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ELECTRICAL SUPPLY

Tech Talk
Online Seminars

E300/E200 Electronic Overloads

October 27, 2021

Technical Seminars from TRC

Register to receive a calendar invite

THE REYNOLDS COMPANY
ELECTRICAL SUPPLY

TECH TALK

- **Automation Fair Preview**
  Wed, November 3, 2021 @ 10am

USER GROUP

- ***See you in January 2022…***

YouTube

TRC Talks
a podcast on industrial automation

Visit our **Resources** page on **reynoldsonline.com**

Automation Fair 2021

NOV 10-11, 2021 • HOUSTON, TEXAS & ONLINE

With your health and safety top of mind, we are excited to welcome you to participate in the 2021 Automation Fair® event in-person in Houston, Texas or online in our hybrid experience.

The Automation Fair experience will feature engaging keynote presentations, interactive hands-on labs and technical sessions, industry-centric panel discussions, an exciting show floor showcasing the latest innovations and solutions from Rockwell Automation and members of our PartnerNetwork™, and the opportunity to participate in networking activities with your peers in the field.

Join us this November to experience the value and power of our IT/OT expertise.

Our Guest Panelists

Todd Abshier
Automation Specialist – Industrial Controls
The Reynolds Company

E300/E200™ Electronic Overload Relay

Advanced Networked Motor Control & Protection

January 2020

Bruce Venne, P.E. • Global Product Manager – Motor Protection Solutions

RA Overload Relay Portfolio

Global Tiered OL Product Strategy

Premium

Performance

Basic

193-T (Bi-metal)
Non-networked

E100 (Elec)
Non-networked

E200 (Elec)
Non-networked

E300 (Elec)

EtherNet/IP &

DeviceNet

Overload Portfolio Feature Comparison

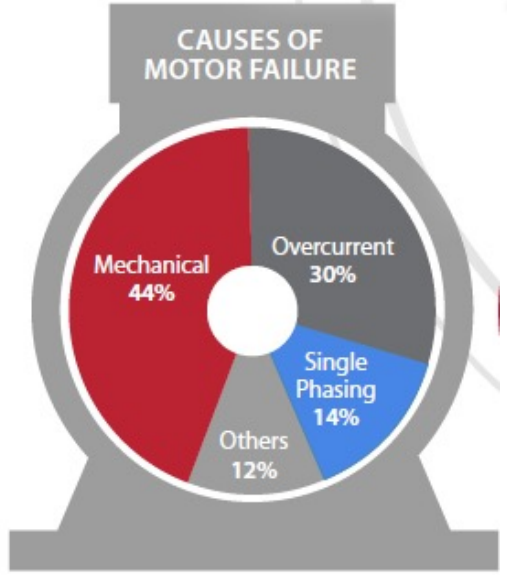
	MachineAlert	Bimetallic	E100	E200	E300
Protection Features					
Overload		✔	✔	✔	✔
Phase loss	✔		✔	✔	✔
Ground fault			✔	✔	✔
Current imbalance		✔		✔	✔
Jam	✔		✔	✔	✔
Over/under voltage	✔			✔	✔
Voltage imbalance	✔			✔	✔
Over/under power	✔			✔	✔
Diagnostics Features					
% Full load amperes			✔	✔	✔
% Thermal capacity utilization			✔	✔	✔
Voltage				✔	✔
Power				✔	✔
Energy				✔	✔
Integration Features					
DeviceLogix™				✔	✔
Logix controller					✔

Increased Protection, Performance, & Features

E300 – Advanced Electronic Overload Relay

Overview

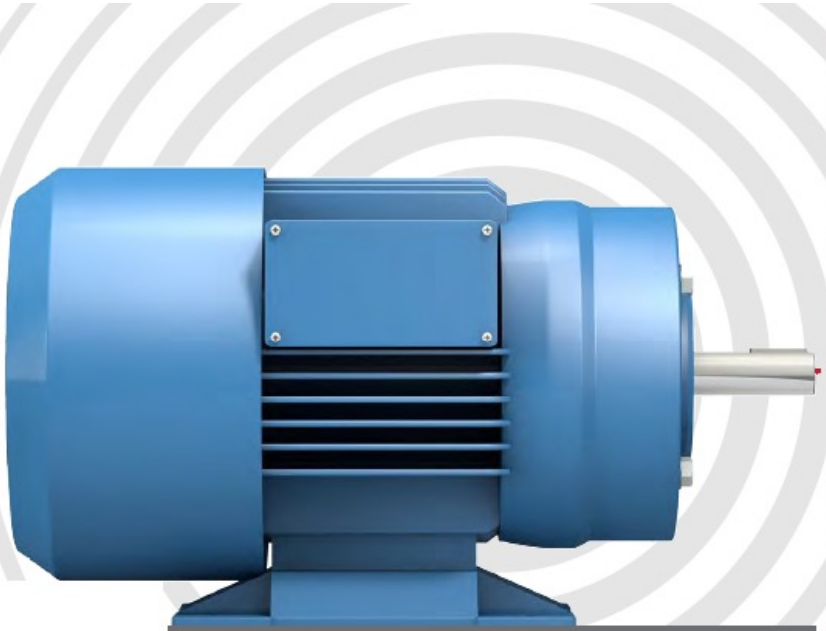
The E300™ Electronic Overload Relay is the latest technology for motor protection that will help reduce your motor control investment and keep your plant running.



- Intelligent Motor Control
  - Native EtherNet/IP & DeviceNet connectivity with easy commissioning, control, and monitoring.
- Scalable Solutions
  - Modularity in the design provides the right solution to fit the target application.
- Diagnostic Information
  - Motor diagnostics to reduce troubleshooting and unplanned downtime.

Simultaneous real-time control, configuration, and data acquisition

Intelligent Motor Control and Diagnostics



- Current
- % Thermal Capacity Utilization
- Trip / Warning Histories
- Time to Trip
- Time to Reset
- Operational Hours
- Number of Starts
- Voltage
- Energy & Power

The conventional approach

Many devices are still hard wired and unable to communicate with higher level control systems and are therefore unable to provide access to real-time data.

- No access to real-time data
- ON, OFF and Tripped - no pre-warnings possible
- User manual fault finding process - no diagnostic data
- Unnecessary downtime periods
- Higher maintenance costs possible
- Changing parameters requires a specialist engineer
- Hard to track and record energy costs

Today's intelligent approach

- Seamless communication and system visibility for increased performance and flexibility
- Operate and maintain motor performance through intelligent equipment and networks
- Reduce unplanned downtime with alarms and advanced diagnostic information
- Monitor energy consumption
- Remote monitoring helps keep personnel away from potential hazards
- Simplified troubleshooting and reduced start-up times

E300 – Advanced Electronic Overload Relay

Modular Design

Communication Module

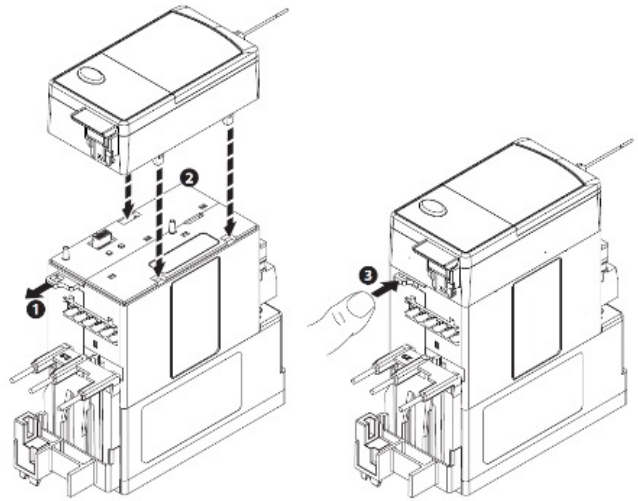
Control Module

Sensing Module

REMOVABLE TERMINAL BLOCKS

IEC OR NEMA STYLE POWER STABS

E300 Overload Relay modules easily snap together and are secured with locking tabs.



54 Pre-Configured Operating Modes

- Overload
- Non-reversing Starter
- Reversing Starter
- Wye/Delta Starter
- Two-speed Starter
- Monitoring Device

Scalable Solutions

The modular design allows users to have choices in each of the sensing, control, and communications modules with additional accessories to tailor the E300 overload relay for the exact needs of the application:

- Multiple Communication Options *(EtherNet/IP, DeviceNet, USB Type B)*
- Multiple Sensing Capabilities *(Current, Ground Fault Current, and Voltage and Power)*
- Simplified Control Wiring *(120V AC, 240V AC, and 24V DC)*
- Wide Current Range *(10:1 and Higher)*
- Expansion I/O *(Digital and Analog I/O)*
- Operator Interfaces *(Multiple Languages)*
- Modular Configuration for Fast Replacement

E300 Sensing Modules

- Consists of Three Styles
  - Voltage / Current / Ground Fault (VIG)
  - Current / Ground Fault Current *(IG)*
  - Current *(I)*
- Each has Four Current Ranges
  - 0.5 – 30 A
  - 6 – 60 A
  - 10 – 100 A
  - 20 – 200 A

New 100-E Contactor Mounting (20-200 A)

200 A NEMA Size 4

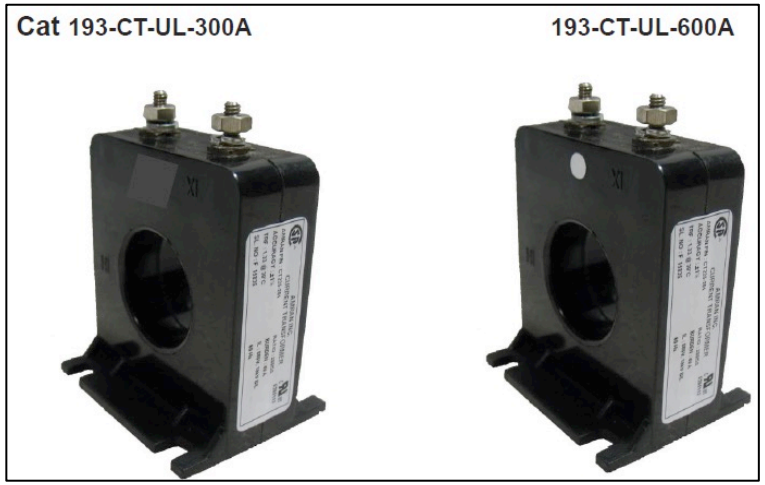
200 A 100-D140 with Terminal Covers

193-ESM-VIG-200A-T with Terminal Covers

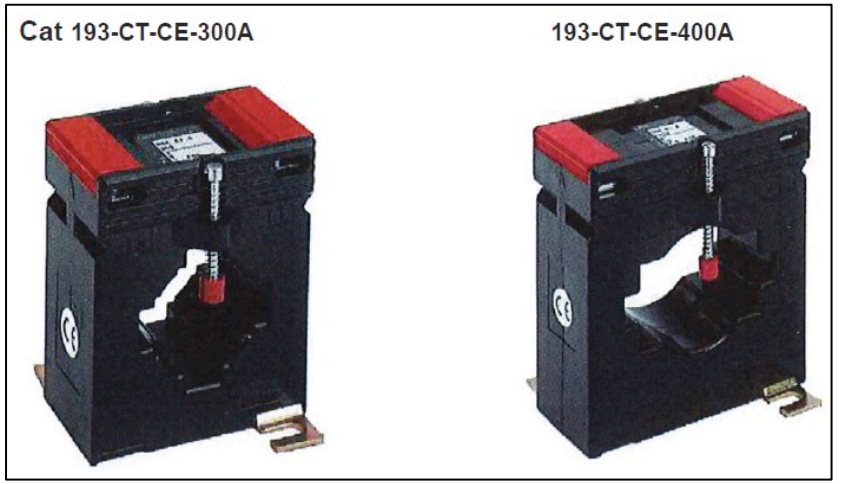
200 A Pass-thru (up to 1000V rated)

E300 New Current Transformer (CT) Kits

- Consists of Two Types
  - UL – 300 A and 600 A
  - CE – 300 A and 400 A



Catalog Number	Current Ratio	Accuracy (60 Hz)	Burden VA
193-CT-UL-300A	300:5A	± 1 %	8.0
193-CT-UL-600A	600:5A	± 1 %	30.0



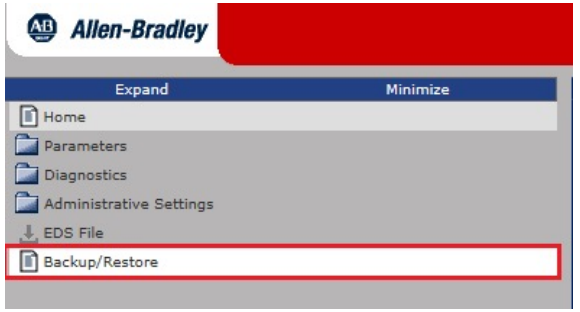
Catalog Number	Current Ratio	Accuracy (60 Hz)	Burden VA
193-CT-CE-300A	300:5A	± 1 %	1.5
193-CT-CE-400A	400:5A	± 1 %	1.5

E300 Control Modules

- I/O Only
  - 4 Inputs 240V AC / 3 Outputs
  - 4 Inputs 120V AC / 3 Outputs
  - 6 Inputs 24V DC / 3 Outputs
  - 2 Inputs 240V AC / 2 Outputs
  - 2 Inputs 120V AC / 2 Outputs
  - 2 Inputs 24V DC / 2 Outputs
- I/O and Protection
  - 2 Inputs 240V AC / 2 Outputs / PTC / GF
  - 2 Inputs 120V AC / 2 Outputs / PTC / GF
  - 4 Inputs 24V DC / 2 Outputs / PTC / GF

New Reduced I/O Count Control Modules w/ Series B

(Series B Only)

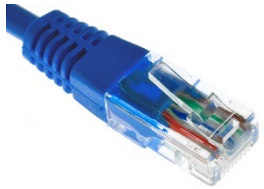


Series B Change from Series A

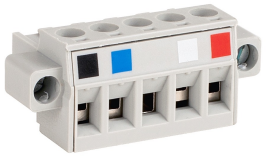
- Highlighted Changes
  - No change to form factor or fit in E300 stack
  - Parameter back-up/restore via web server
  - Exida SIL2 Certification (EN61508)

E300 Communication Modules

- Consists of Three Styles
  - EtherNet/IP
  - DeviceNet
  - Parameter Configuration Module (E200/PCM)



- Dual RJ45 Ports
- Supports Star, Linear, & Ring Topologies
- Embedded Web Server
- Add-on Profile (AOP) & HMI Faceplate Objects



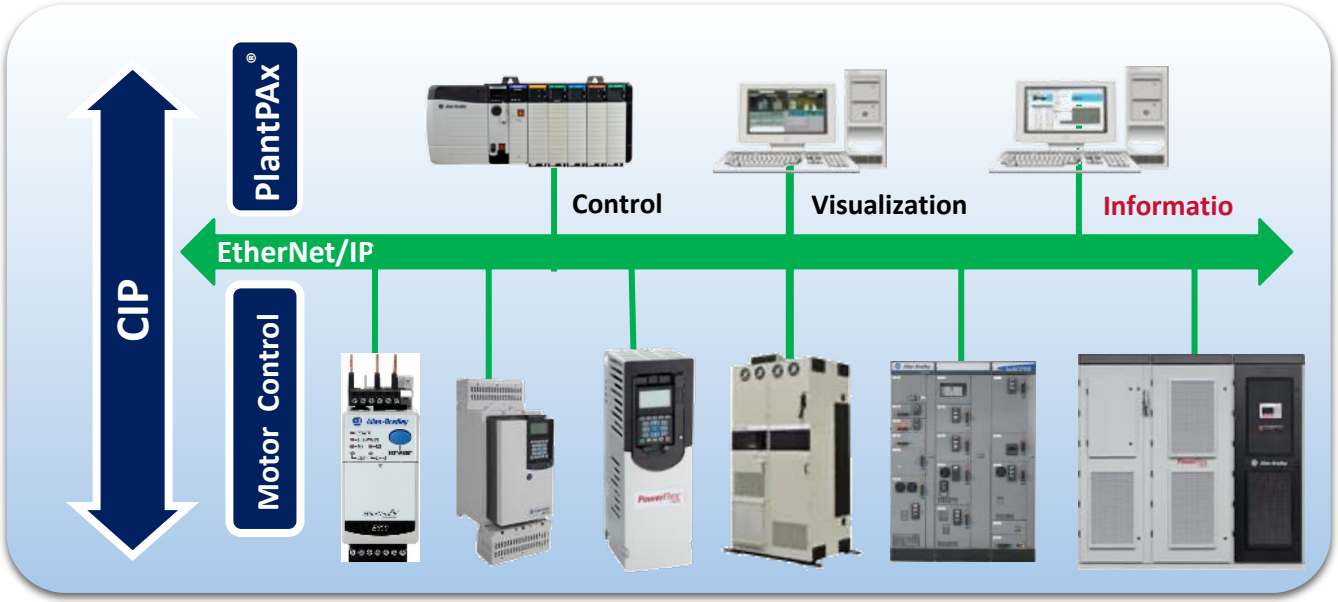
- Single 5-pin DeviceNet connector
- E3/E3+ Emulation Mode (Ser. B Only)
- Automatic Device Replacement (ADR)
- Rotary Dials to set Node Address

- Non-networked
- Configurable with CCW
- 8-pos DIP switch for protection feature selection
- Rotary Dials to set Motor FLA

Intelligent Motor Control

The E300 is fully integrated into the Integrated Architecture®

- Network connectivity - *Native EtherNet/IP and DeviceNet reduces hardware and engineering cost*
- Integrated into Logix – *Device profiles and faceplates help reduce engineering time and project development*
- Automatic Device Configuration – *Reduces time to repair*



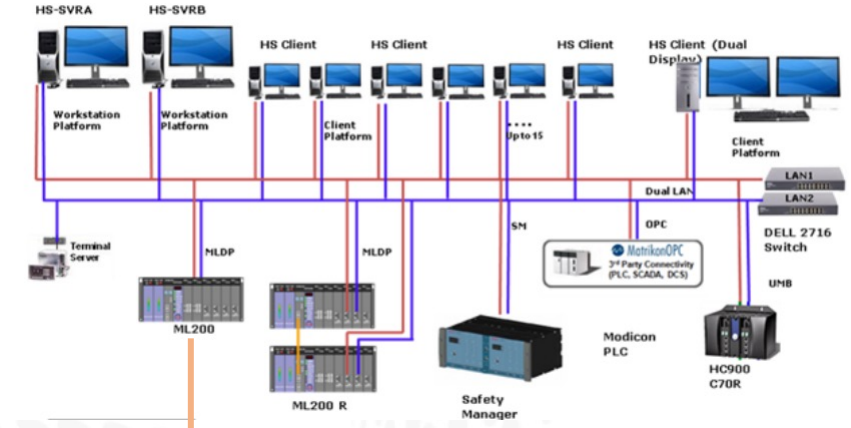
Simultaneous real-time control, configuration, and data acquisition

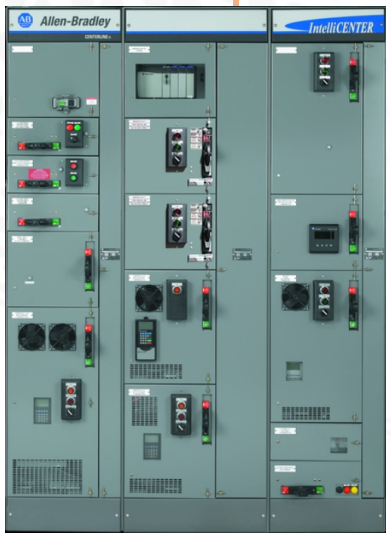
Modbus TCP/IP within LVMCC

Anybus E300 MBTCP

MODBUS TCP COMMUNICATION MODULE FOR THE ALLEN-BRADLEY E300 ELECTRONIC OVERLOAD RELAY

- Solution includes premium drives, soft starters, and now fixed speed starters for both CENTERLINE 2100 and 2500 offerings
- Aligns with the needs of customers within key industries such as oil and gas and other heavy industries
- Reduces hardware costs required to integrate an LVMCC into a third-party PLC or DCS





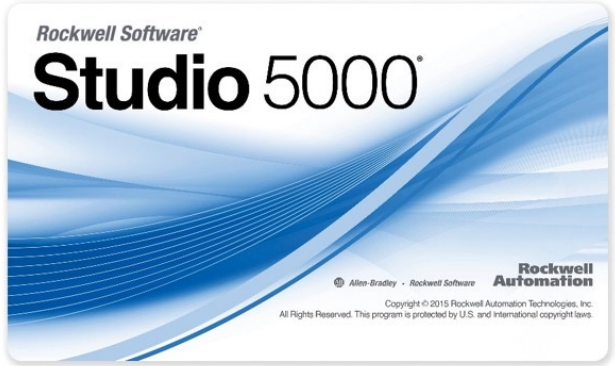
E300 Overload Relay Modbus TCP/IP Communication Module

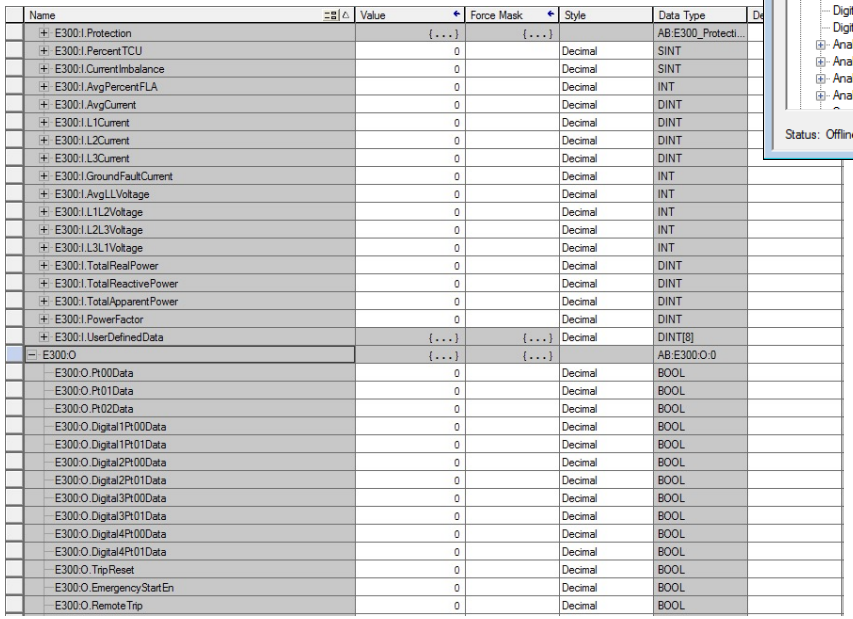
- HMS-branded E300 communication module with native Modbus TCP/IP communication
- No change in form factor within the MCC – maintains existing Ethernet cabling, control wiring and mounting
- Maintain existing network Stratix 5700 switch infrastructure
- Reduces commissioning time and effort with predefined Modbus registers for complete overload relay functionality
- Embedded webserver for complete parameter access and configuration

Easy Integration Into Logix

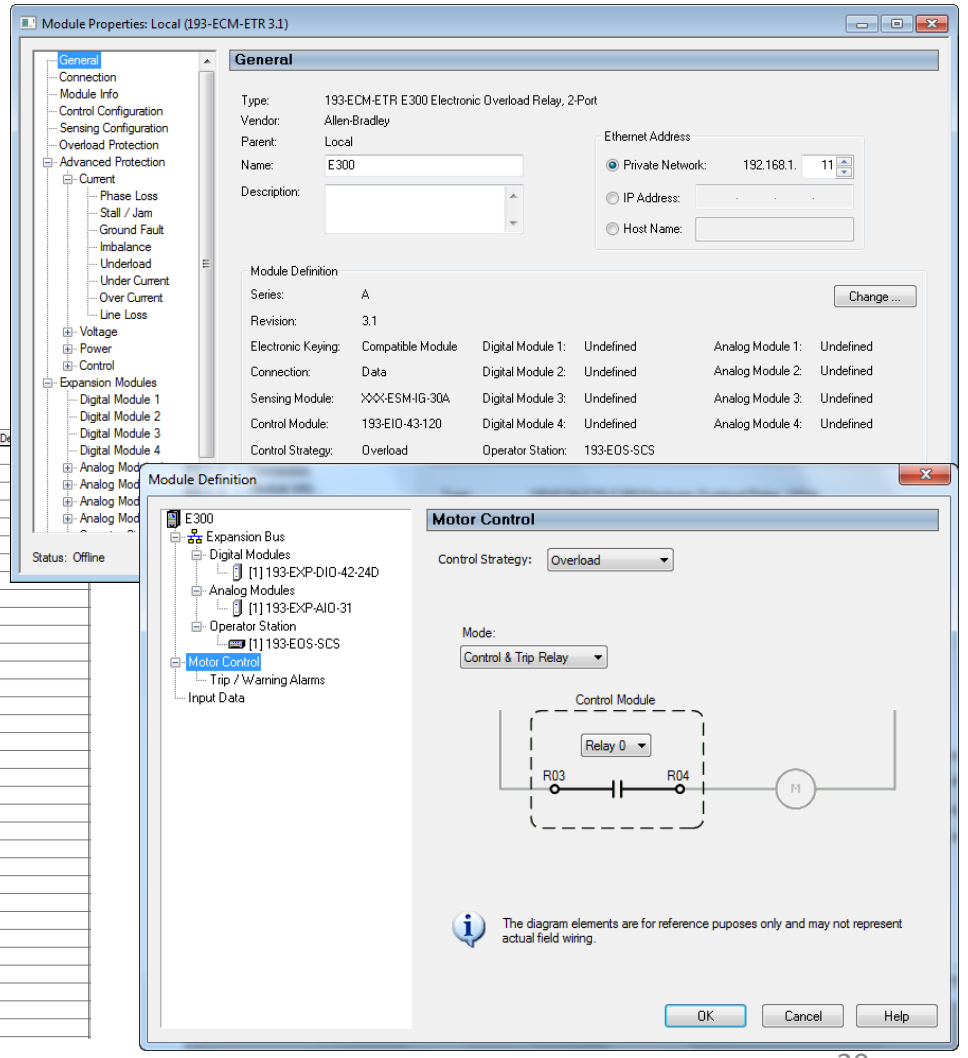
The E300 has an Add-on Profile for RSLogix 5000® and Studio 5000 Logix Designer® environments.

- Creates meaningful tag names
- Configures the E300 (supports ADC)
- Tested to v16 of RSLogix 5000





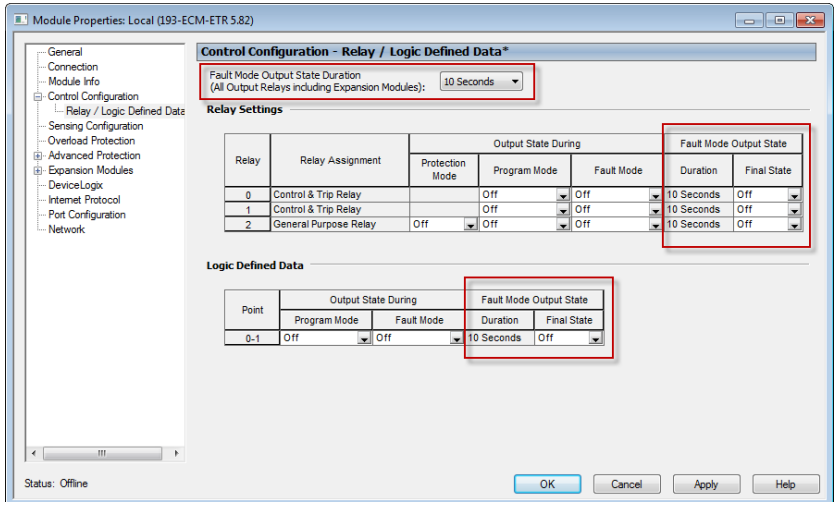
Name	Value	Force Mask	Style	Data Type
E300:I.Protection	{...}	{...}		AB:E300_Protecti...
E300:I.PercentTCU	0		Decimal	SINT
E300:I.CurrentImbalance	0		Decimal	SINT
E300:I.AvgPercentFLA	0		Decimal	INT
E300:I.AvgCurrent	0		Decimal	DINT
E300:I.L1Current	0		Decimal	DINT
E300:I.L2Current	0		Decimal	DINT
E300:I.L3Current	0		Decimal	DINT
E300:I.GroundFaultCurrent	0		Decimal	INT
E300:I.AvgLLVoltage	0		Decimal	INT
E300:I.L1L2Voltage	0		Decimal	INT
E300:I.L2L3Voltage	0		Decimal	INT
E300:I.L3L1Voltage	0		Decimal	INT
E300:I.TotalRealPower	0		Decimal	DINT
E300:I.TotalReactivePower	0		Decimal	DINT
E300:I.TotalApparentPower	0		Decimal	DINT
E300:I.PowerFactor	0		Decimal	DINT
E300:I.UserDefinedData	{...}	{...}	Decimal	DINT[8]
E300:O	{...}	{...}		AB:E300:O:0
E300:O.Pt00Data	0		Decimal	BOOL
E300:O.Pt01Data	0		Decimal	BOOL
E300:O.Pt02Data	0		Decimal	BOOL
E300:O.Digital1Pt00Data	0		Decimal	BOOL
E300:O.Digital1Pt01Data	0		Decimal	BOOL
E300:O.Digital2Pt00Data	0		Decimal	BOOL
E300:O.Digital2Pt01Data	0		Decimal	BOOL
E300:O.Digital3Pt00Data	0		Decimal	BOOL
E300:O.Digital3Pt01Data	0		Decimal	BOOL
E300:O.Digital4Pt00Data	0		Decimal	BOOL
E300:O.Digital4Pt01Data	0		Decimal	BOOL
E300:O.TripReset	0		Decimal	BOOL
E300:O.EmergencyStartEn	0		Decimal	BOOL
E300:O.RemoteTrip	0		Decimal	BOOL

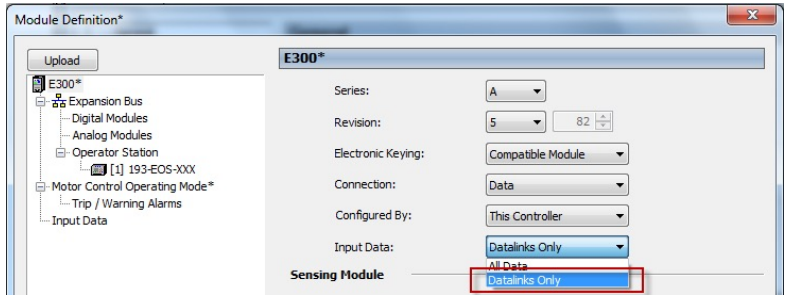


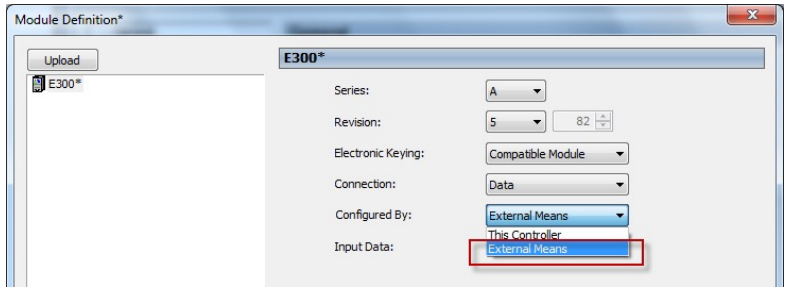
Easy Integration Into Logix

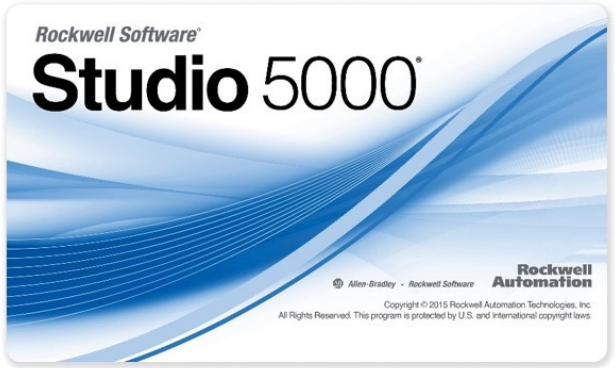
The E300 has a new Add-on Profile (v6.02) for RSLogix 5000 and Studio 5000 Logix Designer environments.

- Output duration timer for redundant control applications
- User selectable input tags
- Enable/disable Automatic Device Configuration
- Additional analog output mode selections



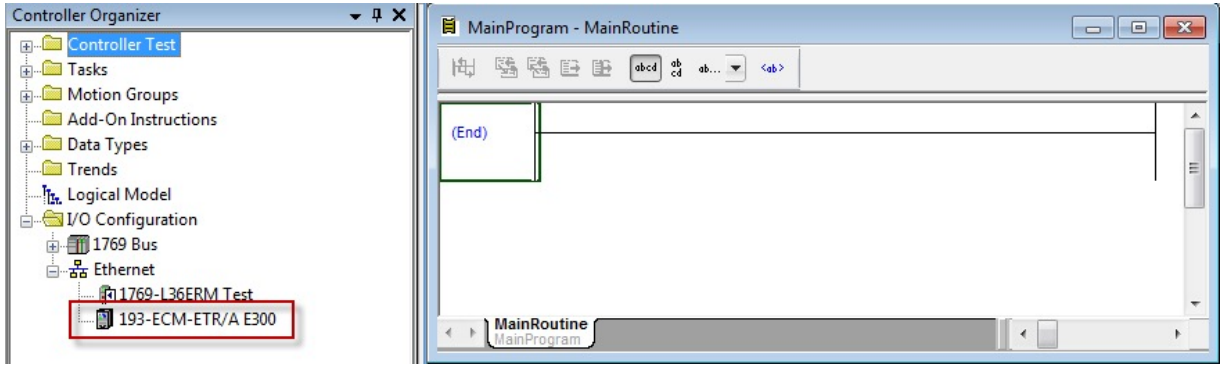


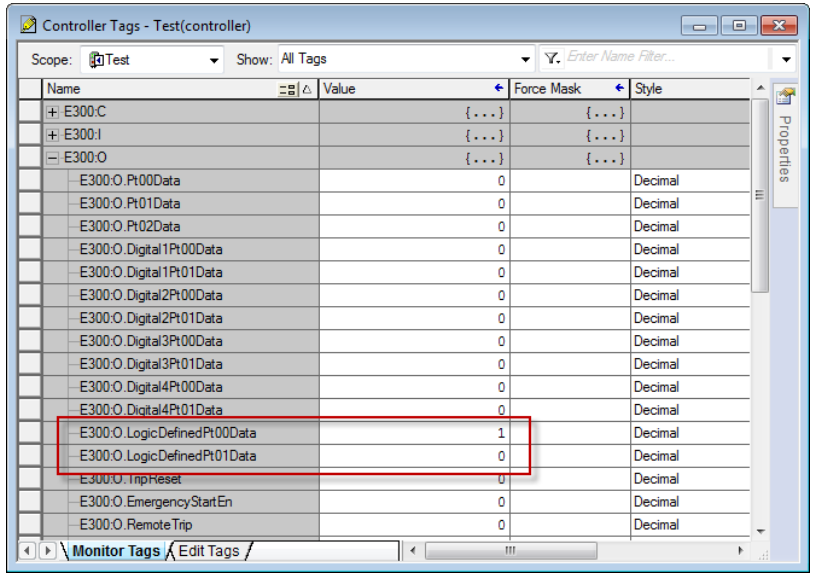




Easy Integration Into Logix

Pre-Configured Operating Modes (embedded DeviceLogix programs) allow the Control Station or Diagnostic Station to be used as an operator interface for hand / auto** (local / remote) **motor control with no ladder logic

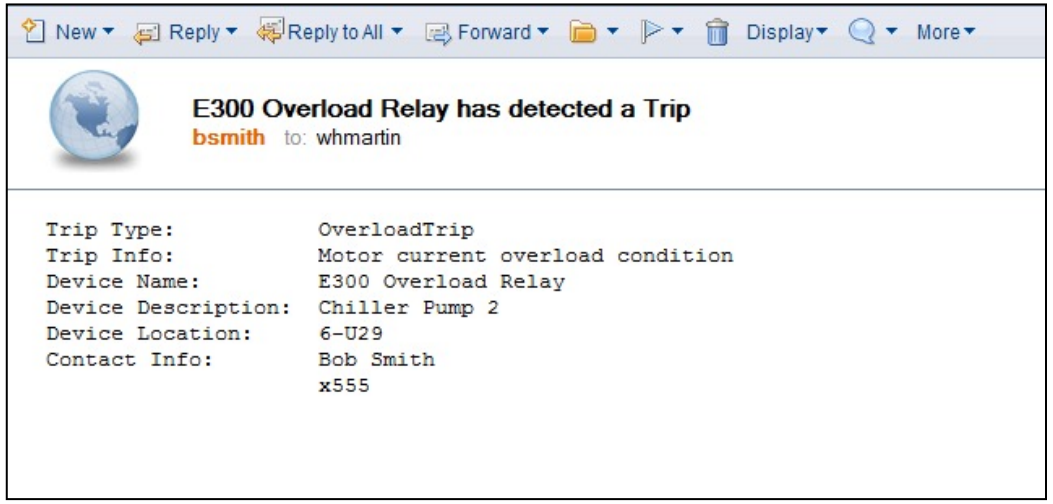


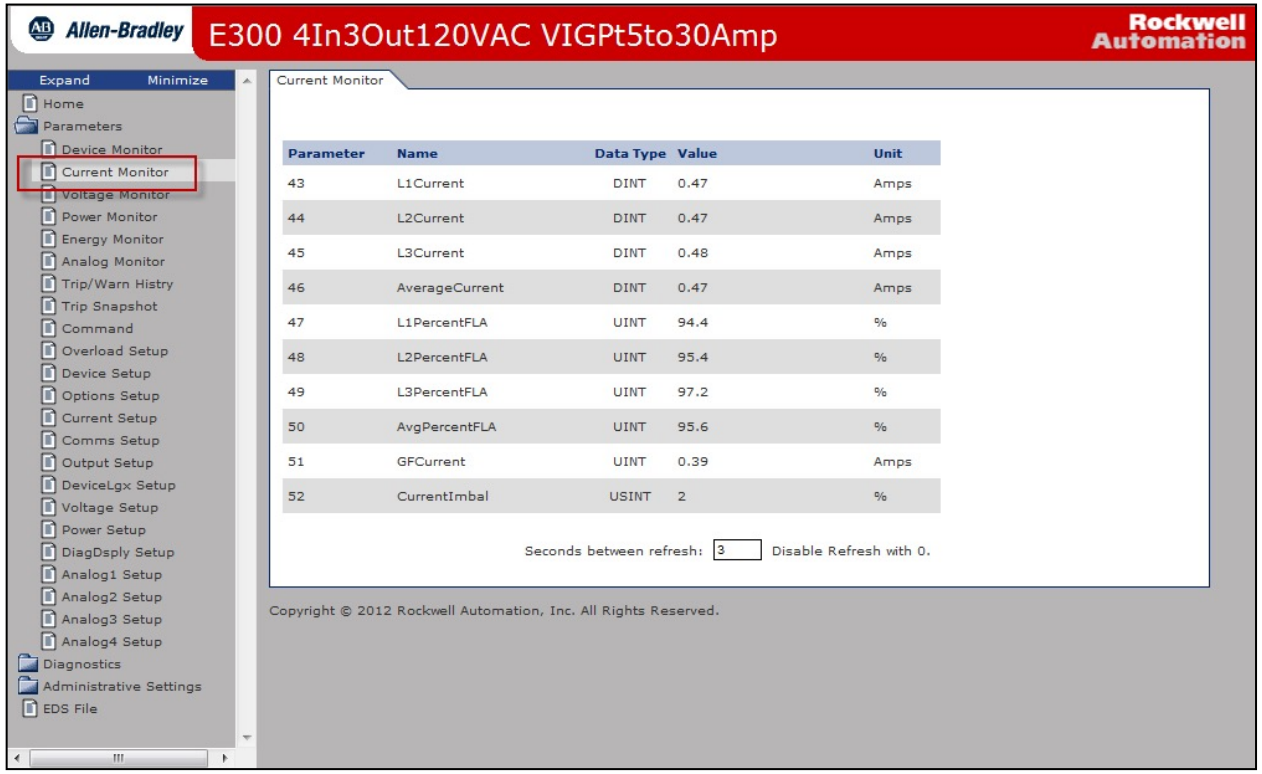


New Series B Diagnostic Station "CopyCat" feature now includes back-up of any custom DeviceLogix program.

Network Connectivity – EtherNet/IP

- Two Ethernet ports that operate as an Ethernet switch
  - Star Topology
  - Linear Topology
  - Ring Topology (DLR)
- Embedded web server
- Supports SMTP messaging

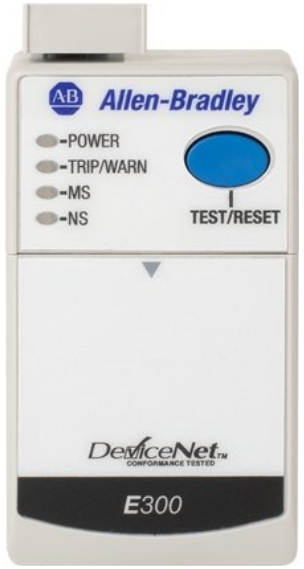


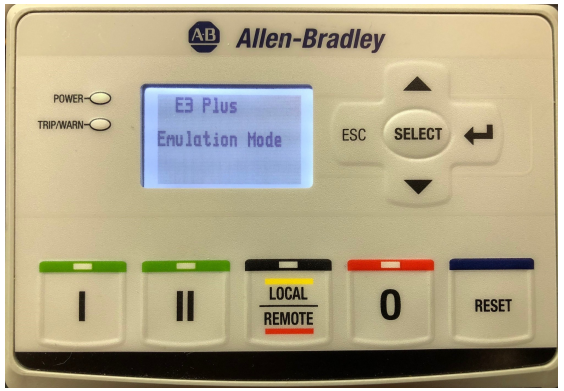


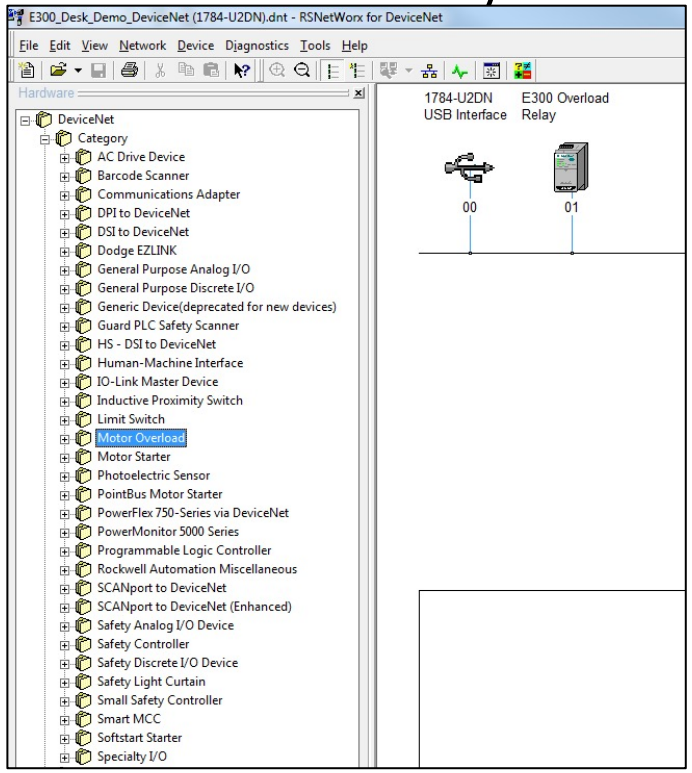
Network Connectivity – DeviceNet

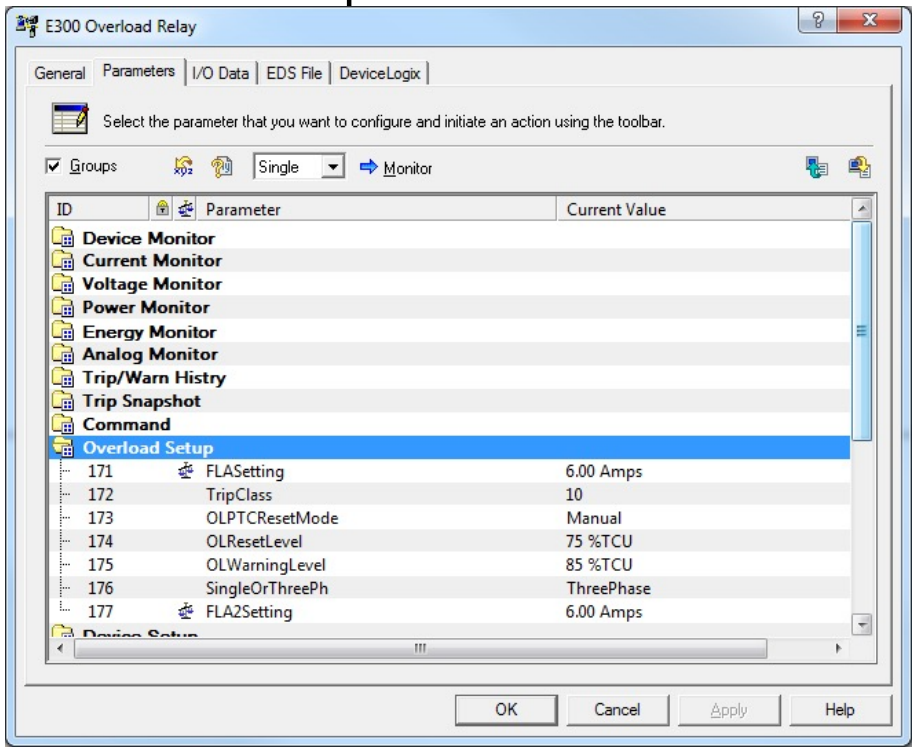
- The E300 now supports DeviceNet as a communication option
  - Provides modernization path for older E3/E3+ products
  - Interface supported in RSNetWorx™ for DeviceNet
  - E3/E3+ Emulation mode for easy and simpler interface experience

RSNetWorx™ For DeviceNet®







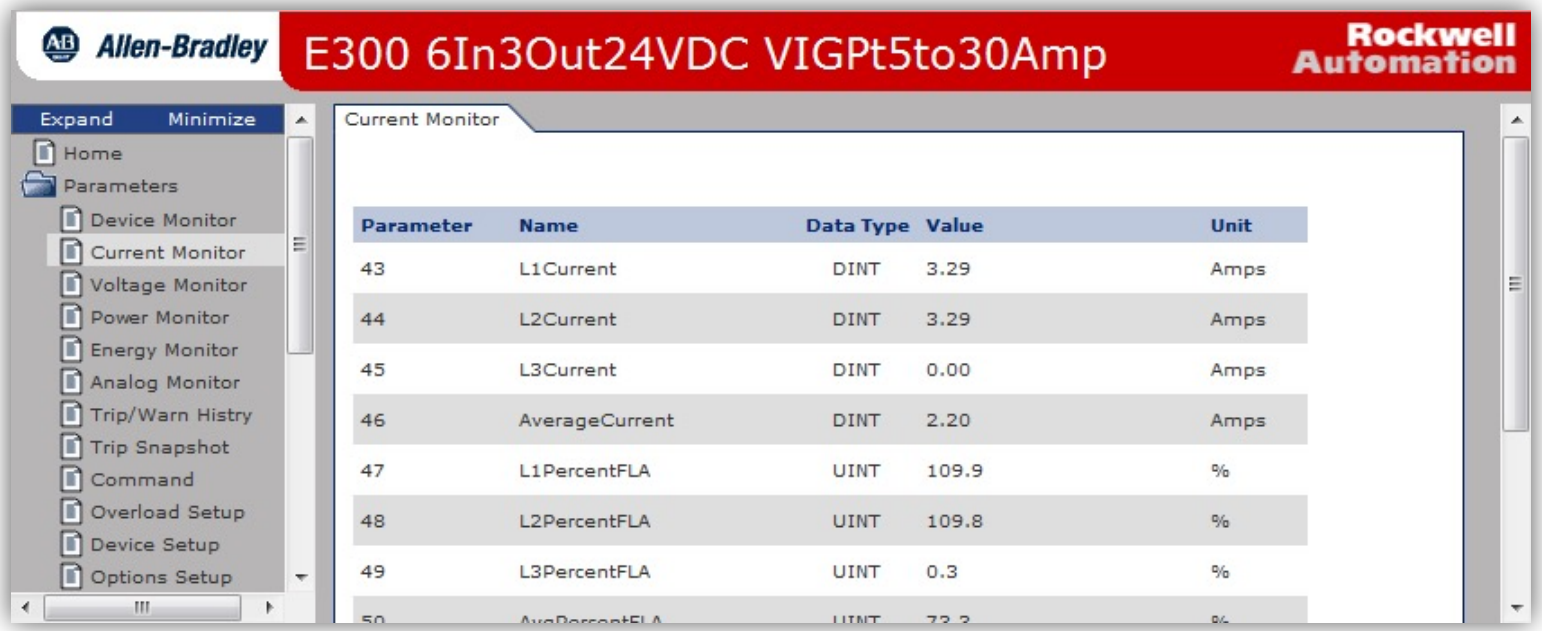


E300 Expansion Modules

- Digital I/O *(4 In / 2 Out – Add up to 4)*
  - AC (120V)
  - AC (240V)
  - DC (24V)
- Universal Analog I/O (3 In / 1 Out – Add up to 4)
  - 0-10V DC
  - 0-20mA DC
  - RTD Sensors
- Power Supply
  - Supplemental power for the expansion bus
- Operator Stations
  - Control Station
  - Diagnostic Station (Multiple Languages)

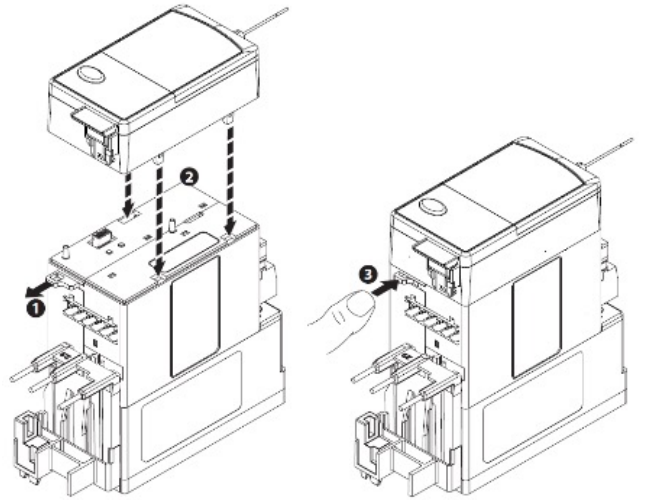
Motor Diagnostics

- The E300 provides a wide variety of diagnostic information to monitor motor performance and proactively alert users to potential operational issues
- This information can trigger either manual or automatic intervention before the occurrence of an unplanned shutdown
  - Voltage, Current, and Energy
  - CIP Energy Enabled
  - Trip / Warning Histories
  - % Thermal Capacity Utilization
  - Motor Winding Temperature
  - Trip Snap Shot
  - Time to Trip
  - Time to Reset
  - Operational Hours
  - Number of Starts

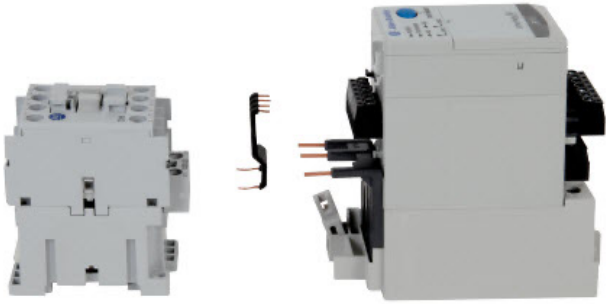


Reduced Wiring and Installation Costs

E300 Overload Relay modules easily snap together and are secured with locking tabs.



Simplified wiring between E300 Overload Relay and 100-C Contactor



Operator Stations feature a standard 22 mm push button cutout

Flexibility and Functionality

The E300 can be applied to three styles of motor starters

- Panel / DIN Rail
- 100-C IEC Contactors
- 300/500 NEMA Contactors

E3 Plus to E300 Migration

January 2020

Bruce Venne, P.E. • Global Product Manager – Motor Protection Solutions

E300 vs. E3 Plus (Dimensional Comparison)

E300 vs. E3 Plus

CENTERLINE 2100 NEMA Low Voltage Motor Control Center Considerations

- **NEMA 1.0 Space Factor Units**
  - **Due to the increased depth of the E300, the clearance between the face of the E300 to the door is extremely close**
  - **Recommended to replace the unit with new containing an E300**

- CENTERLINE 2100 LV MCC Selection Guide
  - https://literature.rockwellautomation.com/idc/groups/literature/documents/sg/2100-sg003_-en-p.pdf

CENTERLINE 2100 Starter Space Factor

Space Factor	E3/E3 Plus	E300
0.5	-	Size 1
1	Size 1 Size 2	Size 1 Size 2
1.5	Size 2	Size 1 Size 2 Size 3
2	Size 3	Size 3 Size 4
2.5	Size 3 Size 4	Size 4
3	Size 4	-
3.5	Size 5	Size 5
4	Size 6	-
6	Size 6	Size 6

E300 vs. E3 Plus

NEW! E3 Plus to E300 Migration Guide

Migration Solutions

Allen-Bradley

E3/E3 Plus to E300/E200 Electronic Overload Relay

Why Upgrade or Migrate

While the E3/E3 Plus Overload Relay has been a valuable part of our portfolio for the past twenty years, this product will no longer be available for sale after October 2019.* Now is the time to migrate to the E300™ or E200™ Electronic Overload Relay. As the latest state-of-the-art electronic overload relay offering, the E300/E200 Electronic Overload Relay offers many modular features designed to help improve your motor control and protection needs.

E300/E200 Basic Product Overview

- Modular design for application customization with various sensing, control and communication module options
- Diagnostic information to monitor motor performance
  - Current, voltage, power and energy
  - % Thermal capacity utilization
  - Time to trip/reset
  - Trip snapshot
  - Trip/warning histories
- Logix integration with add-on profiles, add-on instructions and pre-configured operator faceplate objects

E3/E3 Plus Electronic Overload Relay

E300/E200 Electronic Overload Relay

Why Upgrade or Migrate?

Rockwell Automation understands that your overload relays are a critical asset in your automation system, and we support that by providing you with the latest technology to maximize your investment. New technologies can improve and extend the operation of existing equipment and provide an immediate boost to productivity. By migrating from your legacy E3/E3 Plus™ Overload to a new E300/E200 Electronic Overload Relay, you can help to decrease downtime, increase speed to market, and optimize operations well into the future.

We will help you to meet this demand to innovate by proactively planning and managing your transition every step of the way to help you get the highest possible return on your automation investment.

ACTIVE* | ACTIVE MATURE* | END OF LIFE* | DISCONTINUED*

E3/E3 Plus to E300/E200 Electronic Overload Relay

	Feature	ANSI/IEEE Device No.	EC1	EC2	EC3	EC4	EC5	E200	E300
	Current Range (A)	N/A	0.4…5000	0.4…5000	0.4…5000	0.4…5000	0.4…5000	0.5…65000	0.5…65000
Protection	Thermal Overload	49/51	✓	✓	✓	✓	✓	✓	✓
Protection	Auto or Manual Reset	86	✓	✓	✓	✓	✓	✓	✓
Protection	Mechanical Jam (Stall)	48	✓	✓	✓	✓	✓	✓	✓
Protection	Undercurrent	37	✓	✓	✓	✓	✓	✓	✓
Protection	Phase Loss	46	✓	✓	✓	✓	✓	✓	✓
Protection	Zero Sequence Ground Fault	50G		✓	✓	✓	✓	✓	✓
Protection	Phase Reversal	47					✓	✓	✓
Protection	Current Imbalance	46	✓	✓	✓	✓	✓	✓	✓
Protection	PTC Thermistor Monitoring	49		✓	✓		✓	✓	✓
Protection	Starts / Hour	66		✓	✓	✓	✓	✓	✓
Protection	Time Between Starts	N/A		✓	✓	✓	✓	✓	✓
Protection	Speed Switch Input	14		✓	✓	✓	✓	✓	✓
Protection	Undervoltage	27					✓	✓	✓
Protection	Overvoltage	59					✓	✓	✓
Protection	Power Factor	55					✓	✓	✓
Protection	Underfrequency	81L					✓	✓	✓
Protection	Overfrequency	81I					✓	✓	✓
Protection	Underpower	37					✓	✓	✓
Protection	Reactive Power	N/A					✓	✓	✓
Protection	Resistance Temperature Detection (RTD)	49						✓	✓
Protection	Hea…								
Metering	Pha…								
Metering	Thr…								
Metering	Per…								
Metering	Cur…								
Metering	Gro…								
Metering	Syst…								
Metering	Pha…								
Metering	Ave…								
Metering	Volt…								
Metering	Rea…								
Metering	Rea…								
Metering	App…								

Component Cross-reference Table

Discontinued Part Number	E3/E3 Plus Contactor Mounting/Description	E3/E3 Plus FLA Range	Recommended E300 Replacement Part Numbers	Conversion Notes
193-EC1PB	100-C09...100-C23	0.4 - 2.0A	193-ECM-DNT + 193-ESM-I-30A-C23 + 193-EIOxx-xx-xxx	Sensing Module current range is 0.5 - 30A
193-EC1AB	100-C09...100-C23, 300-AO*	1 - 5A	193-ECM-DNT + 193-ESM-I-30A-C23 + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
193-EC1AD	100-C30...100-C43	1 - 5A	193-ECM-DNT + 193-ESM-I-30A-C55 + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
193-EC1BB	100-C09...100-C23, 300-AO*	3 - 15A	193-ECM-DNT + 193-ESM-I-30A-C23 + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
193-EC1BD	100-C30...100-C43	3 - 15A	193-ECM-DNT + 193-ESM-I-30A-C55 + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
193-EC1CB	100-C09...100-C23, 300-AO*	5 - 25A	193-ECM-DNT + 193-ESM-I-30A-C23 + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
193-EC1CD	100-C30...100-C43	5 - 25A	193-ECM-DNT + 193-ESM-I-30A-C55 + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
193-EC1DD	100-C30...100-C43, 300-BO*, 300-CO*	9 - 45A	193-ECM-DNT + 193-ESM-I-60A-C55 + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
193-EC1DE	100-C60...100-C97	9 - 45A	193-ECM-DNT + 193-ESM-I-100A-C97 + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
193-EC1EE	100-C60...100-C97, 300-DO*	18 - 90A	193-ECM-DNT + 193-ESM-I-100A-C97 + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
193-EC1FF	100-D95...100-D180	28 - 140A	193-ECM-DNT + 193-ESM-I-200A-D180 + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
193-EC1GF	100-D95...100-D180, 300-EO*	42 - 210A	193-ECM-DNT + 193-ESM-I-200A-D180 + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
193-EC1GG	100-D210...100-D420, 300-FO*	42 - 210A	193-ECM-DNT + 193-ESM-I-30A-T + 193-EIOxx-xx-xxx + 1411-180RL-201 (3 required)	No direct contactor mounting is available in E300 line
193-EC1HG	100-D210...100-D420, 300-FO*	60 - 302A	193-ECM-DNT + 193-ESM-I-30A-T + 193-EIOxx-xx-xxx + 1411-180RL-301 (3 required)	No direct contactor mounting is available in E300 line
193-EC1JG	100-D210...100-D420	84 - 420A	193-ECM-DNT + 193-ESM-I-30A-T + 193-EIOxx-xx-xxx + 1411-180RL-401 (3 required)	No direct contactor mounting is available in E300 line
193-EC1KH	100-D630...100-D860	125 - 630A	193-ECM-DNT + 193-ESM-I-30A-T + 193-EIOxx-xx-xxx + 1411-180RL-601 (3 required)	No direct contactor mounting is available in E300 line
193-EC1LH	100-D630...100-D860	172 - 860A	193-ECM-DNT + 193-ESM-I-30A-T + 193-EIOxx-xx-xxx + 1411-180RL-102 (3 required)	No direct contactor mounting is available in E300 line
193-EC1ZZ	Panel Mount Only	9 - 5000A	193-ECM-DNT + 193-ESM-I-30A-E3T + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300
193-EC2PB	100-C09...100-C23	0.4 - 2.0A	193-ECM-DNT + 193-ESM-IG-30A-C23 + 193-EIOxx-xx-xxx	Sensing Module current range is 0.5 - 30A
193-EC2AB	100-C09...100-C23, 300-AO*	1 - 5A	193-ECM-DNT + 193-ESM-IG-30A-C23 + 193-EIOxx-xx-xxx	Direct contactor mounting available with E300

RA Publication [MIGRAT-PP042_-EN-P]

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E300 Supporting Information

- Tech Data (formerly Selection Guide):
  - https://literature.rockwellautomation.com/idc/groups/literature/documents/td/193-td006_-en-p.pdf
  - 193-sg010_-en-p.pdf (replaced by Technical Data)
- Quick Start Guide:
  - 193-qr004_-en-p.pdf
- User Manual:
  - https://literature.rockwellautomation.com/idc/groups/literature/documents/um/193-um015_-en-p.pdf
- Videos:
  - E300 on DeviceNet – E3/E3+ Emulation Mode Demonstration
  - E300 on DeviceNet – Entering Emulation Mode via the Operator Diagnostic Station
  - E300 New Parameter Backup/Restore Demonstration (Series B Only)
  - E200 and E300 Electronic Overload Relay Highlight Reel
- UL Listing Considerations when Modifying an MCC (KnowledgeBase Article 64042):
  - https://rockwellautomation.custhelp.com/app/answers/detail/a_id/64042

E300 Supporting Information

- Expansion IO Modules and Power Supply:
  - https://rockwellautomation.custhelp.com/app/answers/detail/a_id/593132
- Using External Current Transformers with the E300 Electronic Overload Relay:
  - https://rockwellautomation.custhelp.com/app/answers/detail/a_id/616299/page/1
- E300 Overload Relay: CopyCat feature:
  - https://rockwellautomation.custhelp.com/app/answers/detail/a_id/620696/page/1
- E300 Output Relay Wiring Diagrams, Parameter Schemes in an LVMCC:
  - https://rockwellautomation.custhelp.com/app/answers/detail/a_id/977429/page/1
- E300 Overload Relay FAQ:
  - https://rockwellautomation.custhelp.com/app/answers/detail/a_id/1042104/page/1
- E300 Expansion Module Inputs assignments:
  - https://rockwellautomation.custhelp.com/app/answers/detail/a_id/1060989/page/1
- Firmware Release Notes on the RA PCDC (with multiple modules, E300 uses a “composite” firmware version):
  - https://netstorage.rockwellautomation.com/WebFiles/Products/PCDCDRA/Firmware/193-ECM-ETR/S40381/E300_Firmware_Release_Notes_(v7_180-v7_020-v7_004).pdf?rwtoken=1561353306_3115b847d07a926e9d5c88e2c33f4884

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Thank you

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