

Convir TL Series High Performance Non-Contact Infrared Temperature Sensor

- Temperature ranges to 2500°C
- Adjustable Emissivity From 0.05 to 1.00
- Accuracy to $\pm 0.5\%$
- 4 to 20 mA output
- Fast 20 ms response time
- Configurable via optional software and RS-232 or USB interface cable
- Manual emissivity adjustment available
- Large choice of optics
- Different spectral ranges available to suit all applications

The TL Series of high-performance infrared temperature sensors offers a wide choice of temperature ranges and optics to suit the most demanding applications. The 4 to 20 mA output is compatible with almost any indicator, controller, recorder, alarm unit or other process instrument. TL Series sensors operate at many different spectral ranges to enable them to be used in almost any application, no matter how demanding, and no matter what type of material is involved. Standard models are supplied with an RS-232 interface for configuration via a PC. TL-TE models offer manual emissivity adjustment, whilst TL-TI models offer USB digital communications.



Technical Data	TL-S-18	TL-S-25	TL-GA-13	TL-GA-18
Temperature Range	650°C to 1800°C	800°C to 2500°C	300°C to 1300°C	350°C to 1800°C
Spectral Range	0.8 to 1.1 μm	0.8 to 1.1 μm	1.45 to 1.8 μm	1.45 to 1.8 μm
Field-of-view	100 : 1	150 : 1	100 : 1	100 : 1
Accuracy	0.5 %	0.5 %	0.5 %	0.5 %
Repeatability	0.1 %	0.1 %	0.1 %	0.1 %
Response Time t_{90}	20 ms	20 ms	20 ms	20 ms
Emissivity	0.05 to 1.00	0.05 to 1.00	0.05 to 1.00	0.05 to 1.00
Integrated LED Pilot Light	Yes	Yes	Yes	Yes
Integrated Peak Picker (10ms)	Yes	Yes	Yes	Yes
RS-232 Interface	Yes	Yes	Yes	Yes
USB Interface	No	No	No	No
Manual Emissivity Adjustment	No	No	No	No
Optics (see table)	A, B or C	D, E or F	A, B or C	A, B or C
Power Supply	24V DC \pm 25%	24V DC \pm 25%	24V DC \pm 25%	24V DC \pm 25%
Environmental Rating	IP65	IP65	IP65	IP65
Ambient Temperature Range	0°C to 70°C	0°C to 70°C	0°C to 70°C	0°C to 70°C

TL-TI USB INTERFACE



Technical Data	TL-T4-10	TL-T5-12	TL-T14-09
Temperature Range	200°C to 1000°C	100°C to 1200°C	-32°C to 900°C
Spectral Range	3.9 μm	5.14 μm	8 to 14 μm
Field-of-view	50 : 1	50 : 1	50 : 1
Accuracy	1 %	1 %	1 %
Repeatability	0.5 %	0.5 %	0.5 %
Response Time t_{90}	100 ms	100 ms	100 ms
Emissivity	0.20 to 1.00	0.20 to 1.00	0.20 to 1.00
Integrated LED Pilot Light	No	No	No
Integrated Peak Picker (10ms)	No	No	No
RS-232 Interface	Yes	Yes	Yes
USB Interface	Option	Option	Option
Manual Emissivity Adjustment	Option	Option	Option
Optics (see table)	G, H or I	G, H or I	J, K or L
Power Supply	24V DC \pm 25%	24V DC \pm 25%	24V DC \pm 25%
Environmental Rating	IP65	IP65	IP65
Ambient Temperature Range	0°C to 70°C	0°C to 70°C	0°C to 70°C

TL-TE MANUAL EMISSIVITY ADJUSTMENT



Response time, emissivity, peak picker mode and measuring subranges adjustable via interface with PC



SOUTHERN TEMPERATURE SENSORS LTD.

Temperature Sensors, Accessories and Components

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DIAMETER OF TARGET SPOT MEASURED VERSUS DISTANCE FROM SENSOR

For TL-S-18, TL-GA-13 and TL-GA-18 models								
OPTICS	DISTANCE (mm)							
	0	100	300	600	1000	1500	2000	4000
A	13	11.8	9.5	(6)	15	26	36	76
B	16	15	13	10	(9)	15	22	50
C	17	16.3	15	13	11	(11)	17	29

For TL-S-25 model								
OPTICS	DISTANCE (mm)							
	0	100	300	600	1000	1500	2000	4000
D	13	11.5	8.5	(4)	12	23	34	56
E	16	14.5	11.5	7	(5)	12	19	33
F	17	15.8	13.5	10	7	(7)	14	28

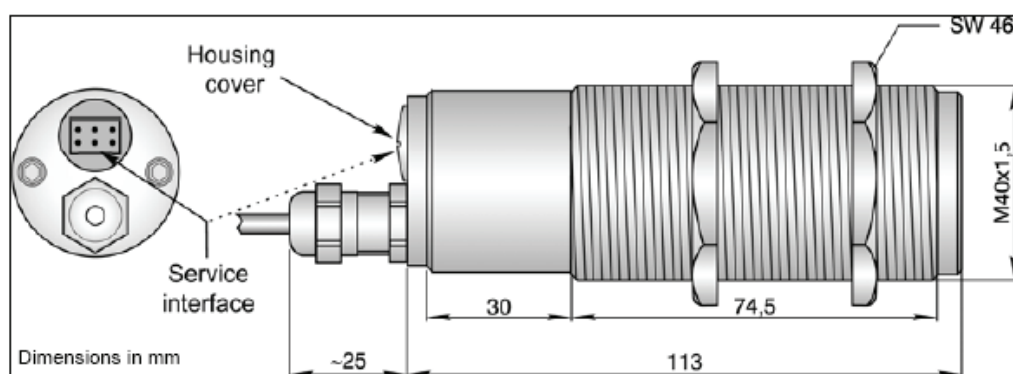
For TL-T4-10, TL-TE4-10, TL-TI4-10, and TL-T5-12, TL-TE5-12, TL-TI5-12 models								
OPTICS	DISTANCE (mm)							
	0	100	300	600	1000	1500	2000	4000
G	15	(2.5)	35	42	76	110	117	151
H	15	12	(6)	22	45	73.8	103	161
I	15	15.8	17.3	19.5	22.5	30	40	80

For TL-T14-09, TL-TE14-09 and TL-TI14-09 models								
OPTICS	DISTANCE (mm)							
	0	100	300	600	1000	1500	2000	4000
J	15	(2)	35	42	76	110	117	151
K	15	12	(6)	22	45	73.8	103	161
L	15	15.1	15.4	15.8	22	36	54	110

(n) indicates minimum spot size within field of view

ACCESSORIES

- Stainless steel housing
- Vacuum adapter
- Stainless steel air purge unit (standard design)
- Adjustable mounting bracket
- Stainless steel air purge unit (heavy duty)
- Fixed mounting bracket
- Stainless steel protection glass cover
- Laser pilot light unit
- Configuration software with interface cable



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