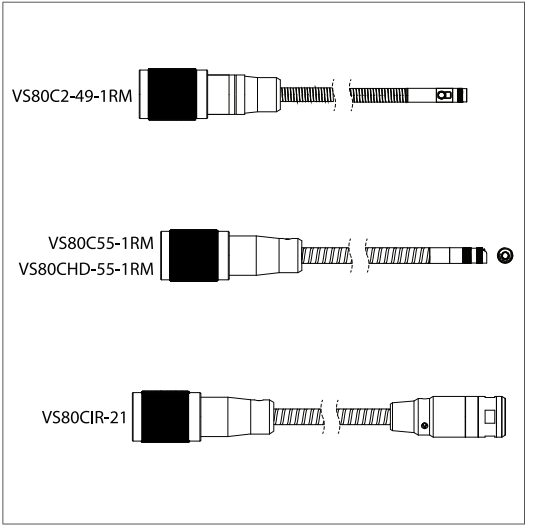
User Manual

VS80 Camera Probes

For use with the VS80 High Performance Videoscope



Introduction

The probes covered in this manual are designed for use with the VS80 High Performance Videoscope. The probes are controlled by the touch-screen icons and control buttons on the VS80.

The VS80 user manual and additional translations of this probe manual are available from the support site (see the Support section).

Please update the VS80 firmware before use, as explained in the VS80 manual. This will ensure optimal functionality and full compatibility with your camera probe.

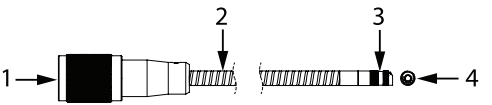
Probe Descriptions

The probes are described in the following sections, see the Specifications and Safety sections for additional information.

The VS80 offers many useful and convenient features including capturing still images and video, changing camera views, connecting with smart devices, and controlling worklights. Please refer to the VS80 user manual for complete information.

VS80C55-1RM General Purpose Camera Probe

The general purpose camera probe head is 5.5 mm in diameter and its probe length is 1 m (3.3 ft). The camera resolution is 640 * 480.

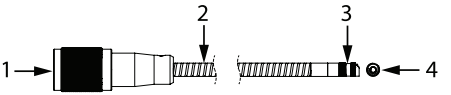


VS80C55-1RM

1. VS80 connector
2. Probe
3. Probe head
4. Front view of camera lens and worklights

VS80CHD–55-1RM HD Camera Probe

The HD camera probe head is 5.5 mm in diameter and its probe length is 1 m (3.3 ft). The camera resolution is 1280 * 720.

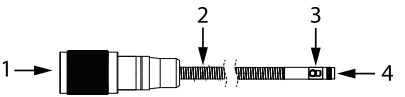


VS80CHD-55-1RM

1. VS80 connector
2. Probe
3. Probe head
4. HD camera lens and worklights

VS80C2-49-1RM Dual HD Camera Probe

The dual HD camera probe head is 4.9 mm in diameter and its probe length is 1 m (3.3 ft). The camera resolution is 1280 * 720.

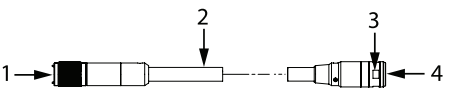


VS80C2-49-1RM

1. VS80 connector
2. Probe
3. Side view camera and worklights
4. Forward view camera

VS80CIR—21 Thermal IR Camera Probe

The VS80CIR-21 offers a Lepton 3.5 IR camera with a 1 m (3.3 ft) probe. The VS80 displays the camera image and the temperature of targeted surfaces and offers s selectable display palette, a temperature alarm, and other features.

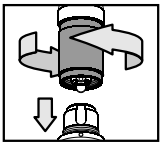


VS80CIR-21

1. VS80 connector
2. Probe
3. Orientation mark. This represents the top of the image
4. IR camera lens

Connecting the Probe

The steps below explain how to safely connect the probe to the VS80 monitor. Always turn the VS80 power off before replacing the probe.



1. Align the white dot on the probe connector with the white dot on the monitor connector.
2. Plug the probe into the monitor unit, ensuring proper alignment and full insertion.
3. Tighten the collar nut to secure the connection. Do not overtighten.

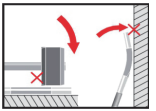
Safety

Safety Note

Please read and understand all safety cautions before use.

⚠ **CAUTION**
Do not insert the probe into flammable liquid or gas. This product is designed for industrial use only. It is not intended for use in human or other biological inspection.

⚠ **CAUTION**
To clean the probe, wipe with a soft cloth dampened with a mild detergent and clean water. Do not use abrasives, corrosives (alcohol), or solvents to clean the probe. Use a high quality lens cleaning fluid and a lint-free swab to clean the camera and worklight lenses. Do not disassemble the product, damage to the product and electrical shock may occur. Avoid direct sun exposure. Store in a cool, dry, and well-ventilated area.

	The probe contains sensitive circuitry that controls the optics and electronics of the camera. Do not strike the probe or allow it to impact objects forcefully.
	For digital probes ONLY, immerse probes only in approved liquids (see the Specifications section). This does NOT apply to the IR Camera (VS80CIR-21). The IR Camera probe must NOT be immersed in liquid.

Specifications

Digital Camera Specifications

Camera resolution	1280 (H) * 720 (V) for VS80C2–49–1RM and VS80CHD-55–1RM 640 (H) * 480 (V) for VS80C55–1RM
Frame rate	30 frames per second (fps), approximately
Probe Diameter	5.5 mm for VS80CHD-55–1RM and VS80C55–1RM 4.9 mm for VS80C2–49–1RM
Field of View	90°
Depth of Field	10 to 100 mm (0.4 to 4.0 in)
Probe tip length	20 mm (0.78 in) for VS80CHD-55–1RM and VS80C55–1RM 21.3 mm (0.84 in) for VS80C2–49–1RM
Probe length	1 m (3.3 ft)
Side-view camera	VS80C2–49–1RM only
LED Worklights	Worklights are controlled from the VS80 Four forward and two side worklights on VS80CHD-55–1RM and VS80C55–1RM Five forward and one side worklight on VS80C2–49–1RM
Operating temperature	0 to 60°C (32 to 140°F)

Storage temperature	-20 to 60°C (–4 to 140°F)
Relative Humidity	10 to 95 % non-condensing
Approved liquids for digital camera probes	Approved for use in brake and transmission fluid, diesel fuel, unleaded gasoline, engine oil, and CPC hydraulic fluid (46AWS). This does NOT apply to the IR camera probe VS80CIR-21
Ingress rating	Probe tip and body: IP 67 (IEC 60529) Protected from submersion in water up to 1 meter (3.3 ft) for 30 minutes maximum. In use: rain, splashes, and accidental submersion

IR Camera Specifications

IR Camera type	Thermal Lepton 3.5
Resolution	160 (H) * 120 (V)
Frame rate	8.7 Hz
Probe diameter	10.4 mm (0.4 in) probe 19 mm (0.7 in) camera
Probe tip length	25 mm (1 in)
Field of View (FOV)	71°
Operating temperature	0 to 50°C (32 to 122°F)
Storage temperature	-20 to 60°C (–4 to 140°F)
Shock	25 g (IEC 60068-2-29)
Vibration	2 g (IEC 60068-2-6)
Drop-proof	2 m (6.6 ft)
Water-proof	Probe tip and body: IP 67 (IEC 60529) Protected from submersion in water up to 1 meter (3.3 ft) for 30 minutes maximum. In use: rain, splashes, and accidental submersion

Warranty and Support

Three-Year Limited Warranty

This product is protected by FLIR's 3-Year Limited Warranty. Visit www.flir.com/testwarranty to read the 3-Year Limited Warranty document.

Customer Support

Customer Support Telephone List:	https://support.flir.com/contact
Repair, Calibration, and Technical Support	https://support.flir.com

User Manual

Website
http://www.flir.com

Customer support
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