



# SM-Register

## High Speed Motion & Registration Control

**SM-Register** is a new AC and servo drive option module that is designed to provide a flexible, high performance solution for programmable motion requiring high speed registration features. It can be used in applications such as printing, packaging and cutting machinery.

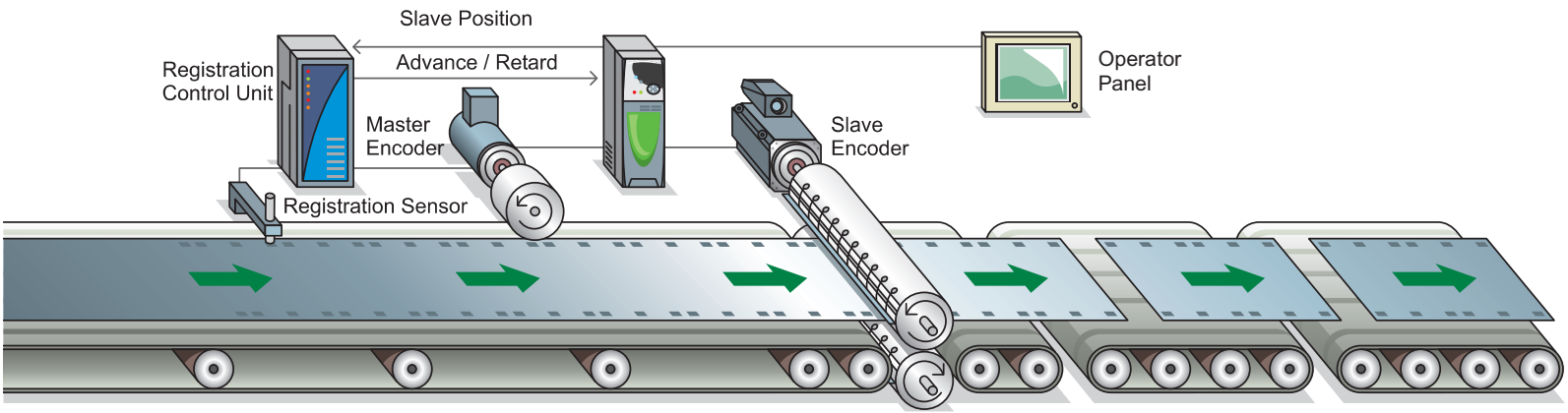
**SM-Register** is much lower cost and yet provides significant advantages over standalone motion and registration controllers:

- Flexibility to cover virtually any application from simple to complex
- Simple integration with the complete automation system
- Higher performance through eliminating delays between the registration device and the drive
- Reduced wiring through a single connection point for operator panels, position capture, feedback and advance/retard adjustment
- Extremely compact as the option module fits within the drive footprint and requires no external control devices or power supplies
- Connectivity to standard Fieldbus and Ethernet protocols including EtherCAT, Profibus and CANopen
- Simplified machine design, programming and commissioning
- Connectivity with virtually any feedback device including resolvers, incremental, sin/cos, and SSI encoders

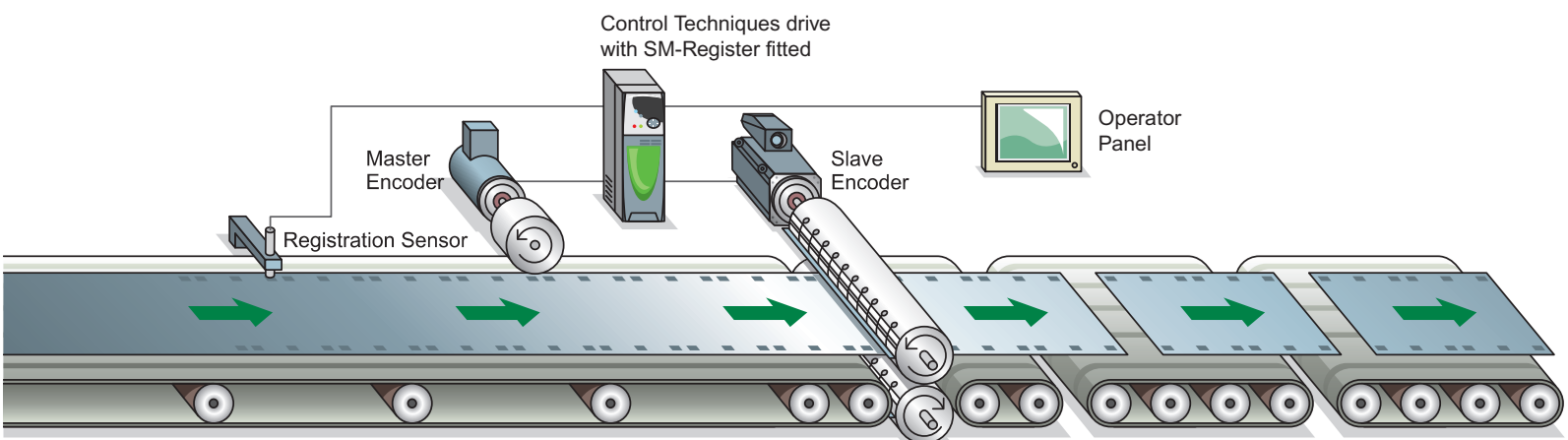


**RoHS Compliant**

## Traditional registration system



## System using SM-Register



## Features & Functions

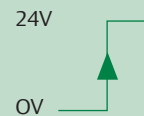
- Motion programming using PLCopen or Control Techniques' Advanced Position Controller (APC)
- Programmable in user defined units
- Two fully independent registration capture channels
- Storage for 256 events per channel, microseconds apart
- Pattern recognition
- Speeds in excess of 1000m/min can be handled
- Ability to filter unwanted marks (i.e. splashes, dirt, text etc)
- Filtering capability:
  - Minimum and/or maximum pulse width
  - Distance from previous edge
- Compensation for registration sensor throughput delay
- A windowing feature saves processor resource by ignoring marks outside of the registration window. This feature adds another level of data filtering
- Compatible with Control Techniques' Unidrive SP and Digitax ST drives

- Position capture:

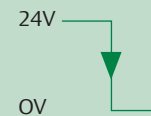
- Edge or pulse; 7 modes in total:

Positive edge, negative edge, both edges, positive pulse, negative pulse, patterns of positive pulses and patterns negative pulses

### Positive Edge



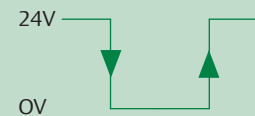
### Negative Edge



### Positive Pulse



### Negative Pulse



- Any encoder position including virtual / software generated encoder can be captured (synchronising to electronic line shaft)

For more information visit [www.controltechniques.com](http://www.controltechniques.com)

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