

DayCor®

SCALAR

THE WORLD SMALLEST CORONA UV CAMERA

DayCor® Scalar is a handheld UV corona camera for indoors inspections. Scalar is a non-destructive testing (NDT) instrument for gauging the condition of high & medium voltage electrical apparatuses and finding imperfections correlated with partial discharges. DayCor® Scalar presents in real time images of corona & arcing sparks and their discharging sources. The pinpointed information provided is instrumental for Factory Acceptance tests, for Quality Analysis of motors & generators, for testing manufactured components claimed to be corona free, and for routine predictive maintenance tasks. Furthermore, when safety is at stake, in locations prone to arc flash and sparks such as: switchgear cabinets, mines and dusty enclosed areas, DayCor® Scalar is an excellent cost effective inspection solution.



LIGHT AND COMPACT

DayCor® Scalar is the world smallest and lightest available corona camera that weighs 0.9 Kg (2.0lb). It has a slim handle that fits a hand grip and is operated using just the thumb. Its unique compact shape and lens location allow viewing through dedicated UV panes and into hard-to-reach compartments.

RECORDING & PLAYBACK

DayCor® Scalar records video clips and still pictures and stores them onto a removable flash card. It is possible to preview the stored media either on the camera's own LCD or on an external monitor via mini USB drive.

LARGE TRANSMISSIVE LCD

A wide 4.3" deluxe transmissive LCD, with high backlight of 600 nits, and resolution of 800X480 px delivers sharp and vivid imaging of the inspected scenes.

ERGONOMICS

DayCor® Scalar is designed to maximize ease of operation. On board command buttons control the most frequently used functions while an intuitive iconized stylish menu adds features that are needed for specific scenes.

CORONA PINPOINTING

APPLICATIONS Motors & Generators testing, Distribution, Switchgear cabinets, Production QA, Electrical contractors, Laboratories, Mines, Training classes, Other

DayCor® Scalar merges the concurrently captured images of both UV and visible channels with overlapping precision of 1 milliradian. This accuracy guarantees pinpointing the emitting sources of corona and arcing discharges. Visible zoom and UV magnification boost detection instances.

SMART OPERATION

DayCor® Scalar allows configuring multiple operation profiles to accommodate for different conditions. During inspection it is readily possible to switch between profiles and select the most appropriate one.

COST EFFECTIVENESS

The capability to see both the authentic scene and the emitted corona, pinpointed and in real time, cuts inspection duration, labor costs and assists in condition evaluation.

INTEGRATED FLASHLIGHT

An integrated LED flashlight with 2 levels of brightness enables inspecting interior parts of cabinets, motors and absolute dark spaces. Using the flashlight contributes to the safety of operators and allows working in variable indoors illumination conditions.



- >> VIDEO AND STILLS CAMERA
- >> PLAYBACK
- >> AUTO/MANUAL FOCUS
- >> EXTENDED BATTERY OPERATION
- >> LARGE TRANSMISSIVE LCD
- >> BUILT-IN LED FLASHLIGHT
- >> VISIBLE & UV ZOOM
- >> CUSTOMIZED PROFILES
- >> PATENTED

TECHNICAL SPECIFICATIONS

UV - OPTICAL PROPERTIES	
Background illumination Rejection	Indoor use with no direct sunlight. Artificial light is accepted. Some fluorescent bulbs may interfere
Minimum Discharge Detection	15 pC @ 1 meter (RWE certified: IEC 60270:2000)
Minimum RIV Sensitivity	43.9 dBµV @ 1MHz (RWE certified: NEMA107-1987)
Spectral Range	310-320nm
Detector Life Span	No degradation
VISIBLE - OPTICAL PROPERTIES	
Minimum Visible Light Sensitivity	0 Lux
Spectral Range	Visible range, Full color
IMAGING PERFORMANCE	
Field of View (HxV)	15° x 11°
Focus Modes	Visible: Auto UV: Auto & Manual
Focus Range	0.5m (20") to infinity
UV Zoom	Digital, 3 steps
DISPLAY	
Image Modes	Visible/UV/Combine
UV/Visible Overlay Accuracy	Better than 1 milliradian
Display	Transmissive 4.3" color LCD (800 x 480 pixels)
Brightness	600 cd/m ² reflective, adjustable backlight
Status Indicators	Focus mode, UV gain, Corona color, Low battery, SD memory status, Date & time, Flashlight
Setup Controls	Gain, Focus mode, Corona color, Date & time, Sleep mode, LI, LCD parameters, UV zoom
CONTROL & OPERATION	
Working Modes	On/Standby/Off
Control Inputs	Keypad and menu
Mounting Point	Standard 1/4" thread tripod mount
Flashlight	Built-in high power LED 3 levels
MEDIA CAPTURE & STORAGE	
Video & Stills Storage	SD card
Video Format	MPEG4
Image Format	BMP
Playback	Video clips and still pictures
OUTPUT INTERFACE	
Communication ports	RS232, USB
POWER SUPPLY	
Battery type	Rechargeable Li-Ion
Battery Run Time	3 hours
External Supply	AC/DC adapter: 9V
Charging System	Internal with AC adapter
Nominal Power Consumption	9V DC, 9 Watts
PHYSICAL CHARACTERISTICS	
Size (LxWxH)	27 x12 x 9 cm (11 x 4.7 x 3.5")
Weight	0.9 Kg [2.0lb]
ENVIRONMENT	
Operating & Storage Temperature Range	-20°C to +55°C (-4°F to +131°F)
ACCESSORIES	
External battery charger, Rechargeable extended battery, TRH, CoronaBase reporting software	
PATENT	
Patent Number 8,781,158 B1 [granted]	

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Ofil USA LTD

P.O.B. 675017 Marietta, GA 30006 USA
T +1.770.485.0675 | F +1.888.950.5557

www.OfilSystems.com

ofil@ofilsystems.com