



## THERMAL IMAGERS

Innovation by **FOTRIC**



## NaviPdM<sup>®</sup> BUILT-IN AI INSPECTION ASSISTANT

NFPA 70B, Standard for Electrical Equipment Maintenance, requires equipment owners to perform at-least-annual infrared inspections of electrical equipment. Additionally, many types of equipment are now required to receive a visual inspection and/or inspection and partial discharge testing every three years.

For many facilities, these mandate represent an increase in frequency and scope of inspections compared to their historic practice. This at a time when skilled tradesmen have become more difficult to find, and while many facilities are experiencing unprecedented labor shortages. NaviPdM<sup>®</sup> and unmatched on-camera processing power make routes and diagnostics faster, easier, and more repeatable & reproducible.

FOTRIC's NaviPdM<sup>®</sup> AI assistant automates diagnostics and reporting based on user-defined criteria.

### FOTRIC's NaviPdM<sup>®</sup>

- Asset component AI tracking.
- Temperature trending.
- Automated diagnostics.
- Automated camera set-up.
- Multiple inspection routes.
- QR code scanner for asset identification and camera set-up.
- On-device report generation.

### Built on National Standards, Trusted by Experts

Use international standards or your site standards for asset-specific on-device alarms.



NaviPdM on-device ROI-based alarms



Example of on-device Trending

# Meticulous Measurement Flawless Imaging

Thermal Mode is the perfect mechanism to switch to when encountering instruments such as: Electrical equipment, transmission devices, high-temperature containers, insulation equipment, and other equipment with potential thermal failure risks.

## 640x480 Thermal Resolution & IREdge Image Detail Enhancement

Provides clear thermal gradients for easy analysis and preserves thermal details to highlight object contour.

## A Wealth of Selectable Lenses

Single view lenses: 46°, 25°, 12°, 7°

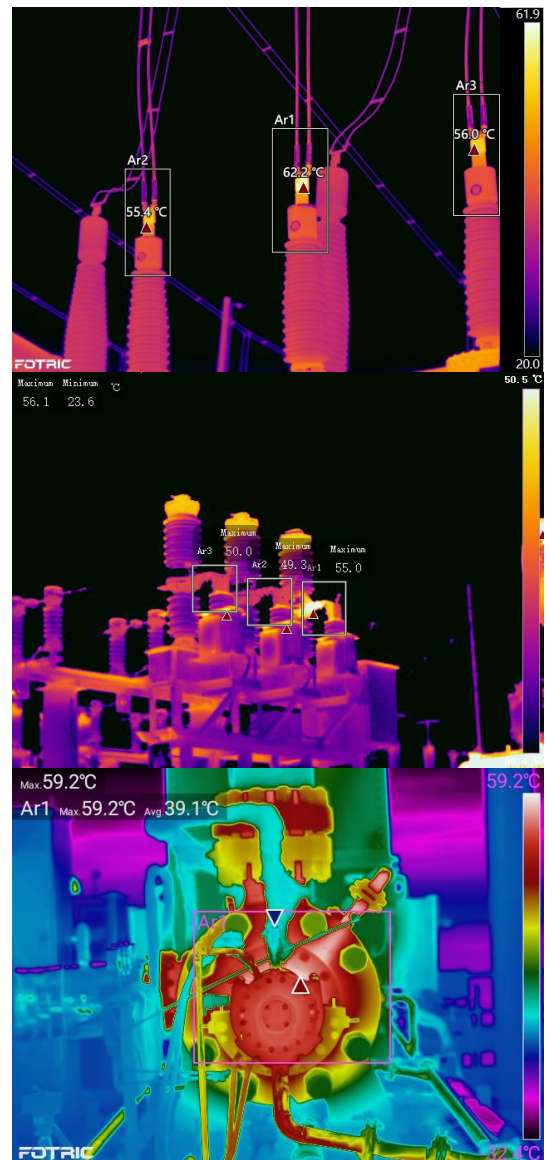
Dual-view lenses: 25° & 12°, 25° & 7°

## TurboFocus® Smart Focusing

Ensures image clarity at any distance and any position, laying a solid foundation for AI recognition.

## MagicThermal®

AI-based auto-recognition and feature contour mark up.



## AI-empowered Acoustic Mode



**162**

MEMS digital microphones

**1.3MP**

Digital camera

**Partial Discharge Diagnosis**

Surface, floating, corona discharge

**Leakage Evaluation**

Leak level, leak rate, leak cost

**Filter Mode**

Narrow the focus of the camera to an isolated area, screening out unwanted noise.

**Signal Delay Mode(T-FFTD®)**

Extrapolate intermittent signals to enhance camera detectability.



# Specification



Model	RP7R1H
<b>Thermal Imaging Parameters</b>	
Infrared Resolution	640*480
Super Resolution	1280*960
Detector Type	Uncooled infrared focal plane detector
Thermal Sensitivity (NETD)	30mk(0.054°F)@86°F
Field of View (FOV)	25°*19°
Spatial Resolution (IFOV)	0.68 mrad
Focus Mode	TurboFocus® system (thermal contrast AF, laser-assisted AF, continuous AF); Touch AF; Manual
<b>Acoustic Imaging Parameters</b>	
Microphone Channels	162 MEMS digital microphone
Acoustic Image FOV	66°*52°
Sound Pressure Sensitivity	0.01L/min@0.1MPa,1.5m,φ30μm leakage 0.025L/min@0.3MPa,6.5m,φ30μm leakage 0.045L/min@0.3MPa,7.5m,φ40μm leakage
Acoustic Sampling Rate	200kHz
Acoustic Refresh Rate	25Hz
Working Distance	0.3~100m
<b>Acouterm Features</b>	
Mix Mode	Display thermal imaging and acoustic signals on the same interface
<b>Unique Features</b>	
NaviPdM®	Support, AI inspection assistant
IRExplorer™	Support, cross-platform remote control and data transfer
T-DEF®	Support, thermal and visible light image blend, transparency 0% ~100%
T-TWB®	Support, temperature visual representation normalization
IREdge	Support, contour detail enhancement
<b>Temperature Analysis</b>	
Temperature Range	-4°F to 248°F, 32°F to 1292°F, Intelligent range
Accuracy	± 1.8°F or ± 1 %, whichever is greater (ambient temp at 77°F, temperature range 32°F-212°F), ± 3.6°F or ± 2 % for other temperature range
<b>Configurations</b>	
Packaging	FOTRIC acouterm camera, Lens, Lens cap, Charging dock, USB to USB-C cable, Micro HDIM to HDMI cable, Documents( certificate of quality, certificate of calibration, warranty card, packing list), Quick start manual, SD card, SD card reader, Power adaptor, 3 pieces of rechargeable lithium battery, Softbag, Hard carrying case.

# Specification





Model	RP9R1	RP7R1	RP5R1
<b>Thermal Imaging Parameters</b>			
Infrared Resolution	1280 x 960	640 x 480	384 x 288
Super Resolution (SR)	2560 x 1920	1280 x 960	768 x 576
Thermal Sensitivity(NETD)	30mk(0.054°F)@86°F		
Spectral Range	7 ~ 14μm		
Image Frame Rate	30Hz		
Field of View(FOV)	25°x 20°	25°x 19°	
Spatial Resolution (IFOV)	0.34 mrad	0.68 mrad	1.14 mrad
Minimum Imaging Distance	0.4m	0.25 m	0.1 m
Focus Mode	TurboFocus® system for continuous, laser-assisted, thermal contrast, touch AF; Manual focus		
<b>Unique Features</b>			
NaviPdM®	Support, AI inspection assistant		
IRExplorer™	Support, cross-platform remote control and data transfer		
T-DEF®	Support, thermal and digital camera image blend, transparency 0% ~100%		
T-TWB®	Support, temperature visual representation normalization		
IREdge	Support, contour detail enhancement		
<b>Temp Analysis</b>			
Temperature Range	-4°F to 248°F, 32°F to 1202°F		
Accuracy	± 1.8°F or ± 1 %, whichever is greater (ambient temp at 77°F, temperature range 32°F-212°F), ± 3.6°F or ± 2 % for other temperature range		± 3.6°F or ± 2 %, whichever is greater, (ambient temp at 77°F)
<b>Lens</b>			
Lens Options	7° Ultra Telephoto Lens 15° Telephoto Lens 25° Standard Lens 46° Wide Angle Lens	25°&12° dual-view lens 25°&7° dual-view lens 7° Ultra Telephoto Lens 12° Telephoto Lens 25° Standard Lens 46° Wide Angle Lens	7° Ultra Telephoto Lens 15° Telephoto Lens 25° Standard Lens 46° Wide Angle Lens
<b>Standard Configuration</b>			
Packaging	Thermal imaging camera, lens, lens cap, 3 rechargeable lithium batteries, battery charger, power adapter, USB Type-C to USB interface cable, Micro HDMI interface to HDMI, SD card, SD card reader, accessory bag (wrist strap), information bag (packing list, calibration certificate, user manual), portable soft bag, hard case	Thermal imaging camera, lens, lens cap, 2 rechargeable lithium batteries, battery charger, power adapter, USB Type-C to USB interface cable, Micro HDMI interface to HDMI, SD card, SD card reader, accessory bag (wrist strap), information bag (packing list, calibration certificate, user manual), portable soft bag, hard case	

# Specification



Model	R46R1			
<b>Thermal Imaging Parameters</b>				
Infrared Resolution	384 x 288			
Super Resolution	768 x 576			
Thermal Sensitivity(NETD)	40mk(0.072°F)@86°F			
Optional Interchangeable Lenses	Wide-angle	Standard	Telephoto	Ultra Telephoto
Field of View (FOV)	44°x 34°	25°x 19°	12°x 9°	7°x5°
Spatial Resolution (IFOV)	2.0 mrad	1.14 mrad	0.55 mrad	0.32 mrad
Focal Length (mm)	8	13.7	24.8	51.2
Minimum Imaging Distance	0.1 m	0.1 m	1 m	3 m
Focus Mode	TurboFocus® system for continuous, laser-assisted, thermal contrast, touch AF; Manual focus			
<b>Unique Features</b>				
NaviPdM®	Support, AI inspection assistant			
IRExplorer™	Support, cross-platform remote control and data transfer			
T-DEF®	Support, thermal and visible light image blend, transparency 0% ~100%			
T-TWB®	Support, temperature visual representation normalization			
IREdge	Support, contour detail enhancement			
<b>Temperature Analysis</b>				
Temperature Range	-4 °F to 248 °F ; 32 °F to 1202 °F ; smart switch between			
Accuracy	± 3.6 °F or ± 2 %, whichever is greater (ambient temp between 59 °F ~95 °F )			
<b>Standard Configuration</b>				
Packaging	Infrared thermal imager, lens, lens cover, 3 batteries, battery charger, power adapter, USB type-C to USB interface cable,micro HDMI to HDMI interface cable, SD card, SD card reader, accessory bag (wrist strap, 2 wrist strap holders, 2 M4 * 8 screws, lanyard, Allen wrench), information bag (packing list,user manual, calibration certificate, warranty card), portable soft bag, portable hard case			

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# PROGUSA

More Than a Test Equipment Sales Company

## Our Story

ProgUSA LLC is a unique American company providing premium diagnostic Test equipment for many application areas within the US electric power industry.

ProgUSA provides a sales, support and service network across the entire USA for select high quality manufacturers originating outside USA. We focus on tools that are more advanced on diagnostic technology and have excellent value, and continuously offer education on such diagnostics. Since 2005.

## Sales

We strive to make every interaction smooth, enjoyable, and beneficial for your unique needs while ensuring that every purchase enhances your operational efficiency and accuracy.

## Calibration

Using cutting-edge technology and methods, our calibration services keep diagnostic equipment precise and accurate to government-regulated standards.

## Repair

Our expert technicians can diagnose and repair many diagnostic instruments, minimizing customer downtime and assure top performance for important applications.

## Training

We have specialists for on-customer-site session or web-based interactive training on the more complicated diagnostic equipment.



















Power Transformer Test & Oil Purify

HiPot Test & Oil Dielectric Test

Circuit Breaker Test  
& SF6 Gas Testing & Treatment

Battery Bank Test

Substation Test, Survey &  
Monitoring

Partial Discharge  
Detection HV Cables

Portable Corona & Thermal  
Imagers

