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

MAC00-EP41

Profinet module M12 6IO 2AI RS422

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	Profinet module M12 6IO 2AI RS422, Profinet module M12 6IO 2AI RS422		
Manufacture	JVL	**For motor type**	MAC
Color	Black	**Protection house**	IP67
Software	MacTalk	**Interface**	RS232
Connectivity - Busses	Profinet		
Control voltage (CVI/O+) [V]	12-28	**Main supply [V]**	12-48
Expansion connector	Generation 2		
Integrated PLC	No	**PLC no. of DI**	4
PLC no. of AIN	1	**PLC no. of DO**	2
Multifunction IOs	1	**PLC no. of DIO**	n/a

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Mechanical information

Customer Sealing	**Datasheet - pdf**	ld0102gb.pdf

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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 17-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 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 - 17pin female connector.

Signal name	Description	Pin no.	JVL Cable WI1009M12 M17TxxN	Isolation group (see note)
IN1	Input channel 1. Can be used as digital input	1	Brown	2
GND	Ground intended to be used toghether with the other signals related to isolation group 1 in this connector	2	Blue	1
IN2	Input channel 2. Can be used as digital input	3	White	2
IN3	Input channel 3. Can be used as digital input	4	Green	2
B2- **	RS422/RS485 Multifunction I/O terminal B2-	5	Pink	1
IN4	Input channel 4. Can be used as digital input	6	Yellow	2
A2- **	RS422/RS485 Multifunction I/O terminal A2-	7	Black	1
B2+ **	RS422/RS485 Multifunction I/O terminal B2+	8	Grey	1
OUT+	Output 1 and 2 supply input. **DO NOT connect >30V to this terminal !**	9	Red	2
A2+ **	RS422/RS485 Multifunction I/O terminal A2+	10	Violet	1
O1	Output 1. Can be used as digital output	11	Grey/pink	2
O2	Output 2. Can be used as digital output	12	Red/blue	2
AIN1	Analog input 1. Can be used as analog input ±10V.	13	White/Green	1
AIN2	Analog input 2. Can be used as analog input ±10V.	14	Brown/Green	1
RS232: RX	RS232 interface. Receive terminal Leave open if unused.	15	White/Yellow	1
IO-	Ground for IN1-4 and O1 and 2. Please notice that this terminal is normally isolated from the main ground and belongs to isolation group 2	16	Yellow/brown	2
RS232: TX	RS232 interface. Transmit terminal Leave open if unused.	17	White/grey	1

MAC00-EP41 Profinet module M12 6IO 2AI RS422

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-EP41 Profinet module M12 6IO 2AI RS422

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		4
Dig. Input impedans		10kohm	**PLC no. of DO**		2
PLC DO max current [mA]		15mA - PNP	**PLC no. of DIO**		n/a
			PLC no. of AIN		1
PLC AIN voltage [VDC]		-10 to +10	**PLC AIN Min-Max [VDC]**		-10 to +32
PLC AIN Max Tol.	**[%]**	5.0	**Multifunction IOs**		1
PLC MF low level	**[VDC]**	2.0	**PLC MF high level**	**[VDC]**	3.0
PLC MF Max level	**[VDC]**	5.5	**MTBF 30% [Year]**		
MTBF 100% [Year]					