

# The Modicon<sup>®</sup> M340<sup>™</sup> PAC

Simple, Versatile and Exceptionally Powerful



Make the most of your energy<sup>SM</sup>

**Schneider**  
Electric

# Simple, intuitive and yet exceptionally powerful!

Extremely powerful, rugged and compact, the Modicon M340 Programmable Automation Controller (PAC) provides cutting-edge features and high-end performance in a mid-range processor. Using commercial integrated circuit technology, the M340 PAC utilizes modern data networking to interact with distributed inputs/outputs (I/O), drives, other PLC devices and enterprise-type entities. It also uses the same Unity™ Pro application development software as the Modicon Quantum™ and Premium™ equipment, making it easy to quickly select, program and implement the controller to optimally manage simple to complex applications.



## Advantages for your application

The Modicon M340 PAC provides numerous cost and performance advantages over comparably priced PLCs by:

- Requiring no battery, which helps to minimize maintenance costs and helps to eliminate program loss as a result of a power failure.
- Offering a compact size (4 in. height by 3.7 in. depth), which reduces panel size and costs.
- Utilizing high-density 64 point I/O cards that are only 1.25 in. wide and provide the ability to manage large amounts of I/O in a very compact space.
- Offering pre-terminated cables with flying leads or Telefast® connections to reduce wiring time.
- Using CANopen networks to reduce field wiring and lower installation costs.
- Utilizing USB cables rather than proprietary cables, thereby promoting open standards.
- Enhancing processing power with 4 Mb of internal RAM, up to 128 Mb of additional memory on an SD flash memory card and an execution speed of up to 8.1 K instructions/ms.
- Exceeding IEC requirements for shock and vibration.

## 1 Compactness

- Height: 100 mm or 3.937 in.
- Depth: 93 mm or 3.661 in. for integration in 150 mm or 5.906 in. enclosures

## 2 Adaptable rack

- 4, 6, 8 or 12 modules
- Extensible up to 4 racks
- “Hot Swap” function for easy maintenance

## 3 High density module

- 64 discrete channels in 32 mm or 1.260 in.

## 4 Wide power supply choice

- 24...48 Vdc
- 24 Vdc/0.9 A sensor supply output
- 100 ... 240 Vac

## 5 Integrated USB port

- For a programming terminal or human/machine interface

## 6 Two communication ports

- Choose Modbus®, Ethernet or CANopen

## 7 Adaptable harsh environment

- Conformally coated to withstand harsh environments
- Extended temperature: -25° C to 70° C



# More of what you need!

## It's rugged and reliable

The Modicon M340 PAC requires no batteries and exceeds IEC requirements for temperature, shock and vibration standards. This translates into more mounting options, continuous operations at remote locations and the security that programming won't be lost during power outages.

## It's smart

New memory cards enable the Modicon M340 PAC to "Hot Swap" modules without rebooting the PLC for faster access and responsiveness. In addition, 4 Mb of memory improves the sharing of data by storing drawings, bills of materials and cut sheets right inside the PLC's memory, as well as using faulty device replacement (FDR) to store configurations and load them into replacement devices such as drives. There's also an SD flash memory card with up to 128 Mb available for application backup including the executable program, source code and comments and data.

## It's web friendly

The Modicon M340 PAC features an embedded web browser, which utilizes Schneider Electric's Transparent Ready® web-based connectivity platform for remote monitoring and troubleshooting. This also enables users to maintain an accurate record of equipment life and schedule predictive maintenance based on known variables and milestones.

## It's connectable

Implementation and connectivity have never been easier as the Modicon M340 PAC embeds Modbus® Master serial protocol and Ethernet on the same processor. In addition, installation costs and wiring errors are reduced by utilizing a CANopen network, FCN/HE10 connectors, preterminated cables with flying leads and standard USB cabling to link to your programming PC.

# 100% certified

The Modicon M340 PAC platform conforms to international standards and marine classifications.

### Counting



## It counts

The counting offer on Modicon M340 PAC programmable controllers includes:

- Two modules: 2x60 kHz channels and 8x10 kHz channels, high performance with 32-bit counting, cycle time 1  $\mu$ s, two capture registers and reflex actions with response time down to 200  $\mu$ s
- Configurable advanced services offering a filter on each input, a wide choice of reflex actions, pulse generator, mechanical play reducer
- Counting and measurement mode configurable functions

### Positioning



## It positions

The Modicon M340 PAC offers positioning solutions that are integrated, flexible and highly economical for applications implementing independent and master/slave linked axes. No axis module needs to be added to the configuration because the solution is based on a motion function block (MFB) library conforming to PLCopen standard. Variable speed drive and servomotor control is by MFB commands via CANopen.

### Control Loop



## It controls

A library of control loop functions is integrated as standard in Unity Pro software. IEC 61131-3 function block diagram language enables completely graphic and highly flexible programming. You therefore optimize your control loop algorithm and keep control of the operation.

In addition to PI and PID controllers, the library integrates numerous advanced blocks:

- PID automatic adjustment (autotune)
- Integrator with limitation, first and second order variation limiter
- Two- or three-position controller, PI hot/cold, PIP and PPI cascade
- Function generator
- PD/PI regulator structure switching
- Duration pulse modulation





# 0% worry

It is the perfect accompaniment to Modicon Premium and Quantum PLCs, satisfying industrial process, infrastructure and OEM automation demands. Associated with the power and flexibility of Unity Pro software, it offers you benefits throughout the lifecycle of your applications.

# Reduce your development costs

## Sustainable

The Unity Pro development software is the only programming tool you need to fully develop, test, debug and manage your applications that leverage the current Modicon line of industrial controllers. Its versatility, ease-of-use and built-in library of pre-tested application function blocks allow users with multi-processor applications to share ideas and information visually, so individuals and teams can benefit from their collective experience and work together more effectively. As a result, you save time and money by reducing on-site development, installation times and debugging across your application's entire lifecycle.

## Choose your language

The Unity Pro software offers five IEC 61131-3 languages as standard. Each section of code can be programmed in the language of your choice, adapted to each processing operation. All edit, debugging and operation tools are accessible whatever the language used.

- LD: ladder diagram
- IL: instructions list
- ST: structured text
- SFC: sequential function chart
- FBD: function block diagram





## Talk to someone you can trust

When we introduced the first programmable controller, we were responding to the needs of our customers for better, more effective machine control. More than 40 years later, we continue to listen and work with you to pioneer innovative new ways of delivering value, efficiency and performance.

This commitment has earned us a reputation for dependability, innovation and reliability that is the defining characteristic of Schneider Electric team members from around the world. This includes product specialists, industry experts, distributors, partners and the countless other members of the Schneider Electric family.

For more information on how to put Schneider Electric to work for you, or about the Modicon M340 PAC, visit [www.us.Schneider-Electric.com/PLC](http://www.us.Schneider-Electric.com/PLC) or contact your Schneider Electric sales representative or distributor.

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