STATEMENT OF DOLAN P. FALCONER

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BEFORE THE

SUBCOMMITTEE ON TRANSPORTATION
SECURITY COMMITTEE ON HOMELAND SECURITY
U.S. HOUSE OF REPRESENTATIVES

CONCERNING

STAKEHOLDER PRESPECTIVES ON TSA ACQUISITION REFORM

JULY 17, 2013

Good morning Mr. Chairman, Ranking Member and distinguished Members of the Subcommittee.

My name is Dolan Falconer and I am the Founder, President and Chief Executive Officer of ScanTech Identification Beam Systems. LLC.

Thank you for inviting me to testify today about my perspectives on Transportation Security Administration (TSA) acquisition reform, and specifically how TSA procurement and acquisition practices can be improved to tap into the technology potential and innovations of U.S. Small Businesses.

TSA faces particular challenges in obtaining the most effective and efficient security technology to protect the traveling public and our economy from evolving threats. Small and innovative high-technology companies face a gauntlet of barriers to achieving government qualification and contracts for security screening technologies. Simply put, it takes a long time, extensive resources and a lot of capital to successfully do business with TSA.

BACKGROUND

Based in Atlanta, GA, ScanTech is a 100% privately funded, U.S. Small Business and a leading innovator of Advanced Technology (AT) X-ray inspection systems. ScanTech's X-ray inspection systems are specifically designed to provide materially better and faster detection of hazardous and contraband materials, thereby increasing processing efficiency resulting in reduced costs, increased confidence, and greater peace of mind for the traveling public.

Designated under the trademark Sentinel™ (see attached brochure), our systems are designed to specifically protect checkpoints and inspect airline carry-on baggage. While nearly identical in overall appearance to existing checkpoint scanners currently deployed at U.S. airports, Sentinel™ systems are anything but the same when it comes to technology and capabilities. Sentinel™ provides improved imaging, better spatial recognition, and advanced material discrimination algorithms to automatically differentiate and identify explosives, flammable liquids and other hazardous materials and substances that may be hidden deep within screened baggage and packages.

With a footprint very similar to traditional X-ray scanners, Sentinel™ systems can quickly be installed and easily maintained at existing checkpoints without major infrastructure modifications. In addition, once installed, Sentinel™ systems have built-in hardware and software upgrade capabilities that negate the need to replace the entire system as technology improves and threats evolve.

Sentinel™ is specifically designed to meet TSA requirements for the inspection of carry-on baggage, handbags, brief cases, laptop computers, small parcels, and packages that pass through airport checkpoints. Employing dual-energy, multi-view material discrimination with proprietary Automatic Threat Identification™ and Modular Threat Adaptation™ technology, Sentinel™ provides a significant advantage and superior threat reduction over traditional and airport checkpoint X-ray systems.

ScanTech is currently one of, if not the only U.S. Small Business in the process of qualifying such a system with TSA. Sentinel™ has already been certified by Underwriter's Laboratory (UL) for Safety and Electromagnetic Compliance (EMC) and is currently at the TSA Transportation Safety Laboratory (TSL) in Atlantic City, New Jersey being prepared for the TSA AT Qualification Test.

Although we consider reaching this point in the TSA acquisition process a major accomplishment, it has been a long and arduous process and is indicative of the challenges that face small technology businesses doing business with TSA.

Please let me explain further.

We began developing Sentinel™ in 2006 when TSA launched a search for new screening technology for carry-on baggage that could detect threats like those that were to be used in an alleged plot to blow up as many as 10 planes in mid-flight from the United Kingdom to the United States using liquid explosive compounds brought on board in carry-on luggage.

TSA invited interested companies to submit white papers for consideration, and in response, ScanTech initiated the development of Sentinel™, a four-plane platform architecture designed to address specific deficiencies in the then current technology. After securing millions of dollars of private funding to support product development and design and to build and test several test beds and prototypes, ScanTech became one of seven companies and the only U.S. small business down-selected by TSA to enter its new AT X-ray qualification program.

It was at this point that the realities of doing high-technology business with TSA as a U.S. Small Business and the challenges associated with navigating the TSA procurement process became apparent to me.

SMALL BUSINESS CHALLENGES

Let me explain:

Development of our next generation of X-ray screening technology began seven (7) long years ago and has taken over $20 million of private equity funding to reach this point. This is more time and money than most small businesses can sustain without federal funding support.

Several significant factors as described below combined to create a nearly insurmountable barrier of time and money for small businesses. Although these are specific to the technology channel we are pursuing within TSA, I believe they are indicative of the challenges facing most high-technology small businesses trying to do business with TSA:

1. Privately Funded R&D – When TSA initially identified the AT X-ray acquisition requirement, no federal funding was made available to support R&D activities. As a result, all ScanTech's R&D effort has been 100% privately funded. No tax payer dollars have been used. Unfortunately, most high technology small businesses cannot secure sufficient private equity funding to support years of R&D required to bring products to the technology readiness level required by TSA to acquire a product.
2. Nationally Recognized Third-party Laboratory (NRTL) Certification – TSA required NRTL certification before Sentinel™ would be accepted for qualification testing. As a result, Sentinel™ was sent to the Underwriter's Laboratory (UL) to meet the NRTL certification requirement. NRTL certification prior to qualification testing requires the investment of significant time and money before confirmation that the technology meets TSA performance standards and has a real path to eventual acquisition by TSA.
3. Full and Open Competition – The AT X-ray acquisition was a full and open competition. A small business set-aside provision was not included for ScanTech to compete for. In addition to having to compete directly against large business for this procurement opportunity, the acquisition also contained several requirements that indirectly precluded small businesses from participating even in the full and open competition. For example, vendors were required to provide TSA with five (5) systems for evaluation and testing at the vendor's cost. Delivering five (5) systems to TSA requires a significant commitment of capital that most small business cannot support.
4. Prior Access To TSL – Acceptance for qualification testing required ScanTech to have access to data that could only be acquired at TSL. As a result, small businesses must have access to TSL prior to submitting a compliant data package for TSA review and approval to proceed with qualification testing. However, TSL is typically full with other mission elements that take priority over scheduling small businesses for this data collection.
5. Security Requirements – Acceptance for qualification testing required ScanTech to have access to Sensitive Security Information (SSI) and National Security Information (NSI). As such, small businesses must invest both time and money in securing the clearances necessary to participate in the acquisition process, however, clearances are only granted to parties with a contract providing a need-to-know.

6. Unfunded Qualification Process – The qualification process was unfunded. ScanTech's investors have invested over $20 million in reaching this point, but must commit even more private funds to get through qualification. The government should provide funding assistance to small businesses that have taken a technology to the point of qualification.

TSA COMMITMENT

On July 19, 2012, I met with the TSA Administrator and the Assistant Administrator for Acquisitions to discuss these issues and their associated impact on small businesses and to share our lessons learned. During this meeting, we discussed the challenges associated with small businesses not having the advantage of access, familiarity and previous contact with TSA technical staff. I emphasized the fact that small businesses, especially those that have no previous experience in dealing with governmental procurement processes, are in need of technical procurement assistance, especially in the case of high-tech services or products, where knowledge of the processes and procedures can mean the difference between survival and success or failure. I presented the following recommendations following our meeting:

1. Assign a subject matter expert to assist us and other small businesses to quickly resolve technical questions and requirements.
2. Assign a contract officer's technical representative (COTR) earlier in the process to assist us and other small businesses navigate the technical procurement process.
3. Conduct an advanced technical visit of our facility in Atlanta by TSA technical management. TSA management had little or no prior knowledge of ScanTech's technology or its capabilities and an advanced visit would provide a baseline understanding of our technology and its potential for addressing key threats and vulnerabilities at the nations checkpoints**.**

I am happy to announce that our recommendations were not ignored and have been implemented by TSA.

TRANSPORTATION SECURITY LABORATORY

In December 2012, ScanTech signed a Cooperative Research and Development Agreement to enter TSL to access the explosive materials required to proceed with data collection and qualification of our Sentinel™ system. TSL has established a Readiness Assistance Program that is structured to assist vendors understand and meet TSA technical standards and requirements and ScanTech has received significant readiness assistance in preparing for TSA qualification through this program.

Readiness assistance is fully supported and endorsed by the TSL Director, Dr. Susan Hallowell. Dr. Hallowell is a leading advocate for high-technology small businesses and

has worked hard to ensure that we are aware and informed of the requirements and processes necessary to successfully maneuver through the qualification process.

Without Dr. Hallowell's stewardship and advocacy, we would still be years away from qualification. I personally commend her efforts and leadership in bringing small business innovation to the forefront of TSL's mission to identify and vet new technologies.

TOP THREE RECOMMENDATIONS

Based on my experience from a small business perspective, I offer my top 3 recommendations for TSA acquisition process changes to bring more competition and innovation to the ever-evolving security market to effectively and efficiently address emerging threats to homeland security.

1. Change the culture to foster accelerated innovation through small business participation. Acquisition regulations and requirements are complex, confusing, and constantly changing which is a big disadvantage to small businesses and newcomers to government work.

    a. Elevate the role of the small-business advocate and define specific and meaningful performance metrics (time and duration oriented) that provide substantive benefits to procuring and utilizing the best technology.

    b. Change the acquisitions process to foster timely, cost-efficient, and compliant qualification submittals, testing, and proposals. Use parallel processes instead of sequential processes. For example: Except for meeting the electrical and radiation safety requirements, the other standards for NRTL should be completed after accepted for testing at TSL. Requiring the completion of all NRTL testing prior to acceptance into TSL is a financial burden for a small business and lengthens the process.

    c. Revise the existing processes to be more nimble and responsive to industry innovations and concerns. A simplified process would reduce the delay between initial White Paper and Qualification Data Package (QDP) submittals and acceptance, and laboratory tests to demonstrate the innovative aspects of needed technology (e.g. liquids and gels kept in bags).

    d. Devise and mandate performance measures and incentives to align the procurement and contracting process with objectives to obtain and deploy the best technology in a faster, fairer manner.

2. Ease the entry-level requirements for promising technologies.

   Entry-level requirements are too high and rigorous to encourage the development of new and promising technologies by small businesses and newcomers to government work.

   a. Amend the extensive and rigorous qualification and testing process for new and innovative technologies to allow and encourage small business participation and their ability to fairly compete against large or global companies. For example: Security clearances serve as a barrier to entry. Clearances are not granted unless the company has an existing contract. A small business with innovative technology may not have on-going government contracts. Assist and facilitate small businesses in obtaining the necessary DD254 and get individuals cleared in a timely manner once the technology White Paper is approved, to allow necessary access to procurement and technical information.

   b. Add small-business and innovative technology set-asides for technology procurement. The current passenger checkpoint technology acquisition process is a Full/ Open Competition and does not provide a "pre- investment model" for small business (i.e. includes requirements like a minimum of five x-ray screening systems to gain entry into the program), which requires significant finances and time. Small business is unfairly expected to compete head-on with very large, multi-billion dollar companies that have extensive government relationships and resources.

   c. Allow involvement by the relevant program experts, along with the contracting officer, for availability to the submitting business to address the multitude of questions relating to technical, process and submittal issues. This provides more timely responses and expedites the process by getting not just direction but clarification and understanding of the requirements and why they were formulated. For example: Data Collection: provide a clear path to acquiring the necessary testing data needed to complete the QDP. Small businesses and newcomers to government procurement typically only have access to simulant explosives, not real threats/ explosives. A solution to this is to have the CRADA "pre-approved" upon acceptance of the White Paper, with a testing slot guaranteed at the TSL. The qualified passenger checkpoint Advanced Technology x-ray companies are all large size, and have equipment deployed at TSL and TSIF.

   d. Minimum Base Unit Requirements: TSA defines various "levels" of screening machines and associated requirements. The base-level requirement has changed many times since 2009 and is constantly evolving with the lessons learned, future considerations, and shifting threats. One section of the TSA procurement

specification lists an electronic diverter for scanned bags as well as a bin return system. In addition to the qualification requirements, a small businesses are also expected to address logistics and conveyors for acceptance into the TSL. The specification should list ancillary equipment as "optional" capabilities to preclude an unnecessary barrier to entry, with the just x-ray unit the base requirement. Threat detection is the germane requirement, not the bin return system, etc. This is an expensive and time-consuming requirement that is not necessary to assessing promising technologies.

3. Establish an effective small business engagement strategy

Effective small business participation within the federal sector requires the full commitment and engagement of the agency. Advocacy is a key component in all leading government small business utilization programs.

a. Assign a government "Sherpa" for small businesses that request assistance to serve as an informed point of contact for learning available government resources.

b. Establish a small business technology ombudsman that acts as a problem finder and facilitator in navigating the qualification, testing, and procurement processes and requirements. For example: Most small businesses with new and innovative solutions typically have no prior experience or relationships within the specific TSA Programs and Offices. To obtain information and get questions answered, companies are not allowed to communicate directly with the programs or lab, but are required to go through the assigned Contracting Officer. This person is typically non-technical and not a subject-matter-expert, and does not have the background or experience to address the issues and questions. Also, the questions and requests for information must be submitted in writing, with no allowance for personal communication or meetings with staff associated with the technology. This requirement does not foster new and innovative technology businesses; it serves the incumbent and large government contractors who have access and relations. Technical representatives should be available to provide technical advice and clarifications. Small businesses should have direct access to the subject matter experts to ensure that requirements and processes are clearly understood.

c. Obtain recommendations from relevant industry associations and their small business membership related to acquisition plans and procurement methods. Does TSA have an industry advisory group for procurement recommendations? High-level TSA executives should be connected to the group with an objective to measurably simplify and streamline the process, for meeting the TSA mission's objectives that are being thwarted by procurement practices.

SUMMARY

In summary, ScanTech offers a viable solution to one of TSA's most difficult technical challenges and we have found a way to navigate the arduous path before us, however, we still need your help! To date, we have been 100% privately funded. However, our private equity investors are now threatening to pull out, because of the uncertainty and timeline associated with qualifying the technology for TSA acquisition and deployment. Small business funding in our sector would help ScanTech and other high-technology small businesses achieve success in TSA. Funding assistance would ensure that small business innovation is available to further strengthen TSA and its critical missions.

ATTACHMENT: ScanTech Sentinel™ Brochure

ScanTech

QUICK REFERENCE

INTRODUCTION

Based in Atlanta, GA, ScanTech Identification Beam Systems, LLC (hereinafter 'ScanTech') is a leading innovator of Advanced Technology (AT) X-ray inspection systems. ScanTech's AT X-ray inspection systems are specifically designed to provide materially better and faster detection of hazardous and contraband materials, thereby increasing processing efficiency resulting in reduced costs, increased confidence, and greater peace of mind for visitors to public and private facilities.

ScanTech's AT X-ray inspection products are subdivided into High and Low Energy systems, the latter being designated under the trademark Sentinel™. Sentinel™ is designed to protect checkpoints and inspect airline carry-on baggage. While nearly identical in size and overall appearance to existing checkpoint scanners currently deployed at airports and public buildings the world over, Sentinel™ checkpoint systems are anything but the same when it comes to technology and capabilities. Sentinel™ provides improved visibility and image quality with four-plane viewing, better spatial recognition, and advanced material discrimination with analytical algorithms to differentiate metallic, non-metallic, and organic substances, allowing them to automatically identify threats hidden deep within screened baggage and packages.

ScanTech is in the process of qualifying Sentinel™ III, it's third generation checkpoint inspection system for inspecting airline carry-on luggage, to both U.S. Transportation Security Administration (TSA) and European Civil Aviation Conference (ECAC) requirements. To date, Sentinel™ III has been certified by Underwriter's Laboratory (UL) for Safety and Electromagnetic Compliance (EMC) and is currently in the TSA Transportation Safety Laboratory (TSL) in preparation for qualification testing.

In the High Energy segment, ScanTech is developing AllSecure™, a high energy AT X-ray system capable of scanning entire cargo containers and vehicles in under a minute with extraordinary imaging, content resolution, high-quality advanced material discrimina-tion and automatic threat detection. AllSecure™ subsystems are currently being integrated in partnership with Idaho State University into a fully functioning Product Demonstration Unit for full-scale testing and demonstration.

CORE BUSINESS & MARKETS SERVED

ScanTech is a global purveyor of Low and High Energy Advanced Technology (AT) X-ray Checkpoint and Cargo Scanning Systems and Solutions, with a strong focus on key markets in the Americas, Europe, Middle East Asia, and India. The global market potential for AT X-ray checkpoint scanning systems is expected to increase significantly over the period 2010 to 2019 in the aviation industry, and given sweeping regulatory changes already underway in markets around the globe will expand into all public and private checkpoint sectors during the coming decade.

The proliferation of terror on a global scale continues to underpin rapid growth in the checkpoint scanning sector, particularly for next-generation systems for inspecting commercial airline carry-on baggage that provide more effective threat detection while improving throughput by reducing false positives, enabling expedited security clearance and significantly reducing overall congestion at domestic and international airports. Progressive and more mobile next-generation solutions promise to extend the utility of such technologies to every facet of public life, including hotels, shopping malls, sports arenas, key government and private office buildings, public facilities, transportation hubs, as well as in larger-format applications such as cargo ports and logistics terminals.

PRIMARY PRODUCTS & BRANDS

Sentinel™ Advanced Technology X-Ray Checkpoint Scanners
AllSecure™ Cargo and Vehicle Inspection Systems

SENIOR SIBS EXECUTIVES

Dolan P. Falconer, President & CEO
Rocky Starns, CTO & VP of Engineering & Manufacturing

SIBS BOARD OF DIRECTORS

Dolan P. Falconer, *Co-Founder & Leading Nuclear Engineer*
W. Ralph Basham, *Fmr. Comm. US Customs & Border Protection*
George Zarur, *Fmr. TSA Senior Science Advisor*
Benjamin R. DeCosta, *Fmr. GM Atlanta International Airport*
Zalmie Jacobs, *Lead Investor Representative*
Daniel Gluck, *Lead Investor Representative*

GROWTH STRATEGY

ScanTech employs a bi-fold growth strategy of (i) leveraging its technological leadership and the cost advantages of its modularized solutions to accelerate market acceptance and capture near term market share; and (ii) achieving long-term organic growth through strategic licensing and teaming partnerships with global manufacturers, marketers, and integrators. The latter will enhance ScanTech's ability to win business over much larger competitors by augmenting its ability to deliver on major government and private sector contracts. Once firmly entrenched in the global checkpoint and homeland security marketplace, ScanTech will seek to derive ancillary growth and revenue from servicing and maintenance operations for its Sentinel™ and AllSecure™ product lines.

ADVANCED TECHNOLOGY X-RAY CHECKPOINT PRODUCTS

Advanced Technology X-ray Scanners

Sentinel™ products can specifically and automatically discriminate threatening and non-threatening materials and contraband such as TNT, C-4, cocaine, heroin, etc. Sentinel™ III, ScanTech's third generation AT X-ray system for inspecting airline carry-on luggage is designed to comply with both U.S. Transportation Security Administration (TSA) and European Civil Aviation Conference (ECAC) requirements for advanced technology X-ray inspection systems.

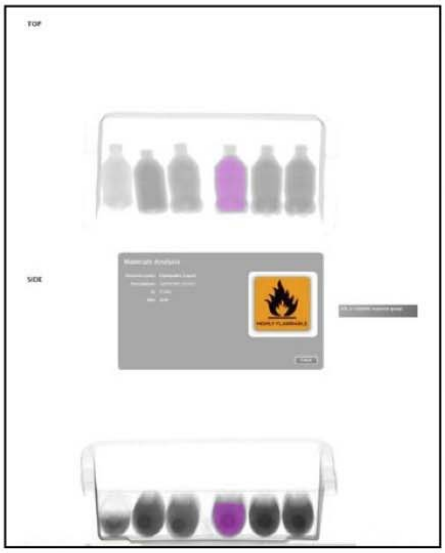
Automated Threat Detection

featuring Automatic Threat Identification™ Technology

ScanTech's proprietary Sentinel™ products provide ultra-high resolution imaging with Automated Threat Detection & Warning using advanced material discrimination technology. ScanTech's systems can automatically identify specific materials and discriminate between harmless items such as water or toiletries and threats such as explosives, caustic and flammable agents, weapons, and even contraband items such as drugs and other prohibited organic substances.

Extraordinary Screening Efficiency

Existing checkpoint inspection systems are extremely ineffective in finding hidden contraband. When a potential threat is identified, existing systems are equally inefficient, and require significant manual effort to evaluate 'false positive' indications. Conversely, the Sentinel™ product line's Automatic Threat Identification™ technology is capable of automatically identifying ambiguous material and substance threats, reducing false positives over competitive systems. Even more impressively, Sentinel™ systems can inspect over 800 bags or packages per hour, versus an industry average of 300 bags or packages per hour ! all within the same footprint and at the same price as existing checkpoint scanners.



Superior Imaging Quality

featuring Crystal Clear Four-Plane Viewing

Sentinel has exceptional image quality and performs at 187% of the acceptable industry minimum transmission X-Ray image quality as measured by ASTM 792-01.

ASTM 792-01 TEST	Min Accepted Score	SENTINEL™ **Score**	% Compliant
Test 1 - Wire Display	4	5	125%
Test 2 - Useful Penetration	5	11	220%
Test 3 - Spatial Resolution	6	8	133%
Test 4 - Simple Penetration	3	5	167%
Test 5 - Organic / Inorganic Differentiation	1	1	100%
Test 6 - IQI Sensitivity	8	22	275%
Test 7 - Organic Differentiation	2	2	100%
Test 8 - Useful Organic Differentiation	2	4	200%
Test 9 - Thin Organic Imaging	2	4	200%
Total	33	62	187%

ADVANCED TECHNOLOGY X-RAY CHECKPOINT PRODUCTS

Sentinel™ – Advanced Technology X-ray Scanners

Sentinel™ products are certified by Underwriter's Laboratory (UL) for Safety and Electromagnetic Compliance (EMC) and can specifically and automatically discriminate threatening and non-threatening materials and contraband such as TNT, C-4, cocaine, heroin, etc. Sentinel™ III, ScanTech's third generation AT X-ray system for inspecting airline carry-on luggage, is designed to comply with both U.S. Transportation Security Administration (TSA) and European Civil Aviation Conference (ECAC) requirements for advanced technology X-ray inspection systems.

Flexible Configurations + Superior Adaptability

with Modular Threat Adaptation™ Technology

Modular Threat Adaptation™ technology maximizes security while optimizing costs for clients, enabling seamless upgrades, and eliminating the need to decommission a system or take it out of operational rotation for long periods of time. As such, Sentinel™ products offer a guaranteed upgrade path without repurchase of a new system, and can easily be reconfigured to provide from 1 to 4 planes, as needed.

Affordability & Scalability

Despite its advanced capabilities, pricing for top-level Sentinel™ systems is competitive with the total cost of ownership of existing AT checkpoint scanners offered by other manufacturers, and its modular approach ensures the most effective pricing per solution, with a simple, easy and cost-effective guaranteed upgrade path that does not require the purchase of a brand new system. All of the foregoing capabilities are deployed as part of the core technology that drives each of ScanTech's products and systems, and are thus available in products ranging from low energy compact checkpoint scanners for use at airports, public buildings, and major venues, to high-energy port-side inspection systems capable of inspecting entire containers, trailers, and railroad cars.

Sentinel™ III

ScanTech

Technical Specification

Scanning Planes	Four (4) Independent Scanning Planes (Horizontal, Vertical & Dual 45°)
Material Discrimination	Automated Material Discrimination (Color Coded & Annunciated)
Detection of Threats	Autonomous Detection of Liquids and Flammable or Explosive Threats
Image Evaluation Tools	Four (4) – Spatially Synchronized High Definition Views; 24 inch Ultra HD Color Monitor w/ 1600 x 1200 resolution; Organic & Inorganic Filtering; Inverse Image Views; Gamma Correction; Emboss Image Views; Edge Enhancement; Multi-level Zoom; Real-time Scrolling Image Reservoir w/ Instant 'Touch Screen' Recall of last 10 scans; Image & Metadata Storage (minimum 10k images)
Remote Evaluation	Imaging & Material Discrimination Metadata can be simultaneously streamed to remote operator(s) or supervisor(s) for additional image evaluation & assessment, or the evaluation of operator procedures & techniques
Penetration	35.0 mm of Steel
Resolution	41 AWG Copper Wire (0.07mm)
Conveyor Speed	0.24 m/s (Standard)
Throughput	800+ bags/parcels per hour
X-Ray Generators	Four(4)–80to160kVX-rayMonoblocks(HermeticallySealed)
Max Conveyor Load	113 kg " 250 lbs.
Tunnel Dimensions	25.5 (W) x 16.75 (H) inches
Overall Dimensions	131 (L) x 59 (W) x 65.3 (H) inches
Power Requirements	120/240 VAC +10%/-15% ; 50/60Hz ; 3kVAmax
Operating Environment	0°- 40° ambient ; 95% non condensing humidity

ScanTech

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