JVL A/S | Bregnerødvej 127 | DK-3460 Birkerød | Denmark | Tel.(+45) 4582 4440 | www.jvl.dk | sales@jvl.dk

MAC00-EC4 EtherCAT module M12 connectors

General information

Description	EtherCAT module M12 connectors, EtherCAT module M12 (G2) IP67, 2IO 1AI RS232. Expansion Module for MAC motor®. 8pin RS232 (not 485) ! ONLY for MAC400..4500 & MAC140-F. (When used with MAC050...141-Axxxxxxx the synchronized clock is not supported. Cycle time is also slower).		
Manufacture	JVL	**For motor type**	MAC
Color	Black	**Protection house**	IP67
Software	MacTalk	**Interface**	RS232
Connectivity: Without module	EtherCAT		
Control voltage (CVI/O+) [VDC]	12-28	**Main supply [V]**	12-48
Expansion connector	Generation 2		
Integrated PLC	No	**PLC no. of DI**	1
PLC no. of AIN		**PLC no. of DO**	1
Multifunction IOs		**PLC no. of DIO**	n/a
Datasheet - pdf	ld0102gb.pdf		
Country Of Origin	DK	**Tariff no**	85371098
Tariff no US			

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Mechanical information

Customer Sealing

MAC00-EC4 EtherCAT module M12 connectors

Connector information

Expansion connector	Generation 2

Motor connectors

Connector 1 label	PWR	**Connector 1**	M12 5-pin male A-coded
Connector 2 label	IO	**Connector 2**	M12 8-pin female A-coded
Connector 3 label	LA OUT	**Connector 3**	M12 4-pin female D-coded Ethernet
Connector 4 label	LA IN	**Connector 4**	M12 4-pin female D-coded Ethernet
Connector 2 RS232	Yes	**Connector 2 RS485**	No
Connector 3 RS232	No	**Connector 3 RS485**	No
Connector 4 RS232	No	**Connector 4 RS485**	No

Picture CN1

"PWR" - Power input. M12 - 5pin male connector

Signal name	Description	Pin no.	JVL Cable WI1000-M12F5T05N	Isolation group
P+	Main supply - Connect with pin 2 * When installed in MAC050 to 141 = 12-48VDC When installed in MAC400-4500 = 18-30VDC	1	Brown	1
P+	Main supply - Connect with pin 1 *	2	White	1
P-	Main supply ground. Connect with pin 5 *	3	Blue	1
CVI	Control supply nominal +12-48VDC. **DO NOT connect >50V to this terminal !** A small leakage current may exist on this pin if not used. Connect this terminal to ground if not used.	4	Black	1
P-	Main supply ground. Connect with pin 3 *	5	Grey	1

* Note: P+ and P- are each available at 2 terminals. Make sure that both terminals are connected in order to split the supply current in 2 terminals and thereby avoid an overload of the connector.

Picture CN2

"I/O" - I/O's and interface. M12 - 8pin female connector.

Signal name	Description	Pin no.	JVL Cable WI1000-M12 M8T05N	Isolation group (See note)
O1	Output 1 - PNP/Sourcing output	1	White	2
RS232: TX	RS232 interface. Transmit terminal Leave open if unused.	2	Brown	1
RS232: RX	RS232 interface. Receive terminal Leave open if unused.	3	Green	1
GND	Interface ground to be used together with the other signals in this connector. Also ground for the analogue input (AIN1 - pin 5)	4	Yellow	1
AIN1	Analogue input1 ±10V or used for zero search	5	Grey	1
IN1	Digital input 1 - 12-32V tolerant.	6	Pink	2
IO-	I/O ground to be used with the I/O terminals O1 and IN1.	7	Blue	2
O+	Positive supply input to the output circuitry. Connect 5-32VDC to this terminal if using the O1 output.	8	Red	2

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Connector information

Picture CN3

"L/A OUT" - Ethernet port connector. M12 - 4 pin female connector "D" coded				
Signal name	**Description**	**Pin no.**	**JVL Cable WI1046-M12M4S05R**	**Isolation group (see note)**
Tx1_P	Ethernet Transmit channel 1 - positive terminal	1	Brown/White	4
Rx1_P	Ethernet Receive channel 1 - positive terminal	2	Blue/White	4
Tx1_N	Ethernet Transmit channel 1 - negative terminal	3	Brown	4
Rx1_N	Ethernet Receive channel 1 - negative terminal	4	Blue	4
Shield	Outside shield connected to connector housing	Housing	Shield	1

Picture CN4

"L/A IN" - Ethernet port connector - M12 - 4pin female connector "D" coded				
Signal name	**Description**	**Pin no.**	**JVL Cable WI1046-M12M4S05R**	**Isolation group (See note)**
Tx0_P	Ethernet Transmit channel 0 - positive terminal	1	Brown/White	3
Rx0_P	Ethernet Receive channel 0 - positive terminal	2	Blue/White	3
Tx0_N	Ethernet Transmit channel 0 - negative terminal	3	Brown	3
Rx0_N	Ethernet Receive channel 0 - negative terminal	4	Blue	3
Shield	Outside shield connected to connector housing	Housing	Shield	1

MAC00-EC4 EtherCAT module M12 connectors

Electrical information

Control voltage (CVI/O+) [VDC]	12-28	**Control Voltage (CVI) Min-Max [VDC]**	
Max current CVI [A]			
Main supply [V]	12-48	**Main supply Min-Max [V]**	10-50
Rated Winding current [A]		**P- isolated from Earth (Low Voltage ground (P-) isolated from housing)**	
PLC no. of DI	1	**Dig. Input impedans**	10kohm
PLC no. of DO	1	**PLC DO max current [mA/DO]**	15mA - PNP
PLC no. of DIO	n/a		
PLC no. of AIN		**PLC AIN voltage [VDC]**	-10 to +10
PLC AIN Min-Max [VDC]	-10 to +32	**PLC AIN Max Tol. [%]**	5.0
Multifunction IOs		**PLC MF low level [VDC]**	
PLC MF high level [VDC]		**PLC MF Max level [VDC]**	
MTBF 30% [Year]		**MTBF 100% [Year]**	

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Communication information

e-PLC Files	**Ethernet, PLC demo files**