

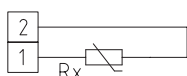
Room temperature sensors and measuring transducers, on-wall

Room temperature sensor **THERMASGARD® RTF 1** with passive output, in an elegant housing 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.

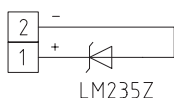
**TECHNICAL DATA**

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:	< 0.6 mA (Pt1000) < 1.0 mA (Pt100) < 0.3 mA (Ni1000, Ni1000 TK5000) < 2.0 mW (NTC xx) 400 µA...5 mA (LM235Z)
Process connection:	by screws
Housing:	plastic, material ABS, colour pure white (similar to RAL 9010), optional stainless steel <b>V2A</b> (1.4301)
Dimensions:	85 x 85 x 27 mm (Baldur 1) Standard 98 x 98 x 33 mm (Baldur 2) optional 75 x 75 x 25 mm (stainless steel <b>V2A</b> (1.4301) optional
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 <sup>2</sup> via terminal screws, secured against loss due to unscrewing, on safety extra-low voltage max. 24 V DC only
Humidity:	max. 90% RH, non-precipitating air
Protection class:	III (according to EN 60 730)
Protection type:	IP 30 (according to EN 60 529)
<b>ACCESSORIES</b>	see last chapter

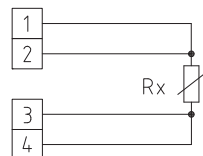
1x two-wire connection standard



1x two-wire connection LM235Z (KP10)



1x four-wire connection (optional)



**THERMASGARD® RTF 1** Room temperature sensors (Standard)

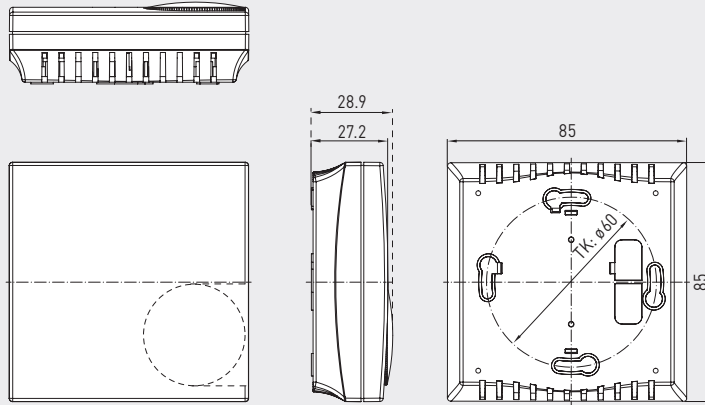
Type / WG03	Sensor / Output	Item No.	Price
<b>RTF1 xx</b>	<b>passive</b>	<b>IP 30 (-30...+70 °C)</b>	
RTF1 Pt100	Pt100 (according to DIN EN 60 751, class B)	1101-40A0-1003-000	<b>23,35 €</b>
RTF1 Pt1000	Pt1000 (according to DIN EN 60 751, class B)	1101-40A0-5000-000	<b>25,97 €</b>
RTF1 Pt1000A	Pt1000 (according to VDI/VDE 3512, class A-TGA)	1101-40A0-6003-000	<b>27,75 €</b>
RTF1 Ni1000	Ni1000 (according to DIN EN 43 760, class B, TCR = 6180 ppm/K)	1101-40A0-9000-000	<b>25,61 €</b>
RTF1 NiTK	Ni1000 TK5000 (TCR = 5000 ppm/K), LG-Ni1000	1101-40A1-0000-000	<b>25,61 €</b>
RTF1 LM235Z	LM235Z (TCR = 10 mV/K; 2.73 V at 0 °C), KP10	1101-40A2-1000-000	<b>23,95 €</b>
RTF1 NTC1,8K	NTC 1.8K	1101-40A1-2000-000	<b>21,82 €</b>
RTF1 NTC10K	NTC 10K	1101-40A1-5000-000	<b>21,82 €</b>
RTF1 NTC20K	NTC 20K	1101-40A1-6000-000	<b>21,82 €</b>
Extra charge:	<b>Stainless steel housing optional</b> Other sensors optional		<b>109,68 €</b> on request



Dimensional drawing

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

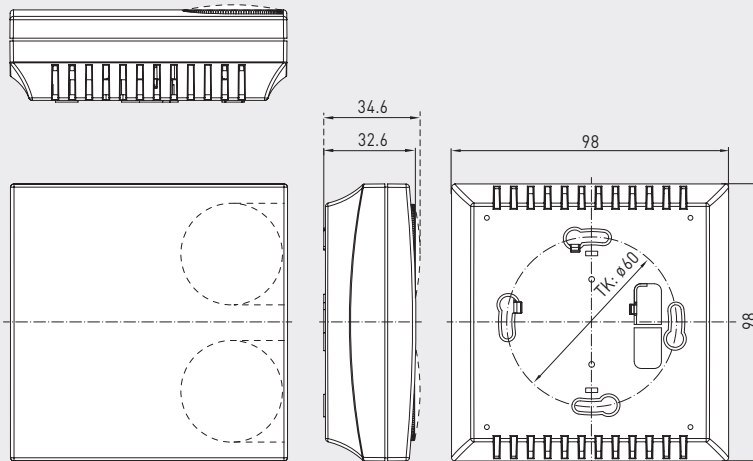
**RTF**  
(Baldur 1)



Dimensional drawing

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

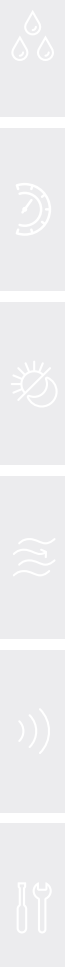
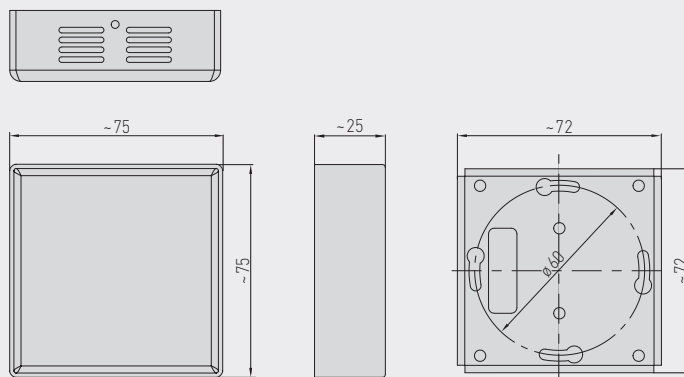
**RTF**  
(Baldur 2)



Dimensional drawing

Housing **stainless steel**

**RTF**  
(stainless steel)



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

**TECHNICAL DATA**

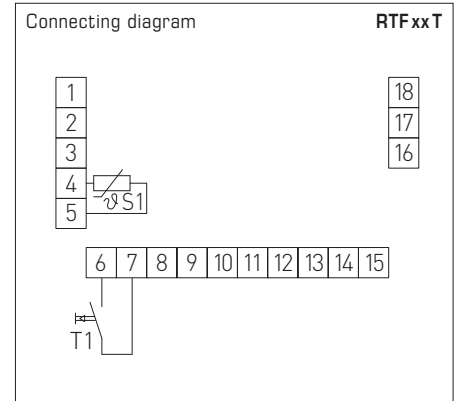
Measuring ranges:	-30...+70 °C (passive sensors) and 0...+50 °C (for U-variant)
Sensor:	for types, see table
Potentiometer:	standard 1kΩ, max. 0.1 W other ratings optional on request, e. g. 100 Ω, 2.5 kΩ, 5 kΩ, 10 kΩ, (optional potentiometer 0...10 V, linear), with angle of rotation limiter
Turn switch:	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)
Housing:	plastic, ABS, pure white (similar to RAL 9010), (optional stainless steel <b>V2A</b> (1.4301))
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 <b>V2A</b> (1.4301))
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 <sup>2</sup> via terminal screws, on safety extra-low voltage max. 24 V DC only
Humidity:	max. 90 % RH, 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")
<b>ACCESSORIES</b>	see last chapter

Potentiometer and  
turn switch with  
**limited angle of rotation**





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

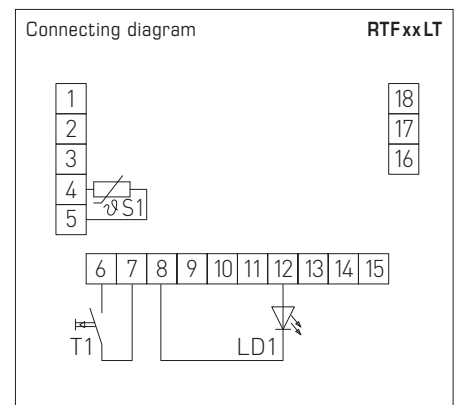


**THERMASGARD® RTF xx T** Room temperature sensors

Type /WG01	Sensor /Output	Item No.	Price
<b>RTF xx T</b>	<b>passive</b>	<b>IP30 (-30...+70 °C)</b>	
RTF Pt100 T	Pt100 (according to DIN EN 60 751, class B)	1101-40A0-1617-000	<b>44,55 €</b>
RTF Pt1000 T	Pt1000 (according to DIN EN 60 751, class B)	1101-40A0-5617-000	<b>44,55 €</b>
RTF Ni1000 T	Ni1000 (according to DIN EN 43 760, class B, TCR = 6180 ppm / K)	1101-40A0-9617-000	<b>46,34 €</b>
RTF NiTK T	Ni1000 TK5000 (TCR = 5000 ppm / K), LG - Ni1000	1101-40A1-0617-000	<b>47,49 €</b>
RTF LM235Z T	LM235Z (TCR = 10 mV / K; 2.73 V at 0 °C), KP10	1101-40A2-1617-000	<b>46,98 €</b>
RTF NTC1,8K T	NTC 1.8K	1101-40A1-2617-000	<b>47,24 €</b>
RTF NTC10K T	NTC 10K	1101-40A1-5617-000	<b>43,92 €</b>
RTF NTC20K T	NTC 20K	1101-40A1-6617-000	<b>43,92 €</b>



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



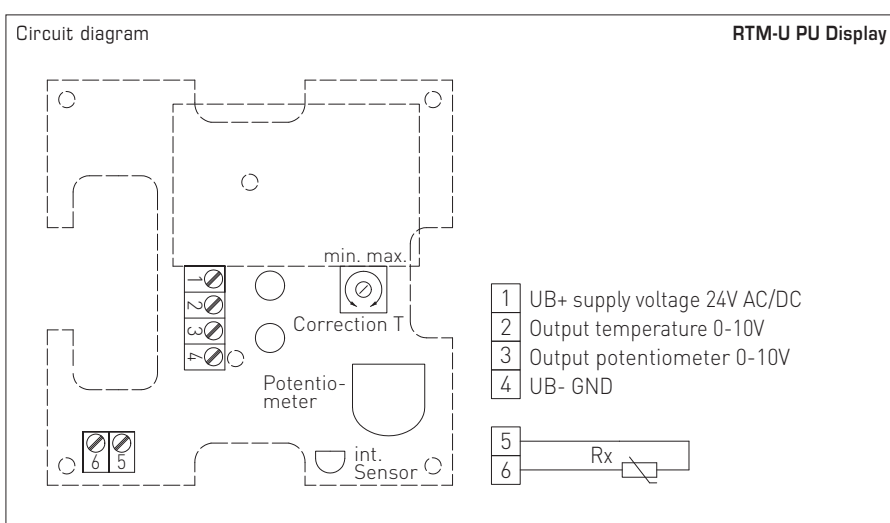
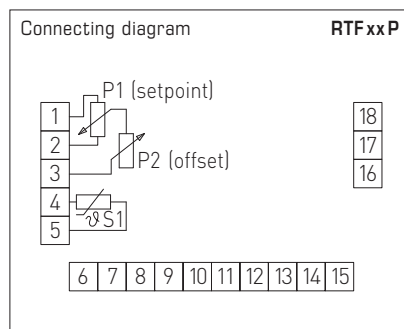
**THERMASGARD® RTF xx LT** Room temperature sensors

Type /WG01	Sensor /Output	Item No.	Price
<b>RTF xx LT</b>	<b>passive</b>	<b>IP30 (-30...+70 °C)</b>	
RTF Pt100 L T	Pt100 (according to DIN EN 60 751, class B)	1101-40A0-1593-002	<b>47,09 €</b>
RTF Pt1000 L T	Pt1000 (according to DIN EN 60 751, class B)	1101-40A0-5593-002	<b>48,81 €</b>
RTF Ni1000 L T	Ni1000 (according to DIN EN 43 760, class B, TCR = 6180 ppm / K)	1101-40A0-9593-002	<b>49,15 €</b>
RTF NiTK L T	Ni1000 TK5000 (TCR = 5000 ppm / K), LG - Ni1000	1101-40A1-0593-002	<b>52,76 €</b>
RTF LM235Z L T	LM235Z (TCR = 10 mV / K; 2.73 V at 0 °C), KP10	1101-40A2-1593-002	<b>48,20 €</b>
RTF NTC1,8K L T	NTC 1.8K	1101-40A1-2593-002	<b>52,46 €</b>
RTF NTC10K L T	NTC 10K	1101-40A1-5593-002	<b>47,54 €</b>
RTF NTC20K L T	NTC 20K	1101-40A1-6593-002	<b>47,54 €</b>



**RTF xx P**  
**RTF xx PU**  
**RTM-U PU**  
(Baldur 1)

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



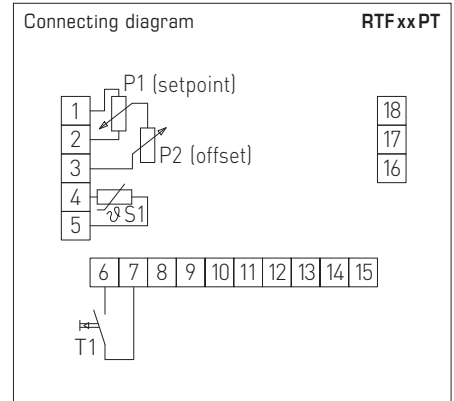
**THERMASGARD® RTF xx P** Room temperature sensors

Type/WG01	Sensor/Output	Display	Item No.	Price
<b>RTF xx P</b>	<b>passive</b>		<b>IP 30</b> (-30...+70 °C)	
RTF Pt100 P	Pt100 (according to DIN EN 60 751, class B)		1101-40A0-1001-345	<b>47,09 €</b>
RTF Pt1000 P	Pt1000 (according to DIN EN 60 751, class B)		1101-40A0-5001-345	<b>48,37 €</b>
RTF Ni1000 P	Ni1000 (according to DIN EN 43 760, class B, TCR = 6180 ppm/K)		1101-40A0-9001-345	<b>49,65 €</b>
RTF NiTK P	Ni1000 TK5000 (TCR = 5000 ppm/K), LG-Ni1000		1101-40A1-0001-345	<b>50,31 €</b>
RTF LM235Z P	LM235Z (TCR = 10 mV/K; 2.73 V at 0 °C), KP10		1101-40A2-1001-345	<b>48,37 €</b>
RTF NTC1,8K P	NTC 1.8K		1101-40A1-2001-345	<b>48,50 €</b>
RTF NTC10K P	NTC 10K		1101-40A1-5001-345	<b>47,09 €</b>
RTF NTC20K P	NTC 20K		1101-40A1-6001-345	<b>47,09 €</b>
<b>RTF xx PU</b>	<b>passive / active</b>		<b>IP 30</b> (0...+50 °C)	
RTF Pt1000 PU	Pt1000 / 0 - 10V (potentiometer)*		1101-40A0-5004-345	<b>112,02 €</b>
RTF Pt1000 PU	Pt1000 / 0 - 10V (potentiometer, central position)*		1101-40A0-5004-642	<b>112,02 €</b>
RTF Pt1000 PU	Pt1000 / 0 - 10V (potentiometer, marking points)*		1101-40A0-5004-050	<b>112,02 €</b>
<b>RTM PU</b>	<b>aktive</b>		<b>IP 30</b> (0...+50 °C)	
RTM-U PU	0 - 10V (temperature and potentiometer)*		1101-41A1-0004-346	<b>146,79 €</b>
RTM-U PU LCD	0 - 10V (temperature and potentiometer)*	■	1101-41A1-1004-346	<b>248,63 €</b>
For special orders please specify:	<b>Ohm rating</b> of potentiometer (standard is 1kOhm; optional 100 Ohm, 2.5kOhm, 5kOhm, 10kOhm, 0-10V), <b>type of swelling arrow*</b> (standard = wedge-shaped, optional with central position or marking points) and differing specific <b>wiring requests</b>			



**RTF xxPT**  
(Baldur 1)

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



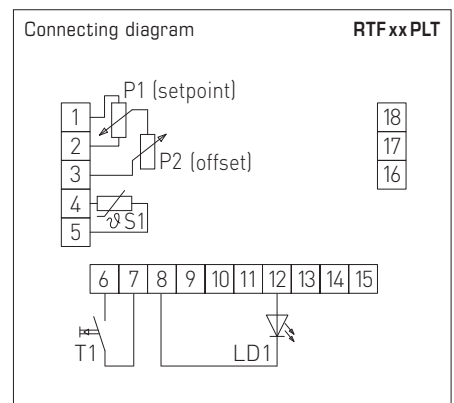
**THERMASGARD® RTF xxPT** Room temperature sensors

Type / WG01	Sensor / Output	Item No.	Price
<b>RTF xx PT</b>	<b>passive</b>	<b>IP30</b> (-30...+70 °C)	
RTF Pt100 P T	Pt100 (according to DIN EN 60 751, class B)	1101-40A0-1021-345	<b>52,08 €</b>
RTF Pt1000 P T	Pt1000 (according to DIN EN 60 751, class B)	1101-40A0-5021-345	<b>54,05 €</b>
RTF Ni1000 P T	Ni1000 (according to DIN EN 43 760, class B, TCR = 6180 ppm / K)	1101-40A0-9021-345	<b>54,37 €</b>
RTF NiTK P T	Ni1000 TK5000 (TCR = 5000 ppm / K), LG - Ni1000	1101-40A1-0021-345	<b>56,66 €</b>
RTF LM235Z P T	LM235Z (TCR = 10 mV / K; 2.73 V at 0 °C), KP10	1101-40A2-1021-345	<b>56,02 €</b>
RTF NTC1,8K P T	NTC 1.8 K	1101-40A1-2021-345	<b>56,13 €</b>
RTF NTC10K P T	NTC 10K	1101-40A1-5021-345	<b>54,68 €</b>
RTF NTC20K P T	NTC 20K	1101-40A1-6021-345	<b>54,68 €</b>
<b>RTF xx PUT</b>	<b>passive / active</b>	<b>IP30</b> (0...+50 °C)	
RTF Pt1000 PU T	Pt1000 / 0 - 10 V (potentiometer)	1101-40B0-5033-345	<b>119,79 €</b>



**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

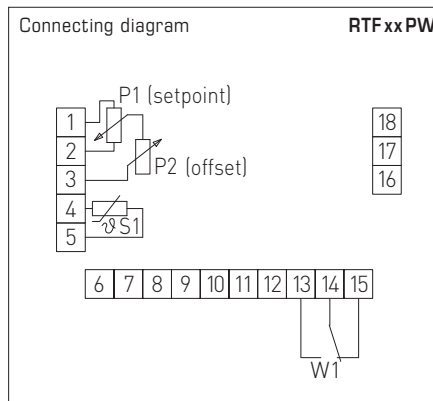
Type / WG01	Sensor / Output	Item No.	Price
<b>RTF xx PLT</b>	<b>passive</b>	<b>IP30</b> (-30...+70 °C)	
RTF Pt100 P L T	Pt100 (according to DIN EN 60 751, class B)	1101-40A0-1663-347	<b>66,38 €</b>
RTF Pt1000 P L T	Pt1000 (according to DIN EN 60 751, class B)	1101-40A0-5663-347	<b>69,71 €</b>
RTF Ni1000 P L T	Ni1000 (according to DIN EN 43 760, class B, TCR = 6180 ppm / K)	1101-40A0-9663-347	<b>70,02 €</b>
RTF NiTK P L T	Ni1000 TK5000 (TCR = 5000 ppm / K), LG - Ni1000	1101-40A1-0663-347	<b>73,06 €</b>
RTF LM235Z P L T	LM235Z (TCR = 10 mV / K; 2.73 V at 0 °C), KP10	1101-40A2-1663-347	<b>68,37 €</b>
RTF NTC1,8K P L T	NTC 1.8 K	1101-40A1-2663-347	<b>72,56 €</b>
RTF NTC10K P L T	NTC 10K	1101-40A1-5663-347	<b>66,38 €</b>
RTF NTC20K P L T	NTC 20K	1101-40A1-6663-347	<b>66,38 €</b>
<b>RTF xx PULT</b>	<b>passive / active</b>	<b>IP30</b> (-30...+70 °C)	
RTF Pt1000 PU L T	Pt1000 / 0 - 10 V (potentiometer)	1101-40B0-5669-347	<b>137,50 €</b>

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



**RTF xx PW**  
(Baldur 1)

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



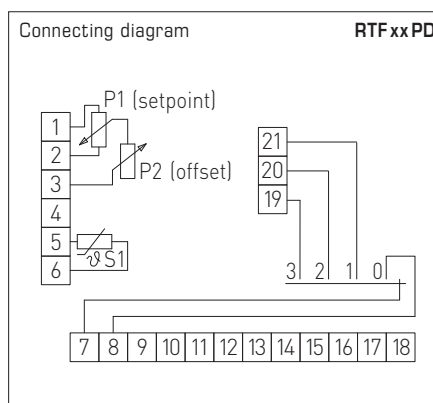
**THERMASGARD® RTF xx PW** Room temperature sensors

Type / WG01	Sensor / Output	Item No.	Price
<b>RTF xx PW</b>	<b>passive</b>	<b>IP 30 (-30...+70 °C)</b>	
RTF Pt100 P W	Pt100 (according to DIN EN 60 751, class B)	1101-40A0-1061-348	<b>52,84 €</b>
RTF Pt1000 P W	Pt1000 (according to DIN EN 60 751, class B)	1101-40A0-5061-348	<b>54,74 €</b>
RTF Ni1000 P W	Ni1000 (according to DIN EN 43 760, class B, TCR = 6180 ppm/K)	1101-40A0-9061-348	<b>55,26 €</b>
RTF NiTK P W	Ni1000 TK5000 (TCR = 5000 ppm/K), LG-Ni1000	1101-40A1-0061-348	<b>57,29 €</b>
RTF LM235Z P W	LM235Z (TCR = 10 mV/K; 2.73 V at 0 °C), KP10	1101-40A2-1061-348	<b>56,66 €</b>
RTF NTC1,8K P W	NTC 1.8K	1101-40A1-2061-348	<b>57,17 €</b>
RTF NTC10K P W	NTC 10K	1101-40A1-5061-348	<b>55,40 €</b>
RTF NTC20K P W	NTC 20K	1101-40A1-6061-348	<b>55,40 €</b>
<b>RTF xx PUW</b>	<b>passive / active</b>	<b>IP 30 (0...+50 °C)</b>	
RTF Pt1000 PU W2	Pt1000 / 0-10 V (potentiometer)	1101-40B0-5067-348	<b>120,44 €</b>



**RTF xx PD**  
(Baldur 2)

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



**THERMASGARD® RTF xx PD** Room temperature sensors

Type / WG01	Sensor / Output	Item No.	Price
<b>RTF xx PD</b>	<b>passive</b>	<b>IP 30 (-30...+70 °C)</b>	
RTF Pt100 P D4	Pt100 (according to DIN EN 60 751, class B)	1101-40B0-1007-349	<b>53,35 €</b>
RTF Pt1000 P D4	Pt1000 (according to DIN EN 60 751, class B)	1101-40B0-5007-349	<b>55,31 €</b>
RTF Ni1000 P D4	Ni1000 (according to DIN EN 43 760, class B, TCR = 6180 ppm/K)	1101-40B0-9007-349	<b>55,62 €</b>
RTF NiTK P D4	Ni1000 TK5000 (TCR = 5000 ppm/K), LG-Ni1000	1101-40B1-0007-349	<b>57,93 €</b>
RTF LM235Z P D4	LM235Z (TCR = 10 mV/K; 2.73 V at 0 °C), KP10	1101-40B2-1007-349	<b>57,29 €</b>
RTF NTC1,8K P D4	NTC 1.8K	1101-40B1-2007-349	<b>57,40 €</b>
RTF NTC10K P D4	NTC 10K	1101-40B1-5007-349	<b>55,97 €</b>
RTF NTC20K P D4	NTC 20K	1101-40B1-6007-349	<b>55,97 €</b>
<b>RTF xx PUD</b>	<b>passive / active</b>	<b>IP 30 (0...+50 °C)</b>	
RTF Pt1000 PU D4	Pt1000 / 0-10 V (potentiometer)	1101-40B0-5019-349	<b>120,93 €</b>



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)

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

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

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**Requested features regarding operating and/or display elements and wiring**

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

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**Special printing:**  
See last chapter "Accessories"

With 4-conductor-circuitry, Sensor 3 is used, thus a maximum of 3 LEDs is 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 Baldur 2 housing, only one operating element is possible at each of the positions "[at bottom]" and "[at top]"!**

