

Open-loop Amplifier 3 (OLA3-48V- 0306)

Hardware Manual

(Rev. B)

By

AKRIBIS SYSTEMS PTE LTD

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DOCUMENT HISTORY

Doc. Rev.	Release Date	Changes
A	2015-03-12	First release with EOD-150 Rev. A
B	2015-07-20	First release with EOD-150 Rev. B
B1	2015-07-27	Page 5,6, add DC power supply range
B2	2015-10-04	Add sec. 2.2, I/O connection examples
B3	2018-07-30	To change EOD to OLA3
B4	2018-09-07	Page 6, add warning for I/O pin connection
B5	2018-11-18	To change OLA3 to OLA3-48V-0306 To add in resolution

Note: Chinese version of this document is upon request.

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TABLE OF CONTENTS

1	DATASHEET
2	INSTALLATION
	2.1 Connectors
	2.2 I/O Connection Examples
3	OPERATION
4	SERVICE
	4.1 Ordering Information
	4.2 Contact

1. DATASHEET



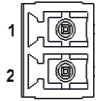
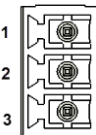
Figure 1: Hardware of Open-Loop Amplifier. Product model OLA3-48V-0306.

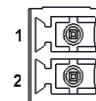
Table 1: General specifications

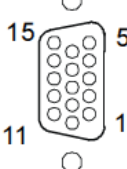
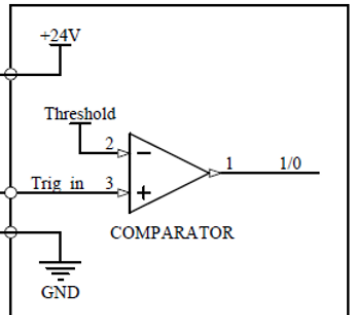
No.	Description	Unit	Specifications
1	Dimensions	mm	120*78*28
2	Weight	kg	0.26
3	Power consumption for logic power	V, A	24V, 1A
4	Power consumption for DC bus	V, A	Nominal 48V, 6A peak (Wide range of 18V to 52V)
5	Current loop control mode		Open-loop
6	Current loop control timing resolution	ms	0.1
7	Peak current to motor	A	6.0
8	Continuous current to motor	A	3.0
9	Communication		RS232, Ethernet TCP/IP
10	Operation temperature	°C	+15~+40
11	PWM Output Resolution	bits	10
12	Output propagation delay	ns	38
13	Output rise/fall time	ns	14

2. INSTALLATION

2.1 Connectors

DC Power Supply	Pin	Signal	Function	Interface
	1	+24V	Logic power supply Nominal 24V, tol. +/-1V	
	2	GND	Ground	
	1	Vbus	DC bus power supply 18V to 52V	
	2	GND	Ground	
	3	PE	Protective earth ground	

J3 Motor	Pin	Signal	Function	Interface
	1	Ph 1	Phase 1 of motor coil	
	2	Ph 2	Phase 2 of motor coil	

J1 I/O	Pin	Signal	Function	Interface
	1	DIN1		<div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center;">OLA3-48V-0306</p>  <p style="text-align: center;">COMPARATOR</p> </div> <p>Note 1</p> <p>Ref to Sec. 2.2 for I/O connection examples.</p>
	2	DIN2		
	3	DIN3		
	4	DIN4		
	5	+24V	output for user I/O, max. load 0.5A DO NOT connect power supply to this pin	
	6	GND		
	7	RS232 Rx		
	8	RS232 GND		
	9	RS232 Tx		
	10	GND		
	11	Reserved		
	12	Reserved		
	13	Reserved		
	14	Reserved		
	15	Reserved		

Note 1: OLA3-48V-0306 digital I/O is +24V.

Mfg. Part Number	Digital I/O Voltage Level	Threshold
200103-01	+24V	H: >15V, L: <8V

2.2 I/O Connection Examples.

Case1: connection with opt-coupler output controllers:

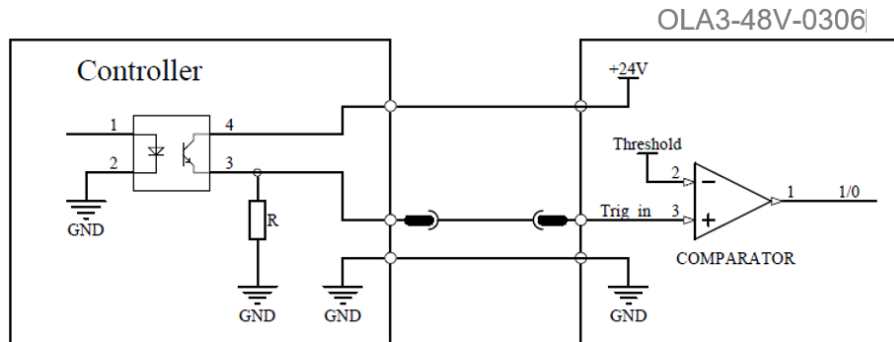


Figure 2: Typical outputs connection diagram with opt-coupler.

Case2: connection with MOSFET output controllers:

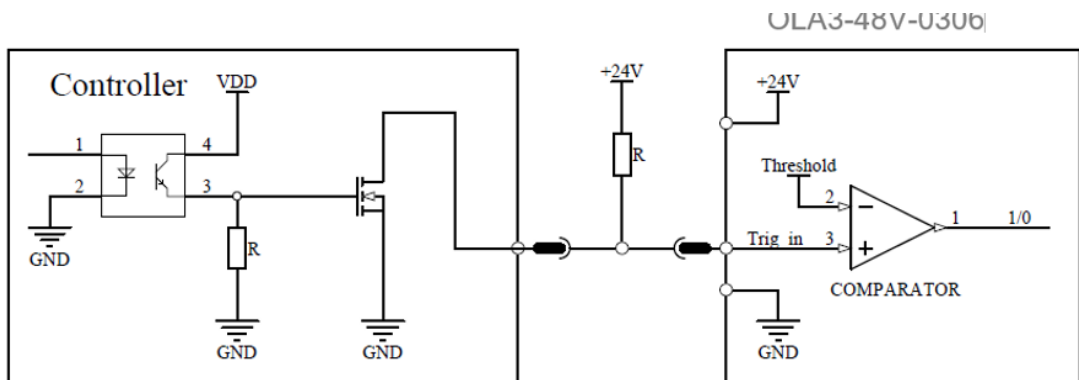


Figure 3: Typical outputs connection diagram with MOSFET.

3. OPERATION

System integration setup is depicted in Figure 4.

Communication between PC and the board could be established via TCP/IP or RS232. There are two control modes, namely Mode A, direction and move and Mode B, forward and backward. Refer to *Operation and Software Manual* for details.

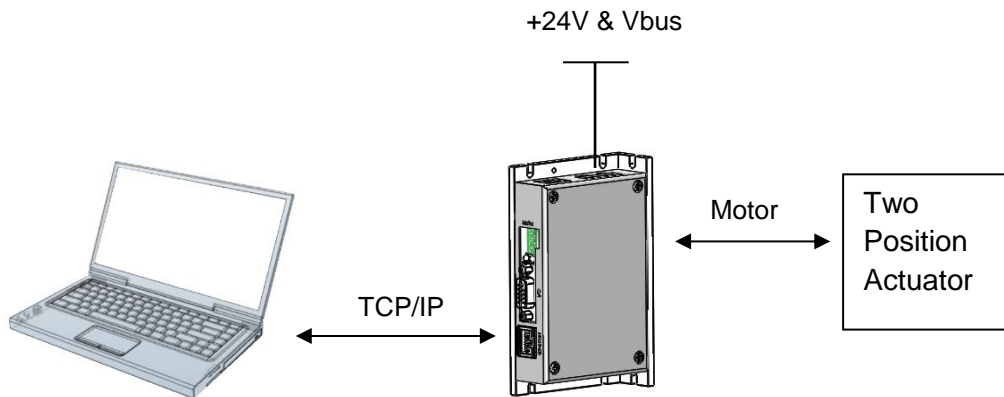


Figure 4: Typical system integration setup using PC to control OLA3-48V-0306 via Ethernet and drive a two position actuator.

OLA3-48V-0306 is pre-programmed with a fixed IP address of 192.168.0.16. Should you need another fixed IP address, please inform our sales person during ordering process.

4. SERVICE

4.1 Ordering Information

Product Model	Mfg. Part Number	Description
OLA3-48V-0306	200103-01	Open-loop Amplifier 48V/3A Start kit, software and mating connectors are included <i>Note : Cables will not be provided</i>

4.2 Contact

In case of technical support needed, please scan the QR-code on product and pass the information to our service people.

Offices

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