

Product Datasheet - Technical Specifications



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IR Boroscope

P/N: VS290-32

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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 VS290-32 is the first industrial-grade Thermal MSX® Videoscope. The patented FLIR MSX (Multi-Spectral Dynamic Imaging) enhancement improves image clarity by embossing visual scene details on full thermal images, providing added context to help you accurately target potential issues in electrical, mechanical or building applications. The 2 m replaceable camera probe with flex points and low profile tip allows you to inspect hard to reach areas and take corrective action. The bright LED worklight helps navigate dark environments like attics, crawlspaces, underground utilities, etc. The FLIR VS290-32 is a rugged and versatile tool for the most demanding inspection jobs.	
Key features:	
<ul style="list-style-type: none">• Identify and troubleshoot problems faster with the 160 × 120 true thermal imager and 2 MP visual camera.• Includes 2 m replaceable camera probe with flex points for maneuverability.• Use color alarms (Isotherms) to quickly identify areas of concern.• Transfer images and video via USB Cable or wirelessly via Wi-Fi.• IP Rated (IP67 camera tip, IP54 base unit and probe) provides a high level of protection against dust and water.• CAT IV 600 V rated for electrical inspections.	
Imaging and optical data	
IR resolution	160 × 120 pixels
Digital image enhancement	Yes
Thermal sensitivity/NETD	<100 mK
Field of view (FOV)	57° × 44°
Minimum focus distance	0.15 m
Minimum focus distance with MSX	0.65 m
Image frequency	8.7 Hz
Focus	Fixed
Detector data	
Focal plane array/spectral range	Uncooled microbolometer/7.5–14 μm
Detector pitch	12 μm
Image presentation	
Display resolution	320 × 240 pixels
Surface brightness (cd/m ²)	1000
Screen size	3.5"



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Image presentation	
Viewing angle	70°
Color depth (bits)	18-bit (262,144 color)
Aspect ratio	4:3
Display technology	TFT
Image modes	<ul style="list-style-type: none">• IR only• Visual only• MSX
Gallery	Yes
Measurement	
Object temperature range	-10°C to 400°C (14°F to 752°F) (at room temperature)
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%
Measurement analysis	
Spotmeter	<ul style="list-style-type: none">• Center spot• Hot spot• Cold spot
Color palettes	<ul style="list-style-type: none">• Iron• Rainbow• Gray• Below alarm• Above alarm
Probe	
Structure and Dimensions	2 m total length with 3 segments: <ul style="list-style-type: none">• 1.2 m semi-rigid• 0.7 m rigid• 0.1 m semi-rigid Probe tip dimensions: 71.7 x 40.5 x 11 mm (2.8 x 1.6 x 0.43 in)
Probe Insulation	2-layers of ruggedized insulating material. Black outer layer and bright yellow inner layer.
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	3 pre-set and 1 custom emissivity setting
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



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Storage of images	
Storage media	16 GB SDHC
Image storage capacity	80 000
Image file format	Radiometric JPEG
Video file format	MPEG 4
Digital camera	
Resolution	2 MP (1600 × 1200 pixels)
Field of view	83°
Worklight	
Model	CREE XPG2
LED CCT	6500 K
LED CRI	70
Beam angle	120°
Rated power	0.7 W
Light output (Lumens)	117 lm
Data communication interfaces	
USB	USB Type-C: data transfer/power
Wi-Fi	Peer to peer (ad hoc) or infrastructure (network)
Power system	
Battery type	Rechargeable Li ion battery
Battery voltage	3.65 V, 5.7 Ah, 21 Wh
Battery operating time	>5 hours (full LCD brightness and worklight on)
Charging system	In camera or two-bay charger
Charging time (using two-bay charger)	2.5 hours to 90% capacity with charging status indicated by LEDs
Power management	Adjustable: off, 5 minutes, 15 minutes, 30 minutes
Environmental data	
Operating temperature range	-10 to +50°C (14 to 122 °F)
Storage temperature range	-20 to +60°C (-4 to 140 °F)
Humidity (operating and storage)	5% to 90% relative humidity (RH) non-condensing
EMC	EN 61326-1, EN 61000-6-2 (Immunity), EN 61000-4-2 (ESD), EN61000-6-3 (Emissions), FCC 47 CFR Part 15 Class B
Magnetic fields	EN 61000-4-8
Radio spectrum	2.4 GHz
Encapsulation	Probe tip : IP67 (IEC 60529) Main body/Tube : IP54
Shock	25 g (IEC 60068-2-29)
Vibration	2 g (IEC 60068-2-6)
Drop	Designed for 2 m (6.6 ft)



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Environmental data	
Safety	CAT IV 600 V
Environmental safety	ETL (EN 61010-1), CE, RCM, FCC WEEE, RoHS, REACH Department of Energy and California Title 20 Battery Charging Systems Efficiency
Physical data	
Weight (including battery)	1.14 kg (2.52 lbs)
Size (L x W x H)	<ul style="list-style-type: none">• Complete kit with case: 120 x 48 x 20 cm (47 x 18.9 x 7.9 in)• Display: 26.4 x 11 x 11 cm (10.4 x 4.3 x 4.3 in)• Probe: 212.2 x 0.69 cm (83.5 x 0.3 in)• Probe length: 2 m (6.6 ft) without probe tip• Probe tip: 71.71 x 40.52 x 11 mm (2.8 x 1.6 x 0.4 in)
Warranty and service	
Warranty	https://www.flir.com/testwarranty
Shipping information	
Packaging, type	Cardboard box
Packaging, contents	<ul style="list-style-type: none">• Videoscope display (FLIR P/N VS290-00)• MSX camera probe (FLIR P/N VSC-IR32)• Battery x 2 (FLIR P/N T199330ACC)• Battery charger adapter (FLIR P/N T911633ACC)• USB cable type A to C (1 m)• Sandisk SD card 16 GB• Wrist strap• Printed documentation
Packaging, weight	13.0 kg (28.66 lbs)
Packaging, size	120 x 48 x 20 cm (47 x 18.90 x 7.87 in)
EAN-13	0793950429020
UPC-12	793950429020
Country of origin	Taiwan
Technical support	
Website	http://support.flir.com
Accessories	
<ul style="list-style-type: none">• T199330ACC: Battery• T199425ACC: Battery charger• T911633ACC: Power supply for battery charger• T911631ACC: USB 2.0 A to USB Type-C cable, 0.9 m	

Supplies & accessories:

- VS290-00; Videoscope display and battery for VS290 series (no probes)
- VSC-IR32; Thermal 160x120 MSX camera probe with rectangular tip