



# FLEXLINE 3500 Low Voltage Motor Control Centers and Switchgear Assemblies

Bulletin Number 3500



***Allen-Bradley***

by ROCKWELL AUTOMATION

**Selection Guide**

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## Overview

FLEXLINE™ 3500 motor control centers (MCCs) offer a full range of IEC components such as AC Drives, direct-on-line starters (DOL), direct-on-line reversing starters (DOLR), circuit breakers, overloads, contactors, and other devices.

Figure 1 - FLEXLINE 3500 MCC



The FLEXLINE 3500 MCC provides withdrawable or fixed units with IP degree up to IP54 and internal separation up to 4B. The FLEXLINE 3500 MCC provides intelligent control with common communication protocols that are easily networked in the MCC.

In addition to a complete line of motor control equipment, the FLEXLINE 3500 MCC also packages power distribution equipment. Your FLEXLINE 3500 MCC can include air circuit breakers, feeders, mains, main-tie-mains, and transformers for an integrated, low voltage power package.

FLEXLINE 3500 MCCs feature:

- Withdrawable units or fixed units
- High unit density, up to 27 units per column
- Rotary handles
- Three or four wire power system capability
- Top-mounted, main bus up to 6000 A
- Fully metric design (hardware and exterior dimensions)
- Air circuit breaker mains and feeders available
- Standard safety features like arc-ignition protected zones and isolated unit power stab assemblies help protect employees and keep your process up and running

# Technical Specifications

Product certificates are located in the Rockwell Automation Literature Library at [rok.auto/literature](http://rok.auto/literature).

Standards	IEC 60204-1:2016 +AMD1:2021 IEC 61439-1:2020 IEC 61439-2:2020	Safety of machinery – Electrical equipment of machines; Part 1: General requirements Low-voltage switchgear and controlgear assemblies; Part 1: General requirements Low-voltage switchgear and controlgear assemblies; Part 2: Power switchgear and controlgear assemblies
EC Directives	2011/65/EU 2014/30/EU 2014/35/EU	RoHS Directive EMC Directive Low Voltage Directive
Certifications and Markings	CE Conformance Marked DEKRA Seismic	
Rated Voltages	Rated Operating Voltage, $U_e$ Rated Frequency, $f_n$ Rated Insulation Voltage, $U_i$	$\leq 690V$ , 3 Phase 50...60 Hz $\leq 1000V$ , 3 Phase
Rated Busbar Currents	Continuous Current Rating, $I_e$ Short Circuit Peak Withstand, $I_{pk}$ Short Time Withstand Rating, $I_{cw}$ Neutral (N)	Main bus $\leq 6000$ A; Distribution bus $\leq 2000$ A per column Main bus $\leq 264$ kA; Distribution bus $\leq 220$ kA Main bus $\leq 120$ kA for 1 second; Distribution bus $\leq 100$ kA for 1 second Full or half-rated
Creepage Distances and Clearances	Rated Impulse Withstand Voltage, $U_{imp}$ Material Group (Overvoltage Category) Pollution Degree	6 kV, 8 kV, or 12 kV IIIa (175 $\leq$ CTI $<$ 400) 3
Bus Material and Plating <sup>(1)</sup>	Horizontal Power Bus Vertical Distribution Bus Protective Earth Conductor (PE)	Copper, unplated Copper, unplated Copper, unplated
Degrees of Protection	IEC 60529	Up to IP54
Forms of Separation	IEC 61439-2	Forms 2b, 3b, 4b
Testing Under Conditions of Arcing Due to Internal Fault	IEC/TR 61641	Optional
Units <sup>(2)</sup>	Unit Size (approx) Units per Column (max) Withdrawable Unit Sizes (width x height)	192 mm high x 192 mm wide = 1 module (7.6 x 7.6 in.) 27 1 x 1, 1.5 x 1, 3 x 1, 3 x 1.5, 3 x 2, 3 x 3 modules
Structural Surface Treatments	Interior Exterior Exterior Top and Side Covers	RAL 7035 Light gray paint with galvanized mounting plates and bars RAL 7035 Light gray paint (additional colors available as custom option) RAL 9005 Black
Environment	Storage Temperature Operating (Ambient) Temperature Altitude External mechanical impact (IK code) Corrosion class	-25...+55 °C (-13...+131 °F) -5...+40 °C <sup>(3)</sup> (23...104 °F) with up to 95% noncondensing humidity $\leq 1000$ m (3280 ft) without derating; derating over 1000 m (3280 ft) Up to IK08 Minimum C2H, according to ISO 12944-2

(1) Tin-plated copper is available upon request. Consult your local Rockwell Automation sales office for other plating options.

(2) Unit size is described in terms of modules.

(3) The average temperature over a 24-hour period must not exceed 35 °C (95 °F).

# System Architecture

EtherNet/IP™ enhances integration, helps reduce your MCC set-up time, and increases the network speed. With EtherNet/IP, you can quickly monitor, troubleshoot, and diagnose your MCC from anywhere. FLEXLINE 3500 MCCs provide robust motor control capabilities with access to the real-time data that you need by using a network that communicates with your entire enterprise.

The cost and performance of an EtherNet/IP network makes them ideal for MCC applications. Open specifications and protocol, managed by the Open DeviceNet® Vendor Association (ODVA), means that vendors are not required to purchase hardware, software, or licensing rights to connect to a system.

An EtherNet/IP system is qualified to communicate and perform under normal and adverse electrical environments. Its application can be plant-wide and over multiple disciplines through commercial off-the-shelf (COTS) products like Ethernet switches and devices.

An EtherNet/IP system has the following capabilities:

- Automatic Device Configuration (ADC) automatically downloads the IP address, firmware, and device parameter settings to a newly replaced device without user interaction, saving costly downtime
- Switch-level linear or switch-level ring topologies provide network flexibility for any sized operation
- Heavy traffic performance
- Add or subtract nodes on-the-fly
- Advanced network configuration, security, and diagnostics are provided by layer-2 managed Ethernet switches
- The EtherNet/IP system in the MCC is designed to operate at 100 Mbaud

## EtherNet/IP Connectivity

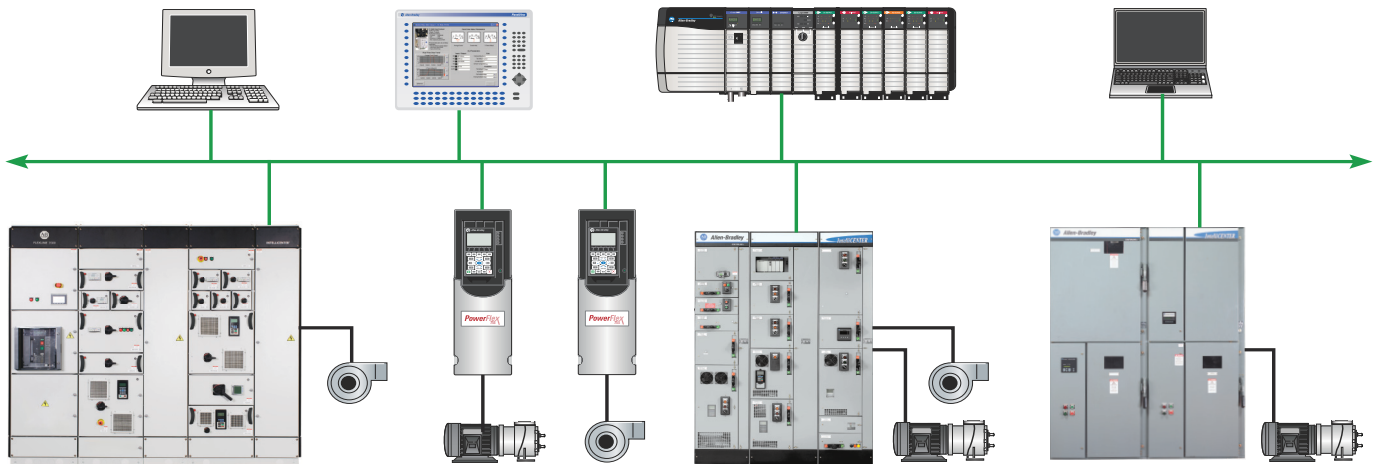
Each unit can be configured with an EtherNet/IP component.

- Mains and Feeders with an ACB can include an Ethernet/IP communication module.
- Starter units can include a solid-state overload relay, like the E300™ Electronic Overload Relay.
- AC drives can include an EtherNet/IP communication module and/or an embedded option.

Networks are factory assembled and connect each Ethernet/IP component with a 600V rated cable. Adding or removing units from the network does not interrupt the other units operating in the system.

	Considerations	References
<b>Ethernet Media</b>	1585 Ethernet Media	Ethernet Media Specifications Technical Data, <a href="#">1585-TD001</a>
<b>EtherNet/IP Managed Switch</b>	Stratix® Switch	Stratix Ethernet Device Specifications, <a href="#">1783-TD002</a>

Figure 2 - Sample System Diagram



# Structure

A typical FLEXLINE 3500 column consists of a functional unit space with a vertical cable compartment at the side or rear, main busbars at the top, and a horizontal cable compartment at the bottom. Column definition also applies to full-height units (frame-mounted) without side or rear cable compartment.

A typical FLEXLINE 3500 shipping block is one or more columns that are mounted in a single frame that must be shipped as one piece.

Columns and shipping blocks are described in terms of modules. Each module is approximately 192 mm wide by 192 mm tall.

Shipping blocks are secured at the installation site by bolting together clearance holes in the supports.

You can combine both fixed and withdrawable units up to form 4B in the same column. Fault containment is enhanced with partition plates on every column to help prevent a fault from cascading throughout the structure and limiting equipment damage. The vertical cable compartment can be in either the front or the rear side of the assembly.

Figure 3 - Typical Column Configuration

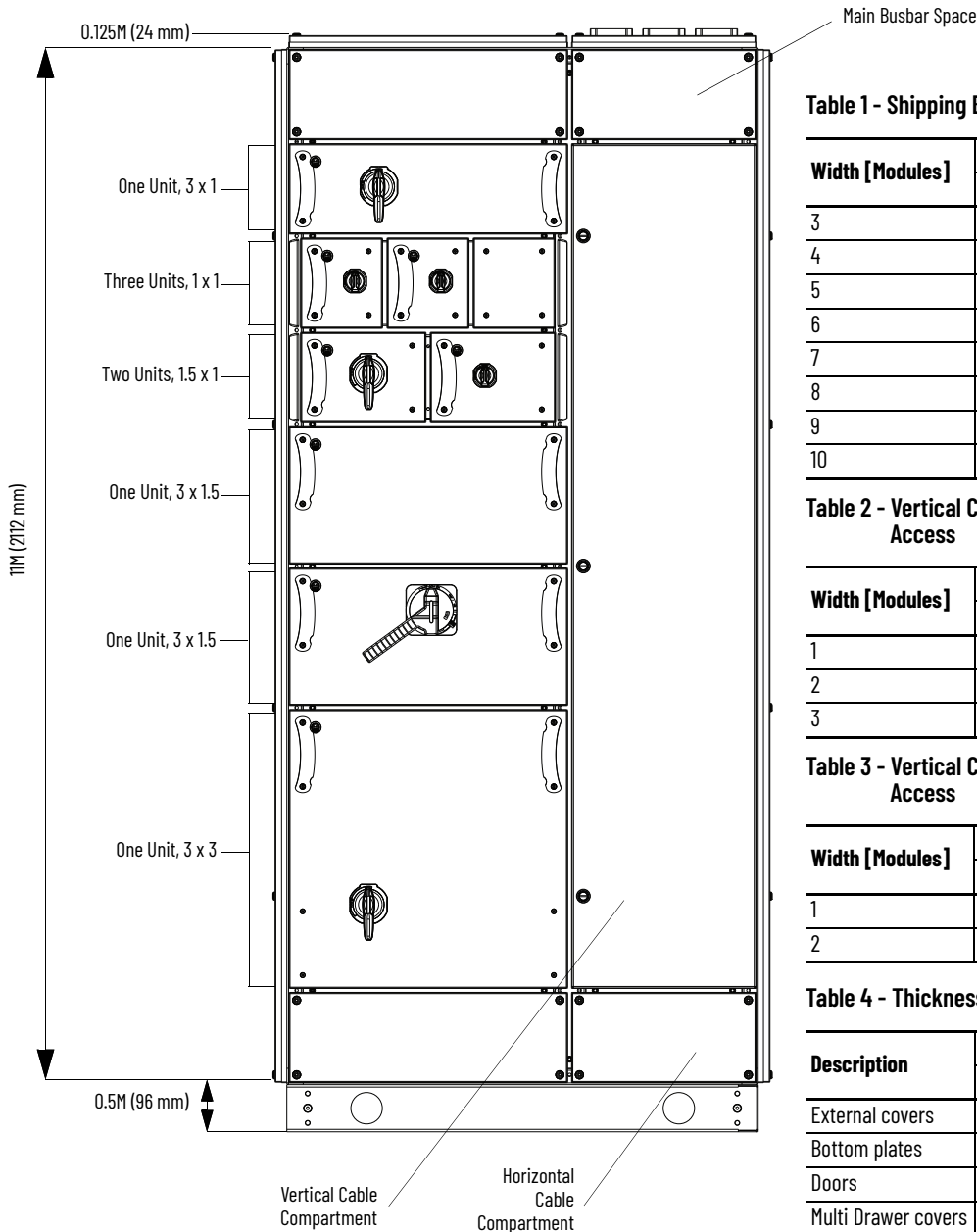


Table 1 - Shipping Block Sizes

Width [Modules]	Length	
	mm	in.
3	576	22.7
4	768	30.2
5	960	37.8
6	1152	45.4
7	1344	52.9
8	1536	60.5
9	1728	68.0
10	1920	75.6

Table 2 - Vertical Cable Compartment Size for Front Access

Width [Modules]	Length	
	mm	in.
1	192	7.6
2	384	15.1
3	576	22.7

Table 3 - Vertical Cable Compartment Size for Rear Access

Width [Modules]	Length	
	mm	in.
1	192	7.6
2	384	15.1

Table 4 - Thickness, Nominal<sup>(1)</sup>

Description	Length	
	mm	in.
External covers	1.25	0.05
Bottom plates	1.5	0.06
Doors	1.5	0.06
Multi Drawer covers	1.25	0.05

(1) Thicker doors and covers available on request.

Figure 4 - Typical Column With Withdrawable Units

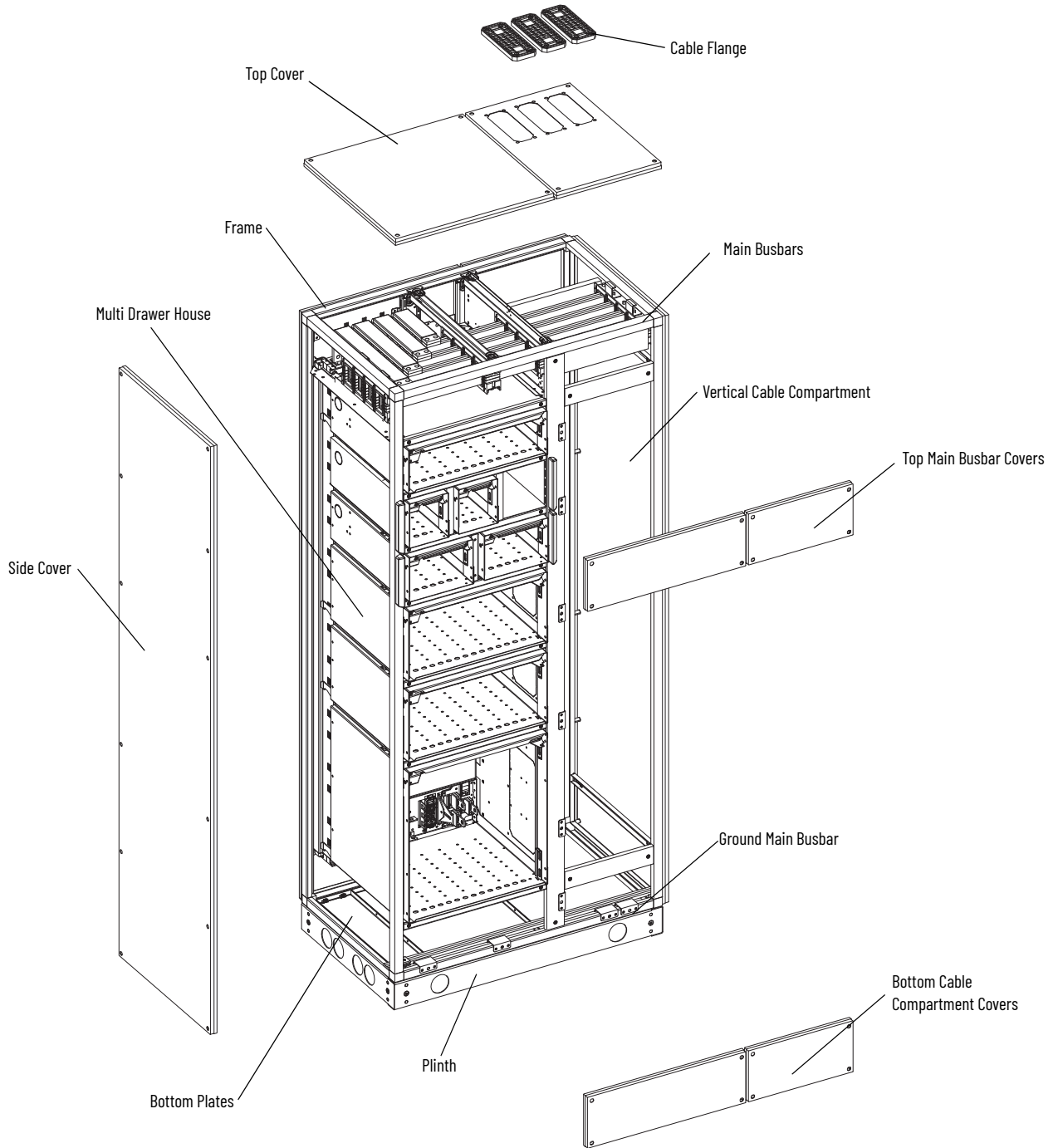


Table 5 - Weight<sup>(1)</sup>

Shipping Block Size	Unit Space [Module]	Cable Compartment Size [Module]	Total Weight, kg	
			With S2000HD Busbar System	With S7000 Busbar System
4 x 11 3	3	1	690	710
5 x 11 3	3	2	720	750
6 x 11 3	3	3	750	790
8 x 11 3	(2x) 3	(2x) 1	1320	1400
9 x 11 3	(2x) 3	1 and 2	1350	1440
10 x 11 3	(2x) 3	(2x) 2	1370	1480

(1) Weights shown are for an MCC column with eight units. Many factors (number of units, horizontal power bus, wireway width, column depth, and shipment packaging) affect the actual weight. The packing slip that is shipped with an MCC unit shows the exact shipping weight.

## Arc Flash Containment

In addition to the standard safety features built into every FLEXLINE 3500 motor control centers, optional ArcShield™ technology provides enhanced arc resistance capabilities to meet your safety program.

ArcShield technology helps mitigate and protect personnel and equipment from the dangers of an arc flash incident. The technology helps contain an arc fault for the entire duration it takes the protective device to clear the fault.

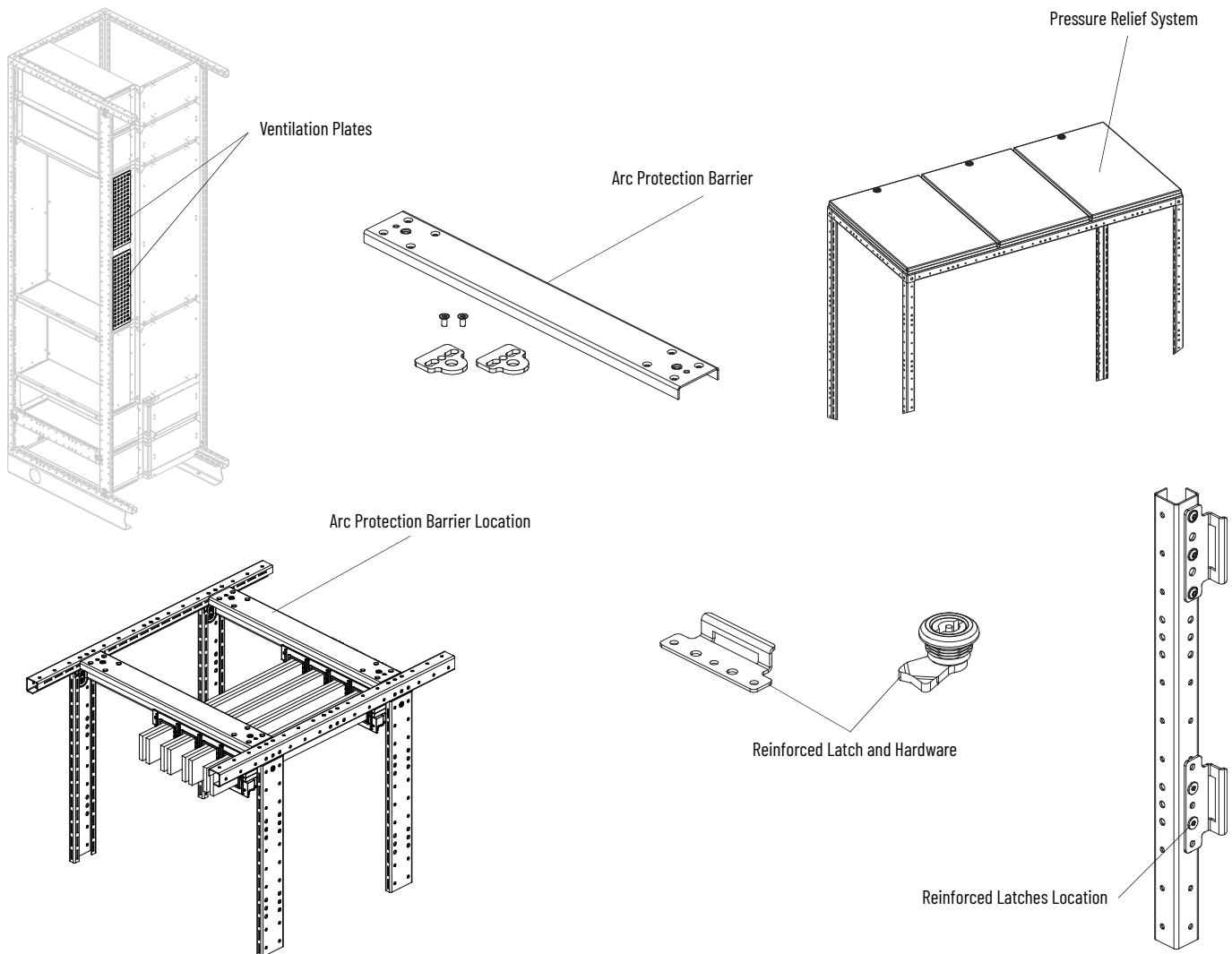
Motor control centers with ArcShield are tested with third-party validation against the IEC/TR 61641 standard that defines tests under conditions of arcing due to internal fault.

To deliver this type of safety and performance, an ArcShield MCC contains the following features:

- Reinforced bracing at the top
- Exhaust gas channeling to the top of the MCC
- Pressure relief systems for managed emissions
- Reinforced latches that keep the MCC doors closed
- Patented arc-resistant baffles that allow ventilation, yet provide arc resistance
- Optional optical and current sensing technologies for added MCC protection
- Separation between unit inserts and distribution busbar system

Contact your local Rockwell Automation sales office to learn of available ArcShield options.

**Figure 5 - ArcShield Column Protection Hardware**





# Power Systems

## Control and Incoming Power

FLEXLINE 3500 MCCs can be used on three-wire or four-wire systems, with or without the optional neutral bus. The neutral bus can be half-rated or full-rated.

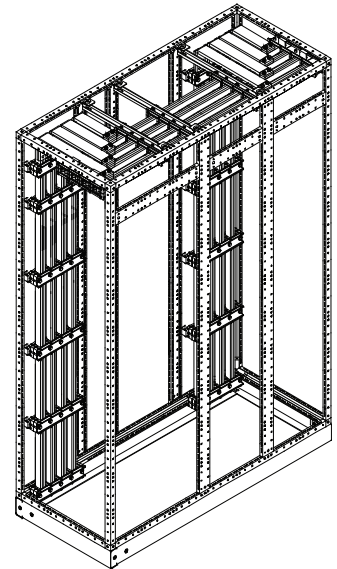
Control power options include DC or 50/60 Hz AC as required. Control voltage can be derived from the line supply through individual or central control transformers, and a line-neutral or DC power supply. The control voltage can also be provided remotely from the MCC.

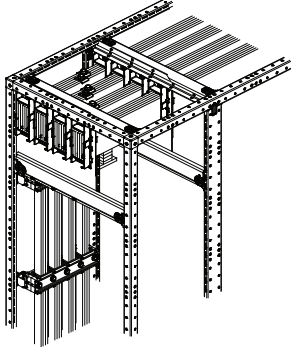
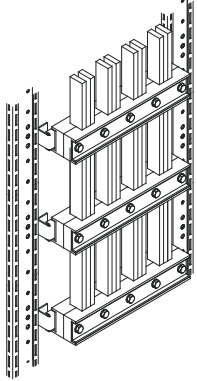
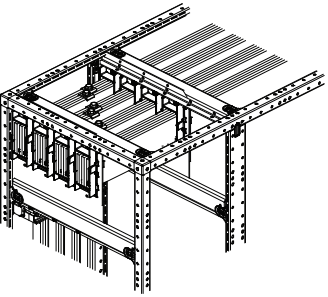
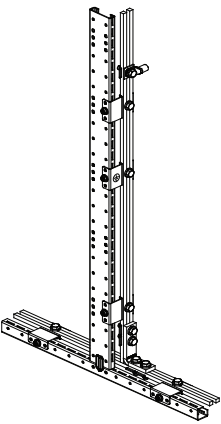
## Busbars

The busbar systems consist of standard components and cover a range of up to 6000 Amps. The systems are tested by DEKRA according to IEC 61439 to a short-circuit level of 120 kA for 1 second, and a peak withstand current of maximum 264 kA. The busbar sections are assembled in templates and fitted into the panel. With the specially developed assembly bolt, it is not necessary to drill holes or cut threads. The assembly bolt allows for an adjustable connection, exactly where it is needed on the busbar holders. All busbar joints are designated as maintenance-free according to DIN 43673. No retightening is necessary for the lifetime of the assembly.

Busbars are copper with copper quality CW008A or CW004A, according to EN13601:2013.

No drilling in the busbar is allowed. The busbars are mounted with minimum two bars in parallel per phase/neutral, and bolted together by type tested connections. This maintains the dynamic strength of the busbar, avoids reducing the busbar dimension, and to maximize the skin effect of the busbars.



Busbar System	Description	Busbar System	Description
Main Busbars - S2000HD 	Continuous Current Rating, $I_e \leq 2700$ A Short Circuit Peak Withstand, $I_{pk} \leq 176$ kA Short Time Withstand Rating, $I_{cw} \leq 80$ kA for 1 s Neutral (N) - Full or half-rated	Distribution Busbars - S2000 	Continuous Current Rating, $I_e \leq 2000$ A Short Circuit Peak Withstand, $I_{pk} \leq 220$ kA Short Time Withstand Rating, $I_{cw} \leq 100$ kA for 1 s
Main Busbars - S7000 	Continuous Current Rating, $I_e \leq 6000$ A Short Circuit Peak Withstand, $I_{pk} \leq 264$ kA Short Time Withstand Rating, $I_{cw} \leq 120$ kA for 1 s Neutral (N) - Full or half-rated	PE-bar 	Short Circuit Peak Withstand, $I_{pk} \leq 158.4$ kA Short Time Withstand Rating, $I_{cw} \leq 72$ kA for 0.1 s

## Main Busbars

- S2000HD and S7000 are available in three- and four-pole configurations and are top front mounted.
- The standard main power bus material is unplated copper. Tin-plated copper is available upon request.
- The main neutral bus is available with a full or half current rating, and matches the material and specifications of the main power bus.

**Table 6 - S2000HD Main Busbar System, Rated Short-time Withstand Current**

Busbar Cross-section	Rated Short-time Withstand Current, $I_{cw}$			
	30 kA, 1 s	50 kA, 1 s	65 kA, 1 s	80 kA, 1 s
(2) 10 x 20	✓	✓	–	–
(2) 10 x 30	✓	✓	–	–
(2) 10 x 40	✓	✓	✓	–
(2) 10 x 50	✓	✓	✓	–
(2) 10 x 60	✓	✓	✓	–
(2) 10 x 70	✓	✓	✓	–
(2) 10 x 80	✓	✓	✓	✓
(2) 10 x 90	✓	✓	✓	✓
(2) 10 x 100	✓	✓	✓	✓

**Table 7 - S7000 Main Busbar System, Rated Short-time Withstand Current**

Busbar Cross-section	Rated Short-time Withstand Current, $I_{cw}$			
	50 kA, 1 s	80 kA, 1 s	100 kA, 1 s	120 kA, 1 s
(2) 10 x 100	✓	✓	–	–
(3) 10 x 100	✓	✓	–	–
(4) 10 x 100	✓	✓	✓	–
(6) 10 x 100	✓	✓	✓	✓

**Table 8 - S2000HD Main Busbar System, Rated Current**

Busbar Cross-section <sup>(1)</sup>	Rated Current, $I_n$
	[A]
(2) 10 x 20	970
(2) 10 x 30	1460
(2) 10 x 40	1640
(2) 10 x 50	1830
(2) 10 x 60	2020
(2) 10 x 70	2200
(2) 10 x 80	2400
(2) 10 x 90	2550
(2) 10 x 100	2700

(1) Values are valid for 50 Hz (the rated current at 60 Hz shall be reduced to 95% of that at 50 Hz).

**Table 9 - S7000 Main Busbar System, Rated Current**

Busbar Cross-section <sup>(1)</sup>	Rated Current, $I_n$
	[A]
(2) 10 x 100	2600
(3) 10 x 100	3200
(4) 10 x 100	4900
(6) 10 x 100	6000

(1) Values are valid for 50 Hz (the rated current at 60 Hz shall be reduced to 95% of that at 50 Hz).

## Distribution Busbars

S2000 busbars are available in three- and four-pole configurations. The distribution neutral bus is connected to the main neutral bus, and provides a neutral connection for units throughout the column.

**Table 10 - S2000 Distribution Busbar System, Rated Short-time and Peak Withstand Current**

Busbar Cross-section	Rated Peak Withstand Current, $I_{pk}$				
	$I_{pk} = 46.2 \text{ kA}$ $I_{cw} = 21.1 \text{ kA, 1 s}$	$I_{pk} = 63 \text{ kA}$ $I_{cw} = 50 \text{ kA, 1 s}$	$I_{pk} = 105 \text{ kA}$ $I_{cw} = 50 \text{ kA, 1 s}$	$I_{pk} = 176 \text{ kA}$ $I_{cw} = 80 \text{ kA, 1 s}$	$I_{pk} = 220 \text{ kA}$ $I_{cw} = 100 \text{ kA, 1 s}$
(2) 10 x 10	✓	✓	–	–	–
(2) 10 x 20	✓	✓	✓	–	–
(2) 10 x 30	✓	✓	✓	✓	–
(2) 10 x 40	✓	✓	✓	✓	–
(2) 10 x 50	✓	✓	✓	✓	✓
(2) 10 x 60	✓	✓	✓	✓	✓

**Table 11 - S2000 Distribution Busbar System, Rated Current**

Busbar Cross-section	Max. Current Rating <sup>(1)</sup>
	[A]
(2) 10 x 10	770
(2) 10 x 20	1150
(2) 10 x 30	1500
(2) 10 x 40	1650
(2) 10 x 50	1850
(2) 10 x 60	2000

(1) Values are valid for 50 Hz (the rated current at 60 Hz shall be reduced to 95% of that at 50 Hz).

The rated current of FLEXLINE 3500 MCC is determined by thermal tests that account for operational ambient temperature limitations for Allen-Bradley components.

	Considerations
<b>Main Busbars</b>	<ul style="list-style-type: none"> <li>Rated current</li> <li>Short-circuit withstand rating</li> <li>Possibilities for extensions</li> <li>Busbar plating</li> <li>Earthing system</li> <li>Neutral busbar sizing</li> <li>Form 2 covering</li> <li>Transport division method</li> </ul>
<b>Distribution Busbars</b>	<ul style="list-style-type: none"> <li>Rated current</li> <li>Short-circuit withstand rating</li> <li>Busbar plating</li> <li>Earthing system</li> <li>Busbar feeding brackets (optional)</li> <li>Current transformer section (optional)</li> </ul>
<b>Ground Busbars</b>	<ul style="list-style-type: none"> <li>Busbar cross-section</li> <li>Short circuit withstand rating</li> <li>Additional connectors for ground cables</li> <li>PE Cu-Flex</li> </ul>

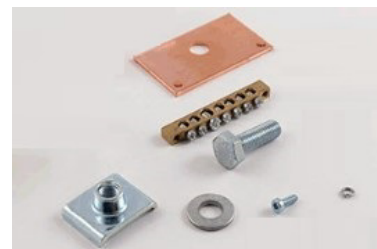
## Protective Earth Conductor

The horizontal protective earth (PE) conductor and vertical PE conductor form a complete internal protective earth circuit.

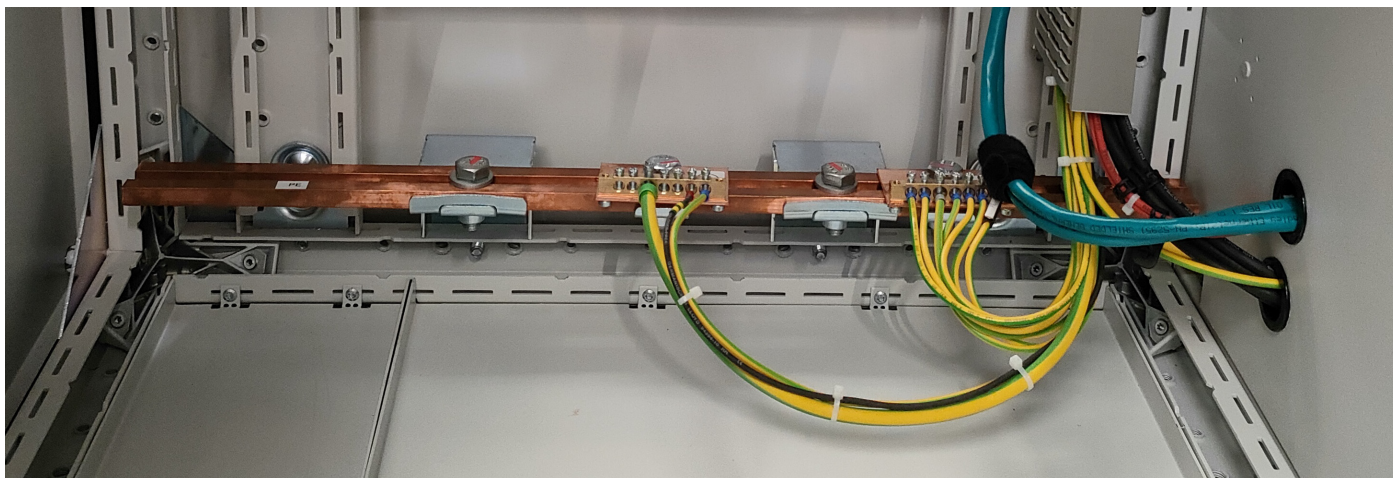
### Horizontal PE Conductor

The horizontal PE conductor is unplated copper (standard) or tin-plated copper (available upon request), and is in the bottom horizontal cable compartment. The horizontal PE conductor is continuous for the width of the column and consists of two parallel busbars with a cross-section from 10 x 10 up to 10 x 60 selected depending on the requirements. A special grounding connector can be installed on the horizontal PE to terminate the motor PE wires.

Grounding Connector for Horizontal PE Conductor



### Horizontal PE Conductor



### Vertical PE Conductor for Customer Loads (Available as an Option)

The optional vertical PE conductor for customer loads is connected to the horizontal PE connector. This vertical PE conductor provides a termination point for the load ground cable that is adjacent to the unit. Without this option, the customer must connect to the horizontal PE conductor at the bottom of the column. The vertical PE conductor for customer loads can be unplated or tin-plated copper.

# Unit Design

## Modular Design

The versatility of the width, height, and depth of the FLEXLINE MCC means that it can be designed to suit its place of installation, and simultaneously ensures that the MCC can be modified or extended.

FLEXLINE 3500 MCCs can offer solutions based on our modular system for the following types of switchboards:

- Main and distribution switchboards
- MCC panels
- Control panels

The FLEXLINE 3500 busbar system consists of standard components and covers a range up to 6000 A. The systems are tested according to IEC/EN 61439 to a short-circuit level of 120 kA for 1 second and a peak withstand current of 264 kA. The busbar sections are easily assembled in templates and fitted into the panel. With a specially developed assembly bolt, it is not necessary to drill holes or cut threads. The assembly bolt allows for an adjustable connection, exactly where it is needed on the busbar holders. All busbar joints are designated as maintenance-free according to DIN 43673.

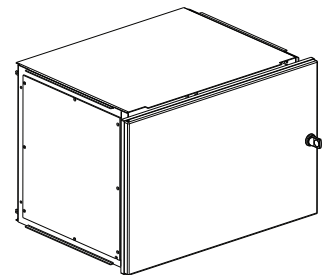
With the FLEXLINE 3500 modular system, you can choose a separation from FORM 2...FORM 4, helping to ensure optimum personal safety and operational dependability according to IEC/EN 61439. All the necessary coverings and protection plates are available as standard parts of the modular system and require no adjustment.

## Fixed Units

**Multi-purpose Inserts (MPIs)** are designed as a box providing separation between other units. Components are mounted on a mounting plate. The insert is available in three depths (1, 1.5, and 2 modules).

**Mounting plates and mounting profiles** (which are mounted directly to the frame) can be used for larger components. Various sizes and configurations are available. Mounting plates are available with busbar connections, and a mounting bracket can place the mounting plate in depths of 8 mm increments.

3M Width x 2M Height x 1.5M Depth



## Withdrawable Units

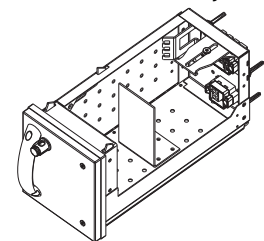
**Multi drawer (MD)** is a drawer unit that can be operated without disconnecting the main supply of the panel. A mechanical interlock helps to prevent the unit door from being opened while the main switch is in the ON/I position. An additional mechanical interlock helps to prevent the unit from being withdrawn or inserted when the unit main switch is closed.

The Multi Drawer is designed to optimize space in the panel and with the possibility of choosing drawers in sizes from 16...630 A. The Multi Drawer units are prepared for installation with all bus systems.

The MD units are delivered with:

- Main plug, 3P or 4P
- Holes for component installation
- Alignment connections
- Interlock
- Hinged door or drawer front
- Unit size ranges from 1 x 1...3 x 3 modules

Withdrawable Unit, 1 x 1 Configuration



# Unit Types

## Allen-Bradley Products in Units

You can populate columns and inserts with units, such as mains, feeders, direct-on-line starters, and AC drives. The following products have been configured and tested to work within standard unit types.

### Circuit and Load Protection

Component	Considerations	References
Circuit Breaker	140UT Molded Case Circuit Breaker	Molded Case Circuit Breaker Specifications Technical Data, <a href="#">140UT-TD001</a>
	140MT Enclosed Circuit Breaker	Enclosed Motor Protection Circuit Breakers Technical Data, <a href="#">140-TD006</a>
	140G, 140MG Molded Case Circuit Breaker	Molded Case Circuit Breaker Specifications Technical Data, <a href="#">140G-TD101</a>
Contactor	<ul style="list-style-type: none"> <li>100-C/104-C Contactor</li> <li>100-E Contactor</li> </ul>	IEC Contactor Specifications Technical Data, <a href="#">100-TD013</a>
Overload Relay	193 E300 Electronic Overload Relay	E300/E200 Electronic Overload Relay Specifications Technical Data, <a href="#">193-TD006</a>
	193 E100 Electronic Overload Relay	E100 Electronic Overload Relay Specifications Technical Data, <a href="#">193-TD013</a>
Supplementary Motor Protector	1492-SP	Supplementary Protectors/Miniature Circuit Breakers Technical Data, <a href="#">1492-TD010</a>

### Connection Devices

Component	Considerations	References
Terminal Block	1492-P Push-in Terminal Block	Push-in Terminal Blocks Specifications Technical Data, <a href="#">1492-TD017</a>

### Energy Monitoring

Component	Considerations	References
Energy Meter	1426 PowerMonitor™ 5000	PowerMonitor 5000 Unit User Manual, <a href="#">1426-UM001</a>
Submeter Option	1420 PowerMonitor 500	PowerMonitor 500 Unit User Manual, <a href="#">1420-UM001</a>

### Power Supplies

Component	Considerations	References
Transformers	1497 Global Control Circuit Transformer	Control Circuit Transformers Technical Data, <a href="#">1497-TD001</a>
Power Supplies	1606 Switched Mode Power Supply	Switched Mode Power Supply Specifications Technical Data, <a href="#">1606-TD002</a>

### PowerFlex AC Variable Frequency Drives

Component	Considerations	References
Variable Frequency Drives	PowerFlex® 525 Drive	PowerFlex 520-series AC Drive Specifications Technical Data, <a href="#">520-TD001</a>
	PowerFlex 755TS with TotalFORCE® Control Drive	PowerFlex 755TS Products with TotalFORCE Control Specifications Technical Data, <a href="#">750-TD014</a>
Power Conditioners	1321 Series Line Reactor	Power Conditioning Products Technical Data, <a href="#">1321-TD001</a>

### Operators and Indicators

Component	Considerations	References
<b>Push Button Operator</b>	30 mm Operator	30 mm Push Button Specifications Technical Data, <a href="#">800-TD009</a>
<b>Selector Switch Operator</b>		
<b>Pilot Light</b>		
<b>Push Button Operator</b>	22 mm Operator	22 mm Push Button Specifications Technical Data, <a href="#">800-TD008</a>
<b>Selector Switch Operator</b>		
<b>Pilot Light</b>		

# Mains

Main incoming units permit customer connection to incoming power, and the main breaker provides the necessary protection to the main power bus of the MCC. These units can use either ACBs or MCCBs as standard sections. Breakers can be 3-pole or 4-pole with top or bottom customer cable access. Main incoming units are typically placed on the left, center, or right side of the MCC. Numerous options are available for both ACBs and MCCBs to meet the needs of the most demanding applications.

## Main Air Circuit Breaker (ACB) Units

Air circuit breaker mains are available in 630...6300 A configurations. Main incoming units that use an ACB provide a withdrawable main breaker for ease of service. These units are front accessible with shutters for added safety when removed. All mains with ACBs are 11 modules high, with three dedicated compartments; metering, breaker, and incoming termination.

### Main ACB Options

- Metering
- Electrical charging device
- Closing release
- Shunt release
- Undervoltage release
- Key and padlocking
- Additional auxiliary signaling contacts
- Locking cradle shutters
- Thermography
- EtherNet/IP communication module

Table 12 - Mains, ACB

Mains, ACB							
ABB ACB Frame	ACB Trip Unit Rating [A]	Pole, Qty	Column Width, Modules <sup>(1)</sup>	Column Depth, Modules	Load Inc [A] <sup>(2)</sup>		Rated Short-time Withstand Current I <sub>CWR</sub> kA
					IP54	IP43 <sup>(3)(4)</sup>	
E1.2	630	3P / 4P	3	3	630	630	≤ 42, 1 s
	800	3P / 4P	3	3	800	800	≤ 42, 1 s
	1000	3P / 4P	3	3	1000	1000	≤ 42, 1 s
	1250	3P / 4P	3	3	1250	1250	≤ 42, 1 s
	1600	3P / 4P	3	3	1300	1520	≤ 42, 1 s
E2.2	800	3P / 4P	3	3	800	800	≤ 65, 1 s
	1000	3P / 4P	3	3	1000	1000	≤ 65, 1 s
	1250	3P / 4P	3	3	1250	1250	≤ 65, 1 s
	1600	3P / 4P	3	3	1600	1600	≤ 65, 1 s
	2000	3P / 4P	3	3	1600	1810	≤ 65, 1 s
E4.2	2500	3P / 4P	4	3	1950	2400	≤ 80, 1 s
	3200	3P / 4P	4	3	2100	2645	≤ 80, 1 s
	4000	3P / 4P	4	4	2650	3380	≤ 100, 1 s
				3	2300	3135	≤ 80, 1 s
E6.2	4000	3P / 4P	6	4	3500	4000	≤ 100, 1 s
	5000	3P / 4P	6	4	3550	5000	≤ 100, 1 s
	6300	3P / 4P	3P	6	4	4250	5240
4P			8				

(1) Width may vary depending on the ACB position in the lineup.  
 (2) Values are valid for 50 Hz (the rated current at 60 Hz shall be reduced to 95% of that at 50 Hz).  
 (3) Include a 100 mm air gap behind the column for single front configurations.  
 (4) IP43 configuration requires engineering work. Contact your Rockwell Automation sales representative for availability.

## Main Molded Case Circuit Breaker (MCCB) Units

Main MCCB units are available in up to 1200 A configurations. Main incoming units use a molded case circuit breaker with a thermal magnetic or electronic trip. These units are smaller than ACBs units, and can be placed in a withdrawable column with other functional units.

### MCCB Options

- Metering
- Motorized operation
- Closing release
- Shunt trip
- Undervoltage release
- Auxiliary contacts
- Thermography

**Table 13 - Mains, MCCB**

Load $I_{nc}$ [A]	Unit Size W x H <sup>(1)</sup>	Unit Type	Column Position	Circuit Breaker					Short Circuit Current Ratings $I_{cc}$ (kA)		
				Trip Rating [A]	Pole <sup>(2)</sup>	Trip Unit Type <sup>(3)</sup>			415V	480V	690V
						Adjust Thermal/ Adjust Magnetic	Electronic LSI <sup>(4)</sup>	Electronic LSIG <sup>(5)</sup>			
480	3 x 5	Fixed	Bottom Only	600	3P	140G-MOF3-D60	140G-MOH3-D60	140G-MOI3-D60	100	65	—
504	3 x 5	Fixed	Bottom Only	630	3P	140G-MOF3-D63	140G-MOH3-D63	140G-MOI3-D63	100	65	—
640	3 x 5	Fixed	Bottom Only	800	3P	140G-MOF3-D80	140G-MOH3-D80	140G-MOI3-D80	100	65	—
960	3 x 6	Fixed	Bottom Only	1200	3P	—	140G-NOH3-E12	140G-NOI3-E12	100	65	50

(1) Unit height increases by 1M if PowerMonitor is used.

(2) Consult your local Rockwell Automation sales office if a 4P circuit breaker is required for feeder applications with MCCB.

(3) Catalog numbers for 140G-M,N refer to circuit breaker version that has the highest short circuit interrupting rating. For other ratings, see [Circuit and Load Protection on page 14](#).

(4) Long, short, instant.

(5) Long, short, instant, ground fault.



## Feeders

Numerous feeder options are available for power distribution from within your switchgear or MCC application. For larger power demands, the ACB is commonly used. The ACB available range is from 630...2500 A. Smaller power applications often use a molded case circuit breaker (MCCB). The standard range for the MCCBs is 0.5...1200 A. All feeders can be provided as 3-pole or 4-pole.

### Feeders Air Circuit Breaker (ACB) Units

Feeder incoming units that use an air circuit breaker provide a withdrawable feeder breaker for ease of service. These units are front accessible with shutters for added safety when removed. All feeders with ACBs are 11 modules in height. All ACBs include a microprocessor-based trip unit.

#### Feeder ACB Options

- Metering
- Motorized operation
- Electrical charging device
- Closing release
- Shunt release
- Undervoltage release
- Key and padlocking
- Additional auxiliary signaling contacts
- Locking cradle shutters
- EtherNet/IP communication module

Table 14 - Feeders, ACB

Feeder, ACB							
ABB ACB Frame	ACB Trip Unit Rating [A]	Pole, Qty	Column Width, Modules <sup>(1)</sup>	Column Depth, Modules	Load Inc [A] <sup>(2)</sup>		Rated Short-time Withstand Current $I_{cw}$ , kA
					IP54	IP43 <sup>(3)(4)</sup>	
E1.2	630	3P / 4P	3	3	630	630	≤ 42, 1 s
	800	3P / 4P	3	3	800	800	≤ 42, 1 s
	1000	3P / 4P	3	3	1000	1000	≤ 42, 1 s
	1250	3P / 4P	3	3	1250	1250	≤ 42, 1 s
	1600	3P / 4P	3	3	1300	1520	≤ 42, 1 s
E2.2	800	3P / 4P	3	3	800	800	≤ 65, 1 s
	1000	3P / 4P	3	3	1000	1000	≤ 65, 1 s
	1250	3P / 4P	3	3	1250	1250	≤ 65, 1 s
	1600	3P / 4P	3	3	1600	1600	≤ 65, 1 s
	2000	3P / 4P	3	3	1600	1810	≤ 65, 1 s
E4.2	2500	3P / 4P	4	3	1950	2400	≤ 80, 1 s
	2500	3P / 4P	4	3	1950	2400	≤ 80, 1 s

(1) Width may vary depending on the ACB position in the lineup.  
 (2) Values are valid for 50 Hz (the rated current at 60 Hz shall be reduced to 95% of that at 50 Hz).  
 (3) Include a 100 mm air gap behind the column for single front configurations.  
 (4) IP43 configuration requires engineering work. Contact your Rockwell Automation sales office for availability.

## Feeder Molded Case Circuit Breaker (MCCB) Units

Feeder MCCB units are placed within the withdrawable column with other functional units, which provides flexibility to place the units where they best suit your needs. MCCB feeders are withdrawable up to 400 A. Units larger than 400 A are fixed mount.

### Feeder MCCB Options

These Feeder unit options are dependent on the available space on the cover and inside the unit.

- Auxiliary contact for circuit breaker
- Shunt trip coil for circuit breaker
- Alarm contact for circuit breaker
- Minimum voltage coil (undervoltage) for circuit breaker
- Combination auxiliary contact and alarm contact for circuit breaker
- Metering

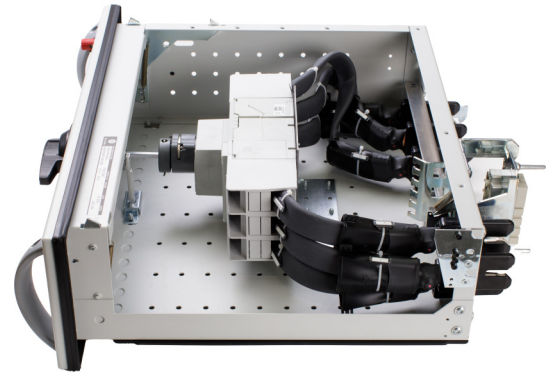


Table 15 - 3593 Feeders, MCCB

Load $I_{nc}$ [A]	Unit Size, W x H	Unit Type	Column Position	Circuit Breaker						Short Circuit Current Ratings, $I_{cc}$ [kA]		
				Trip Rating $I_n$ [A]	Pole <sup>(1)</sup>	Trip Unit Type <sup>(2)</sup>				415V	480V	690V
						Fixed Thermal/ Fixed Magnetic	Adjust Thermal/ Adjust Magnetic	Electronic LSI <sup>(3)</sup>	Electronic LSIG <sup>(4)</sup>			
0.5	1 x 1	Multi Drawer	All	0.5	3P	140UT-D7D3-A50	—	—	—	100	65	—
1	1 x 1	Multi Drawer	All	1	3P	140UT-D7D3-B10	—	—	—	100	65	—
2	1 x 1	Multi Drawer	All	2	3P	140UT-D7D3-B20	—	—	—	100	65	—
3	1 x 1	Multi Drawer	All	3	3P	140UT-D7D3-B30	—	—	—	100	65	—
4	1 x 1	Multi Drawer	All	4	3P	140UT-D7D3-B40	—	—	—	100	65	—
5	1 x 1	Multi Drawer	All	5	3P	140UT-D7D3-B50	—	—	—	100	65	—
6	1 x 1	Multi Drawer	All	6	3P	140UT-D7D3-B60	—	—	—	100	65	—
8	1 x 1	Multi Drawer	All	8	3P	140UT-D7D3-B80	—	—	—	100	65	—
10	1 x 1	Multi Drawer	All	10	3P	140UT-D7D3-C10	—	—	—	100	65	—
11	1 x 1	Multi Drawer	All	12	3P	140UT-D7D3-C12	—	—	—	65	65	—
14	1 x 1	Multi Drawer	All	15	3P	140UT-D7D3-C15	—	—	—	65	65	—
19	1 x 1	Multi Drawer	All	20	3P	140UT-D7D3-C20	—	—	—	65	65	—
21	1 x 1	Multi Drawer	All	25	3P	140UT-D7D3-C25	—	—	—	65	65	—
25	1 x 1	Multi Drawer	All	30	3P	140UT-D7D3-C30	—	—	—	65	65	—
12	1.5 x 1	Multi Drawer	All	15	3P	140G-G6C3-C15	—	—	—	70	50	—
12.8	1.5 x 1	Multi Drawer	All	16	3P	140G-G6C3-C16	—	—	—	70	50	—
16	1.5 x 1	Multi Drawer	All	20	3P	140G-G6C3-C20	—	—	—	70	50	—
20	1.5 x 1	Multi Drawer	All	25	3P	140G-G6C3-C25	—	—	—	70	50	—
24	1.5 x 1	Multi Drawer	All	30	3P	140G-G6C3-C30	—	—	—	70	50	—
25.6	1.5 x 1	Multi Drawer	All	32	3P	140G-G6C3-C32	—	—	—	70	50	—
28	1.5 x 1	Multi Drawer	All	35	3P	140G-G6C3-C35	—	—	—	70	50	—
32	1.5 x 1	Multi Drawer	All	40	3P	140G-G6C3-C40	—	—	—	70	50	—
36	1.5 x 1	Multi Drawer	All	45	3P	140G-G6C3-C45	—	—	—	70	50	—
40	1.5 x 1	Multi Drawer	All	50	3P	140G-G6C3-C50	—	—	—	70	50	—
48	1.5 x 1	Multi Drawer	All	60	3P	140G-G6C3-C60	—	—	—	70	50	—
50.4	1.5 x 1	Multi Drawer	All	63	3P	140G-G6C3-C63	—	—	—	70	50	—
56	1.5 x 1	Multi Drawer	All	70	3P	140G-G6C3-C70	—	—	—	70	50	—
64	1.5 x 1	Multi Drawer	All	80	3P	140G-G6C3-C80	—	—	—	70	50	—
72	1.5 x 1	Multi Drawer	All	90	3P	140G-G6C3-C90	—	—	—	70	50	—
80	1.5 x 1	Multi Drawer	All	100	3P	140G-G6C3-D10	—	—	—	70	50	—
88	1.5 x 1	Multi Drawer	All	110	3P	140G-G6C3-D11	—	—	—	70	50	—
100	1.5 x 1	Multi Drawer	All	125	3P	140G-G6C3-D12	—	—	—	70	50	—
12	1.5 x 1	Multi Drawer	All	15	3P	140G-HOC3-C15	—	—	—	120	60	—
13	1.5 x 1	Multi Drawer	All	16	3P	140G-HOC3-C16	—	—	—	120	60	—

Table 15 - 3593 Feeders, MCCB (Continued)

Load $I_{nc}$ [A]	Unit Size, W x H	Unit Type	Column Position	Circuit Breaker						Short Circuit Current Ratings, $I_{cc}$ [kA]		
				Trip Rating $I_n$ [A]	Pole <sup>(1)</sup>	Trip Unit Type <sup>(2)</sup>				415V	480V	690V
						Fixed Thermal/ Fixed Magnetic	Adjust Thermal/ Adjust Magnetic	Electronic LSI <sup>(3)</sup>	Electronic LSIG <sup>(4)</sup>			
16	1.5 x 1	Multi Drawer	All	20	3P	140G-HOC3-C20	—	—	—	120	60	—
20	1.5 x 1	Multi Drawer	All	25	3P	140G-HOC3-C25	—	140G-HOH3-C25	140G-HO13-C25	120	60	—
24	1.5 x 1	Multi Drawer	All	30	3P	140G-HOC3-C30	—	—	—	120	60	—
26	1.5 x 1	Multi Drawer	All	32	3P	140G-HOC3-C32	—	—	—	120	60	—
28	1.5 x 1	Multi Drawer	All	35	3P	140G-HOC3-C35	—	—	—	120	60	—
32	1.5 x 1	Multi Drawer	All	40	3P	140G-HOC3-C40	—	—	—	120	60	—
40	1.5 x 1	Multi Drawer	All	50	3P	140G-HOC3-C50	—	—	—	120	60	—
48	1.5 x 1	Multi Drawer	All	60	3P	140G-HOC3-C60	—	140G-HOH3-C60	140G-HO13-C60	120	60	—
50	1.5 x 1	Multi Drawer	All	63	3P	140G-HOC3-C63	—	—	—	120	60	—
56	1.5 x 1	Multi Drawer	All	70	3P	140G-HOC3-C70	—	—	—	120	60	—
64	1.5 x 1	Multi Drawer	All	80	3P	—	140G-HOF3-C80	—	—	120	60	—
72	1.5 x 1	Multi Drawer	All	90	3P	—	140G-HOF3-C90	—	—	120	60	—
80	1.5 x 1	Multi Drawer	All	100	3P	—	140G-HOF3-D10	140G-HOH3-D10	140G-HO13-D10	120	60	—
88	1.5 x 1	Multi Drawer	All	110	3P	—	140G-HOF3-D11	—	—	120	60	—
100	1.5 x 1	Multi Drawer	All	125	3P	—	140G-HOF3-D12	140G-HOH3-D12	140G-HO13-D12	120	60	—
21	3 x 1	Multi Drawer	All	25	3P	140G-JOC3-C25	—	—	—	120	100	50 <sup>(5)</sup>
25	3 x 1	Multi Drawer	All	30	3P	140G-JOC3-C30	—	—	—	120	100	50 <sup>(5)</sup>
27	3 x 1	Multi Drawer	All	32	3P	140G-JOC3-C32	—	—	—	120	100	50 <sup>(5)</sup>
29	3 x 1	Multi Drawer	All	35	3P	140G-JOC3-C35	—	—	—	120	100	50 <sup>(5)</sup>
34	3 x 1	Multi Drawer	All	40	3P	140G-JOC3-C40	—	140G-JOH3-C40	140G-JO13-C40	120	100	50 <sup>(5)</sup>
42	3 x 1	Multi Drawer	All	50	3P	140G-JOC3-C50	—	—	—	120	100	50 <sup>(5)</sup>
50	3 x 1	Multi Drawer	All	60	3P	140G-JOC3-C60	—	140G-JOH3-C60	140G-JO13-C60	120	100	50 <sup>(5)</sup>
53	3 x 1	Multi Drawer	All	63	3P	140G-JOC3-C63	—	—	—	120	100	50 <sup>(5)</sup>
59	3 x 1	Multi Drawer	All	70	3P	140G-JOC3-C70	—	—	—	120	100	50 <sup>(5)</sup>
67	3 x 1	Multi Drawer	All	80	3P	—	140G-JOF3-C80	—	—	120	100	50 <sup>(5)</sup>
76	3 x 1	Multi Drawer	All	90	3P	—	140G-JOF3-C90	—	—	120	100	50 <sup>(5)</sup>
84	3 x 1	Multi Drawer	All	100	3P	—	140G-JOF3-D10	140G-JOH3-D10	140G-JO13-D10	120	100	50 <sup>(5)</sup>
92	3 x 1	Multi Drawer	All	110	3P	—	140G-JOF3-D11	—	—	120	100	50 <sup>(5)</sup>
105	3 x 1	Multi Drawer	All	125	3P	—	140G-JOF3-D12	—	—	120	100	50 <sup>(5)</sup>
126	3 x 1	Multi Drawer	All	150	3P	—	140G-JOF3-D15	140G-JOH3-D15	140G-JO13-D15	120	100	50 <sup>(5)</sup>
134	3 x 1	Multi Drawer	All	160	3P	—	140G-JOF3-D16	—	—	120	100	—
147	3 x 1	Multi Drawer	All	175	3P	—	140G-JOF3-D17	—	—	120	100	—
168	3 x 1	Multi Drawer	All	200	3P	—	140G-JOF3-D20	—	—	120	100	—
189	3 x 1	Multi Drawer	All	225	3P	—	140G-JOF3-D22	—	—	120	100	—
210	3 x 1	Multi Drawer	All	250	3P	—	140G-JOF3-D25	140G-JOH3-D25	140G-JO13-D25	120	100	—
210	3 x 1	Multi Drawer	Bottom Only	300	3P	—	140G-KOF3-D30	140G-KOH3-D30	140G-KO13-D30	120	85	65
	3 x 1.5	Multi Drawer	All	300	3P	—	140G-KOF3-D30	140G-KOH3-D30	140G-KO13-D30	120	85	65
280	3 x 1	Multi Drawer	Bottom Only	400	3P	—	140G-KOF3-D40	140G-KOH3-D40	140G-KO13-D40	120	85	65
280	3 x 1.5	Multi Drawer	All	400	3P	—	140G-KOF3-D40	140G-KOH3-D40	140G-KO13-D40	120	85	65
480	3 x 5 <sup>(6)</sup>	Fixed	Bottom Only	600	3P	—	140G-MOF3-D60	140G-MOH3-D60	140G-MO13-D60	80	65	—
504	3 x 5 <sup>(6)</sup>	Fixed	Bottom Only	630	3P	—	140G-MOF3-D63	140G-MOH3-D63	140G-MO13-D63	80	65	—
640	3 x 5 <sup>(6)</sup>	Fixed	Bottom Only	800	3P	—	140G-MOF3-D80	140G-MOH3-D80	140G-MO13-D80	80	65	—
960	3 x 6 <sup>(6)</sup>	Fixed	Bottom Only	1200	3P	—	—	140G-NOH3-E12	140G-NO13-E12	80	65	50

(1) Consult your local Rockwell Automation sales office if a 4P circuit breaker is required for feeder applications with an MCCB.  
 (2) Catalog numbers refer to the circuit breaker version that has the highest short circuit interrupting rating. For other ratings, see [Circuit and Load Protection on page 14](#).  
 (3) Long, short, instant.  
 (4) Long, short, instant, ground fault.  
 (5) 690V ratings refer to the 140G-J15 trip version.  
 (6) Unit height increases by 1M if PowerMonitor is used.

# Starters

## DOL and DOLR Starter Units

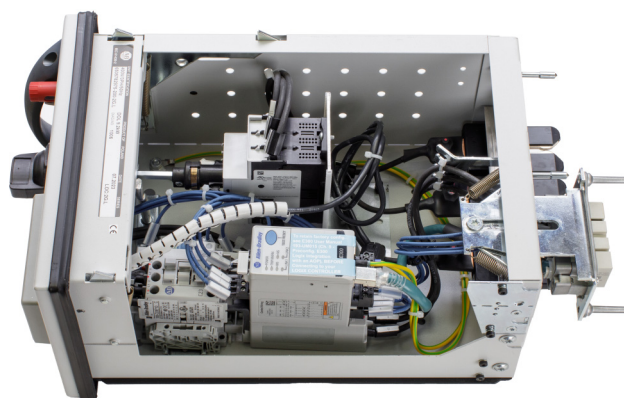
Direct-on-line (DOL) nonreversing starter units are supplied with Allen-Bradley Bulletin 100-C or 100-E contactors and a circuit breaker disconnect. These units are available with an E300 Electronic Overload Relay or E100 Electronic Overload Relay. Starter units are available in withdrawable or fixed configurations.

Direct-on-line reversing (DOLR) starter units are supplied with Allen-Bradley Bulletin 104-C or 104-E contactors and a circuit breaker disconnect. The starters are mechanically and electrically interlocked to avoid both contactors being closed simultaneously. These units are available with an E300 Overload Relay or E100 Solid-state Overload Relay. DOLR starter units are available in withdrawable or fixed configurations.

### DOL and DOLR Starter Unit Options

These starter unit options are dependent on the available space on the cover and inside the unit.

- Auxiliary contact for contactors
- Auxiliary contact for circuit breaker
- Surge suppressor
- Control circuit transformer
- Push buttons
- Pilot lights
  - Status indicator
  - Status indicator, push-to-test
- Selector switch
  - Two-position
  - Three-position
- EtherNet/IP communication module
- Door-mounted overload relay control station



**Table 16 - 3513 DOL and 3507 DOLR Starter Units With 140MT Series Circuit Breakers and E300 Motor Overload Relays for 380...415V, Type 2 Coordination**

P kW, Approx	Voltage			Unit size, Width x Height		Unit Type	140MT Series Circuit Breaker Cat. No.	Contactor Cat. No. <sup>(1)</sup>		E300 Motor Overload Relay Cat. No. <sup>(1)</sup>	Short Circuit Current Ratings
	380V	400V	415V	DOL	DOLR			DOL	DOLR		I <sub>cc</sub> [kA]
0.18	✓	✓	✓	1 x 1	1.5 x 1	Multi Drawer	140MT-D9N-B10	100-C16⊗	104-C16⊗	193-ESM-⊕-30A-C23	80
0.25				1 x 1	1.5 x 1		140MT-D9N-B10	100-C16⊗	104-C16⊗	193-ESM-⊕-30A-C23	80
0.37				1 x 1	1.5 x 1		140MT-D9N-B16	100-C23⊗	104-C23⊗	193-ESM-⊕-30A-C23	80
0.55				1 x 1	1.5 x 1		140MT-D9N-B16	100-C23⊗	104-C23⊗	193-ESM-⊕-30A-C23	80
0.75				1 x 1	1.5 x 1		140MT-D9N-B25	100-C23⊗	104-C23⊗	193-ESM-⊕-30A-C23	80
1.1				1 x 1	1.5 x 1		140MT-D9N-B40	100-C23⊗	104-C23⊗	193-ESM-⊕-30A-C23	80
1.5				1 x 1	1.5 x 1		140MT-D9N-B40	100-C23⊗	104-C23⊗	193-ESM-⊕-30A-C23	80
2.2				1 x 1	1.5 x 1		140MT-D9N-B63	100-C23⊗	104-C23⊗	193-ESM-⊕-30A-C23	80
3				1 x 1	1.5 x 1		140MT-D9N-C10	100-C23⊗	104-C23⊗	193-ESM-⊕-30A-C23	80
4				1 x 1	1.5 x 1		140MT-D9N-C10	100-C23⊗	104-C23⊗	193-ESM-⊕-30A-C23	80
5.5				1 x 1	1.5 x 1	140MT-D9N-C16	100-C37⊗	104-C37⊗	193-ESM-⊕-30A-C55	80	
7.5				1.5 x 1	1.5 x 1	140MT-D9N-C25	100-C37⊗	104-C37⊗	193-ESM-⊕-30A-C55	80	

(1) See [Circuit and Load Protection on page 14](#) to see a full catalog number explanation for your specific component.

**Table 17 - 3513 DOL and 3507 DOLR Starter Units With 140MG Series Circuit Breakers and E300 Motor Overload Relays for 380...415V, Type 2 Coordination**

P kW, Approx	Voltage			Unit size, Width x Height		Unit Type	140MG and Other Options	140MG-H Options	Contactor Cat. No. <sup>(1)</sup>		E300 Motor Overload Relay Cat. No. <sup>(1)</sup>	Short Circuit Current Ratings I <sub>cc</sub> [kA]		
	380V	400V	415V	DOL	DOLR				DOL	DOLR				
0.18	✓	✓	✓	3 x 1	3 x 1	Multi Drawer	140MG-G8P-B30	140MG-H8P-B30	100-C37⊗	104-C37⊗	193-ESM-⊗-30A-C55	100		
0.25				3 x 1	3 x 1	Multi Drawer	140MG-G8P-B30	140MG-H8P-B30	100-C37⊗	104-C37⊗	193-ESM-⊗-30A-C55	100		
0.37				3 x 1	3 x 1	Multi Drawer	140MG-G8P-B30	140MG-H8P-B30	100-C37⊗	104-C37⊗	193-ESM-⊗-30A-C55	100		
0.55				3 x 1	3 x 1	Multi Drawer	140MG-G8P-B30	140MG-H8P-B30	100-C37⊗	104-C37⊗	193-ESM-⊗-30A-C55	100		
0.75				3 x 1	3 x 1	Multi Drawer	140MG-G8P-B30	140MG-H8P-B30	100-C37⊗	104-C37⊗	193-ESM-⊗-30A-C55	100		
1.1				3 x 1	3 x 1	Multi Drawer	140MG-G8P-B70	140MG-H8P-B70	100-C37⊗	104-C37⊗	193-ESM-⊗-30A-C55	100		
1.5				3 x 1	3 x 1	Multi Drawer	140MG-G8P-B70	140MG-H8P-B70	100-C37⊗	104-C37⊗	193-ESM-⊗-30A-C55	100		
2.2				3 x 1	3 x 1	Multi Drawer	140MG-G8P-B70	140MG-H8P-B70	100-C37⊗	104-C37⊗	193-ESM-⊗-30A-C55	100		
3				3 x 1	3 x 1	Multi Drawer	140MG-G8P-C15	140MG-H8P-C15	100-C37⊗	104-C37⊗	193-ESM-⊗-30A-C55	100		
4				3 x 1	3 x 1	Multi Drawer	140MG-G8P-C15	140MG-H8P-C15	100-C37⊗	104-C37⊗	193-ESM-⊗-30A-C55	100		
5.5				3 x 1	3 x 1	Multi Drawer	140MG-G8P-C15	140MG-H8P-C15	100-C37⊗	104-C37⊗	193-ESM-⊗-30A-C55	100		
7.5				3 x 1	3 x 1	Multi Drawer	140MG-G8P-C50	140MG-H8P-C50	100-C37⊗	104-C37⊗	193-ESM-⊗-30A-C55	100		
11				3 x 1	3 x 1	Multi Drawer	140MG-G8P-C50	140MG-H8P-C50	100-C37⊗	104-C37⊗	193-ESM-⊗-30A-C55	100		
15				3 x 1	3 x 1	Multi Drawer	140MG-G8P-C50	140MG-H8P-C50	100-C37⊗	104-C37⊗	193-ESM-⊗-30A-C55	100		
18.5				3 x 1	3 x 1	Multi Drawer	140MG-G8P-C50	140MG-H8P-C50	100-C37⊗	104-C37⊗	193-ESM-⊗-30A-C55	100		
22				3 x 1.5	-	-	3 x 1.5	Multi Drawer	140MG-G8P-C80	140MG-H8P-C80	100-C55⊗	104-C55⊗	193-ESM-⊗-60A-C55	100
30				3 x 1.5			Multi Drawer	140MG-G8P-C80	140MG-H8P-C80	100-C55⊗	104-C55⊗	193-ESM-⊗-60A-C55	100	
37				3 x 2			Multi Drawer	140MG-G8P-D12	140MG-H8P-D12	100-C85⊗	104-C85⊗	193-ESM-⊗-100A-C97	100 <sup>(3)</sup>	
45				3 x 2			Multi Drawer	140MG-G8P-D12	140MG-H8P-D12	100-C85⊗	104-C85⊗	193-ESM-⊗-100A-C97	100 <sup>(3)</sup>	
55				3 x 2			Multi Drawer	140MG-G8P-D12	140MG-H8P-D12	100-C97⊗	104-C97⊗	193-ESM-⊗-100A-C97	100 <sup>(3)</sup>	
75				3 x 3			Multi Drawer	140MG-J8P-D25	-	100-E205⊗	104-E205⊗	193-ESM-⊗-30A-E3T/CT	65	
90				3 x 3			Multi Drawer	140MG-J8P-D25		100-E205⊗	104-E205⊗	193-ESM-⊗-30A-E3T/CT	65	
110	3 x 3	Multi Drawer	140MG-J8P-D25	100-E205⊗			104-E205⊗	193-ESM-⊗-30A-E3T/CT		65				
132	3 x 5	MP <sup>(4)</sup>	140MG-K8P-D40	100-E400⊗			104-E400⊗	193-ESM-⊗-30A-E3T/CT		65				
150	3 x 5	MP <sup>(4)</sup>	140MG-K8P-D40	100-E400⊗			104-E400⊗	193-ESM-⊗-30A-E3T/CT		65				
160	3 x 5	MP <sup>(4)</sup>	140MG-K8P-D40	100-E400⊗			104-E400⊗	193-ESM-⊗-30A-E3T/CT		65				
185	3 x 6	MP <sup>(4)</sup>	140MG-M8P-D80	100-E580⊗			104-E580⊗	193-ESM-⊗-30A-E3T/CT		65				
200	3 x 6	MP <sup>(4)</sup>	140MG-M8P-D80	100-E580⊗			104-E580⊗	193-ESM-⊗-30A-E3T/CT		65				
220	3 x 6	MP <sup>(4)</sup>	140MG-M8P-D80	100-E580⊗			104-E580⊗	193-ESM-⊗-30A-E3T/CT		65				
250	3 x 6	MP <sup>(4)</sup>	140MG-M8P-D80	100-E580⊗			104-E580⊗	193-ESM-⊗-30A-E3T/CT		65				

(1) See [Circuit and Load Protection on page 14](#) to see a full catalog number explanation for your specific component.  
 (2) Contact your local Rockwell Automation sales office if higher kW ratings for DOL(R) are required.  
 (3) Short circuit current rating 65 kA with 140MG-G circuit breaker.  
 (4) Only available in the bottom position in the column.

**Table 18 - 3513 DOL and 3507 DOLR Starter Units With 140MT Series Circuit Breakers and E100 Motor Overload Relays for 380...415V, Type 2 Coordination**

P Approx kW	Voltage			Unit Size W X H		Unit Type	140MT Series Circuit Breaker Cat. No.	Contactor Cat. No.(1)		E100 Motor Overload Relay Cat. No.	Short Circuit Current Ratings
	380V	400V	415V	DOL	DOLR			DOL	DOLR		I <sub>cc</sub> [kA]
0.06	✓	✓	✓	1 x 1	1.5 x 1	Multi Drawer	140MT-D9N-B10	100-C16⊗	104-C16⊗	193-1EFAB	80
0.09				1 x 1	1.5 x 1	Multi Drawer	140MT-D9N-B10	100-C16⊗	104-C16⊗	193-1EFAB	80
0.12				1 x 1	1.5 x 1	Multi Drawer	140MT-D9N-B10	100-C16⊗	104-C16⊗	193-1EFAB	80
0.18				1 x 1	1.5 x 1	Multi Drawer	140MT-D9N-B10	100-C16⊗	104-C16⊗	193-1EFBB	80
0.25				1 x 1	1.5 x 1	Multi Drawer	140MT-D9N-B10	100-C16⊗	104-C16⊗	193-1EFBB	80
0.37				1 x 1	1.5 x 1	Multi Drawer	140MT-D9N-B16	100-C23⊗	104-C23⊗	193-1EFGB	80
0.55				1 x 1	1.5 x 1	Multi Drawer	140MT-D9N-B16	100-C23⊗	104-C23⊗	193-1EFGB	80
0.75				1 x 1	1.5 x 1	Multi Drawer	140MT-D9N-B25	100-C23⊗	104-C23⊗	193-1EFGB	80
1.1				1 x 1	1.5 x 1	Multi Drawer	140MT-D9N-B40	100-C23⊗	104-C23⊗	193-1EFGB	80
1.5				1 x 1	1.5 x 1	Multi Drawer	140MT-D9N-B40	100-C23⊗	104-C23⊗	193-1EFGB	80
2.2				1 x 1	1.5 x 1	Multi Drawer	140MT-D9N-B63	100-C23⊗	104-C23⊗	193-1EFDB	80
3				1 x 1	1.5 x 1	Multi Drawer	140MT-D9N-C10	100-C23⊗	104-C23⊗	193-1EFDB	80
4				1 x 1	1.5 x 1	Multi Drawer	140MT-D9N-C10	100-C23⊗	104-C23⊗	193-1EFDB	80
5.5				1 x 1	1.5 x 1	Multi Drawer	140MT-D9N-C16	100-C37⊗	104-C37⊗	193-1EFED	80
7.5				1.5 x 1	1.5 x 1	Multi Drawer	140MT-D9N-C25	100-C37⊗	104-C37⊗	193-1EFED	80
9.2				1.5 x 1	1.5 x 1	Multi Drawer	140MT-D9N-C25	100-C37⊗	104-C37⊗	193-1EFED	80

(1) See [Circuit and Load Protection on page 14](#) to see a full catalog number explanation for your specific component.

**Table 19 - 3513 DOL and 3507 DOLR Starter Units With 140MG Series Circuit Breakers and E100 Motor Overload Relays for 380...415V, Type 2 Coordination**

P Approx kW	Voltage			Unit Size W X H		Unit Type	140MG-G and Other Options	140MG-H Options	Contactor Cat. No. <sup>(1)</sup>		E100 Motor Overload Relay Cat. No.	Short Circuit Current Ratings
	380V	400V	415V	DOL	DOLR				DOL	DOLR		I <sub>cc</sub> [kA]
0.06	✓	✓	✓	3 x 1	3 x 1	Multi Drawer	—	140MG-H8P-B30	100-C37⊗	104-C37⊗	193-1EFAB <sup>(2)</sup>	100
0.09				3 x 1	3 x 1	Multi Drawer	—	140MG-H8P-B30	100-C37⊗	104-C37⊗	193-1EFAB <sup>(2)</sup>	100
0.12				3 x 1	3 x 1	Multi Drawer	—	140MG-H8P-B30	100-C37⊗	104-C37⊗	193-1EFAB <sup>(2)</sup>	100
0.18				3 x 1	3 x 1	Multi Drawer	—	140MG-H8P-B30	100-C37⊗	104-C37⊗	193-1EFBB <sup>(2)</sup>	100
0.25				3 x 1	3 x 1	Multi Drawer	—	140MG-H8P-B30	100-C37⊗	104-C37⊗	193-1EFBB <sup>(2)</sup>	100
0.37				3 x 1	3 x 1	Multi Drawer	—	140MG-H8P-B30	100-C37⊗	104-C37⊗	193-1EFCB <sup>(2)</sup>	100
0.55				3 x 1	3 x 1	Multi Drawer	—	140MG-H8P-B30	100-C37⊗	104-C37⊗	193-1EFCB <sup>(2)</sup>	100
0.75				3 x 1	3 x 1	Multi Drawer	—	140MG-H8P-B30	100-C37⊗	104-C37⊗	193-1EFCB <sup>(2)</sup>	100
1.1				3 x 1	3 x 1	Multi Drawer	140MG-G8P-B70	140MG-H8P-B70	100-C37⊗	104-C37⊗	193-1EFCB <sup>(2)</sup>	100
1.5				3 x 1	3 x 1	Multi Drawer	140MG-G8P-B70	140MG-H8P-B70	100-C37⊗	104-C37⊗	193-1EFCB <sup>(2)</sup>	100
2.2				3 x 1	3 x 1	Multi Drawer	140MG-G8P-B70	140MG-H8P-B70	100-C37⊗	104-C37⊗	193-1EFDB <sup>(2)</sup>	100
3				3 x 1	3 x 1	Multi Drawer	140MG-G8P-C15	140MG-H8P-C15	100-C37⊗	104-C37⊗	193-1EFED	100
4				3 x 1	3 x 1	Multi Drawer	140MG-G8P-C15	140MG-H8P-C15	100-C37⊗	104-C37⊗	193-1EFED	100
5.5				3 x 1	3 x 1	Multi Drawer	140MG-G8P-C15	140MG-H8P-C15	100-C37⊗	104-C37⊗	193-1EFED	100
7.5				3 x 1	3 x 1	Multi Drawer	140MG-G8P-C50	140MG-H8P-C50	100-C37⊗	104-C37⊗	193-1EFED	100
11				3 x 1	3 x 1	Multi Drawer	140MG-G8P-C50	140MG-H8P-C50	100-C37⊗	104-C37⊗	193-1EFED	100
15				3 x 1	3 x 1	Multi Drawer	140MG-G8P-C50	140MG-H8P-C50	100-C37⊗	104-C37⊗	193-1EFFD	100
18.5				3 x 1	3 x 1	Multi Drawer	140MG-G8P-C50	140MG-H8P-C50	100-C37⊗	104-C37⊗	193-1EFFD	100
22				3 x 1.5	— <sup>(3)</sup>	Multi Drawer	140MG-G8P-C80	140MG-H8P-C80	100-C55⊗	104-C55⊗	193-1EFFD	100
30				3 x 1.5	— <sup>(3)</sup>	Multi Drawer	140MG-G8P-C80	140MG-H8P-C80	100-C55⊗	104-C55⊗	193-1EFFD	100
37	—	—	—	3 x 2	— <sup>(3)</sup>	Multi Drawer	140MG-G8P-D12	140MG-H8P-D12	100-C85⊗	104-C85⊗	193-1EFGE	100 <sup>(4)</sup>
45	✓	—	—	3 x 2	— <sup>(3)</sup>	Multi Drawer	140MG-G8P-D12	140MG-H8P-D12	100-C85⊗	104-C85⊗	193-1EFGE	100 <sup>(4)</sup>
55	—	✓	✓	3 x 2	— <sup>(3)</sup>	Multi Drawer	140MG-G8P-D12	140MG-H8P-D12	100-C85⊗	104-C85⊗	193-1EFGE	100 <sup>(4)</sup>
75	—	—	—	3 x 2	— <sup>(3)</sup>	Multi Drawer	140MG-G8P-D12	140MG-H8P-D12	100-C97⊗	104-C97⊗	193-1EFGE	100 <sup>(4)</sup>
90	✓	—	—	3 x 3	— <sup>(3)</sup>	Multi Drawer	140MG-J8P-D25	—	100-E205⊗	104-E205⊗	193-1EFKZ <sup>(5)</sup>	65
110	—	—	—	3 x 3	— <sup>(3)</sup>	Multi Drawer	140MG-J8P-D25	—	100-E205⊗	104-E205⊗	193-1EFKZ <sup>(5)</sup>	65
132	—	—	—	3 x 5	— <sup>(3)</sup>	MPI <sup>(6)</sup>	140MG-K8P-D40	—	100-E400⊗	104-E400⊗	193-1EFWZ <sup>(5)</sup>	65
150	✓	✓	—	3 x 5	— <sup>(3)</sup>	MPI <sup>(6)</sup>	140MG-K8P-D40	—	100-E400⊗	104-E400⊗	193-1EFWZ <sup>(5)</sup>	65
160	—	—	—	3 x 5	— <sup>(3)</sup>	MPI <sup>(6)</sup>	140MG-K8P-D40	—	100-E400⊗	104-E400⊗	193-1EFWZ <sup>(5)</sup>	65
185	—	—	—	3 x 5	— <sup>(3)</sup>	MPI <sup>(6)</sup>	140MG-K8P-D40	—	100-E400⊗	104-E400⊗	193-1EFWZ <sup>(5)</sup>	65
200	—	—	—	3 x 6	— <sup>(3)</sup>	MPI <sup>(6)</sup>	140MG-M8P-D80	—	100-E580⊗	104-E580⊗	193-1EFMZ <sup>(5)</sup>	65
220	—	—	—	3 x 6	— <sup>(3)</sup>	MPI <sup>(6)</sup>	140MG-M8P-D80	—	100-E580⊗	104-E580⊗	193-1EFMZ <sup>(5)</sup>	65
250	—	—	—	3 x 6	— <sup>(3)</sup>	MPI <sup>(6)</sup>	140MG-M8P-D80	—	100-E580⊗	104-E580⊗	193-1EFMZ <sup>(5)</sup>	65

(1) See [Circuit and Load Protection on page 14](#) to see a full catalog number explanation for your specific component.  
 (2) Overload is installed on the panel adapter.  
 (3) Contact your local Rockwell Automation sales office if higher kW ratings for DOLR are required.  
 (4) Short circuit current rating of 65 kA with a 140MG-G circuit breaker.  
 (5) Includes an external current transformer.  
 (6) Only available in the bottom position in the column.

**Table 20 - 3513 DOL and 3507 DOLR Starter Units With 140MT Series Circuit Breakers and E300 Motor Overload Relays for 440...480V, Type 2 Coordination**

P Approx kW	Voltage			Unit Size W x H		Unit Type	140MT Series Circuit Breaker Cat. No.	Contactor Cat. No. <sup>(1)</sup>		E300 Motor Overload Relay Cat. No. <sup>(1)</sup>	Short Circuit Current Ratings <i>I<sub>cc</sub></i> [kA]
	440V	460V	480V	DOL	DOLR			DOL	DOLR		
0.18	✓	✓	✓	1 x 1	1.5 x 1	Multi Drawer	140MT-D9N-B10	100-C16⊗	104-C16⊗	193-ESM-⊕-30A-C23	50
0.25				1 x 1	1.5 x 1	Multi Drawer	140MT-D9N-B10	100-C16⊗	104-C16⊗	193-ESM-⊕-30A-C23	50
0.37				1 x 1	1.5 x 1	Multi Drawer	140MT-D9N-B16	100-C23⊗	104-C23⊗	193-ESM-⊕-30A-C23	50
0.55				1 x 1	1.5 x 1	Multi Drawer	140MT-D9N-B16	100-C23⊗	104-C23⊗	193-ESM-⊕-30A-C23	50
0.75				1 x 1	1.5 x 1	Multi Drawer	140MT-D9N-B25	100-C23⊗	104-C23⊗	193-ESM-⊕-30A-C23	50
1.1				1 x 1	1.5 x 1	Multi Drawer	140MT-D9N-B40	100-C30⊗	104-C30⊗	193-ESM-⊕-30A-C55	50
1.5				1 x 1	1.5 x 1	Multi Drawer	140MT-D9N-B40	100-C30⊗	104-C30⊗	193-ESM-⊕-30A-C55	50
2.2				1 x 1	1.5 x 1	Multi Drawer	140MT-D9N-B63	100-C30⊗	104-C30⊗	193-ESM-⊕-30A-C55	50
3				1 x 1	1.5 x 1	Multi Drawer	140MT-D9N-C10	100-C30⊗	104-C30⊗	193-ESM-⊕-30A-C55	50
4				1 x 1	1.5 x 1	Multi Drawer	140MT-D9N-C10	100-C30⊗	104-C30⊗	193-ESM-⊕-30A-C55	50
5.5				1 x 1	1.5 x 1	Multi Drawer	140MT-D9N-C16	100-C30⊗	104-C30⊗	193-ESM-⊕-30A-C55	50
7.5	1.5 x 1	1.5 x 1	Multi Drawer	140MT-D9N-C25	100-C30⊗	104-C30⊗	193-ESM-⊕-30A-C55	50			

(1) See [Circuit and Load Protection on page 14](#) to see a full catalog number explanation for your specific component.



**Table 21 - 3513 DOL and 3507 DOLR Starter Units With 140MG Series Circuit Breakers and E300 Motor Overload Relays for 440...480V, Type 2 Coordination**

P Approx kW	Voltage			Unit Size W X H		Unit Type	140MG-G and Other Options	140MG-H Options	Contactor Cat. No. <sup>(1)</sup>		E300 Motor Overload Relay Cat. No. <sup>(1)</sup>	Short Circuit Current Ratings I <sub>cc</sub> [kA]
	440V	460V	480V	DOL	DOLR				DOL	DOLR		
0.18				3 x 1	3 x 1	Multi Drawer	140MG-G8P-B30	140MG-H8P-B30	100-C37⊗	104-C37⊗	193-ESM-⊕-30A-C55	65
0.25				3 x 1	3 x 1	Multi Drawer	140MG-G8P-B30	140MG-H8P-B30	100-C37⊗	104-C37⊗	193-ESM-⊕-30A-C55	65
0.37				3 x 1	3 x 1	Multi Drawer	140MG-G8P-B30	140MG-H8P-B30	100-C37⊗	104-C37⊗	193-ESM-⊕-30A-C55	65
0.55				3 x 1	3 x 1	Multi Drawer	140MG-G8P-B30	140MG-H8P-B30	100-C37⊗	104-C37⊗	193-ESM-⊕-30A-C55	65
0.75				3 x 1	3 x 1	Multi Drawer	140MG-G8P-B30	140MG-H8P-B30	100-C37⊗	104-C37⊗	193-ESM-⊕-30A-C55	65
1.1				3 x 1	3 x 1	Multi Drawer	140MG-G8P-B70	140MG-H8P-B70	100-C37⊗	104-C37⊗	193-ESM-⊕-30A-C55	65
1.5				3 x 1	3 x 1	Multi Drawer	140MG-G8P-B70	140MG-H8P-B70	100-C37⊗	104-C37⊗	193-ESM-⊕-30A-C55	65
2.2				3 x 1	3 x 1	Multi Drawer	140MG-G8P-B70	140MG-H8P-B70	100-C37⊗	104-C37⊗	193-ESM-⊕-30A-C55	65
3	✓	✓		3 x 1	3 x 1	Multi Drawer	140MG-G8P-C15	140MG-H8P-C15	100-C37⊗	104-C37⊗	193-ESM-⊕-30A-C55	65
4			✓	3 x 1	3 x 1	Multi Drawer	140MG-G8P-C15	140MG-H8P-C15	100-C37⊗	104-C37⊗	193-ESM-⊕-30A-C55	65
5.5				3 x 1	3 x 1	Multi Drawer	140MG-G8P-C15	140MG-H8P-C15	100-C37⊗	104-C37⊗	193-ESM-⊕-30A-C55	65
7.5				3 x 1	3 x 1	Multi Drawer	140MG-G8P-C50	140MG-H8P-C50	100-C37⊗	104-C37⊗	193-ESM-⊕-30A-C55	65
11				3 x 1	3 x 1	Multi Drawer	140MG-G8P-C50	140MG-H8P-C50	100-C37⊗	104-C37⊗	193-ESM-⊕-30A-C55	65
15				3 x 1	3 x 1	Multi Drawer	140MG-G8P-C50	140MG-H8P-C50	100-C37⊗	104-C37⊗	193-ESM-⊕-60A-C55	65
18.5				3 x 1	3 x 1	Multi Drawer	140MG-G8P-C50	140MG-H8P-C50	100-C37⊗	104-C37⊗	193-ESM-⊕-60A-C55	65
22				3 x 1	3 x 1	Multi Drawer	140MG-G8P-C50	140MG-H8P-C50	100-C37⊗	104-C37⊗	193-ESM-⊕-60A-C55	65
30				3 x 1.5	_(2)	Multi Drawer	140MG-G8P-C80	140MG-H8P-C80	100-C55⊗	104-C55⊗	193-ESM-⊕-60A-C55	65
37	-	-		3 x 1.5	_(2)	Multi Drawer	140MG-G8P-C80	140MG-H8P-C80	100-C55⊗	104-C55⊗	193-ESM-⊕-60A-C55	65
45				3 x 2	_(2)	Multi Drawer	-	140MG-H8P-D12	100-C85⊗	104-C85⊗	193-ESM-⊕-100A-C97	65
55	✓	✓		3 x 2	_(2)	Multi Drawer	-	140MG-H8P-D12	100-C97⊗	104-C97⊗	193-ESM-⊕-100A-C97	65
75			✓	3 x 3	_(2)	Multi Drawer	140MG-J8P-D25	-	100-E205⊗	104-E205⊗	193-ESM-⊕-30A-E3T/CT <sup>(3)</sup>	50
90				3 x 3	_(2)	Multi Drawer	140MG-J8P-D25	-	100-E205⊗	104-E205⊗	193-ESM-⊕-30A-E3T/CT <sup>(3)</sup>	50
110	-	-		3 x 3	_(2)	Multi Drawer	140MG-J8P-D25	-	100-E205⊗	104-E205⊗	193-ESM-⊕-30A-E3T/CT <sup>(3)</sup>	50
132				3 x 5	_(2)	MP1 <sup>(4)</sup>	140MG-K8P-D40	-	100-E400⊗	104-E400⊗	193-ESM-⊕-30A-E3T/CT <sup>(3)</sup>	50
150	✓	✓		3 x 5	_(2)	MP1 <sup>(4)</sup>	140MG-K8P-D40	-	100-E400⊗	104-E400⊗	193-ESM-⊕-30A-E3T/CT <sup>(3)</sup>	50
160			✓	3 x 5	_(2)	MP1 <sup>(4)</sup>	140MG-K8P-D40	-	100-E400⊗	104-E400⊗	193-ESM-⊕-30A-E3T/CT <sup>(3)</sup>	50
185				3 x 5	_(2)	MP1 <sup>(4)</sup>	140MG-K8P-D40	-	100-E400⊗	104-E400⊗	193-ESM-⊕-30A-E3T/CT <sup>(3)</sup>	50
200	-	-		3 x 5	_(2)	MP1 <sup>(4)</sup>	140MG-K8P-D40	-	100-E400⊗	104-E400⊗	193-ESM-⊕-30A-E3T/CT <sup>(3)</sup>	50
220	✓	✓		3 x 6	_(2)	MP1 <sup>(4)</sup>	140MG-M8P-D80	-	100-E580⊗	104-E580⊗	193-ESM-⊕-30A-E3T/CT <sup>(3)</sup>	50
250			✓	3 x 6	_(2)	MP1 <sup>(4)</sup>	140MG-M8P-D80	-	100-E580⊗	104-E580⊗	193-ESM-⊕-30A-E3T/CT <sup>(3)</sup>	50

(1) See [Circuit and Load Protection on page 14](#) to see a full catalog number explanation for your specific component.  
 (2) Contact your local Rockwell Automation sales office if higher kW ratings for DOLR are required.  
 (3) Includes an external current transformer.  
 (4) Only available in the bottom position in the column.

**Table 22 - 3513 DOL and 3507 DOLR Starter Units With 140MT Series Circuit Breakers and E100 Motor Overload Relays for 440...480V, Type 2 Coordination**

P Approx kW	Voltage			Unit Size W x H		Unit Type	140MT Series Circuit Breaker Cat. No.	Contactor Cat. No. <sup>(1)</sup>		E100 Motor Overload Relay Cat. No.	Short Circuit Current Ratings
	440V	460V	480V	DOL	DOLR			DOL	DOLR		I <sub>cc</sub> [kA]
0.06	✓	✓	✓	1 x 1	1.5 x 1	Multi Drawer	140MT-D9N-B10	100-C16⊗	104-C16⊗	193-1EFAB	50
0.09				1 x 1	1.5 x 1	Multi Drawer	140MT-D9N-B10	100-C16⊗	104-C16⊗	193-1EFAB	50
0.12				1 x 1	1.5 x 1	Multi Drawer	140MT-D9N-B10	100-C16⊗	104-C16⊗	193-1EFAB	50
0.18				1 x 1	1.5 x 1	Multi Drawer	140MT-D9N-B10	100-C16⊗	104-C16⊗	193-1EFBB	50
0.25				1 x 1	1.5 x 1	Multi Drawer	140MT-D9N-B10	100-C16⊗	104-C16⊗	193-1EFBB	50
0.37				1 x 1	1.5 x 1	Multi Drawer	140MT-D9N-B16	100-C23⊗	104-C23⊗	193-1EFBB	50
0.55				1 x 1	1.5 x 1	Multi Drawer	140MT-D9N-B16	100-C23⊗	104-C23⊗	193-1EFBB	50
0.75				1 x 1	1.5 x 1	Multi Drawer	140MT-D9N-B25	100-C23⊗	104-C23⊗	193-1EFBB	50
1.1				1 x 1	—	Multi Drawer	140MT-D9N-B40	100-C30⊗	—	193-1EFBB	50
1.5				1 x 1	—	Multi Drawer	140MT-D9N-B40	100-C30⊗	—	193-1EFBB	50
2.2				1 x 1	—	Multi Drawer	140MT-D9N-B63	100-C30⊗	—	193-1EFBB	50
3				1 x 1	1.5 x 1	Multi Drawer	140MT-D9N-C10	100-C30⊗	104-C23⊗	193-1EFBB	50
4				1 x 1	1.5 x 1	Multi Drawer	140MT-D9N-C10	100-C30⊗	104-C23⊗	193-1EFBB	50
5.5				1 x 1	1.5 x 1	Multi Drawer	140MT-D9N-C16	100-C30⊗	104-C37⊗	193-1EFBB	50
7.5	1.5 x 1	1.5 x 1	Multi Drawer	140MT-D9N-C25	100-C30⊗	104-C37⊗	193-1EFBB	50			
9.2	1.5 x 1	1.5 x 1	Multi Drawer	140MT-D9N-C25	100-C37⊗	104-C37⊗	193-1EFBB	50			

(1) See [Circuit and Load Protection on page 14](#) to see a full catalog number explanation for your specific component.

(2) Overload installed on panel adapter.

**Table 23 - 3513 DOL and 3507 DOLR Starter Units With 140MG Series Circuit Breakers and E100 Motor Overload Relays for 440...480V, Type 2 Coordination**

P Approx kW	Voltage			Unit Size W X H		Unit Type	140MG-G and Other Options	140MG-H Options	Contactor Cat. No. <sup>(1)</sup>		E100 Motor Overload Relay Cat. No.	Short Circuit Current Ratings I <sub>cc</sub> [kA]
	440V	460V	480V	DOL	DOLR				DOL	DOLR		
0.06				3x1	3x1	Multi Drawer	—	140MG-H8P-B30	100-C37⊗	104-C37⊗	193-1EFAB <sup>(2)</sup>	65
0.09				3x1	3x1	Multi Drawer	—	140MG-H8P-B30	100-C37⊗	104-C37⊗	193-1EFAB <sup>(2)</sup>	65
0.12				3x1	3x1	Multi Drawer	—	140MG-H8P-B30	100-C37⊗	104-C37⊗	193-1EFAB <sup>(2)</sup>	65
0.18				3x1	3x1	Multi Drawer	—	140MG-H8P-B30	100-C37⊗	104-C37⊗	193-1EFBB <sup>(2)</sup>	65
0.25				3x1	3x1	Multi Drawer	—	140MG-H8P-B30	100-C37⊗	104-C37⊗	193-1EFBB <sup>(2)</sup>	65
0.37				3x1	3x1	Multi Drawer	—	140MG-H8P-B30	100-C37⊗	104-C37⊗	193-1EFBB <sup>(2)</sup>	65
0.55				3x1	3x1	Multi Drawer	—	140MG-H8P-B30	100-C37⊗	104-C37⊗	193-1EFCB <sup>(2)</sup>	65
0.75				3x1	3x1	Multi Drawer	—	140MG-H8P-B30	100-C37⊗	104-C37⊗	193-1EFCB <sup>(2)</sup>	65
1.1				3x1	3x1	Multi Drawer	140MG-G8P-B70	140MG-H8P-B70	100-C37⊗	104-C37⊗	193-1EFCB <sup>(2)</sup>	65
1.5	✓	✓	✓	3x1	3x1	Multi Drawer	140MG-G8P-B70	140MG-H8P-B70	100-C37⊗	104-C37⊗	193-1EFCB <sup>(2)</sup>	65
2.2				3x1	3x1	Multi Drawer	140MG-G8P-B70	140MG-H8P-B70	100-C37⊗	104-C37⊗	193-1EFDB <sup>(2)</sup>	65
3				3x1	3x1	Multi Drawer	140MG-G8P-C15	140MG-H8P-C15	100-C37⊗	104-C37⊗	193-1EFED	65
4				3x1	3x1	Multi Drawer	140MG-G8P-C15	140MG-H8P-C15	100-C37⊗	104-C37⊗	193-1EFED	65
5.5				3x1	3x1	Multi Drawer	140MG-G8P-C15	140MG-H8P-C15	100-C37⊗	104-C37⊗	193-1EFED	65
7.5				3x1	3x1	Multi Drawer	140MG-G8P-C50	140MG-H8P-C50	100-C37⊗	104-C37⊗	193-1EFED	65
11				3x1	3x1	Multi Drawer	140MG-G8P-C50	140MG-H8P-C50	100-C37⊗	104-C37⊗	193-1EFED	65
15				3x1	3x1	Multi Drawer	140MG-G8P-C50	140MG-H8P-C50	100-C37⊗	104-C37⊗	193-1EFFD	65
18.5				3x1	3x1	Multi Drawer	140MG-G8P-C50	140MG-H8P-C50	100-C37⊗	104-C37⊗	193-1EFFD	65
22				3x1	3x1	Multi Drawer	140MG-G8P-C50	140MG-H8P-C50	100-C37⊗	104-C37⊗	193-1EFFD	65
30				3x1.5	— <sup>(3)</sup>	Multi Drawer	140MG-G8P-C80	140MG-H8P-C80	100-C55⊗	104-C55⊗	193-1EFFD	65
37	—	—		3x1.5	— <sup>(3)</sup>	Multi Drawer	140MG-G8P-C80	140MG-H8P-C80	100-C55⊗	104-C55⊗	193-1EFFD	65
45				3x2	— <sup>(3)</sup>	Multi Drawer	—	140MG-H8P-D12	100-C85⊗	104-C85⊗	193-1EFGGE	65
55	✓	✓		3x2	— <sup>(3)</sup>	Multi Drawer	—	140MG-H8P-D12	100-C97⊗	104-C97⊗	193-1EFGGE	65
75			✓	3x3	— <sup>(3)</sup>	Multi Drawer	140MG-J8P-D25	—	100-E205⊗	104-E205⊗	193-1EFKZ <sup>(4)</sup>	50
90				3x3	— <sup>(3)</sup>	Multi Drawer	140MG-J8P-D25	—	100-E205⊗	104-E205⊗	193-1EFKZ <sup>(4)</sup>	50
110	—	—		3x3	— <sup>(3)</sup>	Multi Drawer	140MG-J8P-D25	—	100-E205⊗	104-E205⊗	193-1EFKZ <sup>(4)</sup>	50
132				3x5	— <sup>(3)</sup>	MP1 <sup>(5)</sup>	140MG-K8P-D40	—	100-E400⊗	104-E400⊗	193-1EFWZ <sup>(4)</sup>	50
150	✓	✓		3x5	— <sup>(3)</sup>	MP1 <sup>(5)</sup>	140MG-K8P-D40	—	100-E400⊗	104-E400⊗	193-1EFWZ <sup>(4)</sup>	50
160			✓	3x5	— <sup>(3)</sup>	MP1 <sup>(5)</sup>	140MG-K8P-D40	—	100-E400⊗	104-E400⊗	193-1EFWZ <sup>(4)</sup>	50
185				3x5	— <sup>(3)</sup>	MP1 <sup>(5)</sup>	140MG-K8P-D40	—	100-E400⊗	104-E400⊗	193-1EFWZ <sup>(4)</sup>	50
200	—	—		3x5	— <sup>(3)</sup>	MP1 <sup>(5)</sup>	140MG-K8P-D40	—	100-E400⊗	104-E400⊗	193-1EFWZ <sup>(4)</sup>	50
220	✓	✓	✓	3x6	— <sup>(3)</sup>	MP1 <sup>(5)</sup>	140MG-M8P-D80	—	100-E580⊗	104-E580⊗	193-1EFMZ <sup>(4)</sup>	50
250				3x6	— <sup>(3)</sup>	MP1 <sup>(5)</sup>	140MG-M8P-D80	—	100-E580⊗	104-E580⊗	193-1EFMZ <sup>(4)</sup>	50

(1) See [Circuit and Load Protection on page 14](#) to see a full catalog number explanation for your specific component.

(2) Overload is installed on the panel adapter.

(3) Contact your local Rockwell Automation sales office if higher kW ratings for DOLR are required.

(4) Includes an external current transformer.

(5) Only available in the bottom position in the column.

**Table 24 - 3513 DOL and 3507 DOLR Starter Units With 140MG Series Circuit Breakers and E300 Motor Overload Relays for 690V, Type 2 Coordination**

P Approx kW	Voltage 690V	Unit Size W x H DOL <sup>(2)</sup>	Unit Type	140MG-G	Contactor Cat. No. <sup>(1)</sup>	E300 Motor Overload Relay Cat. No. <sup>(1)</sup>	Short Circuit Current Ratings
					DOL <sup>(2)</sup>		I <sub>cc</sub> [kA]
22	✓	3 x 1.5	Multi Drawer	140MG-H8P-C80	100-C55⊗	193-ESM-⊕-60A-C55	50
30		3 x 1.5	Multi Drawer	140MG-H8P-C80	100-C55⊗	193-ESM-⊕-60A-C55	50
37		3 x 1.5	Multi Drawer	140MG-H8P-C80	100-C55⊗	193-ESM-⊕-60A-C55	50
45		3 x 1.5	Multi Drawer	140MG-H8P-C80	100-C55⊗	193-ESM-⊕-60A-C55	50
55		3 x 2	Multi Drawer	140MG-H8P-D12	100-C97⊗	193-ESM-⊕-100A-C97	50
75		3 x 2	Multi Drawer	140MG-H8P-D12	100-C97⊗	193-ESM-⊕-100A-C97	50
90		3 x 2	Multi Drawer	140MG-H8P-D12	100-C97⊗	193-ESM-⊕-100A-C97	50
110		3 x 3	Multi Drawer	140MG-J8P-D25	100-E205⊗	193-ESM-⊕-30A-E3T/CT <sup>(3)</sup>	50
132		3 x 3	Multi Drawer	140MG-J8P-D25	100-E205⊗	193-ESM-⊕-30A-E3T/CT <sup>(3)</sup>	50
150		3 x 3	Multi Drawer	140MG-J8P-D25	100-E205⊗	193-ESM-⊕-30A-E3T/CT <sup>(3)</sup>	50
160		3 x 3	Multi Drawer	140MG-J8P-D25	100-E205⊗	193-ESM-⊕-30A-E3T/CT <sup>(3)</sup>	50
185		3 x 5	MP <sup>(4)</sup>	140MG-K8P-D40	100-E400⊗	193-ESM-⊕-30A-E3T/CT <sup>(3)</sup>	50
200		3 x 5	MP <sup>(4)</sup>	140MG-K8P-D40	100-E400⊗	193-ESM-⊕-30A-E3T/CT <sup>(3)</sup>	50
220		3 x 5	MP <sup>(4)</sup>	140MG-K8P-D40	100-E400⊗	193-ESM-⊕-30A-E3T/CT <sup>(3)</sup>	50
250		3 x 5	MP <sup>(4)</sup>	140MG-K8P-D40	100-E400⊗	193-ESM-⊕-30A-E3T/CT <sup>(3)</sup>	50

(1) See [Circuit and Load Protection on page 14](#) to see a full catalog number explanation for your specific component.  
 (2) Contact your local Rockwell Automation sales office if DOLR applications are required.  
 (3) Includes an external current transformer.  
 (4) Only available in the bottom position in the column.

**Table 25 - 3513 DOL and 3507 DOLR Starter Units With 140MG Series Circuit Breakers and E100 Motor Overload Relays for 690V, Type 2 Coordination**

P Approx kW	Voltage 690V	Unit Size W x H DOL <sup>(2)</sup>	Unit Type	140MG	Contactor Cat. No. <sup>(1)</sup>	E100 Motor Overload Relay Cat. No.	Short Circuit Current Ratings
					DOL <sup>(2)</sup>		I <sub>cc</sub> [kA]
22	✓	3 x 1.5	Multi Drawer	140MG-H8P-C80	100-C55⊗	193-1EFFD	50
30		3 x 1.5	Multi Drawer	140MG-H8P-C80	100-C55⊗	193-1EFFD	50
37		3 x 1.5	Multi Drawer	140MG-H8P-C80	100-C55⊗	193-1EFFD	50
45		3 x 1.5	Multi Drawer	140MG-H8P-C80	100-C55⊗	193-1EFFD	50
55		3 x 2	Multi Drawer	140MG-H8P-D12	100-C97⊗	193-1EFGE	50
75		3 x 2	Multi Drawer	140MG-H8P-D12	100-C97⊗	193-1EFGE	50
90		3 x 2	Multi Drawer	140MG-H8P-D12	100-C97⊗	193-1EFGE	50
110		3 x 3	Multi Drawer	140MG-J8P-D25	100-E205⊗	193-1EFKZ <sup>(3)</sup>	50
132		3 x 3	Multi Drawer	140MG-J8P-D25	100-E205⊗	193-1EFKZ <sup>(3)</sup>	50
150		3 x 3	Multi Drawer	140MG-J8P-D25	100-E205⊗	193-1EFKZ <sup>(3)</sup>	50
160		3 x 3	Multi Drawer	140MG-J8P-D25	100-E205⊗	193-1EFKZ <sup>(3)</sup>	50
185		3 x 5	MP <sup>(4)</sup>	140MG-K8P-D40	100-E400⊗	193-1EFWZ <sup>(3)</sup>	50
200		3 x 5	MP <sup>(4)</sup>	140MG-K8P-D40	100-E400⊗	193-1EFWZ <sup>(3)</sup>	50
220		3 x 5	MP <sup>(4)</sup>	140MG-K8P-D40	100-E400⊗	193-1EFWZ <sup>(3)</sup>	50
250		3 x 5	MP <sup>(4)</sup>	140MG-K8P-D40	100-E400⊗	193-1EFWZ <sup>(3)</sup>	50

(1) See [Circuit and Load Protection on page 14](#) to see a full catalog number explanation for your specific component.  
 (2) Contact your local Rockwell Automation sales office if DOLR applications are required.  
 (3) Includes an external current transformer.  
 (4) Only available in the bottom position in the column.

## Variable Frequency Drives

The combination variable-frequency AC drive units, for use in the FLEXLINE 3500 motor control centers, contain a variable frequency AC drive and a circuit breaker disconnect. PowerFlex VFD units are available in withdrawable or fixed unit configurations.

Available standard models include:

- PowerFlex 523
- PowerFlex 525
- PowerFlex 753
- PowerFlex 755
- PowerFlex 755TS



### PowerFlex 523/525 Drive Unit Selection

Table 26 - 3563W Multi Drawer Drive Unit with PowerFlex 523 and 140MT or 140G Circuit Breaker 380...480V, Normal Duty and Heavy Duty

Power Rating [kW]		Cont. Output [A]	PowerFlex Drive Only <sup>(1)</sup>	PowerFlex Drive with External EMC Filters <sup>(1)</sup>	PowerFlex Drive with Line and/or Load Reactors, and EMC Filters <sup>(1)</sup>	Circuit Breaker	PowerFlex 523 Drive Cat. No.	Frame	Short Circuit Current Ratings <sup>(2)</sup>	
ND	HD								I <sub>cc</sub> [kA] @380...415V	I <sub>cc</sub> [kA] @440...480V
0.4	0.4	1.4	3 x 2	3 x 2	3 x 2	140MT-C3E-B25	25A-D1P4N104	A	100	65
0.75	0.75	2.3	3 x 1.5	3 x 1.5	3 x 2	140MT-C3E-B40	25A-D2P3N104	A	100	65
1.5	1.5	4	3 x 1.5	3 x 1.5	3 x 2	140MT-C3E-B63	25A-D4PON104	A	100	65
2.2	2.2	6	3 x 1.5	3 x 1.5	3 x 2	140MT-C3E-C10	25A-D6PON104	A	100	65
4	4	10.5	3 x 2	3 x 2	3 x 3	140G-G6C3-C15	25A-D010N104	B	70	50
5.5	5.5	13	3 x 2	3 x 2	3 x 3	140G-G6C3-C25	25A-D013N104	C	70	50
7.5	7.5	17	3 x 2	3 x 2	3 x 3	140G-G6C3-C25	25A-D017N104	C	70	50
11	11	24	3 x 3	3 x 3	3 x 4 <sup>(3)</sup>	140G-G6C3-C40	25A-D024N104	D	70	50
15	11	30	3 x 3	3 x 3	3 x 4 <sup>(3)</sup>	140G-G6C3-C50	25A-D030N104	D	70	50
18.5	15	37	3 x 3	3 x 3	3 x 4 <sup>(3)</sup>	140G-G6C3-C50	25A-D037N114	E	70	50
22	18.5	43	3 x 3	3 x 4 <sup>(3)</sup>	3 x 4 <sup>(3)</sup>	140G-G6C3-C60	25A-D043N114	E	70	50

(1) An EMC filter is required to meet EN61800-3 Category C3 - 150 m (492.1 ft) motor cable limit.  
 (2) Contact your local Rockwell Automation sales office if higher short circuit ratings are required.  
 (3) Only available using MPI unit configuration.

Table 27 - 3563W Multi Drawer Drive Unit with PowerFlex 525-140MT and 140G Circuit Breaker 380...480V, Normal Duty and Heavy Duty

Power Rating [kW]		Cont. Output [A]	PowerFlex Drive Only <sup>(1)</sup>	PowerFlex Drive with External EMC Filters <sup>(1)</sup>	PowerFlex Drive with Line and/or Load Reactors, and EMC Filters <sup>(1)</sup>	Circuit Breaker	PowerFlex 523 Drive Cat. No.	Frame	Short Circuit Current Ratings <sup>(2)</sup>	
ND	HD								I <sub>cc</sub> [kA] @380...415V	I <sub>cc</sub> [kA] @440...480V
0.4	0.4	1.4	3 x 2	3 x 2	3 x 2	140MT-C3E-B25	25A-D1P4N104	A	100	65
0.75	0.75	2.3	3 x 1.5	3 x 1.5	3 x 2	140MT-C3E-B40	25A-D2P3N104	A	100	65
1.5	1.5	4	3 x 1.5	3 x 1.5	3 x 2	140MT-C3E-B63	25A-D4PON104	A	100	65
2.2	2.2	6	3 x 1.5	3 x 1.5	3 x 2	140MT-C3E-C10	25A-D6PON104	A	100	65
4	4	10.5	3 x 2	3 x 2	3 x 3	140G-G6C3-C15	25A-D010N104	B	70	50
5.5	5.5	13	3 x 2	3 x 2	3 x 3	140G-G6C3-C25	25A-D013N104	C	70	50
7.5	7.5	17	3 x 2	3 x 2	3 x 3	140G-G6C3-C25	25A-D017N104	C	70	50
11	11	24	3 x 3	3 x 3	3 x 4 <sup>(3)</sup>	140G-G6C3-C40	25A-D024N104	D	70	50
15	11	30	3 x 3	3 x 3	3 x 4 <sup>(3)</sup>	140G-G6C3-C50	25A-D030N104	D	70	50
18.5	15	37	3 x 3	3 x 3	3 x 4 <sup>(3)</sup>	140G-G6C3-C50	25A-D037N114	E	70	50
22	18.5	43	3 x 3	3 x 4 <sup>(3)</sup>	3 x 4 <sup>(3)</sup>	140G-G6C3-C60	25A-D043N114	E	70	50

(1) An EMC filter is required to meet EN61800-3 Category C3 - 150 m (492.1 ft) motor cable limit.  
 (2) Contact your local Rockwell Automation sales office if higher short circuit ratings are required.  
 (3) Only available using MPI unit configuration.

### PowerFlex 525 Drive Unit Options

These drive unit options are dependent on the available space on the cover and inside the unit.

- Auxiliary contact for circuit breaker
- Control circuit transformer
- Push buttons
- Pilot lights
- ControlNet®, EtherNet/IP, and PROFIBUS DP communication module, mounted internal to drive
- Human interface module
- I/O control interface type
  - 24V DC sink or source control (via DIP switch setting)
- External EMC filters are optional
- Line or load reactors are optional

### PowerFlex 753, 755, and 755TS Drive Unit Selection

Table 28 - 3563VT Drive unit with PowerFlex 755TS, 380...415V, Normal Duty and Heavy Duty<sup>(1)</sup>

Power Rating [kW]		Cont. Output	Unit Size W x H <sup>(2)</sup>	Unit Type	Circuit Breaker	Fuse Cat. No.	PowerFlex 755TS Drive Cat. No.	Frame	Short Circuit Current Ratings <sup>(3)</sup>
ND	HD	[A]							I <sub>cc</sub> [kA] @380...415V
0.75	0.37	2.1	3 x 3	Multi Drawer	140G-G6C3-C15	FWP-4G10F	20G21RC2P1JA0NNNNN	1	70
1.5	0.75	3.5	3 x 3	Multi Drawer	140G-G6C3-C15	FWP-10G10F	20G21RC2P1JA0NNNNN	1	70
2.2	1.5	5.0	3 x 3	Multi Drawer	140G-G6C3-C15	FWP-10G10F	20G21RC5P0JA0NNNNN	1	70
4	2.2	8.7	3 x 3	Multi Drawer	140G-G6C3-C15	FWP-16G10F	20G21RC8P7JA0NNNNN	1	70
5.5	4	11.5	3 x 3	Multi Drawer	140G-G6C3-C30	FWP-25G10F	20G21RC011JA0NNNNN	1	70
7.5	5.5	15.4	3 x 3	Multi Drawer	140G-G6C3-C30	FWP-25G10F	20G21RC015JA0NNNNN	1	70
0.75	0.75	2.1	3 x 5	MP <sup>(4)</sup>	140G-G6C3-C15	FWP-4G10F	20G21NC2P1JA0NNNNN	2	70
1.5	1.5	3.5	3 x 5	MP <sup>(4)</sup>	140G-G6C3-C15	FWP-6G10F	20G21NC3P5JA0NNNNN	2	70
2.2	2.2	5.0	3 x 5	MP <sup>(4)</sup>	140G-G6C3-C15	FWP-10G10F	20G21NC5P0JA0NNNNN	2	70
4	4	8.7	3 x 5	MP <sup>(4)</sup>	140G-G6C3-C15	FWP-12G10F	20G21NC8P7JA0NNNNN	2	70
5.5	5.5	11.5	3 x 5	MP <sup>(4)</sup>	140G-G6C3-C30	FWP-20G10F	20G21NC011JA0NNNNN	2	70
7.5	5.5	15.4	3 x 5	MP <sup>(4)</sup>	140G-G6C3-C30	FWP-25G10F	20G21NC015JA0NNNNN	2	70
11	7.5	22.0	3 x 5	MP <sup>(4)</sup>	140G-G6C3-C50	170M2696	20G21NC022JA0NNNNN	2	70
15	11	30.0	3 x 6	MP <sup>(4)</sup>	140G-G6C3-C50	170M2696	20G21NC030JA0NNNNN	3	70
18.5	15	37.0	3 x 6	MP <sup>(4)</sup>	140G-G6C3-C70	170M2698	20G21NC037JA0NNNNN	3	70
22	18.5	43.0	3 x 6	MP <sup>(4)</sup>	140G-G6C3-C70	170M2698	20G21NC043JA0NNNNN	3	70
30	22	61.0	3 x 6	MP <sup>(4)</sup>	140G-G6C3-D10	170M2700	20G21NC061JA0NNNNN	3	70
30	22	60.0	3 x 6	MP <sup>(4)</sup>	140G-G6C3-D10	170M2700	20G21NC060JA0NNNNN	4	70
37	30	72.0	3 x 6	MP <sup>(4)</sup>	140G-G6C3-D12	170M2701	20G21NC072JA0NNNNN	4	70
45	37	85.0	3 x 6	MP <sup>(4)</sup>	140G-J6F3-D15	170M2701	20G21NC085JA0NNNNN	5	70
55	45	104.0	3 x 6	MP <sup>(4)</sup>	140G-J6F3-D15	170M2702	20G21NC104JA0NNNNN	5	70

(1) EN 61800-3 Category C3 - 150 m motor cable limit with no filter.  
 (2) Unit size is applicable for Power Flex drives with or without line or/and load reactors.  
 (3) Contact your local Rockwell Automation sales office if higher short circuit ratings are required.  
 (4) Only available in the bottom position in the column.

**Table 29 - 3563VT Drive Unit with PowerFlex 755TS, 480V, Normal Duty and Heavy Duty<sup>(1)</sup>**

Power Rating [kW]		Cont. Output [A]	Unit Size W x H <sup>(2)</sup>	Unit Type	Circuit Breaker	Fuse Cat. No.	PowerFlex 755TS Drive Cat. No.	Frame	Short Circuit Current Ratings <sup>(3)</sup>
ND	HD								I <sub>cc</sub> [kA] @480V
0.75	0.37	2.1	3 x 3	Multi Drawer	140G-G6C3-C15	FWP-4G10F	20G21RD2P1JAONNNNN	1	50
1.5	0.75	3.4	3 x 3	Multi Drawer	140G-G6C3-C15	FWP-10G10F	20G21RD3P4JAONNNNN	1	50
2.2	1.5	5.0	3 x 3	Multi Drawer	140G-G6C3-C15	FWP-10G10F	20G21RD5P0JAONNNNN	1	50
4	2.2	8.0	3 x 3	Multi Drawer	140G-G6C3-C15	FWP-16G10F	20G21RD8P0JAONNNNN	1	50
5.5	4	11.0	3 x 3	Multi Drawer	140G-G6C3-C30	FWP-25G10F	20G21RD011JAONNNNN	1	50
7.5	5.5	14.0	3 x 3	Multi Drawer	140G-G6C3-C30	FWP-25G10F	20G21RD014JAONNNNN	1	50
0.75	0.75	2.1	3 x 5	MPI <sup>(4)</sup>	140G-G6C3-C15	FWP-4G10F	20G21ND2P1JAONNNNN	2	50
1.5	1.5	3.4	3 x 5	MPI <sup>(4)</sup>	140G-G6C3-C15	FWP-6G10F	20G21ND3P4JAONNNNN	2	50
2.2	2.2	5.0	3 x 5	MPI <sup>(4)</sup>	140G-G6C3-C15	FWP-10G10F	20G21ND5P0JAONNNNN	2	50
4	4	8.0	3 x 5	MPI <sup>(4)</sup>	140G-G6C3-C15	FWP-12G10F	20G21ND8P0JAONNNNN	2	50
5.5	5.5	11.0	3 x 5	MPI <sup>(4)</sup>	140G-G6C3-C30	FWP-20G10F	20G21ND011JAONNNNN	2	50
7.5	5.5	14.0	3 x 5	MPI <sup>(4)</sup>	140G-G6C3-C30	FWP-25G10F	20G21ND014JAONNNNN	2	50
11	7.5	22.0	3 x 5	MPI <sup>(4)</sup>	140G-G6C3-C50	170M2696	20G21ND022JAONNNNN	2	50
15	11	27.0	3 x 6	MPI <sup>(4)</sup>	140G-G6C3-C50	170M2696	20G21ND027JAONNNNN	3	50
18.5	15	34.0	3 x 6	MPI <sup>(4)</sup>	140G-G6C3-C70	170M2698	20G21ND034JAONNNNN	3	50
22	18.5	40.0	3 x 6	MPI <sup>(4)</sup>	140G-G6C3-C70	170M2698	20G21ND040JAONNNNN	3	50
30	22	53.0	3 x 6	MPI <sup>(4)</sup>	140G-G6C3-D10	170M2700	20G21ND053JAONNNNN	3	50
30	22	52.0	3 x 6	MPI <sup>(4)</sup>	140G-G6C3-D10	170M2700	20G21ND052JAONNNNN	4	50
37	30	65.0	3 x 6	MPI <sup>(4)</sup>	140G-G6C3-D12	170M2701	20G21ND065JAONNNNN	4	50
45	37	77.0	3 x 6	MPI <sup>(4)</sup>	140G-J6F3-D15	170M2701	20G21ND077JAONNNNN	5	50
55	45	96.0	3 x 6	MPI <sup>(4)</sup>	140G-J6F3-D15	170M2702	20G21ND096JAONNNNN	5	50

- (1) EN 61800-3 Category C3 - 150 m motor cable limit with no filter.
- (2) Unit size is applicable for Power Flex drives with or without line or/and load reactors.
- (3) Contact your local Rockwell Automation sales office if higher short circuit ratings are required.
- (4) Only available in the bottom position in the column.

**Table 30 - 3563U Drive Unit with PowerFlex 753, 380...415V, Normal Duty and Heavy Duty<sup>(1)</sup>**

Power Rating [kW]		Cont. Output [A]	Unit Size W x H <sup>(2)</sup>	Unit Type	Circuit Breaker	PowerFlex 753 Drive Cat. No.	Frame	Short Circuit Current Ratings <sup>(3)</sup>
ND	HD							I <sub>cc</sub> [kA] @380...415V
0.75	0.37	2.1	3 x 3	Multi Drawer	140G-G6C3-C15	20F11RC2P1JAONNNNN	1	70
1.5	0.75	3.5	3 x 3	Multi Drawer	140G-G6C3-C15	20F11RC3P5JAONNNNN	1	70
2.2	1.5	5.0	3 x 3	Multi Drawer	140G-G6C3-C15	20F11RC5P0JAONNNNN	1	70
4	2.2	8.7	3 x 3	Multi Drawer	140G-G6C3-C15	20F11RC8P7JAONNNNN	1	70
5.5	4	11.5	3 x 3	Multi Drawer	140G-G6C3-C30	20F11RC011JAONNNNN	1	70
7.5	5.5	15.4	3 x 3	Multi Drawer	140G-G6C3-C30	20F11RC015JAONNNNN	1	70
0.75	0.75	2.1	3 x 5	MPI <sup>(4)</sup>	140G-G6C3-C15	20F11RD014JAONNNNN	2	70
1.5	1.5	3.5	3 x 5	MPI <sup>(4)</sup>	140G-G6C3-C15	20F11NC3P5JAONNNNN	2	70
2.2	2.2	5.0	3 x 5	MPI <sup>(4)</sup>	140G-G6C3-C15	20F11NC5P0JAONNNNN	2	70
4	4	8.7	3 x 5	MPI <sup>(4)</sup>	140G-G6C3-C15	20F11NC8P7JAONNNNN	2	70
5.5	5.5	11.5	3 x 5	MPI <sup>(4)</sup>	140G-G6C3-C30	20F11NC011JAONNNNN	2	70
7.5	5.5	15.4	3 x 5	MPI <sup>(4)</sup>	140G-G6C3-C30	20F11NC015JAONNNNN	2	70
11	7.5	22.0	3 x 5	MPI <sup>(4)</sup>	140G-G6C3-C50	20F11NC022JAONNNNN	2	70
15	11	30.0	3 x 6	MPI <sup>(4)</sup>	140G-G6C3-C50	20F11NC030JAONNNNN	3	70
18.5	15	37.0	3 x 6	MPI <sup>(4)</sup>	140G-G6C3-C70	20F11NC037JAONNNNN	3	70
22	18.5	43.0	3 x 6	MPI <sup>(4)</sup>	140G-G6C3-C70	20F11NC043JAONNNNN	3	70
30	22	60.0	3 x 6	MPI <sup>(4)</sup>	140G-G6C3-D10	20F11NC060JAONNNNN	4	70
37	30	72.0	3 x 6	MPI <sup>(4)</sup>	140G-G6C3-D12	20F11NC072JAONNNNN	4	70
45	37	85.0	3 x 6	MPI <sup>(4)</sup>	140G-J6F3-D15	20F11NC085JAONNNNN	5	70
55	45	104.0	3 x 6	MPI <sup>(4)</sup>	140G-J6F3-D15	20F11NC104JAONNNNN	5	70

- (1) EN 61800-3 Category C3 - 30 m motor cable limit with no filter, if longer motor cable is required contact your local Rockwell Automation sales office.
- (2) Unit size is applicable for Power Flex drives with or without line or/and load reactors.
- (3) Contact your local Rockwell Automation sales office if higher short circuit ratings are required.
- (4) Only available in the bottom position in the column.

**Table 31 - 3563U Drive Unit with PowerFlex 753, 480V, Normal Duty and Heavy Duty<sup>(1)</sup>**

Power Rating [kW]		Cont. Output [A]	Unit Size W x H <sup>(2)</sup>	Unit Type	Circuit Breaker	PowerFlex 753 Drive Cat. No.	Frame	Short Circuit Current Ratings <sup>(3)</sup>
ND	HD							I <sub>cc</sub> [kA] @480V
0.75	0.37	2.1	3 x 3	Multi Drawer	140G-G6C3-C15	20F11RD2P1JA0NNNNN	1	50
1.5	0.75	3.4	3 x 3	Multi Drawer	140G-G6C3-C15	20F11RD3P4JA0NNNNN	1	50
2.2	1.5	5.0	3 x 3	Multi Drawer	140G-G6C3-C15	20F11RD5P0JA0NNNNN	1	50
4	2.2	8.0	3 x 3	Multi Drawer	140G-G6C3-C15	20F11RD8P0JA0NNNNN	1	50
5.5	4	11.0	3 x 3	Multi Drawer	140G-G6C3-C30	20F11RD011JA0NNNNN	1	50
7.5	5.5	14.0	3 x 3	Multi Drawer	140G-G6C3-C30	20F11RD014JA0NNNNN	1	50
0.75	0.75	2.1	3 x 5	MPI <sup>(4)</sup>	140G-G6C3-C15	20F11ND2P1JA0NNNNN	2	50
1.5	1.5	3.4	3 x 5	MPI <sup>(4)</sup>	140G-G6C3-C15	20F11ND3P4JA0NNNNN	2	50
2.2	2.2	5.0	3 x 5	MPI <sup>(4)</sup>	140G-G6C3-C15	20F11ND5P0JA0NNNNN	2	50
4	4	8.0	3 x 5	MPI <sup>(4)</sup>	140G-G6C3-C15	20F11ND8P0JA0NNNNN	2	50
5.5	5.5	11.0	3 x 5	MPI <sup>(4)</sup>	140G-G6C3-C30	20F11ND011JA0NNNNN	2	50
7.5	5.5	14.0	3 x 5	MPI <sup>(4)</sup>	140G-G6C3-C30	20F11ND014JA0NNNNN	2	50
11	7.5	22.0	3 x 5	MPI <sup>(4)</sup>	140G-G6C3-C50	20F11ND022JA0NNNNN	2	50
15	11	27.0	3 x 6	MPI <sup>(4)</sup>	140G-G6C3-C50	20F11ND027JA0NNNNN	3	50
18.5	15	34.0	3 x 6	MPI <sup>(4)</sup>	140G-G6C3-C70	20F11ND034JA0NNNNN	3	50
22	18.5	40.0	3 x 6	MPI <sup>(4)</sup>	140G-G6C3-C70	20F11ND040JA0NNNNN	3	50
30	22	52.0	3 x 6	MPI <sup>(4)</sup>	140G-G6C3-D10	20F11ND052JA0NNNNN	4	50
37	30	65.0	3 x 6	MPI <sup>(4)</sup>	140G-G6C3-D12	20F11ND065JA0NNNNN	4	50
45	37	77.0	3 x 6	MPI <sup>(4)</sup>	140G-J6F3-D15	20F11ND077JA0NNNNN	5	50
55	45	96.0	3 x 6	MPI <sup>(4)</sup>	140G-J6F3-D15	20F11ND096JA0NNNNN	5	50

- (1) EN 61800-3 Category C3 - 30 m motor cable limit with no filter, if longer motor cable is required contact your local Rockwell Automation sales office.
- (2) Unit size is applicable for Power Flex drives with or without line or/and load reactors.
- (3) Contact your local Rockwell Automation sales office if higher short circuit ratings are required.
- (4) Only available in the bottom position in the column.

**Table 32 - 3563V Drive Unit with PowerFlex 755, 380...415V, Normal Duty and Heavy Duty<sup>(1)</sup>**

Power Rating [kW]		Cont. Output [A]	Unit Size W x H <sup>(2)</sup>	Unit Type	Circuit Breaker	PowerFlex 755 Drive Cat. No.	Frame	Short Circuit Current Ratings <sup>(3)</sup>
ND	HD							I <sub>cc</sub> [kA] @380...415V
0.75	0.37	2.1	3 x 3	Multi Drawer	140G-G6C3-C15	20G11RC2P1JA0NNNNN	1	70
1.5	0.75	3.5	3 x 3	Multi Drawer	140G-G6C3-C15	20G11RC3P5JA0NNNNN	1	70
2.2	1.5	5.0	3 x 3	Multi Drawer	140G-G6C3-C15	20G11RC5P0JA0NNNNN	1	70
4	2.2	8.7	3 x 3	Multi Drawer	140G-G6C3-C15	20G11RC8P7JA0NNNNN	1	70
5.5	4	11.5	3 x 3	Multi Drawer	140G-G6C3-C30	20G11RC011JA0NNNNN	1	70
7.5	5.5	15.4	3 x 3	Multi Drawer	140G-G6C3-C30	20G11RC015JA0NNNNN	1	70
0.75	0.75	2.1	3 x 5	MPI <sup>(4)</sup>	140G-G6C3-C15	20G11NC2P1JA0NNNNN	2	70
1.5	1.5	3.5	3 x 5	MPI <sup>(4)</sup>	140G-G6C3-C15	20G11NC3P5JA0NNNNN	2	70
2.2	2.2	5.0	3 x 5	MPI <sup>(4)</sup>	140G-G6C3-C15	20G11NC5P0JA0NNNNN	2	70
4	4	8.7	3 x 5	MPI <sup>(4)</sup>	140G-G6C3-C15	20G11NC8P7JA0NNNNN	2	70
5.5	5.5	11.5	3 x 5	MPI <sup>(4)</sup>	140G-G6C3-C30	20G11NC011JA0NNNNN	2	70
7.5	5.5	15.4	3 x 5	MPI <sup>(4)</sup>	140G-G6C3-C30	20G11NC015JA0NNNNN	2	70
11	7.5	22.0	3 x 5	MPI <sup>(4)</sup>	140G-G6C3-C50	20G11NC022JA0NNNNN	2	70
15	11	30.0	3 x 6	MPI <sup>(4)</sup>	140G-G6C3-C50	20G11NC030JA0NNNNN	3	70
18.5	15	37.0	3 x 6	MPI <sup>(4)</sup>	140G-G6C3-C70	20G11NC037JA0NNNNN	3	70
22	18.5	43.0	3 x 6	MPI <sup>(4)</sup>	140G-G6C3-C70	20G11NC043JA0NNNNN	3	70
30	22	60.0	3 x 6	MPI <sup>(4)</sup>	140G-G6C3-D10	20G11NC060JA0NNNNN	4	70
37	30	72.0	3 x 6	MPI <sup>(4)</sup>	140G-G6C3-D12	20G11NC072JA0NNNNN	4	70
45	37	85.0	3 x 6	MPI <sup>(4)</sup>	140G-J6F3-D15	20G11NC085JA0NNNNN	5	70
55	45	104.0	3 x 6	MPI <sup>(4)</sup>	140G-J6F3-D15	20G11NC104JA0NNNNN	5	70

- (1) EN 61800-3 Category C3 - 30 m motor cable limit with no filter, if longer motor cable is required contact your local Rockwell Automation sales office.
- (2) Unit size is applicable for Power Flex drives with or without line or/and load reactors.
- (3) Contact your local Rockwell Automation sales office if higher short circuit ratings are required.
- (4) Only available in the bottom position in the column.



**Table 33 - 3563V Drive unit with PowerFlex 755, 480V, Normal Duty and Heavy Duty<sup>(1)</sup>**

Power Rating [kW]		Cont. Output [A]	Unit Size W x H <sup>(2)</sup>	Unit Type	Circuit Breaker	PowerFlex 755 Drive Cat. No.	Frame	Short Circuit Current Ratings <sup>(3)</sup>
ND	HD							I <sub>cc</sub> [kA] @480V
0.75	0.37	2.1	3 x 3	Multi Drawer	140G-G6C3-C15	20G11RD2P1JA0NNNNN	1	50
1.5	0.75	3.4	3 x 3	Multi Drawer	140G-G6C3-C15	20G11RD3P4JA0NNNNN	1	50
2.2	1.5	5.0	3 x 3	Multi Drawer	140G-G6C3-C15	20G11RD5P0JA0NNNNN	1	50
4	2.2	8.0	3 x 3	Multi Drawer	140G-G6C3-C15	20G11RD8P0JA0NNNNN	1	50
5.5	4	11.0	3 x 3	Multi Drawer	140G-G6C3-C30	20G11RD011JA0NNNNN	1	50
7.5	5.5	14.0	3 x 3	Multi Drawer	140G-G6C3-C30	20G11RD014JA0NNNNN	1	50
0.75	0.75	2.1	3 x 5	MPI <sup>(4)</sup>	140G-G6C3-C15	20G11ND2P1JA0NNNNN	2	50
1.5	1.5	3.4	3 x 5	MPI <sup>(4)</sup>	140G-G6C3-C15	20G11ND3P4JA0NNNNN	2	50
2.2	2.2	5.0	3 x 5	MPI <sup>(4)</sup>	140G-G6C3-C15	20G11ND5P0JA0NNNNN	2	50
4	4	8.0	3 x 5	MPI <sup>(4)</sup>	140G-G6C3-C15	20G11ND8P0JA0NNNNN	2	50
5.5	5.5	11.0	3 x 5	MPI <sup>(4)</sup>	140G-G6C3-C30	20G11ND011JA0NNNNN	2	50
7.5	5.5	14.0	3 x 5	MPI <sup>(4)</sup>	140G-G6C3-C30	20G11ND014JA0NNNNN	2	50
11	7.5	22.0	3 x 5	MPI <sup>(4)</sup>	140G-G6C3-C50	20G11ND022JA0NNNNN	2	50
15	11	27.0	3 x 6	MPI <sup>(4)</sup>	140G-G6C3-C50	20G11ND027JA0NNNNN	3	50
18.5	15	34.0	3 x 6	MPI <sup>(4)</sup>	140G-G6C3-C70	20G11ND034JA0NNNNN	3	50
22	18.5	40.0	3 x 6	MPI <sup>(4)</sup>	140G-G6C3-C70	20G11ND040JA0NNNNN	3	50
30	22	52.0	3 x 6	MPI <sup>(4)</sup>	140G-G6C3-D10	20G11ND052JA0NNNNN	4	50
37	30	65.0	3 x 6	MPI <sup>(4)</sup>	140G-G6C3-D12	20G11ND065JA0NNNNN	4	50
45	37	77.0	3 x 6	MPI <sup>(4)</sup>	140G-J6F3-D15	20G11ND077JA0NNNNN	5	50
55	45	96.0	3 x 6	MPI <sup>(4)</sup>	140G-J6F3-D15	20G11ND096JA0NNNNN	5	50

(1) EN 61800-3 Category C3 - 30 m motor cable limit with no filter, if longer motor cable is required contact your local Rockwell Automation sales office.

(2) Unit size is applicable for Power Flex drives with or without line or/and load reactors.

(3) Contact your local Rockwell Automation sales office if higher short circuit ratings are required.

(4) Only available in the bottom position in the column.

**PowerFlex 753, 755 and 755TS Drive Unit Options**

- Auxiliary contact for circuit breaker
- Control circuit transformer
- Push buttons
- Pilot lights
- EtherNet/IP communication module, mounted internal to drive
- Human interface module
- I/O control interface type
- Line or load reactors are optional
- Functional Safety options

**Central Transformer**

**Table 34 - 3597 Central Transformer**

Power Rating [kVA]	Unit Size W x H	Unit Type	Column Position	Primary Circuit Breaker	Secondary Circuit Breaker	
					115V AC	230V AC
2	3 x 3	Fixed	Bottom	140MT-D9T-B40	1492-SPM2C160	1492-SPM2C080
3	3 x 3	Fixed	Bottom	140MT-D9T-B63	1492-SPM2C250	1492-SPM2C100
5	3 x 4	Fixed	Bottom	140G-G6C3-C15	1492-SPM2C400	1492-SPM2C200
8	3 x 4	Fixed	Bottom	140G-G6C3-C20	140G-G6C3-C60	1492-SPM2C320
10	3 x 5	Fixed	Bottom	140G-G6C3-C25	140G-G6C3-C80	1492-SPM2C400
16	3 x 5	Fixed	Bottom	140G-G6C3-C60	140G-J6F3-D12	140G-G6C3-C60

## Power Supply

An EtherNet/IP network in the MCC requires a power supply that provides 24V DC. A quality power supply is essential to reliable system operation. To help system integrity and reliability, an Allen-Bradley 10 A power supply unit is recommended. This power supply can be supplied with a buffer for enhanced ride-through performance. A redundant power supply is also available for added reliability.

The EtherNet/IP back-up power supply is available for unit-level back-up. It seamlessly transfers network power if there is a loss of main network supply. There is no loss of component function. When the main EtherNet/IP power recovers, there is automatic retransfer to the primary power supply.

**Table 35 - Power Supply**

Output Voltage [V]	Output Current [A]	Input Voltage [V]	Power [W]	Unit Size [W x H]	Unit Type <sup>(1)</sup>	Power Supply	Circuit Breaker
24	5	100...240V, 1 PH	120	3 x 1	Multi Drawer	1606-XLS240E	140UT-D7D2-B30
24	8	100...240V, 1 PH	192	3 x 2	Multi Drawer	1606-XLS240E	140UT-D7D2-B30
24	10	100...240V, 1 PH	240	3 x 1	Multi Drawer	1606-XLS480E	140UT-D7D2-B50
24	15	100...240V, 1 PH	360	3 x 2	Multi Drawer	1606-XLS480E	140UT-D7D2-B50
24	20	100...240V, 1 PH	480	3 x 1	Multi Drawer	1606-XLS960E	140UT-D7D2-B50
24	30	100...240V, 1 PH	720	3 x 2	Multi Drawer	1606-XLS960E	140UT-D7D2-B50
24	5	380...480V, 3 PH	240	3 x 1	Multi Drawer	1606-XLE240E-3	140UT-D7D3-B10
24	8	380...480V, 3 PH	384	3 x 2	Multi Drawer	1606-XLE240E-3	140UT-D7D3-B10
24	10	380...480V, 3 PH	480	3 x 1	Multi Drawer	1606-XLS480E-3	140UT-D7D3-B10
24	15	380...480V, 3 PH	720	3 x 2	Multi Drawer	1606-XLS480E-3	140UT-D7D3-B10
24	20	380...480V, 3 PH	960	3 x 1	Multi Drawer	1606-XLS960E-3	140UT-D7D3-B20
24	30	380...480V, 3 PH	1440	3 x 2	Multi Drawer	1606-XLS960E-3	140UT-D7D3-B20

(1) Contact your local Rockwell Automation sales office if a fixed unit is required.

**Table 36 - Redundant Power Supply**

Output Voltage [V]	Output Current [A]	Input Voltage [V]	Power [W]	Unit Size [W x H]	Unit Type <sup>(1)</sup>	Power Supply	Diode Redundancy Modules	Circuit Breaker
24	8	100...240, 1 PH	120	3 x 2	Multi Drawer	1606-XLS240E	1606-XLSRED	140UT-D7D2-B30
24	15	100...240, 1 PH	360	3 x 2	Multi Drawer	1606-XLS480E	1606-XLSRED40	140UT-D7D2-B50
24	8	380...480, 3 PH	384	3 x 2	Multi Drawer	1606-XLE240E-3	1606-XLSRED	140UT-D7D3-B10
24	15	380...480, 3 PH	720	3 x 2	Multi Drawer	1606-XLS480E-3	1606-XLSRED40	140UT-D7D3-B10
24	30	380...480, 3 PH	1440	3 x 2	Multi Drawer	1606-XLS960E-3	PN-56326	140UT-D7D3-B20

(1) Contact your local Rockwell Automation sales office if a fixed unit is required.

**Table 37 - Power Supply with Buffer Module**

Output Voltage [V]	Output Current [A]	Input Voltage [V]	Power [W]	Unit Size [W x H]	Unit Type <sup>(1)</sup>	Power Supply	Buffer Modules	Circuit Breaker
24	8	100...240V, 1 PH	192	3 x 2	Multi Drawer	1606-XLS240E	1606-XLSBUFFER24	140UT-D7D2-B30
24	15	100...240V, 1 PH	360	3 x 2	Multi Drawer	1606-XLS480E	1606-XLSBUFFER24	140UT-D7D2-B50
24	30	100...240V, 1 PH	720	3 x 2	Multi Drawer	1606-XLS960E	1606-XLS960BUFFER	140UT-D7D2-B50
24	8	380...480V, 3 PH	384	3 x 2	Multi Drawer	1606-XLE240E-3	1606-XLSBUFFER24	140UT-D7D3-B10
24	15	380...480V, 3 PH	720	3 x 2	Multi Drawer	1606-XLS480E-3	1606-XLSBUFFER24	140UT-D7D3-B10
24	30	380...480V, 3 PH	1440	3 x 2	Multi Drawer	1606-XLS960E-3	1606-XLS960BUFFER	140UT-D7D3-B20

(1) Contact your local Rockwell Automation sales office if a fixed unit is required.

## Additional Resources

These documents contain additional information concerning related products from Rockwell Automation. You can view or download publications at [rok.auto/literature](http://rok.auto/literature).

Resource	Description
FLEXLINE 3500 Motor Control Center User Manual, publication <a href="#">FLXLN-UM001</a>	Describes how to install cables and columns, install units, commissioning, maintenance, and security for FLEXLINE 3500 MCCs.
EtherNet/IP Network Devices User Manual, publication <a href="#">ENET-UM006</a>	Describes how to configure and use EtherNet/IP devices to communicate on the EtherNet/IP network.
Ethernet Reference Manual, publication <a href="#">ENET-RM002</a>	Describes basic Ethernet concepts, infrastructure components, and infrastructure features.
System Security Design Guidelines Reference Manual, publication <a href="#">SECURE-RM001</a>	Provides guidance on how to conduct security assessments, implement Rockwell Automation products in a secure system, harden the control system, manage user access, and dispose of equipment.
UL Standards Listing for Industrial Control Products, publication <a href="#">CMPNTS-SR002</a>	Assists original equipment manufacturers (OEMs) with construction of panels, to help ensure that they conform to the requirements of Underwriters Laboratories.
American Standards, Configurations, and Ratings: Introduction to Motor Circuit Design, publication <a href="#">IC-AT001</a>	Provides an overview of American motor circuit design based on methods that are outlined in the NEC.
Industrial Components Preventive Maintenance, Enclosures, and Contact Ratings Specifications, publication <a href="#">IC-TD002</a>	Provides a quick reference tool for Allen-Bradley industrial automation controls and assemblies.
Safety Guidelines for the Application, Installation, and Maintenance of Solid-state Control, publication <a href="#">SGI-1.1</a>	Designed to harmonize with NEMA Standards Publication No. ICS 1.1-1987 and provides general guidelines for the application, installation, and maintenance of solid-state control in the form of individual devices or packaged assemblies incorporating solid-state components.
Industrial Automation Wiring and Grounding Guidelines, publication <a href="#">1770-4.1</a>	Provides general guidelines for installing a Rockwell Automation industrial system.
Product Selection and Configuration tools, <a href="http://rok.auto/systemtools">rok.auto/systemtools</a>	Helps configure complete, valid catalog numbers and build complete quotes based on detailed product information.
Rockwell Automation Global SCCR tool, <a href="http://rok.auto/sccr">rok.auto/sccr</a>	Provides coordinated high-fault branch circuit solutions for motor starters, soft starters, and component drives.
Product Certifications website, <a href="http://rok.auto/certifications">rok.auto/certifications</a>	Provides declarations of conformity, certificates, and other certification details.

# Rockwell Automation Support

Use these resources to access support information.

<b>Technical Support Center</b>	Find help with how-to videos, FAQs, chat, user forums, Knowledgebase, and product notification updates.	<a href="http://rok.auto/support">rok.auto/support</a>
<b>Local Technical Support Phone Numbers</b>	Locate the telephone number for your country.	<a href="http://rok.auto/phonesupport">rok.auto/phonesupport</a>
<b>Technical Documentation Center</b>	Quickly access and download technical specifications, installation instructions, and user manuals.	<a href="http://rok.auto/techdocs">rok.auto/techdocs</a>
<b>Literature Library</b>	Find installation instructions, manuals, brochures, and technical data publications.	<a href="http://rok.auto/literature">rok.auto/literature</a>
<b>Product Compatibility and Download Center (PCDC)</b>	Download firmware, associated files (such as AOP, EDS, and DTM), and access product release notes.	<a href="http://rok.auto/pcdc">rok.auto/pcdc</a>





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