FLIR

ELECTRICAL/MECHANICAL APPLICATIONS

FLIR EXX-SERIES™

The FLIR E75, E85, E95, and the entry-level E53 Advanced Thermal Imaging Cameras offer the superior resolution and range performance needed to quickly identify hot spots and discover potential points of failure in electrical distribution and mechanical systems. With up to 161,472 pixels resolution and a more vibrant LCD screen than any other pistol-grip camera, the Exx-Series makes it easier than ever to diagnose problems—even at a distance. Avoid costly shutdowns and lost production time through regular predictive maintenance routines with these rugged, intuitive cameras.

Improve Plant Reliability

Equipment failures are costly and can impact on-time delivery, so it's important to find hidden problems early

- High-resolution infrared detectors, up to 464 x 348, for crisp, detailed images
- Wide temperature ranges with optional calibrations up to 1500°C (2732°F)
- Superior spot-size performance for accurate temperature measurements on smaller, more distant targets
- Laser-assisted autofocus* for precise identification of hot spots, even in cluttered scenes

Increase Plant Safety

The Exx-Series cameras will help you diagnose and report electrical and mechanical failures before they lead to fires or explosions

- Detect temperature differences as small as <0.04°C (24° lens) for immediate identification of failing components
- Interchangeable lenses* offer complete coverage of near and far targets
- Lenses auto-calibrate* with camera for the most precise temperature readings
- MSX® image enhancement adds the depth and detail to image

Make Your Work Easier

FLIR designed all four Exx-Series cameras with features that streamline your workday

- Rapid-response touchscreen with intuitive new user interface
- Convenient menu buttons allow for one-handed operation
- New folder and naming structure that makes finding images easier
- Connect over Wi-Fi to mobile devices or via METERLiNK® to FLIR clamps and multimeters

*E75, E85, E95 models

SPECIFICATIONS

Features By Camera	E53	E75	E85	E95
IR Resolution	240 × 180 (43,200 pixels)	320 × 240 (76,800 pixels)	384 × 288 (110,592 pixels)	464 × 348 (161,472 pixels)
UltraMax®	—	307,200 pixels	442,368 pixels	645,888 pixels
Object Temperature Range	-20°C to 120°C (-4°F to 248°F) 0°C to 650°C (32°F to 1200°F)	-20°C to 120°C (-4°F to 248°F) 0°C to 650°C (32°F to 1200°F) Optional 300°C to 1000°C (572°F to 1830°F)	-20°C to 120°C (-4°F to 248°F) 0°C to 650°C (32°F to 1200°F) 300°C to 1200°C (572°F to 2192°F)	-20°C to 120°C (-4°F to 248°F) 0°C to 650°C (32°F to 1200°F) 300°C to 1500°C (572°F to 2732°F)
Focus	Manual	Continuous, one-shot laser distance meter (LDM), one-shot contrast, manual	Continuous, one-shot laser distance meter (LDM), one-shot contrast, manual	Continuous, one-shot laser distance meter (LDM), one-shot contrast, manual
Time-lapse (Infrared)	—	—	—	10 sec to 24 hours
Laser Area Measurement	—	—	Yes	Yes
Laser Distance Measurement	—	Yes, on-screen	Yes, on-screen	Yes, on-screen
Measurement Presets	No measurement, center spot, hot spot, cold spot, 3 spots, hot spot-spot*	No measurement, center spot, hot spot, cold spot, User Preset 1, User Preset 2	No measurement, center spot, hot spot, cold spot, User Preset 1, User Preset 2	No measurement, center spot, hot spot, cold spot, User Preset 1, User Preset 2
Spotmeter	3 in live mode	1 in live mode	3 in live mode	3 in live mode
Area	1 in live mode	1 in live mode	3 in live mode	3 in live mode
Picture-in-Picture	Centered infrared area on the visual image	Resizable and movable	Resizable and movable	Resizable and movable

Common Features	
Detector Type and Pitch	Uncooled microbolometer, 17 µm
Thermal Sensitivity/NETD	<0.04°C @ 30°C (86°F), 24° lens
Spectral Range	7.5 - 14.0 µm
Image Frequency	30 Hz
Field of View (FOV)	42° × 32° (10 mm lens), 24° × 18° (18 mm lens), 14° × 10° (29 mm lens)
F-Number	f/1.3
Lens Identification	Automatic
Digital Zoom	1-4x continuous
Image Presentation and Modes	
Display	4", 640 × 480 pixel touch screen LCD with auto-rotation
Digital Camera	5 MP, 53° × 41° FOV
Color Palettes	Iron, Gray, Rainbow, Arctic, Lava, Rainbow HC
Image Modes	Infrared, visual, MSX®, Picture-in-Picture
MSX®	Embosses visual details on full resolution thermal image
Measurement and Analysis	
Accuracy	±2°C (±3.6°F) or ±2% of reading for ambient temperature 15°C to 35°C (59°F to 95°F) and object temperature above 0°C (32°F)
Alarms	Moisture, insulation, and measurement
Color Alarm (Isotherm)	Above/below/interval/condensation/insulation
Compass, GPS	Yes; automatic GPS image tagging
METERLiNK®	Yes; several readings
Laser Pointer	Yes; dedicated button

Image Storage	
Storage Media	Removable SD card (8 GB)
Image File Format	Standard JPEG with measurement data included
Video Recording and Streaming	
Radiometric IR Video Recording	Real-time radiometric recording (.csq)
Non-Radiometric IR or Visual Video	H.264 to memory card
Radiometric IR Video Streaming	Yes, over UVC or Wi-Fi
Non-Radiometric IR Video Streaming	H.264 or MPEG-4 over Wi-Fi; MJPEG over UVC or Wi-Fi
Communication Interfaces	USB 2.0, Bluetooth, Wi-Fi, DisplayPort
Video Out	DisplayPort over USB Type-C
Additional Data	
Battery Type	Li-ion battery, charged in camera or on separate charger
Battery Operating Time	Approx. 2.5 hours at 25°C (77°F) ambient temperature and typical use
Operating Temperature Range	-15°C to 50°C (5°F to 122°F)
Storage Temperature Range	-40°C to 70°C (-40°F to 158°F)
Shock/Vibration/ Encapsulation; Safety	25 g / IEC 60068-2-27, 2 g / IEC 60068-2-6, IP 54 /IEC 60529; EN/UL/CSA/PSE 60950-1
Weight/Dimension	1 kg (2.2 lbs), 27.8 × 11.6 × 11.3 cm (11.0 × 4.6 × 4.4 in)
Box Contents	
	Infrared camera with lens, battery (2 ea), battery charger, front protection, straps (hand, wrist), hard transport case, lanyards, lens caps, lens cleaning cloth, power supplies, 8 GB SD card, Torx wrench, cables (USB 2.0 A to USB Type-C, USB Type-C to USB Type-C, USB Type-C to HDMI)

*Hot spot to center spot Delta measurement

Specifications are subject to change without notice.

17-3307-INS-Exx MFG

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