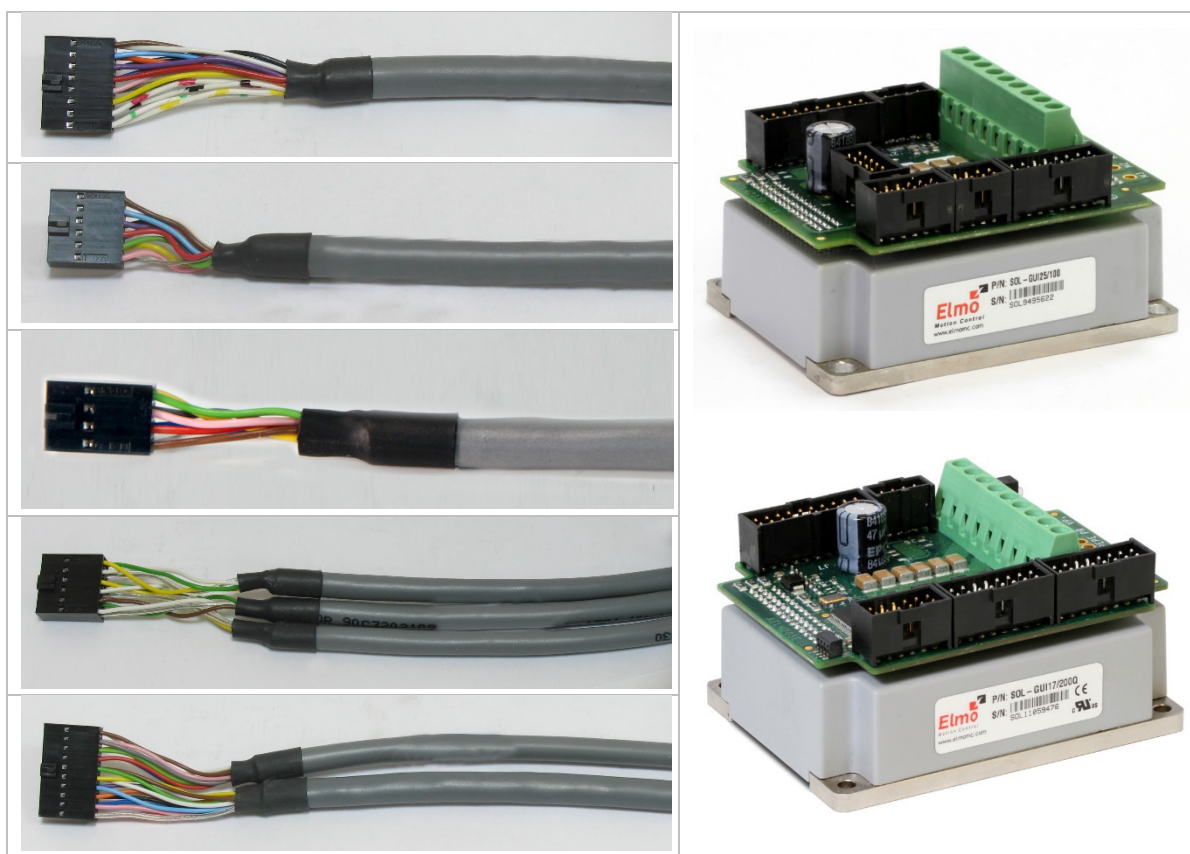


SimplIQ_{Line}

Solo Guitar, Solo Guitar Absolute Feedback Digital Servo Drive Cable Kits



July 2018 (Ver. 2.0)

Elmo
Motion Control

www.elmomc.com

Notice

This guide is delivered subject to the following conditions and restrictions:

- This guide contains proprietary information belonging to Elmo Motion Control Ltd. Such information is supplied solely for the purpose of assisting users of the Solo Guitar, Solo Guitar Absolute Feedback Cable Kits and the servo drives in their installation.
- The text and graphics included in this manual are for the purpose of illustration and reference only. The specifications on which they are based are subject to change without notice.
- Information in this document is subject to change without notice.



Elmo Motion Control and the Elmo Motion Control logo are registered trademarks of Elmo Motion Control Ltd.

Document no. MAN-SOLGUI-CBLKIT (Ver. 2.0)

Copyright © 2018

Elmo Motion Control Ltd.

All rights reserved.

Revision History

Version	Date	Details
Ver. 1.0	Dec 2008	Initial Release
Ver. 2.0	Jul 2018	Completely updated version release



Table of Contents

Chapter 1: Introduction	4
1.1 Solo Guitar Connectors	5
1.2 Solo Guitar Absolute Feedback Connectors	6
1.3 Cable Kit Details	7
1.3.1 Solo Guitar	7
1.3.2 Solo Guitar Absolute Feedback	7
Chapter 2: Main Feedback Cable	8
2.1 Solo Guitar Main Feedback Cable	8
2.2 Solo Guitar Absolute Feedback Main Feedback Cable	9
Chapter 3: Main Feedback Buffered Output Cable	10
Chapter 4: Auxiliary Feedback Cable	11
Chapter 5: Communication Cable	12
Chapter 6: I/O Cable	13



Chapter 1: Introduction

This document provides the wiring details for the cables used to connect Elmo SOLO-GUITAR and SOLO-GUITAR ABSOLUTE FEEDBACK digital servo drives with the end-user application. The servo drive-side pinouts are provided in Chapter 3 of the drive's installation guide. There are four cable kits of two different gauges for the Solo Guitar and Solo Guitar Absolute Feedback servodrives:

Servo-Drives	Cable Kit	
	24 AWG	28 AWG
SOLO-GUITAR	CBL-SOLGUIKIT01	CBL-SOLGUIKIT19
SOLO-GUITAR ABSOLUTE FEEDBACK	CBL-SOLGUIKIT02	CBL-SOLGUIKIT20

Each kit include a 2.54mm Crimp 4-Pins Connector and Crimping pins for the brake and PTC.

The cables come in a single length: 2 meters (6 ½ feet).

Note: The Kits CBL-SOLGUIKIT01 (Solo Guitar 24 AWG) and CBL-SOLGUIKIT02 (Solo Guitar Absolute Feedback 24 AWG) are not recommended for new designs.



1.1 Solo Guitar Connectors

The table below presents the connector panel of the Solo Guitar drive and specifies the cable connectors.

Pins	Type	Connector Manufacturer and Part Number	Port
9	5.08 mm Pitch/14-16AWG Wires	Wires	Power connector
4	2.54 mm Pitch	Molex 90156-0144	J4
20	2.54 mm Pitch	Molex 90142-0020	J5
12	2.54 mm Pitch	Molex 90142-0012	J1
12	2.54 mm Pitch	Molex 90142-0012	J14
8	2.54 mm Pitch	Molex 90142-0008	J17
16	2.54 mm Pitch	Molex 90142-0016	J3

Connector Locations

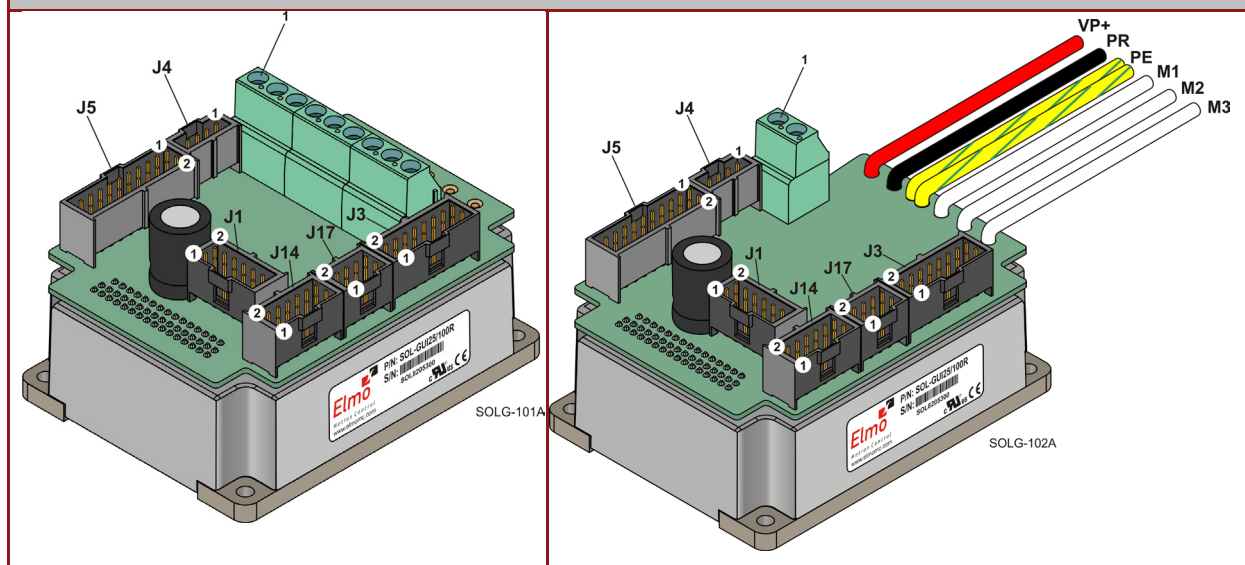


Table 1-1: Connectors on the Solo Guitar Drive



1.2 Solo Guitar Absolute Feedback Connectors

The table below presents the connector panel of the Solo Guitar Absolute Feedback drive and specifies the cable connectors.

Pins	Type	Connector Manufacturer and Part Number	Port
9	5.08 mm Pitch/14-16AWG wire	Wires	Power connector
4	2.54 mm Pitch	Molex 90156-0144	J6
20	2.54 mm Pitch	Molex 90142-0020	J7
12	2.54 mm Pitch	Molex 90142-0012	J3
16	2.54 mm Pitch	Molex 90142-0016	J11
16	2.54 mm Pitch	Molex 90142-0016	J5

Connector Locations

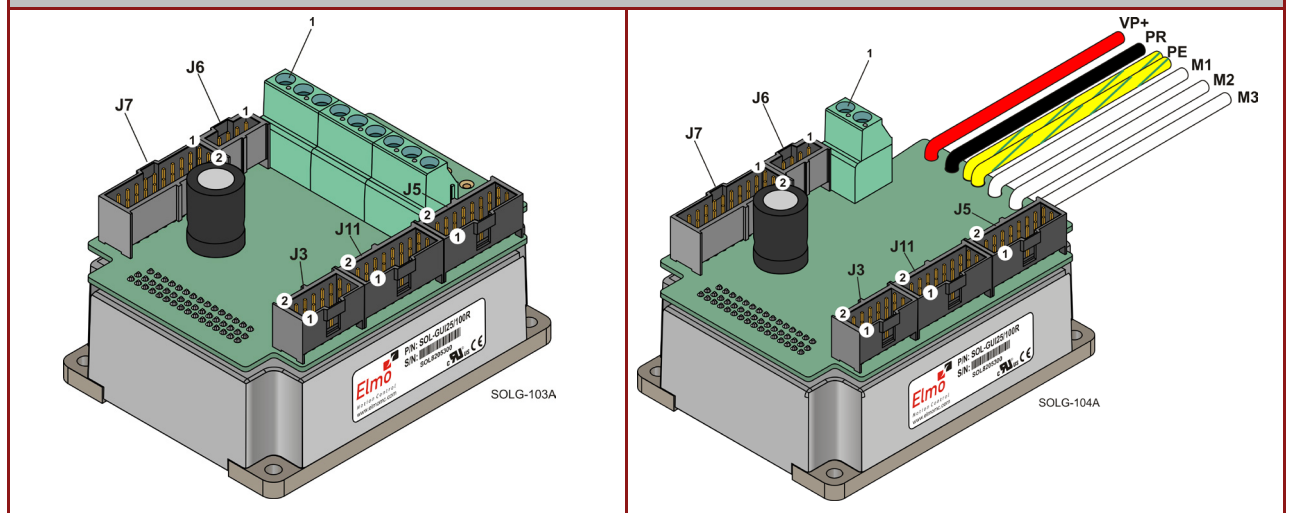


Table 1-2: Connectors on the Solo Guitar-Absolute Feedback Drive



1.3 Cable Kit Details

Four cable kits can be purchased from Elmo. The kits contain five cables in CBL-SOLGUIKIT01, CBL-SOLGUIKIT19 (for the Solo Guitar) and four cables in CBL-SOLGUIKIT02, CBL-SOLGUIKIT20 (for the Solo Guitar Absolute Feedback), respectively. All the cables are 2 m long.

The contents of each kit are listed below:

1.3.1 Solo Guitar

Cable and Connectors	Cable Part. No.		Pins	Pin Location
	CBL-SOLGUIKIT01 24 AWG	CBL-SOLGUIKIT19 28 AWG		
Main Feedback	CBL-GPORTA-B2	CBL-GPORTA001	12	J14
Main Feedback Buffered Output	CBL-HDRPD-001	CBL-HDRPD-002	8	J17
Communication	CBL-HDR001	CBL-HDR006	12	J1
Auxiliary Feedback	CBL-HDRAUX-001	CBL-HDRAUX-002	16	J3
I/O	CBL-HDR002	CBL-HDR005	20	J5
2.54mm Crimp Connector for Brake and PTC	JCW-107604FC	JCW-107604FC	4	J4
Crimping Pins for Brake and PTC	JCW-104601FC	JCW-104601FC	-	-

Table 1-3: Cable and Pin Cross-Reference for the Solo Guitar Drive

1.3.2 Solo Guitar Absolute Feedback

Cable and Connectors	Cable Part. No.		Pins	Pin Location
	CBL-SOLGUIKIT02 24 AWG	CBL-SOLGUIKIT20 28 AWG		
Main Feedback	CBL-HDRAUX-001	CBL-HDRAUX-002	16	J11
Communication	CBL-HDR001	CBL-HDR006	12	J3
Auxiliary Feedback	CBL-HDRAUX-001	CBL-HDRAUX-002	16	J5
I/O	CBL-HDR002	CBL-HDR005	20	J7
2.54mm Crimp Connector for Brake and PTC	JCW-107604FC	JCW-107604FC	4	J6
Crimping Pins for Brake and PTC	JCW-104601FC	JCW-104601FC	-	-

Table 1-4: Cable and Pin Cross-Reference for the Solo Guitar Absolute Feedback Drive



Chapter 2: Main Feedback Cable

2.1 Solo Guitar Main Feedback Cable

The main feedback cables CBL-GPORTA-B2, and CBL-GPORTA001, are a 24 AWG, and 28 AWG respectively, six twisted-pair shielded cable. There is one type of feedback cable, which uses a 12-pin C-Grid III (Molex) 2.54 mm pitch plug on the *SimplIQ* side.

The Solo Guitar Main Feedback Cable is open on the motor side so that it can be connected to customer-specific connectors.

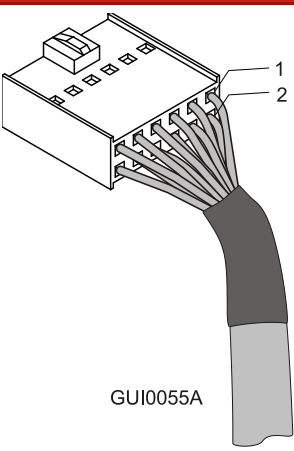
Pin No.	Color	Description	
1	Brown	See installation guide	
2	White	See installation guide	
3	Cyan	See installation guide	
4	Orange	See installation guide	
5	Purple	See installation guide	
6	Black	See installation guide	
7	Red	See installation guide	
8	Blue	See installation guide	
9	Green	See installation guide	
10	Yellow	See installation guide	
11	Pink	See installation guide	
12	Drain wire	See installation guide	

Table 3-1: Main Feedback Cable for the Solo Guitar Drive



Figure 1: Main Feedback Cable (CBL-GPORTA-B2, CBL-GPORTA001)



2.2 Solo Guitar Absolute Feedback Main Feedback Cable

The absolute feedback cables CBL-HDRAUX-001, and CBL-HDRAUX-002, are a 24 AWG, and 28 AWG respectively, eight twisted-pair shielded cable. It is connected using a 16-pin C-Grid III (Molex) plug.

The Solo Guitar Absolute Feedback Main Feedback Cable is open on the motor side so that it can be connected to customer-specific connectors.

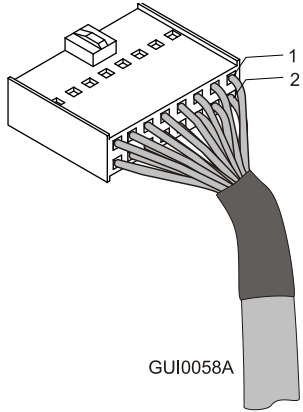
Pin No.	Color	Description	
1	Brown	See installation guide	
2	White	See installation guide	
3	Cyan	See installation guide	
4	Orange	See installation guide	
5	Purple	See installation guide	
6	Black	See installation guide	
7	Red	See installation guide	
8	Blue	See installation guide	
9	Pink	See installation guide	
10	Grey	See installation guide	
11	Yellow	See installation guide	
12	Green	See installation guide	
13	White-Red	See installation guide	
14	White-Black	See installation guide	
15	White-Green	See installation guide	
16	White-Yellow	See installation guide	

Table 3-2: Main Feedback Cable for the Solo Guitar Absolute Feedback Drive

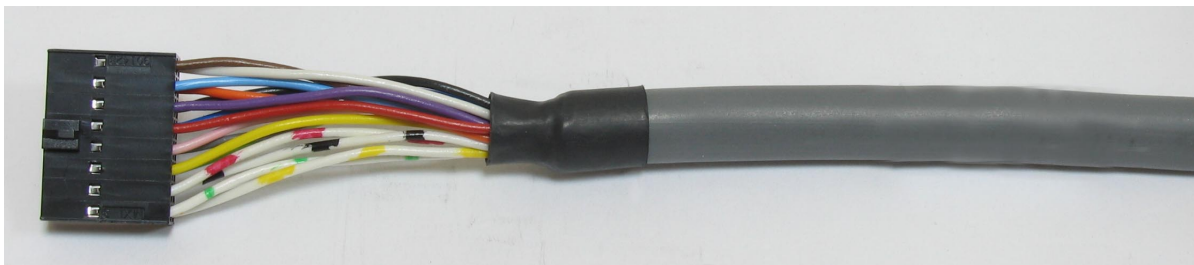


Figure 2: Main Feedback Cable (CBL-HDRAUX-001, CBL-HDRAUX-002)



Chapter 3: Main Feedback Buffered Output Cable

The Solo Guitar main feedback buffered output cables CBL-HDRPD-001, and CBL-HDRPD-002 are a 24 AWG and 28 AWG respectively, four twisted-pair shielded cable. It is connected using an 8-pin C-Grid III (Molex) plug.

The Solo Guitar Main Feedback Buffer Output Cable is open on the motor side so that it can be connected to customer-specific connectors.

Pin No.	Color	Signal
1	Green	CHAO
2	Yellow	CHAO-
3	Pink	CHBO
4	Grey	CHBO-
5	Red	INDEXO
6	Blue	INDEXO-
7	Brown	COMRET
8	White	PE

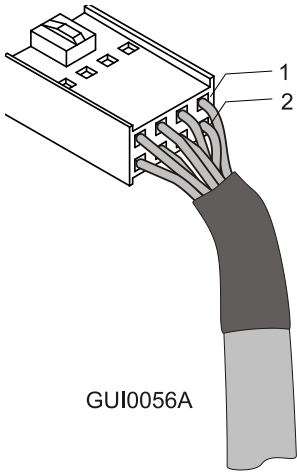


Table 3-1: Main Feedback Buffered Output Cable for the Solo Guitar Drive



Figure 3: Main Feedback Buffered Output Cable (CBL-HDRPD-001, CBL-HDRPD-002)



Chapter 4: Auxiliary Feedback Cable

The auxiliary feedback cables CBL-HDRAUX-001, and CBL-HDRAUX-002 are a 24 AWG, and 28 AWG respectively, eight twisted-pair shielded cable. It is connected using a 16-pin C-Grid III (Molex) plug.

The Solo Guitar Auxiliary Feedback Cable is open on the motor side so that it can be connected to customer-specific connectors.

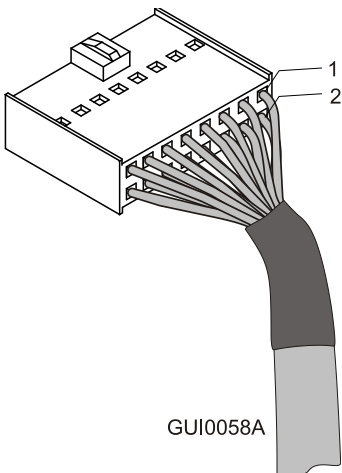
Pin No.	Color	Description	
1	Brown	See installation guide	
2	White	See installation guide	
3	Cyan	See installation guide	
4	Orange	See installation guide	
5	Purple	See installation guide	
6	Black	See installation guide	
7	Red	See installation guide	
8	Blue	See installation guide	
9	Pink	See installation guide	
10	Grey	See installation guide	
11	Yellow	See installation guide	
12	Green	See installation guide	
13	White-Red	See installation guide	
14	White-Black	See installation guide	
15	White-Green	See installation guide	
16	White-Yellow	See installation guide	

Table 4-1: Auxiliary Feedback Cable for the Solo Guitar, Solo Guitar Absolute Feedback Drives

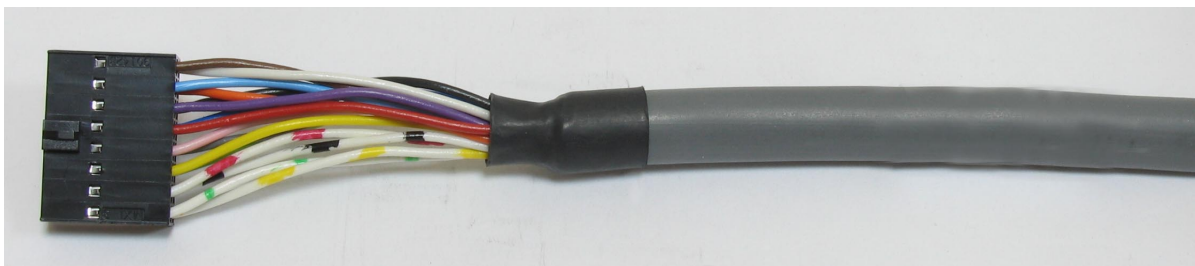


Figure 4: Auxiliary Feedback Cable (CBL-HDRAUX-001, CBL-HDRAUX-002)



Chapter 5: Communication Cable

The communication cables CBL-HDR001, and CBL-HDR006, consists of three 26-AWG and 28 AWG respectively, two-twisted-pair shielded cable. It is connected using a 12-pin C-Grid III (Molex) plug. This cable (and connector) includes RS-232 and CAN communications.

The Solo Guitar Communication Cable is open on the controller side so that it can be connected to customer-specific connectors.

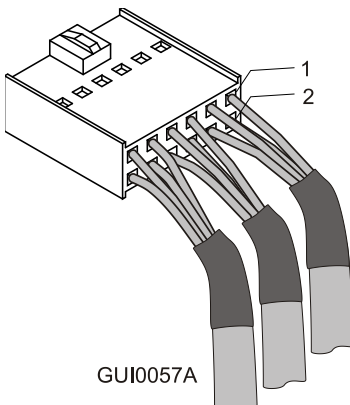
	Pin No.	Color	Signal	
Cable 1	1	Yellow	CAN_L	
	2	Green	CAN_H	
	3	White	CAN_GND	
	4	Drain wire	Shield	
Cable 2	5	Yellow	CAN_L	
	6	Green	CAN_H	
	7	White	CAN_GND	
	8	Drain wire	Shield	
Cable 3	9	Brown	RS232_Tx	
	10	Green	RS232_Rx	
	11	White	RS232_COMRET	
	12	Drain wire	Shield	

Table 5-1: Communication Cable for the Solo Guitar, Solo Guitar Absolute Feedback Drives



Figure 5: Communication Cable (CBL-HDR001, CBL-HDR006)



Chapter 6: I/O Cable

The I/O cables CBL-HDR002, and CBL-HDR005 consist of two 24 AWG and 28 AWG respectively, twisted-pair shielded cables. It is connected using a 20-pin C-Grid III (Molex) plug.

The Solo Guitar IO Cable is open on the controller side so that it can be connected to customer-specific connectors.

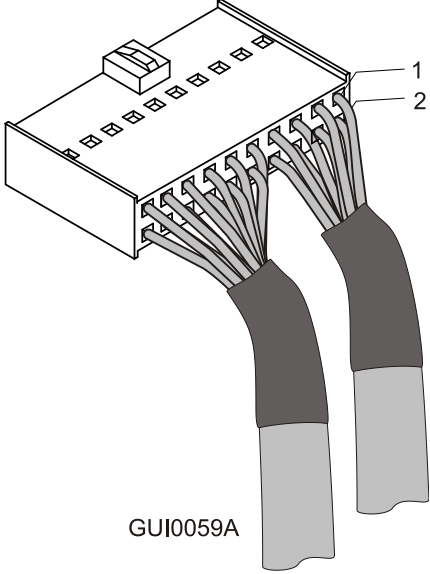
	Pin No.	Color	Signal	
Cable 1	1	Brown	IN2	
	2	White	INRET2	
	3	Grey	IN4	
	4	Pink	IN3	
	5	Green	IN5	
	6	Yellow	INRET	
	7	Red	IN6	
	8	Blue	INRET	
Cable 2	9	Green	VDDIN	
	10	Brown	OUT1	
	11	Yellow	VDDIN	
	12	White	OUT2	
	13	Cyan	VDDRET	
	14	Purple	OUT3	
	15	Orange	VDDRET	
	16	Black	OUT4	
	17	Pink	ANLRET	
	18	Blue	ANLIN1+	
	19	Drain wire	Shield	
	20	Red	ANLIN1-	

Table 6-1: I/O Pin and Cable for the Solo Guitar, Solo Guitar Absolute Feedback Drives



Figure 6: I/O Cable (CBL-HDR002, CBL-HDR005)



Inspiring Motion

Since 1988

For a list of Elmo's branches, and your local area office, refer to the Elmo site www.elmomc.com

