

## Open Communication Specification Released To Address PV Module Rapid Shutdown Regulations

Industry leaders establish open standard to meet U.S. National Electric Code 2017 requirements

September 11, 2017, SAN JOSE, Calif. -- The SunSpec Alliance today announced that it has released the approved version of the open *SunSpec Communication Signal for Rapid Shutdown Interoperability Specification*. This new standard addresses a key U.S. National Electrical Code regulation requiring that all photovoltaic (PV) modules installed on rooftops after December 2018 must be able to cease generating within 30 seconds of being signaled by an operator.

The new specification, developed by more than 30 technology leaders including Maxim Integrated and Texas Instruments, defines a communication protocol that uses the cabling of the solar array to transmit messages over the DC (direct current) power lines between the PV modules and a master control device located near the inverter. PV module manufacturers implement the protocol on intelligent devices embedded in the junction box of each PV module. A master control device associated with the inverter communicates with the PV modules. Altogether, the specification enables plug and play interoperability and any-to-any rapid shutdown solutions at the lowest possible cost.

Companies announcing immediate plans to incorporate the technology into their product lines include ABB, Fronius, Maxim Integrated, Omron, Outback, SMA, and Texas Instruments. The full list of individuals participating in the development of the specification, including work group leader Larry Sherwood, can be found on page two of the document. [Click here to download.](#)

“After nearly two years of intense technical collaboration amongst competitors and business partners within the Alliance, the SunSpec Communication Signal for Rapid Shutdown Specification is now ready for implementation,” said Tom Tansy, Chairman of the SunSpec Alliance. “This open standard delivers multiple benefits to the Distributed Energy industry, most notably lower integration costs and the freedom to choose from an array of interoperable products,” Tansy concluded.

For more information about the SunSpec Communication Signal for Rapid Shutdown Specification, go to [www.sunspec.org](http://www.sunspec.org) or contact any of the companies listed in this announcement.

### **About the SunSpec Alliance**

The SunSpec Alliance is a trade alliance of developers, manufacturers, researchers and service providers, together pursuing information and communications standards for the distributed energy industry. SunSpec standards address most operational aspects of PV, energy storage and other distributed energy power plants on the smart grid—including residential, commercial, and utility-scale systems—thus reducing cost, promoting innovation, and accelerating industry growth. More than 100 organizations are members of the SunSpec Alliance, including global leaders from Asia, Europe, and North America. Membership is open to corporations, non-profits, labs, governments and educational institutions. For more information about the SunSpec Alliance, or to download SunSpec specifications free of charge, please visit [www.sunspec.org](http://www.sunspec.org).

### **About ABB**

ABB (ABB: NYSE) is a pioneering technology leader in electrification products, robotics and motion, industrial automation and power grids, serving customers in utilities, industry and transport & infrastructure globally. Continuing more than a 125-year history of innovation, ABB today is writing the future of industrial digitalization and driving the Energy and Fourth Industrial Revolutions. ABB operates in more than 100 countries with about 132,000 employees. [www.abb.com](http://www.abb.com)

### **About Fronius**

Fronius USA LLC, headquartered in Portage, Indiana, is a leading manufacturer for solar solutions and has been shaping the US solar industry since 2002. The company is the biggest subsidiary of Fronius International GmbH, headquartered in Austria. Fronius has three business units: Perfect Welding, Solar Energy and Perfect Charging. Through innovation and new technologies, Fronius has become a leading resource for high quality solutions in each industry they serve. Fronius' innovation is guided by a vision of 24 hours of sun, a future where 100% of energy needs are covered by renewable energy. For more information, visit [www.fronius-usa.com](http://www.fronius-usa.com).

### **About Maxim Integrated**

Maxim Integrated develops innovative analog and mixed-signal products and technologies to make systems smaller and smarter, with enhanced security and increased energy efficiency. We are empowering design innovation for our automotive, industrial, healthcare, mobile consumer, and cloud data center customers to deliver industry-leading solutions that help change the world. Learn more at <http://www.maximintegrated.com>.

#### Maxim Commentary

“Maxim’s cell-string optimizers offer a smart replacement for the bypass diodes in PV modules, enabling optimized module production, improved reliability, enhanced system flexibility, and NEC compliant safety features,” said Seth Kahn, Executive Director, Solar Products, Maxim Integrated.

### **About Omron**

OMRON Corporation is a global leader in the field of automation based on its core technology of "Sensing & Control + Think." Established in 1933, OMRON has about 36,000 employees worldwide, working to provide products and services in 117 countries. The company's business fields cover a broad spectrum, ranging from industrial automation and electronic components to automotive electronics, social infrastructure systems, healthcare, and environmental solutions. In the field of industrial automation, OMRON supports manufacturing innovation by providing advanced automation technology and products, as well as through extensive customer support, in order to help create a better society. For more information, visit OMRON's website at: <http://www.omron.com/>.

### **About SMA**

The SMA Group with sales of around €1 billion in 2016 is the global market leader for solar inverters, a key component of all PV plants. SMA offers a wide range of products and solutions that allow for high energy yields for residential and commercial PV systems and large-scale PV power plants. To increase PV self-consumption efficiently, SMA system technology can easily be combined with different battery technologies. Intelligent energy management solutions, comprehensive services and operational management of PV power plants round off SMA's range. The company is headquartered in Niestetal, near Kassel, Germany, is represented in 20 countries and has more than 3,000 employees worldwide, including 500 working in Development. SMA's multi-award-winning technology is protected by approximately 900 patents and utility models. Since 2008, the Group's parent company, SMA Solar Technology AG, has been listed on the Prime Standard of the Frankfurt Stock Exchange (S92) and is currently the only company in the solar industry that is listed in the TecDAX index. [www.SMA-America.com](http://www.SMA-America.com)

### **About Texas Instruments**

Texas Instruments Incorporated (TI) is a global semiconductor design and manufacturing company that develops analog ICs and embedded processors. By employing the world's brightest minds, TI creates innovations that shape the future of technology. TI is helping approximately 100,000 customers transform the future, today. Learn more at [www.ti.com](http://www.ti.com).

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### **FOR MORE INFORMATION:**

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