



APPLICATION NOTE

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Product Family: KEPdirect

Number: AN-DSD-004

Subject: Automation Direct Terminator I/O are used in conjunction with KEPdirect to provide a low cost ethernet remote condition monitoring solution for various OPC/DDE compliant computerized maintenance management software (CMMS) programs.

Date Issued: 2-14-2011

Revision: A

Specifications

Field network:	3 x T1H-EBC's
I/O:	Various I/O
PC:	Standard Network PC
Software:	1 x PC-KEPEBC-3
Hub/Switch:	10baseT



With companies changing everyday, one starts hearing words like Lean mfg, JIT, ISO, QS, 6 Sigma, TPM. These words are concepts that when implemented have some margin of improvement. In maintenance it has changed the direction in seven distinct ways:

1. Maintenance is more important.
2. Downtime is not tolerated.
3. Maintenance must interact with operations.
4. Operations are responsible for routine maintenance.
5. Craftsmen are assuming new roles and duties.
6. Maintenance craftsmen need higher skill sets.
7. Maintenance organizations need greater control of material readiness.

With the before mentioned concepts buzzing around the manufacturing world, maintenance changes must be addressed. CMMS is one very important way to do this. Computerized Maintenance Management Systems (CMMS) experts believe can save companies regardless of size 5-15% of their maintenance budgets.



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CMMS has five very obvious advantages over traditional reactionary maintenance.

1. Reductions in machine breakdowns.
2. Reduction in overtime costs.
3. Longer asset/Machine life.
4. Better Inventory management.
5. Other Benefits. Statistical Information for failure effect mode analysis, preventive maintenance, and predictive maintenance.

Condition Monitoring

Condition monitoring is usually the last part of CMMS implementation to be explored. It is expensive and difficult to use. Traditionally, the CMMS companies have used custom build data acquisition (DAQ) boards to monitor systems for values like vibration or temperature.

New technology like KEPdirect and Terminator field I/O are a perfect match to allow the user to dispose of expensive proprietary DAQ boards. In addition to the cost savings, the intuitive set-up will reduce implementation.

These will become the standard tools that monitor control loop performance on-line and in real-time. These tools enable continuous monitoring of control loops, and instant notification of operational deviations as they occur. Using OPC to tie these systems into CMMS provides tracking and automatic evaluation of your soft and hard assets. It also enables easy tracking of true operational and maintenance costs associated with those assets. Personnel can focus on fixing the cause of the problem, and not just the symptom.

Create work orders automatically for you based upon threshold values you've set in a predetermined data table. This sophisticated and powerful feature relieves you of taking manual meter readings thereby saving time and providing timely work assignments.

On a larger scale, ASSET MANAGEMENT SOFTWARE, there is too much information to directly link to the software (many of them are OPC/DDE compliant). There must be a buffer of some type. Usually this buffer is a SCADA type packages that handles distribution of information gathered by condition monitoring field devices. KEPdirect and Terminator Field I/O can easily connect to the SCADA software as it can to any OPC/DDE compliant software.

Technical Assistance:

If you have questions regarding this Application Note, please contact us at 770-844-4200 for further assistance.



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Basic Diagram:

