

THERMASGARD® TF 43-F THERMASGARD® TF 65-F

Flexible sleeve / cable temperature sensors,
immersion / screw-in temperature sensors,
with passive output



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Patented quality product (Immersion sensor patent no. DE 10 2012 017 500.0)

THERMASGARD® TF 43-F is a resistance thermometer with a passive output, housing made from impact-resistant plastic with snap-on lid, with sensor sleeve and flexible cable length.

THERMASGARD® TF 65-F is a resistance thermometer with a passive output, housing made from impact-resistant plastic with quick-locking screws, with sensor sleeve and flexible cable length.

These built-in temperature sensors / immersion temperature sensors are electric contact thermometers for temperature measurement in liquids and gases, which are installed for example in piping systems and vessels. For aggressive media, stainless steel immersion sleeves must be used. Applications of these temperature sensors in piping systems, in heating technology, in storage tanks, in district heating compact stations, in hot and cold-water systems, in oil and lubricant circulation systems, in mechanical, apparatus and plant engineering as well as in the entire industrial sector.

TECHNICAL DATA

Measuring range:	-50...+180 °C
Sensors / output:	see table, passive (Perfect Sensor Protection) (optional also with two sensors)
Connection type:	2-wire connection (4-wire connection optional)
Testing current:	< 0.6 mA (Pt1000) < 0.3 mA (Ni1000)
Insulating resistance:	≥ 100 MΩ, at +20 °C (500 V DC)
Ambient temperature:	-20...+100 °C
Housing:	plastic, UV-resistant, material polyamide, 30 % glass-globe reinforced, colour traffic white (similar to RAL 9016) TF 43-F with snap-on lid TF 65-F with quick-locking screws (slotted / Phillips head combination)
Housing dimensions:	72 x 64 x 37.8 mm (Tyr 1 / Tyr 01)
Cable connection:	cable gland , plastic (M 16 x 1.5; with strain relief, exchangeable, max. inner diameter 10.4 mm) or M12 connector according to DIN EN 61076-2-101 (optional on request)
Electrical connection:	0.14 - 1.5 mm², via terminal screws
Connecting cable:	silicone, SiHF, 2 x 0.25 mm², cable length (KL) = flexible, inserted length (EL) > 50 mm
Sensor sleeve:	stainless steel V4A (1.4571), Ø = 6 mm, nominal length = 50 mm
Permissible humidity:	< 95 % RH, non-precipitating air
Protection class:	III (according to EN 60 730)
Protection type housing:	TF 43-F IP54 (according to EN 60 529)* Housing tested, TÜV SÜD, Report No. 713160960A (Tyr 01) TF 65-F IP65 (according to EN 60 529)* * Housing in the built-in state
Protection type sensor:	IP65 (according to EN 60 529) sleeve humidity-tight (standard) IP68 (according to EN 60 529) sleeve water-tight (optional)

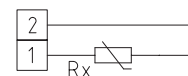
ACCESSORIES

TH08-ms/xx	Immersion sleeve , brass, nickel-plated, Ø = 8 mm, T _{max} = +150 °C, p _{max} = 10 bar
TH08-VA/xx	Immersion sleeve , stainless steel, V4A (1.4571), Ø = 8 mm, T _{max} = +600 °C, p _{max} = 40 bar
TH08-VA/xx/90	Immersion sleeve , stainless steel, V4A (1.4571), with neck tube (90 mm), Ø = 8 mm, T _{max} = +600 °C, p _{max} = 40 bar

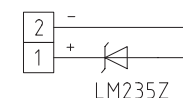
High-performance encapsulation against
vibration, mechanical stress and humidity



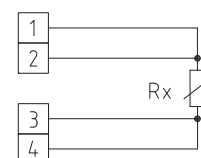
1x two-wire connection
Standard



1x two-wire connection
LM235Z (KP 10)



1x four-wire connection
(optional)



IP65 (standard)
humidity-tight



IP68 (optional)
water-tight
Perfect Sensor Protection



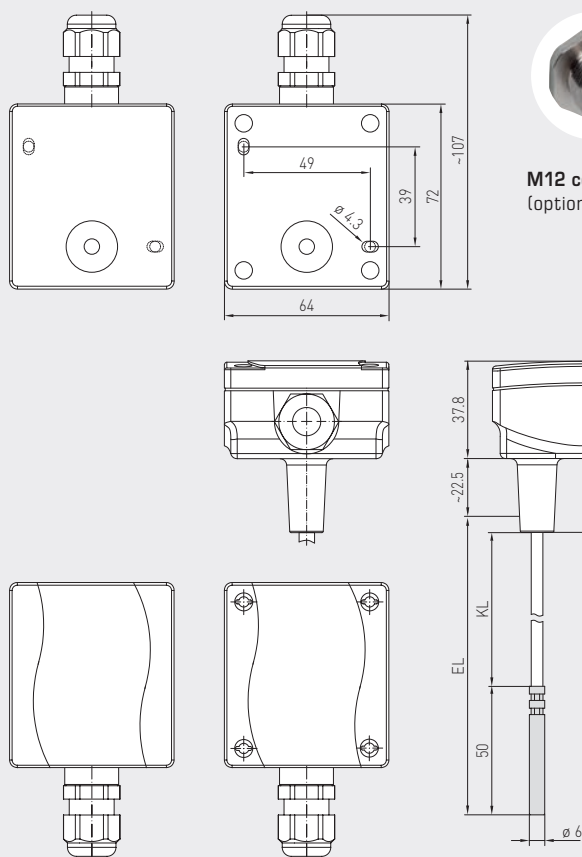
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THERMASGARD® TF 43-F
THERMASGARD® TF 65-F

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with passive output



Dimensional drawing



TF43-F
TF65-F

M12 connector
(optional on request)

with snap-on lid

with quick-locking
screws

TF43-F
with snap-on lid
(IP54)



TF65-F
with quick-locking screws
(IP65)



THERMASGARD® TF 43 F Flexible cable temperature sensor (basic unit with snap-on lid), *Standard*

Type / WG01 / EL	Sensor / Output	Sensor / Output	Price
TF43-F xx		IP54	
TF43-F Pt1000 250mm	Pt1000 (according to DIN EN 60 751, class B)	1101-3080-5051-000	43,27 €
TF43-F Pt1000 450mm	Pt1000 (according to DIN EN 60 751, class B)	1101-3080-5091-000	44,47 €
TF43-F Ni1000 250mm	Ni1000 (according to DIN EN 43 760, class B, TCR = 6180 ppm / K)	1101-3080-9051-000	46,01 €
TF43-F Ni1000 450mm	Ni1000 (according to DIN EN 43 760, class B, TCR = 6180 ppm / K)	1101-3080-9091-000	47,20 €
Optional:	Cable connection with M12 connector according to DIN EN 61076-2-101	on request	
Note:	flexible cable length (EL > 50 mm)		

THERMASGARD® TF 65-F Flexible cable temperature sensor (basic unit with quick-locking screws), *Premium*

Type / WG01 / EL	Sensor / Output	Sensor / Output	Price
TF65-F xx		IP65	
TF65-F Pt1000 250mm	Pt1000 (according to DIN EN 60 751, class B)	1101-3060-5051-000	50,01 €
TF65-F Pt1000 450mm	Pt1000 (according to DIN EN 60 751, class B)	1101-3060-5091-000	51,21 €
TF65-F Ni1000 250mm	Ni1000 (according to DIN EN 43 760, class B, TCR = 6180 ppm / K)	1101-3060-9051-000	52,74 €
TF65-F Ni1000 450mm	Ni1000 (according to DIN EN 43 760, class B, TCR = 6180 ppm / K)	1101-3060-9091-000	53,93 €
Extra charge:	Other sensors and cable lengths optional	on request	
Optional:	Cable connection with M12 connector according to DIN EN 61076-2-101	on request	
Note:	flexible cable length (EL > 50 mm)		

THERMASGARD® TF 43-F **THERMASGARD® TF 65-F**

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A basic unit with flexible cable length in three variants...



TFxx-F + TH08-ms/xx

Immersion / screw-in
temperature sensor
with immersion sleeve,
brass, nickel-plated

TFxx-F + TH08-VA/xx

Immersion / screw-in
temperature sensor
with immersion sleeve,
stainless steel, V4A

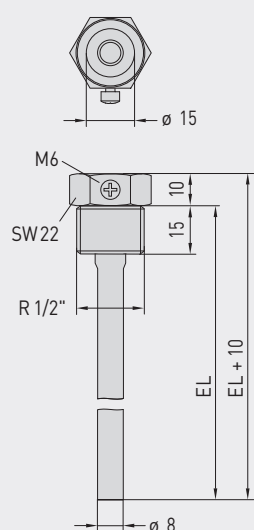
TFxx-F + TH08-VA/xx/90

Immersion / screw-in
temperature sensor with
immersion sleeve with neck
tube, stainless steel, V4A

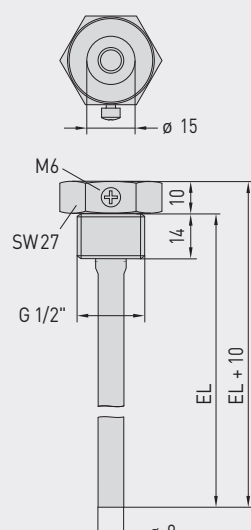
TFxx-F Basic unit

Flexible cable length
through cable entry
in the housing

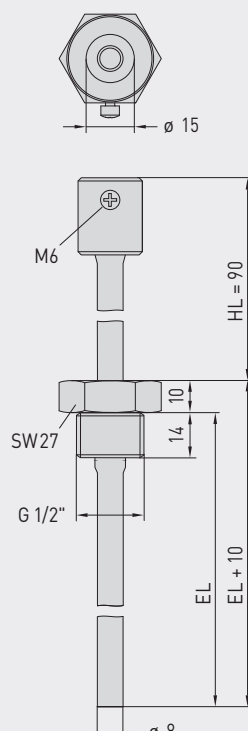
Dimensional drawing **TH08-ms/xx**



Dimensional drawing **TH08-VA/xx**



Dimensional drawing **TH08-VA/xx/90**





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THERMASGARD® TF 43-F
THERMASGARD® TF 65-F

Flexible sleeve / cable temperature sensors,
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...through combination with accessories:



TH08-ms/xx

Immersion sleeve,
brass, nickel-plated,
thread-sealing, conical,
according to DIN 10226



TH08-VA/xx

Immersion sleeve,
stainless steel, V4A,
flat-sealing, cylindrical,
according to DIN 228



TH08-VA/xx/90

Immersion sleeve with neck tube,
stainless steel, V4A,
flat-sealing, cylindrical,
according to DIN 228

THERMASGARD® TH08 Immersion sleeve Ø 8 mm (Accessories)					
Type / WG01B	p _{max} (static)	T _{max}	Inserted Length (EL)	Item No.	Price
TH08-ms/xx	Brass, nickel-plated			without neck tube	
TH08-MS 50MM	10 bar	+150 °C	50 mm	7100-0011-0010-132	9,31 €
TH08-MS 100MM	10 bar	+150 °C	100 mm	7100-0011-0020-132	10,61 €
TH08-MS 150MM	10 bar	+150 °C	150 mm	7100-0011-0030-132	11,20 €
TH08-MS 200MM	10 bar	+150 °C	200 mm	7100-0011-0040-132	11,56 €
TH08-MS 250MM	10 bar	+150 °C	250 mm	7100-0011-0050-132	13,39 €
TH08-MS 300MM	10 bar	+150 °C	300 mm	7100-0011-0060-132	13,76 €
TH08-MS 350MM	10 bar	+150 °C	350 mm	7100-0011-0070-132	13,87 €
TH08-MS 400MM	10 bar	+150 °C	400 mm	7100-0011-0080-132	14,00 €
TH08-VA/xx	Stainless steel, V4A (1.4571)			without neck tube	
TH08-VA 50MM	40 bar	+600 °C	50 mm	7100-0012-0010-132	20,28 €
TH08-VA 100MM	40 bar	+600 °C	100 mm	7100-0012-0020-132	22,41 €
TH08-VA 150MM	40 bar	+600 °C	150 mm	7100-0012-0030-132	24,08 €
TH08-VA 200MM	40 bar	+600 °C	200 mm	7100-0012-0040-132	25,38 €
TH08-VA 250MM	40 bar	+600 °C	250 mm	7100-0012-0050-132	31,55 €
TH08-VA 300MM	40 bar	+600 °C	300 mm	7100-0012-0060-132	32,97 €
TH08-VA 350MM	40 bar	+600 °C	350 mm	7100-0012-0070-132	33,19 €
TH08-VA 400MM	40 bar	+600 °C	400 mm	7100-0012-0080-132	33,78 €
TH08-VA/xx/90	Stainless steel, V4A (1.4571)			with neck tube (90 mm)	
TH08-VA 50/90MM	40 bar	+600 °C	50 mm	7100-0012-0012-132	29,04 €
TH08-VA 100/90MM	40 bar	+600 °C	100 mm	7100-0012-0022-132	30,35 €
TH08-VA 150/90MM	40 bar	+600 °C	150 mm	7100-0012-0032-132	31,84 €
TH08-VA 200/90MM	40 bar	+600 °C	200 mm	7100-0012-0042-132	33,19 €
TH08-VA 250/90MM	40 bar	+600 °C	250 mm	7100-0012-0052-132	34,79 €
TH08-VA 300/90MM	40 bar	+600 °C	300 mm	7100-0012-0062-132	37,71 €
Note: inner diameter of socket 15.0 mm For further information see last chapter!					