

Allen Bradley 1394 Digital Servo Control

Automation Repair and Sales

Electronics
Robotics
Servo motors
Spindle Motors
CNC
HMI / Displays
Operator Stations
Monitors
PLCs
Light Curtains
Inverter Drives
AC/DC Drives
Welders
Process Controls

Capabilities Include:

Main Controllers

1394-SJT05-A/C/T-XX
1394-SJT10-A/C/T-XX
1394-SJT22-A/C/T-XX
1394C-SJT05-A/C/T-XX
1394C-SJT10-A/C/T-XX
1394C-SJT22-A/C/T-XX

Axis Modules

1394 AM-XX
1394C AM-XX

AC Servo Motors

1326AS-XXXX
1326AB-XXXX

Below is Northline Industrial's 1394 Digital AC Servo System. This diagnostic system is comprised of the main system module, four axis amplifier modules (each with associated servo motors), and all necessary power and feed back cables. This 1394 test fixture allows dynamic testing of both the GML digital and digital Turbo system modules, as well as the analog types. Please contact Northline for all of your Allen Bradley 1394 repair needs.



*Contact your Northline sales representative for all
of your repair needs.*

Allen Bradley MP Series Servo Test System

Automation Repair and Sales

Electronics
Robotics
Servo motors
Spindle Motors
CNC
HMI / Displays
Operator Stations
Monitors
PLCs
Light Curtains
Inverter Drives
AC/DC Drives
Welders
Process Controls

Allen Bradley MP Series servo motors are a premium permanent magnet Rotary Servo Motor with a high resolution encoder and optional brake. These compact brushless servo motors are installed in many automated applications demanding high performance motion systems.

This series of servo motors is typically used with the Allen-Bradley Kinetix® 6000, Kinetix 6200, Kinetix 6500, Kinetix 300, Kinetix 350 as well as the Ultra 3000 servo drive families.

Northline has developed dynamic testing for the MP, MPL and MPF Allen Bradley Series Servo Motors. This is a powered dynamic test that includes confirmation of the encoder alignment and torque / speed viability. We also perform thermal or vibration analysis testing upon request. Northline is able to support repair and testing of all sizes within this Allen Bradley MP series.

Capabilities Include:

MPL-AXXX
MPL-BXXX
MPF-BXXX
MPM-BXXX



Contact your Northline sales representative for all of your AB MP Series servo motor repair needs.

Fanuc Powermate D

Automation Repair and Sales

Electronics
 Robotics
 Servo motors
 Spindle Motors
 CNC
 HMI / Displays
 Operator Stations
 Monitors
 PLCs
 Light Curtains
 Inverter Drives
 AC/DC Drives
 Welders
 Process Controls

Capabilities Include:

A06B-6057	A06B-6085
A06B-6058	A06B-6087
A06B-6066	A06B-6088
A06B-6077	A06B-6089
A06B-6078	A06B-6090
A06B-6079	A06B-6091
A06B-6080	A06B-6092
A06B-6081	A06B-6093
A06B-6082	A06B-6098
A06B-6083	A06B-6102

This is Northline Industrials “Fanuc Powermate D Control System”. It was designed to be used as a CNC control for multiple series of Fanuc servo drive systems with either the “Type A” or “Type B” PWM signal control interfaces. Legacy drives as old as the A06B-6057 “L Series” types and newer types such as the A06B-6093 “Beta” servo drives can all be tested with this newly developed Fanuc NC control system. In addition, this system can control either the 200V standard or 400V HV types of devices.



Contact your Northline sales representative for all of your Fanuc Powermate D repair needs.

Fanuc Powermate CNC

Automation Repair and Sales

Electronics
Robotics
Servo motors
Spindle Motors
CNC
HMI / Displays
Operator Stations
Monitors
PLCs
Light Curtains
Inverter Drives
AC/DC Drives
Welders
Process Controls

Capabilities Include:

A06B-6057	A06B-6096
A06B-6058	A06B-6097
A06B-6066	A06B-6098
A06B-6077	A06B-6102
A06B-6078	A06B-6110
A06B-6079	A06B-6111
A06B-6080	A06B-6114
A06B-6081	A06B-6117
A06B-6082	A06B-6120
A06B-6083	A06B-6121
A06B-6085	A06B-6124
A06B-6087	A06B-6127
A06B-6088	A06B-6140
A06B-6089	A06B-6141
A06B-6090	A06B-6150
A06B-6091	A06B-6151
A06B-6092	
A06B-6093	

Northline Industrial introduces repair and testing capabilities on our uniquely designed Fanuc Powermate Series test station. This extremely flexible test system has the ability to dynamically test almost all of the Fanuc A06B family of power supplies, spindle and servo amplifiers including Fanuc's fiber-optic controlled equipment. This encompasses hundreds of model numbers and allows for full load, closed-loop simulation of factory conditions. Please contact us if you have questions about our testing procedures or the types of equipment we can repair for you.



Contact your Northline sales representative for all of your Fanuc Powermate CNC repair needs.

Fanuc Powermate D System

Automation Repair and Sales

Electronics
 Robotics
 Servo motors
 Spindle Motors
 CNC
 HMI / Displays
 Operator Stations
 Monitors
 PLCs
 Light Curtains
 Inverter Drives
 AC/DC Drives
 Welders
 Process Controls

Capabilities Include:

Fanuc 200V Amplifiers

A06B-6057-HXXX
 A06B-6058-HXXX
 A06B-6066-HXXX
 A06B-6079-HXXX
 A06B-6080-HXXX
 A06B-6089-HXXX
 A06B-6090-HXXX
 A06B-6093-HXXX

This is Northline Industrials new “Fanuc Powermate D Servo System” built for our North Carolina Repair lab. It was designed to be used as a CNC control system for dynamically testing multiple series of Fanuc servo amplifiers with either the “Type A” or “Type B” PWM signal control interfaces. This system covers the Fanuc 200V Series of drive models listed below. Please contact Northline for all your Fanuc servo amplifier repair needs.



Contact your Northline sales representative for all of your Fanuc Powermate D repair needs.

Fanuc Powermate Di

Automation Repair and Sales

Electronics
Robotics
Servo motors
Spindle Motors
CNC
HMI / Displays
Operator Stations
Monitors
PLCs
Light Curtains
Inverter Drives
AC/DC Drives
Welders
Process Controls

Capabilities Include:

A06B-6077
A06B-6078
A06B-6081
A06B-6082
A06B-6083
A06B-6087
A06B-6088
A06B-6091
A06B-6092
A06B-6093
A06B-6096
A06B-6097
A06B-6098
A06B-6102

This is Northline Industrials “Fanuc Powermate Di Control System”. It was designed to be used as a CNC control for multiple series of Fanuc servo drive systems with the Fanuc fiber optic “FSSB” servo control interface. This system can control the older Alpha “6096” series of FSSB servo drives as well as the new Alpha i Series. In addition, this new Fanuc Alpha i control system is equipped with an integrated AC serial spindle control. Either serial or fiber optic spindles can be fully tested with this system. As always, this system can control either the 200V standard or 400V HV types of devices.



Contact your Northline sales representative for all of your Fanuc Powermate Di repair needs.

Fanuc 30i-B CNC AC Servo System

Automation Repair and Sales

Electronics
Robotics
Servo motors
Spindle Motors
CNC
HMI / Displays
Operator Stations
Monitors
PLCs
Light Curtains
Inverter Drives
AC/DC Drives
Welders
Process Controls

Capabilities Include:

A06B-6200-HXXX (PS)
Power Supply Module

A06B-6202-HXXX (PS)
Level Up Power Supply

A06B-6240-HXXX (SV)
Servo Amplifier

A06B-6220-HXXX (SP)
Spindle Amplifier

A06B-6222-HXXX (SP)
Level Up Spindle

Northline is first as always with the latest Fanuc CNC repair capability. The Fanuc 30i-B Servo system offers a totally integrated range of drives and motors. Simple maintenance, high quality, compact design and exceptional performance are key factors inherent in their design. High efficiency drive components, power source regeneration and cycle time reduction features combine to reduce energy usage by as much as 30% to 50%. Northline can repair and test your 30iB Equipment!



Contact your Northline sales representative for all of your Fanuc 30i-B Servo repair needs.

Yaskawa Sigma Series

Automation Repair and Sales

Electronics
Robotics
Servo motors
Spindle Motors
CNC
HMI / Displays
Operator Stations
Monitors
PLCs
Light Curtains
Inverter Drives
AC/DC Drives
Welders
Process Controls

Below is Northline Industrial's newest repair capability, the Yaskawa Sigma Series diagnostic test system. This test system was designed with a modular support concept that allows for quick and efficient set up. The Yaskawa SigmaWin + software allows for thorough analysis of the drives operational functions. This extremely flexible system allows for multiple support voltages encompassed within the Sigma I, II, III & V series and provides a dynamic system test of the amplifiers. Contact Northline Industrial for all of your Yaskawa repair needs.



Capabilities Include:

Sigma I: SGDA and SGDB

Sigma II: SGDH and SGDM

Sigma III: SGDS

Sigma V: SGDV

Contact your Northline sales representative for all of
your Yaskawa Sigma Series repair needs.



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Informational Bulletin

www.northlineindustrial.com

Display Repair

Automation Repair and Sales

Electronics
Robotics
Servo motors
Spindle Motors
CNC
HMI / Displays
Operator Stations
Monitors
PLCs
Light Curtains
Inverter Drives
AC/DC Drives
Welders
Process Controls

Capabilities Include:

CRT
LCD
Plasma
Touch Screens
Backlight
Inverter
Powersupply



BEFORE

Failing dimly lit display



AFTER

Bright Display with Warranty

Manufacturers Supported:

ABB
Advantage Electronics
Allen Bradley
Automation Direct
Buehler
Cincinnati Milacron
Modicon
Cutler Hammer
GE Fanuc
KME
Kristel
Mass Multimedia
Motorola
Nortech Engineering

ProFace
Proto Trak
Samsung
Siemens
Selti Elettronica
Sharp
Star
TCP Total Control Products
Tecnel
Toshiba
Totoku Electric Co.
Wells- Gardner Electric
Excel



Contact your Northline sales representative for all of your display repair needs.

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[Remanufactured Spares on Ebay](#)



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Informational Bulletin

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Display Repair

Automation Repair and Sales

Electronics
Robotics
Servo motors
Spindle Motors
CNC
HMI / Displays
Operator Stations
Monitors
PLCs
Light Curtains
Inverter Drives
AC/DC Drives
Welders
Process Controls

Capabilities Include:

CRT-to-LCD Retrofit
LCD Integration
Slow-Scan
Auto-Sync

Northline has the repair and test capabilities on the following Manufactures and Series:



ABB
Advantage Electronics
Allen Bradley
Automation Direct
Buehler
Cincinnati Milacron
Modicon
Cutler Hammer
GE Fanuc
KME
Kristel
Mass Multimedia
Motorola
Nortech Engineering

ProFace
Proto Trak
Samsung
Siemens
Selti Elettronica
Sharp
Star
TCP Total Control Products
Tecnel
Toshiba
Totoku Electric Co.
Wells- Gardner Electric
Excel



Contact your Northline sales representative for all of your Display Repair needs.

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[Remanufactured Spares on Ebay](#)

Yaskawa Sigma II Servo Motor Repair (200V Class)

Automation Repair and Sales

Electronics
Robotics
Servo motors
Spindle Motors
CNC
HMI / Displays
Operator Stations
Monitors
PLCs
Light Curtains
Inverter Drives
AC/DC Drives
Welders
Process Controls

Capabilities Include:

SGMAH

SGMPH

SGMGH

SGMSH

SGMUH

SGMBH

Below is Northline Industrial's newest repair capability, the Yaskawa Sigma II series test system. It was designed to dynamically test various Sigma II associated AC servo motors. There are many Yaskawa servo motor types that can be tested with this system including: SGMAH, SGMPH, SGMGH, SGMSH, SHMUH & SGMBH types of servo motors.



Contact your Northline sales representative for all of your Yaskawa servo motor repair needs.

Yaskawa Sigma V Series AC Servo Motors

Automation Repair and Sales

Electronics
Robotics
Servo motors
Spindle Motors
CNC
HMI / Displays
Operator Stations
Monitors
PLCs
Light Curtains
Inverter Drives
AC/DC Drives
Welders
Process Controls

Capabilities Include:

Rotary

SGMMV
SGMJV
SGMAV
SGMGV
SGMSV

Direct

SGMCS

Linear

SGLGW
SGLFW
SGLTW

These are the **Yaskawa Sigma V** series or AC servo motors. They are the latest generation of Yaskawa Sigma series motion control automation. The Sigma V series has far more options and features than previous versions of Sigma products. Contact Northline Industrial for all of your Sigma V servo motor repair needs.



Contact your Northline sales representative for all
of your repair needs.

Yaskawa Sigma V AC Servo Amplifiers

Automation Repair and Sales

Electronics
Robotics
Servo motors
Spindle Motors
CNC
HMI / Displays
Operator Stations
Monitors
PLCs
Light Curtains
Inverter Drives
AC/DC Drives
Welders
Process Controls

Capabilities Include:

200V Types

SGDV-R70
SGDV-R90
SGDV-1R6
SGDV-2R8
SGDV-3R8
SGDV-5R5
SGDV-7R6
SGDV-120
SGDV-180
SGDV-200
SGDV-330
SGDV-470
SGDV-550
SGDV-590
SGDV-780

This is the **Yaskawa Sigma V** AC 200V servo system. It is the latest version of the Yaskawa Sigma Series of motion control servo motors and amplifiers. Many of the Yaskawa Sigma series are backwards compatible thusly allowing upgrades from previous versions of the Sigma series a snap! The Yaskawa Sigma V series offers more features and options than previous Sigma series versions.



Contact your Northline sales representative for all
of your repair needs.

Mitsubishi CNC Diagnostic Test System

Automation Repair and Sales

Electronics
Robotics
Servo motors
Spindle Motors
CNC
HMI / Displays
Operator Stations
Monitors
PLCs
Light Curtains
Inverter Drives
AC/DC Drives
Welders
Process Controls

Capabilities Include:

MDS-B-CV-XXX
MDS-B-CVE-XXX
MDS-B-V1-XX
MDS-B-V2-XXXX
MDS-B-SP-XXX
MDS-C1-CV-XXX
MDS-C1-V1-XX
MDS-C1-V2-XXXX
MDS-C1-SP-XXX
Currently setting up
for the:
MDS-CH-V1-XX
MDS-CH-V2-XXXX

The Mitsubishi MDS (Servo/Spindle) drive units are widely used in the machine tool industry. In response to the increased need for a quality repair source, Northline has developed the Mitsubishi MDS 200V Series/C64 CNC Diagnostic Test System. This system allows us to dynamically test Mitsubishi servo, spindle, and power supply units. It's design allows for quick parts substitutions and full functional-testing as a definitive check of a quality repair.



*Contact your Northline sales representative for all
of your repair needs.*



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Test Fixture Bulletin

www.northlineindustrial.com

Mitsubishi MDS-CH 400V Servo Diagnostic Test System

Automation Repair and Sales

Electronics
Robotics
Servo motors
Spindle Motors
CNC
HMI / Displays
Operator Stations
Monitors
PLCs
Light Curtains
Inverter Drives
AC/DC Drives
Welders
Process Controls

Capabilities Include:

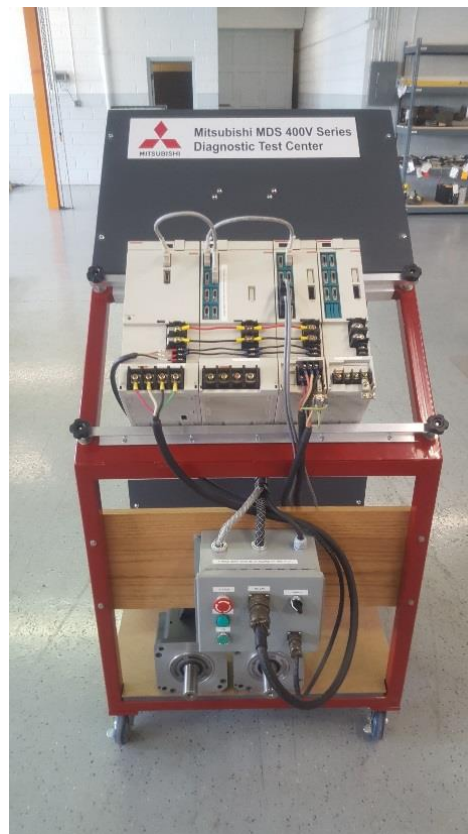
MDS-CH-V1-XX Single Axis
Servo Amplifier Module

MDS-CH-V2-XX/XX Dual
Axis Servo Amplifier Module

MDS-CH-CV-XXX Power
Supply Module

***MDS-CH-SP(H)-XXX**
Spindle Amplifier Module
(Limited Testing Capability)

The Mitsubishi MDS (Servo/Spindle) drive series are widely used in the machine tool industry. In response to the increased need for a quality repair source, Northline has developed the Mitsubishi MDS-CH 400V Series / C64 CNC Diagnostic Test System. This system allows us to dynamically test Mitsubishi MDS-CH 400V servo, spindle and power supply units. It's design allows for quick parts substitutions as well as full functional-testing for a definitive check of a quality repair.



Contact your Northline sales representative for all of your Mitsubishi repair needs.

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Test Fixture Bulletin

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Mitsubishi MR-HXXX-AN Series AC Servo Amplifiers

Automation Repair and Sales

Electronics
Robotics
Servo motors
Spindle Motors
CNC
HMI / Displays
Operator Stations
Monitors
PLCs
Light Curtains
Inverter Drives
AC/DC Drives
Welders
Process Controls

Capabilities Include:

MR-HXXX-AN

Northline Industrial is pleased to announce the repair capability for the Mitsubishi MR-HXXX-AN servo amplifiers. The MR-H's servo settling time has been sharply reduced when compared to conventional servo systems. The ability of the MR-H to respond quickly and precisely to a reference change is due to the high-performance. The MR-H has the most stable performance at low speed in its class of devices. This is made possible through the application of a high-resolution serial encoder and the model-reference adaptive control theory. This low speed performance makes the MR-H well suited for low speed machining operations.

MELSERVO-H



Contact your Northline sales representative for all of your Mitsubishi servo amplifier repair needs.

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Test Fixture Bulletin

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Mitsubishi Melservo MR-J2S-A Series

Automation Repair and Sales

Electronics
Robotics
Servo motors
Spindle Motors
CNC
HMI / Displays
Operator Stations
Monitors
PLCs
Light Curtains
Inverter Drives
AC/DC Drives
Welders
Process Controls

The Mitsubishi Melservo MR-J2S Super Series is a legacy AC servo amplifier and rotatory servo motor system that is advanced and flexible. Northline now offers repair on these MR-J2S servo amplifiers that helps avoid retrofitting and upgrades that are expensive and also create unwanted production downtime. In response to a need for a quality repair source, Northline has engineered a dynamic and full functional testing system as a definitive check of a quality repair. Call Northline if you need repair support on the Mitsubishi Melservo MR-J2S series.

Capabilities Include:

MR-J2S-XXXX
Melservo Amplifier Series

HC-SFSXXXX
AC Servo Motor



*Contact your Northline sales representative for all
of your repair needs.*

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Precision Spindle Repair

Automation Repair and Sales

Electronics
Robotics
Servo motors
Spindle Motors
CNC
HMI / Displays
Operator Stations
Monitors
PLCs
Light Curtains
Inverter Drives
AC/DC Drives
Welders
Process Controls

Capabilities Include:

Blanchard	Kingsbury
Browne &	Landis
Sharpe	Makino
Bryant	Mori-Seiki
Chiron	Pratt &
Cincinnati	Whitney
Doall	Parker
Dumore	Majestic
Excel	Pope
Excello	Precise
Fanuc	Rigid
Franz Kessler	Rockwell
GMN	Setco
Gros-ite	Taft Pierce
Heald	Voumard
Ingersoll	

Belt Driven



Lathe



Boring



Motorized



Gear Driven



High Speed



Block Type



Grinding



Milling



Machine Tool



Northline is proud to offer repair of your of precision, high speed, high frequency, and belt driven spindles-serving the automotive, machine tool, and aerospace industries. Northline can improve your capabilities and productivity and lower your maintenance costs. Skilled technicians will provide quality repairs promptly and accurately with complete diagnostic documentation.



- In-depth Inspection/analysis
- Written Repair Quotes
- Obsolete Parts Manufactured
- Precision Surface Grinding
- Worn component replacement
- Vibration Analysis
- Comprehensive Final Analysis
- Vibration Spectrum Reporting
- SKF Certified Technicians
- Routine & Emergency rebuilds
- Custom Modifications
- Fast Turnaround , Guaranteed Quality

Contact your Northline sales representative for all of your Spindle repair needs.



NORTHLINE
INDUSTRIAL

Test Fixture Bulletin

www.northlineindustrial.com

Servo Motor Testing

Automation Repair and Sales

Electronics
Robotics
Servo motors
Spindle Motors
CNC
HMI / Displays
Operator Stations
Monitors
PLCs
Light Curtains
Inverter Drives
AC/DC Drives
Welders
Process Controls

Capabilities Include:

Surge Testing
DC Hipot
Meg-OHM
Voltage & Current leak Measurement
Feed Back Alignment
Increment encoders
Serial Encoders
Resolver Feedback

In an evolving effort to improve quality and reliability of our repairs, Northline Industrial has added 2 test systems to our arsenal.

The Mitchell TI-3000 is an industry standard for run testing servo feedback motors. This system allow run testing of multiple manufacturers on a common drive system using a patented Commutation Converter technology. Used to confirm alignment and feedback confirmation with a dynamic test.

The Baker Instrument Company ST106E is a Surge and DC Hipot tester in one. As a test to measure voltage and current leak, this unit allow us to test integrity of AC Stators, DC field coils, DC armatures, Synchronous motors, generators as well as a myriad of coils and Motor windings. Used before and after repair as predictive maintenance tool.



Contact your Northline sales representative for all of
your Servo Motor Repair needs.

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Automation Repair and Sales

Electronics
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Spindle Motors
CNC
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Monitors
PLCs
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Inverter Drives
AC/DC Drives
Welders
Process Controls

Capabilities Include:

- AC Servo Motors
- Brushless DC Servomotors
- AC Spindle Motors
- Induction Motors
- DC Motors
- Robotic Wrists

Encoder repair
Encoder replacement
Encoder Alignment

Windings Clean/Bake
Rewind
Remagnetization of Magnets

Machining
Contaminant Sealing

An experienced technician is assigned the responsibility of servicing your repair; they will perform a number of computer, mechanical as well as technical base steps. Each repair goes through a systematic process: disassembling, cleaning, evaluating, assembling, aligning/synchronizing & testing. Once the technician has completed the repair, it is sent to quality control (QC) for final inspection and testing. A summarized report accompanies each job & outlines the initial test results at incoming, replacement & repair of defective components, cause of failure, bench & system test results. Common Manufacturers Supported:

- Allen Bradley
- ABB
- AEG
- Baumuller
- Bautz
- Cincinnati Milacron
- Elmo
- Emerson
- Fanuc
- Fuji
- Gettys
- Gould
- Giddings & Lewis
- Giddings & Lewis
- Indramat
- Industrial Drive
- Kollmorgen
- Lenze
- Mitsubishi
- Moog
- MTS
- Pacific Scientific
- Panasonic
- Parker
- Siemens
- Yaskawa
- Whedco

Contact your Northline sales representative for all of your Servo Motor Repair needs.

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Servo Motor Repair

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Electronics

Robotics

Servo motors

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Process Controls

Capabilities Include:

- AC Servo Motors
- Brushless DC Servomotors
- AC Spindle Motors
- Induction Motors
- DC Motors
- Robotic Wrists

ABB • Elmo

3HAB
3HAC
8C Series
PS Series

AEG

120 Series
R Series
S Series

Allen Bradley Reliance

1326AB
1326AD
1326AS
1326DP
F Series
H Series
LD Series
N Series

Baldor

BSM,M

Elwood Getty's • Gould

120 Series
R Series
Alpha αís
Alpha α(HV)í
Alpha α(HV)ís

GE Fanuc

Alpha α
Alpha αí
Alpha αís
Alpha α(HV)í
Alpha α(HV)ís
Alpha αM, B, βí, βís
MTR-3S
MTR-3T
S Series
SL Series
Spindle
α Spindle
H Series
SW Series

Giddings & Lewis

FSM Series
HSM Series
NSM Series
YSM Series

Giddings & Lewis

FSM Series
HSM Series
NSM Series
YSM Series

Indramat • Rexroth

MAC Series
MDD Series
MHD Series
MKD Series

Industrial Drive • Inland

B Series
TT Series
TTBL Series

Ingersoll Rand

E-2630 "R"
E-3340 "U"

Kollmorgen Goldline

AKM Series
B Series
BH Series
M Series
MH Series

Lenze

MCA Series
MCS Series
MDFKS Series
MDSKS Series
MDFQA Series

Modicon

120 Series
Cyberline R Series
Cyberline S Series

Sew Eurodrive

F Series
K Series
R Series
S Series

Siemens

1FK6 Series
1FK7 Series

Contact your Northline sales representative for all of your Servo Motor Repair needs.

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Siemens 611 AC Servo Control System

Automation Repair and Sales

Electronics
Robotics
Servo motors
Spindle Motors
CNC
HMI / Displays
Operator Stations
Monitors
PLCs
Light Curtains
Inverter Drives
AC/DC Drives
Welders
Process Controls

Capabilities Include:

Infeed Power Module
6SN1145 (Entire Series)

Power Amplifier Module
6SN1123(Entire Series)

Control Card Modules
6SN1118 (Analog and
Universal Series OD and
OG series)

This is Northline Industrial's Siemens 611 AC Servo Control System. This system was designed to provide all the necessary life support for larger Siemens 6SN1145 and 6SN1123 infeed and power modules. The test station utilizes an integral "Siemens 611 Universal" control card that is capable of controlling up to two servos, spindle or induction axis. All facets of the 611 Universal card can be properly tested. There are dozens of 6SN1118 control cards for the 611 series and Northline is continually adding more cards to our dynamic testing capabilities. This system is used in conjunction with Northline's "Dynamic Load System" in order to ensure a quality repair every time. Please contact us if you have questions about our testing procedures or the types of equipment we can repair for you.



*Contact your Northline sales representative for all
of your Siemens 611 repair needs.*



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Test Fixture Bulletin

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Siemens Drive-CliQ Servo Motors

Automation Repair and Sales

Electronics
Robotics
Servo motors
Spindle Motors
CNC
HMI / Displays
Operator Stations
Monitors
PLCs
Light Curtains
Inverter Drives
AC/DC Drives
Welders
Process Controls

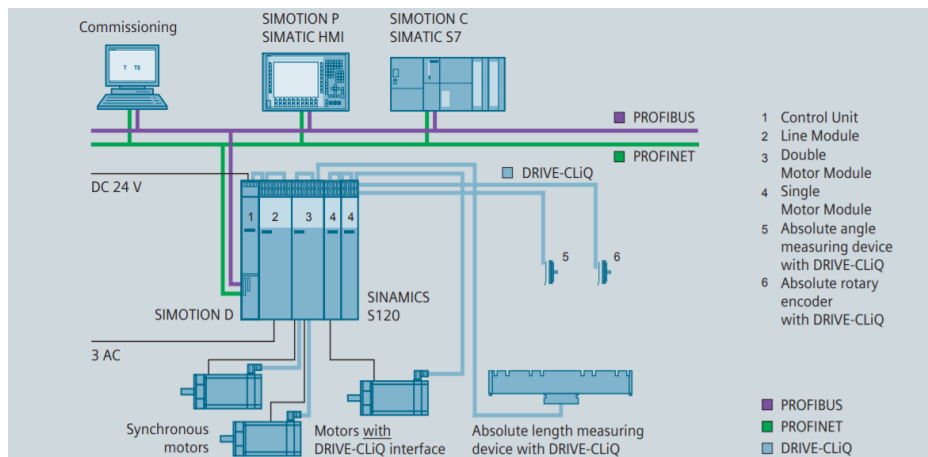
Capabilities Include:

Motors used on:
SINAMICS S120 Drive System

Paul - Do you know a few
Motor Part#'s that have this
Drive CLIQ?

DRIVE-CLiQ is an open encoder interface. This enables users to select the measuring system that is perfectly tailored to their application. Encoders that use new measuring techniques (such as magnetic / inductive systems, magnetostrictive sensors, lasers) can also be connected through DRIVE-CLiQ. DRIVE CLiQ motors and encoders information is automatically programed into the drive.

Northline has invested in the hardware needed to perform a full system test of Siemens Drive-CliQ Motor and Interface. Choose Northline for your quality repair partner.



Contact your Northline sales representative for all
of your servo motor repair needs.

Northline Industrial, Inc.
12238 Woodbine
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Siemens PM240 Power Modules Test Rig

Automation Repair and Sales

Electronics
Robotics
Servo motors
Spindle Motors
CNC
HMI / Displays
Operator Stations
Monitors
PLCs
Light Curtains
Inverter Drives
AC/DC Drives
Welders
Process Controls

Capabilities Include:

Control Units

CU230P-2
CU240B-2
CU240E
CU240E-2
CU240S
CU250S-2

Inverters

FSA
FSB
FSC
FSD
FSE
FSF
FSGX

This is Northline Industrial's Siemens PM240 Power Module Test Rig. The PM240 Power Modules belong to the modular family of SINAMICS G120 inverters. A modular inverter is comprised of a Control Unit and Power Module. The PM240 Power Modules are designed for line voltages of 3 AC 380 V- 480 V. (This PM module is used to Test the inverter(What Type) and Control Units?) Please contact us if you have questions about our testing procedures or the types of equipment we can repair for you.



Contact your Northline sales representative for all of your Siemens PM240 repair needs.

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Siemens Sinamics S120 AC Servo System

Automation Repair and Sales

Electronics
Robotics
Servo motors
Spindle Motors
CNC
HMI / Displays
Operator Stations
Monitors
PLCs
Light Curtains
Inverter Drives
AC/DC Drives
Welders
Process Controls

Capabilities Include:

*See Page 2 for Complete Model Numbers

Power Supply Active Modules

Internal, External, Cold Plate, Liquid

Power Supply Smart Modules

Internal, External, Cold Plate

Power Supply Basic Modules

Internal, Cold Plate

Internal Cooled Motor Modules

Single/Dual Axis Motor Modules

External Cooled Motor Modules

Single/Dual Axis Motor Modules

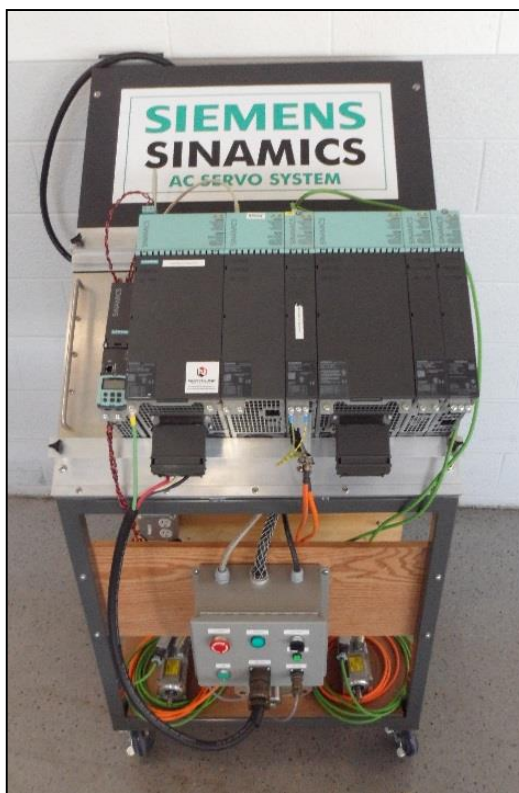
Cold Plate Cooled Motor Modules

Single/Dual Axis Motor Module

Liquid Cooled Motor Modules

Single Axis Motor Modules

This is Northline Industrial's Siemens Sinamics S120 AC Servo System. This system was designed to provide all the necessary life support for the Siemens Sinamics S120 high-performance booksize power supplies and motor modules. This test station utilizes a CU320-2 DP controller that is capable of controlling multiple servo, spindle or induction axis. All facets of the S120 can be properly tested. This system utilizes the Siemens "**Drive-Cliq**" communications format for system modules as well as servo and spindle axis feedback interconnection. Please contact us if you have any questions about the various types of Sinamics S120 equipment we can repair for you.



Contact your Northline sales representative for all of your Siemens Sinamics repair needs.

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Siemens Sinamics S120 AC Servo System

Automation Repair and Sales

Electronics
Robotics
Servo motors
Spindle Motors
CNC
HMI / Displays
Operator Stations
Monitors
PLCs
Light Curtains
Inverter Drives
AC/DC Drives
Welders
Process Controls

Capabilities Include:

Power Supply Active Modules
Internal, External, Cold Plate, Liquid

Power Supply Smart Modules
Internal, External, Cold Plate

Power Supply Basic Modules
Internal, Cold Plate

Internal Cooled Motor Modules
Single/Dual Axis Motor Modules

External Cooled Motor Modules
Single/Dual Axis Motor Modules

Cold Plate Cooled Motor Modules
Single/Dual Axis Motor Module

Liquid Cooled Motor Modules
Single Axis Motor Modules

Power Supply Active Modules

Internal Modules

6SL3130-7TE21-6AAX 16kW Active Module
6SL3130-7TE23-6AAX 36kW Active Module
6SL3130-7TE25-5AAX 55kW Active Module
6SL3130-7TE28-0AAX 80kW Active Module
6SL3130-7TE31-2AAX 120kW Active Module

External Modules

6SL3131-7TE21-6AAX 16kW Active Module
6SL3131-7TE23-6AAX 36kW Active Module
6SL3131-7TE25-5AAX 55kW Active Module
6SL3131-7TE28-0AAX 80kW Active Module
6SL3131-7TE31-2AAX 120kW Active Module

Cold Plate Modules

6SL3136-7TE21-6AAX 16kW Active Module
6SL3136-7TE23-6AAX 36kW Active Module
6SL3136-7TE25-5AAX 55kW Active Module
6SL3136-7TE28-0AAX 80kW Active Module
6SL3136-7TE31-2AAX 120kW Active Module

Liquid Modules

6SL3135-7TE31-2AA3 120kW Active Module

Power Supply Smart Modules

Internal Modules

6SL3130-6AE15-0AAX 5kW Smart Module
6SL3130-6AE21-0AAX 10kW Smart Module
6SL3130-6AE21-6AAX 16kW Smart Module
6SL3130-6AE23-6AAX 36kW Smart Module
6SL3130-6AE25-5AAX 55kW Smart Module

External Modules

6SL3131-6AE15-0AAX 5kW Smart Module
6SL3131-6AE21-0AAX 10kW Smart Module
6SL3131-6AE21-6AAX 16kW Smart Module
6SL3131-6AE23-6AAX 36kW Smart Module
6SL3131-6AE25-5AAX 55kW Smart Module

Cold Plate Modules

6SL3136-6AE15-0AAX 5kW Smart Module
6SL3136-6AE21-0AAX 10kW Smart Module

Power Supply Basic Modules

Internal Modules

6SL3130-1TE22-0AAX 20kW Basic Module
6SL3130-1TE24-0AAX 40kW Basic Module
6SL3130-1TE31-0AAX 100kW Basic Module

Cold Plate Modules

6SL3136-1TE22-0AAX 20kW Basic Module
6SL3136-1TE24-0AAX 40kW Basic Module
6SL3136-1TE31-0AAX 100kW Basic Module

Color Codes:



Ready to Repair/Test
May need Motor Supplied/Call
May need Setup and Motors/Call

Internal Cooled Motor Modules

Single Axis Motor Module

6SL3120-1TE13-0AAX 3A Single Motor Module
6SL3120-1TE15-0AAX 5A Single Motor Module
6SL3120-1TE21-0AAX 9A Single Motor Module
6SL3120-1TE21-08AX 18A Single Motor Module
6SL3120-1TE23-0AAX 30A Single Motor Module
6SL3120-1TE24-5AAX 45A Single Motor Module
6SL3120-1TE26-0AAX 60A Single Motor Module
6SL3120-1TE28-5AAX 85A Single Motor Module
6SL3120-1TE31-3AAX 132A Single Motor Module
6SL3120-1TE32-0AAX 200A Single Motor Module

Dual Axis Motor Module

6SL3120-2TE13-0AAX 3A/3A Dual Motor Module
6SL3120-2TE15-0AAX 5A/5A Dual Motor Module
6SL3120-2TE21-0AAX 9A/9A Dual Motor Module
6SL3120-2TE21-8AAX 18A/18A Dual Motor Module

External Cooled Motor Modules

Single Axis Motor Module

6SL3121-1TE13-0AAX 3A Single Motor Module
6SL3121-1TE15-0AAX 5A Single Motor Module
6SL3121-1TE21-0AAX 9A Single Motor Module
6SL3121-1TE21-08AX 18A Single Motor Module
6SL3121-1TE23-0AAX 30A Single Motor Module
6SL3121-1TE24-5AAX 45A Single Motor Module
6SL3121-1TE26-0AAX 60A Single Motor Module
6SL3121-1TE28-5AAX 85A Single Motor Module
6SL3121-1TE31-3AAX 132A Single Motor Module
6SL3121-1TE32-0AAX 200A Single Motor Module

Dual Axis Motor Module

6SL3121-2TE13-0AAX 3A/3A Dual Motor Module
6SL3121-2TE15-0AAX 5A/5A Dual Motor Module
6SL3121-2TE21-0AAX 9A/9A Dual Motor Module
6SL3121-2TE21-8AAX 18A/18A Dual Motor Module

Cold Plate Cooled Motor Modules

Single Axis Motor Module

6SL3126-1TE13-0AAX 3A Single Motor Module
6SL3126-1TE15-0AAX 5A Single Motor Module
6SL3126-1TE21-0AAX 9A Single Motor Module
6SL3126-1TE21-08AX 18A Single Motor Module
6SL3126-1TE23-0AAX 30A Single Motor Module
6SL3126-1TE24-5AAX 45A Single Motor Module
6SL3126-1TE26-0AAX 60A Single Motor Module
6SL3126-1TE28-5AAX 85A Single Motor Module
6SL3126-1TE31-3AAX 132A Single Motor Module
6SL3126-1TE32-0AAX 200A Single Motor Module

Dual Axis Motor Module

6SL3126-2TE13-0AAX 3A/3A Dual Motor Module
6SL3126-2TE15-0AAX 5A/5A Dual Motor Module
6SL3126-2TE21-0AAX 9A/9A Dual Motor Module
6SL3126-2TE21-8AAX 18A/18A Dual Motor Module

Liquid Cooled Motor Modules

Single Axis Motor Module

6SL3126-1TE32-0AA3 200A Single Motor Module

Contact your Northline sales representative for all of your Siemens Sinamics repair needs.

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Yaskawa Sigma II Servo Motor Repair (200V Class)

Automation Repair and Sales

Electronics
Robotics
Servo motors
Spindle Motors
CNC
HMI / Displays
Operator Stations
Monitors
PLCs
Light Curtains
Inverter Drives
AC/DC Drives
Welders
Process Controls

Capabilities Include:

Supported Servo Motors

SGMAH

SGMPH

SGMGH

SGMSH

SGMUH

SGMBH

Below is Northline Industrial's newest repair capability, the Yaskawa Sigma II series test system. It was designed to dynamically test various Sigma II associated AC servo motors. There are many Yaskawa servo motor types that can be tested with this system including SGMAH, SGMPH, SGMGH, SGMSH, SHMUH, and SGMBH types of servo motors.



Contact your Northline sales representative for all
of your Yaskawa servo motor repair needs.



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Yaskawa Sigma V Series AC Servo Motors

Automation Repair and Sales

Electronics
Robotics
Servo motors
Spindle Motors
CNC
HMI / Displays
Operator Stations
Monitors
PLCs
Light Curtains
Inverter Drives
AC/DC Drives
Welders
Process Controls

Capabilities Include:

Rotary

SGMMV
SGMJV
SGMAV
SGMGV
SGMSV

Direct

SGMCS

Linear

SGLGW
SGLFW
SGLTW

These are the **Yaskawa Sigma V** series or AC servo motors. They are the latest generation of Yaskawa Sigma series motion control automation. The Sigma V series has far more options and features than previous versions of Sigma products. Contact Northline Industrial for all of your Sigma V servo motor repair needs.



Contact your Northline sales representative for all of your repair needs.

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Test Fixture Bulletin

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Yaskawa Sigma V AC Servo Amplifiers

Automation Repair and Sales

Electronics
Robotics
Servo motors
Spindle Motors
CNC
HMI / Displays
Operator Stations
Monitors
PLCs
Light Curtains
Inverter Drives
AC/DC Drives
Welders
Process Controls

Capabilities Include:

200V Types

SGDV-R70
SGDV-R90
SGDV-1R6
SGDV-2R8
SGDV-3R8
SGDV-5R5
SGDV-7R6
SGDV-120
SGDV-180
SGDV-200
SGDV-330
SGDV-470
SGDV-550
SGDV-590
SGDV-780

This is the **Yaskawa Sigma V** AC 200V servo system. It is the latest version of the Yaskawa Sigma Series of motion control servo motors and amplifiers. Many of the Yaskawa Sigma series are backwards compatible thusly allowing upgrades from previous versions of the Sigma series a snap! The Yaskawa Sigma V series offers more features and options than previous Sigma series versions.



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of your repair needs.

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