

VLT® POWERLINK MCA 123

The VLT® POWERLINK MCA 123 interface uses Standard-Fast-Ethernet, which through the POWERLINK timeslot mechanism has been enhanced with deterministic data transfer.



Ordering number
 Uncoated 130B1489
 Coated 130B1490

VLT® POWERLINK MCA 123 represents the second generation of fieldbus. The high bit rate of Industrial Ethernet is used and the full power of IT technologies to the automation world is available now for the factory world.

Ethernet is, when introduced in automation, still open and independent. POWERLINK does not only provide high performance real-time and time synchronisation features. Due to its CANopen-based communication models, network management and device description model offers much more than just a fast communication network.

With this architecture, all additional system features necessary for distributed automation systems are provided in a standardized manner. Therefore the integration of systems built up with devices from multiple manufacturers is easily possible.

The perfect solution for:

- Dynamic motion control applications
- Material handling
- Synchronisation and positioning applications

ETHERNET 
POWERLINK

Feature	Benefit
Cycle-times down to 400µSec	Meets toughest real-time demands
High bandwidth Asynchronous IP data access	Multi-purpose bus
<ul style="list-style-type: none"> • Jitter < 1us • Velocity, position and marker synchronizing 	Maximum performance and precise timing
Integrated hub for daisy chaining	Supports any network topology
<ul style="list-style-type: none"> • No proprietary ASICs needed • License free 	Saves money
Multiplexed timeslot	Increases PLC & Bus performance
<ul style="list-style-type: none"> • Industry proven • Large installed base 	<ul style="list-style-type: none"> • Widely supported • Available and widely deployed
Plug-and-Play commissioning	Easy to learn and use
CANopen application layer	Backwards compatibility

Setup in Automation Studio

The VLT® POWERLINK MCA 123 option utilizes the features in the XDD file to provide a user-friendly interface. This means that the programmer can see the variables from the Frequency converter as channel names directly on screen. This reduces the risk of wrong assignments of I/O data and speeds up the configuration.

The image displays the Automation Studio V 3.0.90.18 # 2:5 220005 interface. The main window shows the 'Physical View' of a PLC system. The 'Model no.' column lists components like X20CP3484, USB 1, USB 2, and Danfoss FC-302. The 'Slot' column shows their respective positions (IF4, IF4.S, IF5, IF5.S, SS1, SS2, SS3, SK, PLC).

The 'Channels' table in the background shows the following data:

Name	Value	Description
P015_Readout_actual_setup_I200F		Objects for cyclic transmission
P0302_Minimum_Reference_I212E		
P0303_Maximum_Reference_I212F		
P0312_Catch_Up_or_slow_Down_Value_I2138		
P0341_Ramp_1_Ramp_Up_Time_I2155		
P0342_Ramp_1_Ramp_Down_Time_I2156		
P0351_Ramp_2_Ramp_up_Time_I215F		
P0352_Ramp_2_Ramp_down_Time_I2160		
P1680_Fieldbus_CTW_1_I2690	Write	UNSIGNED16
P1682_Fieldbus_REF_1_I2692	Write	UNSIGNED16

The 'I/O Configuration' window shows the following channel assignments:

Channel Name	Data Type
ModuleOk	BOOL
P1603_Status_Word_I2643	UINT
P1605_Main_Actual_Value_I2645	INT
P1680_Fieldbus_CTW_1_I2690	UINT
P1682_Fieldbus_REF_1_I2692	INT

The 'Select controller module' dialog box is open, showing a list of modules. The 'POWERLINK Devices' folder is expanded, and 'Danfoss FC-301' is selected. The 'Description' column for 'Danfoss FC-301' reads 'Danfoss Drives VLT® Autom'. The 'Insert module' radio button is selected.