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Drives ABD – Quick Start

R

Ligação Elétrica / Tuning / ABView

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1. Ligação Elétrica e Configuração

Procedimento para conexões do drive.

1.1. Ligação elétrica

Conector de alimentação (Superior):



Conexões trifásica:

Wiring Example for Three-phase Power Supply Input



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Conexões monofásica:

Wiring Example for Single-phase Power Supply Input



[NOTE]: when using single-phase AC power for ABD-15A* drivers, reduce the load factor rating to 80%.

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1.2. STO

Conector do STO (CN6):



Ligação do STO:



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1.3. Freio

Ligação externa:



A ligação do Freio pode ser feita com opto-acoplador ou relé.



Conector de IO (CN1)



No software ABView: Function \rightarrow IO location \rightarrow CN1_6/7 \rightarrow colocar opção /BK

Parâmetro → PN 511.0 colocar opção /BK

Utilizar o pino 6 (+) e o pino 7 (-) do conector CN1 para ligar o relé ou o opto-acoplador.

Туре	Signal	Pin	Signal Status	Meaning
Output		Allocated by Du 511	ON	Releases the brake.
Output	BK	Anocated by Ph511	OFF	Activates the brake.

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1.4. Encoder Absoluto / Bateria

Quando se utiliza um motor com encoder absoluto, ao ligar o drive ABD pela primeira vez, aparecerá a falha A47 no drive.

Após conectar o cabo da bateria e do feedback (encoder) no drive será necessário fazer o reset do contador Multiturn, movimentando o motor para a posição desejada e utilizando o software ABView ou funções no display do drive.

Atenção: Sempre que esses cabos (bateria ou encoder) forem desconectados do drive, esse processo deverá ser refeito!

• Software ABView:

Seguir os passos 1 a 4.

Reiniciar o drive (o alarme A47 não deverá mais aparecer no display do drive).

	ABView	V4	Decompotors	Pup	Monitor	Tuning	Advanced	Alorm						
1	Wizard	Homing	I/O Allocation •	Kun	Monitor	runing	Advanced	Alam	1					
4	Offline	:- No Communic	ation	2 Encoder U Diagnosis	Setting 7 wer Line	Encoder Type Encoder Resolu Single-turn Co Multi-turn Cou	ution unt 3 Reset Mult 4 Reset Ala	Increm Obit 0 0 ii-turn	ental Encoder		270 270 270 270 270 270 270 270 270 270	45		
				Stop N Setting	Node 9	External Enco EXTERNAL ENCO Pn200 Pulse Num Pn212 Resolution Pn213 Position De Pn211.0 C-pulse Co Encoder Pulse Co	der DDER bers for PG Frequer of External Encode eviation Threshold t of External Encoder unt	ncy D r betw	16384 10000 1000 Support C Pu 0	Pulse Pulse Pulse	Range: 16 ~ - Range: 0 ~ 10 Range: 0 ~ 12	16384 048576 34217728	Apply	

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• Funções no display do drive:

Executar a Fn011 no display. Executar a Fn010 no display. Reiniciar o drive (o alarme A47 não deverá mais aparecer no display do drive).

Fn010 (Absolute encoder multi-turn reset)

The following are the steps to reset the absolute encoder multi-turn data.

Step 1 Press [M] key several times to select the Utility Function Mode.



Step 2 Press [▲] key or [▼] key to select the function number Fn010.



Step 3 Press [4] key, and Panel Operator displays as below.



Step 4 Press [M] key to reset the absolute encoder multi-turn data.



Step 5 Press [◀] key to return to the display of the Fn010.

Fn011 (Absolute encoder alarm reset)

The following are the steps to reset the absolute encoder alarm.

Step 1 Press [M] key several times to select the Utility Function Mode.



Step 2 Press [▲] key or [♥] key to select the function number Fn011.



Step 3 Press [4] key, and Panel Operator displays as below.



Step 4 Press [M] key to reset the absolute encoder multi-turn data.



Step 5 Press [4] key to return to the display of the Fn011.

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1.5. Encoder Externo

Conector encoder externo (CN2-S):



Pinagem do conector:

Pin	Name	Function
1	PG5V	Power supply terminal +5V for the external encoder
2	PG0V	Power supply terminal 0V for the external encoder
3	PA+	Disco A signal for the external encoder
4	PA-	Phase A signal for the external encoder
5	PB+	Dhara Divisional for the external encoder
6	PB-	Phase B signal for the external encoder
7	PC+	Disco Chimal for the outernal encoder
8	PC-	Phase C signal for the external encoder
9, 10	-	Reserved
Shell	FG	Frame grounding

Parâmetros:

Pn210.0 \rightarrow colocar em 2

Pn210.0→ sentido de giro do encoder

Pn212→ colocar o número de pulsos do encoder (multiplicados por 4)

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1.6. Parâmetros essenciais

Fins de curso

Pn0.1 \rightarrow colocar em 1

Pn0.2 \rightarrow colocar em 1

Alimentação / Rede

Pn7.1 \rightarrow 0(monofásico), 1(trifásico) e 2(DC) – padrão vem como trifásico

 $Pn7.3 \rightarrow colocar em 1 (60Hz)$

Sentido de Giro

Pn1.0 \rightarrow alterar de acordo com a necessidade

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2. Tuning

Parâmetros utilizados

Parameter	Setting	Meaning	When Enabled	Classification
Pn100.0	3	Set the Tuning Mode as One- Parameter Auto-<u>Tuning</u>.		
D=100.2	0	Set the damping method in One - Parameter Auto-Tuning as Standard .	After restart	Function
Ph100.5	1	Set the damping method in One - Parameter Auto-Tuning as Stable .		
Pn101	-	Servo Rigidity	Immediately	Adjustment
Pn106	-	Load Inertia Percentage	Immediately	Adjustment

2.1 Medição da Inércia

No software: Advanced \rightarrow Load Inertia identification

Selecionar a quantidade de voltas para medir a inércia.

Habilitar o servo e na sequência pressionar o botão "Run".

Load Inertia Identification				×
PARAMETER SETTING			,	
Rotation Count 4 Rev 💌	Servo Off		Run	
TEST RESULTS				
Pn106 Load Inertia Percent 19	%	Range: 0 ~	9999	
	Save			

Pn100.0→ colocar 3 – tuning mode Pn112 → colocar 100 – speed foward

Via drive:

Parameter	Setting	Meaning	When Enabled	Classification
De 172	0 [Default]	8 rotations	Immediately	Eurotion
PII1/2	1	4 rotations	minediatery	Function

2.2. Ajuste da Rigidez

Após executar a medição da inércia, alterar a rigidez do drive no parâmetro PN101 (0-500) até conseguir um erro satisfatório.

Aumentar a rigidez para reduzir o erro até o limite de oscilação do sistema.

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3. Instalação do software ABView

3.1. Instalação do ABView

Baixar o instalador do link: (ABD & ABM) Altra Brasil Servo Series | Kollmorgen

Descompactar o arquivo .zip e executar o Setup.exe

3.2. Instalação do driver USB

Abrir o Gerenciador de Dispositivos (Device Manager) do Windows

Localizar Other devices > ABD USB COMM

Atualizar o driver USB usando o arquivo \USB Drivers\windows_drivers\usb_dev_bulk.inf da pasta descompactada do instalador

Passo a passo:

Install USB Driver

After installing the ABDView software successfully, you may also need to install the USB driver. If you have successfully installed a USB drive, you can skip what is described in this section, otherwise follow the steps below to install the USB driver.



Since the USB Driver can only support one designated port, you shall reinstall the USB Driver if you replaced another port on the PC side, or you can use the previous port.

- Step 1 After installing the ABDView software successfully, connect the Drive to the PC by using the USB connection cable.
- Step 2 Open the main directory of ABDView software (default location is *C:\ABDView*), and extract the **USB Drivers.rar** compressed file to an appropriate directory of your PC.
- Step 3 Open Device Manager.
 - For Win7 OS, select Start > Control Panel. Click Device Manager on the displayed All Control Panel Items.
 - For Win10 OS, just right-click Start, and select Device Manager on the pop-up menu.
- Step 4 An exclamatory mark attaches to the option **Other devices** > **ALTRA BRASIL USB COMM** in **Device Manager** window, which indicates an error occurs in the driver and needs to update, as shown in Figure 1-11.

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Figure 1-1 An error occurs in the driver

🗄 Device Manager
<u>File Action View H</u> elp
🗢 🏟 🖬 🔽 🖬 💻
✓
> 4 Audio inputs and outputs
> 才 Batteries
> 😣 Bluetooth
> 👰 Cameras
> 💻 Computer
> 👝 Disk drives
> 🏣 Display adapters
Human Interface Devices
> 📷 IDE ATA/ATAPI controllers
> 🧱 Keyboards
> U Mice and other pointing devices
> 🛄 Monitors
> 🖵 Network adapters
✓ Other devices
USB COMM
M Unknown device
> Portable Devices
> Print queues
> Processors

Step 5 Right-click ALTRA BRASIL USB COMM, and select Update driver on the pop-up menu.



Step 6 Click Browse my computer for driver software on the Update Drivers dialog box.

Figure 1-3 Browse my computer for driver software

	×
Update Drivers -I USB COMM	
How do you want to search for drivers?	
→ Search automatically for updated driver software	
Windows will search your computer and the Internet for the latest driver software for your device, unless you've disabled this feature in your device installation settings.	
→ Browse my computer for driver software	
Locate and install driver software manually.	
	Cancel

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Step 7 Click Let me pick from a list of available drivers on my computer.

Figure 1-4 Let me pick from a list of available drivers on my computer

	to this location.				
C:\Users\L\Docur	ments		~	Browse	
include subjoit	1013				
→ Let me pi	ck from a list of ava	ilable drivers on	my com	puter	ר
→ Let me pi	ck from a list of ava	ilable drivers on mpatible with the devi	my com	puter drivers in the same	e

Step 8 Click Next.

Figure 1-5 Select your device's type from the list below

Select your device's type from the list below.	
Common hardware types:	
Show All Devices	^
🖗 61883 devices	
Audio inputs and outputs	
Audio Processing Objects (APOs)	
Audio/video control devices	
le Batteries	
Biometric devices	
8 Bluetooth	
Cameras	
Computer	
🛫 Digital Media Devices	
Disk drives	
Search 2 Sea	~

Step 9 Click Have Disk.

Update Drivers - USB COMM	
Select the device driver y	ou want to install for this hardware.
Select the manufactur	er and model of your hardware device and then dick Next. If you I
 disk that contains the 	driver you want to install, click Have Disk.
Manufacturer	Model
Manufacturer (Generic USB Audio)	Model
Manufacturer (Generic USB Audio) (Generic USB Hub)	Model
Manufacturer (Generic USB Audio) (Generic USB Hub) (IEEE 1667 Compatible ACTs)	Model USB Audio Device
Manufacturer (Generic USB Audio) (Generic USB Hub) (IEEE 1667 Compatible ACTs) (IEEE 1667 Compatible Silos)	Model USB Audio Device
Manufacturer (Generic USB Audio) (Generic USB Hub) (EEE 1667 Compatible ACTs) (EEE 1667 Compatible Silos) <	Model
Manufacturer (Generic USB Audio) (Generic USB Hub) (EEE 1667 Compatible ACTs) (EEE 1667 Compatible Silos) <	Model
Manufacturer (Generic USB Audio) (Generic USB Hub) (IEEE 1667 Compatible ACTs) (IEEE 1667 Compatible Silos) C This driver is digitally signed	Model USB Audio Device USB Audio OEM Device d. Bave D

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Step 10 Click Browse on the Install From Disk dialog box.

Figure	1-7 Install From Disk	
Install Fre	om Disk	\times
	Insert the manufacturer's installation disk, and then make sure that the correct drive is selected below.	OK Cancel
	Copy manufacturer's files from:	
	<u>A1</u>	Y Browse

- Step 11 Set the **Look in** as the directory of *ABDView* decompressed file *USB Drivers**windows_drivers* on the **Locate File** dialog box.
- Step 12 Choose *usb_dev_bulk.inf*, and then click **Open**.

Figure 1-8	Choose the	driver file		
击 Locate File				×
Look in:	windows_driv	ers	· 🗿 🤌 📂 🛄•	
	Name amd64	^	Date modified 4/25/2019 09:54	Type File folder
	i386 boot_demo_	usb	4/25/2019 09:54 3/26/2018 02:33 3/26/2018 02:33	File folder Setup Infc Setup Infc
Desktop	usb_dev_bul	k .	3/26/2018 02:33	Setup Info
-	usb_dev_cnic	rial	3/26/2018 02:33	Setup Info
Libraries	ଈ] usb_dev_log 튧] usb_dev_seri	ger ial	3/26/2018 02:33 3/26/2018 02:33	Setup Infc Setup Infc
This PC				
Network	<	unh dau hulk) (res
	Files of type:	Setup Information (*.inf)		Cancel

- Step 13 Click **OK** on the **Install From Disk** dialog box.
- Step 14 Choose Generic Bulk Device, and then click Next.

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Figure 1-9 Select the driver you want to install for this hardware

		Х				
÷	Update Drivers - ESTUN USB COMM					
	Select the device driver you want to install for this hardware.					
	Select the manufacturer and model of your hardware device and then click Next. If you have a disk that contains the driver you want to install, click Have Disk.					
	Manufacturer Model					
	Texas Instruments Inc.					
	Texas Instruments, Inc.					
	TivaWare Device Firmware Upgrade (runtime mode)					
	This driver has an Authenticode(tm) signature. Have Disk					
	Tell me why driver signing is important					
	Next Cance					

Step 15 Click Yes on the Update Driver Warning dialog box.



Step 16 Wait for a while, and then click Install on the Windows Security dialog box.



Step 17 The driver will be automatically installed to your PC, and then the installation result will be displayed. Click **Close** to complete the USB driver installation.

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Figure 1-12 Complete the USB driver installation

		×	
÷	Update Drivers - Generic Bulk Device		
	Windows has successfully updated your drivers		
	Windows has finished installing the drivers for this device:		
	Generic Bulk Device		
	Close		