MOUNTED

DayCor®
RAIL HD

Automatic & Autonomous Inspection System | Eletrical Network

DayCor® Rail HD is an automatic autonomous corona and arcing partial discharge detection system designed for fast inspection of electrified railways. The system inspects, displays, processes, records and generates reports for prognosis of the electrical traction condition. Electrical & structural faults on railway electrical installations involve corona radiation. Corona indicates underlying chemical and electrical processes that damage insulation, corrode metal end fittings and accelerate aging. Moreover, corona indicates hazardous situations and in the case of mass transportation should be detected on time. DayCor® RAIL HD ensures the detection and pinpointing of corona occurrences along the inspected overhead electrical lines. RAIL HD is offered as a package of one or more UV sensors, a powerful processor and a coronaCatch reporting software. Customization and adaptations are optional.

APPLICATIONS: Predictive maintenance | Electrical and structural faults detection of electrified railways & mass transportation

» HD Recording

» High sensitivity to corona

» Pinpointing faults

» Set for high speed

» Robust

» Automatic reports

» Autonomous operation

» GPS

» Single button operation

» Customized to fit

HIGH SPEED UV INSPECTION

High sensitivity to UV enables the detection and capture of distant corona discharge on the move in high speed without smearing the output image and without missing corona events.

RUGGED & STABILIZED

All components have high tolerance to jerky rides and can withstand strong vibrations, resulting in smooth movie clips and continuous uninterrupted recordings. The system operates throughout the ride while the train is on the move without overheating.

AUTOMATIC REPORTS

CoronaCatch, Ofil's proprietary software, distinguishes between noise and corona signals. Only corona events are evaluated and used in the automatically generated reports.

DAYCOR® TECHNOLOGY INSIDE

With DayCor® inside, the UV camera is fully solar blinded allowing operation under all daylight conditions [Registered Patent EP1112459B1].

SUPERIOR PERFORMANCE

With high accuracy, excellent image quality and solar blind performance, Rail provides an outstandingly clear image of the traction elements with corona. The UV channel and the Visible channels are merged perfectly with no deviation.

SENSOR - RECORDER - PROCESSOR - DISPLAY

DayCor® RAIL HD is a system comprised of one or more UV core cameras, a processing unit (MPU), monitor & keyboard, reports generating software, enclosures and peripherals. Building blocks brands and selection are synchronized with customers' needs and special architecture.

VIDEO RECORDING & STORING

Throughout a cruise videos from the sensors are displayed on the external monitor and recorded onto a hard drive. Findings are stored in separate folders and can easily be retrieved. Recording show date & time, GPS, pressure gauge and humidity.

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TECHNICAL SPECIFICATIONS (ACCOMMODATED TO CUSTOMER REQUIREMENTS)

DETECTION UNIT UV-VISIBLE IMAGER

Minimum Discharge Detection	1pC @ 15 meters
Minimum RIV Detection	3.6dBμV (RIV) @ 1MHz@ 10m
Minimum UV Sensitivity	2.2×10^{-18} watt/cm^2
Field of View H x V	Options: H: 10º - 1.6º | V: 5.6º-0.9º
Focus	Fix 3 meters (9.8 feet) to infinity
UV/Visible Overlay Accuracy	Deviation < 1 miliradian
Dimensions	L270 x W129 x H107 mm | L10.6" x W5" x H4.2"
Connectors	Power AC/DC, 1GB Ethernet, HDMI
Nominal Power Consumption	12VDC, 15W
Power Source	110/220V universal

PROCESSOR – RECORDER – STORE DRIVE

CPU	Intel core i7 processor
Memory	16GB DDR2 SRAM
Hard Drive	128 GB SSD & 480GB SSD
Power Input	110/220 VAC
Power Supply	400W ATX
Connectors	Video Cable, USB, RS23
Video Recording Format	MOV
Stills Format	JPG
Recording Time	More than 10 hours of continuous recording
Rack Mount Type	3U 19"

DISPLAY MONITOR – KEYBOARD & KEYPAD

LCD	TFT, 19", 300 nits
Resolution	1280 x 1024
Weight	12 Kg
Display Tilt	Max 130º
Power Supply	60W Built-in, 125W in use
Power Input	110/220V AC
Connectors	VGA
Mount Type	19" rack mount 1U Dual Rail

CORONACATCH APPLICATION SOFTWARE

Input Data	Text, Video, GPS, Temperature & Humidity
Output	DOC & CSV reports, MOV, JPG
Mode of Operation	Automatic corona events capture & report generation
Export Reports	Via removable hard drive or USB flash card
Storage and Operation Temp.	-20℃ up to +55℃
Vibration and Shock	ETSI EN 300 019-2-5 V3.0.0 (2002-12), IEC 60068-2-64

ACCESSORIES

Ofil's CoronaWise, Train Mount , Inspection Guide

Specifications are subject to changes without notice. Imagery used for llustration purposes only.

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