

Unique value-added technology provides Swarm Logic® users with automated fault detection of HVAC rooftop units

SWARM IQTM



ENCYCLE HELPS REDUCE COSTLY SERVICE CALLS AND EXTEND EQUIPMENT LIFE

Commercial HVAC systems often include multiple packaged rooftop units (RTUs). A typical RTU contains air conditioning components, including an evaporator coil, fan, compressor, and condenser. The efficiency and performance of these systems largely depend on how well they are monitored and maintained. Building owners and operators are often unaware when units malfunction and waste energy until occupants report comfort problems. By then, the issue may involve expensive diagnostics, repair, and replacement that could have been avoided or minimized with earlier detection.

Encycle's Swarm IQ is an automated, software-based fault detection tool that identifies HVAC performance degradation and mechanical issues, leading to improved enterprise asset management and energy efficiency.

SWARM IQ™: ACTIONABLE FAULT DETECTION

Swarm IQ is Encycle's autonomous RTU fault detection tool that provides actionable intelligence for proactive HVAC maintenance activities and more efficient budget spending.

Swarm IQ monitors HVAC equipment in real time across an entire portfolio of buildings. Customers gain unprecedented visibility into the performance and health of their HVAC assets through data-driven analytics and customizable reports.

Learning about equipment issues and addressing potential major issues early on allows facility managers to bundle low priority service calls and reduce truck rolls.

SWARM IQ BENEFITS



Automated detection of HVAC issues



Moves customers into proactive, preventive maintenance



Reduces facility maintenance costs



Reduces energy waste and emissions through more efficient asset operation



Avoids unscheduled disruptions and truck rolls



Prolongs equipment life



Minimizes downtime



MAKE BETTER INFORMED HVAC MAINTENANCE DECISIONS AND DRIVE OPERATIONAL EFFICIENCY THROUGH SWARM PORTAL™



Swarm IQ is visualized through Swarm Portal, Encycle's easy-to-use platform that provides powerful analytics and reporting on key HVAC equipment health and efficiency metrics. The centralized web-based portal provides 24/7/365 access with role-based security and permissions for multiple users.

This crucial layer of actionable intelligence helps Encycle customers reduce operational costs and achieve better decarbonization outcomes.

OPTIMIZE WORK ORDER EFFICIENCY WITH SWARM SENTINEL™

Straight-through RTU fault notification sent right to your work order software!

Encycle also offers Swarm Sentinel, an optional HVAC fault detection notification tool that sends Swarm IQ HVAC system fault analysis results directly to ServiceChannel and other work order solutions platforms. The data from Swarm IQ is rich in detail, unambiguous, and precise, giving building managers or service providers information they need to investigate, schedule, and resolve the identified problem.

Swarm Sentinel, HVAC fault detection notification tool sends Swarm IQ HVAC system fault analysis results directly to ServiceChannel $^{\circ}$ and other work order solutions platforms.



About Encycle:

Deploying autonomous intelligence and analytics, Encycle improves commercial HVAC management, energy efficiency and building comfort to reduce operating costs and carbon footprint. As the only utility-endorsed HVAC optimization software, our patented machine learning solutions seamlessly integrate into maintenance workflows. Encycle enables multi-site commercial and industrial companies to maximize efficiency and reach sustainability goals by improving energy use and budgetary spend decisions.

