



MAC00-EM4

Modbus TCP/UDP module M12 connectors

MAC00 modules are control- and -interface modules for the MAC motor® series of integrated (all-in-one) servo motors with shaft power from 46 W to 4500 W.

Choose between a wide range of control modules

- Ethernet modules support all protocols: Profinet, EtherNet/IP, EtherCAT, SERCOS, Powerlink and ModbusTCP/UDP
- Ethernet modules have built-in Switch for easy daisy-chaining of cables from motor-to-motor
- Wireless modules: WLAN or BlueTooth
- CANopen, Devicenet or Profibus or ePLC modules
- Serial communication modules, RS232 and/or RS485

Unique Ethernet functionality: use MacTalk® (PC software) to change freely between all the different Ethernet protocols, you don t need several different types on stock ONE is enough.



General information

Description	Modbus TCP/UDP module M12 connectors, MODBUS TCP module M12 connectors		
Manufacture	JVL	For motor type	MAC
Color	Black	Protection house	IP67
Software	MacTalk	Interface	RS232
Connectivity - Busses	Modbus TCP		
Control voltage (CVI/O+) [V]	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



MAC00-EM4

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Mechanical information

Customer Sealing

Datasheet - pdf

ld0102gb.pdf



MAC00-EM4

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Connector information

Expansion connector Generation 2

Picture 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	n/a
Connector 3 RS232	n/a	Connector 3 RS485	n/a
Connector 4 RS232	n/a	Connector 4 RS485	n/a

Picture CN1

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

Signal name	Description	Pin no.	JVL Cable W11000- 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 W11000-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



MAC00-EM4

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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-EM4

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Electrical information

Control voltage (CVI/O+) [V]	12-28	Control Voltage (CVI) Min-Max [V]	
Max current CVI [A]			
Main supply [V]	12-48	Main supply Min-Max [V]	10-50
Max current (P+) [A]		P- isolated from Earth	
		PLC no. of DI	1
Dig. Input impedans	10kohm	PLC no. of DO	1
PLC DO max current [mA]	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]			