FLUKE®

TECHNICAL DATA

RSE300 and RSE600 Infrared Cameras

Mounted infrared cameras for research, science and engineering

- **MATLAB**® and **LabVIEW**® software compatibility allows users to integrate infrared data, images and videos to support R&D analysis
- 320x240 and 640x480 resolution options
- See the details you need with **optional smart lenses:** 2x and 4x telephoto, wide angle and macro lenses
- Optimize images, generate customizable reports and export images to the format of your choice with **SmartView® desktop software**
- Eliminate potential for mis-diagnosis with automatically focused images throughout your field of view with **MultiSharp™** Focus

SUPERIOR IMAGE QUALITY

SPATIAL RESOLUTION

RSE300
1.85 mRad
RSE600
0.93 mRad

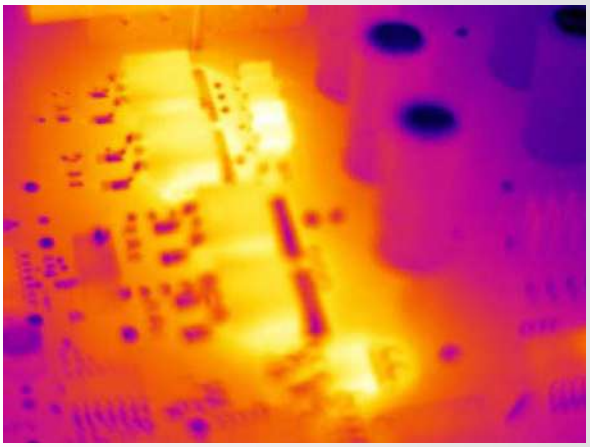
RESOLUTION

RSE300
320x240
RSE600
640x480

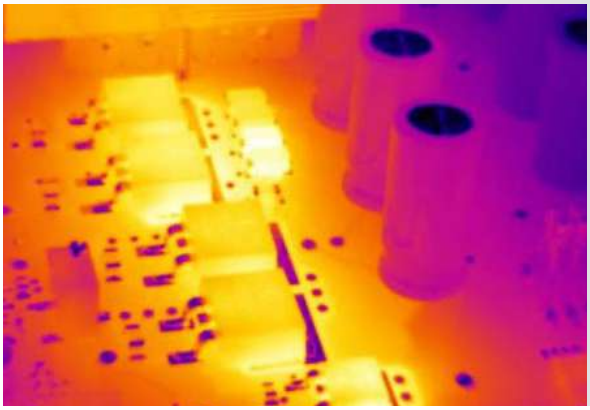
FIELD OF VIEW

RSE300
34 °H x 25.5 °V
RSE600
34 °H x 25.5 °V

100 % Focused–Every object. Near and far. MultiSharp™ Focus.



Manual focus



MultiSharp Focus, available on the RSE300 and RSE600 Infrared Cameras

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Detailed specifications

	RSE300	RSE600
Key Features		
Infrared Resolution[1]	320x240 (76,800 pixels)	640x480 (307,200 pixels)**
IFOV with standard lens (spatial resolution)	1.85 mRad	0.93 mRad
Field of view	34 °H x 25.5 °V	34 °H x 25.5 °V
Minimum focus distance	15 cm (approx. 6 in)	
Camera focus options	Focus is adjusted in SmartView® desktop software	
MultiSharp™ Focus	Yes, focused near and far, throughout the field of view	
IR-Fusion® technology	Yes, in SmartView® desktop software. Five modes of image blending (AutoBlend™ mode, Picture-in-Picture (PIP), IR/Visible alarm, Full IR, Full visible light) add the context of the visible details to your infrared image	
Interfaces for image/data transfer	Supported in camera data ports: GigE Vision	
Thermal sensitivity (NETD)	≤ 0.030 °C at 30 °C target temp (30 mK)*	≤ 0.040 °C at 30 °C target temp (40 mK)*
Filter mode (NETD improvement)	Yes	
Level and span	Smooth auto and manual scaling, in SmartView® desktop software	
Fast auto toggle between manual and auto modes	Yes, in SmartView® desktop software	
Fast auto-rescale in manual mode	Yes, in SmartView® desktop software	
Minimum span (in manual mode)	0.1 °C (0.18 °F), in SmartView® desktop software	
Minimum span (in auto mode)	<1.0 °C (<1.8 °F), in SmartView® desktop software	
Built-in digital camera (visible light)	5 megapixel industrial performance	
Frame rate	60 Hz or 9 Hz versions	
Digital zoom	Variable up to 16x in SmartView® desktop software	
Data storage and image capture		
Memory options	Connect to SmartView® desktop software for storage to device	
Image capture, review, save mechanism	Capture, save and analyze images in SmartView® desktop software	
Image file formats	Non-radiometric (.bmp) or (.jpeg) or fully-radiometric (.is2); no analysis software required for non-radiometric (.bmp, .jpg and .avi) files	
Software	SmartView® desktop software—full analysis and reporting software Compatible with MATLAB® and LabVIEW® software	
Export file formats with SmartView® desktop software	Bitmap (.bmp), GIF, JPEG, PNG, TIFF	
Voice annotation	Yes, in SmartView® desktop software	
IR PhotoNotes™	Yes, in SmartView® desktop software	
Text annotation	Yes, in SmartView® desktop software	
Video recording	Radiometric, in SmartView® desktop software, with exports to standard non-radiometric formats	
File formats video	Non-radiometric (MPEG-encoded .AVI) and fully-radiometric (.IS3), in SmartView® software	
Remote display viewing	Yes, see the live stream of the camera display on your PC, or TV monitor, via Ethernet cable to SmartView® desktop software	
Remote control operation	Yes, through SmartView® desktop software	
Temperature measurement		
Temperature measurement range (not calibrated below -10 °C)	-10 °C to +1200 °C (14 °F to +2192 °F)	
Accuracy	± 2 °C or ± 2 %, whichever is greater	
Autocapture	Yes, in SmartView® desktop software	
Reflected background temperature compensation	Yes, in SmartView® desktop software	
Transmission correction	Yes, in SmartView® desktop software	
Color palettes	Available through IR-Fusion® technology in desktop software	
Standard palettes	8: Ironbow, Blue-Red, High Contrast, Amber, Amber Inverted, Hot Metal, Grayscale, Grayscale Inverted	
Ultra Contrast™ palettes	8: Ironbow Ultra, Blue-Red Ultra, High Contrast Ultra, Amber Ultra, Amber Inverted Ultra, Hot Metal Ultra, Grayscale Ultra, Grayscale Inverted Ultra	

*Best possible

**Option to output 320x240 infrared data through GigE Vision

[1]These products are controlled under ECCN 6A003.B.4.B and an export license is needed for certain destinations. Please see RS1 controls for licensing requirements.

Detailed specifications (continued)

	RSE300	RSE600
Key Features		
Color alarms (temperature alarms)	Yes, in SmartView® desktop software–high temperature, low temperature, and isotherms (within range)	
Infrared spectral band	8 µm to 14 µm (long wave)	
Operating temperature	-10 °C to +50 °C (14 °F to 122 °F)	
Storage temperature	-20 °C to +50 °C (-4 °F to 122 °F)	
Relative humidity	10 % to 95 % non-condensing	
Center-point temperature measurement	Yes, in SmartView® desktop software	
Spot temperature	Yes, in SmartView® desktop software–hot and cold spot markers	
User-definiable spot markers	Unlimited user-definable spot markers, in SmartView® desktop software	
Center box	Expandable-contractible measurement box with MIN-MAX-AVG temp display, in desktop software	
Electromagnetic compatibility	EN 61326-1:2013 IEC 61326-1:2013; (Industrial)	
US FCC	CFR 47, Part 15 Subpart B Class A	
Vibration	IEC 60068-2-26 (sinusoidal vibration): 3G, 11–200 Hz, 3 axis.	
Shock	IEC 60068-2-27 (mechanical shock): 50G, 6 ms, 3 axis.	
Size (HxWxL)	8.3 cm x 8.3 cm x 16.5 cm (3.3 in x 3.3 in x 6.5 in)	
Weight	1 kg (2.2 lbs)	
Enclosure rating	IEC 60529: IP67 (protected against dust, limited ingress; protection against water spray from all directions)	
Warranty	Two years (standard), extended warranties are available	
Recommended calibration cycle	Two years (assumes normal operation and normal aging)	
Supported languages	Czech, Dutch, English, Finnish, French, German, Hungarian, Italian, Japanese, Korean, Polish, Portuguese, Russian, Simplified Chinese, Spanish, Swedish, Traditional Chinese, and Turkish	

Ordering information

FLK-RSE300 60Hz Thermal Imager; 320x240
FLK-RSE300 9Hz Thermal Imager; 320x240
FLK-RSE300 9Hz/CH Thermal Imager; 320x240; 9 Hz, China
FLK-RSE300 60Hz/JP Thermal Imager; 320x240; 60 Hz, Japan
FLK-RSE600 60Hz Thermal Imager; 640x480
FLK-RSE600 9Hz Thermal Imager; 640x480
FLK-RSE600 9Hz/CH Thermal Imager; 640x480; 9 Hz, China
FLK-RSE600 60Hz/JP Thermal Imager; 640x480; 60 Hz, Japan

What's included
Infrared camera with standard infrared lens; AC power supply; Ethernet cable; Antenna

Available by free download: SmartView® desktop software and user manual

Optional accessories
FLK 0.75X WIDE LENS Infrared Wide Angle Lens
FLK 2X LENS Infrared Telephoto Lens (2X magnification)
FLK 4X LENS Infrared Telephoto Lens (4X magnification)
FLK MACRO LENS Infrared Macro Lens
BOOK-ITP Introduction to Thermography Principles Book
FLK-RSE-MB Mounting bracket
FLK-RSE-STAND RSE Stand

Fluke. *Keeping your world up and running.*®