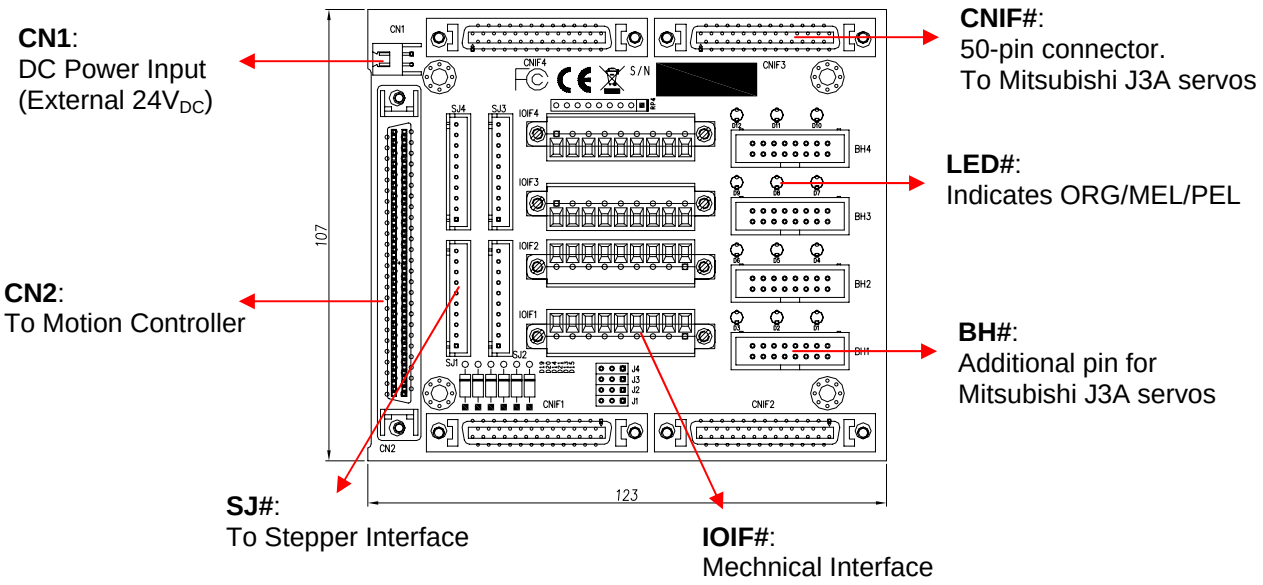
DIN-814M-J3A User Guide

Notice

The DIN-814M is used for wiring between **Mitsubishi J3A** series servo drivers / stepper with pulse trains input driver and **ADLINK PCI-8134, PCI-8164, PXI-8164, MPC-8164 and PCI-8158** motion controller card ONLY. Never use this terminal board with any other servo driver or cards.

P/N: 50-xxxxx-xxx



Note:

1. **Servo & Stepper:** The DIN-814M-J3A provides 4 connection methods for each axis: CNIF1-CNIF4 connectors for Mitsubishi J3A series servo drivers, and a SJ connector for stepping drivers. Notice that the signals in SJ and CNIF1-CNIF4 of the same axis are directly shorted. DO NOT use both connectors at the same time.
2. **CNIF1- CNIF4 cables:** One pin-to-pin 50-PIN cables are required for connection between the CNIF1-CNIF4 and the Mitsubishi J3A driver. It is available from ADLINK, or users may contact the local dealer or distributor to get cable information.
3. **PSD Signal:** The PSD signal on the IOIF# connector has different functions depending on different motion cards. If using PCI-8134, PSD is used as a positive slow down signal. If using PCI-8164/PXI-8164/MPC-8164, PSD1/2 is for CMP1/2 of Axis0/Axis1 and PSD3/4 is for LTC3/4 of Axis3/Axis4.
4. **EMG & EX_EMG Signal:** EMG signal is defined by Mitsubishi J3A servo (pin42 of CNIF1-4). Shorting pin 1-2 of J1-4 as a NC (Normal Close) while users do not want to use external emergency switch device. If users want to use external emergency switch device, short pin 2-3 of J1-4. While EX_EMG and EXGND are open, the motor will not move.

● PIN Assignments:

1. CNIF1-CNIF4 (Mitsubishi AC Servo Driver J3A)

No.	Name	I/O	Function	No.	Name	I/O	Function
1	P15R	--	15VDC power supply	2	VLA	O	Analog speed limit
3	EXGND	--	External Ground	4	EA+	I	Encoder A-phase(+)
5	EA-	I	Encoder A-phase(-)	6	EB+	I	Encoder B-phase(+)
7	EB-	I	Encoder B-phase(-)	8	EZ+	I	Encoder Z-phase(+)
9	EZ-	I	Encoder Z-phase(-)	10	OUT+	O	Pulse Signal(+)
11	OUT-	O	Pulse Signal(-)	12	N.C		

13	N.C			14	N.C		
15	SVON	O	Servo ON	16	SP2	O	Speed selection 2
17	ABSM	O	Forward rotation	18	ABSR	O	Reverse rotation
19	RES	I	Reset Signal	20	+24V	--	Voltage output
21	+24V	--	Voltage output	22	ABSB0	I	Speed reached
23	ZSP	I	Zero Speed	24	INP	I	In-position Signal
25	TLC	I	Limiting Torque	26	N.C		
27	TC	O	Analog torque command	28	EXGND	--	External Ground
29	N.C			30	N.C		
31	N.C			32	N.C		
33	N.C			34	EXGND	--	External Ground
35	DIR+	O	Direction Signal(+)	36	DIR-	O	Direction Signal(-)
37	N.C			38	N.C		
39	N.C			40	N.C		
41	ERC	O	Error counter Clear	42	EMG	O	Emergency stop
43	EXGND	--	External Ground	44	EXGND	--	External Ground
45	LOP	O	Control selection	46	EXGND	--	External Ground
47	EXGND	--	External Ground	48	ALM	I	Servo Alarm Signal
49	RDY	I	Servo Ready Signal	50	N.C		

2. IOIF1-IOIF4 (External Motion Input Signal Interface)

No.	Name	I/O	Function
1	+24V	--	Voltage output
2	EX_EMG	I	External EMG Signal
3	PEL	I	Positive Limit(+)
4	MEL	I	Positive Limit(-)
5	PSD	I	Positive Slow Switch(+)
6	MSD	I	Negative Slow Switch(+)
7	ORG	I	Origin signal
8	RES	I	Reset Signal
9	EXGND	--	External Ground

3. SJ1-SJ4

No.	Name	I/O	Function
1	OUT+	O	Pulse Signal(+)
2	OUT-	O	Pulse Signal(-)
3	DIR+	O	Direction Signal(+)
4	DIR-	O	Direction Signal(-)
5	EZ+	I	Encoder Z-phase(+)
6	ALM	I	Servo Alarm
7	+5V	--	+5V power supply output
8	SVON	O	Servo ON
9	+5V	--	+5V power supply output
10	EXGND	--	External Ground

4. BH1-BH4

No.	Name	I/O	Function	No.	Name	I/O	Function
1	RES	I	Reset Signal	2	ABSM	O	Forward rotation
3	ABSR	O	Reverse rotation	4	ABSB0	I	Speed reached
5	ZSP	I	Zero Speed	6	TLC	I	Limiting Torque
7	SP2	O	Speed selection 2	8	P15R	--	15VDC power supply
9	VLA	O	Analog speed limit	10	TC	O	Analog torque command
11	+24V	--	Voltage output	12	ALM	I	Servo Alarm Signal
13	EX_EMG	I	External EMG Signal	14	EXGND	--	External Ground
15	LOP	O	Control selection	16	EXGND	--	External Ground

5. CN1 (External +24VDC Input Connector)

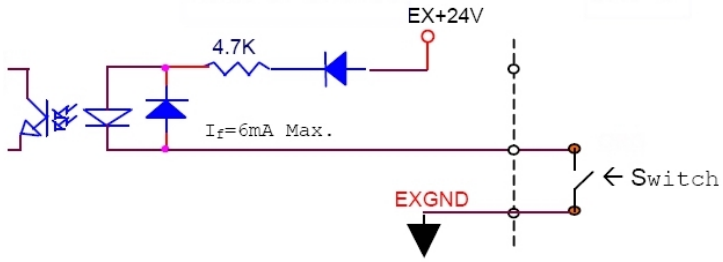
No.	Name	I/O	Function
1	EXGND	--	External Power Supply Ground.
2	EX+24V	I	External Power Supply Input (+24V DC ± 5%)

6. Jumper (Mitsubishi AC Servo Driver EMG Signal Source Selection)

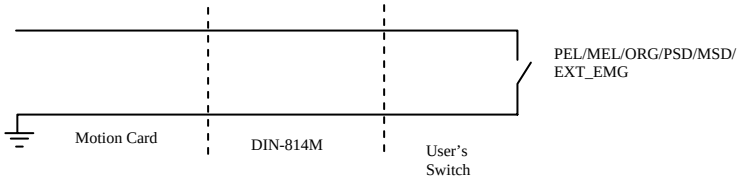
J1-J4	1: EXGND	2: EMG	3: EX_EMG

- Signal Connections

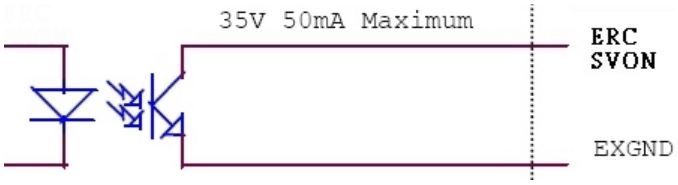
1. PEL、MEL、ORG、ALM、PSD、MSD (in IOIF#)



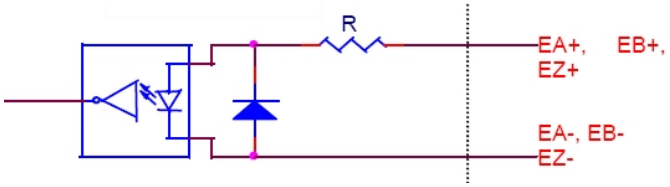
2. EX_EMG (both IOIF# and HD#)



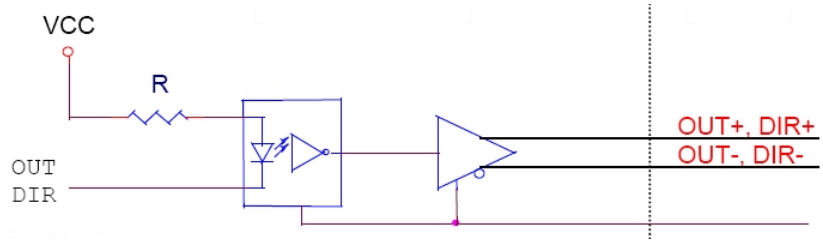
3. ERC、SVON



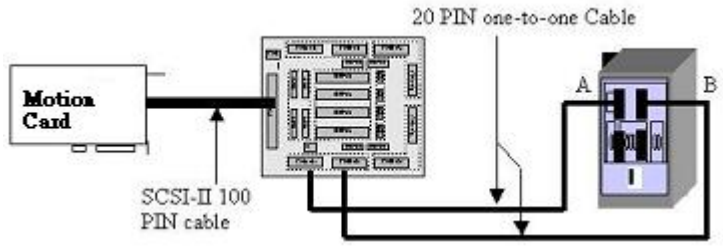
4. EA+、EB+、EZ+、EA-、EB-、EZ-



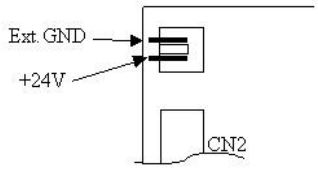
5. DIR+、OUT +、DIR-、OUT-



6. CMP, LTC (in IOIF#'s PSD pin only for 8164 series)



7. CN1: This connector has the same purpse with the on-board CN1. Users can select on of them to connect.



8. **SJ1-4: For stepping driver. Please refer to ADLINK user's manual for wiring.**
9. **BH1-4: Please refer to Mitsubishi's user's manual for wiring.**

- Mechanical Dimensions:

