FLIR Exx-Series

Lightweight design,
Heavyweight performers

The new user interface and new keypad make the new FLIR Exx-Series even more user-friendly than before. New features, such as MSX® and auto orientation, together with the Wi-Fi and MeterLink connectivity, ensure that the FLIR Exx-Series is the best in its class.

The cameras are ideal for predictive maintenance and planned inspections of electrical and mechanical systems to ensure they operate at maximum efficiency and safety with minimal energy consumption.

Up to 320 x 240 pixels resolution
The FLIR Exx-Series infrared image resolution ranges from 160x120 pixels to 320x240 pixels depending on camera model. Every additional pixel means more valuable temperature information to isolate problem areas.

Compact and lightweight
FLIR Exx-Series models weigh only 880g (battery included).

High quality 3.1 Mpixel visual camera
Visible light camera makes observing and inspecting faster and easier.

Thumbnail image gallery
An easy-to-access thumbnail image gallery helps you to quickly review and find your thermal images.

± 2% accuracy
High accuracy of ± 2% or ± 2 °C of reading.

Intuitive user interface
Intuitive user interface including keypad and 3.5" touch screen.

Built-in LED light
The built-in LED lamp ensures quality visual images regardless of job site lighting levels.

Long life battery
With a 4 hour battery life, its easy-to-replace Lithium Ion batteries will keep up with your demanding schedule.

Laser Pointer
A conveniently located button activates the laser pointer that will help you associate the hot or cold spot in the thermal image with the real physical target in the field.

Picture-in-Picture (PiP)
With the PiP function it is easy to locate areas of interest.

Text and voice annotations*
Text comments can be made by using the touch screen. A headset can be connected to make voice annotations.

Interchangeable lenses
In order to adapt the FLIR Exx-Series to every situation both wide angle and tele-lenses are available.

Multi Spectral Dynamic Imaging (MSX®)
The innovative MSX® feature produces an image more rich in every detail than ever before.

Auto orientation
The measurement data on the image will automatically adjust to the vertical or horizontal position of the camera.

Multi Spectral Image storage
Combined image storage including MSX®, thermal, PiP and visual.

Features dependant on camera model, please check technical specifications for more details.

Connect to smartphone or tablet via Wi-Fi, using the FLIR Tools mobile app (Apple iOS and Android) for processing and sharing results as well as for remote control.

WIFI

METER LiNK
Bluetooth

Visual camera

Laser pointer

LED light

Touch screen color LCD

E60

FLIR

91

74

Thermal imaging camera

Back button

Image archive button

Laser pointer

Navigation pad with center push

Save button

Power button

FLIR Exx-Series camera model comparison

FLIR E40	FLIR E50	FLIR E60
Thermal image quality: 160x120 pixels	Thermal image quality: 240x180 pixels	Thermal image quality: 320x240 pixels
Thermal sensitivity: <0.07°C	Thermal sensitivity: <0.05°C	Thermal sensitivity: <0.05°C
Temperature range: -20°C to +650°C	Temperature range: -20°C to +650°C	Temperature range: -20°C to +650°C
Spot meters, areas and difference temperature	Spot meters, areas and difference temperature	Spot meters, areas and difference temperature
MeterLink™	MeterLink™	MeterLink™
Bluetooth® / WiFi	Bluetooth® / WiFi	Bluetooth® / WiFi
2x digital zoom	2x, 4x digital zoom	2x, 4x digital zoom
MSX®	MSX®	MSX®
Multi spectral image storage	Multi spectral image storage	Multi spectral image storage
PiP IR area on visual image	PiP Scalable IR area on visual image	PiP Scalable IR area on visual image
Video out	Video out	Video out
Non-radiometric IR-video recording	Non-radiometric IR-video recording	Non-radiometric IR-video recording
Non-radiometric IR-video streaming	Non-radiometric IR-video streaming	Non-radiometric IR-video streaming
Radiometric IR-video streaming	Radiometric IR-video streaming	Radiometric IR-video streaming

62.0℃
20
70

62.0℃
20
70

Mechanical check-up of an electrical motor using the FLIR Exx-Series. The Auto orientation feature automatically adjusts the measurement information on the display to the position of the camera.

FLIR

FLIR Exx-Series

Technical specifications

Camera specific

	FLIR E40	FLIR E50	FLIR E60
Imaging Performance			
IR resolution	160 × 120 pixels	240 × 180 pixels	320 × 240 pixels
Spatial resolution	2.72 mrad	1.82 mrad	1.36 mrad
Thermal sensitivity	< 0.07 °C	< 0.05 °C	< 0.05 °C
Zoom	2x digital zoom	2x, 4x digital zoom	2x, 4x digital zoom
Image presentation			
Picture in Picture	IR area on visual image	Scalable IR area on visual image	Scalable IR area on visual image
Image modes	IR image, visual image, thumbnail gallery, picture-in-picture	IR image, visual image, picture-in-picture, thumbnail gallery	IR image, visual image, picture-in-picture, thumbnail gallery

General

Imaging Performance	
FOV / Minimum focus distance	25° × 19° / 0.4 m
Spectral range	7.5–13 µm
Image frequency	60 Hz
Focus	Manual
Focal Plane Array (FPA)	Uncooled microbolometer
Image presentation	
Auto orientation	Automatical adjustment of measurement data (vertical/horizontal)
Display	Built-in 3.5" LCD touch screen, 320 × 240 pixels
Digital camera	
Built-in digital camera	3.1 Mpixels, and one LED light
Image annotations	
Voice	60 seconds via Bluetooth®
Text	Text from predefined list or soft keyboard on touch screen
MeterLink	Possible to connect, via Bluetooth, Extech Moisture meter MO297 or Extech clamp meter EX845
Measurement	
Object temperature range	−20°C to +120 ºC / 0°C to +650 ºC
Accuracy	±2 °C or ±2% of reading
Measurement analysis	
Spotmeter	3
Area	3 boxes with min./max./average
Difference temperature	Delta temperature between measurement functions or reference temperature
Automatic hot/cold detection	Auto hot or cold spotmeter markers within area
Emissivity correction	Variable from 0.01 to 1.0 or selected from list of materials
Measurement corrections	Reflected temperature, optics transmission and atmospheric transmission
Color alarm	Red above, Blue below and Yellow interval
Set-up	
Image controls	Palettes (Arctic, Gray, Iron, Lava, Rainbow and Rainbow HC), image adjustment (auto/manual)
Set-up controls	Local adaptation of units, language, date and time formats; automatic shutdown, display intensity

Laser pointer	
Laser alignment	Position is displayed on the IR image
Laser	Activated by dedicated button

Image storage	
Format	Standard JPEG - including measurement data on SD memory card
Mode	Simultaneous storage of images in IR, visual and MSX

Video streaming/recording	
Non-radiometric IR-video recording	MPEG4 to memory card
Non-radiometric IR-video streaming	Uncompressed colorized video using USB
Radiometric IR-video streaming	Full dynamic to PC using USB

Power	
Battery type	Lithium-Ion (field replaceable) - 4 hours operating time
Charging system	In camera, AC adaptor, 2-bay charger or 12 V from a vehicle
Power management	Automatic shutdown and sleep mode (user selectable)
AC operation	AC adaptor, 90-260 V AC
Adaptor voltage	12 V output to camera

Environmental specifications	
Operating temperature range	-15 to +50 °C
Storage temperature range	-40 to +70 °C
Humidity	IEC 60068-2-30/24 h 95% relative humidity +25 °C to +40 °C / 2 cycles
Drop	2 m
Shock / Vibration	25 g (IEC 60068-2-29) / 2 g (IEC 60068-2-6)

Data communication interfaces	
Interfaces	USB-mini, USB-A, Composite video
USB	USB-A: Connect external USB device - USB-mini-B: Data transfer to and from PC / Streaming MPEG 4
Bluetooth®, WiFi	Yes

Report generation	
FLIR Tools	Flir Tools™ Software specifically designed to provide an easy way to create inspection reports. Available on the major platforms: Android, Windows, MacOS and iOS.

Physical characteristics	
Camera weight, incl. battery	0.88 kg
Camera size (L × W × H)	246 × 97 × 184 mm
Shipping size	500 x 350 x 190 mm
Shipping weight	4.7 kg

Standard package	
	FLIR E40, FLIR E50 or FLIR E60: Hard transport case, Thermal imaging camera with lens, Battery charger, Battery (2 ea.), Hand strap, FLIR Tools™ download card, Memory card, Lens cap, Power supply incl. multiplugs, USB cable, User documentation CD-ROM, Video cable, Battery charger, Printed documentation

2 YEAR FULL PRODUCT WARRANTY *

10 YEAR DETECTOR WARRANTY *

* After product registration on www.flir.com

◆FLIR®

FLIR Ex-Series

Accessories

Power

Car charger   [T198532]
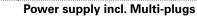This cable is used to power the thermal imaging camera from the 12 V socket in a car.

Battery   [T198530]
Extra battery that will allow you to spend extra time in the field doing inspections.

Power supply incl. Multi-plugs   [T198534]
This power supply is used when powering the camera from the mains supply or to charge the batteries. It comes with different types of plugs.

Accessories

Hard transport case   [T198528]
Rugged, watertight plastic shipping case. Holds all items securely. The case can be locked with padlocks and features a breather valve to prevent pressure build-up in airplane cargo holds.

Pouch   [T198529]
Soft pouch to protect the camera. Including shoulder strap.

Tool belt   [T911093]
Tool belt for thermal imaging camera pouches.

USB cable Std-A <-> Micro-B   [T198533]
USB cable to connect the camera.

FLIR Exx-Series

Accessories

Power

Cigarette lighter adaptor kit, 12 V DC, 1.2 m   [1910490]
Can be used to power the camera from the cigarette lighter socket in a car.

Battery   [T197752]
High capacity battery for the camera.

Battery charger   [T198125]
Stand-alone 2-bay battery charger, including power supply with multi plugs.

Power supply incl. Multi-plugs   [T910814]
This power supply is used when powering the camera from the mains supply or to charge the batteries. It comes with different types of plugs.

Storage

Memory card SD   [T911173]
Capture images on the go with your camera.

Miscellaneous

USB cable Std-A <-> Mini-B   [1910423]
USB cable to connect the camera.

Video cable   [1910582]
This cable can be used to transfer the images of the Exx-Series thermal imaging cameras to a monitor.

Tripod adapter   [T197926]
Tripod adapter, necessary to be able to mount the camera on a tripod.

Bluetooth headset   [T197771]
The Bluetooth headset can be used for annotation thermal images with voice messages. There is a wireless connection between the camera and the headset.

Pouch   [T911087]
Pouch, including shoulder strap, for FLIR Exx-Series.

Tool belt   [T911093]
Tool belt for thermal imaging camera pouches.

Hard transport case   [T198341]
Rugged, watertight plastic shipping case. Holds all items securely. The case can be locked with padlocks and features a breather valve to prevent pressure build-up in airplane cargo holds.

Sun shield   [T127100]
Snap-on sunshield to increase visibility of the LCD display.

Extech Clamp meter EX845   [T910972]
Can be connected to the thermal imaging camera through MeterLink™

Extech Moisture meter MO297   [T910973]
Can be connected to the thermal imaging camera through MeterLink™

Lenses

Lens 10 mm, 45° field of view incl. case   [1196960]
Sometimes there isn't enough room to step back and see the whole picture. This wide angle lens has a field of view almost double than the one of the standard 25° lens. Perfect for wide or tall targets such as electrical panels or paper machinery.

Lens 30 mm, 15° field of view, incl. case   [1196961]
When the target in question is a distance away it may be useful to use a telescope lens. The 15° lens is a popular lens accessory and provides almost 2X magnification compared to the 25° lens. Ideal for small or distant targets such as overhead power lines.

FLIR