Consult, Supply, Installation, and Service

Motor & Drives Specialist

LV and MV Softstarter

AC Motor and AC Drives

Industrial for:
- Food & Beverage
- Oil & gas
- Petrochemical
- Cement
- Mining
- Pulp and paper
- Steel & Metal
- Water/Waste water
- General Industrial

Applications for:
- Fans & Blower
- Pump, Conveyors
- Compressors
- Mixer and etc.

Motor & Drives problems!!! Consultant Free

AC Motors
AC Drives (VSD)
DC Motors & Drives
LV and MV Soft Starter
Instrument and Control
Power Transmission

25/113-115 Soi RamKhamHaeng 124, Saphansoong, Saphansoong, Bangkok 10240 Thailand
Tel: 02728-2902, 02373-2734, Fax 02728-1779, www.tinamics.com
Based on expertise that come from management years of hand-on experience Tinamics Co., Ltd. was founded registered as a Company Limited in 2002. The company has grown to become one of the electrical and mechanical Systems Intergraded in Thailand.

**General Information**

<table>
<thead>
<tr>
<th>Company name</th>
<th>Tinamics Company Limited</th>
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<tbody>
<tr>
<td>Address</td>
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**Intelligent concepts and innovative products**

Economy—always the essential milestone on the road to the top. We help you to reduce your operating costs by applying new technologies and intelligent concepts. We leverage our strategies and systems to enable you to efficiently save costs: when it comes to service and operating procedures and energy consumption.

**Efficiency for your success: Motor & Drives systems**

Today, if you want to be a market leader, you require a success strategy such as streamlining all of your operations for utmost efficiency. We can help you get on track to a leadership position with our solutions:

Cost-effective across the board and reliable from A to Z this is how we guarantee attractive products.

**Product Division (PD)**

Based on expertise that come from years of hand-on experience, TiNAMICS has supply state-of-the-art systems solution and related products, along with comprehensive systems solution for a range of electrical and Mechanical management needs, its main areas of products activity included:

- **LV/ MV Soft Starter**
  - Standard “SIKOSTART” 3RW22
  - “SIRIUS” 3RW30/34/
  - SIMOCODE Protection

- **Electric Motor and accessories**
  - “Energy Saving” induction motors
  - “High Efficiency” Induction Motor
  - Explosion Proof Motor, EExn, EExe, EExde, EExp
  - LV/MV Three phase slipring motors

- **AC Variable Speed Drives (VSDs)**
  - “Micro Master” MM410/420/430/440
  - “MasterDrives” Vector Control
  - “SINAMICS” new version S120, S150

- **DC Motors with variable-Speed control**
  - “SIMOREG DC Master” 6RA70

- **Wound Resistor starter units for slipring motors**
Systems Integrated Division (SI)

Tinamics is one of the Thai contractors in the field of Electrical & Mechanical systems recognized by both government and private projects which serviced in M & E systems for some of the most popular and modern industrial factories and government facility. It is this horizontal diversification across different market segments that have enabled Tinamics to maintain its growth through periods of economical turbulence. Nowadays, Tinamics is one of the Thai contractors who are capable to execute wide ranges of engineering works. Our SI experience includes:

- Electrical and Communication Systems
- Emergency diesel generating standby Systems
- Pumping and Sanitary Systems
- Fire Protection and Fire Fighting Systems

We aim to integrate our intensive experience with the new cutting edge technology in order to optimize the efficiency of our services.

Building Construction

Building Construction is one of the company's intensive experiences for both government and private sectors.

The building experiences include:

- Office Buildings
- Residential Buildings
- Educational Institutions
- Industrial / Manufacturing Facilities
- Equipment Facilities

The Operational Strategy is to be the most cost effective and efficient in order to satisfy customer satisfaction.

Industrial Construction

Industrial Construction is one of our expertise, our experiences include Chemical Factory, Polyester Factory, etc.

Our services include design, development and construction in order to tailor-make the service for the unique customers. We are aiming to integrate the specialized knowledge in industrial field with the construction best practices to modernize the industrial Turn-Key Projects along with our consultant partners.

Our firm provides the cutting edge solutions to the complex environment issues facing all sectors of business and industrial such as chemical wastewater treatment plant, wastewater treatment plant, etc.

Energy Saving By VSD

[Diagram of energy saving by VSD]
**MICROMASTER 430**  
**Performance features**
- Energy saving mode (stopping e.g. of a pump at low speeds)
- Motor staging
- Manual/automatic mode
- Load torque monitoring (detects dry run of pumps)
- High-grade internal PID controller
- Ramp smoothing

**SED2 Variable Frequency Drives**  
**Performance features**
- Common remote start/stop
- Auto bypass
- Interlock start logic
- Disconnect options
  - Disconnect
  - Fused Disconnect
  - Circuit Breaker
- Two and three contactor models
- 6 digital inputs and 6 digital outputs
- Optional line or load reactor
- Optional IP 54

**SINAMICS V50**  
Includes
- 8MF cabinet
- IP20
- Protection cover on the bottom
- Power connection terminal
- Main Switch
- Input fuse
- Input choke (input reactor)
- Power Block
- Cooling fan (inside cabinet)
- Output connection terminal
- Customer terminals
- EMC suppression filter
Soft Start 3RW44
- Tightening torque control
- Integrated motor overload protection and device self-protection
- Adjustable current limiting
- Integrated bridging contact system
- Integrated state and fault monitoring
- Standard circuit and inside-the-delta circuit
- Pump start-up and run-down
- Integrated brake function

SI MOCODE Protective functions
- Overload protection (Class 5 - 40)
- Thermistor motor protection
- Phase failure monitoring
- Unbalance protection
- Stall protection
- Earth-fault monitoring
- Monitoring of current limit values
- Monitoring of operating hours
- Monitoring of motor stop times
- Number-of-starts monitoring

SI MATIC S7 Controllers spare part
- S7-200
- S7-300
- S7-400

Explosion Proof Motor
Types of protection
- "Increased safety" Ex e II
- "Explosion-proof enclosure" Ex de IIC/Ex d IIC
- "Non-sparking" Ex nA II
- "Areas protected against dust explosions in Zones 21 and 22"
“Samwha” Electronics Motor Protection Relay (EOCR)
"Say good bye Motor Failure with
The world leading specialist motor protection"
- Electronics AC Current or Voltage relay
- Electronics DC Current or Voltage relay
- Current Transformer (CT)

“ARRAY” Mini PLC and Smart Relay
- Easy Programming and Installation,
- Mounting on DIN rail, Small but smart relay
- Cost effective, save space and saving cost of wiring and installation
  - 127 counter / timer / RTC
  - Phone remote control
  - Telephone connectable and voice warning
  - Separated panel with LCD display
Special 10 unit MDB Control CTX 9000 for Suwanapumi Airport
We are using "SIEMENS" circuit breaker with local cabinet to control and protection X-Ray CTX 9000 machine totally 10 panel
Scope of work: Design + Supply, Volume 3.5 Million Baht. / July 2005
Application: MDB panel with-out installation for X-Ray CTX 9000 Scan
Industrial: Suwanapumi Air Port
Location: Bangna-Trad Rd., Samutprakarn, Thailand

"SIEMENS" HV squirrel cage induction motor 3 AC 3,300 V 250 kW IP55, 1MB3 @ 2 unit
Scope of work: Supply+Commissioning , Volume 3 Million Baht
Application: Blower for gas burning systems
Industrial: Petrochemical
Location: MapThaPhud, Muang, Rayong THA

"SIEMENS" LV squirrel cage induction motor 3 AC 400 VD/ 690VY 160 kW 6 Pole IP55, 1MB3
Scope of work: Supply special design with fixed ventilation fan+Encoder / 2008
Application: Rubber trie extrusion machine
Industrial: Rubber / Vehicles Tire manufacture
Location: Rayong, Thailand

"SIEMENS" Micromaster MM440 Variable Speed Drives 3AC 380-480 VAC 160 kW/250 HP
Scope of work: Supply+Installation+Commissioning
Application: Blower for gas burning systems
Industrial: Petrochemical
Location: MapThaPhud, Muang, Rayong THA

"SIEMENS" EExde Induction Motor + Micromaster MM430 VSDs 3AC 380 VAC 55 kW/37 HP
Scope of work: Design+Supply+Installation+Commissioning / 2006
Application: Blower for gas burning for exhaust systems
Industrial: Oil & Gas Petrochemical
Location: MapThaPhud, Muang, Rayong THA

"SIEMENS" Micromaster MM430 Special design Energy saving for HVAC
We are using SIEMENS Micromaster MM430 automatic control by sequencing start 2 VSDs control 4 pump motor 55 kW and 1 VSD control 4 cooling 15 kW motor with temperature close loop PID control
Scope of work: Design+Supply+Installation+Commissioning / October 2007
Application: HVAC Systems Condenser Pump + Fan Cooling Tower
Industrial: Office High rise Building
Location: Rachadaphisek Rd., Dindang , Bangkok, Thailand

"SIEMENS" MM430 VSDs @ 4 Unit 3AC 380 VAC, Remote control for convoyor systems
Scope of work: Design+Supply+Installation+Commissioning / 2006
Application: Process of production convoyor line systems
Industrial: General
Location: Lamchabang Industrial, Cholburi Thailand
**"SIEMENS" MM440 VSDs @ 4 Unit 3AC 380 VAC 55 kW + Induction Motor 55 kW 4 Pole IP55**

Scope of work: Design+Supply+Installation+Commissioning / 2007  
Application: Process of production Single screw extrusion systems  
Industrial: Extrusion / Plastic recycle  
Location: Muang, Samutprakarn Thailand

**"SIEMENS" Soft Starter inside-Delta 132 KW 3AC 380V, for Blower machine**

Scope of work: Supply+Commissioning /2008  
Application: Blower in production machine  
Industrial: Particle wood production machine  
Location: Suratthani Thailand

**"Telemecanique" Soft Starter 2 Unit 22 KW 3AC 380V, for Concert pipe machine**

Scope of work: Design+Supply+Installation+Commissioning / 2007  
Application: Process of production high pressure concert pipe  
Industrial: Civil & Construction machine  
Location: BahnPathum, SamKong, Pathumthani Thailand

**Special design PLC + Touch screen Energy saving control for @ 4 VSDs 90 kW + 2 S/ D**  
Automatic control by pressure close loop PID control for water pumping 6 unit.

Scope of work: Design+Supply+Installation+ starting up+testing+Report / February 2008  
Application: Water Supply  
Industrial: General  
Location: Chonburi, Thailand

**"SIEMENS" Micromaster MM440 VSDs 3AC 380 VAC 200 kW (250 HP)**  
Sensor less Vector control by DCS systems with close loop PID control.

Scope of work: Design+Supply+Installation+ starting up+ testing + Report / 2007  
Application: Rubber trie extrusion machine  
Industrial: Rubber / Vehicles Tire manufacture  
Location: Rayong, Thailand

**"SIEMENS" Micromaster MM440 VSDs 3AC 460 V 50/60 Hz 15 kW(22 HP)**

Scope of work: Design+Supply+Installation+ starting up+ testing + Report / 2007  
Application: Air compressor machine  
Industrial: AirCraft / Thai Air way PCL.  
Location: DonMuang, Bangkok Thailand

**"SIEMENS" Micromaster MM440 VSDs 3AC 400 V 50/ 60 Hz @2x22 kW=37 kW**

Scope of work: Design+Supply+Installation+ starting up+ testing + Report / 2007  
Application: Blower production machine / Cabinet panel size 3 x 800 x 550 x 2350 mm  
Industrial: Oil & Gas Petrochemical  
Location: Muang Rayong Thailand
“SIEMENS” Micromaster MM430 Special design Energy saving for HVAC
We are using SIEMENS Micromaster MM430 automatic control by sequencing start 1 VSDs control 3 chiller water pump motor 15 kW and 1 VSD control 2 cooling 5.5 kW motor with temperature close loop PID control
Scope of work : Design+Supply+Installation+Commissioning / October 2007
Application : HVAC Systems Chiller condenser water Pump + Fan Cooling Tower
Industrial : Compart Precision (Thailand) Co.,Ltd. / General electric part factory
Location : Hi-Tech Industrial Estate, , Banpo, Bangpa-in, Ayuthaya, Thailand

“Tinabrake” @4 set of Special design DC injection braking
Scope of work : Design+Supply+Installation+Commissioning / October 2007
Application : Process of production motor conveyor systems 2x1000 kW 6600 V 4 Pole
Industrial : Lignite mining Plant
Location : MaeMoh Lampang, Thailand

“SIEMENS” Induction Motor + MM430 VSDs 3AC 380 VAC 45 kW (55 HP)
Automatic control by pressure close loop PID control.
Scope of work : Design+Supply+Installation+ starting up+testing+Report / November 2007
Application : Vacuum Blower for exhaust systems
Industrial : Toyota / Vehicles part manufacture
Location : ChaChengSaow, Thailand

“SIEMENS” Micromaster MM430 VSDs 3AC 380 VAC 37 kW
Automatic control by pressure close loop PID control for 1 VSD control for 4 water pumping.
Scope of work : Design+Supply+Installation+ starting up+testing+Report / 2008
Application : Water pumping systems / Staging mode + PID close loop control via DCS systems
Industrial : Cytec Co., Ltd. / PetroChemical Manufacture,
Location : Pakorsongkrorrad, Mabtapud, Rayong, Rayong Thailand

“SIEMENS” Micromaster MM430 VSDs Special design Energy saving 3AC 380 VAC 11 kW
Automatic control by sequencing start 1 VSDs control 3 cooling motor tower with temperature close loop PID control systems,
Scope of work : Design+Supply+Installation+Commissioning / February 2006
Application : Fan cooling tower
Industrial : Bangkok Air Way / Office High rise Building
Location : Vibhavadee Rd., Bangkok, Thailand

“SIEMENS” Micromaster MM430 VSDs 3AC 400 V 50/ 60 Hz , 250 kW
Scope of work : Design+Supply+Installation+ starting up+ testing + Report / February 2009
Application : Blower production machine / Cabinet panel size 1500 x 2050 x 900 mm
Industrial : Oil & Gas Petrochemical
Location : Muang Rayong Thailand

Special design PLC + Touch screen Energy saving control for @ 6 VSDs 75 kW + 2 S/D
Automatic control by pressure close loop PID control for water pumping 8 unit.
Scope of work : Design+Supply+Installation+ starting up+testing+Report / October 2008
Application : Water Supply
Industrial : General
Location : Rayong, Thailand