

Gold Bassoon

Gold Bassoon Cable Kit (EtherCAT and CAN)



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Catalog Number

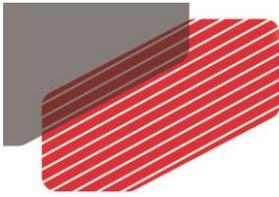
CBL-GBASKIT

Revision History

Version	Date	Details
Ver. 1.000	January 2014	Initial release



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Chapter 1: Introduction

This document provides the wiring details for the cables used to connect Elmo's Gold Bassoon servo drive with the end-user application. The servo drive-front pinouts are provided in the *Gold Bassoon Digital Servo Drive Installation Guide*.

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

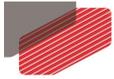
1.1. Cable Kit (CBL-GBASKIT)

NOTE:

It should be noted that this kit does not include any CAT5E RJ-45 for EtherCAT/CAN and Mini-USB communication cables. Please purchase these cables separately. These items are standard cables that can be purchased locally.

This cable kit includes the following cables:

Function	Description
24 VDC auxiliary supply	6-Pin Phoenix Plug-in Connector
Port A	15-Pin D Type Male Connector
I/O cable	15-Pin High Density D-Type Female Connector
Port B	9-Pin D Type Male Connector
Port C	15-Pin High Density D Type Male Connector
STO cable	6-Pin Phoenix Plug-in Connector



Chapter 2: 24 VDC Auxiliary Supply

The 24 VDC logic cable is a single twisted-pair 24-AWG double-shielded cable. It is connected using to the Gold Bassoon connector using an ending ferrule.

The cable is open on the end side so that it can be connected to the power supply.

The general pinout of the 24 VDC auxiliary supply is as follows:

Pin No.	Signal	Color	Twisted & Shielded Wire
VL+	+24VDC	Red	Pair
VL-	24VDC_RET	Black	

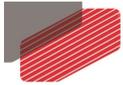
Pin Positions	
<p>2/6-Pin Pluggable 3.5 mm Phoenix Screw Flange Connector</p>	<p>6-Pin Phoenix Plug-in Connector</p>

Table 1: Auxiliary Power Pin Assignments

Note: The specific functionality of each pin is described fully in the *Gold Bassoon Installation Guide*.



Figure 1: 24 VDC Auxiliary Supply Cable

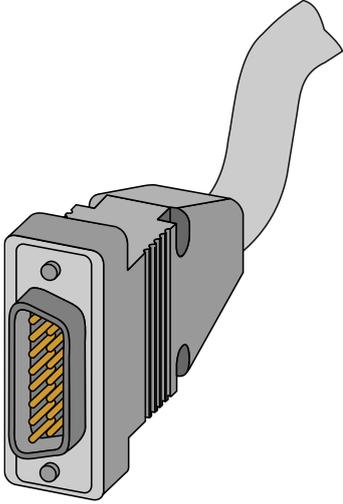


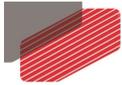
Chapter 3: Port A Cable

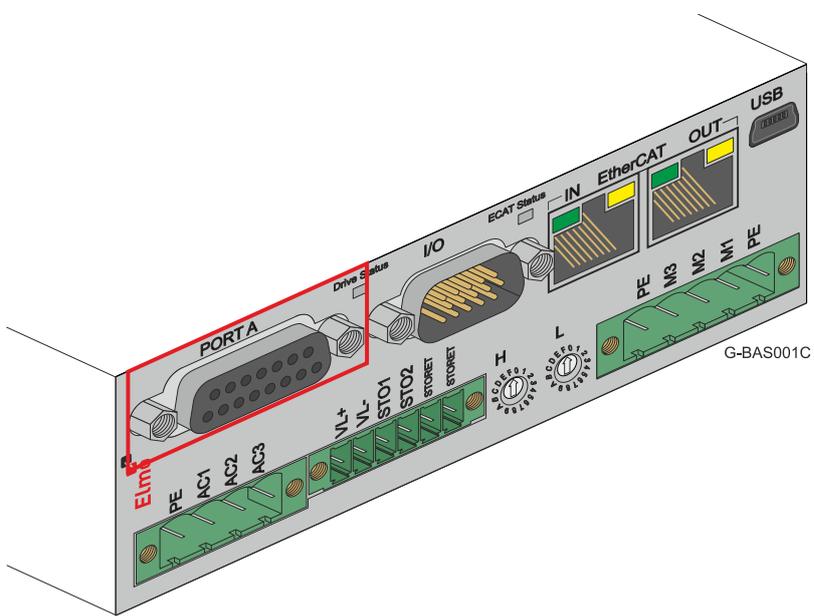
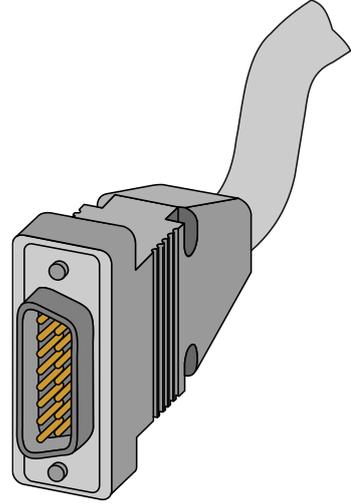
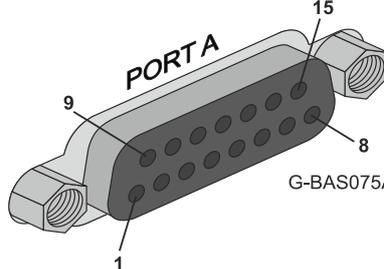
The Port A cable is a 6-pair 24-AWG shielded twisted-pair cable. It is connected using a D-type 15-pin male connector to the Gold Bassoon Port A D-sub connector.

The cable is open on the feedback side so that it can be connected to the motor-feedback connector.

The general pinout of the Port A cable is as follows:

Pin No.	Signal	Color	Twisted & Shielded Wire	Plug
1	HC	Green	Twisted Pair 1	 G-BAS081A 15-Pin D Type Male Connector
10	HB	Yellow		
3	COMRET	White	Twisted Pair 2	
4	+5V	Brown		
5	PortA_ENC_A-	Orange	Twisted Pair 3	
6	PortA_ENC_A+	Cyan		
7	PortA_ENC_INDEX-	Blue	Twisted Pair 4	
8	PortA_ENC_INDEX+	Red		
2	HA	Pink	Twisted Pair 5	
9	COMRET	Gray		
14	PortA_ENC_B-	Black	Twisted Pair 6	
15	PortA_ENC_B+	Purple		
11	COMRET	-	Drain Wire	



Pin No.	Signal	Color	Twisted & Shielded Wire	Plug
Pin Positions				
				
15-Pin D-Type Female Connector				15-Pin D-Type Male Connector
				

Note: The specific functionality of each pin is described fully in of the *Gold Bassoon Installation Guide*.



Figure 2: Feedback Port A Cable

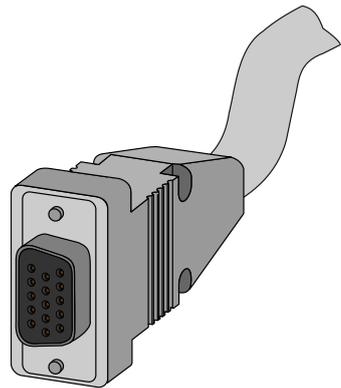


Chapter 4: I/O Cable

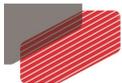
The I/O cable is an 8-pair 24-AWG double shielded twisted-pair cable. It is connected using a D-type 15-pin female connector to the Gold Bassoon on the servo drive side.

The cable is open on the end side so that it can be connected to the controller interface connector.

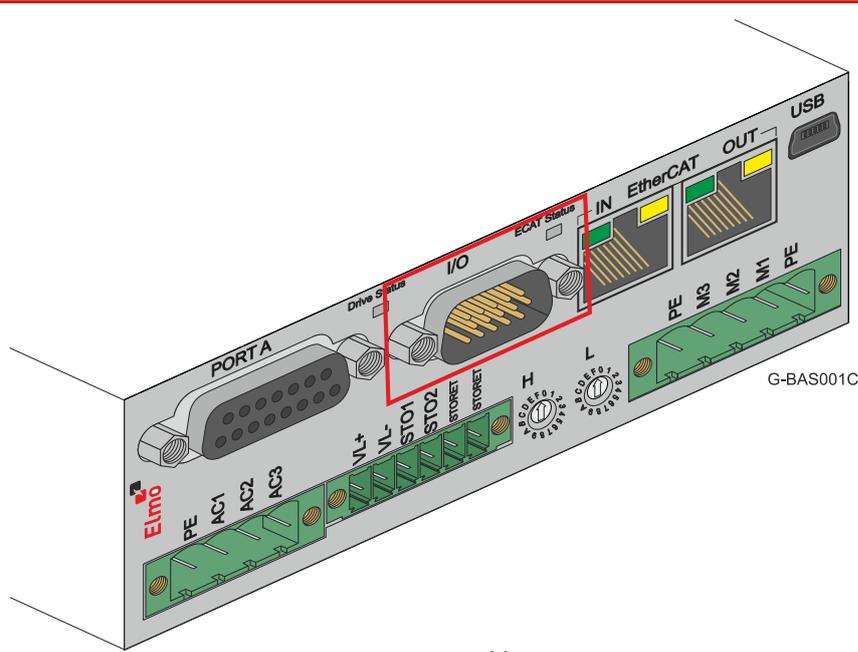
The general pinout of the I/O cable is as follows:

Pin No.	Signal	Color	Twisted & Shielded Wire	Plug
1	IN1	Orange	Twisted Pair 1	 <p>G-BAS082A 15-Pin High Density D-Type Female Connector</p>
2	IN2	Cyan		
3	OUT1	Blue	Twisted Pair 2	
4	OUT2	Red		
5	OUT3	Yellow	Twisted Pair 3	
13	OUT4	Green		
7	IN3	Purple	Twisted Pair 4	
8	IN4	Black		
9	VDDRET	White	Twisted Pair 5	
10	VDD	Brown		
11	IN5	Gray	Twisted Pair 6	
12	IN6	Pink		
14	VDDRET	White/Black	Twisted Pair 7	
15	VDD	White/Red		
6	INRET1-6	White/Yellow	-	
*	PE	-	Drain Wire	

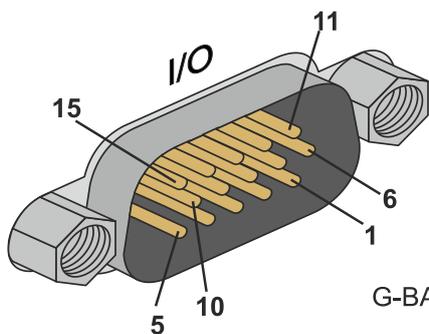
* - Connector 15 Pin High Density Frame



Pin Positions

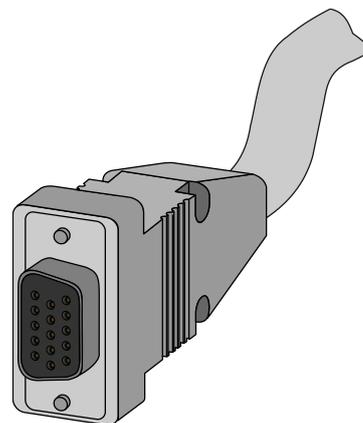


G-BAS001C



G-BAS075A

15-Pin High Density D-Type Male Connector



G-BAS082A

15-Pin High Density
D-Type Female Connector

Note: The specific functionality of each pin is described fully in the *Gold Bassoon Installation Guide*.



Figure 3: I/O Cable

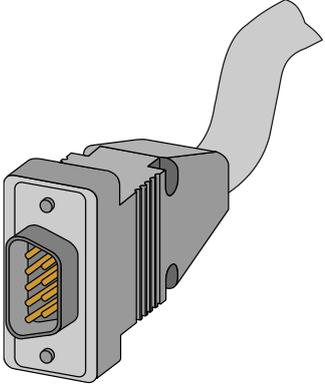


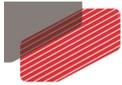
Chapter 5: Port B Cable

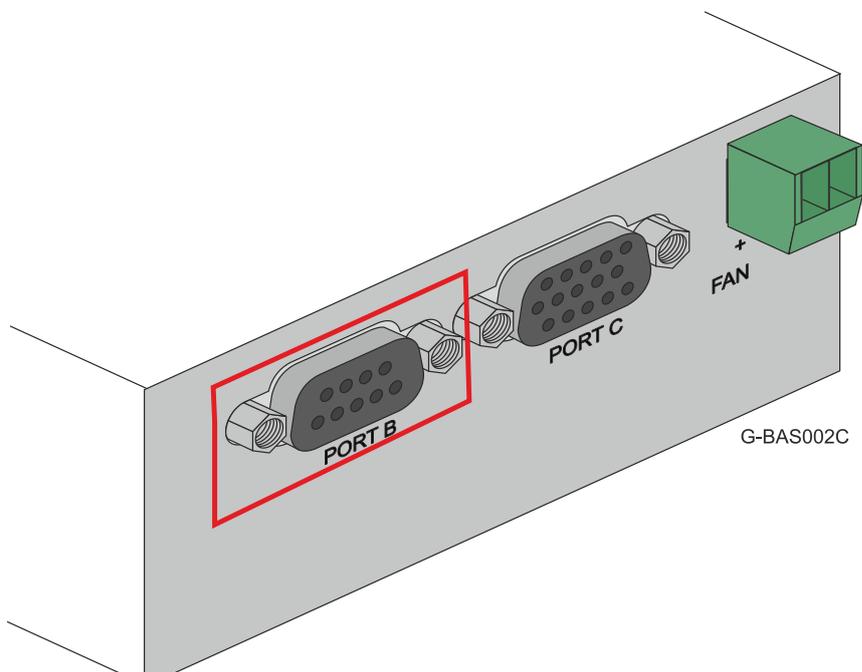
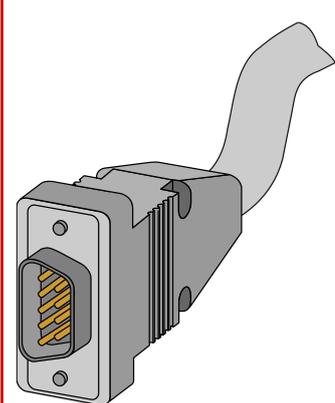
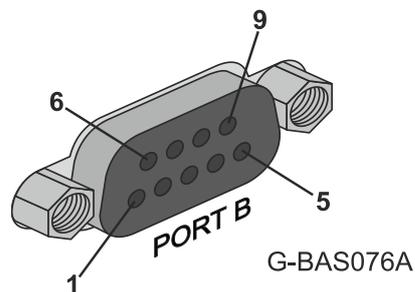
The Port B cable is a 4-pair 24-AWG shielded twisted-pair cable. It is connected using a D-type 9-pin male connector to the Gold Bassoon Port B D-sub connector.

The cable is open on the feedback side so that it can be connected to the motor feedback connector.

The general pinout of the Port B cable is as follows:

Pin No.	Signal	Color	Twisted & Shielded Wire	Plug
1	PortB_ENC_A+/SIN+	Brown	Twisted Pair 1	 G-BAS083A 9-Pin D Type Male Connector
6	PortB_ENC_A-/SIN-	White		
3	PortB_ENC_INDEX+	Red	Twisted Pair 2	
8	PortB_ENC_INDEX-	Blue		
5	COMRET	Gray	Twisted Pair 3	
4	+5V	Pink		
7	PortB_ENC_B-/COS-	Green	Twisted Pair 4	
2	PortB_ENC_B+/COS+	Yellow		
9	COMRET	-	Drain Wire	

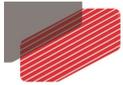


Pin No.	Signal	Color	Twisted & Shielded Wire	Plug
Pin Positions				
				
				9-Pin D-Type Male Connector
9-Pin D-Type Female Connector				

Note: The specific functionality of each pin is described fully in the *Gold Bassoon Installation Guide*.



Figure 4: Feedback Port B Cable

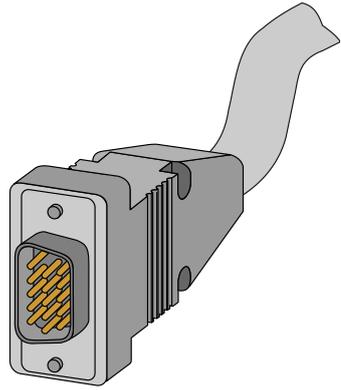


Chapter 6: Port C Cable

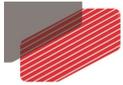
The Port C cable is an 8-pair 24-AWG shielded twisted-pair cable. It is connected using a D-type 15-pin high density male connector to the Gold Bassoon Port C D-sub connector.

The cable is open on the user interface side so that it can be connected to the controller interface connector.

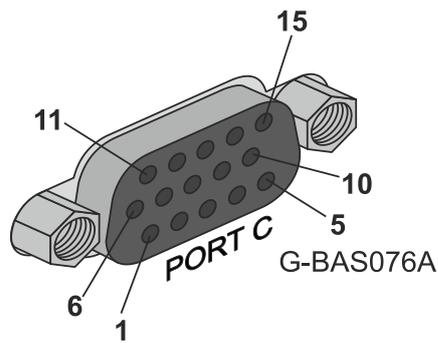
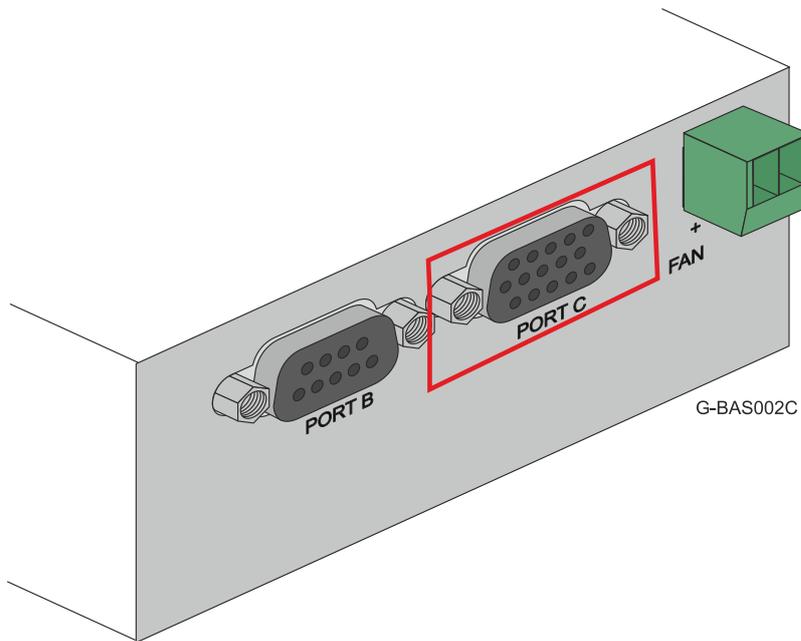
The general pinout of the Port C cable is as follows:

Pin No.	Signal	Color	Twisted & Shielded Wire	Plug
1	PortC_ENCO_A+	Cyan	Twisted Pair 1	 G-BAS084A 15-Pin High Density D Type Male Connector
2	PortC_ENCO_A-	Orange		
3	PortC_ENCO_B+	Purple	Twisted Pair 2	
4	PortC_ENCO_B-	Black		
5	PortC_ENCO_Index+	Red	Twisted Pair 3	
10	PortC_ENCO_Index-	Blue		
7	Not in use	Gray	N/A	
6	Not in use	Pink		
11	Not in use	White/Yellow	N/A	
12	Not in use	White/Green		
9	COMRET	Green	Twisted Pair 6	
13	ANARET	Yellow		
15	ANALOG1+	White/Red	Twisted Pair 7	
14	ANALOG1-	White/Black		
8	Reserved	Brown	Twisted Pair 8	
-	N/C	White		
*	PE	-	Drain Wire	

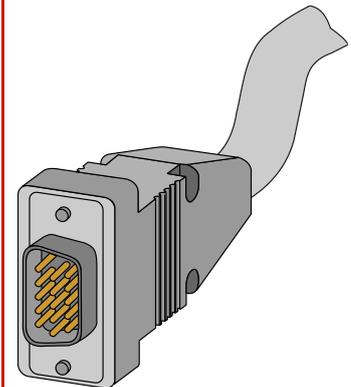
* - Connector 15 Pin Male Frame



Pin Positions



15-Pin High Density D-Type Female Connector



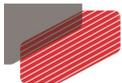
G-BAS084A

**15-Pin High Density
D-Type Male Connector**

Note: The specific functionality of each pin is described fully in the *Gold Bassoon Installation Guide*.



Figure 5: Feedback Port C Cable



Chapter 7: STO Cable

The STO cable is a 24-AWG double-shielded twisted-pair cable. It is connected to the Gold Bassoon connector using an ending ferrule.

The cable is open on the end-side so that it can be connected to the STO interface connector.

The general pinout of the STO cable is as follows:

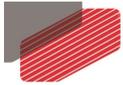
Pin	Signal	Cable	Color	Twisted & Shielded Wire
STO1	STO1 Input	STO cable	Yellow	Twisted Pair 1
STORET	STO Return Signal	STO cable	Green	
STO2	STO2 Input	STO cable	Brown	Twisted Pair 2
STORET	STO Return Signal	STO cable	White	

Pin Positions	
<p>4/6-Pin Pluggable 3.5 mm Screw Flange Connector</p>	<p>6-Pin Phoenix Plug-in Connector</p>

Note: The specific functionality of each pin is described fully in the *Gold Bassoon Installation Guide*.



Figure 4: STO Cable

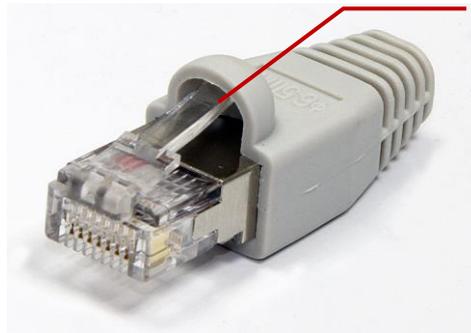


Chapter 8: CAN Terminator

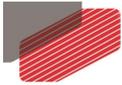
The CAN terminator is used only for CAN applications. It is used to terminate the CAN communication line.

The CAN terminations prevent the CAN signal reflection at the end of the physical lines.

The reflection suppresses the CAN signal which may lead to Error Frames and causes the CAN controller message to be discarded. **120 Ohm resistors** are required on both physical ends of the CAN network to prevent the signal reflection.



120 Ω Resistor
assembly inside



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