The best partner at your production site in the USA

Mitsubishi Electric provides full support of your global business.
01 Reliable Support and Services

We support Japanese manufactures in the USA with our dependable service programs.

We support your production sites by our service network in the USA.

Sales and Support Bases in the USA

Sales Office / FA Center (Chicago)

MITSUBISHI ELECTRIC AUTOMATION, INC.
500 Corporate Woods Parkway, Vernon Hills, IL 60061, U.S.A
• TEL 1–847–478–2100(Main)
• FAX 1–847–478–2253
• Language Japanese/English/Spanish
• HP https://us.mitsubishielectric.com/fa/en
• Products PLC, HMI, SV, INV, RB, LVS, MC, CNC
• Service Area Americas except Brazil

FA Center: 1 (Chicago)
Sales Office: 9 (Chicago, Ohio(2), Michigan, Georgia, California(2), Texas, Ontario(Canada))
Service Area: 25
Distributors: 28, 47 bases
You can search for our authorized distributor depending on location & models on MITSUBISHI ELECTRIC AUTOMATION. INC’s website.

01 Reliable Support & Services

CALL CENTER

Customers can directly consult with our engineers in English.

We respond to your FA・CNC questions in the call center. Please feel free to contact us for local staffs.

■ Language        English
■ Time             Mon—Fri 8:00 AM—6:00 PM (CST)
■ TEL             +1-800-950-7781
■ Products         FA Products
                      PLC・HMI・Inverter・Servo・Robot・LVS
                      CNC
01 Reliable Support & Services

We offer quick repair service of FA・CNC products in the USA.

We repair more than 7,500 units annually.

We enhance our repair service system to provide speedy service in the USA.

FA・CNC products available for after-sales service

PLC, HMI, Servo (Amplifier/Motor), Inverter, Robot, Power Distribution Control Products (Breaker/Electromagnetic Switches), CNC, etc.
01 Reliable Support & Services

Reliable Repair Service System

Customers can check repair status on website.

01 Reliable Support & Services

Emergency shipment service

Even if Non-business hours and weekends, we will ship the FA・CNC products urgently. (Weekday: Mid-west area PM 6:00–)

<emergency telephone number> FA: +1-888-701-7999
CNC: +1-847-478-2504
01 Reliable Support & Services

Local Staff Training

We assist to improve technical skills of your local staff and engineers.

1. Training Classes

We hold training in USA. A variety of actual products is used to implement training sessions from basic operations to advanced programming in English.

Customers can reserve training class through our website.
# Reliable Support & Services

## Local Staff Training

### Training Class (e.g.)

<table>
<thead>
<tr>
<th>Product</th>
<th>Class</th>
<th>Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLC</td>
<td>iQ-R PLC</td>
<td>4 days</td>
</tr>
<tr>
<td></td>
<td>Q PLC</td>
<td>1-3 days</td>
</tr>
<tr>
<td>HMI</td>
<td>GOT</td>
<td>1-3 days</td>
</tr>
<tr>
<td>Inverter</td>
<td>Inverter</td>
<td>1-5 days</td>
</tr>
<tr>
<td>Positioning</td>
<td>Positioning</td>
<td>1-2 days</td>
</tr>
<tr>
<td>Motion</td>
<td>Motion</td>
<td>4 days</td>
</tr>
<tr>
<td></td>
<td>Simple motion(J3/J4)</td>
<td>1 day</td>
</tr>
<tr>
<td>Robot</td>
<td>Robot</td>
<td>1-3 days</td>
</tr>
<tr>
<td>CNC</td>
<td>NC</td>
<td>1-3 days</td>
</tr>
</tbody>
</table>

### Reservation screen (e.g.)

#### Training Calendar

- **February 2/28/2017 - 3/2/2017**
  - **Time**: 8:30 AM - 4:30 PM Eastern Time (US & Canada)
  - **Location**: Gibson Engineering Norwood, MA
  - **Upcoming Event**: GOT2000 & GT Works3
  - **Spaces Remaining**: 3

- **March 3/1/2017 - 3/3/2017**
  - **Time**: 8:30 AM - 4:30 PM Eastern Time (US & Canada)
  - **Location**: Allied Automation Indianapolis, IN
  - **Upcoming Event**: PLC Basics (GX Works2)
  - **Event is Full Accepting Wait List Registrations**
  - **Join Wait List**

- **March 3/7/2017 - 3/9/2017**
  - **Time**: 8:30 AM - 5:00 PM Central Time (US & Canada)
  - **Location**: Mitsubishi Electric Vernon Hills, IL
  - **Upcoming Event**: CNC PLC Troubleshooting
  - **Spaces Remaining**: 8

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2. Customized training

We offer customized training and on-site tutoring upon request. After filling out your requested training program, place, date and the number of participants on the registration form in the website, MITSUBISHI ELECTRIC AUTOMATION. INC. will contact you.

Fill out
- Training program
- Place
- Date
- Number of participants etc.

01 Reliable Support & Services

FA Support & Service

Technical Help Desk also available in Japanese

Customers can freely consult with Mitsubishi Electric FA Centers about technical matters in English and in Japanese. Please feel free to contact us.

- Service Contents in FA Center
  - Technical Support (English/Japanese)
  - Repair
  - Local Staff Training
  - Field Survey
  - Show room

- Your Contacts

  • MITSUBISHI ELECTRIC AUTOMATION. INC.
    
    【FA Center】
    
    <Drive products>
    Kimura（Phone: 847-478-2334）
    <Controllers>
    Takeshita（Phone: 847-478-2469）
    （Email: MEAU-FACenter@meau.com）
    <English>
    +1-800-950-7781 Weekdays 8:00AM—6:00PM(CST)
01 Reliable Support & Services

CNC Support & Service

CNC Professional Support & Service
Service specialists provide support & service for CNC products installed in processing machine tools.

Before sales support (before installation)
- Technical consultation
- Training School
- Adjust the optimize product
- Improve processing precision

After sales support (after installation)
- On-site service, Maintenance parts sales, Repair, Additional option
- Technical support service phone/email (After-hours Tech support)
- Extended maintenance contract / preventive maintenance
- Retrofit / Replacement

Online Service
- Cloud CNC®, CloudRobot™ Data Back Up
- Online Parts Catalog

Your Contacts

MITSUBISHI ELECTRIC AUTOMATION, INC. Technical Service and Support Department
- Chicago Head Office (English) TEL: +1-847-478-2500 E-mail: service@meau.com
- Chicago Head Office (Japanese) TEL: +1-847-478-2243 E-mail: TID@meau.com
01 Reliable Support & Services

CNC Support & Service

NC / Machine tool spindles / Servo Tuning
According to requests, we maintenance
• Precision improvement
• Cycle time reduction
• Vibration during machining, Removing noise

Running the SMARTTEST Machines in the World

Retrofit / Replacement
Renewal case (Servo Amplifier)

MTConnect® Adapter
In CNC data collection ahead of the IoT era, please try to use our MTConnect® Adapter.

MTConnect® Adapter
MTConnect® allows CNC machines and other electrical equipment from different manufacturers to share a common “language.”
MTConnect® adapter is read-only and the open standard utilizes HTTP and XML standards

CloudCNC® & CloudRobot™ Data backup
In preparation for your emergency situation, we keep all backup data necessary for recovery in our server.
You can download data from web page 24 hours a day 365 days.

For CNC Support & Service details, please refer to the URL link below.
https://us.mitsubishielectric.com/fa/en/support
e-Learning

E-Learning allows you to study with self-paced, interactive, and engaging online training available anytime, anywhere. (English)

We clearly explain programming with videos and charts.

Make the best use of this material for skills training of your local staff members.

<table>
<thead>
<tr>
<th>Language</th>
<th>course</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td></td>
</tr>
<tr>
<td>Basic</td>
<td>23 courses</td>
</tr>
<tr>
<td>Advanced</td>
<td>6 courses</td>
</tr>
<tr>
<td>PLC</td>
<td>1 course</td>
</tr>
<tr>
<td>HMI</td>
<td>8 courses</td>
</tr>
<tr>
<td>Inverter</td>
<td>2 courses</td>
</tr>
<tr>
<td>Servo</td>
<td></td>
</tr>
<tr>
<td>Robot</td>
<td></td>
</tr>
<tr>
<td>Power Distribution Control Products</td>
<td>2 courses</td>
</tr>
</tbody>
</table>

Satellite Training Series

We arrange Satellite Training Series that you can learn the FA products basics of electricity, wiring, and PLC with watching DVD instruction. It will help you to improve skill of local staff members.

Available Languages: Japanese / English / Chinese / Thai / Vietnamese / Indonesian

Bundled items:

- Part 1: Electricity, Wiring, PLC Basic DVD Training/Training Kit/Textbook (each language)/GX Works2
- Part 2: Inverter Basic DVD Training/Textbook (each language)
02 Extensive Business Assistance

Overseas Tech Support Tools

- **FA term dictionary**
  
The FA term dictionary contains over 4,000 practical terms that will help you to communicate with local staff members at design sites and production sites in Japanese and English. Please utilize it during business trips to overseas and overseas assignment.

- **FA glossary**
  
  Over 750 technical words which are frequently used at design sites of manufacturers are contained in this FA glossary. It will help you to improve skill of local staff members in Japanese and English.

- **FA field glossary**
  
The FA field glossary includes about 250 terms frequently used at production sites. (between Japanese and English) Please make use of it in preparation for overseas business trip and overseas assignment.

- **Collection of phrases used at FA sites**
  
  We provide a collection of phrases frequently used at FA sites in each situation (design, production, and maintenance etc.) These are expected to help communication with local staff members in English.
02 Extensive Business Assistance

Machine makers

We can introduce local machine makers, panel builders, and engineering companies in the USA, according to requests, who can meet your needs.

Local machine makers, Panel builders

With our network, we can introduce you to local machine makers, panel builders, engineering companies, and system integrators.

When starting a new business or expanding local business, please feel free to contact us.

Your Contacts

<USA>
MITSUBISHI ELECTRIC AUTOMATION. INC.
Nobuyoshi Kimura  TEL:+1-847-478-2334  E-mail: MEAU-FACenter@meau.com

<JAPAN>
Mitsubishi Electric Corporation  Industrial Products Marketing Division
Asian Business Development Department
TEL:81-(0)3-3218-6284(Office)
Customers can search the best system integrator according to the requested location and business type on MITSUBISHI ELECTRIC AUTOMATION. INC. website.

https://us.mitsubishielectric.com/fa/en/support/services/system-integration
02 Extensive Business Assistance

Productivity improvement

We offer productivity improvement ideas by visualizing the production site.

**e-F@ctory**

There are various issues that need to be solved in the production site, such as “how to cope with multiproduct variable quantity production”, improving operation rate through preventive maintenance”, “improving quality by applying tendency management”, “implementing traceability”, etc.

e-F@ctory is a management improvement concept from the production site.

It supports advanced manufacturing, TCO reduction of the company and enhance corporate value by utilizing flexible manufacturing through “human, machine and IT coordination” and the production site to reduce total cost through the entire supply chain and engineering chain.

**<Benefits by introducing e-F@ctory>**

- Adaptation to changes of demand
- Improvement of occupancy rate
- Reduction of downtime
- Quality improvement
- Productivity improvement
- Reduction of lead time
- Cost reduction
- Energy saving
02 Extensive Support of your Business

Providing total solution as an integrated FA manufacturer.

- Mitsubishi – FA products
  Controllers (PLC/HMI), Drive Controllers (Inverters/Servos), Robots, Power Distribution Controllers (Breaker, Electromagnetic Switches), CNC etc

- Sensor Solution
  There are many kinds of sensors that have a lot of functions.

Do you spend too much time and costs for controlling sensor setup, starting up and maintaining system?

By cooperation with each manufacturer partner, we easily provide to start up and maintain system with One Tool.

We offer “iQ Sensor Solution”, reducing your Total Cost of Ownership by combination Sensor・PLC・HMI・Engineering environment.
Sensor Solution

Integration with Vision System

By cooperation with our partner “COGNEX”, the world-wide leading company of Vision System, we provide vision system for productive equipment.

Integration with Wire-saving System

By cooperation with our partner “Anywire”, the leading manufacturer of sensor network, we provide iQ Sensor Solution (iQSS) including wire-saving system and sensor.
02 Extensive Business Assistance

Robot solution

◆ Productivity improvement and total cost reduction
  by automating production site robot

Mitsubishi Electric Corporation is a leading maker of factory automation systems, and has abundant experience in various areas including automobile parts, electronic and electric components, liquid crystal displays, semiconductors, food products, medicines, cosmetic products, potteries, education and research.

We offers the best of its kind intelligent solution with highly rigid arms which enable high-speed and high-precision operations, to support factories, to arrange optimization and to be one step ahead of other manufactures.

◆ Offer s the best system by cooperating with our partners

Based on extensive experience in system construction, Mitsubishi Electric Corporation will support the introduction of optimal automation system in each field.
Proposal for an energy-conservation solution

This proposal is for a way of aiding energy conservation through the visual management of energy.

First, data is collected from energy-measurement devices that are connected to a field network (such as CC-Link). This energy data is then cross-referenced against production data to create a visualization that assists in increasing productivity and conserving energy on the production line.

Example configuration of devices aiding energy conservation:
- Programmable Controller
- Electronic multi-measuring instrument
- MDU breaker
- Ecomonitor Light
- Transmission terminal for pulse input module
- Transmission terminal for analog input module
- Power supply for transmissions B-PS3A
- Energy measuring unit EcoMonitor Pro
- Transmission terminal for digital input module
- Electricity meter with pulse output
- Transducer

Sends email
(users are notified of irregular values by email)

Receives power
Measurement data
(power consumption, current, voltage, etc.)

Data can be viewed from a web browser
(graphs of energy consumption for the current location can be displayed by day, month, or year)
Other solution

Logging

It is necessary for logging productive data to improve productivity and quality.

We offer variety of logging products with advanced function.
Other solution

◆ Maintenance (Preventive maintenance/Breakdown maintenance)

Trouble of machines lead to decline of capacity utilization and quality.

We offer products and systems to prevent some machines trouble in advance, and support early recovery after trouble.

Preventive maintenance

- MESEC-Q Series
  - Energy measuring module
  - Pilot current/alarm function

- Eco Monitor Light
  - Measurement time function

- AnyWire AS Link
  - Parametric detection function

Breakdown maintenance

- Inverter
  - Lifetime diagnosis function

- AC Servo
  - Machine diagnosis function

- GOT
  - Back-up/Restore function
  - One touch program jump function

- High speed data logger
  - Trigger logging function

- Alarm function
Other solution

Remote solution

We offer optimal remote solution by Internet, regardless of the overseas and domestic bases location.

Pokayoke saving wiring system

There are big problems about picking up different parts during assembling variety of parts.
We offer Pokayoke system with low cost, free placement, and easy wiring work by cooperation with our partner “Anywire”.

Andon system

We offer Andon display which shows production results, operating status, and alarm of machines with Soft GOT.
03 Migration Support

We develop products based on the concept “evolution and succession” and provide full support of equipment upgrading.

Upgrading your automation products will solve your problems in factories.

Proposal for upgrading of your FA equipment and systems

- We suggest upgrading which enables “Safety operation”, “Life cycle extension of equipment”, “Preventive maintenance”, “Improvement of productivity and quality” and “Traceability” of your current equipment.
- With know-how accumulated over the years, we provide support to customers in upgrading their equipment. We also offer a variety of upgrading catalogues, collections of application examples, and replacement software for each FA product.
We offer a large selection of migrating support tools.

Products of Mitsubishi Electric System & Service Co., Ltd.

- **A0J2 Migration Tool**
  Support PLC migrating from A0J2(H) to Q series.

- **AC Servo Migration Tool**

Products of Mitsubishi Electric Engineering Co., Ltd.

- **A series Migration Tool**
  Support PLC migrating from A series to Q series.

- **AnS series Migration Tool**
  Support PLC migrating from AnS series to Q series.

*We offer help when migrating FA equipment upon customers request. Please contact us for more details.*
“Evolution and Succession”

We continue developing products with “Evolution and Succession” in mind.

■ “Evolution and Succession” in Mitsubishi PLC transition.
04 Evolution and Succession

“Evolution and Succession” in Mitsubishi PLC FX series transition.
04 Evolution and Succession

“Evolution and Succession” of Mitsubishi HMI (GOT).

Maintenance and repair service is available for 7 years even after production stoppage.
04 Evolution and Succession

"Evolution and Succession" of Mitsubishi inverters.

- **1981**: The first generation
  - FREQROL series launched to respond to energy-efficiency needs
  - FR-E
  - FR-Z200
  - FR-F400

- **1987**: The second generation
  - Digitized Communication with PLC
  - FR-A200
  - FR-F500

- **1991**: The third generation
  - Low-speed torque improved
  - Noise lowered
  - FR-A500
  - FR-F700

- **1997**: The forth generation
  - Environment resistance
  - Maintenance eased
  - FR-A700
  - FR-F800

- **2003**: The fifth generation
  - High-functionality
  - High-performance
  - Longer service life
  - Lifetime diagnosis

- **2013**: The sixth generation
  - High-functionality
  - High-performance
  - Security
  - Safety
  - System support
  - FR-A800
  - FR-A800 Plus
04 Evolution and Succession

"Evolution and Succession" of Mitsubishi servo.

- Technology we released and proposed ahead of competitors
  - Productivity improvement
  - FMS
  - Maintenance free
  - High speed response, CIM
  - Lower Cost
  - Downsized
  - Lower noise
  - Less wiring

- Standards-compliant
  - Environment resistance
  - High-speed, high-performance

- Productivity improvement (per hour/per area)
  - Easy setup
  - Expansion of the range of servo application

Maintenance and repair service is available for 7 years even after production stoppage.

- Vibration control
- Linear motor


- MR-H
- MR-JN

Year:
- 1980
- 1985
- 1990
- 1995
- 2000
- 2005
- 2010
- 2012