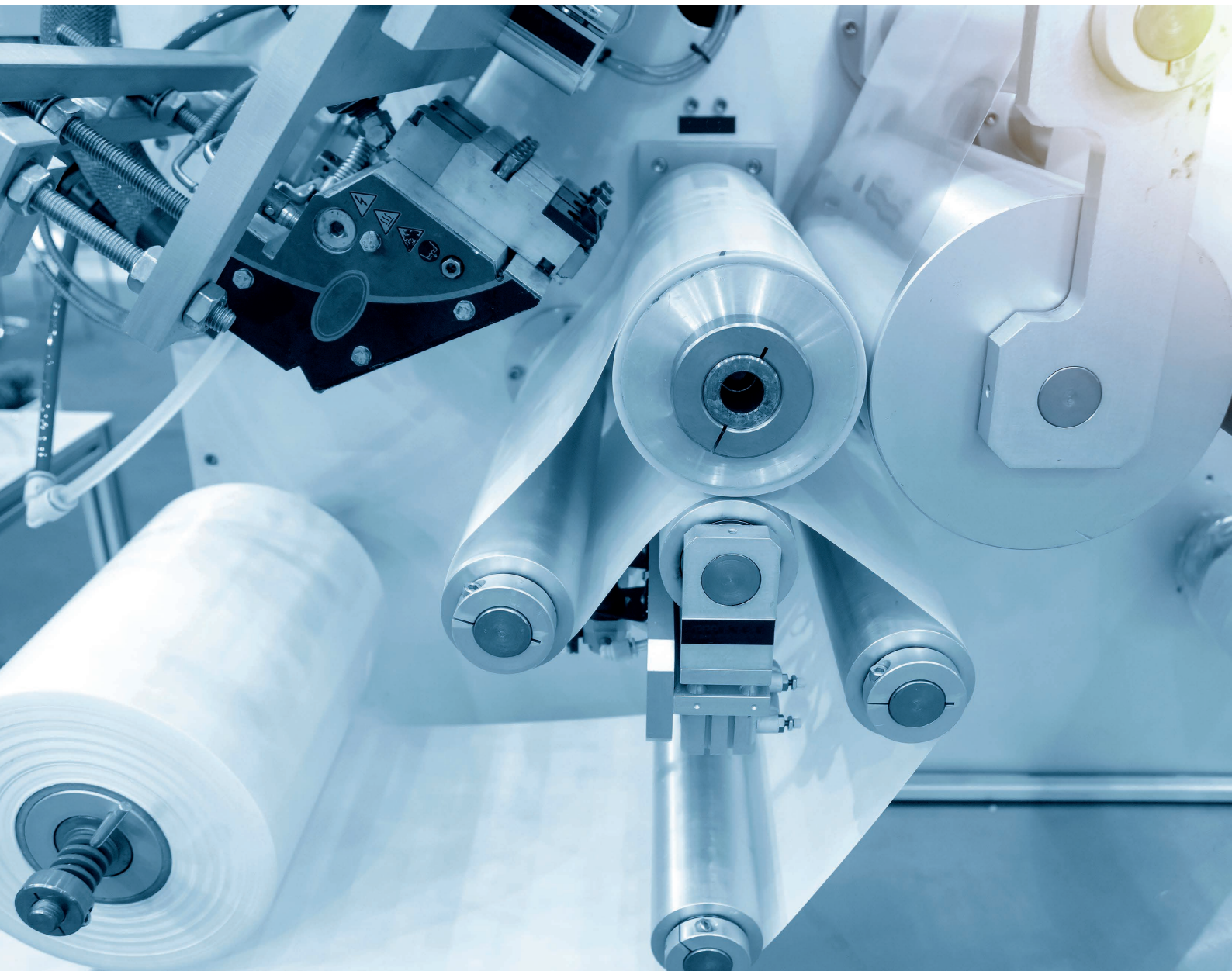# INOVANCE

Industrial Automation Products

Inovance's complete product range

Inovance offers the full range of industrial automation products:
LV & MV AC drives, servos, PLCs & HMIs, motion controllers & I/Os, CNCs, and industrial robots

CANopen | EtherNet/IP | EtherCAT | PROFINET | Modbus RTU | Modbus TCP | STO | CE | UL LISTED E467465 IND.CONT.EQ | UKCA | KC | c UL us

ISO 9001 | ISO 14001 | ISO 45001 | ISO 17025 | IATF 16949

A brief overview of our best selling products

MD800 – Compact AC MultiDrive

- 50% footprint reduction*1
- Common rectifier: 1-8 drives, single and dual drive modules (dual ratings)
- Single drive module*2 - 1 ph 200 V (0.2-2.2 kW), 3 ph 400 V (0.4-7.5 kW)
- Dual drive module*2 - 1 ph 200 V (0.2-2.2 kW), 3 ph 400 V (0.4-3.7 kW)
- Rectifier module*2 - 1 ph 200 V (2.2-3.7kW), 3 ph 200 V (3.7-7.5 kW),
  3 ph 400 V (3.7-15 kW)
- Individual STO SIL 3 PL e capability on each drive module
- +24 VDC backup control supply
- Induction and PMS motor control (sensorless)
- Built-in Modbus RTU, Modbus TCP/IP*3, CANopen, CANlink
- EtherCAT (CiA402, EoE), PROFINET, Ethernet/IP (optional)
- Complies with CE & UL

*1 Compared with traditional single drive modules
*2 HD rating, for ND rating contact Inovance representative
*3 Under development

MD810 – AC MultiDrive

- Common rectifier: 1-N drives
- Single and dual drive modules - 3 ph 400 V
- Inverter unit
  - 1.5 kW to 160 kW (dual: up to 18.5 kW)
- Rectifier Unit
  - 22 kW to 355 kW
- STO SIL 3 PL e
- +24 VDC backup control supply
- Induction and PMS motor control
  (open and closed loop)
- Built-in Modbus RTU, CANopen
- EtherCAT, PROFIBUS-DP & PROFINET variants
- Application dedicated functions (centre winder,
  wobble control, & master-slave)
- Complies with CE & UL

MD520 – High Performance AC Drive

- Open and closed loop, 1/3 ph 200 V,
  3 ph 400 V
- Dual rated (G & P ratings)
  - 3 ph 380 - 480 VAC, 0.4 to 500 kW
  - 3 ph 200 - 240 VAC, 0.4 to 75 kW
  - 3 ph 200 - 240 VAC, 0.4 to 2.2 kW
- Induction motor and PM synchronous
  motor control:
  - Open loop V/f (induction motors only)
    and SVC
  - Closed loop FVC
- Starting torque
  - 150% at 0.25 Hz for SVC
  - 180% at 0 Hz for FVC
- STO SIL 3 PL e
- Built-in LED colour display

- EtherCAT, PROFINET, Profibus DP,
  Ethernet/IP, Modbus TCP, Modbus RTU
  (option cards)
- PTC input as standard
- Application dedicated functions
  (centre winder, wobble control,
  brake control, & master-slave)
- Output frequency: 599 Hz
- Application dedicated functions:
  - Torque, speed, position control
  - Textile wobble control
- Brake control logic
- 4 motor parameter sets
- 4 independent S-ramps
- Simplified parameters for easy start up
- Complies with CE, UL & SIL 3

MD290 - General Purpose AC Drive

- Open loop, three phase 380 to 480 VAC, 0.4 to 450 kW
  Three phase 200 to 240 VAC, 0.4 kW to 75 kW
- Dual rated (G & P ratings)
- Open loop V/f (with slip compensation)
- Automatic torque boost
- Communications options:
  - Modbus-RTU
  - CANlink, CANopen
  - PROFIBUS-DP, PROFINET
  - EtherCAT

- Simplified parameters for easy start-up
- 4-independent S-ramps
- Flexible, programmable I/O connection
- User programmable function
- Variable DC injection braking
- Comprehensive trip diagnostics
- Output frequency 500 Hz
- Complies with CE and UL

MD310 - Compact Vector, Economic AC Drive

- Open loop, three phase, 400 VAC, 0.4 - 18.5 kW
- Open loop V/f & sensorless vector control
- Starting torque:
  150% at 0.5 Hz (SVC), 100% at 1.00 Hz (V/f)
- Automatic torque boost
- Slip compensation
- Communications options:
  - Modbus-RTU
  - CANlink

- 4-independent S-ramps
- Flexible, programmable I/O connection
- Variable DC-injection braking
- Comprehensive trip diagnostics
- Built-in dynamic braking unit
- Complies with CE

MD200 - General Purpose, Economic Drive

- Open loop single phase 200 to 240 VAC, 0.4 to 2.2 kW
  Three phase 380 to 480 VAC, 0.4 to 3.7 kW
- Open loop V/f control & sensorless vector control, PM motor control*
- Starting torque of 150% at 3 Hz
- Automatic torque boost
- Slip compensation
- Communications options:
  - Modbus RTU (standard version)
  - CANlink (variant)

- Simplified parameters for easy start-up
- 2-independent S-Ramps
- Flexible, programmable I/O connection
- Variable DC-injection braking
- Comprehensive trip diagnostics
- Built-in dynamic braking unit
- Complies with CE and UL

* Contact Inovance representative

MS1 Servo Motors

- 23-bit and 26-bit serial encoders
- Rated power: 50 W – 7.5 kW
- MS1H1, MS1H4 (3,000 rpm):
  - Frames: 40, 60, 80
  - Rated torque: 0.16 – 3.18 N·m
- MS1H2 (3,000 rpm):
  - Frames: 100, 130
  - Rated torque: 3.18 – 15.8 N·m
- MS1H3 (1,500 rpm):
  - Frames: 130, 180
  - Rated torque: 5.39 – 48 N·m

H3U PLC - High Performance with Motion Control

- Combined CPU and power supply supports local and remote I/O
- Basic instruction: 100 ns/instruction
- Program capacity of 64,000 steps
- Device memory:
  - Auxiliary relays – 9,216 points
  - Timers – 512 points
  - Counters – 256 points
  - Data registers – 9,552 points
  - File registers – 32,768 points
- High-speed inputs of up to 200 kHz
- High-speed outputs of up to 200 kHz

- Two-axis circular and point-point interpolated motion
- Communications options:
  - Ethernet (MODBUS-TCP)
  - RS485 (Modbus-RTU)
  - CANopen
  - CANlink

AM400/600 Motion Controller

- Able to control up to 32 EtherCAT axes
- Up to 16 local expansion modules (GL10)
- 16 x high-speed inputs, 200 kHz
- 8 x high-speed outputs, 200 kHz
- IEC 61131-3 programming environment (CODESYS)

- Multiple communications protocols:
  - Modbus RTU/TCP
  - Ethernet IP
  - CANopen/CANlink
  - OPC UA

SV660/670 – Single-Axis Servo Drive

- 1/3 ph 220 V, 3 ph 380 V
- 0.1 kW to 7.5 kW
- STO SIL 3 PL e (-FS EtherCAT variant)
- Ultra-fast 4.5 kHz current loop (EtherCAT)
- Easy set-up and tuning
- EtherCAT, Pulse, PROFINET & CANopen variants available
- SV670 - Second encoder interface: incremental quadrature
- SV670 - Analog input & output
- SV670 - External encoder for full close loop function

IT7000 Series HMI

- 7", 10" & 15" display sizes
- IP65 rating (front side), IP20 panel
- Built-in Ethernet and serial ports
- VNC remote access
- Javascript programming

- Canvas control for graphic creation
- Support for OPC UA and Modbus RTU/TCP protocols
- IIoT ready (MQTT)
- Real-time clock

AM320 and AM521/2

Motion control CPU

- Quad-core processor, IEC 61131-3 programming environment (CODESYS)
- 2 expansion slots - left side (GE20)
- 4 (AM320) pulse, 8 (AM521) or 16 (AM522) EtherCAT synchronized axes
- AM521/2 - Up to 127 EtherCAT slaves
- 30 CANopen axes for PTP movements (optional card required)
- 4 pulse axes (AM521 & AM522)
- Axis group for linear and circular interpolation
- 4 encoder inputs (8x high speed inputs, up to 200 kHz)

- Supports up to 16 GL20 local expansion
- Supports up to 8 (AM521) or 16 (AM522) EtherCAT axes
- AM521/2, I/O can be expanded by using EtherCAT bus coupler GL20-RTU-ECT
- AM320 dual network port with independent IP address
- Multiple communications protocols:
  - Modbus RTU/TCP
  - CANopen (optional)
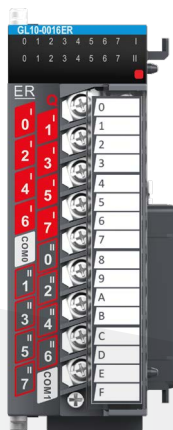 - Ethernet/IP (scanner)
  - OPC UA

Easy Series PLC

- Compact footprint
- Up to 16 local expansion modules (GL20)
- Built-in I/Os
  - 8 high speed inputs (200 kHz)
  - 8 DO (with 4 x 200 kHz channels & PWM support)
- PLCopen-compliant axis control
- Axis group for lineal and circular interpolation, CAM table functionality
- Simulation mode for offline debugging

- Supports function block and function for encapsulation, code reusability, and scalability
- ST, LD, SFC language support
- Multiple communications protocols:
  - Modbus RTU/TCP
  - CANopen (optional)
  - Ethernet/IP (scanner)

GL10 and GR10 Expansion Modules

- Local & remote I/O expansion for H3U, H5U and AM600; remote for AC700 and AC800
- EtherCAT coupler for remote expansion (up to 16 modules)
- Digital input/output modules
- Analog input/ output modules
- Temperature sensing modules
- Encoder/counter and touch probe modules
- Pulse drives position control modules

GL20 Expansion Modules

- Local & remote I/O expansion for Easy series; remote for AC700, AC800, H5U & AM600
- EtherCAT, PROFINET, Ethernet/IP and I/O-Link couplers for remote expansion (up to 16 modules)
- Min EtherCAT cycle 125 µs
- DI/DO hardware response time within 100 µs. AI/AO capture cycle up to 62.5 µs
- Digital I/O modules
- Analog I/O modules
- Temperature sensing modules

2003
founded

IPO:2010

3,405M USD
revenues in 2022

20k
20,256
employees

Global
network of offices
and distributors

100+
Inovance's products are
in use in 100+ countries

3.36 million
servo drives and
motors shipped in 2022

17,000+
industrial robots
delivered by end of 2022

3.72 million
elevator drives
installed worldwide
by the end of 2022

#5
No.5
for servo drives
globally in 2021*

#8
No.8
for LV AC drives
globally in 2021*

#3
No.3
in Asia Pacific region*
AC drives market share
(excluding Japan)

*According to leading market research company Interact Analysis

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