

VIAMI

Seeker D

Digital Leakage Management System A Trilithic Series Leakage Solution

Overview

The VIAMI Seeker D leakage detector provides a complete leakage solution capable of monitoring leakage within the aeronautical band and the LTE band in a complete digital cable system.

The VIAMI Seeker D leakage detector along with the CT-4 Channel Tagger accurately tags, detects, and measures signal leakage within the LTE (frequency range of 610.5–615 MHz) and aeronautical bands (frequency range of 135–139 MHz).

The Seeker D (Meter/Receiver) functions with the CT-4™ head end 1U rack mounted unit (Tagger/Transmitter) to provide an uncompromised tagging solution for active analog or digital systems. Virtualized tagger capabilities available from multiple R-PHY vendors provide seamless transition to advanced plant architectures using the same meters and processes. This feature detects tagged leaks and ignores untagged leaks, saving time from false alarms from signals not originating in your system.

The CT-4 can act as a traditional CT-2™ or CT-3™, and can insert proprietary analog tagged signals used by the VIAMI Seeker (analog meter) in the aeronautical range of 109.25–110.5 MHz and 118.5–147.250 MHz at the same time as injecting the tagged signal for the Seeker D. The CT-4 eliminates the risk of affecting any adjacent digital channels by injecting an adjustable signal from 10–30 dBmV, targeting 30 dB below the chosen digital carriers.

Key Features

- The complete high-performance, easy-to-use leakage solution
- Adjustable frequencies
- Accurately monitors leakage in all digital systems or mixed digital and analog systems
- Time-saving channel tagging capabilities
- Latest leak-tagging technology
- Virtualized tagger support from multiple R-PHY vendors
- Unsurpassed sensitivity from 2–2000 $\mu\text{V}/\text{m}$
- Cost-effective solution utilizing the majority of existing seeker GPS installation and equipment



Seeker D has a wide sensitivity range (2–2000 $\mu\text{V}/\text{m}$). In the NAV band, the Seeker D detects the proprietary signal from the CT-4 or R-PHY unit and scales them to be similar to leakage readings taken from an analog carrier. Consequently, readings taken from the Seeker meter and Seeker D meter produce similar results in the aeronautical band.

This digital leakage system allows the existing LAW (Leakage Analysis Workshop), Garmin GPS receiver, WiFi antenna, cellular antenna, and the MCA, MCA II, or MCA III to be utilized while keeping your plant technologically ready to meet tomorrow’s leakage monitoring needs. Seeker D can also be combined with an existing Seeker GPS system.

Whether testing for leaks in both digital and analog systems, or monitoring aeronautical bands or LTE, Seeker D provides all of the capability to find and fix leaks quickly, accurately, and effectively.

Seeker D Includes	
Seeker D leakage detector	TRI-LKG-SKR-D-W-MOUNT
Low Band Rubber Duck Antenna	
High Band Rubber Duck Antenna	
Seeker D Mobile Mount	
Mobile Mount Power Cable	
AC Travel Charger and USB Cable	
Printed Quick Start Installation Checklist and Guide	
Operation Manual on CD	
Optional Seeker MCA III	Part Number
MCA III	TRI-LKG-SEEKER-MCA-WIFI
Seeker MCA III to Mobile Mount Power and Data Cable	
2.4 and 5 GHz WiFi antenna	
Shielded ethernet cable (10 ft)	
Digital Channel Tagger	Part Number
CT-4 Channel Tagger	TRI-LKG-CT4
Available Software	
Seeker Setup Configuration Software	TRI-LKG-SW-SEEKER-PC

Low Band Antennas		Part Number
AFS-2 dipole antenna		TRI-LKG-AFS-2-LONG
AVM-3 magnetic base, vertical quarter-wave whip antenna (138 MHz)		TRI-LKG-AVM-3
High Band Antennas		
AFS-7 YAGI antenna		TRI-LKG-ANT-AFS-7-YAGI
AVM-4 magnetic base, colinear array antenna (600–700 MHz)		TRI-LKG-AVM-4
Optional Accessories		
Garmin® GPS receiver for Seeker MCA II and Seeker MCA III		TRI-LKG-GPS-MCA
CL-9 vehicle power adapter		TRI-ACCY-USBPWR-VEH-WCBL
Replacement Parts		
Shielded ethernet cable (10 ft)		TRI-ACCY-CAT5-10FT-QUAD
Seeker MCA III to Mobile Mount Power and Data Cable		TRI-LKG-SKR-MCA-PWR-CBL
Shielded ethernet cable (10 ft)		TRI-LKG-MCAIII-WIFI-ANT

Specifications

Seeker D	
Frequency Range	Low band: 135–139 MHz
	High band: 610.5–615 MHz
	Adjustable in 12.5 kHz Steps via Seeker Setup Software
Frequency Settings	10 user-adjustable operating frequencies, selectable on front panel Set using the configuration methods listed below
Receiver Sensitivity	-115 dBmV
Calibrated Level Range	Low band: 2–2000 µV/m scaled to match an analog carrier with an AFS-2/4 Handheld Dipole or AVM-3 Vehicle Mounted Whip Antenna
	High band: 2–2000 µV/m scaled to match an analog carrier with an AFS-7 Handheld Yagi antenna OR 4–2000 µV/m scaled to match an analog carrier with an AVM-4 Vehicle Mounted Colinear Array Antenna

Specifications (continued)

Seeker D	
Level Accuracy	±2.0 dB
Leakage Sampling	Dynamic Auto-Sensing & Adjusting
Display	Dual numerical readout of detected low and high band leakage within sensitivity range
Audible Tone	Tone is present if leakage amplitude exceeds squelch setting and digital tag is detected
	Pitch is proportional to strength of leak
Automatic Noise and Overbuild Discrimination	Internal circuitry discriminates between leaks and noise
	Overbuild discrimination provided by CT-4 channel tagger installed in hub or head-end
Power	Internal battery with eight hours of operation per charge OR Vehicle power of 12 VDC while in Mobile Mount
Configuration Method	USB connection from Leakage Detector to local PC running Seeker Setup Software OR Ethernet or WiFi connection from Seeker MCA III to the LAW Server while the Leakage Detector is located in the Mobile Mount

Seeker MCA III (Optional)

Standard Communications Interfaces	10/100 RJ45 connection to fleet management systems WiFi (802.11 a/b/g/n) to operator-controlled and configured hot-spot
Early Detection Notification (EDN)	Email notification of threshold exceeding leaks