

OPTION CARD OVERVIEW

AQUAVAR® INTELLIGENT PUMP CONTROLLER

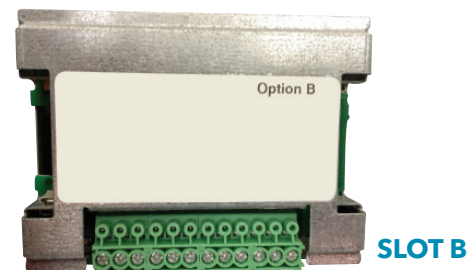
OPTION CARDS ARE A GREAT WAY TO EXPAND THE FUNCTIONALITY OF YOUR INTELLIGENT PUMP CONTROLLER (IPC)



ONE OF THE FOLLOWING CAN BE ACCOMODATED IN SLOT A

Communication Options	Slot	Part Number	Description	Specifications	Link Information
Profibus (MCA101)	A	9K668	Operating the frequency converter via a fieldbus enables you to reduce the cost of your system, communicate faster and more efficiently, and benefit from an easier user interface.	Wide compatibility, a high level of availability, support for major PLC vendors, and compatibility with future versions. Fast, efficient communication, transparent installation, advanced diagnosis and parameterisation and auto-configuration of process data via GSD-file. Acyclic parameterisation using PROFIBUS DP-V1, PROFIdrive or Danfoss FC profile state machines, PROFIBUS DP-V1, Master Class 1 and 2.	http://documentlibrary.xylemappliedwater.com/wp-content/blogs.dir/22/files/2015/02/Profibus-Comm-Option-9K668-IM.pdf
DeviceNet (MCA104)	A	9K669	DeviceNet MCA 104 offers robust, efficient data handling thanks to advanced Producer/Consumer technology	This modern communications model offers key capabilities that let you effectively determine what information is needed and when. Benefit also from ODVA's strong conformance testing policies, which ensure that products are interoperable.	http://documentlibrary.xylemappliedwater.com/wp-content/blogs.dir/22/files/2015/02/Devicenet-Comm-Option-9K669-IM.pdf
Lonworks (MCA108)	A	9K670	LonWorks is a fieldbus system developed for building automation. It enables communication between individual units in the same system (peer-to-peer) and thus supports decentralising of control.	No need for big main station (master/follower). Units receive signals directly. Supports Echelon free-topology interface (flexible cabling and installation). Supports embedded I/Os and I/O options (easy implementation of de-central I/Os). Sensor signals can quickly be moved to another controller via bus cables. Certified as compliant with LonMark ver. 3.4 specifications.	http://documentlibrary.xylemappliedwater.com/wp-content/blogs.dir/22/files/2015/02/LonWorks-Comm-Option-9K670-IM.pdf
BACnet (MCA109)	A	9K791	The open communications protocol for worldwide building automation.	All inputs and outputs can be operated independently of the functions of the drive, and thus work as remote I/Os: COV (Change of Value), Read/write Property Multiple and Alarm/Warning handling	
Profinet (MCA120)	A	9K671	PROFINET MCA 120 uniquely combines the highest performance with the highest degree of openness. The MCA 120 gives the user access to the power of Ethernet.	Built-in high performance switch enabling line and ring topology, and eliminating the need for external switches. Built-in web server for remote diagnosis and reading basic drive parameters. Support of DP-V1 Diagnostic allows easy, fast and standardized handling of warning and fault information into the PLC, improving bandwidth in the system.	http://documentlibrary.xylemappliedwater.com/wp-content/blogs.dir/22/files/2015/02/Profinet-Comm-Option-9K671-IM.pdf
Ethernet IP (MCA121)	A	9K672	Ethernet is the future standard for communication at the factory floor. The EtherNet/IP MCA 121 is based on the newest technology available for industrial use and handles even the most demanding requirements.	Built-in high performance switch enabling line and ring topology, and eliminating the need for external switches. Advanced switch and diagnosis functions. Built-in web server. E-mail client for service notification. Unicast and Multicast communication.	http://documentlibrary.xylemappliedwater.com/wp-content/blogs.dir/22/files/2015/02/Ethernet-IP-Comm-Option-9K672-IM.pdf
MODBUS® TCP (MCA122)	A	9K667	MODBUS TCP is the first industrial Ethernetbased protocol for automation.	Built-in web-server for remote diagnosis and reading basic drive parameters. Configure an email notification to send an email message to one or more recipients, when certain alarms or warnings occur, or are cleared.	http://documentlibrary.xylemappliedwater.com/wp-content/blogs.dir/22/files/2015/02/MODBUS-TCP-Comm-Option-9K667-IM.pdf
BACnet/IP (MCA125)	A	9K790	BACnet/IP makes it easy to control or to monitor points, reducing overall cost of ownership.	COV, Change Of Value, Read/WritePropertyMultiple, Alarm/Warning notifications, PID Loop object, Segmented data transfer, Trend Objects, Schedule Objects	

- Each IPC can accommodate (2) cards.
- Cards are Slot (A or B) specific and only one can go onto each slot
- IPC comes with MCO301 installed in slot B. If Input/Output Options are required, we will have to install the advanced card into slot A.



ONE OF THE FOLLOWING CAN BE ACCOMODATED IN SLOT B

Input-Output Options	Slot	Part Number	Description	Specifications	Link Information
Analog I/O (MCB109) - includes MC301 slot A card	B	9K783	This analog input/output option upgrades the frequency converter to advanced performance and control using the additional in/outputs. This option also provides battery back-up supply for the built-in clock to ensure reliable operation of all clock-based functionality, such as timed actions.	Three analog inputs, each configurable as both voltage and temperature input. Connection of 0-10 V analog signals as well as PT1000 and NI1000 temperature inputs. Three analog outputs each configurable as 0-10 V outputs. Including back-up supply for the standard clock function in the frequency converter. The back-up battery typically lasts for 10 years, depending on environment	http://documentlibrary.xylemappliedwater.com/wp-content/blogs.dir/22/files/2015/02/Analog-IO-Option-9K653-IM.pdf
GeneralPurpose I/O (MCB101) - includes MC301 slot A card	B	9K784	This I/O option offers an extended number of control inputs and outputs.	Three digital inputs 0-24 V: Logic '0' < 5 V; Logic '1' > 10V. Two analog inputs 0-10 V: Resolution 10 bit plus sign. Two digital outputs NPN/PNP push pull. One analog output 0/4-20 mA. Spring-loaded connection.	http://documentlibrary.xylemappliedwater.com/wp-content/blogs.dir/22/files/2015/02/General-Purpose-IO-Option-9K654-IM.pdf
PTC Themistor (MCB112) - includes MC301 slot A card	B	9K785	PTC Thermistor Card MCB 112 enables improved surveillance of the motor condition compared to the built-in ETR function and thermistor terminal.	Protects the motor from overheating .ATEX approved for use with Ex d, Ex e, Ex n, Ex tb and Ex tc motors (EX e and n only FC 302). Uses Safe Torque Off function, which is approved in accordance with SIL 2 IEC 61508. Spring-loaded connection.	http://documentlibrary.xylemappliedwater.com/wp-content/blogs.dir/22/files/2015/02/PTC-Thermistor-Option-9K656-IM.pdf
PT100 Sensor Input (MCB114) - includes MC301 slot A card	B	9K786	The option protects the motor from being overheated by monitoring the bearings and windings temperature in the motor.	Protects the motor from overheating. Three self-detecting sensor inputs for 2 or 3 wire PT100/PT1000 sensors. One additional analog input 4-20 mA.	http://documentlibrary.xylemappliedwater.com/wp-content/blogs.dir/22/files/2015/02/PT-100-Sensor-Option-9K657-IM.pdf
Relay Card (MCB105) - includes MC301 slot A card	B	9K787	Makes it possible to extend relay functions with 3 additional relay outputs.	Maximum switch rate at rated load/minimum load - 6 min-1/20 sec-1 Protects control cable connection. Spring-loaded connection.	http://documentlibrary.xylemappliedwater.com/wp-content/blogs.dir/22/files/2015/02/Relay-Option-9K658-IM.pdf
24VDC BACKUP (MCB107) - includes MC301 slot A card (Requires external power supply)	E Open Slot	9K659	An external 24 V DC supply can be installed for low-voltage supply to the control card and any option card installed. This enables full operation of the LCP (including the parameter setting) and all installed options without connection to mains.	Input voltage range 24 V DC +/- 15% (maximum 37 V for 10 seconds) Maximum input current 2.2 A Maximum cable length75 m Input capacitance load < 10 uF Power-up delay< 0.6 s	http://documentlibrary.xylemappliedwater.com/wp-content/blogs.dir/22/files/2015/02/24VDC-Backup-Option-9K659.pdf

MCO301 will be installed into slot B. If ordering Communication card, no changes are required. If adding input /output option cards, then you will need to install an MCO301 slot card, which will be included with your new card.

STANDARD I/O PROVIDED

- Analog input 2, voltage or current, direct or inverse
- Programmable digital inputs 6, 2 can be used as digital outputs
- Programmable analog outputs 1, 0-10vdc or 4 - 20 mA
- Programmable relay outputs 2, standard Form C, 240 VAC, 2 A (resistive)
- Auxiliary voltage +24 V DC, maximum 200 mA
- RS485 port with MODBUS® RTU and Bacnet included as standard
- The capabilities of Aquavar can be extended with the use of I/O expansion cards available to ship with the drive as a factory option, or as repair parts that can be installed in the field. Additional analog and digital inputs/outputs allow for customized control of your system.

Xylem Product Cybersecurity:

Xylem values your system security and the availability of your critical services. For more information on Xylem cybersecurity practices or to contact the cybersecurity team please visit xylem.com/security.



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