



Modern Grid Needs Correct Time; GE Launches Clock to Synchronize and Automate Electricity Distribution

- *GE's MultiSync 100 1588 GPS Clock Simplifies Traditional Timing Methods to Meet New IEEE Standards*
- *First of Its Kind to be Packaged in Small Form Factor with a Universal Power Supply*

MARKHAM, ONTARIO—June 3, 2014—When it comes to the modern grid, timing is everything. Without accurate and reliable time synchronization, grid-connected devices such as automatic-control and system-protection equipment could be at risk for frequency errors. If an unexpected outage does occur, inaccurate time stamps also can make it difficult for grid operators to identify the sequence of events that led to the outage, potentially extending the time it takes utilities to recover from and prevent future occurrences.

Understanding how critical accurate time is to sustaining a reliable grid, GE's Digital Energy business (NYSE: GE) announced its new small form factor GPS (global positioning system) clock that provides accurate 1588/C37.238 time synchronization over an Ethernet network. Packaged in a small form factor with a universal power supply for utility substations and industrial SCADA applications, the MultiSync 100 1588 GPS Clock allows modern grid assets—including wide-area protection, monitoring and control devices—to operate at an optimal level for a secure, continuous flow of power.

GE's Digital Energy business is the first protective-relay company to have a complete 1588-capable solution for time synchronization of protection and substation-automation control devices. A dedicated, network-based time protocol, IEEE 1588 provides accurate time synchronization over packet-based communications networks, better time synchronization across the power system and has a lower cost of installation versus traditional methods.

"The MultiSync 100 1588 GPS Clock fills an important need for our electric utility, telecommunications, transportation, oil and gas and power industry customers that needed a smaller, more-efficient and cost-effective solution to comply with new IEEE time synchronization standards," said Juan Marcias, general manager of grid automation, GE's Digital Energy business. "As the first small form factor GPS clock with a universal power supply, it also provides vast performance improvements over traditional time-synchronization methods, making it an ideal addition for time-sensitive applications such as protection, control and wide-area monitoring."

GE's new GPS clock features an affordable end-to-end time synchronization solution for protective relays that reduces the cost of time synchronization by eliminating the need to run a separate analog network. It's also critical for synchrophasor applications, which measure the electrical waves on an electricity power grid using a common time source for synchronization. This allows for real-time measurements of multiple remote measurement points on the grid.

Providing a complete 1588/C37.238 time synchronization solution for ML3000 Ethernet switches, universal relays and the 8-Series relay family, GE's MultiSync 100 1588 GPS Clock is compact in size (45

millimeters by 110 millimeters by 155 millimeters) and is intended for DIN-rail mounting to ease installation and is hardened for utility substation applications.

GE's Digital Energy business is a global leader in protection and control, communications, power sensing and power quality solutions. Its products and services increase the reliability of electrical power networks and critical equipment for utility, industrial and large commercial customers. From protecting and optimizing assets such as generators, transmission lines and motors, to ensuring secure wireless data transmission and providing uninterruptible power, GE's Digital Energy business delivers industry-leading technologies to solve the unique challenges of each customer. For more information, visit <http://www.gedigitalenergy.com>.

About GE

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For more information, contact:

Ashley Glowinski
GE
Digital Energy
+1 908 276 4344 x245
ashley.glowinski@ge.com

Matt Falso or Howard Masto
Masto Public Relations
+1 518 786 6488
matt.falso@mastopr.com
howard.masto@ge.com