BOB-4

BOB-4 Quick Setup Guide

Applied Motion Products
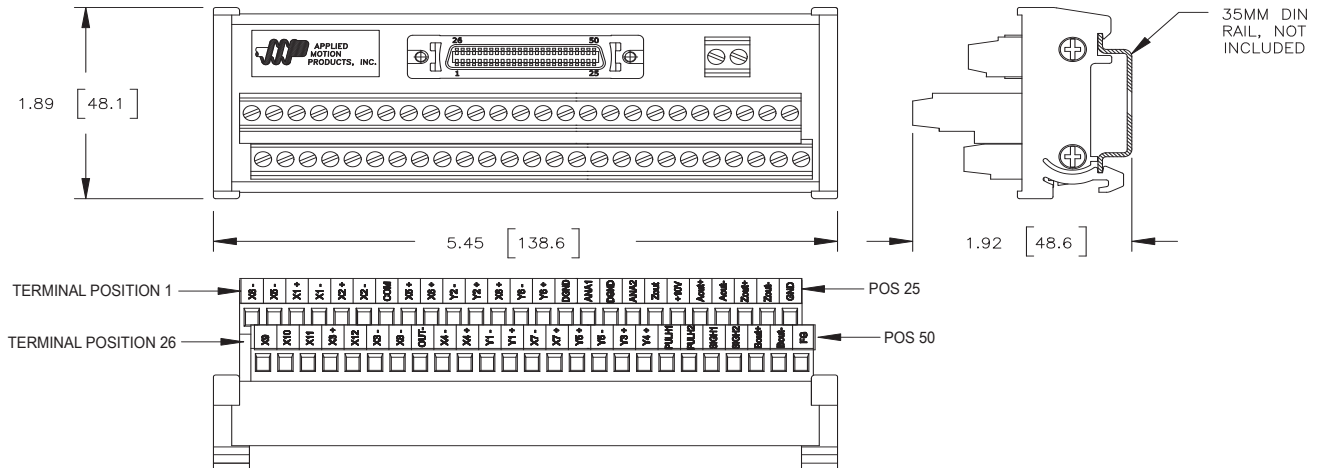

The BOB-4 is a DIN rail mounted break-out board module designed to interface the SV200 servo drive analog and discrete control signals to a PLC or other controllers by connecting the SV200 I/O cable between the CN2 connector and the BOB-4 connector.

Cables:

SV200 I/O cable (Connectorized) 3004-328-0.5M included

SV200 I/O cable (Flying lead) 3004-327-2M, sold separately.

Break-out Board Terminal Pinouts for SV200 Series Servo Drives

TOP ROW	Pin Number	Terminal ID	Description	BOTTOM ROW	Pin Number	Terminal ID	Description
	1	X6-	Digital Input		26	X9	Digital Input
	2	X5-	Digital Input		27	X10	Digital Input
	3	X1+	Digital Input		28	X11	Digital Input
	4	X1-	Digital Input		29	X3+	Digital Input
	5	X2+	Digital Input		30	X12	Digital Input
	6	X2-	Digital Input		31	X3-	Digital Input
	7	COM	X9-X12 common		32	X8-	Digital Input
	8	X5+	Digital Input		33	OUT-	Digital Output (shared for Y3 and Y4)
	9	X6+	Digital Input		34	X4-	Digital Input
	10	Y2-	Digital Output		35	X4+	Digital Input
	11	Y2+	Digital Output		36	Y1-	Digital Output
	12	X8+	Digital Input		37	Y1+	Digital Output
	13	Y6-	Digital Output		38	X7-	Digital Input
	14	Y6+	Digital Output		39	X7+	Digital Input
	15	DGND	Digital ground for Analog Input		40	Y5+	Digital Output
	16	ANA1	Analog Input 1		41	Y5-	Digital Output
	17	DGND	Digital ground for Analog Input		42	Y3+	Digital Output
	18	ANA2	Analog Input 2		43	Y4+	Digital Output
	19	Zout	Encoder Output Z channel (open collector)		44	PULSH1	High-speed pulse inputs (+5VDC line driver input). Maximum input frequency = 2MHz. (NOTE: DO NOT use at same time with X1 & X2 inputs.)
	20	+10V	+10VDC User, 100mA max.		45	PULSH2	
	21	Aout+	Encoder Output A+ channel (line driver out)		46	SIGNH1	
	22	Aout-	Encoder Output A- channel (line driver out)		47	SIGNH2	
	23	Zout+	Encoder Output Z+ channel (line driver out)		48	Bout+	Encoder Output B+ channel (line driver out)
	24	Zout-	Encoder Output Z- channel (line driver out)		49	Bout-	Encoder Output B- channel (line driver out)
	25	GND	+10VDC user Ground		50	FG	Field Ground

CAUTION: Damage to I/O points on SV200 drive may result if BOB-4 terminals are wired incorrectly.   Refer to SV200
Hardware manual to verify terminal functions and ratings prior to wiring a BOB-4 that is connected to a SV200 servo drive.
Note: BOB-4 pinouts are straight through from pin to terminal. For example,
Connector Pin 1 = Terminal position 1, Connector Pin 2 = Terminal position 2, etc.

Safety Instructions:

Only qualified personnel are permitted to transport, assemble, commission, and maintain this equipment. Properly qualified personnel are persons who are familiar with the transport, assembly, installation, commissioning and operation of motors, and who have the appropriate qualifications for their jobs. The qualified personnel must know and observe the following standards and regulations:

Safety Warnings:

HAZARD WARNING
A. THIS EQUIPMENT IS SUITABLE FOR USE IN CLASS I, DIVISION 2/ZONE 2, GROUPS A, B, C AND D OR NON-HAZARDOUS LOCATIONS ONLY.
B. WARNING – EXPLOSION HAZARD – SUBSTITUTION OF COMPONENTS MAY IMPAIR SUITABILITY FOR CLASS I, DIVISION 2/ZONE 2.
C. WARNING – EXPLOSION HAZARD – DO NOT CONNECT OR DISCONNECT CONNECTORS OR OPERATE SWITCHES WHILE CIRCUIT IS LIVE UNLESS THE AREA IS KNOWN TO BE NON-HAZARDOUS.
D. ALL MODULES USED WITH ACCESSORIES MUST USE R/C (ECBT2) MATING PLUG FOR ALLAPPLICABLE MODELS. ALL MATING PLUGS SHALL HAVE SUITABLE RATINGS FOR DEVICE.

WARNING: To minimize the risk of potential safety problems, you should follow all applicable local and national codes that regulate the installation and operation of your equipment. These codes vary from area to area and it is your responsibility to determine which codes
should be followed, and to verify that the equipment, installation, and operation are in compliance with the latest revision of these codes.
Equipment damage or serious injury to personnel can result from the failure to follow all applicable codes and standards. We do not guarantee the products described in this publication are suitable for your particular application, nor do we assume any responsibility for your product design, installation, or operation.

Specifications	
Description	50-Pole Connector Module for interfacing SV200 Servo I/O to a controller
Approvals	File # E200031 UL, cUL, Class 1, Division 2, Groups A,B,C,D Hazardous Locations, CE, EN 61131-2:2007 (Lookup part# ZL-RTB50)
Operation Voltage	0-30VDC
Voltage Rating	24VDC
Maximum Current per Circuit	0.2A
Maximum Current per Module	10A
Number of Terminal Block Positions	50
Surrounding Temperature Range	32 to 140°F (0 to 60°C)
Terminal Block Contacts	Copper alloy, tin-lead plated
Wire Range (Rated Cross Section)	12-24AWG Solid or Stranded Copper Conductor (2.5mm^2)
Wire Strip Length	0.24-0.27" (6-7mm)
Screw Torque	4.4 in-lbs (0.5 Nm)
Connector Type	3M mini DELTA Ribbon (MDR), 101 Series, 50 pin Example: Plug 10150 - 3000VE, Shell 10350 - 52A0 - 008
Dimensions (WxHxD)	5.46" x 1.89" x 1.87" (138.6mm x 48.1mm x 47.5mm)
Connecting Cable	• SV200 I/O cable (Connectorized) 3004-328-0.5M, included with BOB-4 • SV200 I/O cable (Flying lead) 3004-327-2M, sold separately.
Cable/Wire Cleareance	4.00" (101.6mm) top and bottom
Mounting Restrictions	None

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