

Thermal Imager



OSXL-101 Series



- ✓ Thermal Imager with Ethernet Connection
- ✓ Easy to Use and Implement
- ✓ 2256 Pixel Resolution
- ✓ Built-In Alarms
- ✓ NEMA 4 (IP65)

The OSXL-101 is a compact infrared thermal imaging sensor utilizing a thermopile array detector. The OSXL-101 series measures real-time temperature and a thermal image up to 800°C (1472°F). Ethernet connectivity allows the sensor to communicate with the PC running the application software or customers LAN.

Specifications

Temp Range:

OSXL-101/OSXL-101-25:
-20 to 300°C (-4 to 572°F)

OSXL-101-25H: 100 to 800°C
(212 to 1472°F)

Working Temp: -10 to 50°C
(14 to 122°F)

Working RH: 10 to 80% RH
(no dew condensation)

Temperature Resolution: 0.5°C

Accuracy: ±2% of reading or ±3°C
whichever larger (at ambient temp of
25°C ±2°C)

Detector: Thermopile array,
48 x 47 pixels

Wavelength: Center wavelength 10µm

Viewable Angle: 60°x 60° or 25° x 25°

Radius Resolution: 21.8 mrad

Frame Speed: 3 fps (1 fps for alarm
output)

Focus: Fixed focus

Emissivity: 0.10 to 1.00

Ethernet: 10BASE-T/100BASE-TX

Alarm: 2 SPST (non-voltage contact
output)

Power Supply: 12 to 24 Vdc

Power Consumption:
Maximum 2VA @ 12 Vdc

Inrush Current: Maximum 1.3A @
12 Vdc (the inrush current should be
considered for the selection of power)

Casing: Polycarbonate (color: black)

Weight: Approximately 150 g (5.2 oz)
(sensor only)

Protection: NEMA 4 (IP65) (with
provided exclusive cable and tripod
screw)

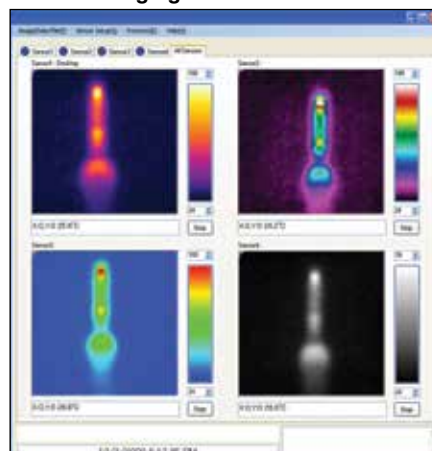
Standards: CE (EN61326 Annex A)

OSXL-101 shown
with mounting
stand (included).

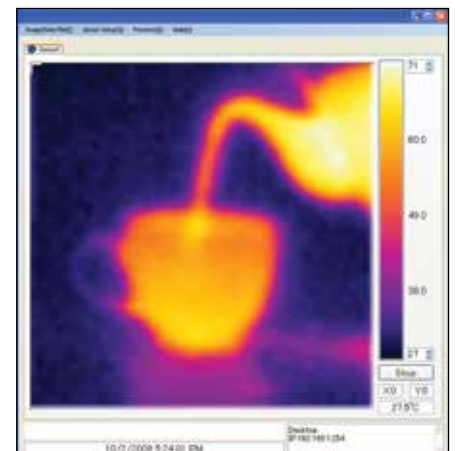


Mounting stand
features a ball-socket
fitting for full range
of motion.

Thermal imaging software included.



Thermal image PC screen of 4 sensors
(maximum) connected.



Thermal image PC screen of 1 sensor
connected.

Functions

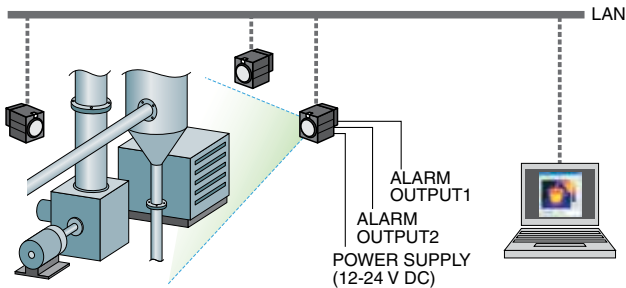
Monitoring Mode

The temperature data is outputted continuously by a command from the PC

Monitor Mode

Multiple Unit Connection (LAN)

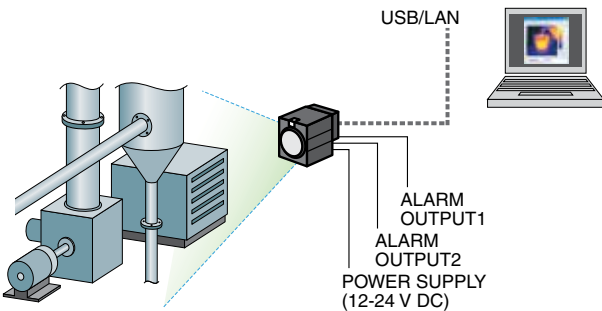
- Up to 4 sensors can be connected
- Monitoring and alarm outputs from sensor can be used together



Monitor Mode

Single Unit Usage

- Single unit can monitor 1 area and has 2 alarm outputs
- When alarm goes on, the unit stores 1 image to the memory
- Image saving updates every occurrence of alarm
- Reading the data from host PC is possible



Capturing Mode

The temperature data is outputted row-by-row horizontally by a command from PLC, etc.

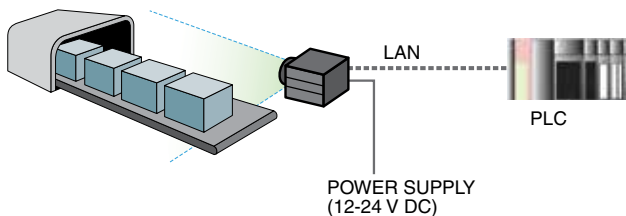
Connectivity

Up to 4 sensors can be connected to a PC via LAN and viewer software allows you to monitor thermal images, measuring temperature and alarms.

Capturing Mode

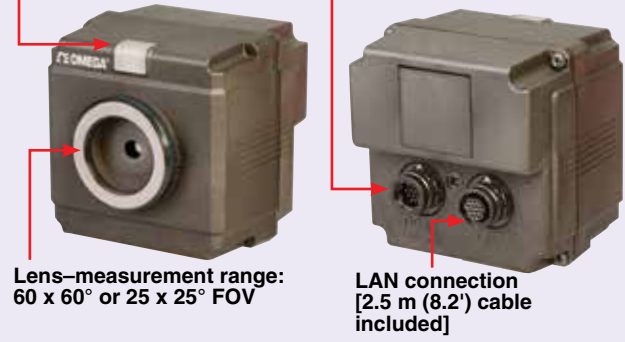
PLC Connection

- The temperature data is outputted row-by-row horizontally by a command from PLC, etc

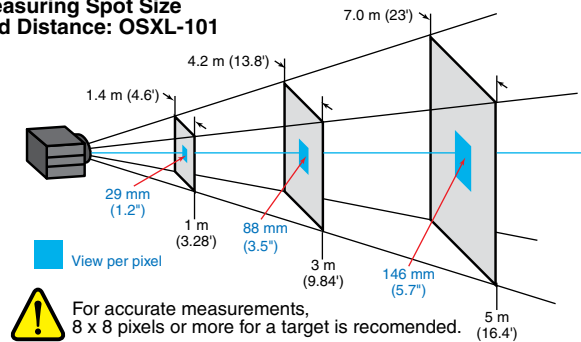


Monitor lamp—state of operation indicated in blue, red, and purple

9 to 30 Vdc powerinput/ contact alarm output (cable and power supply included)

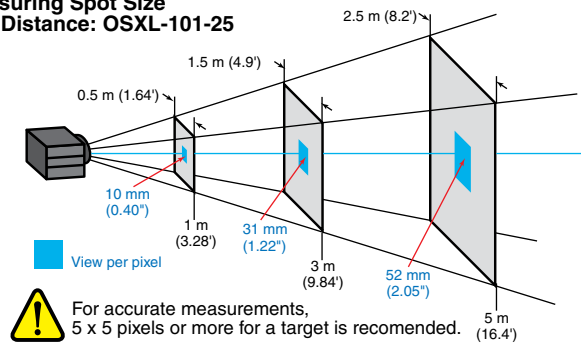


Measuring Spot Size and Distance: OSXL-101



Distance	1 m (3.28')	3 m (9.84')	5 m (16.4')
Width meter (foot)	1.4 (4.6)	4.2 (13.8)	7.0 (23)
Width/Pix mm (inch)	29 (1.2)	88 (3.5)	146 (5.7)

Measuring Spot Size and Distance: OSXL-101-25



Distance	1 m (3.28')	3 m (9.84')	5 m (16.4')
Width meter (foot)	0.5 (1.64)	1.5 (4.9)	2.5 (8.2)
Width/Pix mm (inch)	10 (0.4)	31 (1.22)	52 (2.05)

Application Software

Requirements

OS: Windows® 2000 (SP4 or later)/ XP/Vista (Windows XP or later recommended) NET Framework 2.0 or later (required)

Memory

Windows 2000/XP: 1 GB recommended (512 MB or more)
Windows Vista: 2 GB or more recommended

CPU

Windows 2000/XP: 1.5 GHz or faster recommended
Windows Vista: 2 GHz or faster recommended

Basic Function

When the LAN settings are completed correctly between a PC and the thermal image sensor and the LAN communication is established, thermal image screen will appear; the thermal images up to 4 sensors can be displayed with this application software, and the simultaneous display for 4 images and the individual display for each sensor can be switched

Various Settings of Sensor

LAN settings/alarm settings of the sensors/emissivity setting

Data Storage

Image temperature data storage (temperature data/csv for 2256 pixels)/ Thermal image screen storage (JPEG)

Image Processing

Screen averaging/spatial smoothing/ median filter/rotation/maximum and minimum values indications

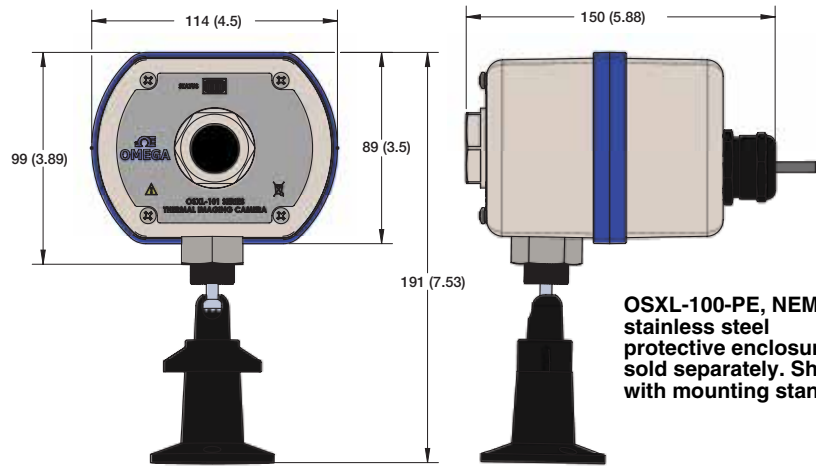
Trend Graph

By specifying a graph area, data can be displayed by the trend graph and the graph data can be stored by setting. (max 8 areas)

Alarm Settings by the Application Software

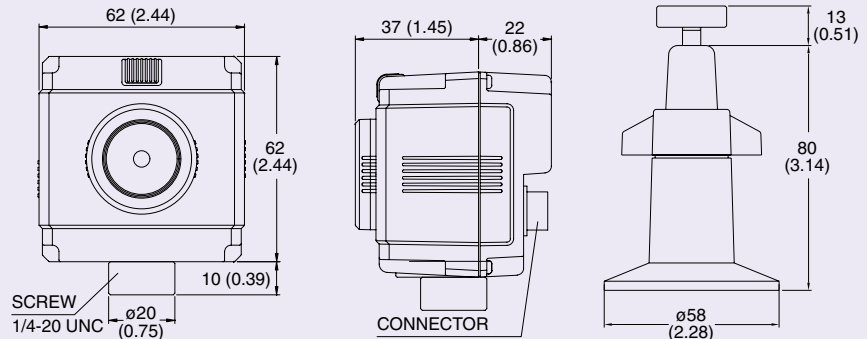
- By specifying a zone, alarms can be set (max 8 areas)
- The zone alarm as set in the application software are separate and in addition to alarms set in the sensor

Protective Enclosure Dimensions: mm (inch)



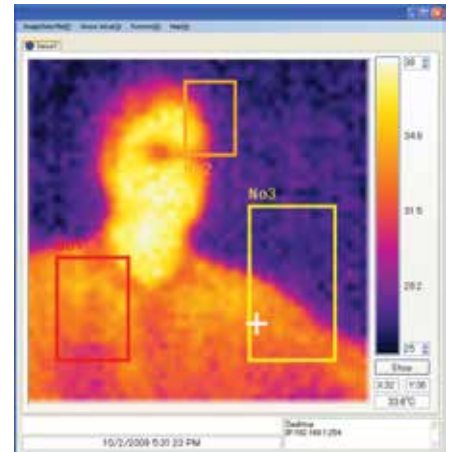
OSXL-100-PE, NEMA 4X stainless steel protective enclosure sold separately. Shown with mounting stand.

Sensor Dimensions: mm (inch) ϕ = diameter Universal head (mounting stand)



Trend Graph

Note: The alarm of the sensor is interlocked with the contact output, but the contact output cannot be activated with the alarm by the application software.



Alarm Screening

To Order

Model No.	Description
OSXL-101	Fixed mount thermal imager (60° x 60° viewing angle, -20 to 300°C temperature range)
OSXL-101-25	Fixed mount thermal imager (25° x 25° viewing angle, -20 to 300°C temperature range)
OSXL-101-25H	Fixed mount thermal imager (25° x 25° viewing angle, 100 to 800°C temperature range)
OSXL-100-PE	NEMA 4X (IP65) stainless steel protective enclosure (only works with OSXL-101-25 and OSXL-101-25H)
OSXL-100-LAN	Replacement LAN cable, 2.5 m (8.2')
OSXL-100-PAC	Replacement power/alarm cable, 2.5 m (8.2')
OSXL-100-MOUNT	Replacement mounting stand
OSXL-100-PS	Replacement power supply with 2.5 m (8.2') cable

Comes complete with operator's manual, software CD, mounting stand, power supply, LAN cable, power/alarm cable, mounting screws and plugs, lens and connector caps.

Ordering Examples: OSXL-101, thermal imager.