

ifm efector



Temperature sensors from ifm. Selection guide

Temperature sensors
www.ifm.com/us



Systems for temperature monitoring

The optimum solution for every requirement

Temperature sensors in contact with the medium



Compact temperature sensors for industrial applications



Compact temperature sensors for sanitary applications



Temperature sensors – the modular concept for industrial and sanitary applications



Accessories

Non-contact temperature sensors



Infrared temperature sensors for hot objects



	Sensor type	Max. measuring range [°F / °C]	Max. installation depth [mm]	Display	Sensor with integrated evaluation	Separate control monitor	PT100 RTD with process connection	PT100 / PT1000 RTD probe	PT100 / PT1000 RTD cabled probe
TA Transmitter	-58...302 °F (-50...150 °C)	150	✓						4 - 5
TN Switching and analog with display	-58...302 °F (-50...150 °C)	45	✓	✓					
TK Switch	-13...284 °F (-25...140 °C)	267		✓					
TA Sanitary transmitter	-58...392 °F (-50...200 °C)	150		✓					6 - 7
TD Sanitary transmitter with display	-58...302 °F (-50...150 °C)	350	✓	✓					
TAD Self-monitoring transmitter	-13...320 °F (-25...160 °C)	87.5		✓					
TR Evaluation unit with display	-148...1112 °F (-100...600 °C)		✓		✓				8 - 11
TP Transmitter plug	-58...572 °F (-50...300 °C)				✓				
TM PT100 RTD probe with process connection	-40...302 °F (-40...150 °C)	250				✓			
TS Cabled PT100/PT1000 RTD probe	-58...482 °F (-40...150 °C)	45						✓	
TT PT100/PT1000 RTD probe	-40...302 °F (-40...150 °C)	560					✓		
									12 - 13
TW Infrared hot object detection	122...2462 °F (50...1350 °C)		✓	✓					14 - 15
TW Infrared hot object measuring system	32...4532 °F (0...2500 °C)		✓	✓					



For industrial applications

Compact:

Sensor and evaluation in one unit.

Versatile:

Compact sensors with and without display.

Robust:

High pressure resistance up to 5800 psi.

Simple:

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

Precise:

High accuracy PT elements with class A accuracy.

Flexible:

Multiple process connections and installation depths.



Type TK temperature sensor

Easy adjustment via two setting rings for simple setup.

Different process connections and installation depths.

Mechanical lock to prevent accidental change of adjustment.

T05 / T09: 1 / 3 s.

Pressure-resistant up to 4350 psi.

Process connection	Installation depth [mm]	Output function	Part no.	List price (USD)
Measuring range -13...284 °F / -25...140 °C				
1/4" NPT	39	NO / NC complementary	TK6330	\$146.00
1/4" NPT	39	2 x NO	TK7330	\$146.00
G 1/4	39	NO / NC complementary	TK6130	\$150.00
G 1/4	39	2 x NO	TK7130	\$150.00
G 1/2	267	1 x NO / 1 x NC	TK7480	\$167.00



PT100 / PT1000 sensors pages 10 - 11



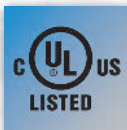
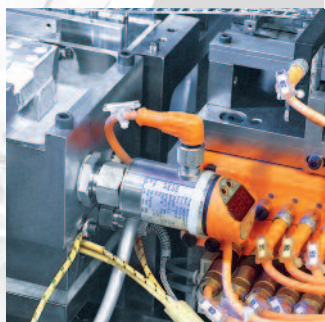
Accessories Process adapters, thermowells pages 12 - 13



The compact units

Temperature sensors for industrial applications

Technical data
at www.ifm.com/us



Process connection	Installation depth [mm]	Probe dia (mm)	Output function	Part no.	List price (USD)	Required accessories
Measuring range -58...302 °F / -50...150 °C						
Factory setting -40...302 °F / -40...150 °C						
Internal thread M18 x 1.5	45	6	Switching, analog 4...20 mA or 0...10 V	NEW! TN2511	\$299.00	Section ⑩
Internal thread M18 x 1.5	45	6	2 switching outputs	NEW! TN7511	\$270.00	Section ⑩

NEW! Next Generation
Type TN temperature sensor
 4-digit LED display.
 Simple 3-pushbutton setup allows sensor to be parameterized in minutes with new scroll and enter buttons.
 IO-Link compatible.
 Large bright LEDs can be seen from all angles and indicate output status.
 Green-red display provides at-a-glance status indication.
 Laser-etched part number will not fade.
 QR code for quick access to technical data.



Type TA temperature transmitter
 Operating status indication via LED.
 Scalable analog output 4...20 mA.
 IO-Link compatible.
 T05 / T09: 1 / 3 s.
 Pressure-resistant up to 5800 psi.



Process connection	Installation depth [mm]	Part no.	Part no.	List price (USD)
Measuring range -58...302 °F / -50...150 °C				
Factory setting 0...300 °F / 0...100 °C				
1/4" NPT	25	TA2603	-	\$164.00
	50	TA2613	-	\$164.00
	100	TA2633	-	\$169.00
1/2" NPT	150	TA2643	-	\$169.00
	30	TA2303	-	\$174.00
	50	TA2313	-	\$174.00
1/2" NPT	100	TA2333	-	\$179.00
	150	TA2343	-	\$179.00
	Measuring range -58...302 °F / -50...150 °C			
Factory setting -50...150°C / 0...100°C				
G 1/4	25	TA2105	-	\$164.00
	50	TA2115	-	\$164.00
	100	TA2135	-	\$169.00
	150	TA2145	-	\$169.00
G 1/2	30	TA2405	-	\$174.00
	50	TA2415	TA2417	\$174.00
	100	TA2435	TA2437	\$179.00
	150	TA2445	TA2447	\$179.00



**For sanitary
and wet areas**

Compact:
Sensor and transmitter
in one unit.

Sanitary:
Ingress resistance, materials
and approvals comply with
sanitary requirements.

Fast:
Response times ≤ 0.5 s.

Simple:
Preset measuring ranges,
configurable via IO-Link.

Precise:
High accuracy PT elements with
class A accuracy.

Flexible:
Multiple process connections and
installation depths.



**Self-monitoring temperature
transmitter type TAD**

Integrated drift detection.

*Free 5-point calibration
certificate.*

*Cost savings possible through
reduced calibration intervals.*

Diagnostic and backup function.

*Scalable analog output
4...20 mA.*

IO-Link compatible.

T05 / T09: 3 / 6 s.



Process connection	Installation depth [mm]	Part no.	List price (USD)	Required accessories
Measuring range		-13...320 °F / -25...160 °C		
Factory setting		32...302 °F / 0...150 °C		
G 1/2 with sealing cone	33	TAD991	\$442.00	Section ⑪ ⑫ ⑭
	50	TAD091	\$445.00	
	87.5	TAD191	\$465.00	
G1 male Aseptoflex Vario	33	TAD981	\$442.00	Section ⑬
	50	TAD081	\$455.00	
	87.5	TAD181	\$457.00	

**Type TA temperature
transmitter**

*Operating status
indication via LED*

*Scalable analog
output 4...20 mA.*

*Sanitary process
connections.*

*Installation depths
of 25 to 150 mm.*

IO-Link compatible.

T05 / T09: < 0.5 / < 2 s.



**PT100 / PT1000
sensors
pages 10 - 11**



**Accessories
Process
adapters,
thermowells
pages 12 - 13**



Process connection

Measuring range

Factory setting

Ø 6 mm

G 1/2 with
sealing cone

Tri-clamp
3/4"

Tri-clamp
1.5"



Compact units

Temperature sensors for sanitary areas



Installation depth [mm]	Part no.	Part no.	List price (USD)	Required accessories
Measuring range	-50...200°C	0...100°C		
Factory setting	0...200°C	-		
50	TA2212	-	\$175.00	
100	TA2232	-	\$180.00	Section ① ② ③
150	TA2242	-	\$180.00	
Flush mount	-	TA3597	\$190.00	
30	TA2502	-	\$190.00	
50	TA2512	-	\$190.00	Section ⑪ ⑫ ⑭
100	TA2532	-	\$195.00	
150	TA2542	-	\$195.00	
25	TA2002	-	\$185.00	
60	TA2012	-	\$185.00	
30	TA2802	-	\$190.00	
50	TA2812	-	\$190.00	
100	TA2832	-	\$195.00	
150	TA2842	-	\$195.00	

Type TD temperature transmitter with display
 4-digit LED display.
 Scalable analog output 4...20 mA.
 Sanitary process connections.
 Installation depths of 30 to 350 mm.
 IO-Link compatible.
 T05 / T09: 1 / 3 s.



Process connection	Installation depth [mm]	Part no.	Part no.	Part no.	List price (USD)	Required accessories	
Measuring range		-58...302 °F / -50...150 °C					
Factory setting		-10...150°C	0...100°C	0...300°F			
Ø 6 mm	50	TD2211	TD2217	TD2213	\$200.00		
	100	TD2231	TD2237	TD2233	\$205.00		
	150	TD2241	TD2247	TD2243	\$210.00		
	200	TD2251	TD2257	TD2253	\$216.00	Section ① ② ③	
	250	TD2261	TD2267	TD2263	\$221.00		
	300	TD2271	TD2277	TD2273	\$226.00		
G 1/2 with sealing cone	350	TD2291	TD2297	TD2293	\$231.00		
	30	TD2501	TD2507	-	\$221.00		
	50	TD2511	TD2517	-	\$221.00		
	100	TD2531	TD2537	-	\$226.00	Section ⑪ ⑫ ⑭	
	150	TD2541	TD2547	-	\$231.00		
	30	TD2801	TD2807	TD2803	\$221.00		
Tri-clamp 1.5"	50	TD2811	TD2817	TD2813	\$221.00		
	100	TD2831	TD2837	TD2833	\$226.00		
	150	TD2841	TD2847	TD2843	\$231.00		
Tri-clamp 2"	30	TD2901	TD2907	TD2903	\$221.00		
	50	TD2911	TD2917	TD2913	\$226.00		
	100	TD2931	TD2937	TD2933	\$231.00		
150	TD2941	TD2947	TD2943	\$237.00			



For industrial applications



For sanitary and wet areas

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 -148 to 1112 °F.

Convenient:

Thermowells allow replacement of the sensors in a live process.



Evaluation unit

Mounting

Direct connection to the process

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



Temperature probe



Accessories
Process adapters,
thermowells
pages 12 - 13



The modular concept

Temperature sensors for industrial and sanitary applications



NEW! Next Generation
Type TR evaluation unit
4-digit LED display.
Simple 3-pushbutton setup allows sensor to be parameterized in minutes with new scroll and enter buttons.
IO-Link compatible
Large bright LEDs can be seen from all angles and indicate output status.
Green-red display provides at-a-glance status indication.
Laser-etched part number will not fade.
QR code for quick access to technical data.



Type TP measured signal converter
Operating status indication via LED.
Scalable analog output 4...20 mA resistance.
IO-Link compatible.
Minimized installation and error sources.
High vibration



Mounting set

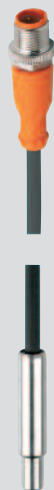


Connection cable up to 30 m

Direct connection to the process



PT100 / PT1000 RTD type TT probe sensor
For industrial and sanitary applications.
Different installation depths up to 560 mm.
Protection rating IP 67.
Measuring probes \varnothing 6 and 10 mm.
Accuracy class A.
Pressure resistance up to 2300 psi.



PT100 / PT1000 RTD 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.



PT100 RTD with process connection type TM
Industrial and sanitary process connections.
Different installation depths up to 250 mm.
High protection IP 68 / IP 69K.
Measuring probe \varnothing 6 mm.
Accuracy class A.
Pressure resistance up to 2300 psi.





For industrial applications



For sanitary and wet areas

Need a suitable cable?
www.ifm.com/us



NEW! Type TR evaluation unit

Measuring range [°C]	Output function	Part no.	List price (USD)
-148...1112 °F -100...600 °C	Analog output, switching output 4...20 mA or 0...10 V	NEW! TR2439	\$275.00
-148...1112 °F -100...600 °C	2 switching outputs	NEW! TR7439	\$232.00



TR evaluation with E30017 (\$34.00) mounting set on PT100 / PT1000 probe sensors type TT



TR mounting bracket: E30421 (\$7.00)



Connection cables

PT100 / PT1000 RTD probe type TT



RTD element	Ø probe [mm]	Installation depth [mm]	Part no.	List price (USD)	Required accessories
Industrial applications					
Measuring range -40...302 °F / -40...150 °C					
PT100	6	50	TT9281	\$81.00	Section ① ②
	6	100	TT0281	\$91.00	
	6	150	TT1281	\$94.00	
	6	250	TT2281	\$96.00	
	6	350	TT3281	\$106.00	
PT100	10	160	TT1081	\$78.00	Section ① ②
	10	260	TT2081	\$85.00	
	10	360	TT3081	\$91.00	
	10	560	TT5081	\$100.00	
PT1000	10	150	TT1050	\$80.00	Section ① ②
	10	260	TT2050	\$85.00	
	10	360	TT3050	\$91.00	
	10	560	TT5050	\$97.00	
Sanitary applications					
Measuring range -40...302 °F / -40...150 °C					
PT100	6	50	TT9291	\$89.00	Section ③
	6	100	TT0291	\$98.00	
	6	150	TT1291	\$100.00	
	6	250	TT2291	\$98.00	
	6	350	TT3291	\$108.00	

Plug / cable	Cable length [m]	Part no.	List price (USD)
Industrial applications (PUR jacket)			
Straight / angled	1	EVC017	\$18.00
	5	EVC019	\$22.00
Angled / straight	1	EVC027	\$18.00
	5	EVC029	\$22.00
Angled / angled	1	EVC032	\$18.00
	5	EVC034	\$22.00
Straight / straight	1	EVC012	\$18.00
	5	EVC014	\$22.00
Sanitary applications (PVC jacket)			
Straight / straight, sanitary	5	EVT044	\$26.00
	10	EVT045	\$31.00
Angled / angled, sanitary	5	EVT050	\$26.00
	10	EVT051	\$31.00

More options at www.ifm.com/us

PT100 RTD with process connection type TM





The modular concept

Temperature sensors for industrial and sanitary applications

Type TP
measured signal
converter



Factory setting	Measuring range	Connection	Output function	Part no.	List price (USD)
0...300 °F				TP3233	\$90.00
-50...150 °C	-58...572 °F	M12 connector	Analog output 4...20 mA	TP3231	\$90.00
-50...300 °C	-50...300 °C			TP3232	\$90.00
0...100 °C				TP3237	\$90.00
0...100 °C	-58...572 °F -50...300 °C	M12 connector	Analog output 0...10 V	TP9237	\$90.00

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

Direct connection
TR or TP evaluation
on PT100 / PT1000
cabled probes type TS

Direct connection TP
evaluation on PT100 /
PT1000 RTD probes
type TT or TM

Process connection	Measuring range	Installation depth [mm]	Part no.	List price (USD)	Required accessories
Industrial applications					
1/4" NPT	-40...302°F/ -40...150°C	25	TM5601 ¹⁾	\$82.00	-
		50	TM4311	\$95.00	-
		100	TM4331	\$98.00	-
1/2" NPT	-40...302°F/ -40...150°C	100	TM5311 ¹⁾	\$96.00	-
		150	TM4341	\$100.00	-
		250	TM4361	\$109.00	-
		25	TM4101	\$95.00	-
G 1/4	-40...302°F/ -40...150°C	25	TM5101 ¹⁾	\$93.00	-
		50	TM4411	\$99.00	-
G 1/2	-40...302°F/ -40...150°C	50	TM5411 ¹⁾	\$97.00	-
		100	TM4431	\$103.00	-
		150	TM4441	\$106.00	-
Internal thread M18 x 1.5	-40...257°F/ -40...125°C	60	TM9550 ¹⁾	\$112.00	Section ⑩
		60	TM9950	\$114.00	Section ⑩
Sanitary applications					
G 1/2 with sealing cone	-40...302°F/ -40...150°C	20	TM4591	\$105.00	-
		30	TM4501	\$111.00	-
		50	TM4511	\$117.00	Section ⑪ ⑫ ⑭
		100	TM4531	\$122.00	-
		150	TM4541	\$128.00	-
Clamp 1 - 1.5"	-40...302°F/ -40...150°C	30	TM4801	\$112.00	-
		50	TM4811	\$115.00	-
		100	TM4831	\$118.00	-
Clamp 2"	-40...302°F/ -40...150°C	150	TM4841	\$120.00	-
		30	TM4901	\$123.00	-
		50	TM4911	\$125.00	-
G 1/2 with sealing cone	-58...284°F/ -50...140°C	100	TM4931	\$129.00	-
		150	TM4941	\$133.00	-
G 1/2 with sealing cone	-58...284°F/ -50...140°C	Flush mount	TM4599	\$113.00	-

PT100/PT1000
cabled
RTD probes
type TS



Process connection	Measuring range	Cable / plug length [m]	Part no.	List price (USD)	Required accessories
Ø 5 mm ATEX	-4...176 °F 20...80 °C	Silicone / - / 3	TS325A	\$139.00	Section ②
Ø 6 mm	-40...194 °F -40...90 °C	PUR / M12 / 2	TS2269 ¹⁾	\$51.00	-
		PUR / M12 / 2	TS2289	\$52.00	-
		PUR / M12 / 2.5	TS9289	\$57.00	-
		PUR / M12 / 5	TS5289	\$63.00	-
Ø6mm x 100mm	-58...482 °F -50...250 °C	PTFE / M12 / 0.15	TS9256 ¹⁾	\$112.00	Section ②
		PTFE / M12 / 2	TS2256	\$112.00	-
Ø6mm x 150mm	-148...1112 °F	PFA / M12 / 2	TS2451	\$108.00	-
Ø6mm x 200mm	-100...600 °C	PFA / M12 / 2	TS2452	\$110.00	-
Ø6mm x 250mm		PFA / M12 / 2	TS2453	\$112.00	-
Ø 10 mm	-40...194 °F -40...90 °C	PUR / M12 / 2	TS2454	\$115.00	-
		PUR / M12 / 2	TS2069 ¹⁾	\$56.00	-
		PUR / M12 / 2	TS2089	\$57.00	Section ②
Bolt - on 12x8.7x51 mm	-58...482 °F -50...250 °C	PUR / M12 / 5	TS5089	\$63.00	-
		PTFE / M12 / 2	TS2056	\$112.00	-
Bolt - on 12.5x8.7x47 mm	-13...194 °F -25...90 °C	PUR / M12 / 2	TS2229	\$71.00	Section ②
Bolt - on 10x18x48 mm	-4...239 °F -20...115 °C	PUR / - / 2	TS2239	\$41.00	Section ②
Bolt - on ATEX 10x10x42 mm		Silicone / - / 5	TS502A ¹⁾	\$206.00	Section ②
Screw-in sensor M5	-40...194 °F -40...90 °C	PUR / M12 / 0.5	TS9789	\$66.00	-
		PUR / M12 / 2	TS2789	\$68.00	-
		Silicone / M12 / 2	TS2759	\$82.00	Section ②
		Silicone / - / 4	TS4759	\$112.00	-
Screw-in sensor M6	-22...356 °F -30...180 °C	Silicone / M12 / 10	TS0759	\$112.00	-
		PUR / M12 / 2	TS2689	\$58.00	Section ②
Screw-in sensor M6	-40...194 °F -40...90 °C	PUR / M12 / 2	TS2689	\$58.00	Section ②
		Silicone / M12 / 2	TS2659	\$80.00	-

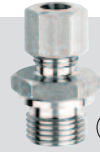
¹⁾PT1000 sensor element



For industrial applications



For sanitary and wet areas



Compression fitting



Clamp fitting

Section	Device connection	Process connection	Ferrule material	For sensor type				Part no.	List price (USD)
Industrial applications									
①	Ø 6 mm	1/4" NPT	polyamide	TA	TD	-	TTx2xx	UT0058	\$34.00
		1/4" NPT	316 Ti	TA	TD	-	TTx2xx	E30049	\$35.00
		1/2" NPT	316 Ti	TA	TD	-	TTx2xx	UT0038	\$35.00
		1/2" NPT	polyamide	TA	TD	-	TTx2xx	UT0042	\$31.00
		G 1/2	316 Ti	TA	TD	-	TTx2xx	E30047	\$41.00
①	Ø 10 mm	1-1/4-18 UNEF	polyamide	TA	TD	TS	TT	UT0039	\$56.00
		1/2" NPT	316 Ti	-	-	-	TTx0xx	E30024	\$27.00
		G 1/2	316 Ti	-	-	-	TTx0xx	E30016	\$27.00
		1/2" NPT	FPM	TA	TD	TS	TT	E30025	\$27.00
②	6 / 8 / 10 mm	G 1/2	FPM	TA	TD	TS	TT	E30018	\$27.00

Section	Device connection	Process connection	Bore diameter	Installation depth [mm]	Part no.	For sensor type				List price (USD)
Industrial applications										
④	1/4" NPT	1/2" NPT	6 mm	76	UT0022	-	TD224x ³⁾	-	TT1281	\$35.00
				210	UT0023	-	TD226x ³⁾	-	TT2281	\$40.00
				288	UT0024	-	-	-	TT3281	\$46.00
④	1/2" NPS	1/2" NPT	10 mm	100	UT0009	-	-	-	TT10xx ⁴⁾	\$33.00
				200	UT0010	-	-	-	TT20xx ⁴⁾	\$39.00
				300	UT0011	-	-	-	TT30xx ⁴⁾	\$46.00
				500	UT0012	-	-	-	TT50xx ⁴⁾	\$54.00
④	1/2" NPS	1/2" NPT	6 mm	64	E37210	TA2833	TD224x ²⁾	TM4331	TT1281	\$24.00
				115	E37220	TA2843	TD225x ²⁾	-	-	\$36.00
				190	E37230	-	TD226x ²⁾	-	TT2281	\$51.00
				267	E37250	-	TD229x ²⁾	-	TT3281	\$67.00
④	G 1/2	G 1/2	10 mm	82	E35010	-	-	-	TT1081 ¹⁾	\$47.00
				182	E35020	-	-	-	TT2081 ¹⁾	\$53.00
				282	E35030	-	-	-	TT3281 ¹⁾	\$59.00
④	G 1/2	G 1/2	6 mm	27	E37600	TA2415	-	TM4411	TT0281 ¹⁾	\$31.00
				74	E37610	TA2435	-	TM4431	TT1281 ¹⁾	\$31.00
				124	E37620	TA2445	-	TM4441	TT2281 ¹⁾	\$39.00
⑤	Ø 6 mm	G 1/2	6 mm	33	E37603	TA2212	TD221x	-	TT9281	\$30.00
				83	E37613	TA2232	TD223x	-	TT0281	\$30.00
				120	E37623	TA2242	TD224x	-	TT1281	\$32.00
				233	E37643	-	TD226x	-	TT2281	\$34.00
				333	E37663	-	TD229x	-	TT3281	\$39.00

In connection with: ¹⁾Adapter E30018/E30047 ²⁾Adapter UT0042 ³⁾Adapter UT0058 ⁴⁾Adapter E30024



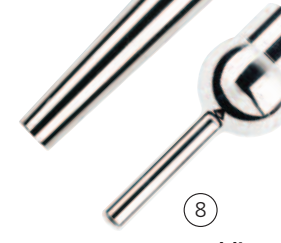
Screw-in thermowell



Screw-in thermowell



Welding thermowell

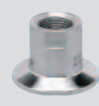


Welding thermowell

Section	Design	Device connection	Process connection	Part no.	For sensor type				Price list (USD)	
⑩	Stainless steel adapter	M18 x 1.5	1/4" NPT	E40106	-	-	TM	TN	-	\$22.00
	Stainless steel adapter	M18 x 1.5	1/2" NPT	E40107	-	-	TM	TN	-	\$24.00
	Stainless steel adapter	M18 x 1.5	3/4" NPT	U40085	-	-	TM	TN	-	\$46.00
	Stainless steel adapter	M18 x 1.5	1" NPT	U40080	-	-	TM	TN	-	\$74.00
	Stainless steel adapter	M18 x 1.5	G 1/4	E40099	-	-	TM	TN	-	\$22.00
	Stainless steel adapter	M18 x 1.5	G 1/2	E40096	-	-	TM	TN	-	\$27.00
⑪	Ball 24.7 mm	Ø 6 mm	Clamp adapter	E30108	TA	TD	-	-	TT	\$54.00
	Ball 25 mm	Ø 6 mm	Clamp adapter	E30407	TA	TD	-	-	TT	\$54.00



Adapter



Process adapter G1/2



Welding adapter



Process adapter G1



Accessories

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

Section	Device connection	Process connection	For sensor type	Part no.	List price (USD)
Sanitary applications					
③	Ø 6 mm	G 1/2	TA TD - TTx29x	E30144	\$45.00



Clamp adapter

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⑦
Screw-in thermowell

⑨
Tri-clamp thermowell

Section	Device connection	Process connection	Installation depth [mm]	Part no.	For sensor type				List price (USD)
Industrial applications / Sanitary applications									
⑥	1/2 NPS	Ø 38.1 mm	191	E37430	-	TD226x ¹⁾	-	TT3281 ¹⁾	\$86.00
			267	E37450	-	TD229x ¹⁾	-	TT3281 ¹⁾	\$116.00
Sanitary applications									
⑦	G 1/2 with sealing cone	G 1/2 with sealing cone	68	E37511	TA2532	TD253x	TM4531	TT1281 ²⁾	\$55.00
			118	E37521	TA2542	TD254x	TM4541	TT2281 ²⁾	\$60.00
⑧	G 1/2 with sealing cone	Ø 34 mm weld-on	49	E37411	TA2512	TD251x	TM4511	TT0291 ²⁾	\$62.00
			99	E37421	TA2532	TD253x	TM4531	TT1291 ²⁾	\$67.00
			149	E37431	TA2542	TD254x	TM4541	TT2291 ²⁾	\$72.00
			64	E37810	TA2435 TA2333	TD224x ¹⁾	TM4431 TM4331	TT1281 ¹⁾	\$79.00
⑨	1/2" NPS ³⁾	1.5"	115	E37820	TA2445 TA2343	TD225x ¹⁾	TM4441 TM4341	TT2281 ¹⁾	\$93.00
			191	E37830	-	TD226x ¹⁾	-	TT3281 ¹⁾	\$111.00
			267	E37850	-	TD229x ¹⁾	-	TT3281 ¹⁾	\$125.00
⑨	1/2" NPS ³⁾	2"	64	E37910	TA2435 TA2333	TD224x ¹⁾	TM4431 TM4331	TT1281 ¹⁾	\$95.00
			115	E37920	TA2445 TA2343	TD225x ¹⁾	TM4441 TM4341	TT2281 ¹⁾	\$101.00
			191	E37930	-	TD226x ¹⁾	-	TT3281 ¹⁾	\$117.00
			267	E37950	-	TD229x ¹⁾	-	TT3281 ¹⁾	\$130.00

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

Section	Design / Device connection	Process connection	Part no.	For sensor type	Price list (USD)
⑬	Metal-to-metal seal / G1 Aseptoflex Vario	Clamp 1 - 1.5"	E33701	TAD	\$59.00
		DIN 11851 DN32	E33711	TAD	\$76.00
		Varivent DN25	E33721	TAD	\$58.00
		SMS DN40	E33731	TAD	\$55.00
⑬	Sealing by O-ring / G1 Aseptoflex Vario	Clamp 1 - 1.5"	E33201	TAD	\$57.00
		DIN 11851 DN32	E33211	TAD	\$80.00
		Varivent DN25	E33221	TAD	\$62.00
		DN/OD33.7	E33304	TAD	\$84.00
	DRD Flansch	E33242	TAD	\$133.00	

Section	Design / Device connection	Process connection	Part no.	For sensor type	Price list (USD)
⑫	Metal-to-metal seal / G 1/2 sealing cone adapter	Clamp 1 - 1.5"	E43311	TA TAD TD TM	\$77.00
		Clamp 2"	E43312	TA TAD TD TM	\$99.00
		DIN 11851 DN25	E43304	TA TAD TD TM	\$73.00
		Varivent DN25	E43306	TA TAD TD TM	\$91.00
		Varivent DN40	E43307	TA TAD TD TM	\$128.00
		G 3/4	E43302	TA TAD TD TM	\$47.00
⑪	Metal-to-metal seal / G 1/2 sealing cone weld-on	G1	E43303	TA TAD TD TM	\$82.00
		Weld-on for tanks	E43309	TA TAD TD TM	\$44.00
		Weld-on for pipes	E43310	TA TAD TD TM	\$49.00
		Weld-on collar	E43315	TA TAD TD TM	\$54.00
	Weld-on ball	E30055	TA TAD TD TM	\$62.00	
⑭	Metal-to-PEEK seal for 3A authorization	Sealing ring	E43911	TA TAD TD TM	\$12.00



For industrial applications

Without contact:

Exact temperature measurement of 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.

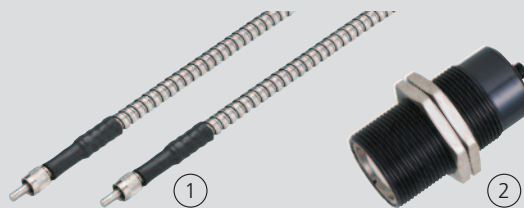
3-pushbutton operating concept.



Measuring range	Wave length range [µm]	Output function	Part no.	List price (USD)
Detecting system				
122...932 °F 50...500 °C	8...14	2 binary switching outputs	TW7000	\$813.00
482...2282 °F 250...1250 °C	1...1.7		TW7001	\$1,150.00
662...2462 °F 350...1350 °C	1...1.7		TW7011¹⁾	\$1,098.00

¹⁾Sensor only. Fiber optic cable ① and measuring head ② required

No.	Design	Part no.	List price (USD)
①	Fiber-optics 2 m	E35061	\$277.00
①	Fiber-optics 5 m	E35062	\$334.00
②	Measuring head	E35060	\$287.00



Type TW20xx temperature sensor

Scalable analog output 4...20 mA.

Freely configurable switching output.

Easy emissivity setting via display.

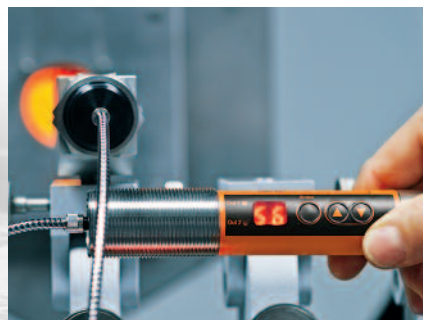
3-pushbutton operating concept.

Local temperature indication.





For hot objects Infrared temperature sensors, switches or analog

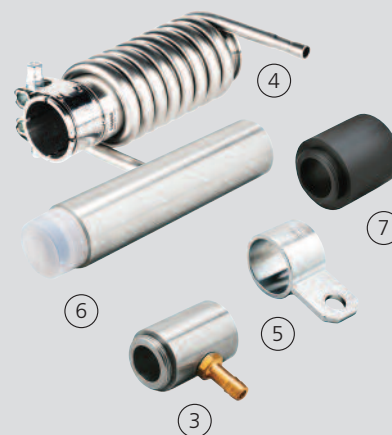


Measuring range	Wave length range [μm]	Output function	Part no.	List price (USD)
Measuring system				
32...1832 °F 0...1000 °C	8...14	Analog output 4...20 mA and switching output	TW2000	\$1,087.00
482...2732 °F 250...1600 °C	1...1.7		TW2001	\$1,358.00
932...4532 °F 500...2500 °C	0.78...1.06		TW2002	\$1,374.00
572...2912 °F 300...1600 °C	1...1.7		TW2011²⁾	\$1,973.00

²⁾Sensor incl. 2m fiber-optics and measuring head

Accessories

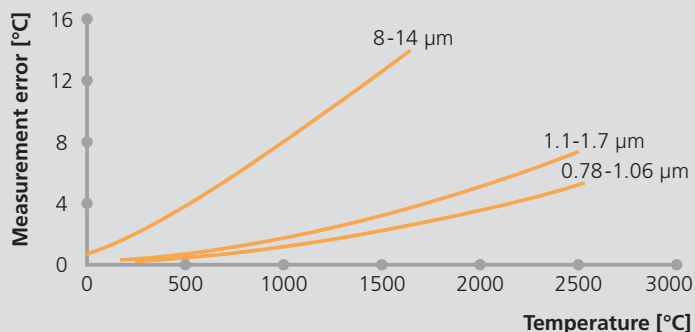
No.	Design	Part no.	List price (USD)
③	Air purge	E35063	\$122.00
④	Cooling jacket	E35064	\$277.00
⑤	Mounting bracket	E35065	\$57.00
⑥	Protective tube	E35066	\$84.00
⑦	Insulating tube	E35067	\$46.00



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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