



- Flexibility
- Connectivity
- Serviceability

Powerful Tightening Control On A Single Platform

The **mPro400GC**. Innovation For Safety Critical Applications.

Cleco®

The Most Flexible, Cost-Effective Systems Controller... Ever

Introducing the Cleco **mPro400GC** Global Controller, the first controller for safety-critical applications that offers unsurpassed levels of flexibility, connectivity, and serviceability while providing superb torque accuracy and process control. This new controller incorporates the advanced technical features of the proven DGD mPro system with the user-friendly software of the trusted Cleco TME controller, resulting in a powerful control solution that offers impressive cost savings through unequalled flexibility.

Corded, Cordless, Or Fixtured ... All From One Controller

The Cleco **mPro400GC** Global Controller is compatible with all Cleco 18-48 Series DC electric corded tools, LiveWire cordless tools, and all DGD and EMT fixtured spindles. That means fewer controllers and cables are needed for your line. And that means savings...up to 50% over traditional systems.

Reduce System Costs Up To 50%

■ Configure up to 32 DC spindles in varying configurations. Consult your Apex representative for details.

■ Facility Cost Savings

- Installation Expenses: Save on Ethernet and power drops, controller stands, cable management, labor to install and support
- Production Expenses: One controller means fewer backups, fewer repairs, fewer headaches and one-time training



Universal Connectivity For Ultimate Flexibility

Universal connectivity begins with global auto-sensing input voltage, 16 configurable inputs and outputs, plus DeviceNet, Ethernet-IP, Profibus and Profinet fieldbus standards. User-friendly software mapping of discrete and fieldbus selections provides ultimate error-proofing control. Dual fieldbus ports allow redundant I/O mapping or expansion. Utilize two different fieldbus standards simultaneously for maximum flexibility.

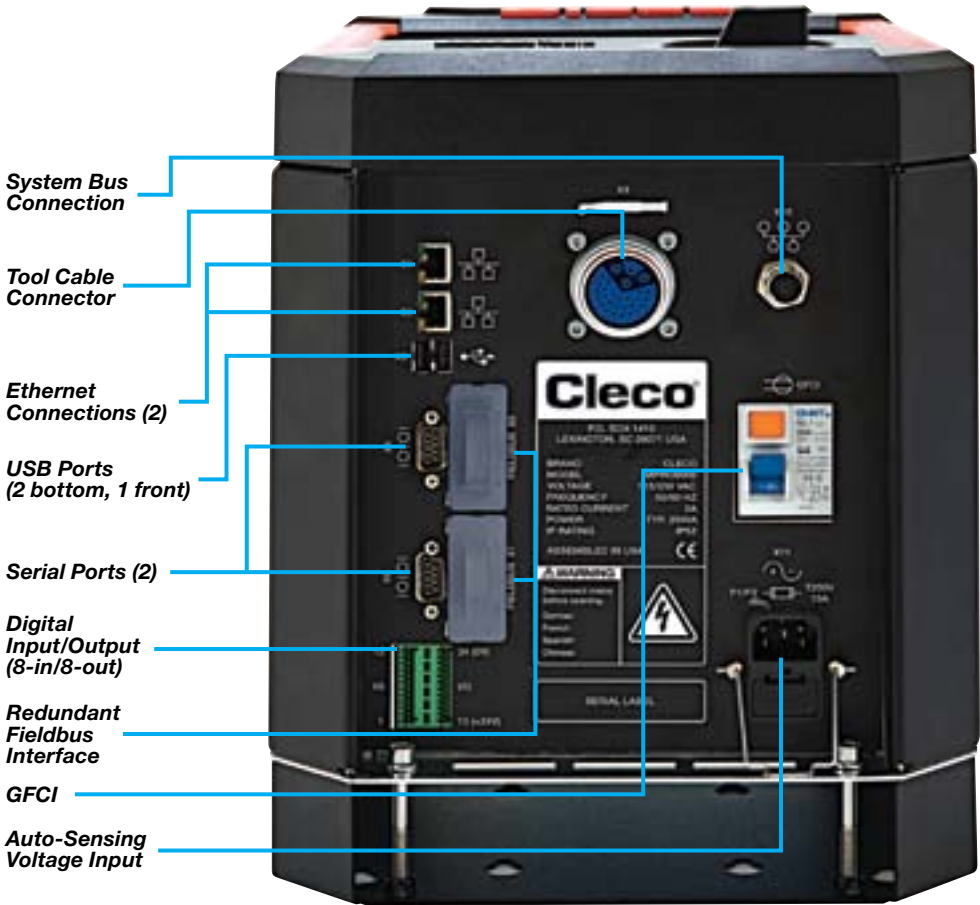
The Cleco **mPro400GC** Global Controller comes standard with a system bus to manage internal data flow and avoid burdening outside networks. It can be utilized for rapid “grab and go” connectivity to accessories, such as adding error-proofing from socket trays,

stack lights, or operator boxes. Configurable software menus allow quick integration into any process. With up to 32 configurable nodes on the system bus, endless error-proofing combinations are possible.

The system bus can manage up to 15 secondary controllers in combination with single and multi-spindle stations. Spindle sequencing, data management, and diagnostics are just a few of the many functions performed. In addition, new DGD® Fixture Intelligent Spindles can utilize the system bus to drive up to 30% of cost out of a traditional system through cable reduction, maximizing acquisition and facility cost savings.

Universal Connectivity

- Auto-Sensing Voltage
- 16 Configurable I/O's
- Redundant Fieldbus
- Redundant Serial and Ethernet Ports
- Isolated System Bus



Rundown Data Storage

The **mPro400GC** supports TorqueNet, our data collection and archiving software, as well as other industry standard software packages. Protocols are available for many of the standard products.

The Cleco **mPro400GC** Global Controller works seamlessly with current protocols and offers significant performance advantages over traditional systems. Features include:

- A single software program that covers both standard and fixtured applications
- Standard spindle sequencing and reject management
- 19 advanced fastening control sequences standard at no additional cost
- Remote programming software with no licensing restrictions
- Touch screen display with integrated alpha-numeric keyboard

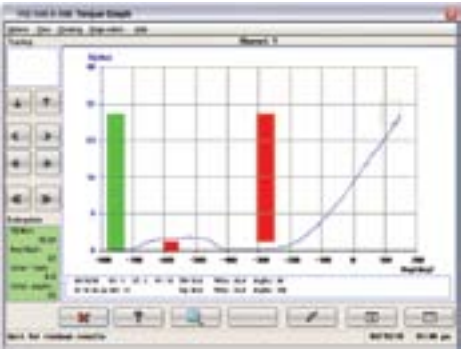
No Software Licensing!



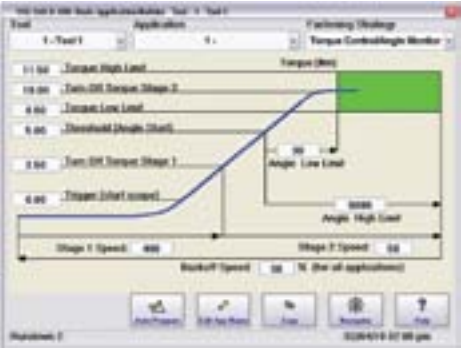
User Friendly GUI



Oscilloscope Process Management



Quick-Start Auto Program Option



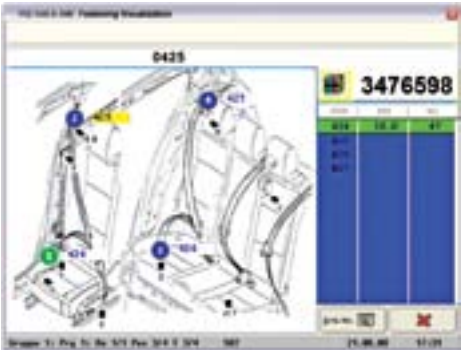
In-Depth Data Management

The screenshot displays a table with multiple columns and rows of data, representing in-depth data management. The table is titled "In-Depth Data Management".

Easy-To-Read Run Screen



Digital Image Bolt Sequencing



Superior Serviceability For Exceptional Ease-Of-Use



Installation Flexibility

At only 10" w X 15" h X 15" d (254mm X 381mm X 381mm) and weighing just 30 lbs. (13.6 kg.), the Cleco **mPro400GC** is substantially smaller and lighter than most traditional controllers. It can be lifted easily by a single person and will mount just about anywhere.

Quick Mount Bracket

No more templates and measuring mounting hole patterns...installation of the **mPro400GC** is simple with a separate receiver bracket that makes locating mounting holes easy. The unit then attaches directly to the bracket so the installation is fast and foolproof.



Integrated Cable Management

The **mPro400GC** mounting bracket incorporates an integral cable management channel, so installations stay orderly and easily accessible. Clearly labeled connectors and top-down cable routing means a clean installation with no guesswork. Mounting was designed to be simple and effective to get you up and running fast.

CompactFlash® Memory For Production Uptime

A standard CompactFlash card reliably stores:

- Operating system
- Drivers
- Network settings
- Application parameters
- Torque data

**50
Second
Boot!**



Positioned on the back of the unit for added security and tamper resistance, the card is still easily accessible.

- Rapid controller swap with 50-second boot
- No licensing or proprietary hardware
- Card stores up to 10,000 rundowns per tool

Secondary Controller Functionality

A secondary controller is controlled from a master or primary unit. It has I/O for local error proofing and peripherals, plus a LCD for operator feedback and troubleshooting.



10"x15"x15"
(254mm X 381mm X 381mm)
**And Just
30 lbs.**
(13.6 kg.)

Controllers

| Description | Tool Compatibility | Model |
|-----------------------|---|----------------|
| Primary | Cleco 18-48 Series, LiveWire, Intelligent Spindle* | MPRO400GC-P |
| Primary 1-2 | LiveWire, Intelligent Spindle*, DGD/EMT Fixtured Spindles - Size 1-2 | MPRO400GC-P-12 |
| Primary 3-4 | DGD/EMT Fixtured Spindles - Size 3-4 | MPRO400GC-P-34 |
| Secondary | Cleco 18-48 Series | MPRO400GC-S |
| Secondary 1-2 | DGD / EMT Fixtured Spindles - Size 1-2 | MPRO400GC-S-12 |
| Secondary 3-4 | DGD / EMT Fixtured Spindles - Size 3-4 | MPRO400GC-S-34 |
| Master | LiveWire, Intelligent Spindle* | MPRO400GC-M |
| Current Control | Cleco 18-48, CPE, CAE, or CSE | MPRO400GC-I |
| Torque Control | Cleco 18-48, EPE, EAE, or ESE | MPRO400GC-E |
| Isolation Transformer | Cleco 17-47-67 Series, 18-48 Series Matrix Tools | 544185PT** |

* Requires quote to accommodate hardware configurations.

** See chart below for required cables.



Cables

| Tool | Extension | Description | Connectors |
|----------------------|----------------------|----------------------------------|-----------------|
| 301866- <u>XM</u> | 301877- <u>XM</u> | Straight, Std. Durability | AirLB - AirLB |
| 301903- <u>XXX</u> | | Angle Swivel, Std. Durability | AirLB - AirLB |
| 301904- <u>XXX</u> | | Straight Swivel, Std. Durability | AirLB - AirLB |
| 542778- <u>XM</u> ** | 542779- <u>XM</u> ** | Straight, Std. Durability | Matrix - Matrix |

(X = 1,2,3,6,8,10,15) Meters

(XXX = 010, 020, 030, 040, 050, 060, 080, 100, 120, 130, 140, 150, 180, 220) Decimeters

Maximum tool to controller cable length 20M.

**Required for use with Isolation Transformer.



Accessory Cables

| Part No. | Accessory Cable Description |
|-------------|-------------------------------|
| S133412 | System Bus Terminator |
| S133408-005 | System Bus Cable - 0.5M Bus |
| S133408-020 | System Bus Cable - 2M Bus |
| S133408-050 | System Bus Cable - 5M Bus |
| S133408-200 | System Bus Cable - 20M Bus |
| S133408-500 | System Bus Cable - 50M Bus |
| 543446-7 | Ethernet Cable Crossover - 2M |
| 543445-7 | Ethernet Cable Patch - 2M |
| 935170 | Serial Cable IrDA - 1M |
| 543490-10 | Serial Cable Null Modem - 3M |

Accessories

| Part No. | Accessory Description |
|----------|---------------------------------------|
| 543995 | Access Point 2.4GHz WLAN (US) |
| 961323 | Access Point 2.4GHz WLAN (EU) |
| S133437 | System Bus 16 I/O Expander |
| S133436 | System Bus 32 I/O Expander |
| S133410 | System Bus 4-Position Socket Tray |
| S133411 | System Bus 8-Position Socket Tray |
| S133406 | System Bus Control Box with Buzzer |
| S133405 | System Bus Stack Light without Buzzer |
| S133420 | System Bus Stack Light with Buzzer |
| 544171PT | Fieldbus Devicenet |
| 544172PT | Fieldbus Ethernet-IP |
| 544173PT | Fieldbus Profibus |
| 544174PT | Fieldbus Profinet |
| 544163PT | CompactFlash Module Programmed |
| 544183PT | Cleco Remote Programming Software |

