Fat Spaniel Sub-Array Monitoring

Benefits

- Most cost-effective way to monitor solar array performance

- Immediate identification of performance problems allows maximization of system kWh output

- Easiest DC monitoring approach to maintain over the life of the system

- Maximum configuration flexibility with support for both inverter-integrated monitoring and external sub-array combiner box monitoring

- Automated alerting in the event of performance problems minimizes the need for manual system tracking

- Detailed Web display supports remote problem analysis and troubleshooting before scheduling on-site service

Hardware Requirements

Inverter-integrated sub-array monitoring hardware supported by Fat Spaniel (contact your Fat Spaniel sale resentative for the latest list)

Or

External Fat Spaniel-enabled sub-array combiner box

Fat Spaniel Ordering Info:

Setup per inverter or external monitoring box: SKU #4690

Sub-array monitoring service per sub-array: SKU #4691 (1 year) or SKU #4695 (5 years)

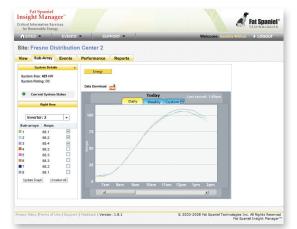String/sub-array monitoring communications unit: SKU #5385 (only required for certain configurations)

Note: requires Insight Manager™ portal service

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Cost-Effective Visibility into Large System DC Production

Want constant assurance that your solar arrays are producing as much DC power as they should? Fat Spaniel's sub-array monitoring service can provide you with that assurance by watching over the current production of individual sub-arrays. In the event of a fault such as a string failure or an environment problem such as partial array shading, the Fat Spaniel system can automatically send you an alert. The sub-array Web view can then be used for detailed problem analysis of current and historical data, enabling a more educated diagnosis before sending out maintenance.

Fat Spaniel sub-array monitoring Web view.

The detailed visibility and control provided by Fat Spaniel sub-array monitoring is the perfect complement to the system-level performance tracking provided by the Fat Spaniel Performance Index. Sub-array monitoring protects you from array-level problems such as string failure, while the Performance Index protects against system-level problems such as panel degradation.

Performance Visibility With Minimal Cost and Complexity

Sub-array monitoring is the perfect window into the standard large system configuration of strings of modules consolidated on the roof into sub-arrays by DC string combiner boxes, which in turn are consolidated at the inverter by a DC sub-array combiner. Current sensors included with the sub-array combiner constantly measure the DC current produced by each sub-array. These current readings are sent to the Fat Spaniel data center, where they are processed and immediately made available for online display and analysis.

"Hands-free" Operation with Automatic Performance Problem Alerts

Automatic alert generation in the event of performance issues means that you are only notified if there's a problem. Alerts are triggered when the performance of a given sub-array deviates by a specifiable percentage from its peers. The time window for alert generation can be customized, as can the minimum level of system activity.

Analyze Performance Problems with Sub-Arrays and Strings

The sub-array view provides both numerical and graphical displays of sub-array current. Sub-array failures are immediately obvious as cases of zero current while other sub-arrays are producing energy. The numerical and graphical displays can also indicate string-level problems. These will show up as deviations from average sub-array performance. While problems cannot be localized to specific strings (in contrast with Fat Spaniel's String Monitoring Service), they can be localized to a specific sub-array or string combiner box.

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