

5 Things You Should Know About Your Vision Application.

1. What are the Operating Conditions? This is the typical “operating environment” question. This will determine any special needs required by the camera and associated components to be installed. Many inspection devices are only rated IP20, this is acceptable for a few installations but most will require at least some extra protection.

2. What are the Inspection Needs? This is where we see many applications meet an un-timely demise. Often the specific trait or quality to be inspected is not defined, or at least it is not in a written documented form. For example; if you are interested in identifying surface defects they should be classified by size, shape, color and possibly quantity. The current vision systems available on the market today require programming or “training” to look for specific defects. They are only effective for defects that can be identified by the vision and programmed as good or bad traits to report.

3. What are the Reporting Needs? Every company has its own very unique reporting and recording needs that are to be met by the vision system. All basic systems will provide a simple relay signal for each inspection to indentify it as a pass or fail. Most of the basic dedicated vision sensors only have this capability. Most of mid to hi end vision systems have the ability to log pictures and statistical data on the inspections performed. Many of these higher end systems can also be connected into the plant data network to store data remotely.

4. What are the Application Needs? This is where we make sure the vision system meets the process needs. To select the correct vision system we need to know the production specifics such as; line speed, product size, interface needs and product color. These may be fixed or they may have multiple options for one or all of these aspects. Quite often it is the multitude of product variables that increases the vision system complexity from a simple vision sensor to a more involved vision system. What you will find on today’s market is a very broad product offering of vision inspection equipment. In recent years large steps have been made on capabilities, quite often the very basic system has the ability to identify the defect but may not be able to meet the other needs such as data-logging, processing speed, or even operator interface capabilities.

5. What are the System Integration Needs? This is one area that we typically find has been discussed and planned. Basic vision systems can provide a simple relay and hardwire connection to the machine control system. Expanded capabilities and needs include network control and data collection. Many vision systems are capable of communication directly with PLC’s on the market for control and status signals. Your needs may include historical trending or even logging of the actual pictures for quality control purposes. All of this is possible with the selection of the correct hardware.

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