

INOVANCE

Industrial Automation Solutions

Inovance's product range overview



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

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

An overview of our advanced products for industrial automation.

MD800 Compact AC MultiDrive



- 50% footprint reduction*
- Common rectifier: 1-8 drives
- Single and dual drive modules
- 1/3 ph 200 V, 3 ph 400 V
- 0.2 kW to 11 kW (dual: up to 5.5 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, CANopen
- EtherCAT (CiA402, EoE), PROFINET IO, Ethernet/IP (optional)

*Compared to traditional single drive modules

MD810 AC MultiDrive



- Common rectifier: 1-N drives
- Single and dual drive modules
- 3 ph 400 V
- 1.5 kW to 160 kW (dual: up to 18.5 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)

MD520 High Performance AC Drive



- 1/3 ph 200 V, 3 ph 400 V
- 0.4 kW to 500 kW
- Dual rated
- TO SIL 3 PL e
- Built-in LED colour display
- Induction, PMS and synchronous reluctance motor control (open and closed loop)
- Application dedicated functions (centre winder, wobble control, brake control, & master-slave)
- Built-in user programmable logic
- EtherCAT, PROFINET, Ethernet/IP, & Modbus TCP (option cards)

Wide range of MD520 Option Cards

- Feedback: MD38PGMD (incremental quadrature encoder, HTL/line driver), MD38PG4 (resolver), ES510-PG-CT1 (serial encoder), & MD520-PG-S1 (sincos)
- I/O extension: MD38IO1 (5 DI, 1 AI, 1 RO, 1 DO, 1 AO, 1 RS485 and 1 CANlink), MD38IO2 (3 DI), & MD38IO3 (3 DI, 1 RO, 1 RS485)
- Communication: MD38TX1 (RS485, Modbus RTU), MD38CAN1 (CANopen, CANlink), MD-SI-DP1 (PROFIBUS-DP), MD500-ECAT (EtherCAT), MD500-PN1 (PROFINET), MD500-EN1 (Ethernet/IP), & MD500-EM1 (Modbus TCP)

NEW MD630 Advanced Compact AC Drive



- 3 ph 400 V, 0.4 kW to 22 kW
- Dual rated
- STO SIL 3 PL e
- +24 VDC backup control power supply (N variant)
- Built-in EMC filter (category C3)
- Operating ambient temperature: -20 to +60 °C
- Induction, PM synchronous and Reluctance motor control (sensorless)
- EtherCAT, PROFINET and Ethernet/IP communication (N variant)
- Built-in user programmable logic
- Modbus RTU protocol (RS485) built-in, CANopen as option (S variant)

MD880 High Performance AC Drive



- 3 ph 400 V (2.2 kW to 2000 kW), 3 ph 690 V (45 to 4000 kW)
- Dual rated (HD: 150% for 1 min, ND: 110% for 1 min)
- Converter and inverter are different modules, different choices for the converter (non regenerative or regenerative rectifier, active front end). DC/DC converter module.
- STO SIL 3 PL e
- +24 VDC control backup supply input
- 3 option card slots
- Induction and PM synchronous motor control (open loop and closed loop)
- Built-in user programable logic
- Modbus RTU, PROFIBUS-DP, PROFINET, CANopen, EtherCAT, Modbus TCP (option cards)
- Interface for incremental quadrature (HTL, Line Driver), incremental SinCos encoders, resolver (option cards)

MD580 High Performance AC Drive



- 3 ph 400 V (0.75 kW to 450 kW), 3 ph 690 V (5.5 to 250 kW)
- Dual rated (HD: 150% for 1 min, ND: 110% for 1 min)
- STO SIL 3 PL e
- Built-in LED colour display
- +24 VDC control backup supply input
- Induction, PM synchronous and SynR motors control (open loop and closed loop)
- Built-in user programable logic
- Modbus RTU, PROFIBUS-DP, PROFINET, CANopen, EtherCAT, Ethernet/IP, Modbus TCP (option cards)
- Interface for incremental quadrature (HTL, Line Driver), incremental SinCos encoders, resolver (option cards)



SV660 Single-Axis Servo Drive

- 1/3 ph 200 V, 3 ph 400 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, PROFINET IRT, pulse, and CANopen variants available

SV670 Single-Axis Servo Drive



- 1/3 ph 200 V, 3 ph 400 V
- 0.1 kW to 7.5 kW
- STO SIL 3 PL e
- Ultra-fast 4.5 kHz current loop
- Easy set-up and tuning
- Feedback encoder interface: serial (Wetón), Nikon, Tamagawa and Harmonic
- EtherCAT & pulse/CANopen variants available
- Second encoder interface (full closed loop): incremental quadrature
- Linear motor control

SV680 Single-Axis Servo Drive



- 1/3 ph 200 V, 3 ph 400 V
- 0.1 kW to 7.5 kW
- STO SIL 3 PL e
- FSoE and SS1, SS2, SLS, SBC, SOS, SSM, SDI SIL 3 PL e (variant)
- Ultra-fast 4.5 kHz current loop
- Easy set-up and tuning
- Feedback encoder interface: serial (Wetón), BiSS-C, Endat 2.2 and SSI
- Second encoder interface (full closed loop): incremental quadrature, serial (Wetón), BiSS-C, Endat 2.2 and SSI
- EtherCAT & pulse/CANopen variants available
- Linear motor control
- Gantry synchronization function
- +24 VDC backup control supply (variant)

SVD60 Extra Low Voltage Servo



- Supply voltage: 24 to 72 VDC
- STO SIL 3 PL e (-FS variant)
- Ultra-fast 4.5 kHz current loop
- EtherCAT and CANopen variants available
- 23 bit serial encoder
- MS1H4 motors (3000 rpm):
 - Rated power: 400, 750 W
 - Frames: 60, 80
 - Rated torque: 1.27, 2.39 N·m

MS1 Servo Motors



- 23 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

IS810N Multi-Axis Servo Drive



- 3 ph 400 V
- Single and dual axes modules
- 0.85 kW to 120 kW (dual: up to 18.5 kW)
- STO SIL 3 PL e
- Ultra-fast 4.5 kHz current loop
- Feedback encoder interfaces: serial (Weton) and Endat 2.2
- Second encoder interface: incremental quadrature
- EtherCAT CoE (CiA 402)
- +24 VDC backup control supply
- PMS and asynchronous motor control (closed loop)

AM320/521/522 CODESYS Controllers



- Compact footprint
- Quad-core processor
- Up to 8 (AM521) or 16 (AM522) EtherCAT axes
- Dual network port (in AM320 with independent IP address)
- Up to 16 local expansion modules (GL20)
- 4 encoder inputs (8x high speed inputs, up to 200 kHz)
- 2 expansion slots (GE20)
- IEC 61131-3 programming environment (CODESYS)
- Multiple communication protocols: Modbus RTU/TCP, Ethernet/IP, OPC UA, CANopen (optional card)

GL20 Expansion Modules



- Local & remote I/O expansion for Easy and AM300/500 series, remote for AC700, AC800, H5U & AM series
- EtherCAT, PROFINET, and Ethernet/IP couplers for remote expansion (up to 16 expansion modules)
- Min EtherCAT cycle 125µs
- DI/DO hardware response time within 100µs. AI/AO capture cycle up to 62.5 µs
- Digital I/O modules
- Analog I/O modules
- Temperature sensing modules

Easy Series PLC



- Compact footprint
- Able to control up to 32 EtherCAT axes (72 slaves)
- 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)
- 2 expansion slots (GE20)
- 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 communication protocols:
 - Modbus RTU/TCP
 - CANopen (optional)
 - Ethernet/IP (scanner/adaptor)
 - PROFINET slave (can be used as gateway)

AC700 & AC800 Series IPC Motion Controllers



- CPU: Celeron series (AC703) or Intel i5 (AC810)
- Dual EtherCAT ports with redundancy support (AC802, AC810)
- Up to 256 EtherCAT axes
- Multiple communication protocols:
 - Modbus RTU/TCP
 - Ethernet IP
 - OPC UA
- Remote commissioning and IIoT capabilities
- IEC 61131-3 programming environment (CODESYS)
- Webvisu functionality (AC703, AC810)

GS20 & GR20 I/O Expansion Modules



- IP67 rating
- Aluminium housing
- Easy wiring (M12 A-Code connectors)
- Different types:
 - EtherCAT slave + IO-Link master (8x class A ports)
 - IO-Link slave for standard sensors and actuators
- IO-Link sensors and/or standard sensors and actuators can be combined
- GR20:
 - IP20 rating (IP50 with dust cover)
 - IO-Link slave
 - For standard sensors and actuators
- GS20 and GR20 modules are available as PNP and NPN types

IT7000 Series HMI



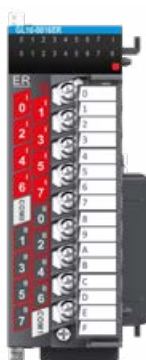
- 7", 10" & 15" display sizes
- IP65 rating (front side)
- Built-in Ethernet and serial ports
- VNC remote access
- Javascript programming
- Canvas control for graphic creation
- Support for OPC UA and Modbus RTU/TCP protocols
- IIoT ready (MQTT)
- Real-time clock

HP800 Series Touch Screen



- Industrial touch screen display
- 15.6" (1366 x 768) and 21.5" (1920 x 1080)
- IP65 front panel
- Capacitive and resistive touch panel models
- HDMI, DP and VGA interfaces
- 16:9 format
- Panel mount and VESA-mount (75 x 75mm)

GL10 and GR10 Expansion Modules



- Local & remote I/O expansion for H3U, H5U and AM600; remote for AC700 and AC800 series
- 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
- EtherCAT switch

H5U Motion Controller



AM400/600 Motion Controller



- Able to control up to 32 EtherCAT axes
- Up to 16 local expansion modules (GL10)
- 16 x high-speed inputs
- 8 x high-speed outputs
- Built-in 2 x incremental encoder inputs
- IEC 61131-3 programming environment (CODESYS)
- Multiple communication protocols:
 - Modbus RTU/TCP
 - Ethernet IP
 - CANopen/CANlink
 - OPC UA

- Compact footprint
- Able to control up to 32 EtherCAT axes (72 slaves)
- Up to 16 local expansion modules (GL10)
- Built-in I/Os
 - 16 DIs (with 4 x 200 kHz channels)
 - 14 DOs (with 4 x 200 kHz channels)
- 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, and SFC language support
- Multiple communication protocols:
 - Modbus RTU/TCP
 - CANopen/CANlink
 - PROFINET slave (can be used as gateway)

LMC Linear Motors



- Available sizes: 88, 118, 168, 188, 218 mm
- Rated force from 51 to 1235 N
- Peak force from 99 to 2717 N
- Speed up to 5 m/s
- Acceleration up to 5 g
- Effective stroke up to 6000 mm (LMC118)
- Position repeatability of $\pm 2 \mu\text{m}$
- Low cogging, silent operation

Direct Drive Motors (MP1 and ISMT1 Series)



Series	MP1				ISMT1	
Frame	112	175	140	160		
Rated speed (rpm)	300	350	330	330	120	120
Maximum speed (rpm)	500	500	500	500	240	150
Rated torque (N·m)	4.2	36	36	36	4	15
Maximum torque (N·m)	10.5	108	108	108	12	45
Positioning repeatability (arcsec)	±1.2	±2	±2	±2	±3	±3
Absolute positioning accuracy (arcsec)	±18	±20	±20	±4	±30	±30
Certifications	CE, cUL					

- High accuracy and efficiency
- Fast response
- Easy integration and commissioning

SCARA and 6-Axes Industrial Robots



- SCARA:
 - Floor and ceiling mounted models
 - Arm length: 350 – 1200 mm
 - Payload: 4 – 50 kg
- 6-Axes articulated:
 - Arm length: 545.7 - 2045 mm
 - Payload: 4 – 20 kg
- Maximum repeatability accuracy can reach ±0.01 mm
- Standard interfaces: EtherCAT, TCP/IP, EIP, Modbus TCP, MC, RS485
- Optional interfaces: PROFINET (slave)
- Optional safety card for advanced safety functionality
- Various programming tools available:
 - Teach pendant wizard
 - PC software
- Built-in vibration suppression and optimal trajectory algorithm



Flexⁿ CNC

- CPU : Celeron series J6413 or Intel i3
- 8GB RAM, 128GB SSD
- Integrated Security Chip
- Protocols: EtherCAT, Modbus TCP, Ethernet/IP, OPC UA
- Fast commissioning with Engineering tool, Backup, logic analyzer
- Integrated axis optimization tools
- Integrated CAD/CAM with nesting
- Ready to use solutions: cutting (laser, plasma, waterjet) and milling



MEG Motors

- PM Synchronous motors
- 23 bit serial encoder feedback
- Foot mount option

ES680N PIMM Dedicated Drive



- 3 ph 400V supply: 11 - 355 kW
- Overload: 150% for 1 min, 160% for 20 s, 178% for 2 s
- STO SIL 3 PL e
- EtherCAT interface compliant to CiA 402 (PP, PV, PT, HM, CSP, CSV, CST)
- 23-bit serial encoder interface
- Dedicated functions for PIMM applications

Series	Frame size (mm)	Rated speed (rpm)	Maximum speed (rpm)	Rated power (kW)	Rated torque (N·m)	Cooling type
MEG20	200	1700	3000	7.1 - 34.1	40 - 196	Air cooled
		2000	3000	8.0 - 37.9	38 - 181	
		2200	3000	8.5 - 41.2	37 - 178	
MEG23	230	1700	3000	41.4 - 63.7	233 - 357	Air cooled
		2000	3000	47.5 - 72.7	227 - 348	
		2200	3000	50.7 - 78.6	220 - 341	
MEG26	260	1500	2000	60.5 - 80.1	385 - 510	Liquid cooled
		1700	2200	35.6 - 68.5	200 - 385	
		2000	2500	41.9 - 70.2	200 - 335	
MEG36	360	1200	1500	94.2 - 188.5	750 - 1500	Liquid cooled
		1700	2000	133.5 - 267	750 - 1500	

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