

Temperaturmanagement



Temperaturfühler / Temperatur sensor UETF-IR-CSM-2WLT

Very small two-wire infrared thermometer
for -40 bis 1030°C



Features

- Size: M12x1, 28 mm long, stainless steel housing
- Temperature range: -40°C to 1030°C
- Scalable 4-20mA analog output /additional simultaneous alarm output
- Rugged coated silicon optics
- Usable up to 180°C ambient temperature without cooling (LTH sensing head)
- Green LED alarm indication, aiming support, self diagnostic or temperature code indication
- Cable build in electronics
- Adjustable signal processing
- Optional USB programming interface and software
- Wide power range: 5-30V DC

General Specifications

Environmental rating	IP 65 (NEMA-4)
Ambient temperature	-20°C to 120°C (LT sensing head) -20°C to 180°C (LTH sensing head) -20°C to 75°C ¹⁾ (electronics)
Storage temperature	-40°C to 85°C (sensing head and electronics)
Relative humidity	10 – 95%, non condensing
Vibration	IEC 68-2-6: 3G, 11-200 Hz, any axis
Shock	IEC 68-2-27: 50G, 11 ms, any axis
Weight	42 g

Electrical Specification

Output / analog	4-20mA
Loop resistance	Max. 1000Ω ²⁾
Output / alarm	0-30 V/50 mA (open collector)
Output / digital	Uni/bidirektional, 9,6 kBaud, 0/3 V digital level / USB optional
Input (0-10V)	Programmable functional input for triggered signal output or peak-hold function
LED-functions	Alarm indication, automatic aiming support, self diagnostic, temperature indication (via temp.code)
Cable length	
Head – electronics	0,5m (standard), 3m, 6m
After electronics	0,5m (standard), 3m
Power supply	5-30 V DC

¹⁾ For Vcc (supply voltage) 5-12V DC / at Vcc > 12V DC the max ambient temperature of the electronics is 65°C

²⁾ in dependence on supply voltage

Measurements Specifications

Temperature range (scalable via software)	-40°C – 1030°C
Spectral range	8-14 µm
Optical resolution (90% energie)	15:1 (LT, LTH) 22:1 (LTH)
CF-lens (optional)	0,8 mm @ 10 mm (15:1) 0,6 mm @ 10 mm (22:1)
System accuracy	±1,0% or ±1,0°C ^{1) 2)}
Repeatability	±0,5% or ± 0,5°C ^{1) 2)}
Temperature coefficient	±0,05 K/K or ±0,05 % K ³⁾
Temperature resolution	0,1K
Response time (90%)	30 ms (LT) 150ms (LTH)
Emissivity / Gain (adjustable vis 0-5V DC input or software)	0,100 – 1,100
Transmissivity (adjustable via software)	0,100 – 1,100
Signal processing (parameter adjustable via software)	Peak hold, valley hold, average; extended hold function with threshold and hysteresis
Dimensions of electronics	Length: 35mm Diameter: 12mm
Software	CS-Serie + USB

¹⁾ at ambient temperature 23 ±5°C, ε=1, response time 1s

²⁾ object temperature > 23°C, whichever is greater

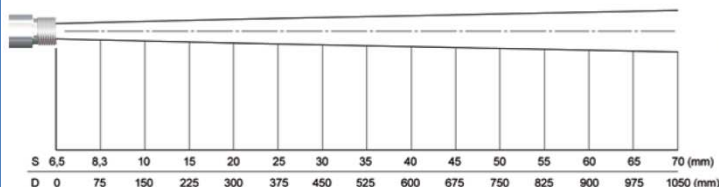
³⁾ for ambient temperatures <18°C and >28°C; whichever is greater

Änderungen und Irrtümer vorbehalten/ Specifications subject to change without notice.

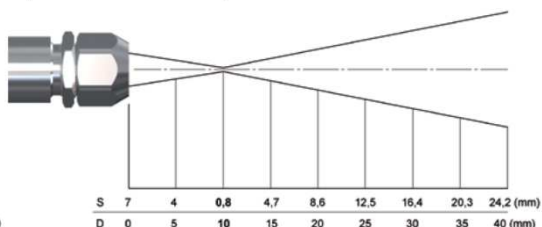
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Optical Parameter

Optics, D:S = 15:1

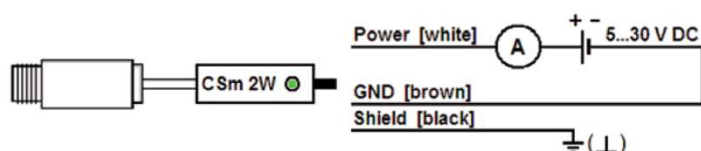


Optics with CF-lens, D:S = 15:1

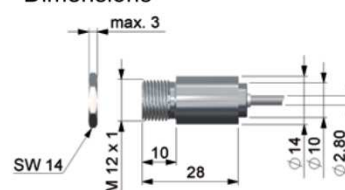


Connection / Dimension

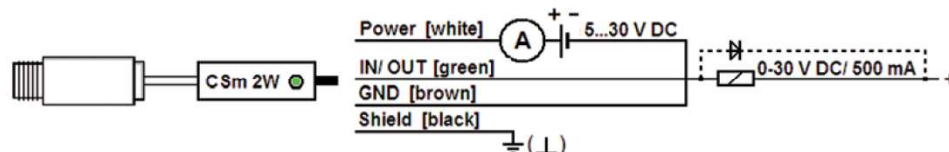
Analog Mode (Two wire connection)



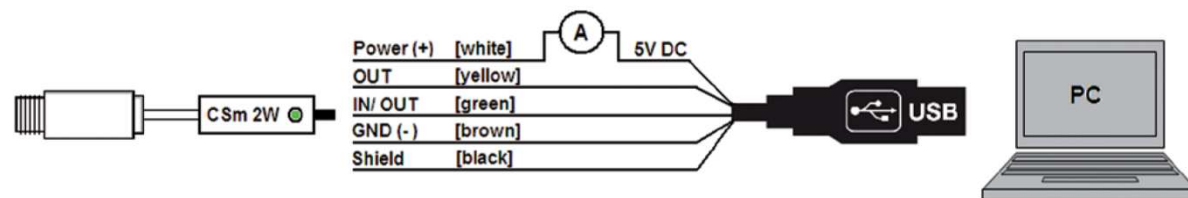
Dimensions



Connection analog with open collector alarm output

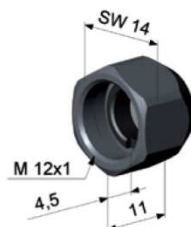


Combined Mode (analog and digital)

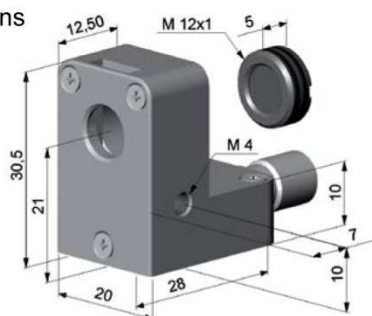


Equipment (Examples)

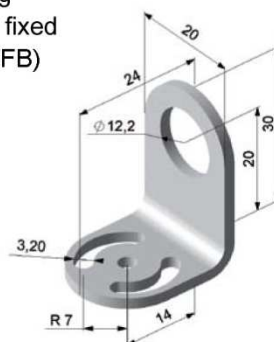
CF-lens
(ZACCTCF)



Air purge collar with
integrated CF-lens
(ZACCTAPLCF)



Mounting
bracket, fixed
(ZACCTFB)



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