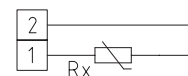


**Room temperature sensor,
on-wall, with passive output**

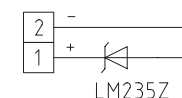
Room temperature sensor **THERMASGARD® RTF 1** with passive output, in attractive plastic housing (Baldur 1) with snap-on enclosure cover, base with 4-hole attachment, for mounting on vertically or horizontally installed in-wall flush boxes, with predetermined breaking point for on-wall cable entry or in stainless steel housing (top and base made of stainless steel, screwed-on enclosure cover) as vandal-proof version e.g. for schools, barracks and public buildings.

This residential room temperature sensor is used to detect the temperature (-30 to +70 °C) in closed, dry rooms, in apartments, cinemas, supermarkets, storage rooms, office and business facilities.

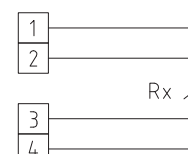
1x two-wire connection
standard



1x two-wire connection
LM235Z (KP 10)



1x four-wire connection
(optional)



TECHNICAL DATA

Measuring range:	-30...+70 °C
Sensor / output:	passive, see table
Switching type:	2-wire connection (4-wire connection for Pt100/Pt1000A, optional for 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)
Housing:	plastic, material ABS, colour pure white (similar to RAL 9010), optionally in stainless steel V2A (1.4301)
Dimension:	85 x 85 x 27 mm (Baldur 1) 75 x 75 x 25 mm (stainless steel V2A 1.4301)
Mounting:	wall mounting or on in-wall flush box, Ø 55 mm, base with 4 holes, for attachment to vertically or horizontally installed in-wall flush boxes for rear cable entry, with predetermined breaking point for top / bottom cable entry for surface-mounted installation
Electrical connection:	0.14–1.5 mm ² , via screw terminals, secured against unscrewing, only with safety extra-low voltage, max. 24 VDC
Process connection:	via screws
Permitted humidity:	max. 90 % RH, non-condensing air
Protection class:	III (according to EN 60 730)
Protection type:	IP 30 (according to EN 60 529)



THERMASGARD® RTF 1 Room temperature sensor (Standard)

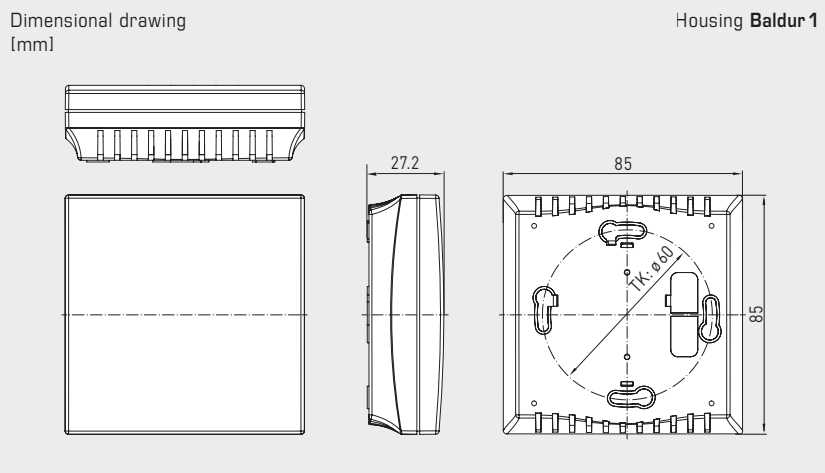
Type / WG03	Sensor / Output	Item No.
RTF1 xx		Baldur 1
RTF1 Pt100	Pt100 (according to DIN EN 60 751, class B)	1101-40A0-1003-000
RTF1 Pt1000	Pt1000 (according to DIN EN 60 751, class B)	1101-40A0-5000-000
RTF1 Pt1000A	Pt1000 (according to VDI/VDE 3512, class A-TGA)	1101-40A0-6003-000
RTF1 Ni1000	Ni1000 (according to DIN EN 43760, class B, TCR = 6180 ppm / K)	1101-40A0-9000-000
RTF1 NiTK	Ni1000 TK5000 (TCR = 5000 ppm / K), LG-Ni1000	1101-40A1-0000-000
RTF1 LM235Z	LM235Z (TCR = 10mV / K; 2.73V at 0 °C), KP10	1101-40A2-1000-000
RTF1 NTC1,8K	NTC 1.8K	1101-40A1-2000-000
RTF1 NTC10K	NTC 10K	1101-40A1-5000-000
RTF1 NTC20K	NTC 20K	1101-40A1-6000-000
Extra charge:	Stainless steel housing optional Other sensors optional	on request



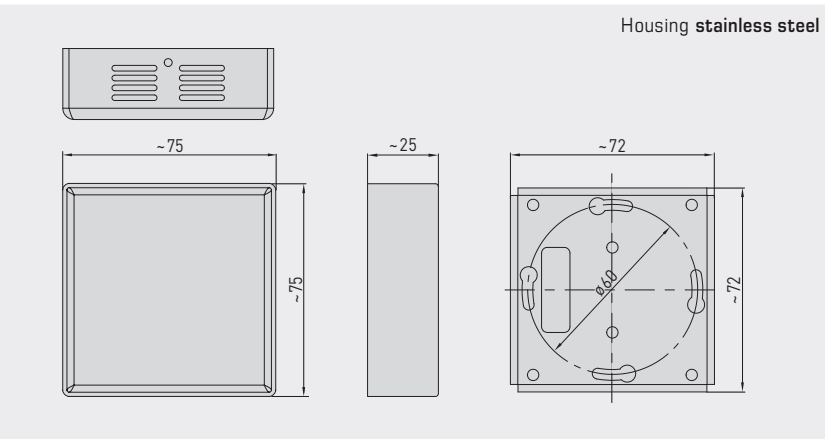
S+S REGELTECHNIK

THERMASGARD® RTF 1
THERMASGARD® RTF xx

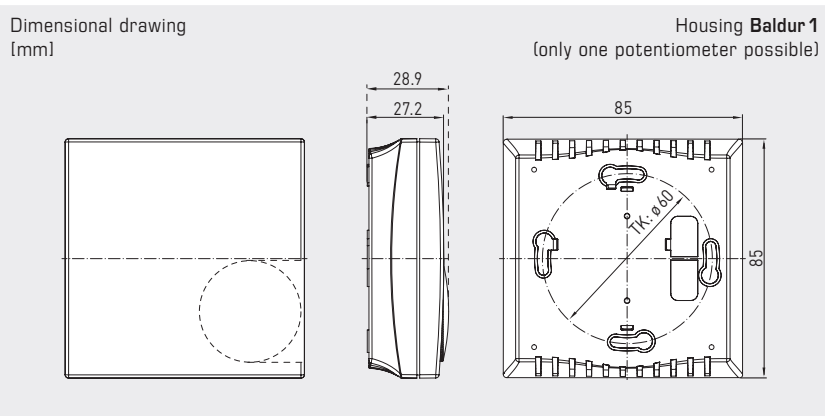
Room temperature sensors /
room control unit in different versions,
on-wall, with passive output



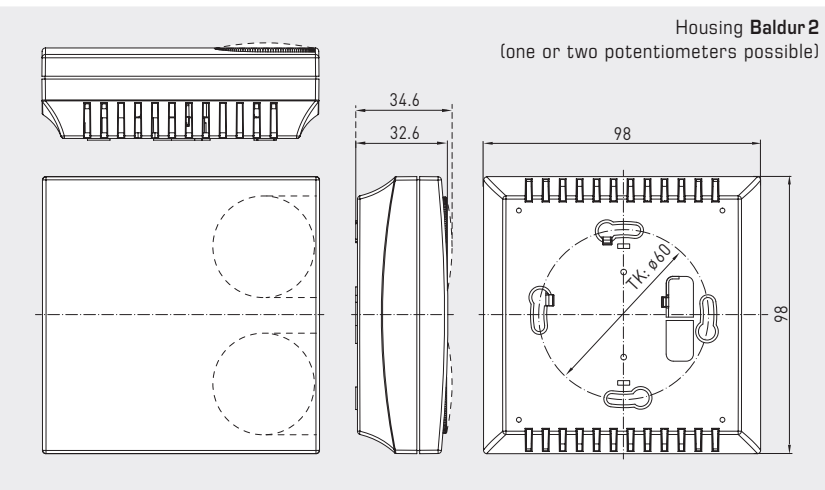
RTF 1
(Baldur 1)



RTF 1
(stainless steel)



RTF xx
(Baldur 1)



RTF xx
(Baldur 2)



Room temperature sensors /
room control unit in different versions,
on-wall, with passive output

Room temperature sensor **THERMASGARD® RTF xx** with passive output, in attractive plastic housing (Baldur 1 / Baldur 2) with snap-on enclosure cover, base with 4-hole attachment, for mounting on vertically or horizontally installed in-wall flush boxes, with predetermined breaking point for on-wall cable entry. Available as a room control unit in various type versions with **control elements** such as setpoint potentiometer (%), rotary switch (max. 5-step), rocker switch, push-button or coloured **LEDs** for displaying the operating states.

This residential room temperature sensor is used to detect/display the temperature (-30...+70 °C) in closed, dry rooms, in apartments, in cinemas, supermarkets, storage rooms, office and business facilities.

TECHNICAL DATA

Measuring range:	-30...+70 °C
Sensor / output:	passive, see table
Switching type:	depending on type, see connection diagram
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)
Potentiometer:	Standard 1 kOhm, max. 0.1 W (other values optionally available upon request, e.g. 100 Ohm, 2.5 kOhm, 5 kOhm, 10 kOhm – units with active potentiometer RTMxx), with angle of rotation limiter
Rotary switch:	max. 24 V AC/DC, max. 130 mA, up to 5 switching speeds (0, Auto, I, II, III), with angle of rotation limiter
Rocker switch:	max. 24 V AC/DC, max. 130 mA
Push-button:	NO contact, max. 24 VDC, max. 10 mA
LED:	max. 24 VDC (optionally max. 24 VAC), standard green and red (optionally red, yellow or two-tone)
Housing:	plastic, material ABS, colour pure white (similar to RAL 9010)
Dimension:	85 x 85 x 27 mm (Baldur 1) 98 x 98 x 33 mm (Baldur 2)
Mounting:	wall mounting or on in-wall flush box, Ø 55 mm, base with 4 holes, for attachment to vertically or horizontally installed in-wall flush boxes for rear cable entry, with predetermined breaking point for top/bottom cable entry for surface-mounted installation
Electrical connection:	0.14–1.5 mm², via screw terminals, only with safety extra-low voltage, max. 24 V DC
Process connection:	via screws
Permitted humidity:	max. 90 % RH, non-condensing air
Protection class:	III (according to EN 60 730)
Protection type:	IP 30 (according to EN 60 529)

RTF xx
Potentiometer / rotary switch
with angle of rotation limiter
(Fig. without rotary knob)



The standard **print** is a swelling arrow with centre position unfilled (1) optionally wedge-shaped and unfilled (2) or with marking points ±3K... +3K (3)

THERMASGARD® RTF xx Room temperature sensor Baldur 1 / Baldur 2)

RTF xx various equipment versions see type tables

Please specify with special orders: **Ohm value** of potentiometer (standard is 1 kOhm; optionally 100 Ohm, 2.5 kOhm, 5 kOhm, 10 kOhm)
Swelling arrow type (standard print is filled with centre position; optionally wedge-shaped or with marking points -3K... +3K)
deviating **wiring requests** (available upon request)

Extra charge: **unique special print** – see "Accessories" chapter

Note: Unit versions with **active** potentiometer, see **RTMxx** – special versions available upon request



S+S REGELTECHNIK

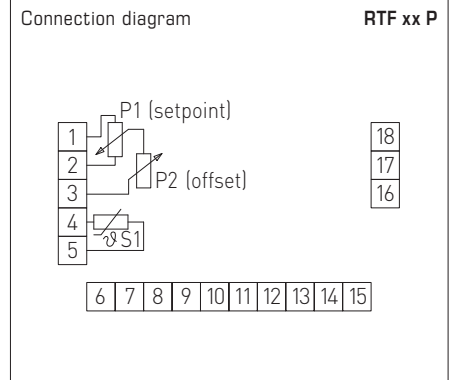
THERMASGARD® RTF xx

Room temperature sensors /
room control unit in different versions,
on-wall, with passive output



RTF xx P
(Baldur 1)

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



THERMASGARD®
RTF xx P

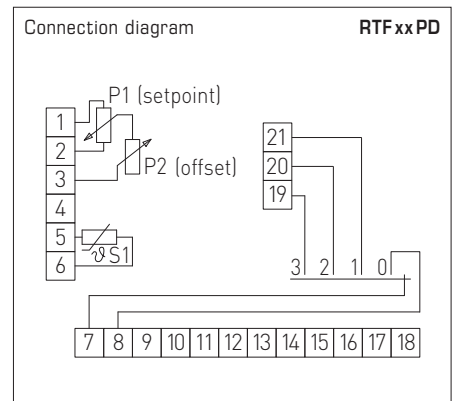
Room temperature sensor
with potentiometer

Type/WG01	Sensor / Output	Display	Item No.
RTF xx P			Baldur 1
RTF Pt100 P	Pt100 (according to DIN EN 60 751, class B)		1101-40A0-1001-345
RTF Pt1000 P	Pt1000 (according to DIN EN 60 751, class B)		1101-40A0-5001-345
RTF Ni1000 P	Ni1000 (according to DIN EN 43 760, class B, TCR = 6180 ppm/K)		1101-40A0-9001-345
RTF NiTK P	Ni1000 TK5000 (TCR = 5000 ppm/K), LG-Ni1000		1101-40A1-0001-345
RTF LM235Z P	LM235Z (TCR = 10 mV/K; 2.73 V at 0 °C), KP10		1101-40A2-1001-345
RTF NTC1,8K P	NTC 1,8K		1101-40A1-2001-345
RTF NTC10K P	NTC 10K		1101-40A1-5001-345
RTF NTC20K P	NTC 20K		1101-40A1-6001-345
Note:	Unit versions with active potentiometer, see RTMxx		



RTF xx PD
(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 xx PD

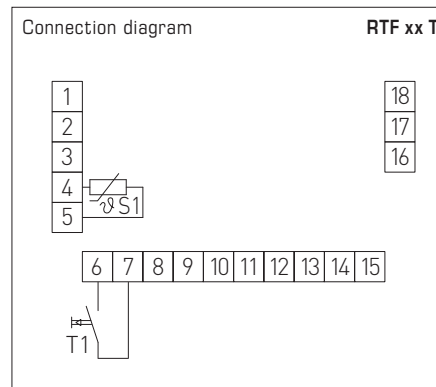
Room temperature sensor
with potentiometer and rotary switch

Type/WG01	Sensor / Output	Item No.
RTF xx PD		Baldur 2
RTF Pt100 P D4	Pt100 (according to DIN EN 60 751, class B)	1101-40B0-1007-349
RTF Pt1000 P D4	Pt1000 (according to DIN EN 60 751, class B)	1101-40B0-5007-349
RTF Ni1000 P D4	Ni1000 (according to DIN EN 43 760, class B, TCR = 6180 ppm/K)	1101-40B0-9007-349
RTF NiTK P D4	Ni1000 TK5000 (TCR = 5000 ppm/K), LG-Ni1000	1101-40B1-0007-349
RTF LM235Z P D4	LM235Z (TCR = 10 mV/K; 2.73 V at 0 °C), KP10	1101-40B2-1007-349
RTF NTC1,8K P D4	NTC 1,8K	1101-40B1-2007-349
RTF NTC10K P D4	NTC 10K	1101-40B1-5007-349
RTF NTC20K P D4	NTC 20K	1101-40B1-6007-349
Note:	Special versions available upon request	

Room temperature sensors /
room control unit in different versions,
on-wall, with passive output



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

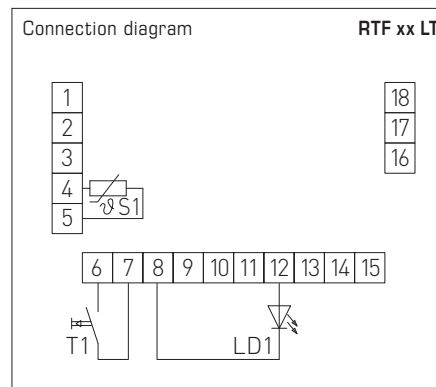


THERMASGARD® RTF xx T Room temperature sensor with push-button

Type /WG01	Sensor /Output	Item No.
RTF xx T		Baldur 1
RTF Pt100 T	Pt100 (according to DIN EN 60 751, class B)	1101-40A0-1617-000
RTF Pt1000 T	Pt1000 (according to DIN EN 60 751, class B)	1101-40A0-5617-000
RTF Ni1000 T	Ni1000 (according to DIN EN 43 760, class B, TCR = 6180 ppm / K)	1101-40A0-9617-000
RTF NiTK T	Ni1000 TK5000 (TCR = 5000 ppm / K), LG-Ni1000	1101-40A1-0617-000
RTF LM235Z T	LM235Z (TCR = 10 mV / K; 2.73 V at 0 °C), KP10	1101-40A2-1617-000
RTF NTC1,8K T	NTC 1,8K	1101-40A1-2617-000
RTF NTC10K T	NTC 10K	1101-40A1-5617-000
RTF NTC20K T	NTC 20K	1101-40A1-6617-000
Note:	Special versions available upon request	



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 sensor with LED and push-button

Type /WG01	Sensor /Output	Item No.
RTF xx LT		Baldur 1
RTF Pt100 L T	Pt100 (according to DIN EN 60 751, class B)	1101-40A0-1593-002
RTF Pt1000 L T	Pt1000 (according to DIN EN 60 751, class B)	1101-40A0-5593-002
RTF Ni1000 L T	Ni1000 (according to DIN EN 43 760, class B, TCR = 6180 ppm / K)	1101-40A0-9593-002
RTF NiTK L T	Ni1000 TK5000 (TCR = 5000 ppm / K), LG-Ni1000	1101-40A1-0593-002
RTF LM235Z L T	LM235Z (TCR = 10 mV / K; 2.73 V at 0 °C), KP10	1101-40A2-1593-002
RTF NTC1,8K L T	NTC 1,8K	1101-40A1-2593-002
RTF NTC10K L T	NTC 10K	1101-40A1-5593-002
RTF NTC20K L T	NTC 20K	1101-40A1-6593-002
Note:	Special versions available upon request	



S+S REGELTECHNIK

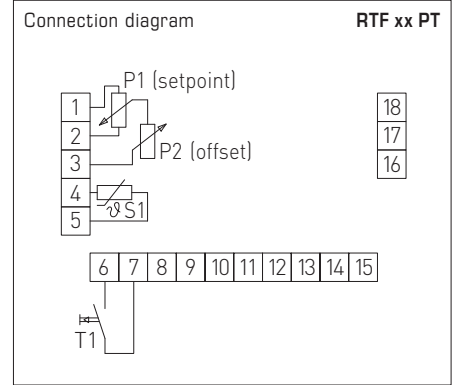
THERMASGARD® RTF xx

Room temperature sensors /
room control unit in different versions,
on-wall, with passive output



RTF xx PT
(Baldur 1)

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



**THERMASGARD®
RTF xx PT**

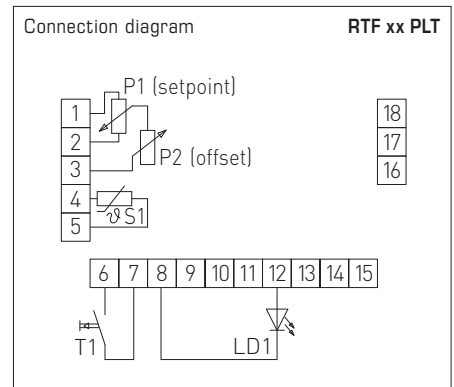
Room temperature sensor
with potentiometer and push-button

Type /WG01	Sensor /Output	Item No.
RTF xx PT		Baldur 1
RTF Pt100 P T	Pt100 (according to DIN EN 60 751, class B)	1101-40A0-1021-345
RTF Pt1000 P T	Pt1000 (according to DIN EN 60 751, class B)	1101-40A0-5021-345
RTF Ni1000 P T	Ni1000 (according to DIN EN 43 760, class B, TCR = 6180 ppm / K)	1101-40A0-9021-345
RTF NiTK P T	Ni1000 TK5000 (TCR = 5000 ppm / K), LG-Ni1000	1101-40A1-0021-345
RTF LM235Z P T	LM235Z (TCR = 10 mV / K; 2.73 V at 0 °C), KP10	1101-40A2-1021-345
RTF NTC1,8K P T	NTC 1,8K	1101-40A1-2021-345
RTF NTC10K P T	NTC 10K	1101-40A1-5021-345
RTF NTC20K P T	NTC 20K	1101-40A1-6021-345
Note:	Special versions available upon request	



RTF xx PLT
(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 xx PLT**

Room temperature sensor
with potentiometer, LED and push-button

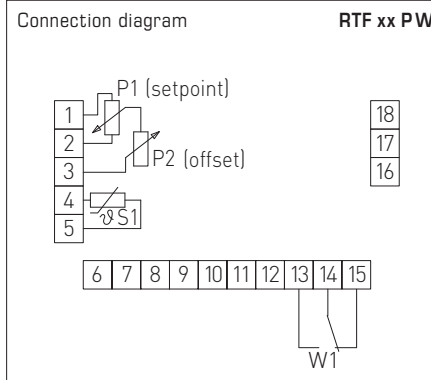
Type /WG01	Sensor /Output	Item No.
RTF xx PLT		Baldur 1
RTF Pt100 P L T	Pt100 (according to DIN EN 60 751, class B)	1101-40A0-1663-347
RTF Pt1000 P L T	Pt1000 (according to DIN EN 60 751, class B)	1101-40A0-5663-347
RTF Ni1000 P L T	Ni1000 (according to DIN EN 43 760, class B, TCR = 6180 ppm / K)	1101-40A0-9663-347
RTF NiTK P L T	Ni1000 TK5000 (TCR = 5000 ppm / K), LG-Ni1000	1101-40A1-0663-347
RTF LM235Z P L T	LM235Z (TCR = 10 mV / K; 2.73 V at 0 °C), KP10	1101-40A2-1663-347
RTF NTC1,8K P L T	NTC 1,8K	1101-40A1-2663-347
RTF NTC10K P L T	NTC 10K	1101-40A1-5663-347
RTF NTC20K P L T	NTC 20K	1101-40A1-6663-347
Note:	Special versions available upon request	

Room temperature sensors /
room control unit in different versions,
on-wall, with passive output



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 sensor with potentiometer and rocker switch

Type /WG01	Sensor / Output	Item No.
RTF xx PW		Baldur 1
RTF Pt100 P W	Pt100 (according to DIN EN 60751, class B)	1101-40A0-1061-348
RTF Pt1000 P W	Pt1000 (according to DIN EN 60751, class B)	1101-40A0-5061-348
RTF Ni1000 P W	Ni1000 (according to DIN EN 43760, class B, TCR = 6180 ppm/K)	1101-40A0-9061-348
RTF NiTK P W	Ni1000 TK5000 (TCR = 5000 ppm/K), LG-Ni1000	1101-40A1-0061-348
RTF LM235Z P W	LM235Z (TCR = 10 mV/K; 2.73 V at 0 °C), KP10	1101-40A2-1061-348
RTF NTC1,8K P W	NTC 1,8K	1101-40A1-2061-348
RTF NTC10K P W	NTC 10K	1101-40A1-5061-348
RTF NTC20K P W	NTC 20K	1101-40A1-6061-348
Note:	Special versions available upon request	



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"

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]"!

