



คุณสมบัติ

- **Compact Thermometers : CS Series** เป็นอุปกรณ์วัดอุณหภูมิแบบไม่สัมผัส โดยอาศัยหลักการตรวจจับ รังสีอินฟราเรด (รังสีความร้อน) ที่ปล่อยออกมาจากวัตถุ
- **Field of view : Ø80/500 mm.**
- **สามารถวัดอุณหภูมิวัตถุได้ -40 - 500°C/0-1,000°C**
- **Emissivity adjustment : 0.1-1.2**
- **Response time : 150 ms/90% response**
- Analog output : 4-20 mA, External trigger, 2 Bank switch, 2 Alarm Output
- Cable type สายสัญญาณมีความยาวถึง 2 เมตร

ข้อมูลทางเทคนิค

Model		Low-medium-temperature models (standard)		High-temperature models (heat-resistant head)	
		CS-30TAC	CS-40TAC	CS-30TAC-HT	CS-40TAC-HT
Measurement range		−40 to 500°C (−40 to 932°F)		0 to 1000°C (32 to 1832°F)	
Field of view		ø30/500 mm (22:1)	ø40/500 mm (15:1)	ø30/500 mm (22:1)	ø40/500 mm (15:1)
Optics		Silicone lens			
Sensing element/ spectral response		Thermopile/8 to 14 μm			
Response time		150 ms/90% response		150 ms/90% response	
Accuracy ¹		−40 to 0°C (−40 to 32°F): ±3°C (5.4°F), 1 to 200°C (33.8 to 392°F): ±2°C (3.6°F), 201 to 500°C (393.8 to 932°F): ±1% of reading value		0 to 200°C (32 to 392°F): ±2°C (3.6°F), 201 to 1000°C (393.8 to 1832°F): ±1% of reading value	
Repeatability		Up to 200°C (392°F): ±1.0°C (1.8°F), 201°C (393.8°F) or more: ±0.5% of reading value			
Emissivity adjustment		0.1 to 1.2			
Display resolution		1°C increments			
Analog output	Output	4 to 20 mA			
	Resolution	0.5°C increments			
	Accuracy	±0.5% or ±1.0°C (1.8°F)			
	Update time	10 ms			
	Allowable load	250 Ω			
	Impedance	47 Ω			
Control output		Photo MOS FET × 2 (Transfer contact × 2)			
Capacitive load		300 mA/30 VDC or less			
Interface		Digital output			
Functions		Teaching function: 2 points, Response time selection (DELAY) function: 1 (0.15 sec.) to 200 (approx. 10 sec.), Output scaling function			
External input		Bank function: 4 banks, Synchronous input trigger function, External trigger function, Wave trigger function			
Degree of protection		Sensor head: IP69K, Amplifier: IP40			
Vibration resistance		10 to 55 Hz; amplitude 1.5 mm; 2 hours in each of the X, Y, and Z directions			
Supply voltage		12 to 24 VDC ±10%			
Current consumption		120 mA (at max. load) / 80 mA (in Eco mode)			
Ambient temperature		Sensor head: 0 to 100°C (32 to 212°F), Amplifier: 0 to 65°C (32 to 149°F)		Sensor head: 0 to 180°C (32 to 356°F), Amplifier: 0 to 65°C (32 to 149°F)	
Ambient humidity		35 to 85% RH (no condensation)			
Storage temperature		0 to 70°C (32 to 158°F)			
Dimensions		Sensor head: M12 (ø14) × 34 mm, Amplifier: 35 × 52 × 38.5 mm			
Weight		Sensor head: Approx. 100 g (including 3 m cable), Amplifier: Approx. 200 g (including 2 m cable)			
Material		Sensor head: SUS, Amplifier: ABS, Sensor cable: PVC (low-medium-temperature models) / Silicone rubber (high-temperature models)			

Options

Laser marker

CS-LDP

A laser marker makes precise positioning easy even with a small head, which is difficult with a conventional setup. Designed to be the same shape as the sensor head, laser markers can be easily used during alignment.

■ Laser beam

- This product uses a Class 2 laser that conforms to IEC 60825-1. Use the product according to the affixed labels.



CF lens

CS-CF01

Air purge pipe

CS-AP1

Mounting bracket (for sensor head)

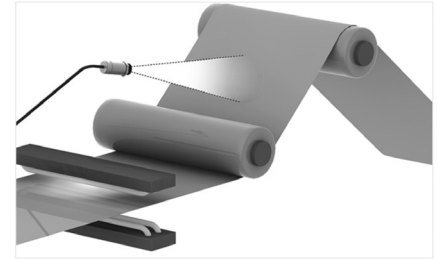
CS-FB12

Black tape for glossy objects

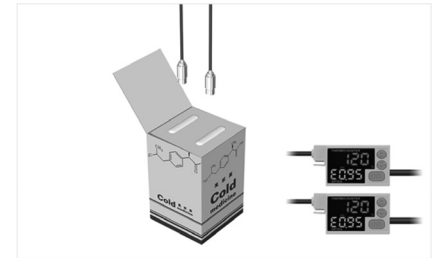
HB-250



Application

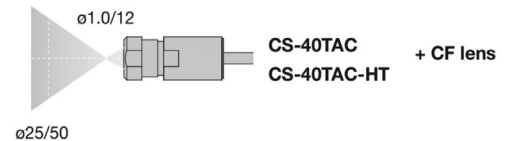
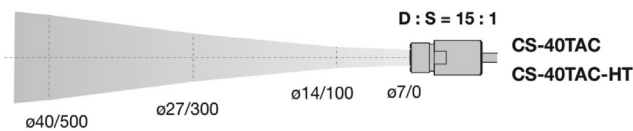
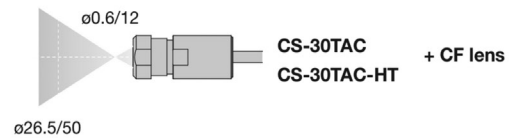
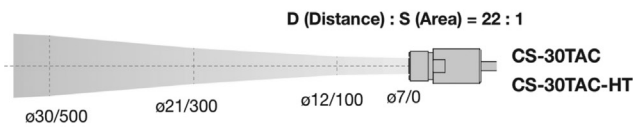


Temperature Measurement of Raw Plastic Sheets



Hot-Melt Adhesive Inspections

(Area size/distance: mm)

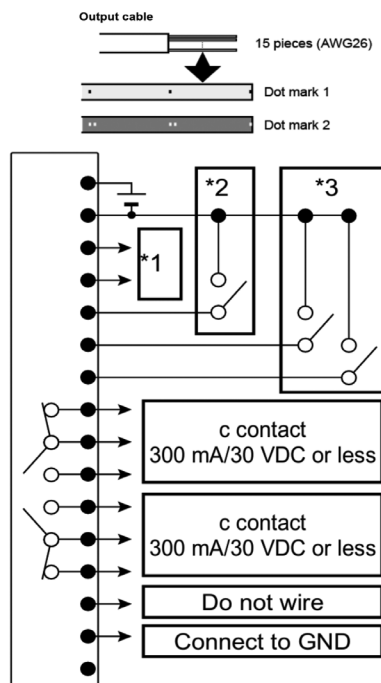


- The fields of view stated above are for an optical response (energy) of 90%.
- The size of the measurement target must be sufficiently larger than the figures shown in the above diagram.

- When a CF lens is equipped, the amount of light received from the measurement target is attenuated by 20 to 30%. Emissivity adjustment is necessary.
- For micro-point measurement, the size of the measurement target must be approx. 1.5 times larger than the measurement field of view shown in the above diagram.

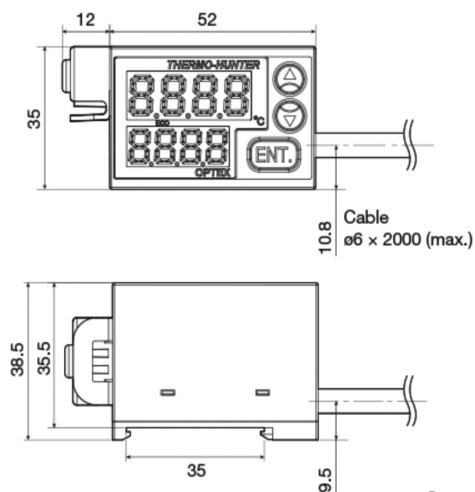
การต่อใช้งาน

No.	Output cable			Descriptions	
	Line color	Dot mark			
		Color	Quantity		
1	Pink	Red	1	Power supply	12 to 24 VDC
2	Gray	Black	1		GND
3	White	Red	1	Analog output 4-20 mA	+
4	White	Black	1		—
5	Pink	Black	1	External trigger	Input
6	Gray	Black	2	Bank switch	(1)
7	White	Red	2		(2)
8	Yellow	Red	1	Alarm output H	N.C.
9	Gray	Red	1		COM
10	Yellow	Black	1		N.O.
11	Orange	Red	1	Alarm output L	N.O.
12	Gray	Red	2		COM
13	Orange	Black	1		N.C.
14	Orange	Red	2	Do not wire	
15	Orange	Black	2	Connect to GND	
16	*4 (Shielded cable)			-	

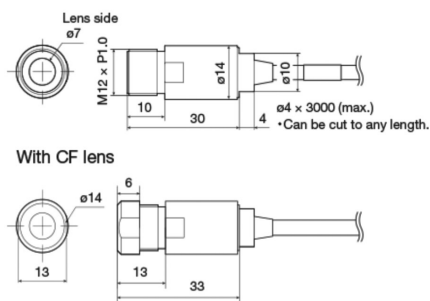


ขนาดและมิติ

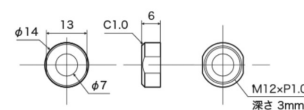
• Amplifier



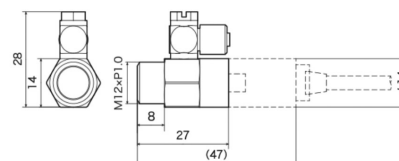
• Sensor head



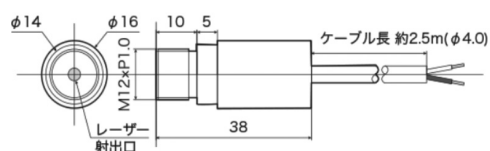
• CF lens CS-CF01



• Air purge pipe CS-AP1



• Laser marker CS-LDP



• Mounting bracket CS-FB12

