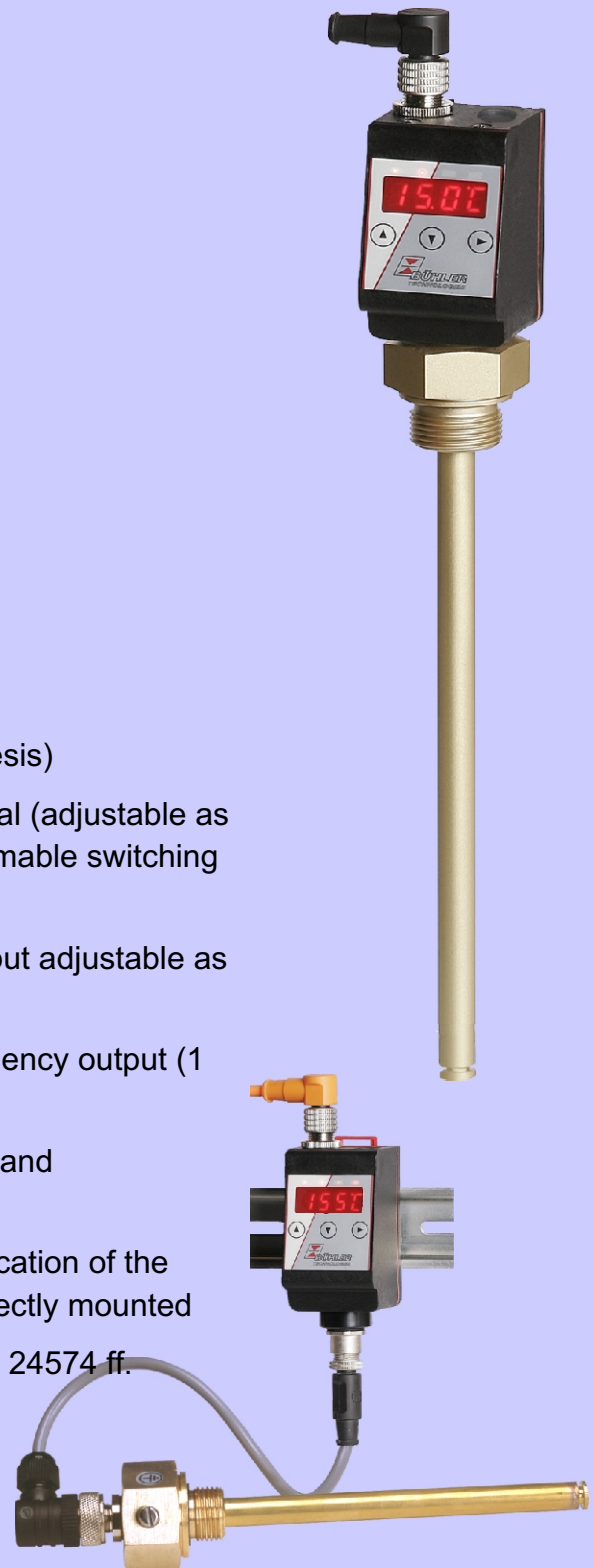


Thermotronik TT-77

- Electronic temperature switch
- Up to four programmable outputs (hysteresis)
- Alternatively continuous temperature signal (adjustable as current or voltage) plus one free programmable switching output
- Output characteristic of the switching output adjustable as window or hysteresis
- Two switching outputs adjustable as frequency output (1 to 100 Hz)
- Direct or external mounting of the display and control unit
- Highly visible LED display with status indication of the switching outputs, turnable 270° when directly mounted
- Menu structure based on VDMA guideline 24574 ff.
- Min/Max memory, logbook
- Probe length up to 1 m



Technical data

Thermotronik TT-77F

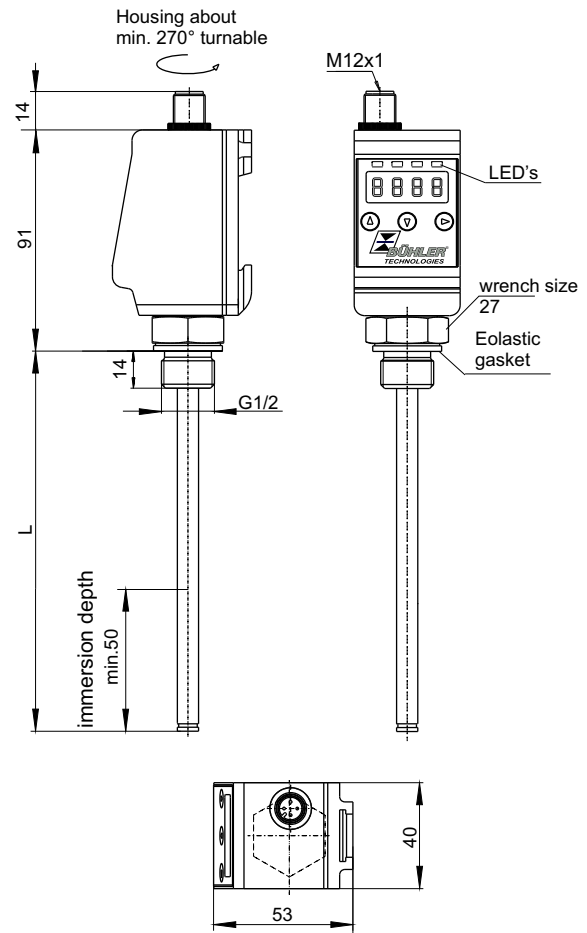
Version tank top installation

Design

material probe	MS brass	VA 1.4571
max. operating pressure	5 bar	10 bar
connection	G1/2	G1/2
operating temperature	-40 °C to +100 °C	
lengths	L = 280, 370, 500 (standard) variable from 70 to 1000 mm	

Display

temperature display range	-20 °C to +120 °C (4 °F to 248 °F)
alarm setting range	0 °C to 100 °C (32 °F to 178 °F)
accuracy	1%
resolution	0,5 °C (1 °F)
protection class	IP65
display	4 digit 7 segment LED display
operation	over 3 buttons
current consumption at power up	approx. 100 mA for 100 ms
operating consumption	approx. 50 mA
supply voltage (U _B)	10 V to 30 V DC (nominal voltage 24 V DC)
ambient temperature	-20 °C to +70 °C
material display housing	PA
Temperature sensor:	Pt 100 (RTD) class B, DIN EN 60 751



Following temperature outputs are available:

Type	-2T	-1T-KT	-4T
connector (base)	M12 - 4 pol	M12 - 4 pol	M12 - 8 pol.
max. contact load	1A	1A	1A
PNP transistor output,	2 x free programmable,	1 x free programmable,	4 x free programmable,
current PNP output	max 0,5 A per output	max. 0,5 A per output	max. 0,5 A per output
analogue output		1 x 4 - 20 mA, 2-10 V, 0-10 V or 0-5 V	
load analogue output		max. 500 Ω	

ALTERNATIVE

Product code for Thermotronik TT-77 Version Tank top installation

TT-77F-□□□

Design

MS	brass
VA	stainless steel

-2T	2 x PNP output
-4T	4 x PNP output
-1T-KT	1 x PNP output / 1 x Analogue output

Length (max. 1000 mm)

280

370

500

Variable (please specify)

Accessories

Part-No. 4-pole	Part-No. 8-pole	Description
9144 05 0010	9144 05 0048	Connecting cable M12x1, 1,5 m, elbow connector (female) and straight connector (male)
9144 05 0046	9144 05 0049	Connecting cable M12x1, 3,0 m, elbow connector (female) and straight connector (male)
9144 05 0047	9144 05 0033	Connecting cable M12x1, 5,0 m, elbow connector (female) and wire

Example for order

You need: Electronic controller for tank top installation, design brass, length L= 470 mm, 1 temperature contact and analogue output

You order: Thermotronik TT-77F-MS-1T-KT / 470

Technical data

Thermotronik TT-77W

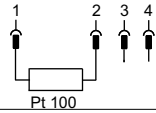
Temperature probe Pt 100 (RTD)

Design

material probe
max. operating pressure
connection
operating temperature
lengths

connector
probe element
tolerance

Pin assignment



Version remote indication

MSVA

brass 1.4571
5 bar/10 bar
G1/2G1/2
-40 °C to +100 °C
L = 280, 370, 500 (standard)
variable from 70 to 1000 mm

M12 (base)

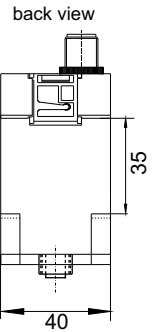
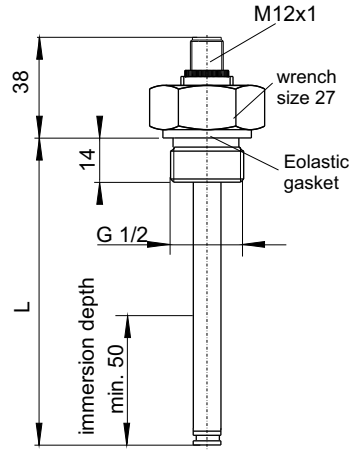
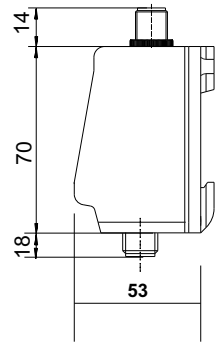
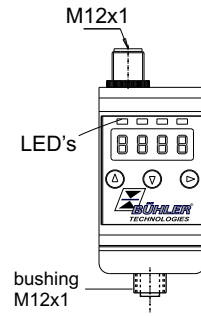
Pt 100 (RTD) class B DIN EN 60 751
±0,8 °C

Display

temperature display range
alarm setting range
accuracy
resolution
protection class
display
operation
current consumption at power up
operating current consumption
supply voltage (U_B)

ambient temperature
mounting:

-20 °C to +120 °C (4 °F to 248 °F)
0 °C to 100 °C (32 °F to 178 °F)
1%
0,5 °C (1 °F)
IP65
4 digit 7 segment LED display
over 3 buttons
approx. 100 mA for 100 ms
approx. 50 mA
10 V to 30 V DC
(nominal voltage 24 V DC)
-20 °C to +70 °C
35 mm simply rail mounting



Following temperature outputs are available:

Type

bushing (sensor input)
connector (base)
PNP transistor output,
current PNP output
contact load overall
analogue output

load analogue output

-2T

M12 - 4 pol
M12 - 4 pol
2 x free programmable
max 0,5 A per output
max. 1A

-1T-K

M12 - 4 pol
M12 - 4 pol
1 x free programmable
max. 0,5 A per output
max. 1A
1 x 4 - 20 mA, 2-10V,
0-10V or 0-5V
max. 500Ω

-4T

M12 - 4 pol
M12 - 8 pol.
4 x free programmable
max. 0,5 A per output
max. 1A

A
L
T
E
R
N
A
T
I
V

Product code for Thermotronik TT-77 Version remote indication

TT-77W-□□□

Design

MS brass
VA stainless steel

A
L
T.

-2T 2 x PNP output
-4T 4 x PNP output
-1T-K 1 x PNP output / 1 x Analogue output

Length (max. 1000 mm)

280

370

500

Variable (please specify)

Accessories

Part-No. 4-pole Part-No. 8-pole Description


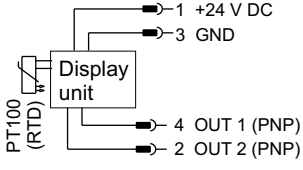
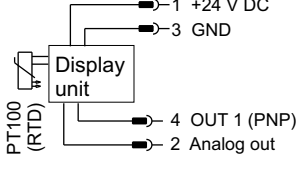
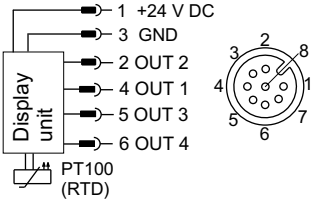
9144 05 0010 9144 05 0048 Connecting cable M12x1, 1,5 m, elbow connector (female) and straight connector (male)
9144 05 0046 9144 05 0049 Connecting cable M12x1, 3,0 m, elbow connector (female) and straight connector (male)
9144 05 0047 9144 05 0033 Connecting cable M12x1, 5,0 m, elbow connector (female) and wire

Example for order


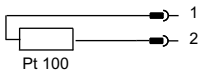
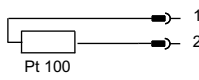
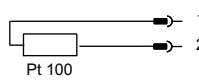
You need: Electronic controller remote indication version, design brass, length L= 470mm,
1 temperature contact and analogue output

You order: Thermotronik TT-77W-MS-1T-KT / 470

Pin assignment Thermotronik TT-77F

Pin assignment	TT-77F...-2T	TT-77F...-1T-KT	TT-77F...-4T
			

Pin assignment Thermotronik TT-77W

Pin assignment	TT77W...-2T	TT77W...-1T-K	TT77W...-4T
bushing - remote indication (sensor input) 			
Connector (base) 