FLIR TG165-X

P/N: 87501-0101

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Website

http://www.flir.com

Customer support

http://support.flir.com

Disclaimer

Specifications subject to change without further notice. Camera models and accessories subject to regional market considerations. License procedures may apply. Products described herein may be subject to US Export Regulations. Please refer to exportquestions@flir.com with any questions.

General description	
The FLIR TG165-X lets you both see and evaluate the hot and cold spots that can indicate serious issues. Ideal for commercial electrical, facility maintenance applications, the FLIR TG165-X reduces diagnostic time while simplifying repair and maintenance reporting. FLIR MSX enhancement improves image clarity by embossing visual scene details on full thermal images, providing added context to help you accurately target potential faults and troubleshoot repairs. Record images to monitor maintenance history and reassure your customer that problems have been resolved.	

Key features:

- See beyond the limitations of single-spot IR thermometers with a 80 × 60 (4,800 pixel) true thermal imager.
- FLIR patented MSX enhancement adds sharp visual detail to thermal images, making it easier to diagnose problems.
- Measure a wide range of temperatures, from –25°C to 300°C (–13°F to 572°F).
- Multipoint Laser pointer provides a circle to clearly show the area you are measuring.
- Rugged and reliable with an IP54 enclosure that protects the camera from dirt, dust, and oil.

Imaging and optical data	
IR resolution	80 × 60 pixels
Thermal sensitivity/NETD	< 70 mK
Field of view (FOV)	51° × 66°
Minimum focus distance	0.3 m (0.98 ft.)
Distance to spot ratio	24:1
Pseudo dual range	No
Image frequency	8.7 Hz
Focus	Fixed

Detector data	
Focal plane array/spectral range	Uncooled microbolometer/7.5–14 µm
Detector pitch	17 µm

Image presentation	
Display resolution	320 × 240 pixels
Surface brightness (cd/m²)	400
Screen size	2.4 in. portrait
Viewing angle	80°

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Image presentation	
Color depth (bits)	24
Aspect ratio	4:3
Display technology	TFT
Cover glass material	Optical grade silicon
Image adjustment	Automatic
Image modes	• MSX (Multi Spectral Dynamic Imaging) • Visual with temperature reading
Gallery	Yes

Measurement	
Object temperature range	–25 to 300°C (–13 to 572°F)
Object temperature range and accuracy (ambient temp. 15 to 35°C (59 to 95°F))	–25 to 0°C (–13 to 32°F), acc. ±3°C (±7°F)
	0 to 50°C (32 to 122°F), acc. ±2.5°C (±5°F)
	50 to 100°C (122 to 212°F), acc. ±1.5°C (±3°F)
	100 to 300°C (212 to 572°F), acc. ±2.5%
IR temperature resolution	0.1°C (0.2°F)
Repeatability of reading	±1% of reading or ±1°C (2°F), whichever is greater
Response time	150 ms
IR thermometer measurement	Continuous scanning
Minimum measurement distance	0.26 m (0.85 ft.)

Measurement analysis	
Spotmeter	Center spot on/off
Color palettes	• Iron • Rainbow • Whitehot • Blackhot • Arctic • Lava

Set-up	
Set-up commands	• Local adaptation of units, language, date, and time formats • Screen brightness (high, medium, low) • Gallery, deletion of images
Emissivity correction	Yes: 4 pre-set levels with custom adjustment of 0.1–0.99
Languages	Czech, Danish, Dutch, English, Finnish, French, German, Greek, Hungarian, Italian, Japanese, Korean, Norwegian, Polish, Portuguese, Russian, simplified Chinese, Spanish, Swedish, traditional Chinese, Turkish

Service functions	
Camera software update	Download from http://support.flir.com

Storage of images	
Storage media	eMMC 4GB
Image storage capacity	50.000 images
Image file format	JPEG with spot temp in meta tag

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Digital camera	
Resolution	2 MP (1600 × 1200 pixels)
Focus	Fixed
Field of view	71° × 56°, adapts to the IR lens

Flashlight	
Flashlight	Bright LED on/off
LED CCT	6500°K
LED CRI	70
Beam angle	±20°
Rated power	0.5 W
Light output (Lumens)	100

Laser pointer	
Laser pointer	Indicating the size of the measurement area
Laser	Class 1

Data communication interfaces	
Interfaces	USB 2.0
USB	USB Type-C: data transfer/power
USB standard	USB 2.0 High Speed

Power system	
Battery type	Rechargeable Li ion battery
Battery voltage	3.6 V
Battery capacity	3000 mAh
Battery operating time	• 5 hours of scanning (LCM medium brightness) • 4.5 hours with laser on (LCM medium brightness)
Battery charge life	30 days minimum
Charging system	Battery is charged inside the camera
Charging time	4 hours to 90%, 6 hours to 100%
Charging temperature	0 to 45°C (32 to 113°F)
Power management	Adjustable: off, 5 minutes, 15 minutes, 30 minutes
Battery documents	For documents like MSDS and UN38.3 test reports/summaries, see: https://support.flir.com/resources/msds

Environmental data	
Operating temperature range	–10 to 45°C (14 to 113°F)
Storage temperature range	–30 to 55°C (–22 to 131°F)
Humidity (operating and storage)	0–90% relative humidity (RH) (0 to 37°C (32 to 98.6°F)) 0–65% RH (37 to 45°C (98.6 to 113°F)) 0–45% RH (45 to 55°C (113 to 131°F))
EMC	• EN 61000-6-3 • EN 61000-6-2 • FCC 47 CFR Part 15 Class B
Magnetic fields	EN 61000-4-8 class 3

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Environmental data	
Radio spectrum	• ETSI EN 300 328 • FCC Part 15.249 • RSS-247 Issue 2 • EN 301 489-1:2011 • EN 301 489-17:2009
Encapsulation	IP 54 (IEC60529)
Shock	25 g (IEC 60068-2-27)
Vibration	2 g (IEC 60068-2-6)
Drop	Designed for 2 m (6.56 ft.)
Safety	CE/CB/EN61010/UL
Environmental safety	• REACH Regulation EC 1907/2006 • RoHS2 Directive 2011/65/EC • WEEE Directive 2012/19/EC • JIS C 6802:2011 laser directive (ongoing) • IEC 60825-1 class I laser directive • FDA laser
Humidity requirement	• IEC 60068-2-30 / 24h 95% Relative Humidity +25 - +70°C / 2 Cycles (Storage) • IEC 60068-2-30 / 24h 95% Relative Humidity +25 - +40°C / 2 Cycles (Operating)
Declaration of conformity	See: https://support.flir.com/resources/DoC

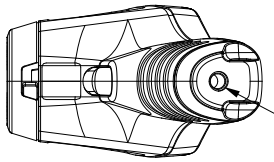
Physical data	
Weight (including battery)	0.394 kg (13.9 oz.)
Size (L × W × H)	210 × 64 × 81 mm (8.3 × 2.5 × 3.2 in.)
Tripod mounting	UNC ¼″-20

Warranty and service	
Warranty	http://www.flir.com/warranty/

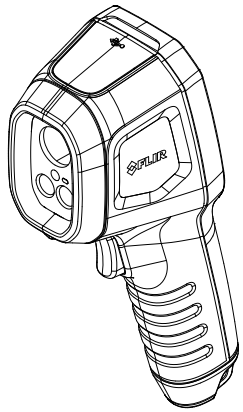
Shipping information	
Packaging, type	Cardboard box
Packaging, contents	• TG165-X • FLIR Thermal Studio Starter • Printed documentation • Wrist strap lanyard • USB cable • Pouch
Packaging, weight	0.942 kg (2.08 lb.)
Packaging, size	284 × 151 × 105 mm (11.2 × 5.95 × 4.12 in.)
EAN-13	7332558023822
UPC-12	845188019570
Country of origin	Taiwan

Supplies & accessories:

- T130976ACC; Retractable lanyard, 7 N (24 oz)



Tripod mount: UNC 1/4-20



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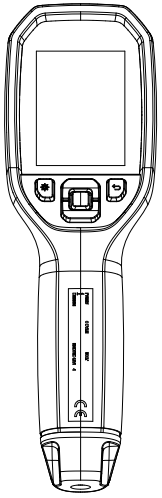

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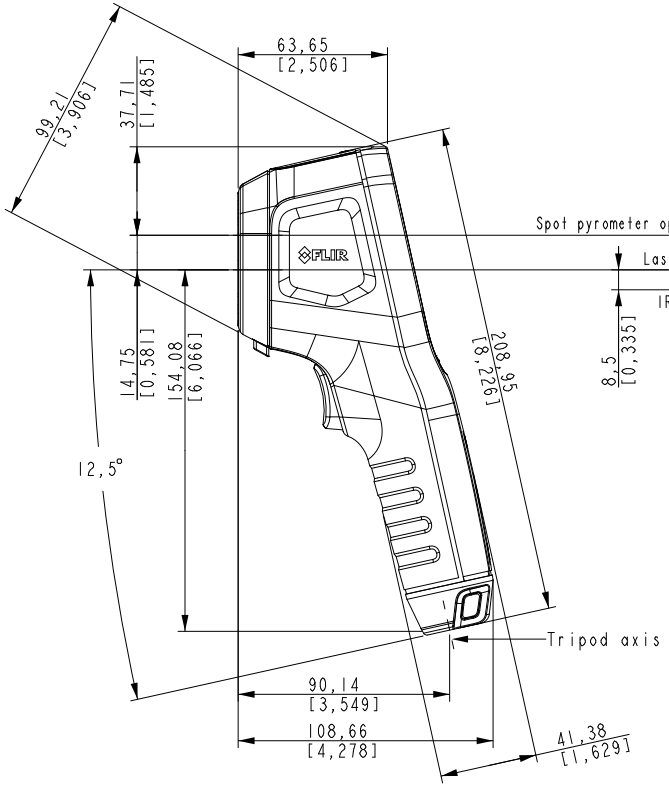

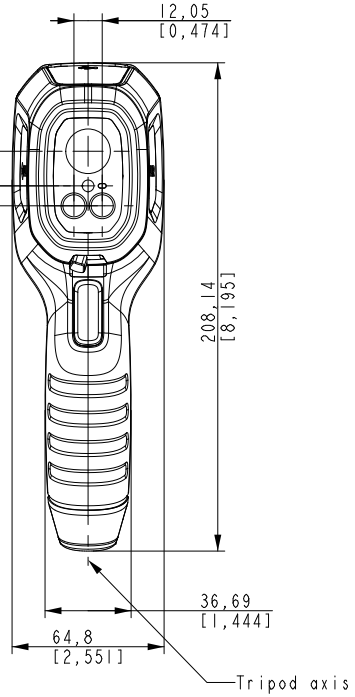

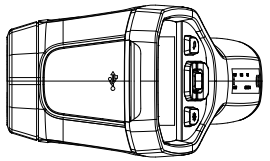

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Denomination: Basic Dimension TG165-X / TG267 / TG275 / TG297			Size A3	
			Scale 1:2	Sheet 1(1)
			Drawing No.	Size A