

Essential Insight.mesh* Basic Package Wireless Condition Monitoring Solution

GE Energy's Bently Nevada* Essential Insight.mesh wireless condition monitoring solution provides an innovative wireless starter kit that gives you everything you need to set up a wireless network—with many sites going from start of deployment to data collection in two days. The Essential Insight.mesh Basic Package delivers value right out of the box, with wireless condition monitoring for two to four motor-driven assets. It contains all the hardware necessary to deploy 16 static points of wireless monitoring throughout your plant. To help you maximize the value obtained from the Essential Insight.mesh solution, we are also providing two days of technical service direction.

The Basic Package is an optimal solution for your site, allowing expansion from an initial 16 static points up to thousands, delivering exactly the monitoring you need to improve plant reliability. This rapid deployment and flexibility is provided by a sensor mesh solution that is enabled through the Essential Insight.mesh wSIM* node. The wSIM supports four inputs that can be any combination of vibration transducers or thermocouples.

Benefits

The Essential Insight.mesh solution helps you to:

- Eliminate complex wiring and required outages for wireless condition monitoring installations
- Increase plant reliability for a fraction of the cost of a wired solution
- Improve maintenance planning to reduce outage time and duration of unplanned outages
- Optimize equipment usage by managing equipment life and personnel
- Enhance machine availability through data quality and analysis from the proven Bently Nevada condition monitoring solutions

Quick Access to Asset Health Information

The Bently Nevada Essential Insight.mesh wireless solution enables plant employees to spend more time managing assets based on information from process data and reliability information—instead of spending time making data collection rounds. This gives your plant personnel a key advantage by minimizing the amount of time that maintenance staff needs to spend gathering information and trying to identify where an issue is occurring. System 1* empowers the engineering team to immediately initiate corrective actions by knowing where best to focus their efforts before more serious problems develop.

Everything You Need

The Basic Package delivers everything you need to easily, quickly, and economically extend your System 1 condition monitoring software to monitor your essential assets. The Basic Starter Package augments System 1 version 6.5 SP2 (or newer) with the following:

- The Manager Gateway (802.15.4, 2.4 GHz) to manage the network and serve as the gateway between the wireless and wired network
- Sixteen sensors (thermocouples and/or vibration transducers)
- Sensor mounting hardware
- Sixteen static point licenses in System 1
- Essential Insight.mesh network license
- Four wSIM nodes, one repeater, and vibration sensor cables
- Two days of technical direction
- One-year Silver-level Technical Service Agreement (TSA)

The backbone of the system is the wSIM device—a wireless sensor input module that also serves as a wireless mesh node. Each wSIM module supports up to four sensors (with your choice of the mix of vibration and thermocouples). As part of the Basic Package, you can select magnetic or conventional threaded mounting studs for the wSIMs, repeater, and sensors (see Tables 1 and 2).

Simple to Deploy

Deployment of our Essential Insight.mesh solution is easy. The wireless network is self-forming through our innovative mesh network technology. This means that once commissioned, wSIM nodes automatically form the mesh network, without any additional steps. The network is also self-healing, so if a signal path is



interrupted, the mesh ensures alternate signal transmission paths and automatically adds the interrupted path as soon as it becomes available again. This keeps your system interconnected and communicating with System 1 software at all times.

Deployment requires only a few simple steps:

1. Commission the nodes to the Manager Gateway
2. Attach the wSIM nodes to your machines
3. Connect the Ethernet wireless gateway to System 1 enterprise
4. Confirm the network recognizes nodes
5. Reap the value of monitoring your assets



Essential Insight.mesh Basic Package Contents	Quantity	Part Numbers
Basic Package		185300-01
Essential Insight.mesh network license	1	n/a
System 1 point license upgrade to add 16 static wireless points	1	n/a
Manager Gateway with power and mounting option	1	-BB-CC
wSIM, battery powered with mounting option	4	-DD
Repeater with mounting option	1	-DD
Thermocouples ^(1,2) and/or vibration sensors ^(1,2) (2001xx)	16	EE-FF-GG-HH
Configuration and technical direction services	2 days	

Table 1

Footnote

(1) Order 16 thermocouples (TCs) or 16 vibration sensors (Vibs), or eight TCs and eight Vibs. TCs and Vibs delivered are 200125 TC or TC connector, 200150 Vib, 200155 Vib, 200157 Vib. For additional ordering information, please see Thermocouple Data Sheet 149558, Accelerometer Data Sheet 164986, and Essential Insight.mesh Data Sheet GE#185 301-01.

2) Includes associated cabling, connectors, and mountings.

3) This can only be ordered for an existing Essential Insight.mesh network license.



Technology Support

The Basic Package has been designed with both new and experienced users in mind. To ensure that your team gains insight and understanding, we have included two days of onsite technical direction that will cover building and configuring wireless points in the System 1 software. A Bently Nevada expert will provide comprehensive guidance on product deployment best practices. Additionally, each Basic Package comes with a Silver-level Technical Service Agreement, which provides unlimited remote tech support.

Essential Insight.mesh Basic Package Contents	Quantity	Part Numbers
Basic Expansion kit⁽³⁾		185300-03-00-00
System 1 license upgrade for 16 static wireless points	1	n/a
wSIM, battery powered with mounting option	4	-DD
Repeater with mounting option	1	-DD
Thermocouples ^(1,2) and/or vibration sensors ^(1,2) (2001xx)	16	EE-FF-GG-HH
Full Services		Quote
<ul style="list-style-type: none"> • Solution design • Configuration • Technical direction 		<ul style="list-style-type: none"> • Installation • Training

Table 2

Improve your overall plant reliability by extending Bently Nevada Essential Insight.mesh wireless condition monitoring into your balance-of-plant. Visit ge-energy.com/bentlywireless for more information today!

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