New Video from Bedrock Automation Documents High EMP Resistance of Cybersecure Industrial Control System

Independent test lab certifies that the Bedrock OSA control platform and power supplies can survive repeated high voltage electromagnetic pulse (EMP) blasts

BOSTON, MASS., UNITED STATES, June 16, 2022 /EINPresswire.com/ -- New Video from Bedrock Automation Documents High EMP Resistance of Cybersecure Industrial Control System

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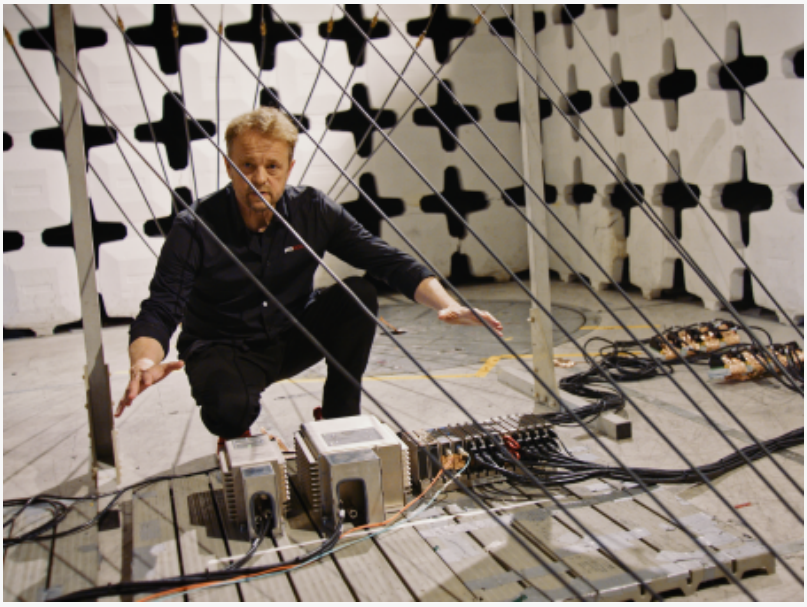
> *Bedrock Automation Founder, CEO and CTO, Albert Rooyakkers.*

Bedrock Automation, the creator of Bedrock OSA®, the world's most powerful, rugged and secure industrial control system, released today a new video documenting the independent test procedure by which its Open Secure Automation (OSA®) platforms have achieved compliance with U.S. Military Standard 461 (MIL-STD-461G) for electromagnetic pulse resistance. The system withstood repeated electromagnetic pulse blasts per the RS105 test, equivalent to what a high-altitude nuclear EMP detonation might deliver.

"We are seeing EMP protection specified in more RFPs, especially those from military sources. This video shows how the Bedrock OSA control platforms can meet and even exceed such requirements, surviving the rigorous RS105 test necessary for compliance with Military Standard 461G. I believe this is the first time that this test has been run on such a complete control system configuration," said Bedrock Automation Founder, CEO and CTO, Albert Rooyakkers.

The possibility of an electromagnetic pulse knocking out critical infrastructure is considered a high impact security threat by many global security experts. According to the EMP Taskforce on National and Homeland Security, it would take only a few EMP weapons launched from

freighters in international waters to inflict up to 10 years damage on infrastructure and electronics. High altitude detonation of such devices could permanently damage digital electronics and large high voltage transformers, denying electric power to homes, businesses, government and military operations.



Bedrock Automation CEO-CTO Albert Rooyakkers stages Bedrock OSA secure control system and power supplies for MIL STD 461G EMP compliance test

In early 2016, Bedrock Automation conducted its first RS105 test for U.S. MIL-STD-461G on its cyber secure industrial control system, involving multiple electromagnetic pulse (EMP) blasts, each measuring 50,000-volts/m. In July of 2017, they received the same certification for their standalone primary and uninterruptible power supplies. And in testing conducted this year, Bedrock achieved full compliance on an assembly containing a fully integrated and operational DCS/PLC system with control, I/O, power, UPS, gateways, cabling, and SCADA all running during the test.

Exceeding the standard

As defined by the RS105 Test Criteria, National Technical Systems, Inc., a leading independent provider of qualification testing, inspection, and certification solutions, subjected the Bedrock systems under test to a total of 67 EMP strikes in X, Y, and Z orientations. The 67 strikes are part of the test, starting at 50% (25,000 volts/m) and the last 5 strikes are at the full 50,000 volts/m.

Pushing the envelope further

Although surviving electrical blasts of 50,000 volts/m was required to meet the standard, the test equipment could produce blasts of more than 100,000 volts/m and Bedrock wanted to see just how much voltage the system could withstand. In a dramatic moment captured at the end of the video, the testing team maxed out the test chamber at 107,000 volts/m and the Bedrock systems under test survived multiple rapid strikes and remained operational.

“This demonstrates the extremes of protection and reliability we build into all Bedrock products. Threats to our infrastructure will continue to evolve and our ability to mitigate those threats must evolve as well. Whether we talk about electromagnetic pulse, environmental attack, cyber security or other emerging threats, our commitment is to continue to deliver the simplest, most scalable and most secure automation solutions possible,” said Rooyakkers.

Watch the full video here:

About Bedrock Automation
Bedrock Automation, established in San Jose, California and now based in the Boston, Massachusetts area, has developed the world's most powerful and cyber secure automation platforms. Bedrock has assembled the latest technologies and talents from the automation, measurement, cyber security, and semiconductor industries to build unprecedented solutions for ICS, Power and Flow based on three prime directives: simplicity, scalability, and security. The result is its award-winning Open Secure Automation (OSA®) platforms, which provide deeply embedded ICS cyber security and the highest levels of performance and reliability, at the lowest lifecycle costs. Build on Bedrock®!

For more information about Bedrock Automation visit Bedrock Automation.

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