

# Surveyor Camera

Live-Line Inspection

## S35/S345

High Voltage Wireless  
Inspection Tool

- Read Name Plates
- Examine Contacts & Connections
- Inspect Insulators & Cut Outs
- View Gauges & Levels
- Locate Oil Leaks

The hotstick mounted Surveyor inspection camera is a portable non-intrusive tool for inspection of energized high voltage equipment. The Surveyor wirelessly streams real-time high quality video images to a color LCD display allowing engineers to visually inspect critical asset information and the condition of equipment safely and without scheduling an outage.



### Features

- ✓ Hotstick Mounted
- ✓ 35KV & 34KV Models
- ✓ Portable & Rugged
- ✓ Wireless Color Display
- ✓ High Intensity Illumination

**GridSense**™

T&D Solutions Since 1974

# Surveyor Camera S35/S345

## Safe Live-Line Inspection

The Surveyor high voltage inspection camera allows for safe visual inspection of energized equipment up to 345KV without scheduling unnecessary and costly outages. Real time asset information is transmitted wirelessly and viewed on a standalone color LCD display. Still images or video are easily recorded to a digital camera, camcorder or laptop to document the inspection and to catalog asset information.

The Surveyor is an ideal maintenance and troubleshooting tool that engineers depend upon for safe access and inspection of uninterrupted energized equipment for effective maintenance planning and scheduling of resources.

Designed for use on transmission and distribution substations, lines and vault applications, the Surveyor uses include, but are not limited to, inspecting:

- Name plate details
- Oil level and gas pressure gauges
- Contact wear and equipment failure
- Pitting and excess heating
- Corrosion and pollution build up
- Misalignment and loose connections
- Joint and gasket integrity
- Elevated or inaccessible plant
- Confined spaces



### Video Transmitter

The Surveyor video camera is attached to the appropriate hotstick isolating the camera from the user; its design utilizes a fixed focal length lens allowing for close detailed inspection of energized plant equipment up to 345kV-L (S345 model). The camera's high intensity LED's provide ample lighting for inspection at night, shaded locations or within a vault. The durable Acetal Resin housing and shielding protects the camera and wireless transmitter from the harmful electric magnetic fields and high voltages. The 2.4Ghz video transmitter wirelessly transmits real-time images up to 200ft away and is powered by internal rechargeable lithium polymer batteries providing up to 8-hours operation.



### Receiver & Color Display

The color LCD display can either be connected to the base of the hotstick or held separately depending on the user's preference. The LCD display is powered by the receiver box that feeds the real-time video images from the camera. The LCD Display and receiver are powered by rechargeable lithium polymer batteries providing up to 8-hours operation. The receiver has an additional video RCA output jack for connection with the optional video goggles for use on sunny days, or a laptop, digital camera or camcorder for image recording.



### Snapshots & Video

Connecting a laptop, digital camera or camcorder to the video RCA output jack on the receiver allows the user to easily take snapshots or video recording of the inspections. The images can then be used after the inspection for further analysis, reporting or cataloged for future reference.



### Technical Specifications

Model No.	S35	S345
Line to Line Rating	35kV	345kV
Typical Kit	35kV Rated Camera Combined Screen & Receiver Camera and receiver a.c. charger Camera and receiver car charger 3.6mm lens and spare lens cover Custom Pelican Case	345kV Rated Camera Standalone LCD screen LCD Hotstick mount assembly Dual output receiver RCA to USB converter and software for PC Camera and receiver a.c. charger Camera and receiver car charger 3.6mm and 8mm lens and spare lens cover Custom Pelican Case
Hotstick Mount	Universal spline / sunrise fitting	
Transmission Frequency	2.4 to 2.483 GHz	
Transmission Range	Up to 200ft (70m) line of site, minimum of 75ft (25m)	
Transmission Power	10 mW EIRP	
Transmission Standards	ESTI EN 300 400, FCC Part 15C	
<b>Display &amp; Image Capture</b>		
LCD Resolution	440 lines	
Video Format	Video color PAL or NTSC, 720x480 / 720x526 MPEG2	
Image Formats	color JPEG or BMP, 720x576 96dpi	
<b>Power</b>		
Battery	Internal lithium polymer rechargeable battery packs	
Camera Battery Performance	8-hours operation, 2.5-hours recharge time	
Receiver Batter Performance	3 to 8 hours operation, 6-hours recharge time	
<b>Environmental</b>		
Housing Material	Acetal Resin	
Housing Dielectric Strength	19.7kV/mm	
Camera Weight	2.2lbs (1kg)	
Receiver Weight	1.75lbs (0.8kg)	
Operating Temperature	32°F (0°C) to 122°F (50°C)	

When connecting to a laptop a RCA to USB converter box and accompanying software is used to capture images and video recordings. The captured images are in a standard mpeg and bmp format that can be viewed, enhanced and modified using standard Microsoft and other third party software.