

Room temperature sensors and measuring transducers,
on-wall, general

TECHNICAL DATA

Measuring ranges:	-30...+70 °C (passive sensors) and 0...+50 °C (for U-variant)
Sensor:	for types, see table
Potentiometer:	standard 1kΩ, max. 0.1 W other ratings optional on request, e. g. 100 Ω, 2.5 kΩ, 5 kΩ, 10 kΩ, (optional potentiometer 0...10 V, linear), with angle of rotation limiter
Turn switch:	max. 24 V AC / DC, max. 130 mA, up to 5 steps (0, Auto, I, II, III), with angle of rotation limiter
Rocker switch:	max. 24 V AC / DC, max. 130 mA
Push-buttons:	normally open contact, max. 24 V DC, max. 10 mA
LEDs:	max. 24 V DC (optional max. 24 V AC), standard green (optional red, yellow, or two-colour)
Enclosure:	plastic, ABS, pure white (similar to RAL 9010), (optional stainless steel)
Dimensions:	85 x 85 x 27 mm (Baldur 1) Standard 98 x 98 x 33 mm (Baldur 2) 75 x 75 x 25 mm (stainless steel)
Installation:	wall mounting or on in-wall flush box Ø55 mm, base with 4-hole for mounting on vertically or horizontally installed in-wall flush boxes for cable entry from the back, with predetermined breaking point for on-wall cable entry from top / bottom in case of plain on-wall installation
Electrical connection:	0.14 - 1.5 mm ² via terminal screws, on safety extra-low voltage max. 24 V DC only
Humidity:	max. 90% r. H., non-precipitating air
Protection class:	III (according to EN 60 730)
Protection type:	IP 30 (according to EN 60 529)
Lettering:	standard is swelling arrow with centre position, unfilled (optional special printing – see last chapter "Accessories")
ACCESSORIES	see last chapter

RTF
(Baldur 1)

without operating elements



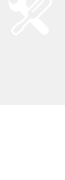
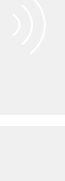
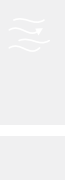
RTF
(Baldur 2)

with potentiometer
and turn switch



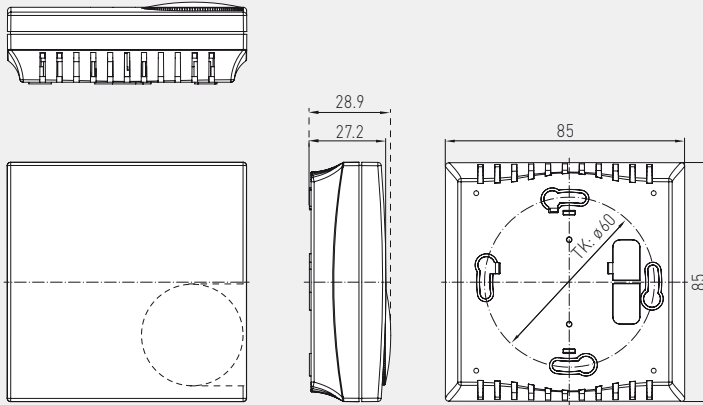
Potentiometer and
turn switch with
limited angle of rotation





Dimensional drawing

Enclosure **Baldur 1**
(only one potentiometer possible)

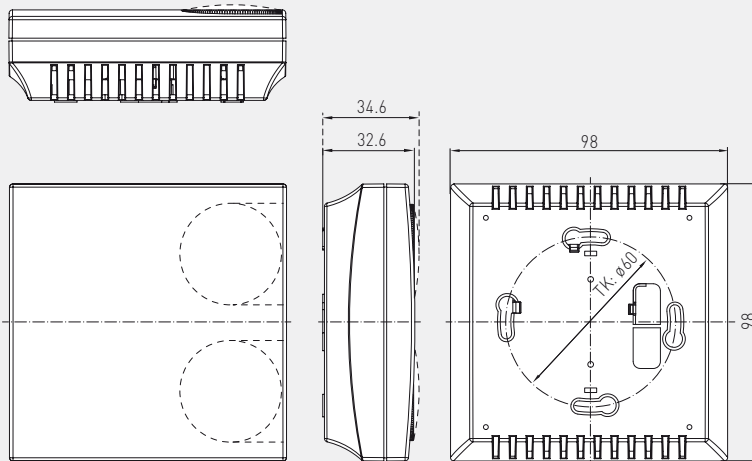


RTF
(Baldur 1)
with potentiometer



Dimensional drawing

Enclosure **Baldur 2**
(one or two potentiometers possible)

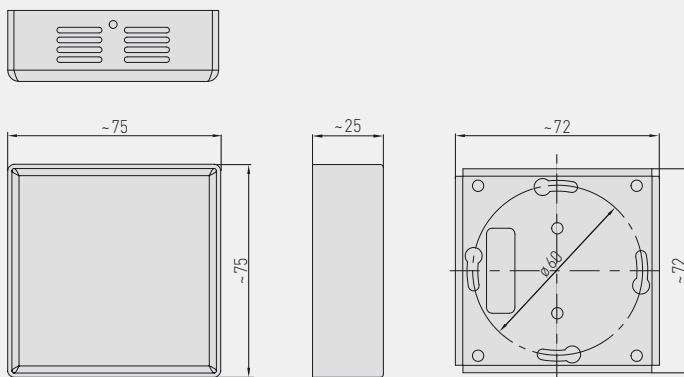


RTF
(Baldur 2)
with potentiometer



Dimensional drawing

Enclosure stainless steel



RTF
(stainless steel)



Room temperature sensors and measuring transducers, on-wall, different versions

Room temperature sensor **THERMASGARD® RTF 1** with passive output, in an elegant enclosure made of plastic, with snap-on lid, base with 4-hole attachment for installation on vertically or horizontally installed in-wall flush boxes, with predetermined breaking point for on-wall cable entry, or in enclosures made of stainless steel (top and bottom part are of stainless steel, the lid is screwed on), vandal-proof version e.g. for schools, military barracks, and public buildings. This residential room temperature sensor is used to detect / display temperatures in closed dry rooms, in apartments, in cinemas, supermarkets, storage rooms, office and business facilities.



RTF 1
(Baldur 1)

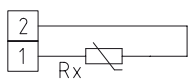


RTF 1
(stainless steel)

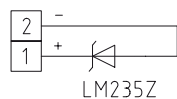
TECHNICAL DATA

Measuring range:	-30...+70 °C
Sensor / output:	see table, passive
Connection type:	2-wire connection (4-wire connection on PT100/PT1000A, optional on other sensors)
Testing current:	approx. 1 mA
Process connection:	by screws
Enclosure:	plastic, material ABS, colour pure white (similar to RAL 9010), optional stainless steel
Dimensions:	85 x 85 x 27 mm (Baldur 1) Standard 98 x 98 x 33 mm (Baldur 2) 75 x 75 x 25 mm (optional stainless steel)
Installation:	wall mounting or on in-wall flush box Ø55 mm, base with 4-hole for mounting on vertically or horizontally installed in-wall flush boxes for cable entry from the back, with predetermined breaking point for on-wall cable entry from top/bottom in case of plain on-wall installation
Electrical connection:	0.14 - 1.5 mm ² via terminal screws, secured against loss due to unscrewing, on safety extra-low voltage max. 24V DC only
Humidity:	max. 90% r. H., non-precipitating air
Protection class:	III (according to EN 60 730)
Protection type:	IP 30 (according to EN 60 529)
ACCESSORIES	see last chapter

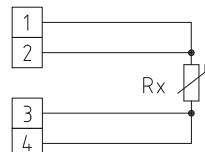
1x two-wire connection standard



1x two-wire connection LM235Z (KP10)



1x four-wire connection (optional)

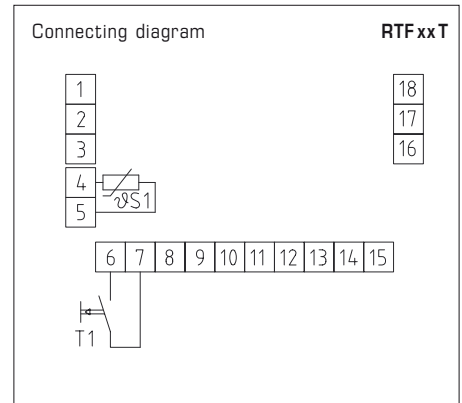


THERMASGARD® RTF 1 – Room temperature sensors (Standard)

Type / WG03	Sensor / Output	Item No.	Price
RTF1 xx	passive	IP 30 (-30...+70 °C)	
RTF1 PT100	Pt100 (according to DIN EN 60 751, class B)	1101-40A0-1003-000	16,21 €
RTF1 PT1000	Pt1000 (according to DIN EN 60 751, class B)	1101-40A0-5000-000	17,89 €
RTF1 PT1000A	Pt1000 (according to VDI/VDE 3512, class A-TGA)	1101-40A0-6003-000	22,87 €
RTF1 Ni1000	Ni1000 (according to DIN EN 43 760, class B, TCR = 6180 ppm/K)	1101-40A0-9000-000	18,10 €
RTF1 NITK	Ni1000 TK5000 (TCR = 5000 ppm/K), LG-Ni1000	1101-40A1-0000-000	21,16 €
RTF1 LM235Z	LM235Z (TCR = 10 mV/K; 2.73 V at 0 °C), KP10	1101-40A2-1000-000	16,75 €
RTF1 NTC1,8K	NTC 1.8K	1101-40A1-2000-000	16,21 €
RTF1 NTC10K	NTC 10K	1101-40A1-5000-000	16,21 €
RTF1 PRECON	NTC 10K Precon	1101-40A1-9000-000	16,21 €
RTF1 NTC20K	NTC 20K	1101-40A1-6000-000	16,21 €
RTF1 KTY81-210	KTY 81-210	1101-40A2-0000-000	16,21 €
Extra charge:	Stainless steel enclosure optional Other sensors optional		86,24 € on request



RTF xx T
(Baldur 1)
Version with sensor and push-button (max. 24V DC, max. 10mA)

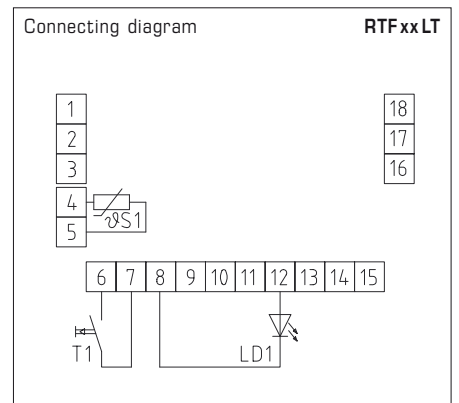


THERMASGARD® RTF xx T – Room temperature sensors

Type / WG01	Sensor / Output	Item No.	Price
RTF xx T	passive	IP30 (-30...+70 °C)	
RTF PT100 T	Pt100 (according to DIN EN 60751, class B)	1101-40A0-1617-000	37,58 €
RTF PT1000 T	Pt1000 (according to DIN EN 60751, class B)	1101-40A0-5617-000	37,58 €
RTF Ni1000 T	Ni1000 (according to DIN EN 43760, class B, TCR = 6180 ppm/K)	1101-40A0-9617-000	39,08 €
RTF NiTK T	Ni1000 TK5000 (TCR = 5000 ppm/K), LG-Ni1000	1101-40A1-0617-000	40,06 €
RTF LM235Z T	LM235Z (TCR = 10 mV/K; 2.73V at 0 °C), KP10	1101-40A2-1617-000	39,63 €
RTF NTC1,8K T	NTC 1.8K	1101-40A1-2617-000	39,84 €
RTF NTC10K T	NTC 10K	1101-40A1-5617-000	37,04 €
RTF PRECON T	NTC 10K Precon	1101-40A1-9617-000	37,04 €
RTF NTC20K T	NTC 20K	1101-40A1-6617-000	37,04 €
RTF KTY81-210 T	KTY 81-210	1101-40A2-0617-000	37,04 €



RTF xx LT
(Baldur 1)
Version with sensor, LED (green) and push-button (max. 24V DC, max. 10mA)



THERMASGARD® RTF xx LT – Room temperature sensors

Type / WG01	Sensor / Output	Item No.	Price
RTF xx LT	passive	IP30 (-30...+70 °C)	
RTF PT100 L T	Pt100 (according to DIN EN 60751, class B)	1101-40A0-1593-002	39,73 €
RTF PT1000 L T	Pt1000 (according to DIN EN 60751, class B)	1101-40A0-5593-002	41,18 €
RTF Ni1000 L T	Ni1000 (according to DIN EN 43760, class B, TCR = 6180 ppm/K)	1101-40A0-9593-002	41,45 €
RTF NiTK L T	Ni1000 TK5000 (TCR = 5000 ppm/K), LG-Ni1000	1101-40A1-0593-002	44,51 €
RTF LM235Z L T	LM235Z (TCR = 10 mV/K; 2.73V at 0 °C), KP10	1101-40A2-1593-002	40,65 €
RTF NTC1,8K L T	NTC 1.8K	1101-40A1-2593-002	44,24 €
RTF NTC10K L T	NTC 10K	1101-40A1-5593-002	40,11 €
RTF PRECON L T	NTC 10K Precon	1101-40A1-9593-002	40,11 €
RTF NTC20K L T	NTC 20K	1101-40A1-6593-002	40,11 €
RTF KTY81-210 L T	KTY 81-210	1101-40A2-0593-002	40,11 €

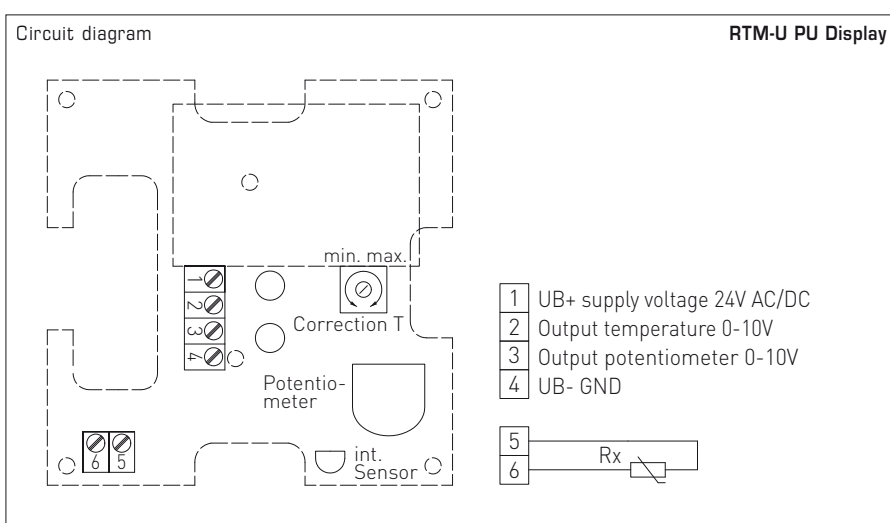
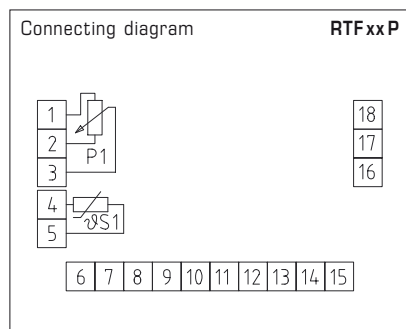
Room temperature sensors and measuring transducers, on-wall, different versions



RTF xx P
RTF xx PU
RTM-U PU

(Baldur 1)

Version with sensor and potentiometer (1 kOhm, max. 0.1 W)



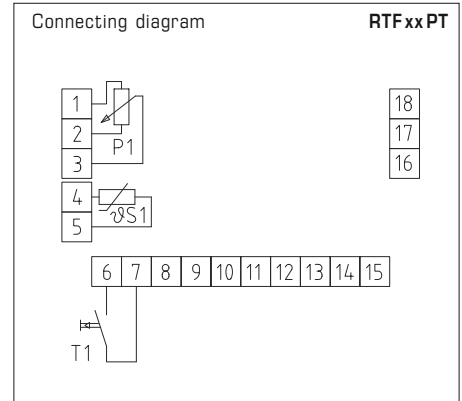
THERMASGARD® RTF xx P – Room temperature sensors

Type / WG01	Sensor / Output	Display	Item No.	Price
RTF xx P	passive		IP30 (-30...+70 °C)	
RTF PT100 P	Pt100 (according to DIN EN 60 751, class B)		1101-40A0-1001-345	39,73 €
RTF PT1000 P	Pt1000 (according to DIN EN 60 751, class B)		1101-40A0-5001-345	40,80 €
RTF Ni1000 P	Ni1000 (according to DIN EN 43 760, class B, TCR = 6180 ppm / K)		1101-40A0-9001-345	41,88 €
RTF NiTK P	Ni1000 TK5000 (TCR = 5000 ppm / K), LG- Ni1000		1101-40A1-0001-345	42,43 €
RTF LM235Z P	LM235Z (TCR = 10 mV / K; 2.73 V at 0 °C), KP10		1101-40A2-1001-345	40,80 €
RTF NTC1,8K P	NTC 1.8 K		1101-40A1-2001-345	40,91 €
RTF NTC10K P	NTC 10K		1101-40A1-5001-345	39,73 €
RTF PRECON P	NTC 10K Precon		1101-40A1-9001-345	39,73 €
RTF NTC20K P	NTC 20K		1101-40A1-6001-345	39,73 €
RTF KTY81-210 P	KTY 81-210		1101-40A2-0001-345	39,73 €
RTF xx PU	passive / active		IP30 (0...+50 °C)	
RTF PT1000 PU	Pt1000 / 0 - 10V (potentiometer)*		1101-40A0-5004-345	94,49 €
RTF PT1000 PU	Pt1000 / 0 - 10V (potentiometer, central position)*		1101-40A0-5004-642	94,49 €
RTF PT1000 PU	Pt1000 / 0 - 10V (potentiometer, marking points)*		1101-40A0-5004-050	94,49 €
RTM PU	aktive		IP30 (0...+50 °C)	
RTM-U PU	0 - 10V (temperature and potentiometer)*		1101-41A1-0004-346	123,80 €
RTM-U PU DISPLAY	0 - 10V (temperature and potentiometer)*	■	1101-41A1-1004-346	209,71 €
For special orders please specify:	Ohm rating of potentiometer (standard is 1kOhm; optional 100 Ohm, 2.5 kOhm, 5 kOhm, 10 kOhm, 0-10 V), type of swelling arrow* (standard = wedge-shaped, optional with central position or marking points) and differing specific wiring requests			



RTF xxPT
(Baldur 1)

Version with sensor,
potentiometer (1 kOhm, max. 0.1 W) and
push-button (max. 24 V DC, max. 10 mA)



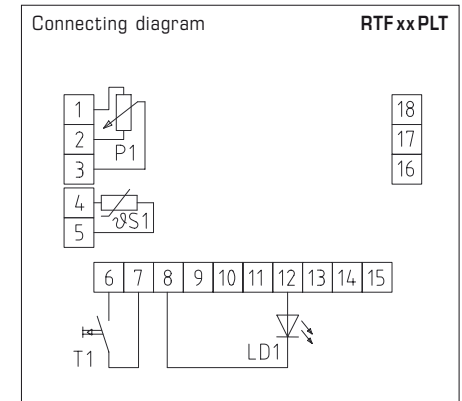
THERMASGARD® RTF xxPT – Room temperature sensors

Type / WG01	Sensor / Output	Item No.	Price
RTF xx PT	passive	IP30 (-30...+70 °C)	
RTF PT100 P T	Pt100 (according to DIN EN 60751, class B)	1101-40A0-1021-345	43,93 €
RTF PT1000 P T	Pt1000 (according to DIN EN 60751, class B)	1101-40A0-5021-345	45,58 €
RTF Ni1000 P T	Ni1000 (according to DIN EN 43760, class B, TCR = 6180 ppm/K)	1101-40A0-9021-345	45,85 €
RTF NiTK P T	Ni1000 TK5000 (TCR = 5000 ppm/K), LG-Ni1000	1101-40A1-0021-345	47,79 €
RTF LM235Z P T	LM235Z (TCR = 10 mV/K; 2.73 V at 0 °C), KP10	1101-40A2-1021-345	47,25 €
RTF NTC1,8K P T	NTC 1.8K	1101-40A1-2021-345	47,35 €
RTF NTC10K P T	NTC 10K	1101-40A1-5021-345	46,12 €
RTF PRECON P T	NTC 10K Precon	1101-40A1-9021-345	46,12 €
RTF NTC20K P T	NTC 20K	1101-40A1-6021-345	46,12 €
RTF KTY81-210 P T	KTY 81-210	1101-40A2-0021-345	46,12 €
RTF xx PUT	passive / active	IP30 (0...+50 °C)	
RTF PT1000 PU T	Pt1000 / 0 - 10 V (potentiometer)	1101-40B0-5033-345	101,04 €



RTF xxPLT
(Baldur 1)

Version with sensor,
potentiometer (1 kOhm, max. 0.1 W),
LED (green) and
push-button (max. 24 V DC, max. 10 mA)



THERMASGARD® RTF xxPLT – Room temperature sensors

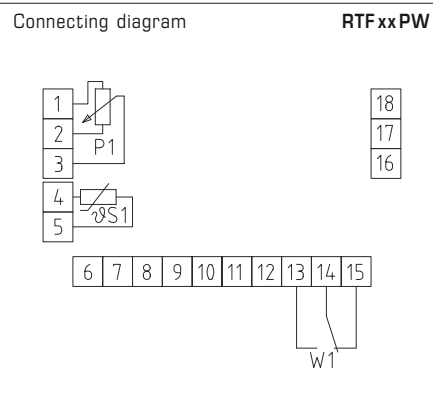
Type / WG01	Sensor / Output	Item No.	Price
RTF xx PLT	passive	IP30 (-30...+70 °C)	
RTF PT100 P L T	Pt100 (according to DIN EN 60751, class B)	1101-40A0-1663-347	55,99 €
RTF PT1000 P L T	Pt1000 (according to DIN EN 60751, class B)	1101-40A0-5663-347	58,79 €
RTF Ni1000 P L T	Ni1000 (according to DIN EN 43760, class B, TCR = 6180 ppm/K)	1101-40A0-9663-347	59,06 €
RTF NiTK P L T	Ni1000 TK5000 (TCR = 5000 ppm/K), LG-Ni1000	1101-40A1-0663-347	61,63 €
RTF LM235Z P L T	LM235Z (TCR = 10 mV/K; 2.73 V at 0 °C), KP10	1101-40A2-1663-347	57,67 €
RTF NTC1,8K P L T	NTC 1.8K	1101-40A1-2663-347	61,20 €
RTF NTC10K P L T	NTC 10K	1101-40A1-5663-347	55,99 €
RTF PRECON P L T	NTC 10K Precon	1101-40A1-9663-347	55,99 €
RTF NTC20K P L T	NTC 20K	1101-40A1-6663-347	55,99 €
RTF KTY81-210 P L T	KTY 81-210	1101-40A2-0663-347	55,99 €
RTF xx PULT	passive / active	IP30 (-30...+70 °C)	
RTF PT1000 PU L T	Pt1000 / 0 - 10 V (potentiometer)	1101-40B0-5669-347	115,97 €

Room temperature sensors and measuring transducers,
on-wall, different versions



RTF xxPW
(Baldur 1)

Version with sensor,
potentiometer (1 kOhm, max. 0.1 W) and
rocker switch (max. 24 V AC/DC, max. 130 mA)



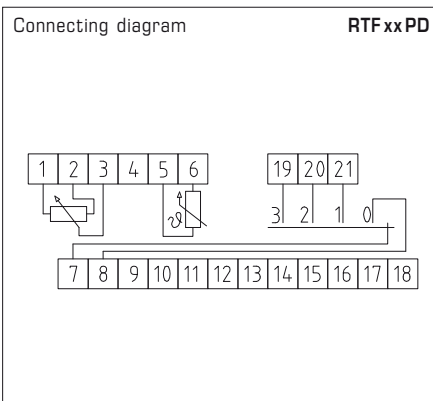
THERMASGARD® RTF xxPW – Room temperature sensors

Type / WG01	Sensor / Output	Item No.	Price
RTF xx PW	passive	IP 30 (-30...+70 °C)	
RTF PT100 P W	Pt100 (according to DIN EN 60 751, class B)	1101-40A0-1061-348	44,57 €
RTF PT1000 P W	Pt1000 (according to DIN EN 60 751, class B)	1101-40A0-5061-348	46,17 €
RTF Ni1000 P W	Ni1000 (according to DIN EN 43 760, class B, TCR = 6180 ppm / K)	1101-40A0-9061-348	46,60 €
RTF NITK P W	Ni1000 TK5000 (TCR = 5000 ppm / K), LG-Ni1000	1101-40A1-0061-348	48,32 €
RTF LM235Z P W	LM235Z (TCR = 10 mV / K; 2.73 V at 0 °C), KP10	1101-40A2-1061-348	47,79 €
RTF NTC1,8K P W	NTC 1.8K	1101-40A1-2061-348	48,22 €
RTF NTC10K P W	NTC 10K	1101-40A1-5061-348	46,72 €
RTF PRECON P W	NTC 10K Precon	1101-40A1-9061-348	46,72 €
RTF NTC20K P W	NTC 20K	1101-40A1-6061-348	46,72 €
RTF KTY81-210 P W	KTY 81-210	1101-40A2-0061-348	46,72 €
RTF xx PUW	passive / active	IP 30 (0...+50 °C)	
RTF PT1000 PU W2	Pt1000 / 0-10 V (potentiometer)	1101-40B0-5067-348	101,58 €



RTF xxPD
(Baldur 2)

Version with sensor,
potentiometer (1 kOhm, max. 0.1 W) and
and turn switch (max. 24 V AC/DC, max. 130 mA)



THERMASGARD® RTF xxPD – Room temperature sensors

Type / WG01	Sensor / Output	Item No.	Price
RTF xx PD	passive	IP 30 (-30...+70 °C)	
RTF PT100 P D4	Pt100 (according to DIN EN 60 751, class B)	1101-40B0-1007-349	45,00 €
RTF PT1000 P D4	Pt1000 (according to DIN EN 60 751, class B)	1101-40B0-5007-349	46,65 €
RTF Ni1000 P D4	Ni1000 (according to DIN EN 43 760, class B, TCR = 6180 ppm / K)	1101-40B0-9007-349	46,92 €
RTF NITK P D4	Ni1000 TK5000 (TCR = 5000 ppm / K), LG-Ni1000	1101-40B1-0007-349	48,86 €
RTF LM235Z P D4	LM235Z (TCR = 10 mV / K; 2.73 V at 0 °C), KP10	1101-40B2-1007-349	48,32 €
RTF NTC1,8K P D4	NTC 1.8K	1101-40B1-2007-349	48,42 €
RTF NTC10K P D4	NTC 10K	1101-40B1-5007-349	47,20 €
RTF PRECON P D4	NTC 10K Precon	1101-40B1-9007-349	47,20 €
RTF NTC20K P D4	NTC 20K	1101-40B1-6007-349	47,20 €
RTF KTY81-210 P D4	KTY 81-210	1101-40B2-0007-349	47,20 €
RTF xx PUD	passive / active	IP 30 (0...+50 °C)	
RTF PT1000 PU D4	Pt1000 / 0-10 V (potentiometer)	1101-40B0-5019-349	102,00 €



Operating elements Baldur 1	Possible combinations	1	2	3	4	5	6
Sensor 1		●	●	●	●	●	●
Sensor 2		●		●			
Sensor 3 LM235Z with calibrating pot (4-wire)		●			●	●	
Potentiometer 1 with / without series resistor		●	●	●	●		
Potentiometer 2 with calibrating pot						●	●
LED 1 (max. one LED)							
LED 2 (max. two LEDs)							
LED 3 (max. three LEDs)							
LED 4 (max. four LEDs)		●	●	●	●	●	●
Rocker switch			●	●			●
Push-button 1 (max. one button)		●		●		●	●
Push-button 2 (max. two buttons)			●	●			

Please specify in your order:

Ohm rating of potentiometer
(e. g. 100 Ohm, 1 kOhm, 2.5 kOhm, 5 kOhm, 10 kOhm)

Colour of LED
(e. g. green, red, yellow)

Printing, form of swelling arrow
(wedge-shaped or with central position, points or numerical scale)

Requested features regarding operating and / or display elements and wiring

We offer special designs on request in written form including approval drawing.

Special printing:
See last chapter "Accessories"

Sensor 3 to be used with 4-wire connection, thereby max. 3 LEDs possible.
LM235Z with calibrating pot = calibration of sensor output signal.
Satchwell switching possible with sensor 2.
Turn switches are not possible with Baldur 1!

Operating elements Baldur 2	Possible combinations	1	2	3	4	5	6	7	8	9	10
Sensor 1		●	●	●	●	●	●	●	●	●	●
Sensor 2 LM235Z with calibrating pot		●						●			
Sensor 3 with heat sink (4-wire)											
Potentiometer 1 (at bottom) with / without series resistor		●	●		●		●	●	●		●
Potentiometer 2 (at top)			●						●		
Key switch (at bottom)				●						●	
Turn switch 1 (at top) with / without series resistor					●						●
Turn switch 2 (at bottom)						●					
LED 1 (max. one LED)											
LED 2 (max. two LEDs)											
LED 3 (max. three LEDs)			●						●		
LED 4 (max. four LEDs)					●						●
LED 5 (max. five LEDs)		●		●		●		●		●	
LED 6 (max. six LEDs)							●				
Rocker switch		●	●	●	●	●	●				
Push-button 1 (max. one button)											
Push-button 2 (max. two buttons)		●	●	●		●	●				●
Push-button 3 (max. three buttons)											
Push-button 4 (max. four buttons)								●	●	●	

Sensor 3 can also be used instead of sensor 1.
LM235Z with calibrating pot = calibration of sensor output signal.
In the case cascade connections with turn switch 1, LEDs are not possible!
With the Baldur2 enclosure, only one operating element is possible at each of the positions "at bottom" and "at top"!

