

VLT® Positioning Controller MCO 351

Option for VLT® AutomationDrive



The MCO 351 Positioning Controller option is fully integrated in the VLT® AutomationDrive. No additional wiring is required.

The VLT® Positioning Controller option for VLT® AutomationDrive expands the functional properties of the frequency converter in positioning applications.

It replaces traditional mechanical solutions, adding new flexibility to applications like:

- Palletisers
- Indexing tables
- Storage systems
- Pick & place systems
- Cranes, hoists, elevators
- Stage control
- Tool machines
- Testing and simulation devices

The VLT® Positioning Controller is user-friendly, enabling set-up of all parameters via the VLT® Automation-Drive Local Control Panel or via the VLT® set-up software MCT 10.

As the MCO 351 is a standard product with fixed functional properties, no additional application programming is required.

The Positioning Controller can handle most positioning applications with vertical as well as horizontal movements.

The option is mainly suited for applications with an overall control system, for example a PLC.

Positioning on the user's terms

The technology behind the Positioning Controller option offers a host of user-friendly benefits for positioning applications in many industries, like:

- Warehouses
- Ice cream manufacturers
- Bakeries
- Production assembly lines
- Distribution centres
- Food and beverage processing

Features	Benefits
User-friendly	
<ul style="list-style-type: none"> • Direct positioning via Fieldbus • Relative positioning • Absolute positioning • Touch probe positioning 	<ul style="list-style-type: none"> • Interfacing is simplified • Highly flexible positioning functions
<ul style="list-style-type: none"> • 32 fixed positions (64 via fieldbus) • End limit handling (software and hardware) • Mechanical brake handling (programmable hold delay) 	<ul style="list-style-type: none"> • Repeated positioning made easy • Increased safety for user and system
<ul style="list-style-type: none"> • Error handling • Jog speed/manual operation • Home function • Auto PID calculation 	<ul style="list-style-type: none"> • Easy faultfinding and reduction of down time • Commissioning and manual override made easy • Ensures high repeatability and accuracy • Commissioning made easy

Technical features

- Covers the entire series of VLT® AutomationDrive (power range 0.37–500 kW, voltage range 200V–500 V)
- Built-in option preserves the IP/NEMA rating
- Control and status signals via I/O or fieldbus. Fieldbus requires an additional option card, the following are available: PROFIBUS, DeviceNet
- Access to VLT® and option parameters via fieldbus or the VLT® AutomationDrive control panel
- Improved encoder resolution thanks to quadrature signals
- Test run, PID optimising
- Restoring of factory settings
- VLT® mode, open loop speed control for emergency VLT® operation
- Control of external electro mechanical brake

2 versions available:

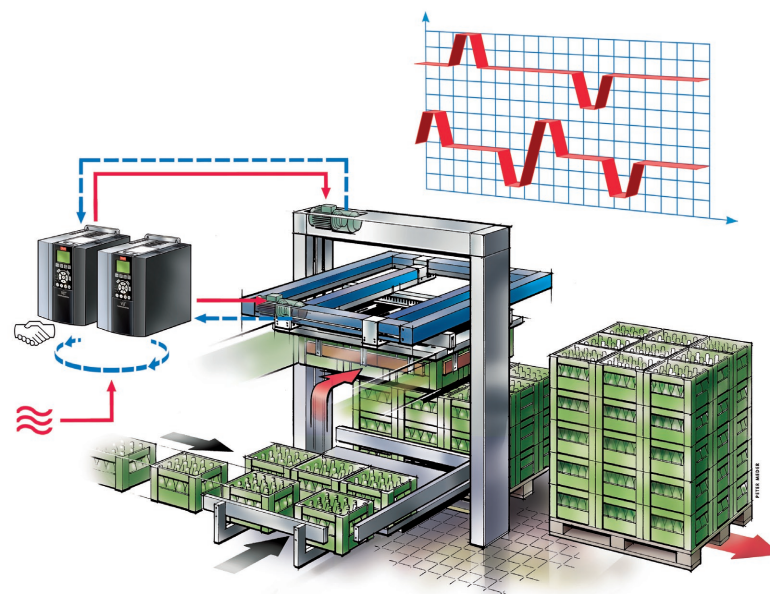
The MCO 351 Positioning Controller option is available with and without conformal coating.

Option card or built-in

The module can be supplied either as an option card for field installation or as a built-in option in all VLT® AutomationDrives.

Specifications

Encoder inputs	
Encoder inputs	2
Incremental encoder spec.	
Incr. encoder type	RS422/TTL
Maximum frequency	410 kHz
Phase displacement between A and B	90° ± 30°
Maximum cable length	300 m
Absolute encoder specifications	
Absolute encoder type	SSI
Data coding	Gray
Data length	12 – 37 bit
Clock frequency	78 kHz – 2 MHz
Maximum cable length	150 m
Encoder options (B)	
Sinus/cosinus	
Resolver	
Encoder voltage supply	
24 V, max. load	250 mA
8 V, max. load	250 mA
5 V, max. load	400 mA
Control characteristics	
Sample time of position PID loop	1 ms
Positioning static accuracy	± 1 increment
Synchronising static accuracy	± 1 increment



The objective of this positioning-via-indexing application is to increase the capacity and simplify the control system of a palletiser stacking boxes with bottles.