

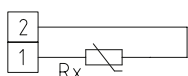
Room temperature sensors and measuring transducers, on-wall

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.

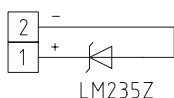
TECHNICAL DATA

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 V2A (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 V2A (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 ² via terminal screws, secured against loss due to unscrewing, 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)
ACCESSORIES	see last chapter

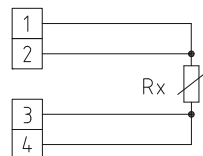
1x two-wire connection standard



1x two-wire connection LM235Z (KP10)



1x four-wire connection (optional)



THERMASGARD® RTF 1 Room temperature sensors (Standard)

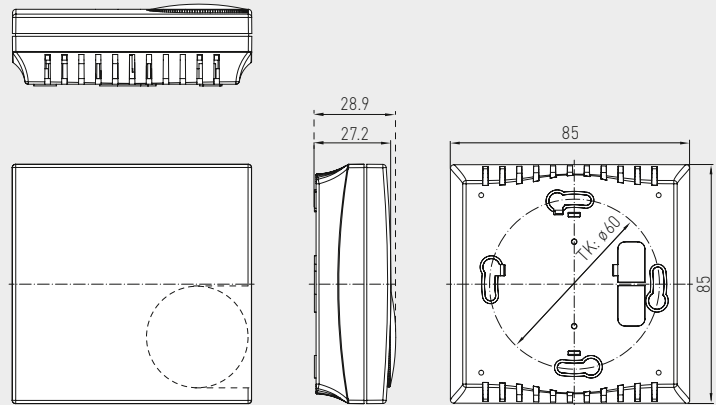
Type / WG03	Sensor / Output	Item No.	Price
RTF1 xx	passive	IP 30 (-30...+70 °C)	
RTF1 Pt100	Pt100 (according to DIN EN 60 751, class B)	1101-40A0-1003-000	20,59 €
RTF1 Pt1000	Pt1000 (according to DIN EN 60 751, class B)	1101-40A0-5000-000	22,90 €
RTF1 Pt1000A	Pt1000 (according to VDI/VDE 3512, class A-TGA)	1101-40A0-6003-000	24,47 €
RTF1 Ni1000	Ni1000 (according to DIN EN 43 760, class B, TCR = 6180 ppm/K)	1101-40A0-9000-000	22,58 €
RTF1 NiTK	Ni1000 TK5000 (TCR = 5000 ppm/K), LG-Ni1000	1101-40A1-0000-000	22,58 €
RTF1 LM235Z	LM235Z (TCR = 10 mV/K; 2.73 V at 0 °C), KP10	1101-40A2-1000-000	21,12 €
RTF1 NTC1,8K	NTC 1.8K	1101-40A1-2000-000	19,24 €
RTF1 NTC10K	NTC 10K	1101-40A1-5000-000	19,24 €
RTF1 NTC20K	NTC 20K	1101-40A1-6000-000	19,24 €
Extra charge:	Stainless steel housing optional Other sensors optional		96,72 € on request



Dimensional drawing

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

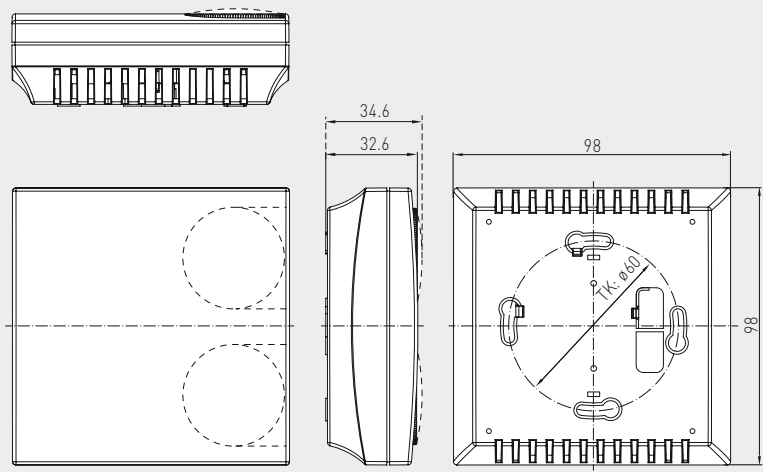
RTF
(Baldur 1)



Dimensional drawing

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

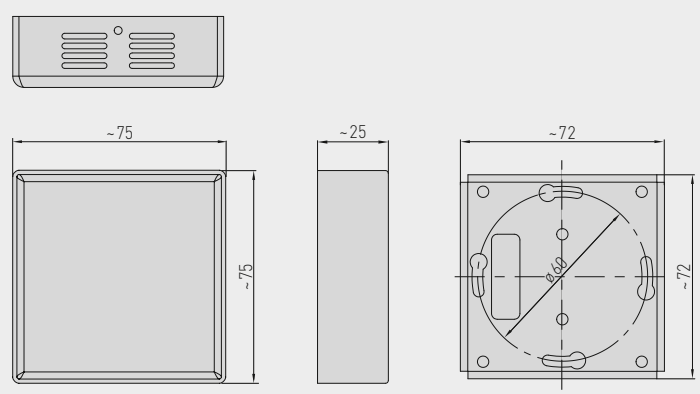
RTF
(Baldur 2)



Dimensional drawing

Housing **stainless steel**

RTF
(stainless steel)



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

TECHNICAL DATA

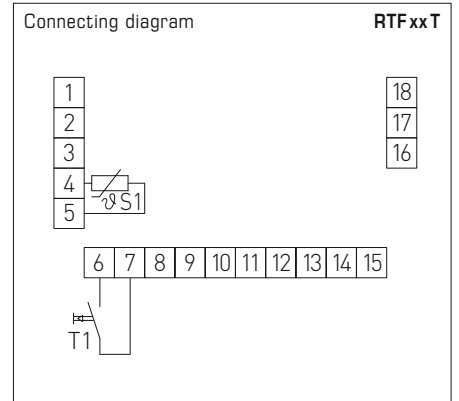
Measuring ranges:	-30...+70 °C (passive sensors) and 0...+50 °C (for U-variant)
Sensor:	for types, see table
Potentiometer:	standard 1kΩ, max. 0.1 W other ratings optional on request, e. g. 100 Ω, 2.5 kΩ, 5 kΩ, 10 kΩ, (optional potentiometer 0...10 V, linear), with angle of rotation limiter
Turn switch:	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 V2A (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 V2A (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 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

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)

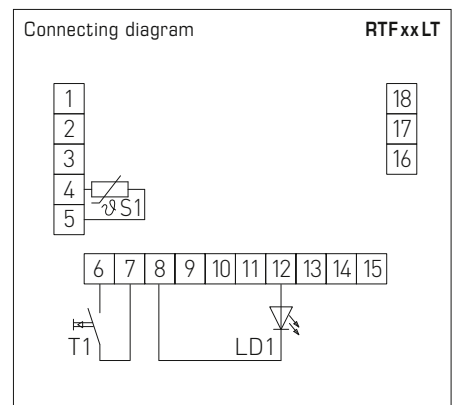


THERMASGARD® RTF xx T Room temperature sensors

Type /WG01	Sensor /Output	Item No.	Price
RTF xx T	passive	IP30 (-30...+70 °C)	
RTF Pt100 T	Pt100 (according to DIN EN 60 751, class B)	1101-40A0-1617-000	39,29 €
RTF Pt1000 T	Pt1000 (according to DIN EN 60 751, class B)	1101-40A0-5617-000	39,29 €
RTF Ni1000 T	Ni1000 (according to DIN EN 43 760, class B, TCR = 6180 ppm / K)	1101-40A0-9617-000	40,86 €
RTF NiTK T	Ni1000 TK5000 (TCR = 5000 ppm / K), LG - Ni1000	1101-40A1-0617-000	41,88 €
RTF LM235Z T	LM235Z (TCR = 10 mV / K; 2.73 V at 0 °C), KP10	1101-40A2-1617-000	41,43 €
RTF NTC1,8K T	NTC 1.8K	1101-40A1-2617-000	41,66 €
RTF NTC10K T	NTC 10K	1101-40A1-5617-000	38,73 €
RTF NTC20K T	NTC 20K	1101-40A1-6617-000	38,73 €



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

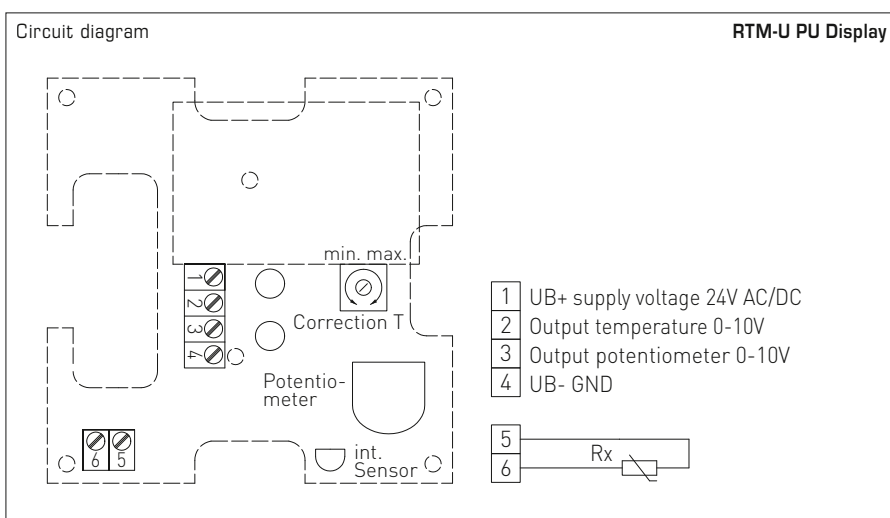
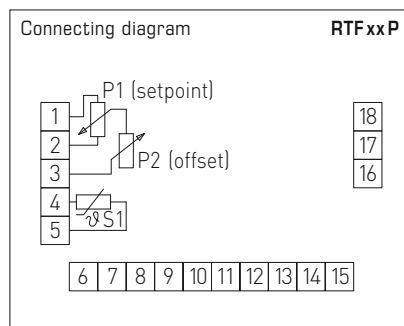


THERMASGARD® RTF xx LT Room temperature sensors

Type /WG01	Sensor /Output	Item No.	Price
RTF xx LT	passive	IP30 (-30...+70 °C)	
RTF Pt100 L T	Pt100 (according to DIN EN 60 751, class B)	1101-40A0-1593-002	41,53 €
RTF Pt1000 L T	Pt1000 (according to DIN EN 60 751, class B)	1101-40A0-5593-002	43,05 €
RTF Ni1000 L T	Ni1000 (according to DIN EN 43 760, class B, TCR = 6180 ppm / K)	1101-40A0-9593-002	43,34 €
RTF NiTK L T	Ni1000 TK5000 (TCR = 5000 ppm / K), LG - Ni1000	1101-40A1-0593-002	46,53 €
RTF LM235Z L T	LM235Z (TCR = 10 mV / K; 2.73 V at 0 °C), KP10	1101-40A2-1593-002	42,50 €
RTF NTC1,8K L T	NTC 1.8K	1101-40A1-2593-002	46,26 €
RTF NTC10K L T	NTC 10K	1101-40A1-5593-002	41,93 €
RTF NTC20K L T	NTC 20K	1101-40A1-6593-002	41,93 €



RTF xx P
RTF xx PU
RTM-U PU
(Baldur 1)
Version with sensor and potentiometer (1 kOhm, max. 0.1 W)

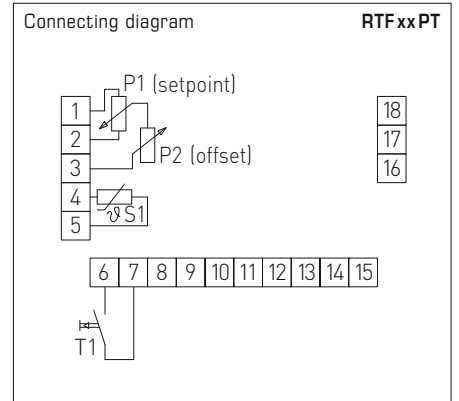


THERMASGARD® RTF xx P Room temperature sensors				
Type/WG01	Sensor/Output	Display	Item No.	Price
RTF xx P	passive		IP 30 (-30...+70 °C)	
RTF Pt100 P	Pt100 (according to DIN EN 60751, class B)		1101-40A0-1001-345	41,53 €
RTF Pt1000 P	Pt1000 (according to DIN EN 60751, class B)		1101-40A0-5001-345	42,66 €
RTF Ni1000 P	Ni1000 (according to DIN EN 43760, class B, TCR = 6180 ppm/K)		1101-40A0-9001-345	43,79 €
RTF NiTK P	Ni1000 TK5000 (TCR = 5000 ppm/K), LG-Ni1000		1101-40A1-0001-345	44,36 €
RTF LM235Z P	LM235Z (TCR = 10 mV/K; 2.73 V at 0 °C), KP10		1101-40A2-1001-345	42,66 €
RTF NTC1,8K P	NTC 1.8K		1101-40A1-2001-345	42,77 €
RTF NTC10K P	NTC 10K		1101-40A1-5001-345	41,53 €
RTF NTC20K P	NTC 20K		1101-40A1-6001-345	41,53 €
RTF xx PU	passive / active		IP 30 (0...+50 °C)	
RTF Pt1000 PU	Pt1000 / 0 - 10 V (potentiometer)*		1101-40A0-5004-345	98,79 €
RTF Pt1000 PU	Pt1000 / 0 - 10 V (potentiometer, central position)*		1101-40A0-5004-642	98,79 €
RTF Pt1000 PU	Pt1000 / 0 - 10 V (potentiometer, marking points)*		1101-40A0-5004-050	98,79 €
RTM PU	aktive		IP 30 (0...+50 °C)	
RTM-U PU	0 - 10 V (temperature and potentiometer)*		1101-41A1-0004-346	129,44 €
RTM-U PU LCD	0 - 10 V (temperature and potentiometer)*	■	1101-41A1-1004-346	219,25 €
For special orders please specify:	Ohm rating of potentiometer (standard is 1kOhm; optional 100 Ohm, 2.5kOhm, 5kOhm, 10kOhm, 0-10V), 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)



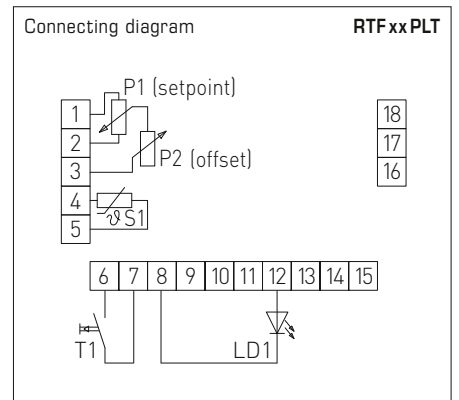
THERMASGARD® RTF xxPT Room temperature sensors

Type / WG01	Sensor / Output	Item No.	Price
RTF xx PT	passive	IP30 (-30...+70 °C)	
RTF Pt100 P T	Pt100 (according to DIN EN 60 751, class B)	1101-40A0-1021-345	45,93 €
RTF Pt1000 P T	Pt1000 (according to DIN EN 60 751, class B)	1101-40A0-5021-345	45,58 €
RTF Ni1000 P T	Ni1000 (according to DIN EN 43 760, class B, TCR = 6180 ppm / K)	1101-40A0-9021-345	47,94 €
RTF NiTK P T	Ni1000 TK5000 (TCR = 5000 ppm / K), LG - Ni1000	1101-40A1-0021-345	49,96 €
RTF LM235Z P T	LM235Z (TCR = 10 mV / K; 2.73 V at 0 °C), KP10	1101-40A2-1021-345	49,40 €
RTF NTC1,8K P T	NTC 1.8 K	1101-40A1-2021-345	49,50 €
RTF NTC10K P T	NTC 10K	1101-40A1-5021-345	48,22 €
RTF NTC20K P T	NTC 20K	1101-40A1-6021-345	48,22 €
RTF xx PUT	passive / active	IP30 (0...+50 °C)	
RTF Pt1000 PU T	Pt1000 / 0 - 10 V (potentiometer)	1101-40B0-5033-345	105,64 €



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

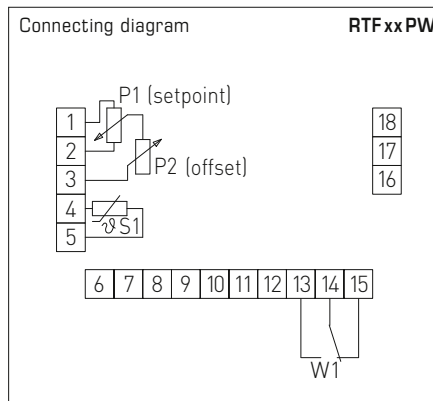
Type / WG01	Sensor / Output	Item No.	Price
RTF xx PLT	passive	IP30 (-30...+70 °C)	
RTF Pt100 P L T	Pt100 (according to DIN EN 60 751, class B)	1101-40A0-1663-347	58,54 €
RTF Pt1000 P L T	Pt1000 (according to DIN EN 60 751, class B)	1101-40A0-5663-347	61,47 €
RTF Ni1000 P L T	Ni1000 (according to DIN EN 43 760, class B, TCR = 6180 ppm / K)	1101-40A0-9663-347	61,75 €
RTF NiTK P L T	Ni1000 TK5000 (TCR = 5000 ppm / K), LG - Ni1000	1101-40A1-0663-347	64,43 €
RTF LM235Z P L T	LM235Z (TCR = 10 mV / K; 2.73 V at 0 °C), KP10	1101-40A2-1663-347	60,29 €
RTF NTC1,8K P L T	NTC 1.8 K	1101-40A1-2663-347	63,98 €
RTF NTC10K P L T	NTC 10K	1101-40A1-5663-347	58,54 €
RTF NTC20K P L T	NTC 20K	1101-40A1-6663-347	58,54 €
RTF xx PULT	passive / active	IP30 (-30...+70 °C)	
RTF Pt1000 PU L T	Pt1000 / 0 - 10 V (potentiometer)	1101-40B0-5669-347	121,25 €

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)



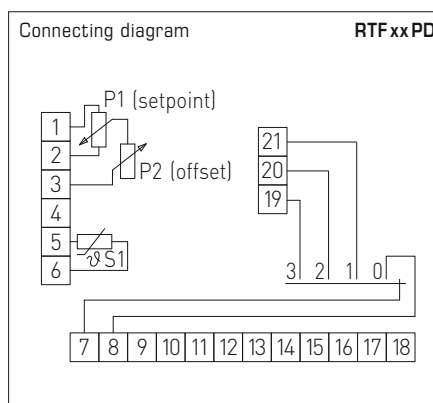
THERMASGARD® RTF xxPW Room temperature sensors

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	46,59 €
RTF Pt1000 P W	Pt1000 (according to DIN EN 60 751, class B)	1101-40A0-5061-348	48,27 €
RTF Ni1000 P W	Ni1000 (according to DIN EN 43 760, class B, TCR = 6180 ppm/K)	1101-40A0-9061-348	48,73 €
RTF NiTK P W	Ni1000 TK5000 (TCR = 5000 ppm/K), LG-Ni1000	1101-40A1-0061-348	50,52 €
RTF LM235Z P W	LM235Z (TCR = 10 mV/K; 2.73 V at 0 °C), KP10	1101-40A2-1061-348	49,96 €
RTF NTC1,8K P W	NTC 1.8K	1101-40A1-2061-348	50,42 €
RTF NTC10K P W	NTC 10K	1101-40A1-5061-348	48,85 €
RTF NTC20K P W	NTC 20K	1101-40A1-6061-348	48,85 €
RTF xx PUW	passive / active	IP 30 (0...+50 °C)	
RTF Pt1000 PU W2	Pt1000 / 0-10 V (potentiometer)	1101-40B0-5067-348	106,20 €



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 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	47,05 €
RTF Pt1000 P D4	Pt1000 (according to DIN EN 60 751, class B)	1101-40B0-5007-349	48,78 €
RTF Ni1000 P D4	Ni1000 (according to DIN EN 43 760, class B, TCR = 6180 ppm/K)	1101-40B0-9007-349	49,05 €
RTF NiTK P D4	Ni1000 TK5000 (TCR = 5000 ppm/K), LG-Ni1000	1101-40B1-0007-349	51,08 €
RTF LM235Z P D4	LM235Z (TCR = 10 mV/K; 2.73 V at 0 °C), KP10	1101-40B2-1007-349	50,52 €
RTF NTC1,8K P D4	NTC 1.8K	1101-40B1-2007-349	50,62 €
RTF NTC10K P D4	NTC 10K	1101-40B1-5007-349	49,35 €
RTF NTC20K P D4	NTC 20K	1101-40B1-6007-349	49,35 €
RTF xx PUD	passive / active	IP 30 (0... +50 °C)	
RTF Pt1000 PU D4	Pt1000 / 0-10 V (potentiometer)	1101-40B0-5019-349	106,64 €

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 Baldur 2 housing, only one operating element is possible at each of the positions "[at bottom]" and "[at top]"!

