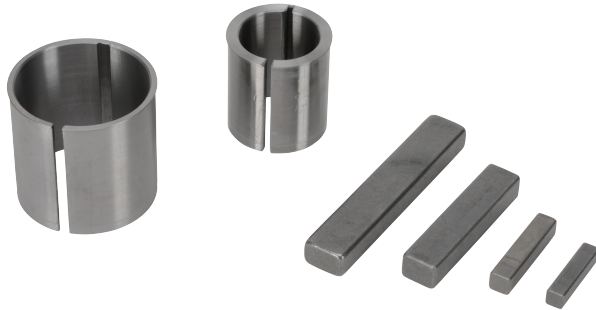


# Suregear® Precision Servo Gearboxes

## SureGear® Servo Gearbox Replacement Parts



SureGear® Precision Servo Gearboxes – Replacement Parts		
Part Number	Price	Description
<b>PG050-KEY</b>	\$4.00	Output Shaft Key, replacement, 4 x 4 x 14 mm, for SureGear PGA050 series gearboxes.
<b>PG070-KEY</b>	\$4.00	Output Shaft Key, replacement, 5 x 5 x 22 mm, for SureGear PGA070 and PGB070 series gearboxes.
<b>PG090-KEY</b>	\$4.00	Output Shaft Key, replacement, 6 x 6 x 28 mm, for SureGear PGA090 and PGB090 series gearboxes.
<b>PG120-KEY</b>	\$4.00	Output Shaft Key, replacement, 10 x 8 x 45 mm, for SureGear PGA120 and PGB120 series gearboxes.
<b>PG155-KEY</b>	\$4.00	Output Shaft Key, replacement, 12 x 8 x 65 mm, for SureGear PGA155 and PGB155 series gearboxes.
<b>PGA4-A5-BUSH</b>	\$19.00	Input Shaft Bushing, replacement, 28 x 22 x 30.5 mm, for all SureGear gearboxes using SVL-210(B) and SVM-210(B) SureServo motors.
<b>PGA6-BUSH</b>	\$19.00	Input Shaft Bushing, replacement, 38 x 35 x 36 mm, for all SureGear gearboxes using SVM-220(B) and SVM-230(B) SureServo motors.

# SureServo<sup>®</sup> AC Servo System Accessories

## Accessories

### External Regeneration Resistors

Use external resistors to provide additional regenerative capacity and to dissipate heat away from the servo drive.

Part Number	Resistance	SureServo Drives	Price
<b>GS-25PO-BR</b>	40Ω	<b>SVA-2040</b>	\$75.00
<b>GS-2010-BR-ENC</b>	20Ω	<b>SVA-2100, SVA-2300</b>	\$223.00



**Resistor GS-25PO-BR**

### AC Line Filters

Input EMI filters reduce electromagnetic interference or noise on the input side of the servo drive. They are required for CE compliance and recommended for installations prone to or sensitive to electromagnetic interference.

SureServo <sup>®</sup> Drives	AC Input Power	EMI Filter Rating	EMI Filter Part Number	Price
<b>SVA-2040</b>	Single-Phase	250V, 1-phase, 20A	<b>20DRT1W3S</b>	\$76.00
	Three-Phase	250V, 3-phase, 10A	<b>10TDT1W4C</b>	\$81.00
<b>SVA-2100</b>	Single-Phase	250V, 1-phase, 20A	<b>20DRT1W3S</b>	\$76.00
	Three-Phase	250V, 3-phase, 10A	<b>10TDT1W4C</b>	\$81.00
<b>SVA-2300</b>	Three-Phase	250V, 3-phase, 26A	<b>26TDT1W4C</b>	\$113.00

*NOTE: THESE EMI FILTERS ARE ELECTRICALLY COMPATIBLE WITH THE SURESERVO DRIVES. HOWEVER, THEY ARE INTENDED TO BE MOUNTED NEXT TO THE SERVO DRIVE. DO NOT MOUNT THE FILTER UNDER THE DRIVE. THE DRIVE MOUNTING HOLES ON THESE UNITS ARE INTENDED TO BE USED ONLY WITH AUTOMATIONDIRECT'S LINE OF VFDs.*



**AC Line Filter 10TDT1W4C**

### Edison Fuses & Fuji Contactors

SureServo <sup>®</sup> Drives	Input Type	Input Voltage	Edison Fuse - Class CC	Price*	Contactor**	Price
<b>SVA-2040</b>	Main Input Power	230V 3-Phase	<b>HCTR4</b>	\$89.00	<b>SC-E02-xxx</b>	varies
<b>SVA-2100</b>			<b>HCTR7-5</b>	\$102.00	<b>SC-E03-xxx</b>	varies
<b>SVA-2300</b>			<b>HCTR15</b>	\$83.00	<b>SC-E04-xxx</b>	varies
<b>SVA-2040</b>	Control Input Power	230V 1-phase	<b>HCTR4</b>	\$89.00	<b>SC-E02-xxx</b>	varies
<b>SVA-2100</b>			<b>HCTR10</b>	\$90.00	<b>SC-E03-xxx</b>	varies
<b>SVA-2040</b> <b>SVA-2100</b> <b>SVA-2300</b>	Control Input Power	230V 1-phase	<b>HCTR2-5</b>	\$93.00		

\* Fuses are sold in packages of 10.  
 \*\* Note: For contactors, xxx = coil voltage (for example, SC-E02-220VAC).



**Fuji Contactor SC-E02-xxx**



**Edison Fuse HCTRx**

# **ZIPLINK** Wiring Solutions

## Wiring Solutions using the **ZIPLink** Wiring System

ZIPLinks eliminate the normally tedious process of wiring between devices by utilizing prewired cables and DIN rail mount connector modules. It's as simple as plugging in a cable connector at either end or terminating wires at only one end. Prewired cables keep installation clean and efficient, using half the space at a fraction of the cost of standard terminal blocks. There are several wiring solutions available when using the ZIPLink System ranging from PLC I/O-to-ZIPLink Connector Modules that are ready for field termination, options for connecting to third party devices, GS, DuraPulse and SureServo Drives, as well as special relay, transorb and communications modules. Pre-printed I/O-specific adhesive label strips for quick marking of ZIPLink modules are provided with ZIPLink cables. See the following solutions to help determine the best ZIPLink system for your application.

### Solution 1: Do-more, *Direct*LOGIC, CLICK and Productivity Series I/O Modules to ZIPLink Connector Modules

When looking for quick and easy I/O-to-field termination, a ZIPLink connector module used in conjunction with a prewired ZIPLink cable, consisting of an I/O terminal block at one end and a multi-pin connector at the other end, is the best solution.



Using the PLC I/O Modules to ZIPLink Connector Modules selector tables located in this section,

1. Locate your I/O module/PLC
2. Select a ZIPLink Module
3. Select a corresponding ZIPLink Cable.

### Solution 2: Do-more, *Direct*LOGIC, CLICK and Productivity Series I/O Modules to 3rd Party Devices

When wanting to connect I/O to another device within proximity of the I/O modules, no extra terminal blocks are necessary when using the ZIPLink Pigtail Cables. ZIPLink Pigtail Cables are prewired to an I/O terminal block with color-coded pigtail with soldered-tip wires on the other end.



Using the I/O Modules to 3rd Party Devices selector tables located in this section,

1. Locate your PLC I/O module
2. Select a ZIPLink Pigtail Cable that is compatible with your 3rd party device.

### Solution 3: GS Series and DuraPulse Drives Communication Cables

Need to communicate via Modbus RTU to a drive or a network of drives?

ZIPLink cables are available in a wide range of configurations for connecting to PLCs and SureServo, SureStep, Stellar Soft Starter and AC drives. Add a ZIPLink communications module to quickly and easily set up a multi-device network.

Using the Drives Communication selector tables located in this section,

1. Locate your Drive and type of communications
2. Select a ZIPLink cable and other associated hardware.



# **ZIP**LINK<sup>™</sup> Wiring Solutions AUTOMATIONDIRECT

## **Solution 4: Serial Communications Cables**

ZIPLink offers communications cables for use with DirectLOGIC, CLICK, and Productivity CPUs, that can also be used with other communications devices. Connections include a 6-pin RJ12 or 9-pin, 15-pin and 25-pin D-sub connectors which can be used in conjunction with the RJ12 or D-Sub feedthrough modules.

Using the Serial Communications Cables selector table located in this section,

1. Locate your connector type
2. Select a cable.



## **Solution 5: Specialty ZIPLink Modules**

For additional application solutions, ZIPLink modules are available in a variety of configurations including stand-alone relays, 24VDC and 120VAC transorb modules, D-sub and RJ12 feedthrough modules, communication port adapter and distribution modules, and SureServo 50-pin I/O interface connection.

Using the ZIPLink Specialty Modules selector table located in this section,

1. Locate the type of application
2. Select a ZIPLink module.



## **Solution 6: ZIPLink Connector Modules to 3rd Party Devices**

If you need a way to connect your device to terminal blocks without all that wiring time, then our pigtail cables with color-coded soldered-tip wires are a good solution. Used in conjunction with any compatible ZIPLink Connector Modules, a pigtail cable keeps wiring clean and easy and reduces troubleshooting time.

Using the Universal Connector Modules and Pigtail Cables table located in this section,

1. Select module type
2. Select the number of pins
3. Select cable.





# CPU I/O Modules to ZIPLink Connector Modules - Productivity2000



**NOTE:** IN EACH TABLE BELOW SELECT THE LENGTH OF CABLE AS FOLLOWS: (BLANK) = 0.5 M, -1 = 1.0 M, -2 = 2.0 M.

Productivity2000 Analog Input Module ZIPLink Selector				
I/O Module	ZIPLink			
Analog Module	# of Terms	Component	Part No.	Cable Part No.
P2-04AD	18	Feedthrough	ZL-RTB20 (-1)	ZL-P2-CBL18
P2-06AD-1				ZL-P2-CBL18-1
P2-06AD-2				ZL-P2-CBL18-2
P2-06ADL-1				
P2-06ADL-2				
P2-16AD-1	24			ZL-P2-CBL24
P2-16AD-2				ZL-P2-CBL24-1
P2-16ADL-1				ZL-P2-CBL24-2
P2-16ADL-2				
P2-06RTD	Matched Only		See Note 1	
P2-06THM	T/C Wire Only		See Note 1	
P2-06NTC	Copper Conductors		See Note 1	



† These modules are not supported by the ZIPLink wiring system.

Productivity2000 Analog Output Module ZIPLink Selector				
I/O Module	ZIPLink			
Analog Module	# of Terms	Component	Part No.	Cable Part No.
P2-04DA	18	Feedthrough	ZL-RTB20 (-1)	ZL-P2-CBL18
P2-04DAL-1				ZL-P2-CBL18-1
P2-04DAL-2				ZL-P2-CBL18-2
P2-06DA-1				
P2-06DA-2				
P2-06DAL-1	24			ZL-P2-CBL24
P2-06DAL-2				ZL-P2-CBL24-1
P2-16DA-1				ZL-P2-CBL24-2
P2-16DA-2				
P2-8AD4DA-1	18			ZL-P2-CBL18
P2-8AD4DA-2				ZL-P2-CBL18-1
				ZL-P2-CBL18-2



**NOTE:** ZIPLINK CONNECTOR MODULES SPECIFICATIONS FOLLOW THE COMPATIBILITY MATRIX TABLES. ZIPLINK CABLES SPECIFICATIONS ARE AT THE END OF THIS ZIPLINK SECTION.