

FLARESPECTION™

Infrared camera system for continuous pilot flame and flare stack monitoring in hazardous areas.



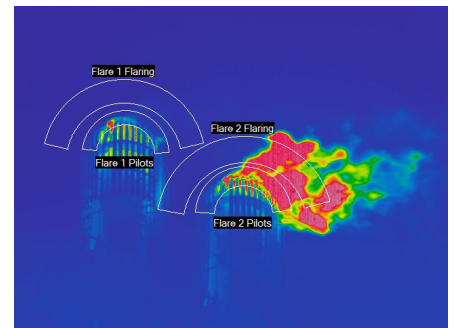
Advanced Energy's FlareSpection™ system is a complete flare monitoring solution. This thermal imaging system can monitor both the flare and the pilot light continuously, through adverse weather and environmental conditions, around the clock. Our unique optics, enclosures, and calibrations focus on critical combustion regions—even through moisture, heavy rain, fog, dust, or smoke.

Our best-in-class optics offer higher resolution at longer distances, allowing for camera mounting in convenient locations and enabling installation and maintenance while the flare is still in service.

The camera system is ATEX certified for use in the harshest locations and easily integrates into your existing DCS and/or re-ignition system.

PRODUCT HIGHLIGHTS

- Superior image quality using a telephoto (200 mm) lens, enabling detailed view of flares from distances up to 300 m
- High resolution 640 x 480 pixel thermal imager provides unmatched spatial resolution
- Individual pilot monitoring, even in the presence of a main flame
- Detects a wide range of flame types, including hydrogen flames
- Stainless steel enclosure designed for hazardous area
- Industry's most advanced software enabling automated and seamless integration with plant DCS
- Easy installation and maintenance from remote mounted location



Thermal image taken by camera



FlareSpection system view

FLARE SPECTION

OVERVIEW

With an adjustable mount and base, the powerful lens and high resolution camera offer a clear view of flare details from a convenient ground mounting location. The camera is protected in a stainless steel enclosure with an integrated site tube to prevent dust and dirt on the window, allowing for uninterrupted use with minimal maintenance.

The software includes the capability to log performance for audits, record video for reviewing of historical events, and set up alerts for measurements that may fall outside of the plant's preset limits. The software also easily connects to the plant DCS via protocols such as Modbus and OPC, as well as connections to pilot ignitors via traditional I/O relay modules.

TECHNICAL DATA

Performance Specifications

Image Update Rate	9 Hz
Pixel Pitch	17 µm
Detector	640 x 480 Uncooled Microbolometer

Optical Specifications

Lens Focal Length	200 mm
Field of View (FOV)	3° (H) x 2.3° (V)
Digital Zoom	1 to 8x using LumaSpec RT software

Interface Specifications

Interfaces	OPC, Modbus Serial, Modbus Ethernet, Analog Contact Outputs, Relays
Power Input	24 VDC

Environmental Specifications

Hazardous Classification	ATEX II 2 G Ex db IIB T4
	IECEX Ex db IIB T4
	US/Canada: Class 1 Div 1, Group C and D T4; Class 1 Div 2 Group A, B, C and D T4
Environmental Protection	NEMA 4x IP66
Operating Temperature	-30 to 50°C (-22 to 122°F)
Storage Temperature	-20 to 70°C (-4 to 158°F)
Weight	38 kg (~84 lbs)
Housing	316L stainless steel certified for hazardous areas and suitable for marine applications

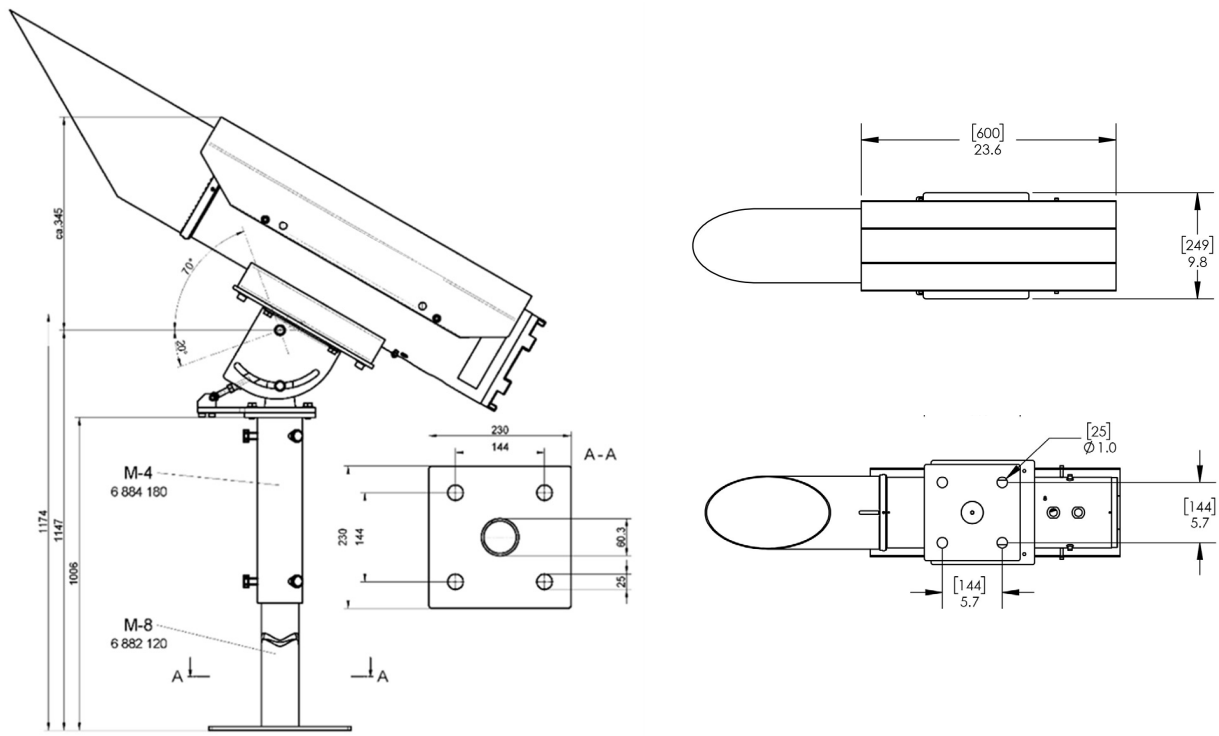
Scope of Delivery

- FlareSpection camera with 200 mm lens
- FlareSpection stainless steel enclosure with Sunshield and Sight Tube
- Flare and Pilot monitoring software
- Adjustable, stainless steel pan-tilt mount

Optional Accessories

- Stainless steel base
- Junction box
- IO module to interface with DCS and pilot ignition system
- Computer server for automation and archiving
- Data historian using SQL server

DIMENSIONS



All dimensions in mm and inches

Swivel mount and optional stand shown in drawing above

SOFTWARE KEY FEATURES

Windows-based thermal imaging software that offers high-speed real-time data acquisition and image analysis capabilities

- Automated image analysis and alarms
- Support for up to 24 cameras
- Historical video recordings easily retrieved for study or analysis
- Integrated protocols for alarm and status reporting to DCS or PLC
- Lock-in scene registration feature to keep image analysis accurate when flare stack moves or sways
- Archive to files or database
- Intuitive user interface
- Support to view images simultaneously at any location on plant network



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ABOUT ADVANCED ENERGY

Advanced Energy (AE) has devoted more than three decades to perfecting power for its global customers. We design and manufacture highly engineered, precision power conversion, measurement and control solutions for mission-critical applications and processes.

Our products enable customer innovation in complex applications for a wide range of industries including semiconductor equipment, industrial, manufacturing, telecommunications, data center computing, and medical. With deep applications know-how and responsive service and support across the globe, we build collaborative partnerships to meet rapid technological developments, propel growth for our customers, and innovate the future of power.

PRECISION | POWER | PERFORMANCE

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