



● **Easy installation and excellent environmental resistance**

- M18 cylindrical housing with IP67 rating against dust and water
- Heat resistance up to 70°C, 158 °F
- SUS housing and silicone lens for superb resistance against noise to perform accurate and stable measurement

● **High-speed response time of 100ms/90%**

● **Wide field of view of  $\phi 80\text{mm}$  at 500mm**

● **IO-Link network supported (SA-80T-4IO)**

Various data, such as listed below, can be exchanged with control systems, via IO-Link and field networks.

**Cyclic data exchange:**

- Alarm output, Measured temperature
- Process data of Peak hold value, Valley hold value or Internal temperature

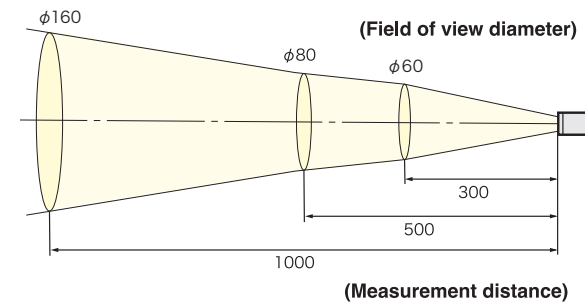
**Acyclic data exchange:**

- Emissivity, Alarm limits, Timer settings, Maintenance data and Events

■ **Lineup**

Model No.	Measurement Range	Emissivity	Output / Communication	Connection
SA-80T-2A	0 to 200°C (32 to 392°F)	0.95	Analog, 4 to 20 mA	2m cable
SA-80T-4A	0 to 400°C (32 to 752°F)	0.95	Analog, 4 to 20 mA	2m cable
SA-80T-4IO	0 to 400°C (32 to 752°F)	0.1 to 1.2	IO-Link	M12 4-pin 300mm pigtail cable

■ **Field of view**



• The fields of view stated above are measurement diameters with an optical response of 90%.  
 • The size of the measurement target must be sufficiently larger than the measurement diameters shown in the above diagram.



## Specifications

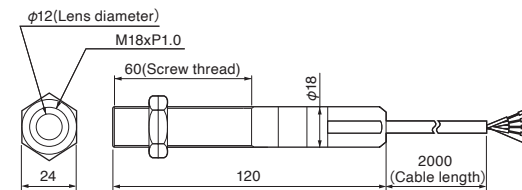
Model	SA-80T-2A	SA-80T-4A	SA-80T-4IO
Measurement range	0 to +200°C (32 to 392°F)	0 to +400°C (32 to 752°F)	0 to +400°C (32 to 752°F)
Field of view	ø80/500 mm		
Optics	Silicon lens		
Sensing element/spectral response	Thermopile/8 to 14 μm		
Response time	100 ms/90% response		
Accuracy*	0 to 200°C (32 to 392°F): ±2°C (±3.6°F), 201 to 400°C (393.8 to 752°F): ±1% of reading value * Measurement conditions: ε = 1.0, ambient temperature of 23 ± 5°C (73.4 ± 9°F), measurement distance of 250 mm, measurement target: ø100 mm		
Repeatability	±1°C (±1.8°F)		
Emissivity adjustment	0.95 (fixed)		0.1 to 1.2
Supply voltage	12 to 24 VDC ± 10%		18 to 30 VDC ± 10%
Current consumption	Max. 70 mA		Max. 50 mA
Communication interface	Not supported		IO-Link
IO-Link specifications	Minimum cycle time		3 ms
	Communication speed		COM2 (38.4 kbps)
	IO-Link version		1.1
	Communication function		IO-Link power supply (supplied from IO-Link Master)
	Process input data byte count		4 bytes
	Process output data byte count		0 byte
Output	Analog output, 4 to 20 mA		Via IO-Link
Total cable extension	-		20 m
Connection	2 m cable		M12 4-pin 300 mm pigtail cable
Environmental resistance	Degree of protection	IP67	
	Ambient temperature	0 to +70°C (32 to 158°F)	
	Ambient humidity	35 to 85%RH (no condensation)	
	Storage temperature	-20 to +70°C (-4 to +158°F)	
Applicable regulations	Vibration resistance	10 to 55 Hz, 1.5 mm amplitude, 2 hours each for XYZ directions	
	EMC	EMC Directive (2014/30/EU)	
Applicable standard	RoHS Directive (2011/65/EU), China RoHS (MIIT Order No.32)		
Materials	EN 61326-1:2013		
Weight	SUS/AL		
Standard included accessories	Approx. 180 g		
	Mounting nut × 2		Mounting nut × 2, Mounting bracket

\* With an environmental temperature of 23 ± 5°C (73.4 ± 9°F) and an environmental temperature fluctuation of ±1°C (±1.8°F)/hour and under Optex FA calibration conditions.

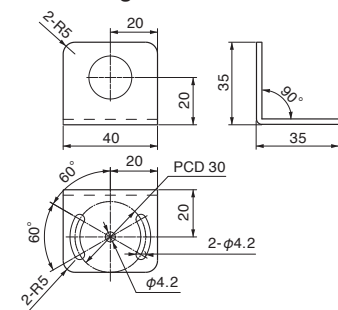
• Note that specifications are subject to change without prior notice for product improvement purposes.

## Dimensions (mm)

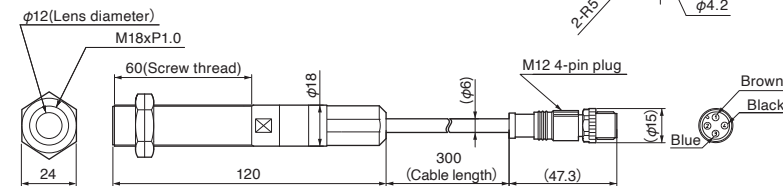
### SA-80T-2A / SA-80T-4A



### Mounting bracket

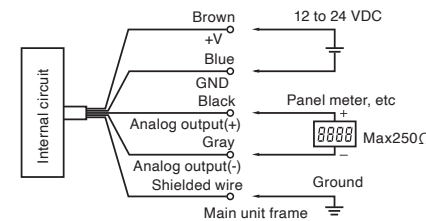


### SA-80T-4IO

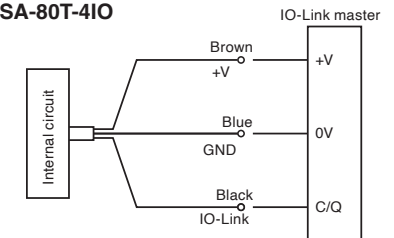


## I/O circuit diagram

### SA-80T-2A / SA-80T-4A



### SA-80T-4IO



## Options / Accessories

Type	Model	Description
M12 4-pin Connector cables	YF2A14-020VB3XLEAX	Straight, 2 m
	YF2A14-050VB3XLEAX	Straight, 5 m
	YF2A14-100VB3XLEAX	Straight, 10 m
Mounting bracket	SA-FB18	1 piece
Black tape for glossy objects	HB-250	60mm×2000mm



**OPTEX FA CO., LTD.** [www.optex-fa.com](http://www.optex-fa.com)

<b>Japan</b>	OPTEX FA Co., Ltd.	Kyoto	+81-75-325-1314	faovs@optex-fa.com
<b>China</b>	Guangzhou OPTEX Co., Ltd.	Guangzhou, Guangdong	+86-20-39922102	sales_ofc@optex-fa.cn
<b>Thailand</b>	OPTEX (Thailand) Co., Ltd.	Bangkok	+66-2-168-3162	thailand@optex-fa.com
<b>U.S.A.</b>	OPTEX FA Inc.	Schaumburg, Illinois	+1-847-565-3500	off-sales@optexfa-america.com