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Temperature sensors from ifm. A selection guide.

Temperature sensors
www.ifm.com




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Systems for temperature monitoring


The optimum solution for every requirement




Compact temperature sensors for industrial applications



Compact temperature sensors for mobile applications



Compact temperature sensors for hygienic applications



Temperature sensors – the modular concept for industrial and hygienic applications



Accessories



Infrared temperature sensors for hot objects

Temperature sensors in contact with the medium

Non-contact temperature sensors



	Sensor type	Max. measuring range [°C]	Max installation depth [mm]	Display	Sensor with integrated evaluation	Separate control monitor with process connection	PT100 / PT1000	PT100 / PT1000 probe	PT100 / PT1000 cable sensor		
TA	-50...150	150	✓	✓						Industrial applications	
TN	-50...150	150	✓	✓					4 - 7		
TK	-25...140	270		✓							
TA / TU	-50...150	200		✓						Mobile applications	
TM	-40...150	50			✓				8 - 9		
TA	-50...200	150		✓						Hygienic applications	
TD	-50...150	350	✓	✓					10 - 11		
TAD	-25...160	87.5		✓							
TR	-100...600		✓		✓					The modular concept	
TP	-50...300				✓						
TM	-40...150	250				✓			12 - 15		
TS	-50...250	45						✓			
TT	-40...150	560					✓				
										16 - 17	Accessories
TW Detecting system	50...1350		✓	✓						18 - 19	Infrared
TW Measuring system	0...2500		✓	✓							



For industrial applications

Compact:

Sensor and evaluation in one unit.

Versatile:

Compact sensors with and without display.

Robust:

High pressure resistance up to 400 bar.

Simple:

Setting via setting ring, setting menu or IO-Link.

Precise:

High accuracy thanks to use of PT elements of accuracy class A.

Flexible:

Different process connections and installation depths.



Type TK temperature sensor

Easy adjustment via two setting rings allowing optimum read-out.

Different process connections and installation depths.

Mechanical lock to prevent accidental adjustment.

T05 / T09: 1 / 3 s.

Pressure-resistant up to 300 bar.

Accuracy [K]: ± 3.



Process connection	Installation depth [mm]	Output function	Order no.
Measuring range [°C]			-25...140
G 1/4	39	NO / NC complementary	TK6130
G 1/4	39	2 x NO	TK7130
G 1/2	267	1 x NO / 1 x NC	TK7480



PT100 / PT1000 sensors
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Accessories
Process adapters,
thermowells
pages 16 - 17



The compact units

Temperature sensors for industrial applications



Industrial applications

Mobile applications

Hygienic applications

Type TA temperature transmitter

Operating status indication via LED.

Scalable analogue output 4...20 mA.

IO-Link.

T05 / T09: 1 / 3 s.

Pressure-resistant up to 400 bar.

Accuracy [K]: ± 0.3 + (± 0.1 % MS).



Process connection	Installation depth [mm]	Order no.	Order no.
Measuring range [°C]		-50...150	
Factory setting [°C]		-50...150	0...100
G 1/4	25	TA2105	-
	50	TA2115	-
	100	TA2135	-
	150	TA2145	-
G 1/2	30	TA2405	-
	50	TA2415	TA2417
	100	TA2435	TA2437
	150	TA2445	TA2447

The modular concept

Accessories

Infrared

Technical data and prices?
www.ifm.com



For industrial applications

Savings potential:

Evaluation electronics and integrated process connections in one unit do not require complex documentation and save storage cost.

Unmistakable:

Clear indication of acceptable ranges. Programmable red/green display.

Resistant:

Pressure resistance up to 400 bar.

Simple:

Setting via display and buttons on the unit or via IO-Link.

Flexible:

Different process connections and installation depths.



Type TN temperature sensor

Selectable colour display.

Operation via 3 buttons.

Scalable analogue output 4...20 mA / 0...10 V.

Freely configurable switching output.

IO-Link.

T05 / T09: 1 / 3 s.

Pressure-resistant up to 300 bar.

Accuracy [K]: ± 0.3 + (± 0.1 % MS).



Process connection	Installation depth [mm]	Output function	Order no.
Measuring range [°C]			-50...150
Factory setting [°C]			-40...150
Internal thread M18 x 1.5	45	1 switching output and 1 analogue output 4...20 mA or 0...10 V	TN2511
Internal thread M18 x 1.5	45	2 switching outputs	TN7511



PT100 / PT1000 sensors
pages 12 - 15

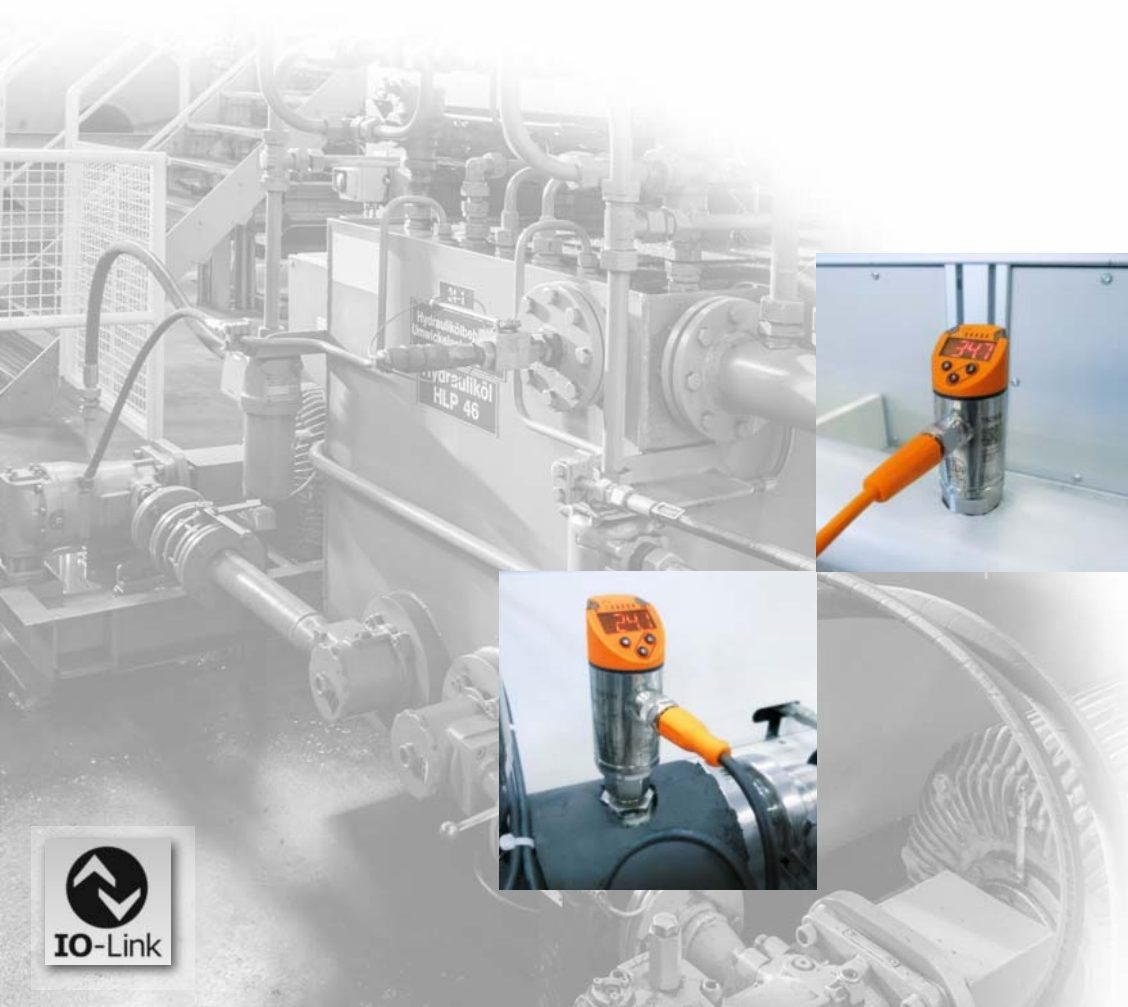


Accessories
Process adapters, thermowells
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The compact units

Temperature sensors for industrial applications



Industrial applications

Mobile applications

Hygienic applications

Type TN temperature sensor
 Selectable colour display.
 Operation via 3 buttons.
 2 x normally open / closed or
 1 x normally open / closed and
 1 analogue output
 4...20 mA / 0...10 V
 scalable.
 IO-Link.
 T05 / T09: 1 / 3 s.
 Pressure-resistant
 up to 400 bar.
 Accuracy [K]:
 ± 0.3 + (± 0.1 % MS).



Process connection	Installation depth [mm]	Output function	Order no.
Measuring range [°C]			-50...150
Factory setting [°C]			-50...150
G 1/4	25	2 switching outputs or 1 switching output and 1 analogue output 4...20 mA or 0...10 V	TN2105
	50		TN2115
G 1/2	30		TN2405
	50		TN2415
	100		TN2435
	150		TN2445

The modular concept

Accessories

Infrared



Compact:

Temperature transmitter
with current or voltage output
or PT1000.

Versatile:

Connector versions M12,
DEUTSCH and AMP selectable.

Economical:

Operating voltage as of 8 V.

Robust:

Pressure resistance up to 400 bar.

Simple:

Plug&Play and preset measuring
ranges.

Flexible:

Different installation lengths.



*Type TA / TU temper-
ature transmitter*

*Welded stainless
steel housing.*

*Installation depths
of 25 to 200 mm.*

T05 / T09: 1 / 3 s.

*Accuracy [K]:
± 0.3 + (± 0.1 % MS).*



Process connection	Installation depth [mm]	Connector	Order no.	Order no.
Measuring range -50...150 °C				
Output function			4...20 mA	0.5...4.5 V
G 1/4	25	M12	TA3105	TU3105
	50	M12	TA3115	-
	200	M12	TA3155	-
G 1/4	25	DEUTSCH	TA4105	TU4105
	50	DEUTSCH	TA4115	-
G 1/4	25	AMP	TA5105	TU5105
	50	AMP	TA5115	-



PT100 / PT1000
sensors
pages 12 - 15

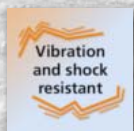


Accessories
Process
adapters,
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pages 16 - 17



The compact units

Temperature sensors for mobile applications



Industrial applications

Mobile applications

Hygienic applications

PT1000 with type TM process connection
Installation depths of 25 to 50 mm.
T05 / T09: 1 / 3 s.
Accuracy [K]:
 $\pm (0.15 + 0.002 \times |t|)$.



Process connection	Installation depth [mm]	Connector	Order no.
Measuring range -40...150 °C · PT1000			
G 1/4	25	M12	TM5101
G 1/2	50	M12	TM5411
G 1/4	25	DEUTSCH	TM6101

The modular concept

Accessories

Infrared



**For hygienic areas
and viscous media**

Compact:

Sensor and transmitter
in one unit.

Hygienic:

Ingress resistance, materials
and approvals comply with
hygiene requirements.

Fast:

Response times ≤ 0.5 s.

Simple:

Preset measuring ranges,
configurable via IO-Link.

Precise:

High accuracy thanks to
use of PT elements of accuracy
class A.

Flexible:

Different process connections
and installation depths.



**Self-monitoring
temperature trans-
mitter type TAD**

*Integrated drift
detection.*

*Free 5-point
calibration
certificate.*

*Cost savings
possible through
reduced calibra-
tion intervals.*

*Diagnostic and
backup function.*

*Scalable
analogue output
4...20 mA.*

IO-Link.

T05 / T09: 3 / 6 s.

*Accuracy [K]:
see data sheet.*



Process connection	Installation depth [mm]	Order no.
Measuring range [°C]		-25...160
Factory setting [°C]		0...150
G 1/2 with sealing cone	33	TAD991
	50	TAD091
	87.5	TAD191
G1 male Aseptoflex Vario	33	TAD981
	50	TAD081
	87.5	TAD181



**PT100 / PT1000
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**Accessories
Process
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**Type TA tempera-
ture transmitter**

*Operating status
indication via LED.*

*Scalable
analogue output
4...20 mA.*

*Hygienic process
connections.*

*Installation depths
of 25 to 150 mm.*

IO-Link.

*T05 / T09:
 $\leq 0.5 / \leq 2$ s.*

*Accuracy [K]:
 $\pm 0.3 + (\pm 0.1 \% MS)$.*



Process connection

Measuring

Factory se

Ø 6 mm

G 1/2 with
sealing cone

Clamp
3/4"

Clamp
1-1.5"



Compact units

Temperature sensors for hygienic areas



Industrial applications

Mobile applications

Hygienic applications

Installation depth [mm]	Order no.	Order no.
Measuring range [°C]	-50...200	0...100
Setting [°C]	0...200	-
50	TA2212	-
100	TA2232	-
150	TA2242	TA2247
Flush mount	-	TA3597
30	TA2502	-
50	TA2512	-
100	TA2532	-
150	TA2542	-
25	TA2002	-
60	TA2012	-
30	TA2802	-
50	TA2812	-
100	TA2832	-
150	TA2842	-

Type TD temperature transmitter with display
 4-digit LED display.
 Scalable analogue output 4...20 mA.
 Hygienic process connections.
 Installation depths of 30 to 350 mm.
 IO-Link.
 T05 / T09: 1 / 3 s.
 Accuracy [K]: ± 0.3 + (± 0.1 % MS).



Process connection	Installation depth [mm]	Order no.	Order no.
Measuring range [°C]		-50...150	
Factory setting [°C]		-10...150	0...100
Ø 6 mm	50	TD2211	TD2217
	100	TD2231	TD2237
	150	TD2241	TD2247
	200	TD2251	TD2257
	250	TD2261	TD2267
	300	TD2271	TD2277
G 1/2 with sealing cone	350	TD2291	TD2297
	30	TD2501	TD2507
	50	TD2511	TD2517
	100	TD2531	TD2537
Clamp 1-1.5"	150	TD2541	TD2547
	30	TD2801	TD2807
	50	TD2811	TD2817
Clamp 2"	100	TD2831	TD2837
	150	TD2841	TD2847
	30	TD2901	TD2907
	50	TD2911	TD2917
	100	TD2931	TD2937
	150	TD2941	TD2947

The modular concept

Accessories

Infrared



For industrial applications



For hygienic areas and viscous media

Individual:

Configure your measurement system according to your requirements.

Suitable:

Broad range of combination options.

Visual:

Evaluation units with or without LED display.

Flexible:

Different process connections and installation depths.

Far reaching:

Measuring ranges from -100 to 600 °C.

Convenient:

Thermowells allow replacement of the sensors in a live process.



Want to find a suitable sensor online?
www.ifm.com

Temperature probe



Accessories
Process adapters, thermowells
pages 16 - 17



The modular concept

Temperature sensors for industrial and hygienic applications



Type TR evaluation unit

Selectable colour display.
Scalable analogue output 4...20 mA / 0...10 V.
Freely configurable switching output.
Automatic detection of the temperature probe.
Accuracy [K]:
 $\pm 0.3 + (\pm 0.1 \% MS)$.



Mounting set



Connection cable up to 30 m



Type TP measured signal converter

Operating status indication via LED.
Scalable analogue output 4...20 mA.
Minimised installation and error sources.
High vibration resistance.
Accuracy [K]:
 $\pm 0.3 + (\pm 0.1 \% MS)$.

Direct connection to the process



PT100 / PT1000 type TT probe sensor

For industrial and hygienic applications.
Different installation depths up to 560 mm.
Measuring probes $\varnothing 6$ and 10 mm.
Protection rating IP 67.
T05 / T09: 1 / 3 s.
Accuracy [K]:
 $\pm (0.15 + 0.002 \times |t|)$.



PT100 / PT1000 type TS cable sensors

Measuring probes $\varnothing 5, 6$ and 10 mm.
Screw-in sensors in M5 and M6 sizes.
Bolt-on sensor for M6 and M10 screws.
Temperature probes for the ATEX zone.
Different cable materials.
Protection rating IP 67.
T05 / T09: 3 / 10 s.
Accuracy [K]:
 $\pm (0.15 + 0.002 \times |t|)$.



PT100 / PT1000 with process connection type TM

Industrial and hygienic process connections.
Different installation depths up to 250 mm.
Measuring probe $\varnothing 6$ mm.
Accuracy class A.
Pressure resistance up to 160 bar.
High protection IP 68 / IP 69K.
T05 / T09: 1 / 3 s.
Accuracy [K]:
 $\pm (0.15 + 0.002 \times |t|)$.



Industrial applications

Mobile applications

Hygienic applications

The modular concept

Accessories

Infrared



For industrial applications



For hygienic areas and viscous media

Need a suitable socket?
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Type TR evaluation unit



Process connection	Measuring range [°C]	Output function	Order no.
G 1/2	-100...600	1 switching output and 1 analogue output 4...20 mA or 0...10 V	TR2439
G 1/2	-100...600	2 switching outputs	TR7439



TR evaluation with E30017 mounting set on PT100 / PT1000 probe sensors type TT



Connection cables (selection)

Plug / socket	Cable length [m]	Order no.
Industrial applications		
Straight / angled	1	EVC017
	5	EVC019
Angled / straight	1	EVC027
	5	EVC029
Angled / angled	1	EVC032
	5	EVC034
Straight / straight	1	EVC012
	5	EVC014
Hygienic applications		
Straight / straight, hygienic	1	EVT042
	5	EVT044

More options at www.ifm.com

PT100 / PT1000 type TT probe sensor
Type TS cable sensors high temperature



Sensor element	Ø probe [mm]	Installation depth [mm]	Order no.	
Industrial applications Measuring range [°C] -40...150				
PT100	6	50	TT9281	
	6	70	TT7281	
	6	100	TT0281	
	6	150	TT1281	
	6	250	TT2281	
	6	350	TT3281	
PT100	10	160	TT1081	
	10	260	TT2081	
	10	360	TT3081	
	10	560	TT5081	
PT1000	10	160	TT1050	
	10	260	TT2050	
	10	360	TT3050	
PT1000	10	560	TT5050	
	Hygienic applications Measuring range [°C] -40...150			
	PT100	6	50	TT9291
		6	100	TT0291
		6	150	TT1291
6		250	TT2291	
6	350	TT3291		
Industrial applications Measuring range [°C] -100...600				
PT100	6	100	TS2451	
	6	150	TS2452	
	6	200	TS2453	
	6	250	TS2454	

PT100 / PT1000 type TS cable sensors





The modular concept

Temperature sensors for industrial and hygienic applications

Type TP
measured signal
converter



Factory setting [°C]	Connection	Output function	Order no.
-50...150	M12 connector	Analogue output 4...20 mA	TP3231
-50...300			TP3232
0...100			TP3237
0...100	M12 connector	Analogue output 0...10 V	TP9237

Industrial applications

TR or TP evaluation
with connection cable
on PT100 / PT1000 sensors
types TM, TT or TS

Direct connection
TR or TP evaluation
on PT100 / PT1000
cable sensors type TS

Direct connection
TP evaluation
on PT100 / PT1000
probe sensors type TT
or TM

Mobile applications

Process connection	Measuring range [°C]	Cable / plug length [m]	Order no.
∅ 5 mm ATEX	-20...80	Silicone / - / 3	TS325A
∅ 6 mm	-40...90	PUR / M12 / 2	TS2289
	-40...90	PUR / M12 / 2	TS2269 ¹⁾
	-40...90	PUR / M12 / 2.5	TS9289
	-40...90	PUR / M12 / 5	TS5289
	-50...250	PTFE / M12 / 0.15	TS9256 ¹⁾
∅ 10 mm	-50...250	PTFE / M12 / 2	TS2256
	-40...90	PUR / M12 / 2	TS2089
	-40...90	PUR / M12 / 2	TS2069 ¹⁾
	-40...90	PUR / M12 / 5	TS5089
	-50...250	PTFE / M12 / 2	TS2056
Contact sensor 12 x 8,7 x 51 mm	-40...90	PUR / M12 / 2	TS2229
Contact sensor 12.5 x 8.7 x 47 mm	-40...90	PUR / - / 2	TS2239
Contact sensor ATEX 10 x 18 x 48 mm	-20...115	Silicone / - / 5	TS502A ¹⁾
Contact sensor ATEX 10 x 10 x 42 mm	-20...115	Silicone / - / 5	TS522A
Screw-in sensor M5	-40...90	PUR / M12 / 2	TS2789
	-30...180	Silicone / M12 / 2	TS2759
	-30...180	Silicone / - / 4	TS4759
	-30...180	Silicone / M12 / 10	TS0759
Screw-in sensor M6	-40...90	PUR / M12 / 2	TS2689
	-30...180	Silicone / M12 / 2	TS2659

PT100 with
process connection
type TM



Process connection	Measuring range [°C]	Installation depth [mm]	Order no.
Industrial applications			
G 1/4	-40...150	25	TM4101
	-40...150	25	TM5101 ¹⁾
G 1/2	-40...150	50	TM4411
	-40...150	50	TM5411 ¹⁾
	-40...150	100	TM4431
	-40...150	150	TM4441
Internal thread M18 x 1.5	-40...150	250	TM4461
	-40...125	60	TM9900
	-40...125	60	TM9950
Hygienic applications			
G 1/2 with sealing cone	-50...140	Flush mount	TM4599
	-40...150	20	TM4591
G 1/2 with sealing cone	-40...150	30	TM4501
	-40...150	50	TM4511
	-40...150	100	TM4531
	-40...150	150	TM4541
Clamp 1 - 1.5"	-40...150	30	TM4801
	-40...150	50	TM4811
	-40...150	100	TM4831
Clamp 2"	-40...150	150	TM4841
	-40...150	30	TM4901
	-40...150	50	TM4911
	-40...150	100	TM4931
	-40...150	150	TM4941

Hygienic applications

The modular concept

Accessories

Infrared

¹⁾PT1000 sensor element

¹⁾PT1000 sensor element



For industrial applications



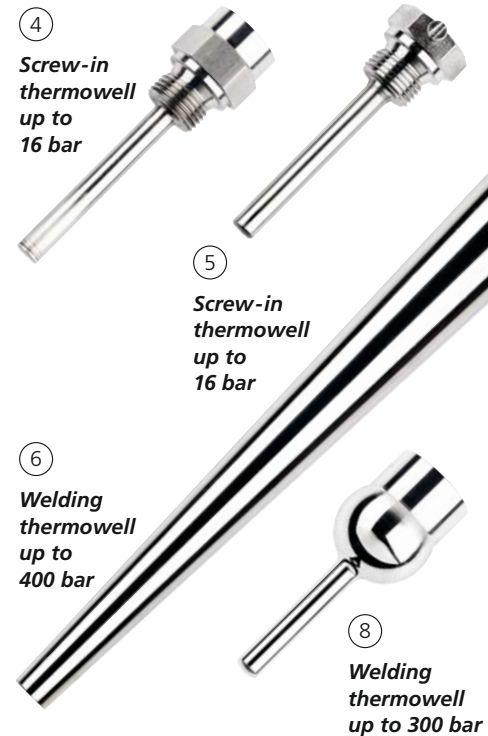
For hygienic areas and viscous media



No.	Device connection	Process connection	For sensor type	Order no.
Industrial applications				
1	Ø 6 mm	G 1/4	- - - TT	E33431
		M12 x 1	- - - TT	E33433
		G 1/2	- - - TT	E30047
1	Ø 10 mm	G 1/2	- - - TT	E30016
		1/2" NPT	- - - TT	E30024

No.	Device connection	Process connection	Installation depth [mm]	Order no.	For sensor type			
Industrial applications								
4	G 1/2	G 1/2	27	E37600	TA241x	-	TM4411	TT0281 ¹⁾
			74	E37610	TA243x	-	TM4431	TT1281 ¹⁾
			82	E35010	-	-	-	TT1081 ¹⁾
			124	E37620	TA244x	-	TM4441	TT2281 ¹⁾
			174	E37630	-	-	-	TT2281 ¹⁾
			182	E35020	-	-	-	TT2081 ¹⁾
			224	E37640	-	-	TM4461	TT3281 ¹⁾
			274	E37650	-	-	-	TT3281 ¹⁾
			282	E35030	-	-	-	TT3081 ¹⁾
			482	E35050	-	-	-	TT5081 ¹⁾
5	Ø 6 mm	G 1/2	33	E37603	TA2212	TD221x	-	TT9281
			83	E37613	TA2232	TD223x	-	TT0281
			128	E37623	TA2242	TD224x	-	TT1281
			233	E37643	-	TD226x	-	TT2281
			333	E37663	-	TD229x	-	TT3281
Industrial applications / Hygienic applications								
6	1/2 NPS ³⁾	Ø 38,1 mm	191	E37430	-	TD227x ¹⁾	-	TT3281 ¹⁾
			267	E37450	-	TD229x ¹⁾	-	TT3281 ¹⁾

In connection with: ¹⁾Adapter E30018 / E30047; ³⁾suitable for G 1/2 and 1/2" NPT



No.	Design	Device connection	Process connection	Order no.	For sensor type			
10	Stainless steel adapter	M18 x 1.5	G 1/2	E30073	-	-	TM	TN
	Titanium adapter	M18 x 1.5	G 1/2	E40114	-	-	TM	TN
	Hastelloy adapter	M18 x 1.5	G 1/2	E40175	-	-	TM	TN
	Brass adapter	M18 x 1.5	G 1/2	E40097	-	-	TM	TN
	Plastic adapter	M18 x 1.5	Ø 23 mm	E40138	-	-	TM	TN
11	Ball 24.7 mm	Ø 6 mm	Clamp adapter	E30108	TA	TD	-	TT
	Ball 25 mm	Ø 6 mm	Clamp adapter	E30407	TA	TD	-	TT





Accessories

Process adapters and thermowells for temperature sensors in industrial and hygienic applications

Order now?
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No.	Device connection	Process connection	For sensor type				Order no.
Industrial applications							
②	6 / 8 / 10 mm	G 1/2	TA	TD	TS	TT	E30018
		1/2" NPT	TA	TD	TS	TT	E30025
Hygienic applications							
③	Ø 6 mm	G 1/2 with sealing cone	TA	TD	-	TT	E30144



Clamp adapter



⑦
Screw-in thermowell up to 16 bar

⑨
Clamp thermowell up to 25 bar

No.	Device connection	Process connection	Installation depth [mm]	Order no.	For sensor type			
Hygienic applications								
⑦	G 1/2 with sealing cone	G 1/2 with sealing cone	53	E30393	TAD191	-	-	-
			68	E37511	TA2532	TD253x	TM4531	TT1291 ²⁾
			118	E37521	TA2542	TD254x	TM4541	TT2291 ²⁾
⑧	G 1/2 with sealing cone	Ø 34 mm	49	E37411	TA2512	TD251x	TM4511	TT0291 ²⁾
			86	E30403	TAD191	-	-	-
			99	E37421	TA2532	TD253x	TM4531	TT1291 ²⁾
			149	E37431	TA2542	TD254x	TM4541	TT2291 ²⁾
			64	E37810	TA2435 TA2333	TD224x ¹⁾	TM4431 TM4331	TT1291 ¹⁾
⑨	1/2" NPS ³⁾	Clamp 1-1.5"	115	E37820	TA2445 TA2343	TD225x ¹⁾	TM4441 TM4341	TT2291 ¹⁾
			191	E37830	-	TD227x ¹⁾	-	TT3291 ¹⁾
			267	E37850	-	TD229x ¹⁾	-	TT3291 ¹⁾
⑨	1/2" NPS ³⁾	Clamp 2"	64	E37910	TA2435 TA2333	TD224x ¹⁾	TM4431 TM4331	TT1291 ¹⁾
			115	E37920	TA2445 TA2343	TD225x ¹⁾	TM4441 TM4341	TT2291 ¹⁾
			191	E37930	-	TD227x ¹⁾	-	TT3291 ¹⁾
			267	E37950	-	TD229x ¹⁾	-	TT3291 ¹⁾

In connection with: ¹⁾Adapter E30018 / E30047; ²⁾Adapter E30144; ³⁾suitable for G 1/2 and 1/2" NPT

No.	Design / Device connection	Process connection	Order no.	For sensor type
⑫	Metal-to-metal seal / G1 Aseptoflex Vario	Clamp 1 - 1.5"	E33701	TAD
		DIN 11851 DN32	E33711	TAD
		Varivent DN25	E33721	TAD
		SMS DN40	E33731	TAD
⑫	Sealing by O-ring / G1 Aseptoflex Vario	Clamp 1 - 1.5"	E33201	TAD
		DIN 11851 DN32	E33211	TAD
		Varivent DN25	E33221	TAD
		DN/OD33.7	E33304	TAD
		DRD Flansch	E33242	TAD

No.	Design / Device connection	Process connection	Order no.	For sensor type
⑫	Metal-to-metal seal / G 1/2 with sealing cone	Clamp 1 - 1.5"	E33401	TA TAD TD TM
		DIN 11851 DN25	E43304	TA TAD TD TM
		Varivent DN25	E43306	TA TAD TD TM
		SMS DN25	E33430	TA TAD TD TM
		G 3/4	E43302	TA TAD TD TM
⑪	Metal-to-metal seal / G 1/2 with sealing cone	G1	E43303	TA TAD TD TM
		Ø 35	E30055	TA TD TM TT ²⁾
		Ø 45	E30056	TA TD TM TT ²⁾

In connection with: ²⁾Adapter E30144

More options at www.ifm.com

Industrial applications

Mobile applications

Hygienic applications

The modular concept

Accessories

Infrared



For industrial applications

Without contact:

Exact temperature measurement of particularly hot objects or objects which are difficult to access.

Hot:

For object temperatures of 0...2,500 °C.

Informative:

Display of the current object temperature (type TW20xx).

Simple:

The sensors can be set via the display and pushbuttons.

Precise:

Scratch-resistant precision lenses for minimum sensitivity to ambient light.

Convenient:

Triggering of test function on sensor or by external control signal.



Temperature sensor type TW70xx

2 switching outputs.

Easy switch-point setting via display.

3-pushbutton operating concept.

Accuracy [K]: see data sheet.



Measuring range [°C]	Wave length range [µm]	Output function	Order no.
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Detecting system			
50...500	8...14	2 binary switching outputs	TW7000
250...1250	1...1.7		TW7001
350...1350	1...1.7		TW7011 ¹⁾

¹⁾Sensor for fibre-optics and measuring head

No.	Design	Order no.
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①	Fibre-optics 2 m	E35061
	Fibre-optics 5 m	E35062
②	Measuring head	E35060



Type TW20xx temperature sensor

Scalable analogue output 4...20 mA.

Freely configurable switching output.

Easy emissivity setting via display.

3-pushbutton operating concept.

Local temperature indication.

Accuracy [K]: see data sheet.





For hot objects

Infrared temperature sensors, binary or analogue



Industrial applications

Mobile applications

Hygienic applications

Measuring range [°C]	Wave length range [µm]	Output function	Order no.
Measuring system			
0...1000	8...14	Analogue output	TW2000
250...1600	1...1.7	4...20 mA and switching output	TW2001
500...2500	0.78...1.06		TW2002
300...1600	1...1.7		TW2011²⁾

Accessories

No.	Design	Order no.
③	Air purge	E35063
④	Cooling jacket	E35068
⑤	Mounting bracket	E35065
⑥	Protective tube	E35066
⑦	Insulating tube	E35067

The modular concept

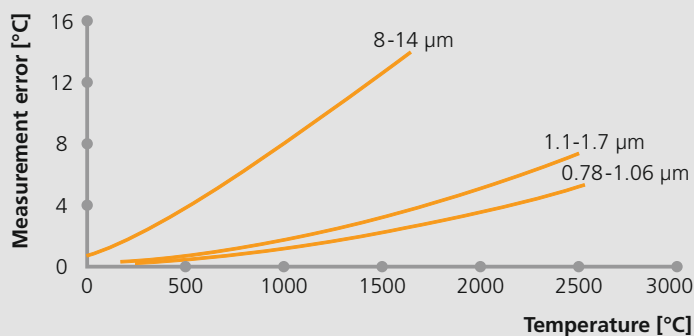
²⁾Sensor incl. fibre-optics and measuring head

Accessories

Infrared



Select the optimum sensor
 The optimum sensor is to be as short-wave as possible. The shorter the wavelength and the smaller the spectral range, the lower the impact of changes of the object's emission factor on the measurement.



Temperature measuring error depending on the temperature and the wave length at 1 % change of the degree of emission

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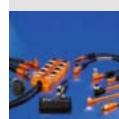
Identification systems



**Condition monitoring
systems**



**Systems for
mobile machines**



**Connection
technology**



Accessories