

# FLIR VS290™

## THERMAL VIDEOSCOPE KITS WITH SPECIALTY PROBE OPTIONS

The FLIR VS290 is an industrial thermal and visual videoscope system designed to help professionals quickly and safely find hidden dangers in difficult-to-access locations. Featuring a 160 × 120 true thermal imager and FLIR MSX® (Multi-Spectral Dynamic Imaging)\*, the VS290 gives users the power to see and measure invisible hot spots before catastrophic equipment failures can occur. Early detection improves safety and reliability and helps lower maintenance and replacement costs.

The small, sleek tips of the 2 m and 1 m camera probes make it possible to easily inspect through tight or confined openings, improving productivity and reducing diagnostic time. The side-viewing probe options are CAT IV 600 V safety rated – perfect for underground electrical vault inspections. The forward-viewing probe option is a practical fit for general purpose equipment and building thermal scans. All are versatile tools for the most demanding environments in utility, manufacturing, and building maintenance applications.



### INSPECT DIFFICULT-TO-ACCESS AREAS SAFELY

Quickly find hidden faults without entering unsafe or hard-to-reach spaces

- Troubleshoot problems from a safe distance with the 160 × 120 true thermal imager
- Easily maneuver the narrow 2 m or 1 m field-replaceable camera probe to inspect underground electrical distribution faults, inside large gearboxes, motors, attics, crawl spaces, and other cramped locations
- Instantly recognize the location of a temperature issue with FLIR MSX that embosses scene details from the built-in visual camera onto the full thermal image\*
- Navigate dark environments using the bright LED worklight\*



### IDENTIFY, DOCUMENT, AND SHARE

Improve workflow and communicate potential issues before they become major problems

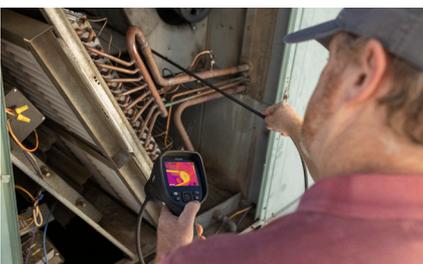
- View findings clearly on the large 3.5-inch color display and use color alarms (isotherms) to quickly identify problems
- Save images and videos using the included SD memory card then upload to a PC via USB-C Cable
- Quickly create reports using FLIR Thermal Studio Suite software and share findings with team members to prioritize repairs



### VERSATILE, RUGGED, AND RELIABLE

Use the VS290 system in the most demanding environments

- IP67 camera tips and IP54 base unit and probe provide a high level of protection against dust and water
- Easily replace or interchange the camera probe while in the field
- Conduct electrical inspections safely with CAT IV 600 V-rated VSC-IR32 and VSC-IR33 probes



### Available Options



**VSC-IR21 Probe**  
19 mm round forward viewing tip



**VSC-IR32 Probe**  
11 mm rectangular side viewing tip†



**VSC-IR33 Probe**  
19 mm round side viewing tip

\* Visual camera, MSX, and worklight available on VSC-IR32 and VSC-IR33 probes only.

† Rectangular tip thinnest dimension

For more information, visit:  
[www.flir.com/VS290](http://www.flir.com/VS290)

[www.teledyneflir.com](http://www.teledyneflir.com)

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## SPECIFICATIONS

Imaging and optical data		Additional data	
IR resolution	160 × 120 pixels	Battery type	Rechargeable 3.7 V Li-ion
Digital image enhancement	Yes, MSX® on VSC-IR32 and VSC-IR33 probes only	Battery operating time	>5 hours (full LCD brightness and worklight on)
Thermal sensitivity/NETD	<100 mK	Probe length (including tip)	VSC-IR21 Probe only: 111.5 cm (43.9 in) VSC-IR32 Probe only: 212.2 cm (83.5 in) VSC-IR33 Probe only: 211.9 cm (83.5 in)
IR Field of view (FOV)	57° × 44°	Probe tip shape – forward view Probe tip shape – side view Probe tip shape – side view	VSC-IR21 – round 19 mm diameter VSC-IR32 – rectangular 11 mm (thinnest dimension) VSC-IR33 – round 19 mm diameter
Minimum focus distance	0.15 m	Weight of kits (including two batteries)	Complete VS290-21 kit with case: 4.8 kg (10.58 lb) Complete VS290-32 and VS290-33 kit with case: 13.0 kg (26.46 lb)
Minimum focus distance with MSX	0.65 m (VSC-IR32 and VSC-IR33 only)	Weight of individual components	Videoscope Display Only: 640 g (1.41 lb) VSC-IR21 Probe Only: 490 g (1.08 lb) VSC-IR32 Probe Only: 470 g (1.04 lb) VSC-IR33 Probe Only: 470 g (1.04 lb)
Image frequency	8.7 Hz	Size of kits and videoscope (L × W × H)	Complete VS290-21 kit with case: 53 × 33 × 16.5 cm (20.87 × 12.99 × 6.5 in) Complete VS290-32 and VS290-33 kit with case: 118 × 45 × 16 cm (46.46 × 17.72 × 6.3 in) Videoscope display only: 26.4 × 11 × 11 cm (10.4 × 4.3 × 4.3 in)
Focus	Fixed	Box contents	Kits include videoscope display, thermal camera probe, two rechargeable batteries, battery charger, SD card, USB cable, wrist strap, hard case, printed documents
Focal plane array/spectral range	Uncooled microbolometer/7.5–14 μm	Complete Kits	
Detector pitch	12 μm	VS290-21	Thermal Videoscope Kit with 19 mm Diameter Round Tip Forward View Camera Probe
Image presentation		VS290-32	Thermal MSX® Videoscope Kit with CAT IV 11 mm Rectangular Tip Side View Camera Probe
Display resolution	320 × 240 pixels	VS290-33	Thermal MSX® Videoscope Kit with CAT IV 19 mm Diameter Round Tip Side View Camera Probe
Screen size	3.5 in	Individual Components -- available as extra probes and/or spare videoscope displays	
Color palettes	Iron, Rainbow, Gray, Below alarm, Above alarm	VSC-IR21	Thermal Camera Probe with 19 mm Diameter Round Tip (Forward View)
Image modes	IR only, visual only, MSX (visual only and MSX available on VSC-IR32 and VSC-IR33 probes)	VSC-IR32	Thermal MSX® Camera Probe with 11 mm Rectangular Tip (Side View)
Gallery	Yes	VSC-IR33	Thermal MSX® Camera Probe with 19 mm Diameter Round Tip (Side View)
Measurement and analysis		VS290-00	Videoscope Display for VS290 Series
Object temperature range	-10 to 400°C (14 to 752°F)		
Measurement accuracy	At ambient temp. 15 to 35°C (59 to 95°F) and object temp. above 0°C (32°F) 0 to 100°C (32 to 212°F): ±3°C (±5.5°F) 100 to 400°C (212 to 752°F): ±3%		
Spotmeter	1 in live mode		
Emissivity correction	3 preset and 1 custom emissivity setting		
Image storage and visual camera			
Storage capacity	Removable SD card (16 GB) - about 80,000 images		
Image file format	Radiometric JPEG		
Visual camera resolution	2 MP on VSC-IR32 and VSC-IR33 probes only		
Visual camera field of view (FOV)	83° on VSC-IR32 and VSC-IR33 probes only		
Worklight	Bright LED on VSC-IR32 and VSC-IR33 only		
Data communication interface			
USB	USB Type-C: data transfer/power		

Specifications are subject to change without notice. For the most up-to-date specifications, visit [www.teledyneflir.com](http://www.teledyneflir.com).

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[www.flir.com/VS290](http://www.flir.com/VS290)

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