary

Tender specifications

You can find our current tender specifications as a free download here.
You can thus quickly and easily use the texts in your contract specifications:
http://qrc.graesslin.de/tendertexts

Discontinued and replacement types

You can find an overview of our discontinued and replacement types here:
http://qrc.graesslin.de/replacements

Legal notice

Publisher

Grässlin GmbH
Bundesstraße 36
78112 St. Georgen
Germany

Phone:	+49 (0) 7724 / 933-0
Technical Support UK:	0808 164 0317
Fax:	+49 (0) 7724 / 933-240
Email:	info@graesslin.de

Visit us online:
www.graesslin.de
www.graesslin.co.uk

Printing
C. Maurer GmbH & Co. KG

Edition

Grässlin GmbH
Bundesstraße 36
78112 St. Georgen
Germany

+49 (0) 7724 / 933-0
+49 (0) 7724 / 933-240

www.graesslin.de
www.graesslin.co.uk
info@graesslin.de

82.01.1404.7/1706/V02