MNS-MCC
Low Voltage Motor Control Center
Application Guide

Power and productivity
for a better world™

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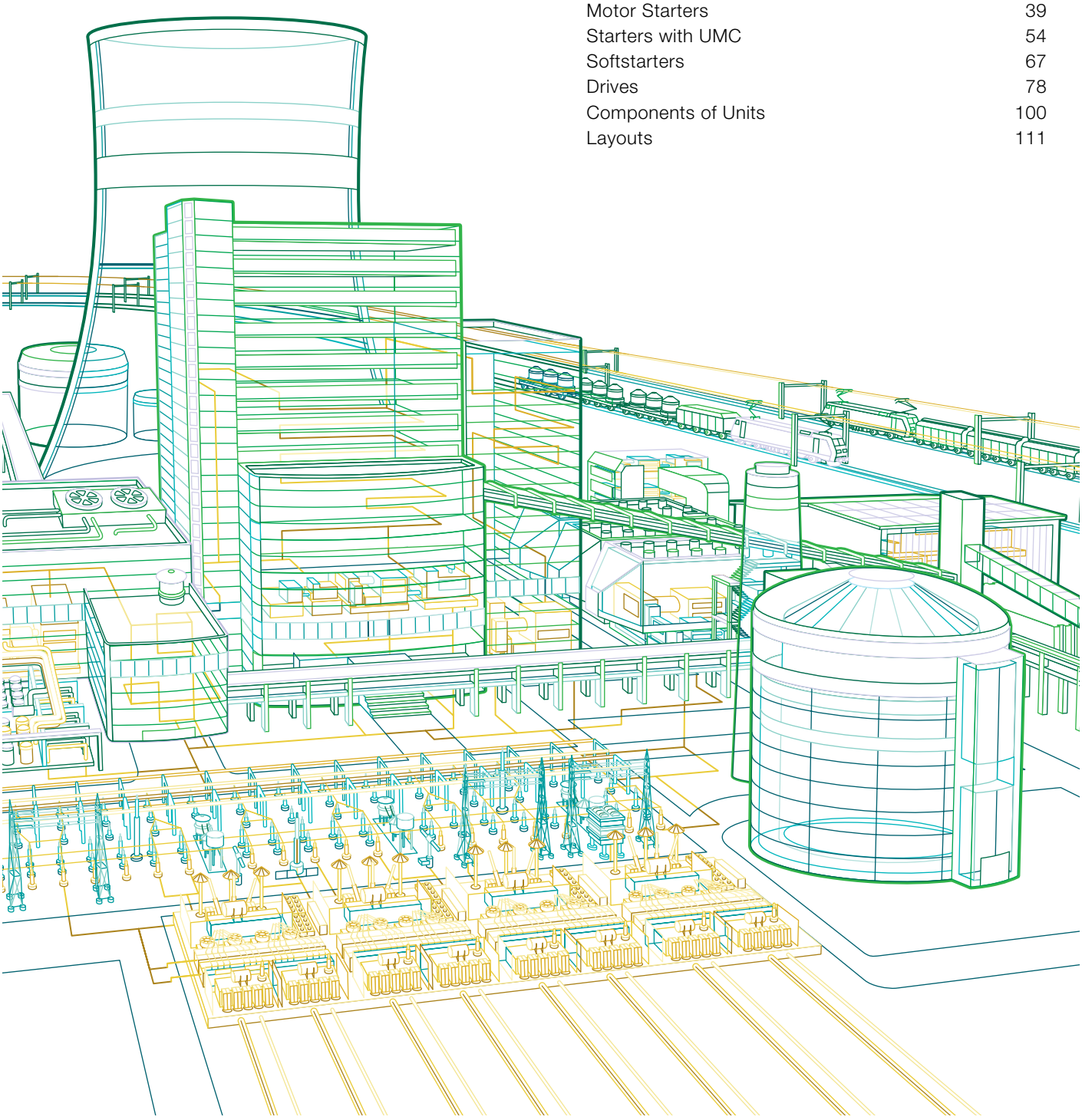


General

MNS-MCC is the result of over 30 years of experience with the design, manufacturing and application of Low Voltage Motor Control across the entire range of industrial and utility installations.

To achieve the greatest possible flexibility, the MNS-MCC Motor Control Center offers plug-in, withdrawable, and full height unit technology, with up to 4000A horizontal and 1600A vertical bus. The high horizontal bus rating also allows the MNS-MCC to be used in a switchgear application.

Designed for the highest degree of safety, ease of installation and maintenance, reliability, and flexibility, the MNS-MCC provides users with maximum uptime. Its unique and innovative design raises the bar in Arc Flash Protection for Low Voltage Motor Control Centers. The MNS-MCC provides industry leading features that afford operators the highest degree of safety and efficiency while performing both normal and maintenance operations.

Safe and Reliable

– Motor Control Center designed to address the causes of arc flash and other electrical safety hazards such as shock and electrocution
– Tested to IEEE C37.20.7 guide without current limiting main device
– Multifunction wall provides Fault Free Zone with a touch safe IP 20 rating
– Bus Shutters are not required
– Patented mechanical guide rail eliminates the chance of misalignment
– IBC-2009 seismic compliance

Easy to use and maintain

– Front access to all compartments
– All unit wiring terminals are located in the vertical wireway: Only connect line and load, control and power wiring once
– MCC buckets are removed and replaced without opening the door
– A reduction in PPE from level 2 down to level 0 per table 130.7(c) in NFPA
– No tools required for bucket removal, no wire removal
– Once removed, unit maintenance or modifications can be safely performed outside of the Arc Flash Boundary
– Visual inspection of bus bar connections
– Maintenance free “torque and forget” bolts
– Units in vertical structure can be easily interchanged or modified

Flexibility

– UMC-100 Intelligent overload relay – remote monitoring of operating hours, number of starts, number of overload trips
– Allows components to communicate with other equipment
– Allows intelligent planning of maintenance activities
– Intelligent devices allow maintenance personnel to troubleshoot remotely
– Components are factory connected to eliminate troubleshooting errors

Product Description

System Overview

The basic design:
– Standard UL845, CSA and NOM
– Enclosure Type: NEMA 1A
– Withdrawable unit technology
– Available as Arc Resistant per IEEE C37.20.7

Available with the following nominal ratings:
– 600Vac maximum
– 4000A maximum Horizontal Bus; 1600A maximum Vertical Bus
– 60 Hz
– 100kA maximum symmetrical short circuit SCCR at 600V

Standards

The MNS-MCC is designed, tested, and constructed in accordance with the following industry standards and guidelines:
– UL845 — Low Voltage Motor Control Centers
– UL50 — Enclosures for Electrical Equipment
– NOM NMXJ853 — Normas Oficiales Mexicanas
– NFPA 70E — National Electric Code Safety Requirements
– NFPA 70 — National Electric Code
– NEMAICS 1B — Motor Control Centers
– NEMA 250 — Enclosures for Electrical Equipment
– IEEE 1584 — Arc Flash Calculations Standard
– CSA C22.2 — Canadian Low Voltage Electrical Equipment
– ANSI C84.1 — Voltage Tolerances for North America
– Seismic Qualification to IBC-2009, IEEE 693, NBC (National Building Code of Canada), AC-156-2010

ABB MNS-MCCs are manufactured to Underwriters Laboratories (UL) Standard 845 and carry the “UL Listed” label, where applicable. The “UL Listed” label is applied to vertical sections and units that are installed within those sections. Sections and installed units are independently listed devices. Thus, it is possible to have non-UL Listed units installed in UL Listed vertical sections. An ongoing temperature and short circuit design test program, as required by UL845, ensures a quality product that meets the latest safety codes.

Product Description

Technical Data

Electrical Ratings	
Available nominal operating voltages	208Vac, 240Vac, 480Vac, 600Vac
Available power system types	3 phase, 3 wire; 3 phase, 4 wire
Frequency	60 Hz
Voltage tolerance	+/-10%
Frequency tolerance	+/-1%
Short circuit current withstand, 480Vac	42KA, 65KA, 100KA [1]
Short circuit current withstand, 600Vac	25KA, 42KA, 65KA [1]
Continuous Current Ratings	
Horizontal main bus	800A, 1200A, 1600A, 2000A [2], 2500A, 3200A [3], 4000A [3]
Vertical distribution bus	800A, 1600A
Neutral bus (horizontal)	800A, 1200A, 1600A
Neutral bus (vertical)	800A
Ground bus	400A
Seismic Ratings/Testing	
	IBC2009, IEEE 693, NBC, AC156

[1] Consult factory for additional restrictions.
[2] Available with or without ventilated enclosure.
[3] Available only with ventilated enclosure.

Environmental Data

Environmental Data		
	Enclosure rating	NEMA 1A
Environmental Tolerances		
	Ambient temperature (storage)	-30C to 65C
	Ambient temperature (operation)	0C to 40C
	Humidity	95% (Non-condensing)
	Altitude	1000m (3300ft)

Product Description

Mechanical Data

Standard Enclosure Dimensions		
	Height	92” (2300mm)
	Width	20” (500mm)
	Depth	20” (500mm)
	Top wireway	10” (250mm)
	Bottom wireway	7” (175mm)
Vertical Wireway		
	Height	89” (2225mm)
	Width (standard)	4” (100mm)
	Width (optional)	8” (200mm)
	Depth	12” (300mm)
	Useable equipment space	72” (1800mm)
	Spacing increments	6” (150mm)
Optional Enclosures		
	Width	20”-48” (500 – 1200mm)
Finish		
	Color	Gray ANSI 61
	Texture	Medium
	Gloss	G40 (+/- 10)
	Minimum thickness	3 mils
	Application	Powder coat (baked on)
	Material	Polyester
Frame		
	Vertical “C” profile channels	14 - gauge
	Horizontal “C” profile channels	12 - gauge
	Doors	16 - gauge
	Sidewalls	16 - gauge minimum
	Cable entry plates	14 - gauge
	Roof	16 - gauge
Plug-in and Withdrawable Units		
	Sides	16 - gauge minimum
	Door	16 - gauge
	Base Plate	16 - gauge
	Mid-shelf supports	16 - gauge

Product Description

Standard Finish

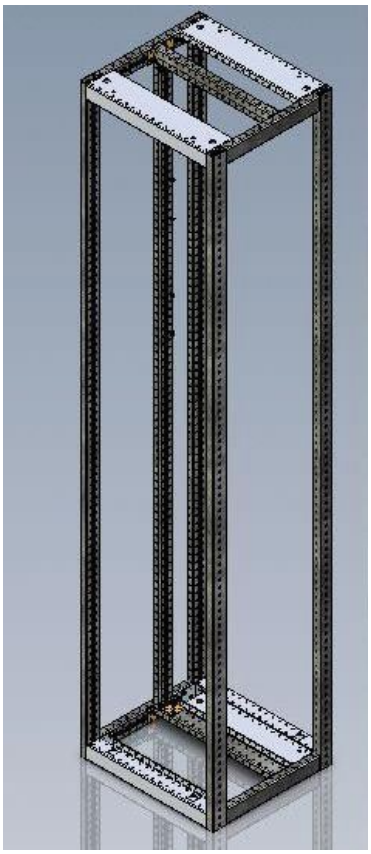
The MNS-MCC's standard finish color is a hammer-tone gray (ANSI 61) with a gloss: G40 +/- 10. The painting process is an electrostatic-coat system using polyester powder coat paint. The completed finish has minimum 3 mils dry film thickness. The process includes cleaning any grease or phosphate, rinsing, spray coating, oven drying, electrostatic powder spray paint coating, and oven baking. The salt spray rating per the ASTM B 117-07a testing method is 2000 hours.

Frame

The MNS-MCC frame consists of rigid C-channel rails of 12 and 14 gauge thickness galvanized steel with holes at 1 inch (25mm) intervals. The frame members are secured with threadforming screws that require no maintenance. The corner joints are formed of pressure plates and secured with thread-forming screws.

Covers and Barriers

Side and rear panels on the MNS-MCC are made with16-gauge sheet metal secured by threaded screws. The roof plate is a single piece of 16-gauge galvanized material. Each section is separated from the next by vertical 16-gauge galvanized barriers located on the ends of the bus compartment.



Structure steel gauge information

Part Description	Thickness (Gauge)
Base channels	12
Vertical "C" Channel	14
Top cover	16
Side cover	16
Back cover	16
Unit door	16
Vertical wireway door	16
Unit base plate	16
Right side plate unit	16
Left side plate unit	14
Back plate unit	16

Paint specification

Structure Features	Tin-plated copper / Silver-plated
Horizontal bus material	Copper
Horizontal ground bus material	Copper
Channels	Galvanized steel
Top, back and side covers	Gray ANSI 61
Doors	Gray ANSI 61
Apparatus plate	White

Safety Features

Basic Safety Philosophy The two priorities of protection in ABB MNS-MCC are:

Arc Prevention
Through proven built in features, the MNS-MCC substantially reduces the risk of an internal arcing fault.

Arc Containment
MNS-MCC has been tested in accordance with IEEE C37.20.7 to provide Type 2 accessibility.

The ABB MNS-MCC offers a wide array of features from the unique withdrawable concept to the patented vertical bus system which provides the operator a higher level of safety than that of traditional Low Voltage Motor Control Centers. MNS-MCC has adopted the safety features of ABB's industry leading IEC style Controlgear into a NEMA/UL design.

Comprehensive Approach to Safety and Reliability
Although Arc Flash Safety often leads the discussion of electrical safety, studies have shown that electrical shock and electrocution are even more prevalent. MNS-MCC provides IP20 touch safe protection throughout the front accessible areas of the equipment on the line side of individual unit disconnects. Workers can safely interchange MCC units without opening any covers or doors and without disconnecting any field wiring. Exposure to energized conductors is virtually eliminated and maximum productivity is maintained.

In the unlikely event of an internal fault, the insulated busbar system in MNS-MCC contributes to the arc self-extinguishing in 2 cycles our less. Equipment damage is minimized and the equipment can quickly be put back in service.

Arc Prevention: The Multifunction Wall
Arc Prevention in MNS-MCC begins with the patented vertical busbar system, the Multifunction Wall (MFW). The MFW is an insulating, non-flammable, and non-hygroscopic housing for the vertical busbars. The MFW provides a solid, isolating barrier between the front accessible areas of the MCC and the horizontal bus compartment at the rear of the MCC. Traditional bus shutters are not required in MNS-MCC. Bus shutters are a potential point of failure in an MCC, presenting an opportunity for the operator to come in contact with a live part. The MFW provides IP20 protection at the vertical busbars with no moving parts. An isolating barrier is formed around unit stabs prior to coming in contact with the vertical bus.

Arc Prevention: Withdrawable Units
MNS-MCC offers a unique withdrawable concept that allows the operator to insert or remove a unit without the use of tools, reaching inside the equipment, or opening any door or cover. This is accomplished by a disconnecting, pull apart terminal block design for all control and power connections. The field connections remain terminated and are available for inspection and test in the vertical wireway. Traditional MCCs require the operator to open a door or remove a cover to disconnect field wiring prior to withdrawing a unit for maintenance. The MNS-MCC design substantially reduces the possibility of an operator coming in contact with a live part during maintenance of a withdrawable unit, which could result in an internal arcing fault.
The rotary handle in each withdrawable unit not only controls the operation of the unit disconnect, it provides an interlocking system with the structure support shelf. This interlocking prevents inadvertent insertion into the vertical bus and prohibits the unit from being removed while the disconnect is in the closed position. An isolated position is available in which the unit is secured in position approximately 30mm off of the vertical bus. Since deliberate action is required to change the position of the unit and locks can be applied to the rotary handle, the risk of accidental energization of field equipment is greatly reduced.
The location of the control terminal block in the vertical wireway allows an operator to troubleshoot the control circuit without being exposed to primary voltage. According to the generic hazard categories established by NFPA 70E Article 130, this reduces the required PPE levels from Category 2 to Category 0 when working on a 120V (or less) control circuit.

Arc Prevention: Structural Integrity
Insulated horizontal bus in MNS-MCC prevents the introduction of an arcing fault due to an unintentional circuit created by contamination of bus bar supports, animal or vermin infestation, or human error. In the unlikely event that

Safety Features

an arc is initiated in the horizontal bus compartment, the duration of the fault is substantially limited.
The MNS-MCC utilizes removable covers in the vertical wireway to cover the horizontal bus splices.

Arc Prevention: Fault Free Zone

A Fault Free Zone is defined by IEC 60439-1: "under normal operating conditions an internal short circuit between phases and/or earth (ground) is only a remote possibility."
From the insulating and isolating features of the horizontal and vertical bus assemblies and shrouded unit stabs to eliminating the need for factory personnel to open doors and remove covers during routine maintenance, the MNS-MCC creates a safer working environment in which a reduction of risk from internal arc faults is realized.

Arc Containment: Arc Resistant MCCs

No recognized standard currently exists for Low Voltage MCCs to evaluate their performance in the event of an internal arcing fault. The ANSI/NEMA standard for evaluating LV MCCs in general is UL 845, which requires that the bus assembly and outgoing feeder units be subjected to a series of bolted fault conditions. However, the evaluation provided by UL 845 has very little practical relevance since it is unlikely that MCC assemblies will endure this type of fault condition. Instead, MCC bus assemblies and feeder units that are subject to high fault currents would most likely be the effect of internal arcing. Internal arc faults may not be detected by protective devices which can create a much more dangerous condition for factory personnel.

An internal arcing fault can be a very rapid and destructive event. Since the ignition of the fault is typically blown away within milliseconds, ionized gases develop which become the conducting path between opposite polarities and/or ground until the flow of current is interrupted by the short circuit protective device (SCPD). The resulting pressure build up is a function of the magnitude and duration of the fault current. The concept of an arc resistant enclosure is that the assembly can contain the arc under specified installation conditions.

The Fault Free Zone employed in MNS-MCC not only prevents an arcing event, it ensures that the arc is extinguished immediately following the dissipation of the ignition element, in some cases before even the SCPD has cleared the circuit. Typical MCC designs include uninsulated bus assemblies and branch circuit connections which potentially allow the arcing to propagate until cleared by the SPCD device.

Other methods have been introduced into MCCs to prevent personnel exposure and limit the effects of an internal arcing event. However such methods are often dependent on the proper selection, functioning, and setup of devices and that specific procedures are followed by the operator. The arc prevention and containment features of the MNS-MCC are inherent to the standard design.

Arc Containment: IEEE C37.20.7

In the absence of a specific test procedure for arc resistant LV MCCs, MNS-MCC has been tested in accordance with IEEE C37.20.7, IEEE Guide for Testing Metal Enclosed Switchgear. When used in appropriate conditions, MNS-MCC can provide Type 2 accessibility (front, sides and rear) on systems with available fault currents up to 65kA at 480V.

Testing was carried out on an array of samples of varying construction, representing the worst case installation scenarios available in MNS-MCC. Selections were made based on minimum unit volumes used for maximum sized components and the maximum values of unbraced doors and covers. The test circuit was calibrated to deliver 65kA at 480 V for 500 ms, as prescribed by C37.20.7. The arc ignition was carried utilizing a 10 awg wire in specific locations and situations, to represent an event that could potentially occur under normal operating conditions.

All evaluation criteria in C37.20.7 was met or exceeded. IEEE 1584, Guide for Performing Arc-Flash Hazard Calculations was followed to measure the incident energy for each test scenario. The maximum thermal energy measured during the testing was below 1.2 cal/cm2. The key to the performance of MNS-MCC is the short duration of the arcing fault. Because no paths exist between phases and ground, the arc was extinguished in less than 2 cycles.

Available Section Types

Modular Sections

Modular sections are equipped with a vertical distribution bus assembly that accepts either withdrawable or plug-in unit types. The standard dimension for modular sections is 20” wide x 20” deep x 92” high (500mm x 500mm x 2300mm). An optional extended vertical wireway is available making the section 24” wide (600mm).

Full-Height Unit Sections

Full height unit sections contain devices that are fixed mounted and directly connected to the horizontal bus system. These sections are also 20” deep (500mm) and 92” high (2300mm), but range in width from 20” (500mm) to 48” (1200mm) depending on the installed device(s).

Available Unit Types

General

The MNS-MCC accommodates three types of units:
– Plug-in type
– Withdrawable type
– Full height

The units may include disconnect feeders or a combination type of a motor starter, softstarter, or variable frequency drive (VFD) with a circuit protector.

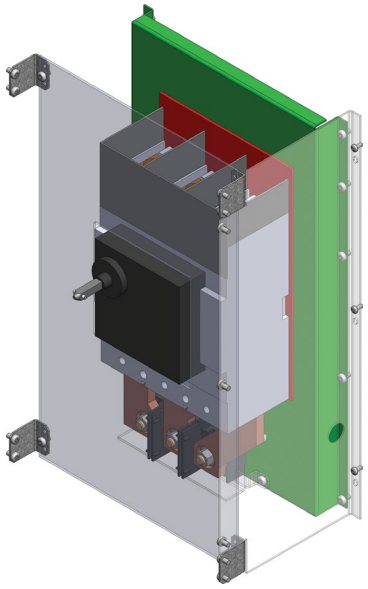
Plug-in Type

Plug-in units consist of a main or feeder molded-case breaker or main lug unit. They are connected to the vertical distribution bars with plug-in contacts. The unit is secured to the MCC frame with self-tapping screws. Each unit is covered by a hinged door, closed with a quarter-turn latch.

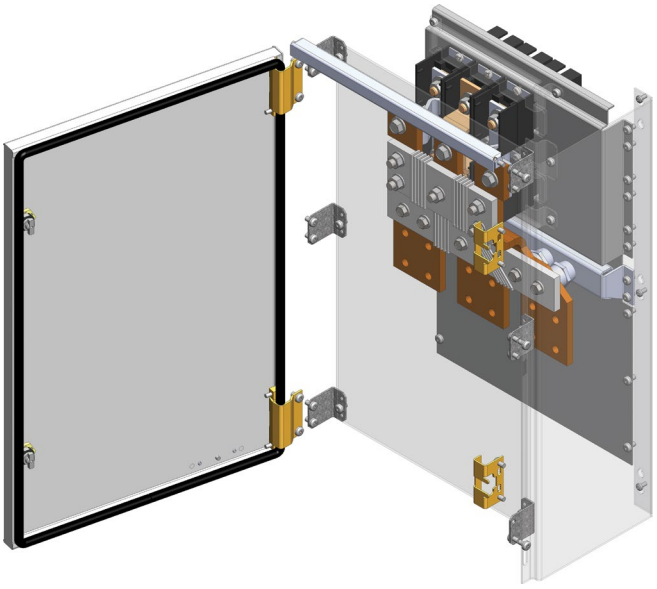
Circuit breaker units are operated using a rotary handle. Power terminations are made directly to the terminals of the circuit breaker or copper extender bars. A clear cover provides protection from coming in contact with live parts.

There are two options available for plug-in type units:
– Main Lug
– Circuit breaker

Note: Plug-in unit types are removable from the MCC structure simply by removing the self-tapping screws.



Plug-in Circuit Breaker



Plug-in Main Lug Unit

Available Unit Types

Withdrawable Units

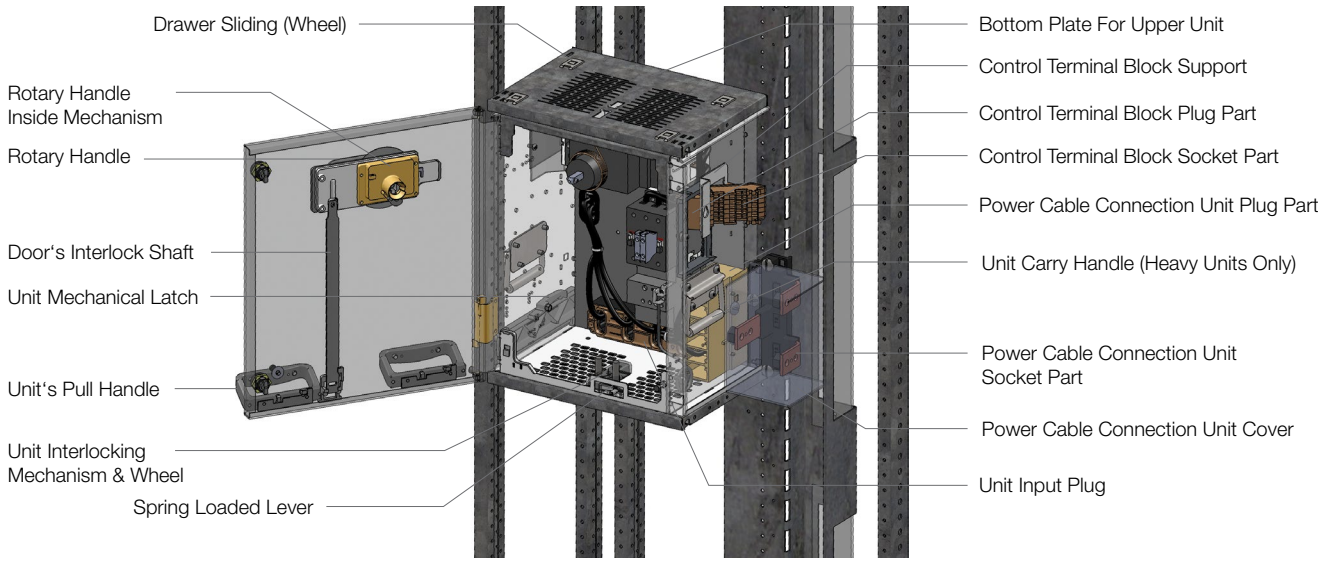
MNS-MCC offers withdrawable units that can be removed and inserted into the structure without disturbing any field wiring. The standard unit sizes are: 6”, 12”, 18”, 24”, 30”, 36”, 42” and 48”.

Sections containing withdrawable units are supplied with the following:

– Compartment bottom steel plate with roller.
– Guide rails for the units.
– Sheet metal side wall with the outgoing control plug.
– Outgoing cable connection unit.

Features of the withdrawable unit include:

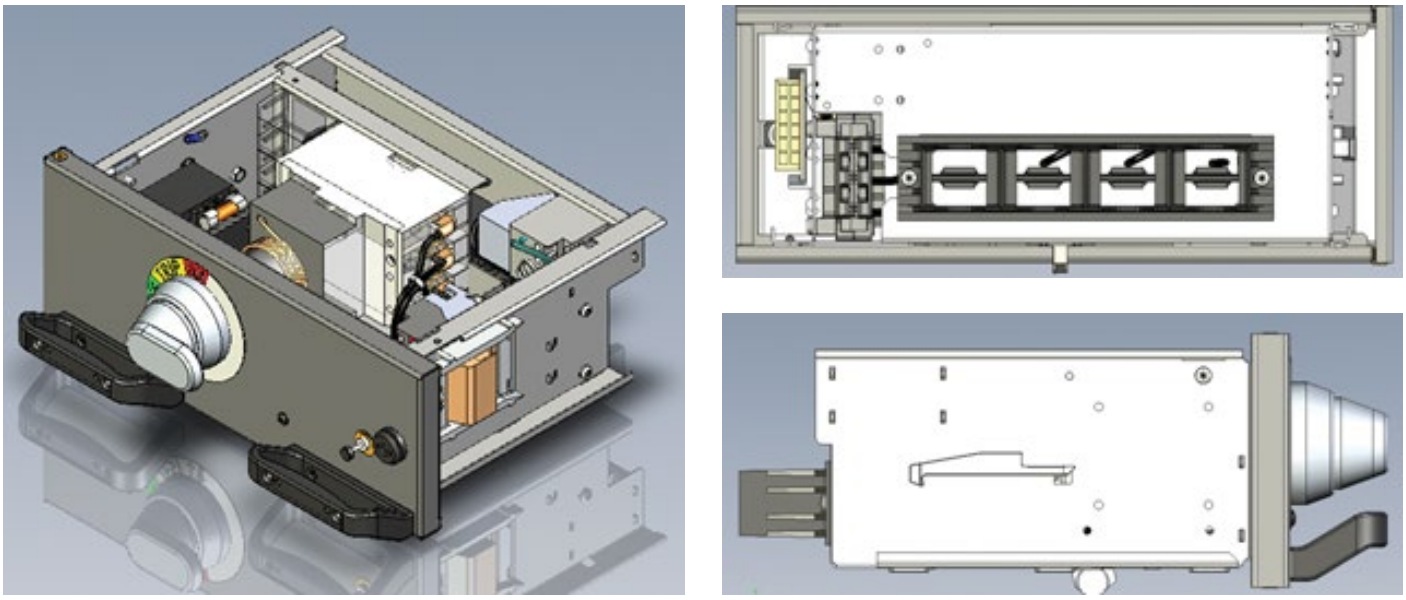
– Hinged front cover secured by a quarter-turn latch that allows ease of accessibility to the components inside the unit from the front of the section.
– Two handles attached to the front cover for ease of removing the unit from the section.
– A rotary operating handle.
– Sheet metal side wall with one end of the pull-apart terminal blocks.
– Roller wheel for mechanically interlocking the device.
– Plug-in contacts to connect to the multi-function wall and distribution bus.
– Plug-in contacts for motor lead connections.
– Electrical components such as breakers, contactors, overloads, control transformers, pilot devices and push buttons.



Available Unit Types

Withdrawable Units

Withdrawable unit connections to the vertical distribution bus bar are provided by shrouded stabs that engage the L-shaped bus bars. Outgoing cables are connected via plug-in-contacts to the outgoing cable connection unit (main circuit) and via terminal blocks (auxiliary circuit). The outgoing cable connection units are secured directly to the frame. The circuit breaker disconnect is operated via a rotary operating handle that is used for mechanically and electrically interlocking the unit. The rotary handle also provides control of movement of the withdrawable unit. Only when the handle is in the MOVE position can the unit be withdrawn from or inserted in the section.



6E Withdrawable Motor Starter

Withdrawable Units

Withdrawable unit connections to the vertical distribution busbar are provided by shrouded stabs that engage the L-shaped busbars. Outgoing cables are connected via plug-in-contacts to the outgoing cable connection unit (main circuit) and via terminal blocks (auxiliary circuit). The outgoing cable connection units are secured directly to the frame. The circuit breaker disconnect is operated via a rotary operating handle which is used for mechanically and electrically interlocking the unit. The rotary handle also provides control of movement of the withdrawable unit. Only when the handle is in the “Move” position can the unit be withdrawn or inserted from the structure.

Test Position

WIthdrawable starters and softstarters are available with a Test Position. The Test Position allows for a separate control power source to be connected to the unit via the control terminal block. A contact located on the rotary handle assembly is actuated when the handle is rotated to the TEST position. The contact controls an isolation relay, which isolates the internal control power transformer and circuit breaker from the control circuit. While the bucket is fully inserted, control power is now available to the control circuit, while the circuit breaker is OFF and no primary voltage is present. A Motor Control Center with the Test Position feature will include starters and softstarters factory interconnected to a common input terminal block to facilitate connection to the separate 120V source.

Available Unit Types

Withdrawable Unit Rotary Handle Description

Standard Operation: Each withdrawable unit's rotary operating handle is provided with four positions as indicated below.

Figure	Rotary Operating Handle Position	Unit Position in Enclosure	Unit Status	Unit Status and Operation
	ON	Engaged with Vertical Bus	Energized	Unit disconnect is closed, control circuit is energized
	OFF	Engaged with Vertical Bus	Off	Unit disconnect is open, control circuit is de-energized.
	TRIP	Engaged with Vertical Bus	Off	Unit disconnect has automatically tripped and must be reset before continued operation.
	MOVE	Engaged with Vertical Bus	Off	Unit disconnect is open, control circuit is de-energized, unit is ready to move to the isolated position
		Isolated Position, Disengaged from Vertical Bus	Off	Unit disconnect is open, control circuit is de-energized, unit is secured in place with unit stabs disengaged from vertical bus
		Withdrawn	Off	Unit disconnect is open, control circuit is de-energized, unit is ready to move to the isolated position. The unit is removed from the MCC enclosure.
	Test	Engaged with Vertical Bus	Off, Control Circuit Energized	Unit disconnect is open, control circuit is energized from a separate control power source external to the unit.

Note: Rotary Handle has been tested for 10,000 mechanical operations per UL 489.

Available Unit Types

Full-Height Unit Section

Larger motor controllers, mains and feeders are available in full height, fixed mounted units. These units are fed directly from the horizontal bus bar. Sections containing these units do not contain vertical distribution bus bars.

Variable Speed Drive

Solid State Reduced Voltage Starter (SSRV)

Technical Description

Shipping Design

Each MNS-MCC shipping split is delivered on a removable wood shipping base that is heat-treated and fumigated. The maximum shipping split is 2100mm and is anchored at a minimum of four points in each spilt.

Shipping pallets are available in three sizes:

Length	Width	Height
1200mm	900mm	120mm
1700mm	900mm	120mm
2100mm	900mm	120mm

Technical Description

Horizontal Wireways

The top horizontal wireway is 10 inches (250 mm) high. The horizontal wireway is covered by a 10 inches (250 mm) high 16-gauge steel hinged door secured by a steel quarter-turn latch.

The bottom horizontal wireway is 7 inches (175 mm) high. The wireway contains the ground bus. The horizontal wireway is covered by a 7 inches (175 mm) high, 16-gauge steel hinged door secured by a steel quarter-turn latch.

Vertical Wireways

A vertical wireway is provided in each modular MCC section. It is located on the right side of the section and extends the entire height of the MCC. Standard wireway width is 100mm (4 in). The overall depth of the wireway is 300mm (12 in), providing a cross-sectional area of 30000mm^2 (48 in^2). An optional 200mm (8 in) wireway is also available if additional wire bending and working space is desired. Wires may be secured in place using fastening holes located in the structural frame.

Each wireway is provided with a full-height, 12-gauge steel door that is hinged and closed using three steel quarter-turn latches. The doors open 105° opposite of the unit doors for maximum accessibility. Door hinges are secured using self-tapping screws and are easily removed.

Each vertical wireway is equipped with a clear, polycarbonate cover over the bus splices to allow for visual inspection. The cover can be easily removed during installation and maintenance.

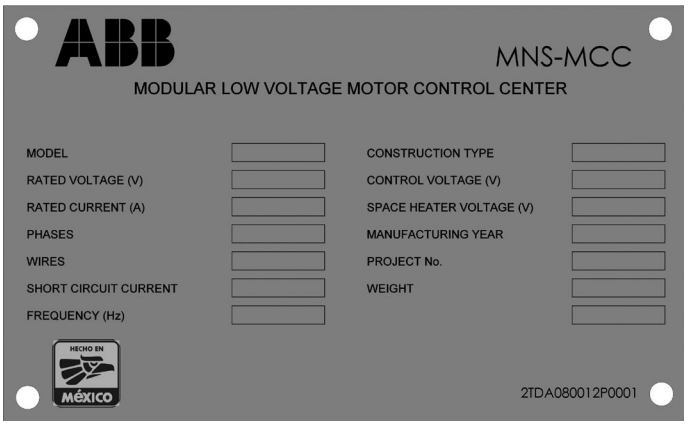
Technical Description

Equipment Labeling

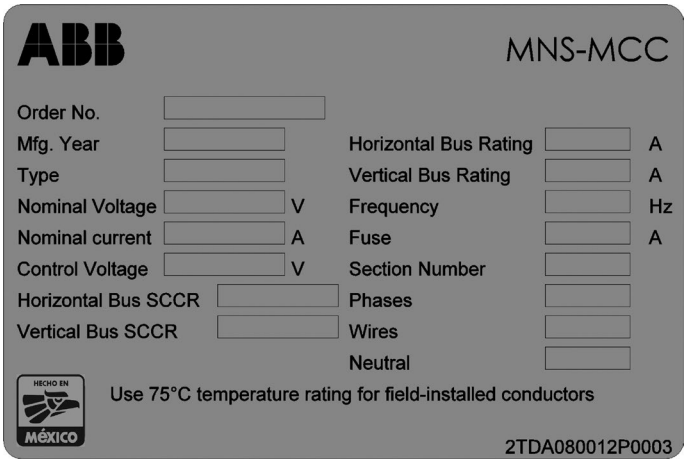
Each MCC lineup contains a Master Nameplate, typically located on the horizontal wireway door of the left most section.

Each MCC section contains a Section Nameplate, located on the vertical wireway door for modular sections and on the unit door for full height units. If the section is UL, CSA, or NOM listed, the Section Nameplate will carry the appropriate marking.

Each MCC unit will contain a Unit Information Label affixed to the inside of the unit door. If the unit is UL, CSA, or NOM listed, the Section Nameplate will carry the appropriate marking. Each unit will also contain a Unit Nameplate (Tag) which typically describes the load.



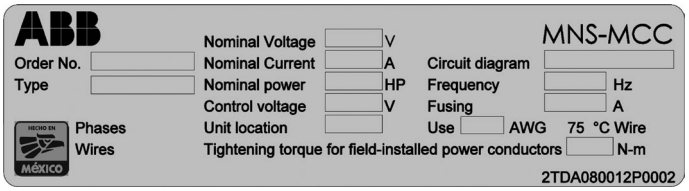
Master Nameplate



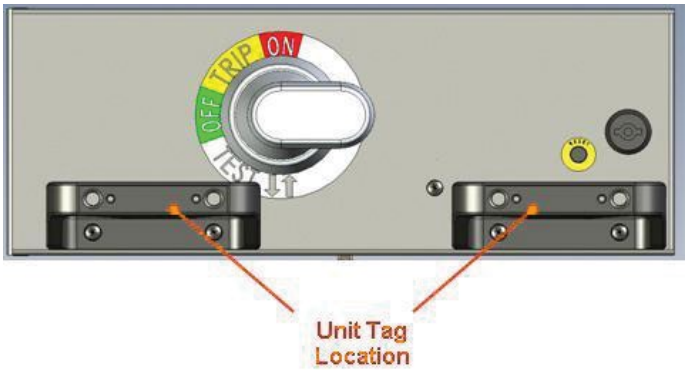
Section Nameplate

Unit Tags

MCC units also have nameplates on the two handles of each unit containing additional unit information.



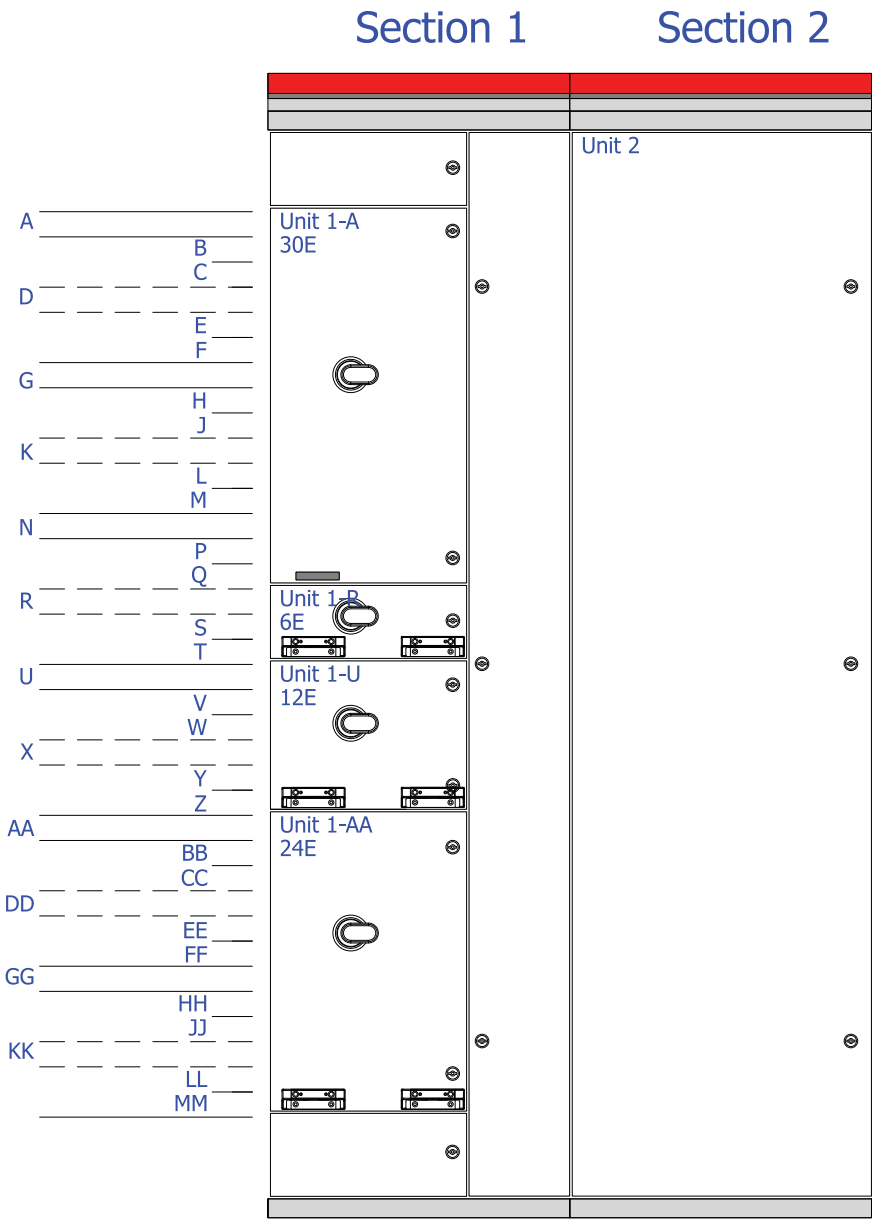
Unit Label



Technical Description

Unit Location Designation

Each unit will have a corresponding unit location. The location is described by a two digit designation. The first character is the section number, and the second is the upper most vertical location in which the unit is positioned.



Technical Description

NEMA-1A (gasketed)

The MNS-MCC standard enclosure is NEMA-1A (gasketed). The enclosures are deadfront, metal-enclosed structures. All front doors, side panels and rear panels or doors are painted using textured, electrostatic, powder-type paint. The enclosure is appropriate for installations with normal atmospheric conditions. It is intended for use primarily in areas with moderate dirt and contamination.

Standard Features

– ANSI 61 textured paint color
– 4-inch vertical wireway
– Barriers between each section
– Removable, steel top plates over conduit entrance
– Gasketing on all doors
– Lifting eyes

Available Options

– 8-inch vertical wireway
– Bottom plates

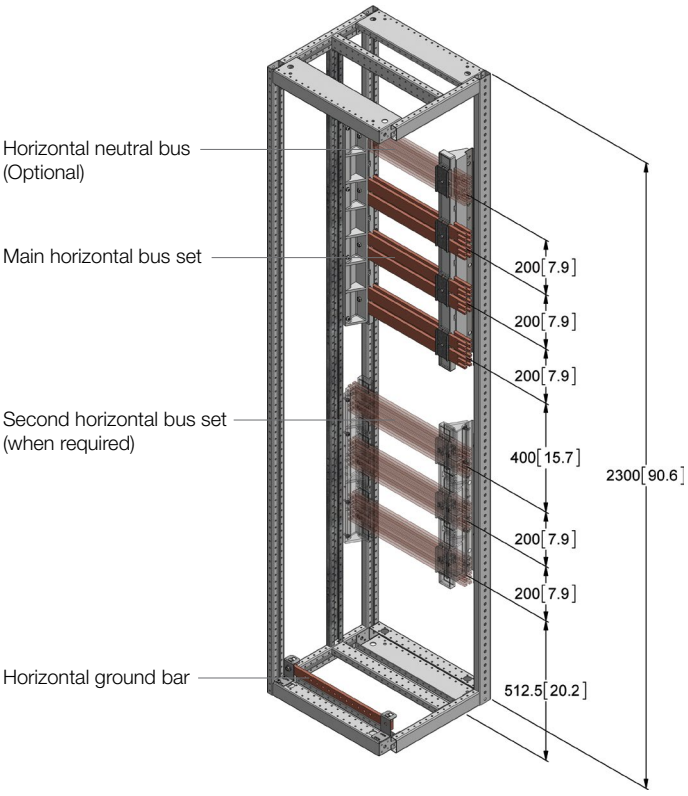
Technical Description

Bus Bar System

The horizontal bus bar system is installed in the rear of the MCC, isolated from the front accessible areas. The bus bars are arranged Neutral, A, B, and C phase from top to bottom in each vertical section. For larger ampacities, a second set of bus bars is installed in the lower portion of each section. Refer to the figures on the following page for additional information. The horizontal bus is secured in place by maintenance-free screw connectors. The horizontal bus bars of multi-section shipping splits are spliced at the factory and can be removed at your site if needed.

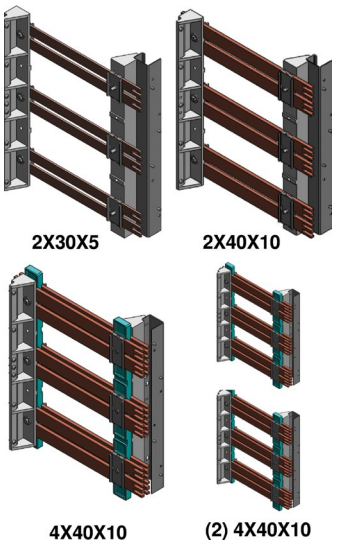
The bus bars are connected to the adjacent section at each end with shipping bus splice bar kits, are provided on the left side of each shipping split. The bus splice kits are accessible through the front side in the vertical wireway. The bus splice kits are secured by grade 5 hardware.

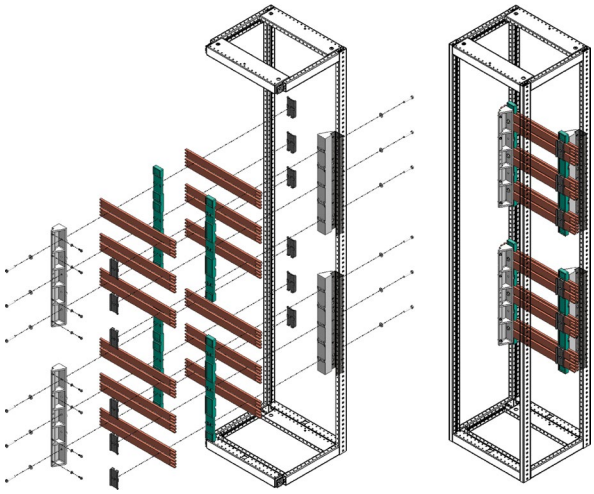
Main bus amperages include: 800A, 1200A, 1600A, 2000A, 2500A, 3200A, and 4000A with bus bracing available up to 100kA max at 600V. Tin-plated bussing is standard; optional silver-plating is available.

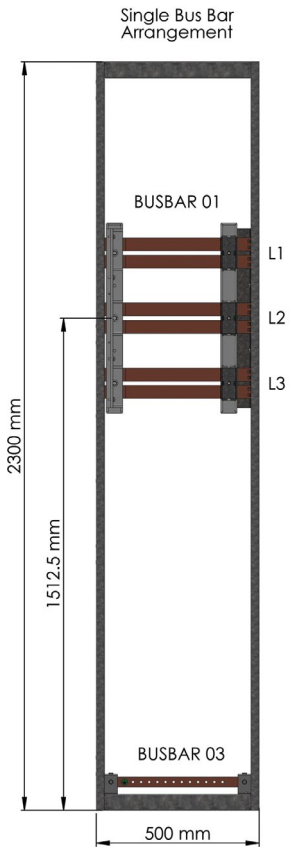


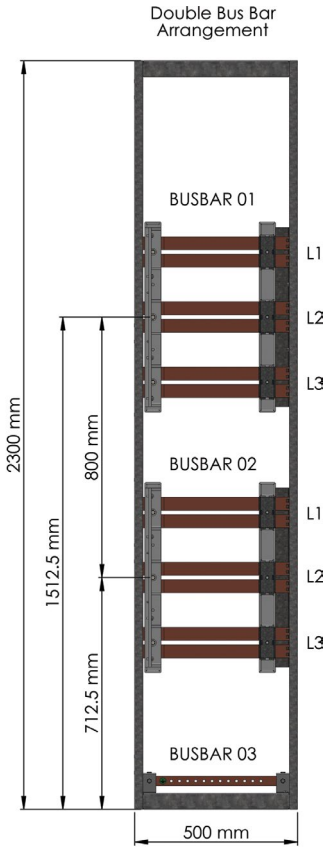
Technical Description

Depending on the amperage, a combination of either 2, 4, or 8 (two of the four buses) are provided per section.









Bus Bar Dimensions for Each Ampacity

Horizontal bus ratings	Number of buses	Bars/Phase	Dimensions bars	Maximum operating temperature	Enclosure requirements	Bus bracing
800	1	2	30mm x 5mm	65°C	Not Ventilated	65 KA
1200	1	2	40mm x 10mm	65°C	Not Ventilated	65 KA
1600	1	4	40mm x 10mm	65°C	Not Ventilated	65 KA
2000	1	4	40mm x 10mm	65°C	Ventilated	65 KA
2000	2	8	40mm x 10mm	65°C	Not Ventilated	100 KA
2500	2	8	40mm x 10mm	65°C	Not Ventilated	100 KA
3200	2	8	40mm x 10mm	65°C	Ventilated	100 KA
4000	2	8	40mm x 10mm	65°C	Ventilated	100 KA

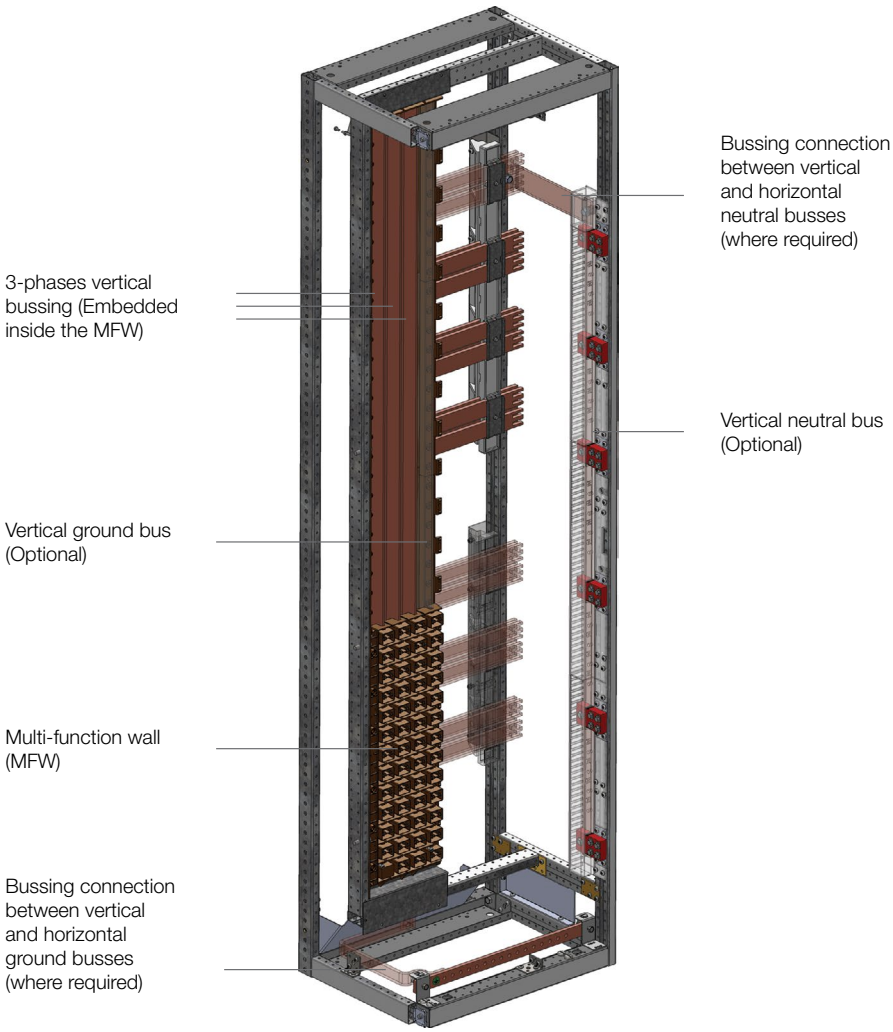
Technical Description

Vertical Bus Bar

The vertical distribution bus bars run A, B, and C phase from left to right. The bars are used for distribution of main power to plug-in and withdrawable units. The distribution bars are silver plated, L-shaped copper bars and are embedded into the multi-function wall (MFW) made of insulating, nonflammable and non-hygroscopic material.

The MFW provides IP20 protection IP20 (protection against ingress of solid foreign objects equal or greater than 12.5 mm) and provides isolation between the main horizontal bus bar compartment and the front accessible areas of the MCC. The vertical distribution bus bars are available in ratings of 800A or 1600A.

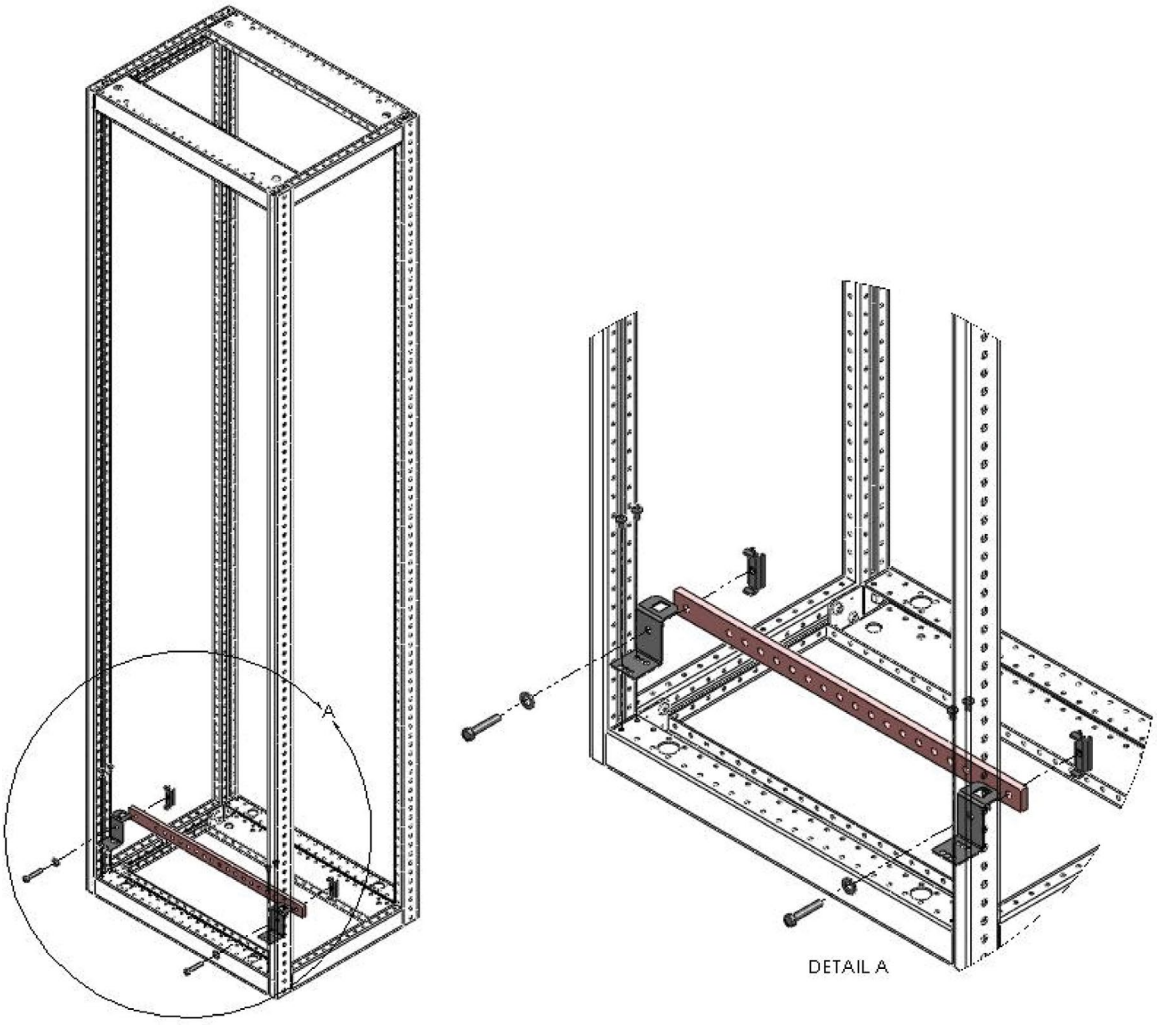
As an option, an 800A rated vertical neutral bus bar is available in the vertical wireway. This configuration requires the extended width wireway and includes a touchsafe protective cover.



Technical Description

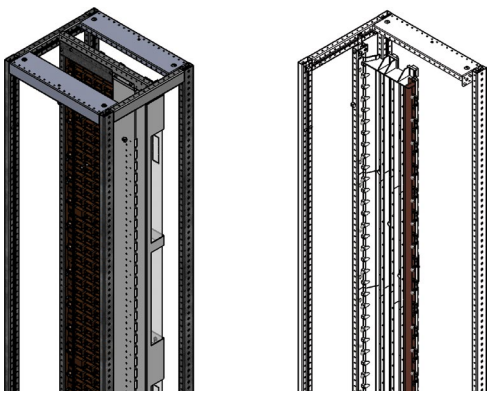
Horizontal Ground Bus

A bare copper ground bar is located in the bottom horizontal wireway of each vertical section. The dimension of the bar is 30mm x 10mm and is rated for 400A. The bar is pre-drilled with ½" holes with a minimum of 5 holes per vertical section.



Vertical Ground Bus

As an option, a vertical ground bus is available in the MFW to provide unit grounding via plug-in contact. The vertical ground bus is solidly connected to the horizontal ground bus. The grounding stabs will make before the phase stabs when inserting. Conversely, the phase stabs will break before the ground stab when withdrawing.



Mains and Feeders

Main and Feeder Circuit Breakers

Molded Case (TMAX) and Air (EMAX) circuit breakers are available in MNS-MCC up to 3000A for main and feeder applications. Breakers described as main breakers can also be used for feeder breaker applications.

All TMAX series main and feeder breakers are 80% rated. All EMAX series main and feeder breakers are 100% rated.

Feeder breakers up to 400A are available in either withdrawable or plug-in unit construction. Refer to the description of withdrawable and plug-in units for further information.

For information on the load terminals provided for main and feeder breaker units, please refer to the Components of Units section.

Mains Unit Selection
208-240V; 42kA

Nominal Current	System Type	Entry	Unit Size	Plug-In or Fixed	Incoming Device	Rating Plug
540	3W	TOP	24E	Plug-in, single (sotax)	T6N600BW	-
		BOTTOM	24E	Plug-in, single (sotax)	T6N600BW	-
	4W (n/a)	-	-	-	-	-
		-	-	-	-	-
640	3W	TOP	30E	Plug-in, double (sotax)	T6N800BW	-
		BOTTOM	30E	Plug-in, double (sotax)	T6N800BW	-
	4W (n/a)	-	-	-	-	-
		-	-	-	-	-
960	3W	TOP	85E	Fixed 500mm	T7S1200BW	-
		BOTTOM	85E	Fixed 500mm	T7S1200BW	-
	4W	TOP	85E	Fixed 600mm	T7S1200BW	-
		BOTTOM	85E	Fixed 600mm	T7S1200BW	-
1200	3W	TOP	85E	Fixed 600mm	E2B-A 16 (F)	1SDA058224R0001
		BOTTOM	85E	Fixed 600mm	E2B-A 16 (F)	1SDA058224R0001
	4W	TOP	85E	Fixed 800mm	E2B-A 16 (F)	1SDA058224R0001
		BOTTOM	85E	Fixed 800mm	E2B-A 16 (F)	1SDA058224R0001
1600	3W	TOP	85E	Fixed 600mm	E3V-A 16 (F)	-
		BOTTOM	85E	Fixed 600mm	E3V-A 16 (F)	-
	4W	TOP	85E	Fixed 800mm	E3V-A 16 (F)	-
		BOTTOM	85E	Fixed 800mm	E3V-A 16 (F)	-
2000	3W	TOP	85E	Fixed 600mm	E3N-A 20 (F)	-
		BOTTOM	85E	Fixed 600mm	E3N-A 20 (F)	-
	4W	TOP	85E	Fixed 800mm	E3N-A 20 (F)	-
		BOTTOM	85E	Fixed 800mm	E3N-A 20 (F)	-
2500	3W	TOP	85E	Fixed 800mm	E4S-A 32 (F)	1SDA058228R0001
		BOTTOM	85E	Fixed 800mm	E4S-A 32 (F)	1SDA058228R0001
	4W	TOP	85E	Fixed 1000mm	E4S-A 32 (F)	1SDA058228R0001
		BOTTOM	85E	Fixed 1000mm	E4S-A 32 (F)	1SDA058228R0001
3000	3W	TOP	85E	Fixed 1000mm	E6H-A 40 (F)	1SDA058229R0001
		BOTTOM	85E	Fixed 1000mm	E6H-A 40 (F)	1SDA058229R0001
	4W	TOP	85E	Fixed 1200mm	E6H-A 40 (F)	1SDA058229R0001
		BOTTOM	85E	Fixed 1200mm	E6H-A 40 (F)	1SDA058229R0001

Mains and Feeders

Mains Unit Selection
208-240V; 65kA

Nominal Current	System Type	Entry	Unit Size	Plug-In or Fixed	Incoming Device	Rating Plug
540	3W	TOP	24E	Plug-in, single (sotax)	T6N600BW	-
		BOTTOM	24E	Plug-in, single (sotax)	T6N600BW	-
	4W (n/a)	-	-	-	-	-
		-	-	-	-	-
640	3W	TOP	30E	Plug-in, double (sotax)	T6N800BW	-
		BOTTOM	30E	Plug-in, double (sotax)	T6N800BW	-
	4W (n/a)	-	-	-	-	-
		-	-	-	-	-
960	3W	TOP	85E	Fixed 500mm	T7S1200BW	-
		BOTTOM	85E	Fixed 500mm	T7S1200BW	-
	4W	TOP	85E	Fixed 600mm	T7S1200BW	-
		BOTTOM	85E	Fixed 600mm	T7S1200BW	-
1200	3W	TOP	85E	Fixed 600mm	E2N-A 16 (F)	1SDA058224R0001
		BOTTOM	85E	Fixed 600mm	E2N-A 16 (F)	1SDA058224R0001
	4W	TOP	85E	Fixed 800mm	E2N-A 16 (F)	1SDA058224R0001
		BOTTOM	85E	Fixed 800mm	E2N-A 16 (F)	1SDA058224R0001
1600	3W	TOP	85E	Fixed 600mm	E3V-A 16 (F)	-
		BOTTOM	85E	Fixed 600mm	E3V-A 16 (F)	-
	4W	TOP	85E	Fixed 800mm	E3V-A 16 (F)	-
		BOTTOM	85E	Fixed 800mm	E3V-A 16 (F)	-
2000	3W	TOP	85E	Fixed 600mm	E3N-A 20 (F)	-
		BOTTOM	85E	Fixed 600mm	E3N-A 20 (F)	-
	4W	TOP	85E	Fixed 800mm	E3N-A 20 (F)	-
		BOTTOM	85E	Fixed 800mm	E3N-A 20 (F)	-
2500	3W	TOP	85E	Fixed 800mm	E4S-A 32 (F)	1SDA058228R0001
		BOTTOM	85E	Fixed 800mm	E4S-A 32 (F)	1SDA058228R0001
	4W	TOP	85E	Fixed 1000mm	E4S-A 32 (F)	1SDA058228R0001
		BOTTOM	85E	Fixed 1000mm	E4S-A 32 (F)	1SDA058228R0001
3000	3W	TOP	85E	Fixed 1000mm	E6H-A 40 (F)	1SDA058229R0001
		BOTTOM	85E	Fixed 1000mm	E6H-A 40 (F)	1SDA058229R0001
	4W	TOP	85E	Fixed 1200mm	E6H-A 40 (F)	1SDA058229R0001
		BOTTOM	85E	Fixed 1200mm	E6H-A 40 (F)	1SDA058229R0001

Mains and Feeders

Mains Unit Selection
208-240V; 100kA

Nominal Current	System Type	Entry	Unit Size	Plug-In or Fixed	Incoming Device	Rating Plug
540	3W	TOP	24E	Plug-in, single (sotax)	T6S600BW	-
		BOTTOM	24E	Plug-in, single (sotax)	T6S600BW	-
	4W (n/a)	-	-	-	-	-
		-	-	-	-	-
640	3W	TOP	30E	Plug-in, double (sotax)	T6S800BW	-
		BOTTOM	30E	Plug-in, double (sotax)	T6S800BW	-
	4W (n/a)	-	-	-	-	-
		-	-	-	-	-
1600	3W	TOP	85E	Fixed 600mm	E3V-A 16 (F)	-
		BOTTOM	85E	Fixed 600mm	E3V-A 16 (F)	-
	4W	TOP	85E	Fixed 800mm	E3V-A 16 (F)	-
		BOTTOM	85E	Fixed 800mm	E3V-A 16 (F)	-
2000	3W	TOP	85E	Fixed 600mm	E3V-A 20 (F)	-
		BOTTOM	85E	Fixed 600mm	E3V-A 20 (F)	-
	4W	TOP	85E	Fixed 800mm	E3V-A 20 (F)	-
		BOTTOM	85E	Fixed 800mm	E3V-A 20 (F)	-
2500	3W	TOP	85E	Fixed 800mm	E4V-A 32 (F)	1SDA058228R0001
		BOTTOM	85E	Fixed 800mm	E4V-A 32 (F)	1SDA058228R0001
	4W	TOP	85E	Fixed 1000mm	E4V-A 32 (F)	1SDA058228R0001
		BOTTOM	85E	Fixed 1000mm	E4V-A 32 (F)	1SDA058228R0001
3000	3W	TOP	85E	Fixed 1000mm	E6V-A 40 (F)	1SDA058229R0001
		BOTTOM	85E	Fixed 1000mm	E6V-A 40 (F)	1SDA058229R0001
	4W	TOP	85E	Fixed 1200mm	E6V-A 40 (F)	1SDA058229R0001
		BOTTOM	85E	Fixed 1200mm	E6V-A 40 (F)	1SDA058229R0001

Mains and Feeders

Mains Unit Selection
480V; 42kA

Nominal Current	System Type	Entry	Unit Size	Plug-In or Fixed	Incoming Device	Rating Plug
540	3W	TOP	24E	Plug-in, single (sotax)	T6S600BW	-
		BOTTOM	24E	Plug-in, single (sotax)	T6S600BW	-
	4W (n/a)	-	-	-	-	-
		-	-	-	-	-
640	3W	TOP	30E	Plug-in, double (sotax)	T6S800BW	-
		BOTTOM	30E	Plug-in, double (sotax)	T6S800BW	-
	4W	-	-	-	-	-
		-	-	-	-	-
960	3W	TOP	85E	Fixed 500mm	T7S1200BW	-
		BOTTOM	85E	Fixed 500mm	T7S1200BW	-
	4W	TOP	85E	Fixed 600mm	T7S1200BW	-
		BOTTOM	85E	Fixed 600mm	T7S1200BW	-
1200	3W	TOP	85E	Fixed 600mm	E2B-A 16 (F)	1SDA058224R0001
		BOTTOM	85E	Fixed 600mm	E2B-A 16 (F)	1SDA058224R0001
	4W	TOP	85E	Fixed 800mm	E2B-A 16 (F)	1SDA058224R0001
		BOTTOM	85E	Fixed 800mm	E2B-A 16 (F)	1SDA058224R0001
1600	3W	TOP	85E	Fixed 600mm	E3V-A 16 (F)	-
		BOTTOM	85E	Fixed 600mm	E3V-A 16 (F)	-
	4W	TOP	85E	Fixed 800mm	E3V-A 16 (F)	-
		BOTTOM	85E	Fixed 800mm	E3V-A 16 (F)	-
2000	3W	TOP	85E	Fixed 600mm	E3N-A 20 (F)	-
		BOTTOM	85E	Fixed 600mm	E3N-A 20 (F)	-
	4W	TOP	85E	Fixed 800mm	E3N-A 20 (F)	-
		BOTTOM	85E	Fixed 800mm	E3N-A 20 (F)	-
2500	3W	TOP	85E	Fixed 800mm	E4S-A 32 (F)	1SDA058228R0001
		BOTTOM	85E	Fixed 800mm	E4S-A 32 (F)	1SDA058228R0001
	4W	TOP	85E	Fixed 1000mm	E4S-A 32 (F)	1SDA058228R0001
		BOTTOM	85E	Fixed 1000mm	E4S-A 32 (F)	1SDA058228R0001
3000	3W	TOP	85E	Fixed 1000mm	E6H-A 40 (F)	1SDA058229R0001
		BOTTOM	85E	Fixed 1000mm	E6H-A 40 (F)	1SDA058229R0001
	4W	TOP	85E	Fixed 1200mm	E6H-A 40 (F)	1SDA058229R0001
		BOTTOM	85E	Fixed 1200mm	E6H-A 40 (F)	1SDA058229R0001

Mains and Feeders

Mains Unit Selection
480V; 65kA

Nominal Current	System Type	Entry	Unit Size	Plug-In or Fixed	Incoming Device	Rating Plug
540	3W	TOP	24E	Plug-in, single (sotax)	T6H600BW	-
		BOTTOM	24E	Plug-in, single (sotax)	T6H600BW	-
	4W (n/a)	-	-	-	-	-
		-	-	-	-	-
640	3W	TOP	30E	Plug-in, double (sotax)	T6H800BW	-
		BOTTOM	30E	Plug-in, double (sotax)	T6H800BW	-
	4W	-	-	-	-	-
		-	-	-	-	-
960	3W	TOP	85E	Fixed 500mm	T7H1200BW	-
		BOTTOM	85E	Fixed 500mm	T7H1200BW	-
	4W	TOP	85E	Fixed 600mm	T7H1200BW	-
		BOTTOM	85E	Fixed 600mm	T7H1200BW	-
1200	3W	TOP	85E	Fixed 600mm	E2S-A 16 (F)	1SDA058224R0001
		BOTTOM	85E	Fixed 600mm	E2S-A 16 (F)	1SDA058224R0001
	4W	TOP	85E	Fixed 800mm	E2S-A 16 (F)	1SDA058224R0001
		BOTTOM	85E	Fixed 800mm	E2S-A 16 (F)	1SDA058224R0001
1600	3W	TOP	85E	Fixed 600mm	E3V-A 16 (F)	-
		BOTTOM	85E	Fixed 600mm	E3V-A 16 (F)	-
	4W	TOP	85E	Fixed 800mm	E3V-A 16 (F)	-
		BOTTOM	85E	Fixed 800mm	E3V-A 16 (F)	-
2000	3W	TOP	85E	Fixed 600mm	E3S-A 20 (F)	-
		BOTTOM	85E	Fixed 600mm	E3S-A 20 (F)	-
	4W	TOP	85E	Fixed 800mm	E3S-A 20 (F)	-
		BOTTOM	85E	Fixed 800mm	E3S-A 20 (F)	-
2500	3W	TOP	85E	Fixed 800mm	E4S-A 32 (F)	1SDA058228R0001
		BOTTOM	85E	Fixed 800mm	E4S-A 32 (F)	1SDA058228R0001
	4W	TOP	85E	Fixed 1000mm	E4S-A 32 (F)	1SDA058228R0001
		BOTTOM	85E	Fixed 1000mm	E4S-A 32 (F)	1SDA058228R0001
3000	3W	TOP	85E	Fixed 1000mm	E6H-A 40 (F)	1SDA058229R0001
		BOTTOM	85E	Fixed 1000mm	E6H-A 40 (F)	1SDA058229R0001
	4W	TOP	85E	Fixed 1200mm	E6H-A 40 (F)	1SDA058229R0001
		BOTTOM	85E	Fixed 1200mm	E6H-A 40 (F)	1SDA058229R0001

Mains and Feeders

Mains Unit Selection
480V; 100kA

Nominal Current	System Type	Entry	Unit Size	Plug-In or Fixed	Incoming Device	Rating Plug
540	3W	TOP	24E	Plug-in, single (sotax)	T6L600BW	-
		BOTTOM	24E	Plug-in, single (sotax)	T6L600BW	-
	4W (n/a)	-	-	-	-	-
		-	-	-	-	-
640	3W	TOP	30E	Plug-in, double (sotax)	T6L800BW	-
		BOTTOM	30E	Plug-in, double (sotax)	T6L800BW	-
	4W (n/a)	-	-	-	-	-
		-	-	-	-	-
1600	3W	TOP	85E	Fixed 600mm	E3V-A 16 (F)	-
		BOTTOM	85E	Fixed 600mm	E3V-A 16 (F)	-
	4W	TOP	85E	Fixed 800mm	E3V-A 16 (F)	-
		BOTTOM	85E	Fixed 800mm	E3V-A 16 (F)	-
2000	3W	TOP	85E	Fixed 600mm	E3V-A 20 (F)	-
		BOTTOM	85E	Fixed 600mm	E3V-A 20 (F)	-
	4W	TOP	85E	Fixed 800mm	E3V-A 20 (F)	-
		BOTTOM	85E	Fixed 800mm	E3V-A 20 (F)	-
2500	3W	TOP	85E	Fixed 800mm	E4V-A 32 (F)	1SDA058228R0001
		BOTTOM	85E	Fixed 800mm	E4V-A 32 (F)	1SDA058228R0001
	4W	TOP	85E	Fixed 1000mm	E4V-A 32 (F)	1SDA058228R0001
		BOTTOM	85E	Fixed 1000mm	E4V-A 32 (F)	1SDA058228R0001
3000	3W	TOP	85E	Fixed 1000mm	E6V-A 40 (F)	1SDA058229R0001
		BOTTOM	85E	Fixed 1000mm	E6V-A 40 (F)	1SDA058229R0001
	4W	TOP	85E	Fixed 1200mm	E6V-A 40 (F)	1SDA058229R0001
		BOTTOM	85E	Fixed 1200mm	E6V-A 40 (F)	1SDA058229R0001

Mains and Feeders

Mains Unit Selection
600V; 42kA

Nominal Current	System Type	Entry	Unit Size	Plug-In or Fixed	Incoming Device	Rating Plug
540	3W	TOP	24E	Plug-in, single (sotax)	T6L600BW	-
		BOTTOM	24E	Plug-in, single (sotax)	T6L600BW	-
	4W (n/a)	-	-	-	-	-
		-	-	-	-	-
640	3W	TOP	30E	Plug-in, double (sotax)	T6L800BW	-
		BOTTOM	30E	Plug-in, double (sotax)	T6L800BW	-
	4W (n/a)	-	-	-	-	-
		-	-	-	-	-
960	3W	TOP	85E	Fixed 500mm	T7H1200BW	-
		BOTTOM	85E	Fixed 500mm	T7H1200BW	-
	4W	TOP	85E	Fixed 600mm	T7H1200BW	-
		BOTTOM	85E	Fixed 600mm	T7H1200BW	-
1200	3W	TOP	85E	Fixed 600mm	E2B-A 16 (F)	1SDA058224R0001
		BOTTOM	85E	Fixed 600mm	E2B-A 16 (F)	1SDA058224R0001
	4W	TOP	85E	Fixed 800mm	E2B-A 16 (F)	1SDA058224R0001
		BOTTOM	85E	Fixed 800mm	E2B-A 16 (F)	1SDA058224R0001
2000	3W	TOP	85E	Fixed 600mm	E3N-A 20 (F)	-
		BOTTOM	85E	Fixed 600mm	E3N-A 20 (F)	-
	4W	TOP	85E	Fixed 800mm	E3N-A 20 (F)	-
		BOTTOM	85E	Fixed 800mm	E3N-A 20 (F)	-
2500	3W	TOP	85E	Fixed 1000mm	E6H-A 40 (F)	1SDA058228R0001
		BOTTOM	85E	Fixed 1000mm	E6H-A 40 (F)	1SDA058228R0001
	4W	TOP	85E	Fixed 1200mm	E6H-A 40 (F)	1SDA058228R0001
		BOTTOM	85E	Fixed 1200mm	E6H-A 40 (F)	1SDA058228R0001
3000	3W	TOP	85E	Fixed 1000mm	E6H-A 40 (F)	1SDA058229R0001
		BOTTOM	85E	Fixed 1000mm	E6H-A 40 (F)	1SDA058229R0001
	4W	TOP	85E	Fixed 1200mm	E6H-A 40 (F)	1SDA058229R0001
		BOTTOM	85E	Fixed 1200mm	E6H-A 40 (F)	1SDA058229R0001

Mains and Feeders

Mains Unit Selection
600V; 65kA

Nominal Current	System Type	Entry	Unit Size	Plug-In or Fixed	Incoming Device	Rating Plug
960	3W	TOP	85E	Fixed 500mm	T7L1200BW	-
		BOTTOM	85E	Fixed 500mm	T7L1200BW	-
	4W	TOP	85E	Fixed 600mm	T7L1200BW	-
		BOTTOM	85E	Fixed 600mm	T7L1200BW	-
1200	3W	TOP	85E	Fixed 600mm	E2S-A 16 (F)	1SDA058224R0001
		BOTTOM	85E	Fixed 600mm	E2S-A 16 (F)	1SDA058224R0001
	4W	TOP	85E	Fixed 800mm	E2S-A 16 (F)	1SDA058224R0001
		BOTTOM	85E	Fixed 800mm	E2S-A 16 (F)	1SDA058224R0001
2000	3W	TOP	85E	Fixed 600mm	E3S-A 20 (F)	-
		BOTTOM	85E	Fixed 600mm	E3S-A 20 (F)	-
	4W	TOP	85E	Fixed 800mm	E3S-A 20 (F)	-
		BOTTOM	85E	Fixed 800mm	E3S-A 20 (F)	-
2500	3W	TOP	85E	Fixed 1000mm	E6H-A 40 (F)	1SDA058228R0001
		BOTTOM	85E	Fixed 1000mm	E6H-A 40 (F)	1SDA058228R0001
	4W	TOP	85E	Fixed 1200mm	E6H-A 40 (F)	1SDA058228R0001
		BOTTOM	85E	Fixed 1200mm	E6H-A 40 (F)	1SDA058228R0001
3000	3W	TOP	85E	Fixed 1000mm	E6H-A 40 (F)	1SDA058229R0001
		BOTTOM	85E	Fixed 1000mm	E6H-A 40 (F)	1SDA058229R0001
	4W	TOP	85E	Fixed 1200mm	E6H-A 40 (F)	1SDA058229R0001
		BOTTOM	85E	Fixed 1200mm	E6H-A 40 (F)	1SDA058229R0001

600V; 100kA

Nominal Current	System Type	Entry	Unit Size	Plug-In or Fixed	Incoming Device	Rating Plug
2500	3W	TOP	85E	Fixed 1000mm	E6V-A 40 (F)	1SDA058228R0001
		BOTTOM	85E	Fixed 1000mm	E6V-A 40 (F)	1SDA058228R0001
	4W	TOP	85E	Fixed 1200mm	E6V-A 40 (F)	1SDA058228R0001
		BOTTOM	85E	Fixed 1200mm	E6V-A 40 (F)	1SDA058228R0001
3000	3W	TOP	85E	Fixed 1000mm	E6V-A 40 (F)	1SDA058229R0001
		BOTTOM	85E	Fixed 1000mm	E6V-A 40 (F)	1SDA058229R0001
	4W	TOP	85E	Fixed 1200mm	E6V-A 40 (F)	1SDA058229R0001
		BOTTOM	85E	Fixed 1200mm	E6V-A 40 (F)	1SDA058229R0001

Mains and Feeders

Feeder Unit Selection
208-480V; 42-65kA

Selection Current	Nominal Current (derating 80%)	Unit Size	Disconnect	Power wire size	Configuration
15	12	6E	T2H015TW, T2H025BW	2 awg	Plug-In
20	16	6E	T2H020TW, T2H025BW	2 awg	Plug-In
		8E, 10E	T4H020TW, T4H100BW, T4H100CW, T4H100EW	1/0 awg	Plug-In
25	20	6E	T2H025TW, T2H025BW	2 awg	Plug-In
30	24	6E	T2H030TW, T2H060BW	2 awg	Plug-In
		8E, 10E	T4H030TW, T4H100BW, T4H100CW, T4H100EW	1/0 awg	Plug-In
35	28	6E	T2H035TW, T2H060BW	2 awg	Plug-In
40	32	6E	T2H040TW, T2H060BW	2 awg	Plug-In
		8E, 10E	T4H040TW, T4H100BW, T4H100CW, T4H100EW	1/0 awg	Plug-In
50	40	6E	T2H050TW, T2H060BW	2 awg	Plug-In
		8E, 10E	T4H050TW, T4H100BW, T4H100CW, T4H100EW	1/0 awg	Plug-In
60	48	6E	T2H060TW, T2H060BW	2 awg	Plug-In
70	56	6E	T2H070TW, T2H100BW	2 awg	Plug-In
80	64	6E	T2H080TW, T2H100BW	1/0 awg	Plug-In
		8E, 10E	T4H080TW, T4H100BW, T4H100CW, T4H100EW		Plug-In
90	72	6E	T2H090TW, T2H100BW	1/0 awg	Plug-In
100	80	6E	T2H100TW, T2H100BW	1/0 awg	Plug-In
		8E, 10E	T4H100TW, T4H100BW, T4H100CW, T4H100EW		Plug-In
125	100	8E, 10E	T4H125TW, T4H150BW, T4H150CW, T4H150EW	1/0 awg	Plug-In
150	120	8E, 10E	T4H150TW, T4H150BW, T4H150CW, T4H150EW	4x20x1 mm	Plug-In
200	160	8E, 10E	T4H200TW, T4H250BW, T4H250CW, T4H250EW	4x20x1 mm	Plug-In
250	200	8E, 10E	T4H250TW, T4H250BW, T4H250CW, T4H250EW	5x20x1 mm	Plug-In
300	240	10E	T5H300TW, T5H300BW, T5H300CW, T5H300EW	3x32x1 mm	Plug-In
400	320	10E	T5H400TW, T5H400BW, T5H400CW, T5H400EW	5x32x1 mm	Plug-In
15	15	6E	T2HQ015TW, T2HQ025BW	2 awg	Plug-In
20	20	6E	T2HQ020TW, T2HQ025BW	2 awg	Plug-In
25	25	6E	T2HQ025TW, T2HQ025BW	2 awg	Plug-In
30	30	6E	T2Q030TW, T2Q060BW	2 awg	Plug-In
35	35	6E	T2Q035TW, T2Q060BW	2 awg	Plug-In
40	40	6E	T2Q040TW, T2Q060BW	2 awg	Plug-In
50	50	6E	T2Q050TW, T2Q060BW	2 awg	Plug-In
60	60	6E	T2Q060TW, T2Q060BW	2 awg	Plug-In
70	70	6E	T2Q070TW, T2Q100BW	2 awg	Plug-In
80	80	6E	T2Q080TW, T2Q100BW	1/0 awg	Plug-In
90	90	6E	T2Q090TW, T2Q100BW	1/0 awg	Plug-In
100	100	6E	T2Q100TW, T2Q100BW	1/0 awg	Plug-In

Note: Is possible to select extension up to 48E

Mains and Feeders

Feeder Unit Selection
208-480V; 100kA

Selection Current	Nominal Current (derating 80%)	Unit Size	Disconnect	Power wire size	Configuration (withdrawable/fixed)
20	16	8E / 10E	T4L020TW, T4L100BW, T4L100CW, T4L100EW	1/0 awg	Plug-In
30	24	8E / 10E	T4L030TW, T4L100BW, T4L100CW, T4L100EW	1/0 awg	Plug-In
40	32	8E / 10E	T4L040TW, T4L100BW, T4L100CW, T4L100EW	1/0 awg	Plug-In
50	40	8E / 10E	T4L050TW, T4L100BW, T4L100CW, T4L100EW	1/0 awg	Plug-In
80	64	8E / 10E	T4L080TW, T4L100BW, T4L100CW, T4L100EW	1/0 awg	Plug-In
100	80	8E / 10E	T4L100TW, T4L100BW, T4L100CW, T4L100EW	1/0 awg	Plug-In
125	100	8E / 10E	T4L125TW, T4L150BW, T4L150CW, T4L150EW	1/0 awg	Plug-In
150	120	8E / 10E	T4L150TW, T4L150BW, T4L150CW, T4L150EW	4x20x1 mm	Plug-In
200	160	8E / 10E	T4L200TW, T4L250BW, T4L250CW, T4L250EW	4x20x1 mm	Plug-In
250	200	8E / 10E	T4L250TW, T4L250BW, T4L250CW, T4L250EW	5x20x1 mm	Plug-In
300	240	10E	T5L300TW, T5L300BW, T5L300CW, T5L300EW	3x32x1 mm	Plug-In
400	320	10E	T5L400TW, T5L400BW, T5L400CW, T5L400EW	5x32x1 mm	Plug-In

Note: Is possible to select extension up to 48E

Feeder Unit Selection
600V; 25kA

Selection Current	Nominal Current (derating 80%)	Unit Size	Disconnect	Power wire size	Configuration (withdrawable/fixed)
20	16	8E, 10E	T4S020TW, T4S100BW, T4S100CW, T4S100EW	1/0 awg	Plug-In
30	24	8E, 10E	T4S030TW, T4S100BW, T4S100CW, T4S100EW	1/0 awg	Plug-In
40	32	8E, 10E	T4S040TW, T4S100BW, T4S100CW, T4S100EW	1/0 awg	Plug-In
50	40	8E, 10E	T4S050TW, T4S100BW, T4S100CW, T4S100EW	1/0 awg	Plug-In
80	64	8E, 10E	T4S080TW, T4S100BW, T4S100CW, T4S100EW	1/0 awg	Plug-In
100	80	8E, 10E	T4S100TW, T4S100BW, T4S100CW, T4S100EW	1/0 awg	Plug-In
125	100	8E, 10E	T4S125TW, T4S150BW, T4S150CW, T4S150EW	1/0 awg	Plug-In
150	120	8E, 10E	T4S150TW, T4S150BW, T4S150CW, T4S150EW	4x20x1 mm	Plug-In
200	160	8E, 10E	T4S200TW, T4S250BW, T4S250CW, T4S250EW	4x20x1 mm	Plug-In
250	200	8E, 10E	T4S250TW, T4S250BW, T4S250CW, T4S250EW	5x20x1 mm	Plug-In
300	240	10E	T5S300TW, T5S300BW, T5S300CW, T5S300EW	3x32x1 mm	Plug-In
400	320	10E	T5S400TW, T5S400BW, T5S400CW, T5S400EW	5x32x1 mm	Plug-In

Note: Is possible to select extension up to 48E

Mains and Feeders

Feeder Unit Selection
600V; 42-65kA

Selection Current	Nominal Current (derating 80%)	Unit Size	Disconnect	Power wire size	Configuration (withdrawable/fixed)
20	16	8E, 10E	T4L020TW, T4L100BW, T4L100CW, T4L100EW	1/0 awg	Plug-In
30	24	8E, 10E	T4L030TW, T4L100BW, T4L100CW, T4L100EW	1/0 awg	Plug-In
40	32	8E, 10E	T4L040TW, T4L100BW, T4L100CW, T4L100EW	1/0 awg	Plug-In
50	40	8E, 10E	T4L050TW, T4L100BW, T4L100CW, T4L100EW	1/0 awg	Plug-In
80	64	8E, 10E	T4L080TW, T4L100BW, T4L100CW, T4L100EW	1/0 awg	Plug-In
100	80	8E, 10E	T4L100TW, T4L100BW, T4L100CW, T4L100EW	1/0 awg	Plug-In
125	100	8E, 10E	T4L125TW, T4L150BW, T4L150CW, T4L150EW	1/0 awg	Plug-In
150	120	8E, 10E	T4L150TW, T4L150BW, T4L150CW, T4L150EW	4x20x1 mm	Plug-In
200	160	8E, 10E	T4L200TW, T4L250BW, T4L250CW, T4L250EW	4x20x1 mm	Plug-In
250	200	8E, 10E	T4L250TW, T4L250BW, T4L250CW, T4L250EW	5x20x1 mm	Plug-In
300	240	10E	T5L300TW, T5L300BW, T5L300CW, T5L300EW	3x32x1 mm	Plug-In
400	320	10E	T5L400TW, T5L400BW, T5L400CW, T5L400EW	5x32x1 mm	Plug-In

Note: Is possible to select extension up to 48E

Feeder Unit Selection
208-240V; 100kA

Selection Current	Nominal Current (derating 80%)	Unit Size	Disconnect	Power wire size	Configuration (withdrawable/fixed)
15	12	12E	T2H015TW	8 awg	Withdrawable-CCU300
		6E			Withdrawable-CCU40
20	16	12E	T2H020TW	8 awg	Withdrawable-CCU300
		6E			Withdrawable-CCU40
25	20	12E	T2H025TW	8 awg	Withdrawable-CCU300
		6E			Withdrawable-CCU40
30	24	12E	T2H030TW	8 awg	Withdrawable-CCU300
		6E			Withdrawable-CCU40
35	28	12E	T2H035TW	8 awg	Withdrawable-CCU300
		6E			Withdrawable-CCU40
40	32	12E	T2H040TW	2 awg	Withdrawable-CCU300
		6E		8 awg	Withdrawable-CCU40
50	40	12E	T2H050TW	2 awg	Withdrawable-CCU300
		6E		8 awg	Withdrawable-CCU40
60	48	12E	T2H060TW	2 awg	Withdrawable-CCU300
70	56	12E	T2H070TW	2 awg	Withdrawable-CCU300
80	64	12E	T2H080TW	2 awg	Withdrawable-CCU300
90	72	12E	T2H090TW	2 awg	Withdrawable-CCU300
100	80	12E	T2H100TW	2 awg	Withdrawable-CCU300
125	100	12E	T4S125TW	2 awg	Withdrawable-CCU300
150	120	24E	T4S150TW	2/0 awg	Withdrawable-CCU300
200	160	24E	T4S200TW	2/0 awg	Withdrawable-CCU300
250	200	24E	T4S250TW	2/0 awg (2)	Withdrawable-CCU300
300	240	24E	T5S300TW	2/0 awg (2)	Withdrawable-CCU300
400	320	24E	T5S400TW	2/0 awg (2)	Withdrawable-CCU300

Mains and Feeders

Feeder Unit Selection
480V; 42-65kA

Selection Current	Nominal Current (derating 80%)	Unit Size	Disconnect	Power wire size	Configuration (withdrawable/fixed)
15	12	12E	T2H015TW	8 awg	Withdrawable-CCU300
		6E			Withdrawable-CCU40
20	16	12E	T2H020TW	8 awg	Withdrawable-CCU300
		6E			Withdrawable-CCU40
25	20	12E	T2H025TW	8 awg	Withdrawable-CCU300
		6E			Withdrawable-CCU40
30	24	12E	T2H030TW	8 awg	Withdrawable-CCU300
		6E			Withdrawable-CCU40
35	28	12E	T2H035TW	8 awg	Withdrawable-CCU300
		6E			Withdrawable-CCU40
40	32	12E	T2H040TW	2 awg	Withdrawable-CCU300
		6E		8 awg	Withdrawable-CCU40
50	40	12E	T2H050TW	2 awg	Withdrawable-CCU300
		6E		8 awg	Withdrawable-CCU40
60	48	12E	T2H060TW	2 awg	Withdrawable-CCU300
70	56	12E	T2H070TW	2 awg	Withdrawable-CCU300
80	64	12E	T2H080TW	2 awg	Withdrawable-CCU300
90	72	12E	T2H090TW	2 awg	Withdrawable-CCU300
100	80	12E	T2H100TW	2 awg	Withdrawable-CCU300
125	100	12E	T4H125TW	2 awg	Withdrawable-CCU300
150	120	24E	T4H150TW	2/0 awg	Withdrawable-CCU300
200	160	24E	T4H200TW	2/0 awg	Withdrawable-CCU300
250	200	24E	T4H250TW	2/0 awg (2)	Withdrawable-CCU300
300	240	24E	T5H300TW	2/0 awg (2)	Withdrawable-CCU300
400	320	24E	T5H400TW	2/0 awg (2)	Withdrawable-CCU300

Mains and Feeders

Feeder Unit Selection
480V; 100kA

Selection Current	Nominal Current (derating 80%)	Unit Size	Disconnect	Power wire size	Configuration (withdrawable/fixed)
20	16	12E	T4L020TW	8 awg	Withdrawable-CCU300
30	24	12E	T4L030TW	8 awg	Withdrawable-CCU300
40	32	12E	T4L040TW	2 awg	Withdrawable-CCU300
50	40	12E	T4L050TW	2 awg	Withdrawable-CCU300
80	64	12E	T4L080TW	2 awg	Withdrawable-CCU300
100	80	12E	T4L100TW	2 awg	Withdrawable-CCU300
125	100	12E	T4L125TW	2 awg	Withdrawable-CCU300
150	120	24E	T4L150TW	2/0 awg	Withdrawable-CCU300
200	160	24E	T4L200TW	2/0 awg	Withdrawable-CCU300
250	200	24E	T4L250TW	2/0 awg (2)	Withdrawable-CCU300
300	240	24E	T5L300TW	2/0 awg (2)	Withdrawable-CCU300
400	320	24E	T5L400TW	2/0 awg (2)	Withdrawable-CCU300

600V; 25ka, 42kA, 65kA

Selection Current	Nominal Current (derating 80%)	Unit Size	Disconnect	Power wire size	Configuration (withdrawable/fixed)
20	16	12E	T4L020TW	8 awg	Withdrawable-CCU300
30	24	12E	T4L030TW	8 awg	Withdrawable-CCU300
40	32	12E	T4L040TW	2 awg	Withdrawable-CCU300
50	40	12E	T4L050TW	2 awg	Withdrawable-CCU300
80	64	12E	T4L080TW	2 awg	Withdrawable-CCU300
100	80	12E	T4L100TW	2 awg	Withdrawable-CCU300
125	100	12E	T4L125TW	2 awg	Withdrawable-CCU300
150	120	24E	T4L150TW	2/0 awg	Withdrawable-CCU300
200	160	24E	T4L200TW	2/0 awg	Withdrawable-CCU300
250	200	24E	T4L250TW	2/0 awg (2)	Withdrawable-CCU300
300	240	24E	T5L300TW	2/0 awg (2)	Withdrawable-CCU300
400	320	24E	T5L400TW	2/0 awg (2)	Withdrawable-CCU300

Main Lugs

Main Lug Only Units

Main Lug Only (MLO) units are available in a plug-in unit design for 800A and 1000A or a fixed mounted section for 1200-4000A. Refer to the selection tables for further detail.

Fixed Mount Main Lugs

Nominal Current	System Type	SCCR	Entry	Unit Size	Plug-In or Fixed
800-1200	3W	65	TOP	85E	Fixed 500mm
			BOTTOM	85E	Fixed 500mm
	4W		TOP	85E	Fixed 600mm
			BOTTOM	85E	Fixed 600mm
1600	3W	65	TOP	85E	Fixed 600mm
			BOTTOM	85E	Fixed 600mm
	4W		TOP	85E	Fixed 800mm
			BOTTOM	85E	Fixed 800mm
2000	3W	65	TOP	85E	Fixed 600mm
			BOTTOM	85E	Fixed 600mm
	4W		TOP	85E	Fixed 800mm
			BOTTOM	85E	Fixed 800mm
2000-2500	3W	100	TOP	85E	Fixed 600mm
			BOTTOM	85E	Fixed 600mm
	4W		TOP	85E	Fixed 800mm
			BOTTOM	85E	Fixed 800mm
3200-4000	3W	100	TOP	85E	Fixed 600mm
			BOTTOM	85E	Fixed 600mm
	4W		TOP	85E	Fixed 800mm
			BOTTOM	85E	Fixed 800mm

Plug-In Main Lugs

Nominal Current	System Type	SCCR	Entry	Unit Size	Plug-In or Fixed
1000	3W	65	TOP	24E	Plug-in, double (sotax)
			BOTTOM		Plug-in, double (sotax)

Motor Starters

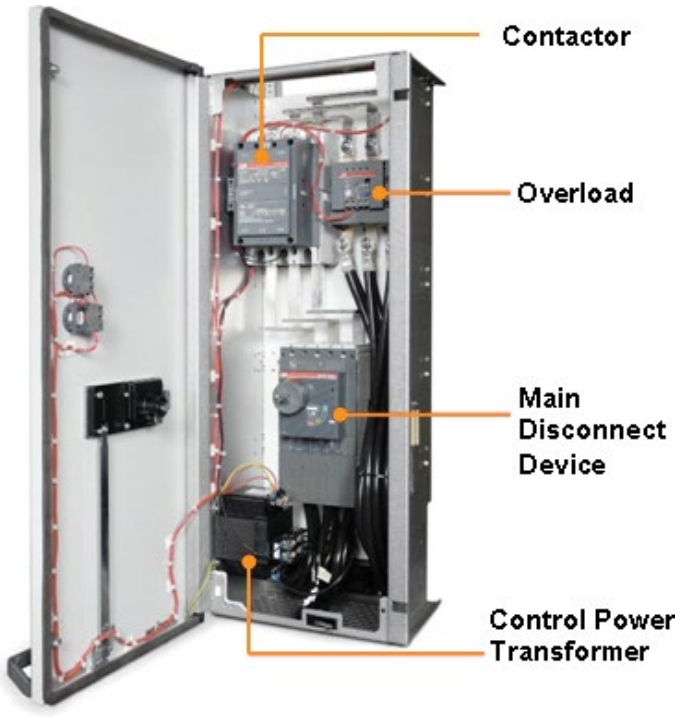
Combination Motor Starter Units

The MNS-MCC offers four types of combination starters: full voltage non-reversing (FVNR), full voltage reversing (FVR), two-speed one winding (2S1W), and two-speed two winding (2S2W). Depending on the load requirements, combination starters are available in withdrawable and fixed mounted units. Refer to the selection tables for additional detail.

Each combination starter is provided with a combination of the following:

– An ABB disconnecting means
– An ABB A-line or AF contactor
– An ABB thermal overload, electronic overload protection, or Universal Motor Controller (UMC)
– An ABB control power transformer for 120VAC power

For information on the components and load terminals provided for starter units, please refer to the Components of Units section.



Combination Motor Starter

Combination Starter Selection
208-240V; 42-65kA

NEMA Size	HP (Max)	Type	Size (Min)	FLA (Max)	Disconnect	Contactor	Overload Relay	CPT
00	0.5	FVNR	6E	2.4	T2S015TW	A9N00-30-10-84	E16DU6.3-10/TA25DU3.1	T4045SF1/T4050PSF1
		FVR	18E					T4050PSF1
		2S2W	n/a					n/a
		2S1W	n/a					n/a
	0.75	FVNR	6E	3.5	T2S015TW	A9N00-30-10-84	E16DU6.3-10/TA25DU4.0	T4045SF1/T4050PSF1
		FVR	18E					T4050PSF1
		2S2W	n/a					n/a
		2S1W	n/a					n/a
	1	FVNR	6E	4.6	T2S015TW	A9N00-30-10-84	E16DU6.3-10/TA25DU5.0/TA25DU6.5	T4045SF1/T4050PSF1
		FVR	18E					T4050PSF1
		2S2W	n/a					n/a
		2S1W	n/a					n/a
	1.5	FVNR	6E	6.6	T2S015TW	A9N00-30-10-84	E16DU18.9-10/TA25DU8.5	T4045SF1/T4050PSF1
		FVR	18E					T4050PSF1
		2S2W	n/a					n/a
		2S1W	n/a					n/a

Motor Starters

Combination Starter Selection
208-240V; 42-65kA

NEMA Size	HP (Max)	Type	Size (Min)	FLA (Max)	Disconnect	Contactor	Overload Relay	CPT
0	2	FVNR	6E	7.5	T2S025E5W	A16N0-30-10-84	E16DU18.9-10/TA25DU8.5	T4045SF1/T4050PSF1
		FVR	18E					T4050PSF1
		2S2W	18E					T4050PSF1
		2S1W	18E					T4050PSF1
	3	FVNR	6E	10.6	T2S025E5W	A16N0-30-10-84	E16DU18.9-10/TA25DU11/TA25DU14	T4045SF1/T4050PSF1
		FVR	18E				E16DU18.9-10/TA25DU14	T4050PSF1
		2S2W	18E				E16DU18.9-10/TA25DU14	T4050PSF1
		2S1W	18E				E16DU18.9-10/TA25DU14	T4050PSF1
1	5.0	FVNR	12E	16.8	T2S060E5W T2S060E5W	A26N1-30-10-84	E16DU18.9-10/TA25DU19	T4050PSF1
		FVR	18E					
		2S2W	18E					
		2S1W	18E					
	7.5	FVNR	12E	24.2	T2S025E5W	A26N1-30-10-84	E45DU30-10/E45DU45-10/ TA25DU25/TA25DU32	T4050PSF1
		FVR	18E					
		2S2W	18E					
		2S1W	18E					
2	10	FVNR	12E	30.8	T2S060E5W	A50N2-30-11-84	E80DU80-10/TA75DU32	T4075PSF1
		FVR	18E				E80DU80-10/TA75DU42/TA75DU32	
		2S2W	18E				E80DU80-10/TA75DU42/TA75DU32	
		2S1W	24E				E80DU80-10/TA75DU42/TA75DU32	
3	15	FVNR	18E	46.2	T2S100E5W	A75N3-30-11-84	E80DU80-10/TA75DU52	T4075PSF1
		FVR	18E					
		2S2W	24E					
		2S1W	24E					
	20	FVNR	18E	60	T2S100E5W	A75N3-30-11-84	E80DU80-10/TA75DU63/TA75DU80	T4075PSF1
		FVR	18E					
		2S2W	24E					
		2S1W	24E					
	25	FVNR	18E	75	T2S100E5W	A75N3-30-11-84	E80DU80-10/TA75DU80	T4075PSF1
		FVR	18E					
		2S2W	24E					
		2S1W	24E					
	30	FVNR	18E	80	T4N150E5W	A75N3-30-11-84	E140DU140-10/TA110DU90	T4075PSF1
		FVR	18E				E140DU140-10/TA110DU90	
		2S2W	24E				E80DU800-10/TA110DU90	
		2S1W	30E				E140DU140-10/TA110DU90	

Motor Starters

Combination Starter Selection
208-240V; 42-65kA

NEMA Size	HP (Max)	Type	Size (Min)	FLA (Max)	Disconnect	Contactor	Overload Relay	CPT
4	30	FVNR	24E	88	T4N150E5W	A145N4-30-11-84	E200DU200-10/TA200DU110	T4150PSF1
		FVR	36E					
		2S2W	42E					
		2S1W	FULL					
	40	FVNR	30E	115	T4N250E5W	A260N5-30-11-84	E320DU320-10/TA200DU110/ TA200DU135	T4250PSF1
		FVR	42E					T4150PSF1
		2S2W	48E					T4150PSF1
		2S1W	FULL					T4150PSF1
5	50	FVNR	36E	143	T5N300E5W	A260N5-30-11-84	E320DU320-10/TA450DU185	T4250PSF1
		FVR	48E					
		2S2W	FULL					
		2S1W	FULL					
	60	FVNR	36E	160	T5N300E5W	A260N5-30-11-84	E320DU320-10/TA450DU185	T4250PSF1
		FVR	48E					
		2S2W	FULL					
		2S1W	FULL					
	75	FVNR	42E	211	T5N400E5W	AF460N6-3011-70	E500DU500-10/TA450DU235	T4250PSF1
		FVR	FULL					
		2S2W	FULL					
		2S1W	FULL					
	100	FVNR	FULL	273	T6N600E5W	AF750N7-3011-70	E500DU500-10	T4250PSF1
		FVR	FULL					
		2S2W	FULL					
		2S1W	FULL					
6	125	FVNR	FULL	344	T6N600E5W	AF750N7-3011-70	E500DU500-10	T4250PSF1
		FVR	FULL					T4250PSF1
		2S2W	FULL					T4500PSF1
		2S1W	FULL					T4500PSF1
	150	FVNR	FULL	396	T6N800E5W	AF750N7-3011-70	E500DU500-10	T4250PSF1
		FVR	FULL					T4250PSF1
		2S2W	FULL					T4500PSF1
		2S1W	FULL					T4500PSF1
	200	FVNR	FULL	480	T6N800E5W	AF750N7-3011-70	E500DU500-10	T4250PSF1
		FVR	FULL					T4250PSF1
		2S2W	FULL					T4500PSF1
		2S1W	FULL					T4500PSF1

Motor Starters

Combination Starter Selection
208-240V; 100kA

NEMA Size	HP (Max)	Type	Size (Min)	FLA (Max)	Disconnect	Contactor	Overload Relay	CPT
00	0.5	FVNR	6E	2.4	T2H015TW	A9N00-30-10-84	E16DU6.3-10/TA25DU3.1	T4045SF1/T4050PSF1
		FVR	18E					T4050PSF1
		2S2W	n/a					n/a
		2S1W	n/a					n/a
	0.75	FVNR	6E	3.5	T2H015TW	A9N00-30-10-84	E16DU6.3-10/TA25DU4.0	T4045SF1/T4050PSF1
		FVR	18E					T4050PSF1
		2S2W	n/a					n/a
		2S1W	n/a					n/a
	1	FVNR	6E	4.6	T2H015TW	A9N00-30-10-84	E16DU6.3-10/TA25DU5.0/TA25DU6.5	T4045SF1/T4050PSF1
		FVR	18E					T4050PSF1
		2S2W	n/a					n/a
		2S1W	n/a					n/a
	1.5	FVNR	6E	6.6	T2H015TW	A9N00-30-10-84	E16DU18.9-10/TA25DU8.5	T4045SF1/T4050PSF1
		FVR	18E					T4050PSF1
		2S2W	n/a					n/a
		2S1W	n/a					n/a
0	2	FVNR	6E	7.5	T2H025E5W	A16N0-30-10-84	E16DU18.9-10/TA25DU8.5	T4045SF1/T4050PSF1
		FVR	18E					T4050PSF1
		2S2W	18E					T4050PSF1
		2S1W	18E					T4050PSF1
	3	FVNR	6E	10.6	T2H025E5W	A16N0-30-10-84	E16DU18.9-10/TA25DU11/TA25DU14	T4045SF1/T4050PSF1
		FVR	18E					T4050PSF1
		2S2W	18E					T4050PSF1
		2S1W	18E					T4050PSF1
1	5.0	FVNR	12E	16.8	T2H025E5W/ T2H060E5W	A26N1-30-10-84	E16DU18.9-10/TA25DU19	T4050PSF1
		FVR	18E					
		2S2W	18E					
		2S1W	18E					
	7.5	FVNR	12E	24.2	T2H060E5W	A26N1-30-10-84	E45DU30-10/E45DU45-10/ TA25DU25/TA25DU32	T4050PSF1
		FVR	18E					
		2S2W	18E					
		2S1W	18E					
2	10	FVNR	12E	30.8	T2H060E5W	A50N2-30-11-84	E80DU80-10/TA75DU32	T4075PSF1
		FVR	18E				E80DU80-10/TA75DU42/TA75DU32	
		2S2W	18E				E80DU80-10/TA75DU42/TA75DU32	
		2S1W	24E				E80DU80-10/TA75DU42/TA75DU32	

Motor Starters

Combination Starter Selection
208-240V; 100kA

NEMA Size	HP (Max)	Type	Size (Min)	FLA (Max)	Disconnect	Contactor	Overload Relay	CPT
3	15	FVNR	18E	46.2	T2H100E5W	A75N3-30-11-84	E80DU80-10/TA75DU52	T4075PSF1
		FVR	18E					
		2S2W	24E					
		2S1W	24E					
	20	FVNR	18E	60	T2H100E5W	A75N3-30-11-84	E80DU80-10/TA75DU63/TA75DU80	T4075PSF1
		FVR	18E					
		2S2W	24E					
		2S1W	24E					
	25	FVNR	18E	75	T2H100E5W/T2S100E5W	A75N3-30-11-84	E80DU80-10/TA75DU80	T4075PSF1
		FVR	18E					
		2S2W	24E					
		2S1W	24E					
	30	FVNR	18E	80	T4S150E5W	A75N3-30-11-84	E140DU140-10/TA110DU90	T4075PSF1
		FVR	18E				E140DU140-10/TA110DU90	
		2S2W	24E				E80DU80-10/TA110DU90	
		2S1W	30E				E140DU140-10/TA110DU90	
4	30	FVNR	24E	88	T4S150E5W	A145N4-30-11-84	E200DU200-10/TA200DU110	T4150PSF1
		FVR	36E					
		2S2W	42E					
		2S1W	FULL					
	40	FVNR	30E	115	T4S250E5W	A260N5-30-11-84	E320DU320-10/TA200DU110/ TA200DU135	T4250PSF1
		FVR	42E					T4150PSF1
		2S2W	48E					T4150PSF1
		2S1W	FULL					T4150PSF1
5	50	FVNR	36E	143	T5S300E5W/T5N300E5W	A260N5-30-11-84	E320DU320-10/TA450DU185	T4250PSF1
		FVR	48E		T5S300E5W			
		2S2W	FULL		T5S300E5W			
		2S1W	FULL		T5S300E5W			
	60	FVNR	36E	160	T5S300E5W	A260N5-30-11-84	E320DU320-10/TA450DU185	T4250PSF1
		FVR	48E					
		2S2W	FULL					
		2S1W	FULL					
	75	FVNR	42E	211	T5S400E5W	AF460N6-3011-70	E500DU500-10/TA450DU235	T4250PSF1
		FVR	FULL					
		2S2W	FULL					
		2S1W	FULL					
	100	FVNR	FULL	273	T6S600E5W	AF750N7-3011-70	E500DU500-10	T4250PSF1
		FVR	FULL					
		2S2W	FULL					
		2S1W	FULL					

Motor Starters

Combination Starter Selection
208-240V; 100kA

NEMA Size	HP (Max)	Type	Size (Min)	FLA (Max)	Disconnect	Contactor	Overload Relay	CPT
6	125	FVNR	FULL	344	T6S600E5W	AF750N7-3011-70	E500DU500-10	T4250PSF1
		FVR	FULL					T4250PSF1
		2S2W	FULL					T4500PSF1
		2S1W	FULL					T4500PSF1
	150	FVNR	FULL	396	T6S800E5W	AF750N7-3011-70	E500DU500-10	T4250PSF1
		FVR	FULL					T4250PSF1
		2S2W	FULL					T4500PSF1
		2S1W	FULL					T4500PSF1
	200	FVNR	FULL	480	T6S800E5W	AF750N7-3011-70	E500DU500-10	T4250PSF1
		FVR	FULL					T4250PSF1
		2S2W	FULL					T4500PSF1
		2S1W	FULL					T4500PSF1

Motor Starters

Combination Starter Selection
480V; 42-65kA

NEMA Size	HP (Max)	Type	Size (Min)	FLA (Max)	Disconnect	Contactor	Overload Relay	CPT
00	0.5	FVNR	6E	1.1	T2H015TW	A9N00-30-10-84	E16DU2.7-10/TA25DU1.4	T4045SF1
		FVR	n/a					
		2S2W	n/a					
		2S1W	n/a					
	0.75	FVNR	6E	1.6	T2H015TW	A9N00-30-10-84	E16DU2.7-10/TA25DU1.8	T4045SF1/T4050PSF1
		FVR	18E					T4050PSF1
		2S2W	n/a					n/a
		2S1W	n/a					n/a
	1	FVNR	6E	2.1	T2H015TW	A9N00-30-10-84	E16DU2.7-10/TA25DU2.4	T4045SF1/T4050PSF1
		FVR	18E					T4050PSF1
		2S2W	n/a					n/a
		2S1W	n/a					n/a
	1.5	FVNR	6E	3	T2H015TW	A9N00-30-10-84	E16DU6.3-10/TA25DU4.0	T4045SF1/T4050PSF1
		FVR	18E					T4050PSF1
		2S2W	n/a					n/a
		2S1W	n/a					n/a
	2	FVNR	6E	3.4	T2H025E5W	A9N00-30-10-84	E16DU6.3-10/TA25DU4.0	T4045SF1/T4050PSF1
		FVR	18E					T4050PSF1
		2S2W	18E					T4050PSF1
		2S1W	18E					T4050PSF1
0	3	FVNR	6E	4.8	T2H025E5W	A16N0-30-10-84	E16DU6.3-10/TA25DU6.5	T4045SF1/T4050PSF1
		FVR	18E					T4050PSF1
		2S2W	18E					T4050PSF1
		2S1W	18E					T4050PSF1
	5	FVNR	6E	7.6	T2H025E5W	A16N0-30-10-84	E16DU18.9-10/TA25DU8.5	T4045SF1/T4050PSF1
		FVR	18E				E16DU18.9-10	T4050PSF1
		2S2W	18E				E16DU18.9-10	T4050PSF1
		2S1W	18E				E16DU18.9-10	T4050PSF1
1	7.5	FVNR	12E	11	T2H025E5W	A26N1-30-10-84	E45DU30-10/TA25DU14	T4050PSF1
		FVR	18E					
		2S2W	18E					
		2S1W	18E					
	10	FVNR	12E	14	T2H025E5W	A26N1-30-10-84	E45DU30-10/TA25DU19	T4050PSF1
		FVR	18E					
		2S2W	18E					
		2S1W	18E					

Motor Starters

Combination Starter Selection
480V; 42-65kA

NEMA Size	HP (Max)	Type	Size (Min)	FLA (Max)	Disconnect	Contactor	Overload Relay	CPT
2	15	FVNR	12E	21	T2H060E5W	A50N2-30-11-84	E45DU45-10/TA75DU25	T4075PSF1
		FVR	18E					
		2S2W	18E					
		2S1W	24E					
	20	FVNR	12E	27	T2H060E5W	A50N2-30-11-84	E80DU80-10/TA75DU32	T4075PSF1
		FVR	18E					
		2S2W	18E					
		2S1W	24E					
	25	FVNR	12E	34	T2H060E5W	A50N2-30-11-84	E80DU80-10/TA75DU42	T4075PSF1
		FVR	18E					
		2S2W	18E					
		2S1W	24E					
3	30	FVNR	12E	40	T2H100E5W	A75N3-30-11-84	E80DU80-10/TA75DU42	T4075PSF1
		FVR	18E					T4050PSF1
		2S2W	18E					T4075PSF1
		2S1W	24E					T4075PSF1
	40	FVNR	18E	52	T2H100E5W	A75N3-30-11-84	E80DU80-10/TA75DU52	T4075PSF1
		FVR	18E				E80DU80-10/TA75DU63	
		2S2W	24E				E80DU80-10/TA75DU63	
		2S1W	24E				E80DU80-10/TA75DU63	
	50	FVNR	18E	65	T2H100E5W	A75N3-30-11-84	E80DU80-10/TA75DU80	T4075PSF1
		FVR	18E					
		2S2W	24E					
		2S1W	24E					
4	60	FVNR	24E	77	T4H150E5W	A145N4-30-11-84	E200DU200-10/TA200DU90	T4150PSF1
		FVR	36E					
		2S2W	42E					
		2S1W	FULL					
	75	FVNR	24E	96	T4H150E5W	A145N4-30-11-84	E200DU200-10/TA200DU110	T4150PSF1
		FVR	36E					
		2S2W	42E					
		2S1W	FULL					
	100	FVNR	30E	124	T4H250E5W	A260N5-30-11-84	E320DU320-10/TA200DU150	T4250PSF1
		FVR	42E				E320DU320-10/TA200DU135	T4150PSF1
		2S2W	48E				E320DU320-10/TA200DU150	T4150PSF1
		2S1W	FULL				E320DU320-10/TA200DU135	T4150PSF1

Motor Starters

Combination Starter Selection
480V; 42-65kA

NEMA Size	HP (Max)	Type	Size (Min)	FLA (Max)	Disconnect	Contactor	Overload Relay	CPT
5	125	FVNR	36E	156	T5H300E5W	A260N5-30-11-84	E320DU320-10/TA450DU185	T4250PSF1
		FVR	48E					
		2S2W	FULL					
		2S1W	FULL					
	150	FVNR	42E	180	T5H300E5W	AF460N6-3011-70	E500DU500-10/TA450DU185	T4250PSF1
		FVR	FULL					
		2S2W	FULL					
		2S1W	FULL					
	200	FVNR	42E	240	T5H400E5W	AF460N6-3011-70	E500DU500-10/TA450DU310	T4250PSF1
		FVR	FULL					
		2S2W	FULL					
		2S1W	FULL					
6	250	FVNR	FULL	302	T6H600E5W/T6S600E5W	AF750N7-3011-70	E500DU500-10	T4250PSF1
		FVR	FULL					T4250PSF1
		2S2W	FULL					T4500PSF1
		2S1W	FULL					T4500PSF1
	300	FVNR	FULL	361	T6H800E5W/T6S800E5W	AF750N7-3011-70	E500DU500-10	T4250PSF1
		FVR	FULL		T6H800E5W/T6S800E5W			T4250PSF1
		2S2W	FULL		T6H800E5W/T6S800E5W			T4500PSF1
		2S1W	FULL		T6H800E5W			T4500PSF1
	350	FVNR	FULL	414	T6H800E5W/T6S800E5W	AF750N7-3011-70	E500DU500-10	T4250PSF1
		FVR	FULL					T4250PSF1
		2S2W	FULL					T4500PSF1
		2S1W	FULL					T4500PSF1
	400	FVNR	FULL	477	T6H800E5W/T6S800E5W	AF750N7-3011-70	E500DU500-10	T4250PSF1
		FVR	FULL					T4250PSF1
		2S2W	FULL					T4500PSF1
		2S1W	FULL					T4500PSF1

Motor Starters

Combination Starter Selection
480V; 100kA

NEMA Size	HP (Max)	Type	Size (Min)	FLA (Max)	Disconnect	Contactor	Overload Relay	CPT
1	7.5	FVNR	12E	11	T4L020TW	A26N1-30-10-84	E45DU30-10	T4050PSF1
		FVR	n/a					
		2S2W	18E					
		2S1W	n/a					
2	15	FVNR	12E	21	T4L100E5W	A50N2-30-11-84	E45DU45-10/TA75DU25	T4075PSF1
		FVR	18E					
		2S2W	24E					
		2S1W	24E					
	20	FVNR	12E	27	T4L100E5W	A50N2-30-11-84	E80DU80-10/TA75DU32	T4075PSF1
		FVR	18E					
		2S2W	24E					
		2S1W	24E					
	25	FVNR	12E	34	T4L100E5W	A50N2-30-11-84	E80DU80-10/TA75DU42	T4075PSF1
		FVR	18E					
		2S2W	24E					
		2S1W	24E					
3	30	FVNR	12E	40	T4L100E5W	A75N3-30-11-84	E80DU80-10/TA75DU42	T4075PSF1
		FVR	18E					
		2S2W	24E					
		2S1W	24E					
	40	FVNR	18E	52	T4L100E5W	A75N3-30-11-84	E80DU80-10/TA75DU52	T4075PSF1
		FVR	18E				E80DU80-10/TA75DU63	
		2S2W	24E				E80DU80-10/TA75DU63	
		2S1W	24E				E80DU80-10/TA75DU63	
	50	FVNR	18E	65	T4L150E5W	A75N3-30-11-84	E80DU80-10/TA75DU80	T4075PSF1
		FVR	18E					
		2S2W	24E					
		2S1W	24E					
4	60	FVNR	24E	77	T4L150E5W	A145N4-30-11-84	E200DU200-10/TA200DU90	T4150PSF1
		FVR	36E					
		2S2W	42E					
		2S1W	FULL					
	75	FVNR	24E	96	T4L150E5W	A145N4-30-11-84	E200DU200-10/TA200DU110	T4150PSF1
		FVR	36E					
		2S2W	42E					
		2S1W	FULL					
	100	FVNR	30E	124	T4L250E5W	A260N5-30-11-84	E320DU320-10/TA200DU150	T4250PSF1
		FVR	42E				E320DU320-10/TA200DU135	T4150PSF1
		2S2W	48E				E320DU320-10/TA200DU150	T4150PSF1
		2S1W	FULL				E320DU320-10/TA200DU135	T4150PSF1

Motor Starters

Combination Starter Selection
480V; 100kA

NEMA Size	HP (Max)	Type	Size (Min)	FLA (Max)	Disconnect	Contactor	Overload Relay	CPT
5	125	FVNR	36E	156	T5L300E5W	A260N5-30-11-84	E320DU320-10/TA450DU185	T4250PSF1
		FVR	48E					
		2S2W	FULL					
		2S1W	FULL					
	150	FVNR	42E	180	T5L300E5W	AF460N6-3011-70	E500DU500-10/TA450DU185	T4250PSF1
		FVR	FULL					
		2S2W	FULL					
		2S1W	FULL					
	200	FVNR	42E	240	T5L400E5W	AF460N6-3011-70	E500DU500-10/TA450DU310	T4250PSF1
		FVR	FULL					
		2S2W	FULL					
		2S1W	FULL					
6	250	FVNR	FULL	302	T6L600E5W	AF750N7-3011-70	E500DU500-10	T4250PSF1
		FVR	FULL					T4250PSF1
		2S2W	FULL					T4500PSF1
		2S1W	FULL					T4500PSF1
	300	FVNR	FULL	361	T6L800E5W	AF750N7-3011-70	E500DU500-10	T4250PSF1
		FVR	FULL					T4250PSF1
		2S2W	FULL					T4500PSF1
		2S1W	FULL					T4500PSF1
	350	FVNR	FULL	414	T6L800E5W	AF750N7-3011-70	E500DU500-10	T4250PSF1
		FVR	FULL					T4250PSF1
		2S2W	FULL					T4500PSF1
		2S1W	FULL					T4500PSF1
	400	FVNR	FULL	477	T6L800E5W	AF750N7-3011-70	E500DU500-10	T4250PSF1
		FVR	FULL					T4250PSF1
		2S2W	FULL					T4500PSF1
		2S1W	FULL					T4500PSF1

Motor Starters

Combination Starter Selection
600V; 25kA

NEMA Size	HP (Max)	Type	Size (Min)	FLA (Max)	Disconnect	Contactor	Overload Relay	CPT
1	7.5	FVNR	12E	9	T4S020TW	A26N1-30-10-84	E45DU30-10	T6075PS1
		FVR	18E					
		2S2W	18E					
		2S1W	24E					
	10	FVNR	12E	11	T4S020TW	A26N1-30-10-84	E45DU30-10	T6075PS1
		FVR	18E					
		2S2W	18E					
		2S1W	24E					
2	15	FVNR	12E	17	T4S100E5W	A75N3-30-11-84	TA25DU19	T6075PS1
		FVR	18E					
		2S2W	24E					
		2S1W	24E					
	20	FVNR	12E	22	T4S100E5W	A75N3-30-11-84	TA75DU25	T6075PS1
		FVR	18E			A50N2-30-11-84		
		2S2W	24E			A50N2-30-11-84		
		2S1W	24E			A50N2-30-11-84		
	25	FVNR	12E	27	T4S100E5W	A75N3-30-11-84	E80DU80-10	T6075PS1
		FVR	18E					
		2S2W	24E					
		2S1W	24E					
3	30	FVNR	12E	32	T4S100E5W	A75N3-30-11-84	E80DU80-10/TA75DU42	T6075PS1
		FVR	18E					
		2S2W	24E					
		2S1W	24E					
	40	FVNR	18E	41	T4S100E5W	A75N3-30-11-84	E80DU80-10/TA75DU52	T6075PS1
		FVR	18E					
		2S2W	24E					
		2S1W	24E					
	50	FVNR	18E	52	T4S100E5W	A75N3-30-11-84	E80DU80-10/TA75DU52	T6075PS1
		FVR	18E				E80DU80-10/TA75DU63	
		2S2W	24E				E80DU80-10/TA75DU63	
		2S1W	24E				E80DU80-10/TA75DU63	
4	60	FVNR	24E	62	T4S100E5W	A145N4-30-11-84	E200DU200-10/TA80DU80	T6150PS1
		FVR	36E					
		2S2W	42E					
		2S1W	FULL					
	75	FVNR	24E	77	T4S150E5W	A145N4-30-11-84	TA200DU90	T6150PS1
		FVR	36E				TA200DU90/E200DU200-10	
		2S2W	42E				TA200DU90/E200DU200-10	
		2S1W	FULL				TA200DU90/E200DU200-10	
	100	FVNR	30E	99	T4S150E5W	A260N5-30-11-84	E200DU200-10/TA200DU110	T6250PS1
		FVR	42E					
		2S2W	48E					
		2S1W	FULL					

Motor Starters

Combination Starter Selection
600V; 25kA

NEMA Size	HP (Max)	Type	Size (Min)	FLA (Max)	Disconnect	Contactor	Overload Relay	CPT
5	125	FVNR	30E	125	T4S250E5W	A260N5-30-11-84	E320DU320-10/TA200DU150	T6250PS1
		FVR	42E				E320DU320-10/TA200DU150	
		2S2W	48E				E320DU320-10/TA200DU185	
		2S1W	FULL				E320DU320-10/TA200DU150	
	150	FVNR	36E	144	T5S300E5W	A260N5-30-11-84	E320DU320-10/TA450DU185	T6250PS1
		FVR	48E				E320DU320-10/TA450DU185	T6250PS1
		2S2W	FULL				E320DU320-10/TA450DU185	T6250PS1
		2S1W	FULL				E320DU320-10	T6150PS1
	200	FVNR	42E	192	T5S400E5W	AF460N6-3011-70	E500DU500-10/TA450DU235	T6250PS1
		FVR	FULL					
		2S2W	FULL					
		2S1W	FULL					
6	250	FVNR	FULL	242	T6S600E5W	AF750N7-3011-70	E500DU500-10	T6250PS1
		FVR	FULL		T6S800E5W			T6250PS1
		2S2W	FULL		T6S600E5W			T6500PS1
		2S1W	FULL		T6S600E5W			T6500PS1
	300	FVNR	FULL	289	T6S600E5W	AF750N7-3011-70	E500DU500-10	T6250PS1
		FVR	FULL					T6250PS1
		2S2W	FULL					T6500PS1
		2S1W	FULL					T6500PS1
	350	FVNR	FULL	336	T6S600E5W	AF750N7-3011-70	E500DU500-10	T6250PS1
		FVR	FULL					T6250PS1
		2S2W	FULL					T6500PS1
		2S1W	FULL					T6500PS1
	400	FVNR	FULL	382	T6S800E5W	AF750N7-3011-70	E500DU500-10	T6250PS1
		FVR	FULL					T6250PS1
		2S2W	FULL					T6500PS1
		2S1W	FULL					T6500PS1
7	500	FVNR	FULL	472	T6S800E5W	AF750N7-3011-70	E500DU500-10	T6250PS1
		FVR	FULL					T6250PS1
		2S2W	FULL					T6500PS1
		2S1W	FULL					T6500PS1

Motor Starters

Combination Starter Selection
600V; 42-65kA

NEMA Size	HP (Max)	Type	Size (Min)	FLA (Max)	Disconnect	Contactor	Overload Relay	CPT
1	7.5	FVNR	12E	9	T4L020TW	A26N1-30-10-84	E45DU30-10	T6075PS1
		FVR	18E					
		2S2W	18E					
		2S1W	24E					
	10	FVNR	12E	11	T4L020TW	A26N1-30-10-84	E45DU30-10	T6075PS1
		FVR	18E					
		2S2W	18E					
		2S1W	24E					
2	15	FVNR	12E	17	T4L100E5W	A75N3-30-11-84	TA25DU19	T6075PS1
		FVR	18E					
		2S2W	24E					
		2S1W	24E					
	20	FVNR	12E	22	T4L100E5W	A75N3-30-11-84	TA75DU25	T6075PS1
		FVR	18E			A50N2-30-11-84		
		2S2W	24E			A50N2-30-11-84		
		2S1W	24E			A50N2-30-11-84		
	25	FVNR	12E	27	T4L100E5W	A75N3-30-11-84	E80DU80-10	T6075PS1
		FVR	18E					
		2S2W	24E					
		2S1W	24E					
3	30	FVNR	12E	32	T4L100E5W	A75N3-30-11-84	E80DU80-10/TA75DU42	T6075PS1
		FVR	18E					
		2S2W	24E					
		2S1W	24E					
	40	FVNR	18E	41	T4L100E5W	A75N3-30-11-84	E80DU80-10/TA75DU52	T6075PS1
		FVR	18E					
		2S2W	24E					
		2S1W	24E					
	50	FVNR	18E	52	T4L100E5W	A75N3-30-11-84	E80DU80-10/TA75DU52	T6075PS1
		FVR	18E				E80DU80-10/TA75DU63	
		2S2W	24E				E80DU80-10/TA75DU63	
		2S1W	24E				E80DU80-10/TA75DU63	
4	60	FVNR	24E	62	T4L100E5W	A145N4-30-11-84	E200DU200-10/TA80DU80	T6150PS1
		FVR	36E					
		2S2W	42E					
		2S1W	FULL					
	75	FVNR	24E	77	T4L150E5W/T4H150E5W	A145N4-30-11-84	E200DU200-10/TA200DU90	T6150PS1
		FVR	36E		T4L150E5W			
		2S2W	42E		T4L150E5W			
		2S1W	FULL		T4L150E5W			
	100	FVNR	30E	99	T4L150E5W	A260N5-30-11-84	E200DU200-10/TA200DU110	T6250PS1
		FVR	42E					
		2S2W	48E					
		2S1W	FULL					

Motor Starters

Combination Starter Selection
600V; 42-65kA

NEMA Size	HP (Max)	Type	Size (Min)	FLA (Max)	Disconnect	Contactor	Overload Relay	CPT
5	125	FVNR	30E	125	T4L250E5W	A260N5-30-11-84	E320DU320-10/TA200DU150	T6250PS1
		FVR	42E				E320DU320-10/TA200DU150	
		2S2W	48E				E320DU320-10/TA450DU185	
		2S1W	FULL				E320DU320-10/TA200DU150	
	150	FVNR	36E	144	T5L300E5W	A260N5-30-11-84	E320DU320-10/TA450DU185	T6250PS1
		FVR	48E				E320DU320-10/TA450DU185	T6250PS1
		2S2W	FULL				E320DU320-10/TA450DU185	T6250PS1
		2S1W	FULL				E320DU320-10	T6150PS1
	200	FVNR	42E	192	T5L400E5W	AF460N6-3011-70	E500DU500-10/TA450DU235	T6250PS1
		FVR	FULL					
		2S2W	FULL					
		2S1W	FULL					
6	250	FVNR	FULL	242	T6L600E5W	AF750N7-3011-70	E500DU500-10	T6250PS1
		FVR	FULL					T6250PS1
		2S2W	FULL					T6500PS1
		2S1W	FULL					T6500PS1
	300	FVNR	FULL	289	T6L600E5W	AF750N7-3011-70	E500DU500-10	T6250PS1
		FVR	FULL					T6250PS1
		2S2W	FULL					T6500PS1
		2S1W	FULL					T6500PS1
	350	FVNR	FULL	336	T6L600E5W	AF750N7-3011-70	E500DU500-10	T6250PS1
		FVR	FULL					T6250PS1
		2S2W	FULL					T6500PS1
		2S1W	FULL					T6500PS1
	400	FVNR	FULL	382	T6L800E5W	AF750N7-3011-70	E500DU500-10	T6250PS1
		FVR	FULL					T6250PS1
		2S2W	FULL					T6500PS1
		2S1W	FULL					T6500PS1
7	500	FVNR	FULL	472	T6L800E5W	AF750N7-3011-70	E500DU500-10	T6250PS1
		FVR	FULL					T6250PS1
		2S2W	FULL					T6500PS1
		2S1W	FULL					T6500PS1

Starters with UMC

208-240V; 42-65kA

NEMA Size	HP (Max)	Type	Size (Min)	FLA (Max)	Disconnect	Contactor	Overload Relay	CPT
00	0.5	FVNR	12E	2.4	T2S015TW	A26N1-30-10-84	UMC-FBP	T4075PSF1
		FVR	18E					
		2S2W	18E					
		2S1W	18E					
	0.75	FVNR	12E	3.5	T2S015TW	A26N1-30-10-84	UMC-FBP	T4075PSF1
		FVR	18E					
		2S2W	18E					
		2S1W	18E					
	1	FVNR	12E	4.6	T2S015TW	A26N1-30-10-84	UMC-FBP	T4075PSF1
		FVR	18E					
		2S2W	18E					
		2S1W	18E					
	1.5	FVNR	12E	6.6	T2S015TW	A26N1-30-10-84	UMC-FBP	T4075PSF1
		FVR	18E					
		2S2W	18E					
		2S1W	18E					
0	2	FVNR	12E	7.5	T2S025E5W	A26N1-30-10-84	UMC-FBP	T4075PSF1
		FVR	18E					
		2S2W	18E					
		2S1W	18E					
	3	FVNR	12E	9.6	T2S025E5W	A26N1-30-10-84	UMC-FBP	T4075PSF1
		FVR	18E					
		2S2W	18E					
		2S1W	18E					
1	5.0	FVNR	12E	16.8	T2S025E5W	A26N1-30-10-84	UMC-FBP	T4075PSF1
		FVR	18E					
		2S2W	18E					
		2S1W	18E					
	7.5	FVNR	12E	24.2	T2S025E5W	A26N1-30-10-84	UMC-FBP	T4075PSF1
		FVR	18E					
		2S2W	18E					
		2S1W	18E					
2	10	FVNR	18E	28	T2S060E5W	A50N2-30-11-84	UMC-FBP	T4075PSF1
		FVR	18E					
		2S2W	18E					
		2S1W	24E					

Starters with UMC

208-240V; 42-65kA

NEMA Size	HP (Max)	Type	Size (Min)	FLA (Max)	Disconnect	Contactor	Overload Relay	CPT
3	15	FVNR	18E	42	T2S100E5W	A50N2-30-11-84	UMC-FBP	T4075PSF1
		FVR	24E					
		2S2W	24E					
		2S1W	24E					
	20	FVNR	18E	60	T2S100E5W	A75N3-30-11-84	UMC-FBP	T4075PSF1
		FVR	24E					
		2S2W	24E					
		2S1W	24E					
	25	FVNR	24E	75	T2S100E5W	A75N3-30-11-84	UMC-FBP	T4075PSF1
		FVR	24E					
		2S2W	24E					
		2S1W	30E					
4	30	FVNR	24E	88	T4N150E5W	A145N4-30-11-84	UMC-FBP	T4150PSF1
		FVR	30E					T4150PSF1
		2S2W	42E					T4200PSF1
		2S1W	48E					T4200PSF1
	40	FVNR	36E	114	T4N250E5W	A260N5-30-11-84	UMC-FBP	T4250PSF1
		FVR	48E					T4250PSF1
		2S2W	48E					T4350PSF1
		2S1W	FULL					T4350PSF1
5	50	FVNR	36E	143	T5N300E5W	A260N5-30-11-84	UMC-FBP	T4250PSF1
		FVR	48E					T4250PSF1
		2S2W	FULL					T4350PSF1
		2S1W	FULL					T4350PSF1
	60	FVNR	36E	169	T5N300E5W	A260N5-30-11-84	UMC-FBP	T4250PSF1
		FVR	48E					T4250PSF1
		2S2W	FULL					T4350PSF1
		2S1W	FULL					T4350PSF1
	75	FVNR	36E	211	T5N400E5W	AF460N6-3011-70	UMC-FBP	T4250PSF1
		FVR	FULL					T4250PSF1
		2S2W	FULL					T4350PSF1
		2S1W	FULL					T4350PSF1
6	125	FVNR	FULL	344	T6N600E5W	AF750N7-3011-70	UMC-FBP	T4250PSF1
		FVR	FULL					T4250PSF1
		2S2W	FULL					T6500PS1/T4500PSF1
		2S1W	FULL					T6500PS1/T4500PSF1
	150	FVNR	FULL	396	T6N800E5W	AF750N7-3011-70	UMC-FBP	T4250PSF1
		FVR	FULL					T4250PSF1
		2S2W	FULL					T4500PSF1
		2S1W	FULL					T4500PSF1
	200	FVNR	FULL	480	T6N800E5W	AF750N7-3011-70	UMC-FBP	T4250PSF1
		FVR	FULL					T4250PSF1
		2S2W	FULL					T4500PSF1
		2S1W	FULL					T4500PSF1

Starters with UMC

208-240V; 100kA

NEMA Size	HP (Max)	Type	Size (Min)	FLA (Max)	Disconnect	Contactor	Overload Relay	CPT
00	0.5	FVNR	12E	2.4	T2H015TW	A26N1-30-10-84	UMC-FBP	T4075PSF1
		FVR	18E					
		2S2W	18E					
		2S1W	18E					
	0.75	FVNR	12E	3.5	T2H015TW	A26N1-30-10-84	UMC-FBP	T4075PSF1
		FVR	18E					
		2S2W	18E					
		2S1W	18E					
	1	FVNR	12E	4.6	T2H015TW	A26N1-30-10-84	UMC-FBP	T4075PSF1
		FVR	18E					
		2S2W	18E					
		2S1W	18E					
	1.5	FVNR	12E	6.6	T2H015TW	A26N1-30-10-84	UMC-FBP	T4075PSF1
		FVR	18E					
		2S2W	18E					
		2S1W	18E					
0	2	FVNR	12E	7.5	T2H025E5W	A26N1-30-10-84	UMC-FBP	T4075PSF1
		FVR	18E					
		2S2W	18E					
		2S1W	18E					
	3	FVNR	12E	9.6	T2H025E5W	A26N1-30-10-84	UMC-FBP	T4075PSF1
		FVR	18E					
		2S2W	18E					
		2S1W	18E					
1	5.0	FVNR	12E	16.8	T2H025E5W	A26N1-30-10-84	UMC-FBP	T4075PSF1
		FVR	18E					
		2S2W	18E					
		2S1W	18E					
	7.5	FVNR	12E	24.2	T2H025E5W	A26N1-30-10-84	UMC-FBP	T4075PSF1
		FVR	18E					
		2S2W	18E					
		2S1W	18E					
2	10	FVNR	18E	28	T2H060E5W	A50N2-30-11-84	UMC-FBP	T4075PSF1
		FVR	18E					
		2S2W	18E					
		2S1W	24E					

Starters with UMC

208-240V; 100kA

NEMA Size	HP (Max)	Type	Size (Min)	FLA (Max)	Disconnect	Contactor	Overload Relay	CPT
3	15	FVNR	18E	42	T2H100E5W	A50N2-30-11-84	UMC-FBP	T4075PSF1
		FVR	24E					
		2S2W	24E					
		2S1W	24E					
	20	FVNR	18E	60	T2H100E5W	A75N3-30-11-84	UMC-FBP	T4075PSF1
		FVR	24E					
		2S2W	24E					
		2S1W	24E					
	25	FVNR	24E	75	T2H100E5W	A75N3-30-11-84	UMC-FBP	T4075PSF1
		FVR	24E					
		2S2W	24E					
		2S1W	30E					
4	30	FVNR	24E	88	T4S150E5W	A145N4-30-11-84	UMC-FBP	T4150PSF1
		FVR	30E					T4150PSF1
		2S2W	42E					T4200PSF1
		2S1W	48E					T4200PSF1
	40	FVNR	36E	114	T4S250E5W	A260N5-30-11-84	UMC-FBP	T4250PSF1
		FVR	48E					T4250PSF1
		2S2W	48E					T4350PSF1
		2S1W	FULL					T4350PSF1
5	50	FVNR	36E	143	T5S300E5W	A260N5-30-11-84	UMC-FBP	T4250PSF1
		FVR	48E					T4250PSF1
		2S2W	FULL					T4350PSF1
		2S1W	FULL					T4350PSF1
	60	FVNR	36E	169	T5S300E5W	A260N5-30-11-84	UMC-FBP	T4250PSF1
		FVR	48E					T4250PSF1
		2S2W	FULL					T4350PSF1
		2S1W	FULL					T4350PSF1
	75	FVNR	36E	211	T5S400E5W	AF460N6-3011-70	UMC-FBP	T4250PSF1
		FVR	FULL					T4250PSF1
		2S2W	FULL					T4350PSF1
		2S1W	FULL					T4350PSF1
6	125	FVNR	FULL	344	T6S600E5W	AF750N7-3011-70	UMC-FBP	T4250PSF1
		FVR	FULL					T4250PSF1
		2S2W	FULL					T4500PSF1
		2S1W	FULL					T4500PSF1
	150	FVNR	FULL	396	T6S800E5W	AF750N7-3011-70	UMC-FBP	T4250PSF1
		FVR	FULL					T4250PSF1
		2S2W	FULL					T4500PSF1
		2S1W	FULL					T4500PSF1
	200	FVNR	FULL	480	T6S800E5W	AF750N7-3011-70	UMC-FBP	T4250PSF1
		FVR	FULL					T4250PSF1
		2S2W	FULL					T4500PSF1
		2S1W	FULL					T4500PSF1

Starters with UMC

480V; 42-65kA

NEMA Size	HP (Max)	Type	Size (Min)	FLA (Max)	Disconnect	Contactor	Overload Relay	CPT
00	0.5	FVNR	12E	1.1	T2H015TW	A26N1-30-10-84	UMC-FBP	T4075PSF1
		FVR	18E					
		2S2W	18E					
		2S1W	18E					
	0.75	FVNR	12E	1.6	T2H015TW	A26N1-30-10-84	UMC-FBP	T4075PSF1
		FVR	18E					
		2S2W	18E					
		2S1W	18E					
	1	FVNR	12E	2.1	T2H015TW	A26N1-30-10-84	UMC-FBP	T4075PSF1
		FVR	18E					
		2S2W	18E					
		2S1W	18E					
	1.5	FVNR	12E	3	T2H015TW	A26N1-30-10-84	UMC-FBP	T4075PSF1
		FVR	18E					
		2S2W	18E					
		2S1W	18E					
	2	FVNR	12E	3.4	T2H025E5W	A26N1-30-10-84	UMC-FBP	T4075PSF1
		FVR	18E					
		2S2W	18E					
		2S1W	18E					
0	3	FVNR	12E	4.8	T2H025E5W	A26N1-30-10-84	UMC-FBP	T4075PSF1
		FVR	18E					
		2S2W	18E					
		2S1W	18E					
	5	FVNR	12E	7.6	T2H025E5W	A26N1-30-10-84	UMC-FBP	T4075PSF1
		FVR	18E					
		2S2W	18E					
		2S1W	18E					
1	7.5	FVNR	12E	11	T2H025E5W	A26N1-30-10-84	UMC-FBP	T4075PSF1
		FVR	n/a					
		2S2W	n/a					
		2S1W	n/a					
	10	FVNR	12E	14	T2H025E5W	A26N1-30-10-84	UMC-FBP	T4075PSF1
		FVR	18E					
		2S2W	18E					
		2S1W	18E					

Starters with UMC

480V; 42-65kA

NEMA Size	HP (Max)	Type	Size (Min)	FLA (Max)	Disconnect	Contactor	Overload Relay	CPT
2	15	FVNR	18E	21	T2H060E5W	A50N2-30-11-84	UMC-FBP	T4075PSF1
		FVR	18E					
		2S2W	18E					
		2S1W	24E					
	20	FVNR	18E	27	T2H060E5W	A50N2-30-11-84	UMC-FBP	T4075PSF1
		FVR	18E					
		2S2W	18E					
		2S1W	24E					
	25	FVNR	18E	34	T4H100E5W	A50N2-30-11-84	UMC-FBP	T4075PSF1
		FVR	18E					
		2S2W	18E					
		2S1W	24E					
3	30	FVNR	18E	40	T2H050E5W	A75N3-30-11-84	UMC-FBP	T4075PSF1
		FVR	18E					
		2S2W	18E					
		2S1W	24E					
	40	FVNR	18E	52	T2H100E5W	A75N3-30-11-84	UMC-FBP	T4075PSF1
		FVR	24E					
		2S2W	24E					
		2S1W	24E					
	50	FVNR	24E	65	T2H100E5W	A75N3-30-11-84	UMC-FBP	T4075PSF1
		FVR	24E					
		2S2W	24E					
		2S1W	30E					
4	60	FVNR	24E	77	T4H150E5W	A75N3-30-11-84	UMC-FBP	T4075PSF1
		FVR	24E					
		2S2W	24E					
		2S1W	30E					
	75	FVNR	24E	96	T4H150E5W	A145N4-30-11-84	UMC-FBP	T4150PSF1
		FVR	30E					T4150PSF1
		2S2W	42E					T4200PSF1
		2S1W	48E					T4200PSF1
	100	FVNR	36E	124	T4H250E5W	A260N5-30-11-84	UMC-FBP	T4250PSF1
		FVR	48E					T4250PSF1
		2S2W	48E					T4350PSF1
		2S1W	FULL					T4350PSF1

Starters with UMC

480V; 42-65kA

NEMA Size	HP (Max)	Type	Size (Min)	FLA (Max)	Disconnect	Contactor	Overload Relay	CPT
5	125	FVNR	36E	156	T5H300E5W	A260N5-3011-84	UMC-FBP	T4250PSF1
		FVR	48E					T4250PSF1
		2S2W	FULL					T4350PSF1
		2S1W	FULL					T4350PSF1
	150	FVNR	36E	180	T5H300E5W	AF460N6-3011-70	UMC-FBP	T4250PSF1
		FVR	FULL					T4150PSF1
		2S2W	FULL					T4250PSF1
		2S1W	FULL					T4250PSF1
	200	FVNR	36E	240	T5H400E5W	AF460N6-3011-70	UMC-FBP	T4250PSF1
		FVR	FULL					
		2S2W	FULL					
		2S1W	FULL					
6	250	FVNR	FULL	302	T6S600E5W/ T6H600E5W	AF750N7-3011-70	UMC-FBP	T4250PSF1
		FVR	FULL					T4250PSF1
		2S2W	FULL					T6500PS1
		2S1W	FULL					T6500PS1
	300	FVNR	FULL	361	T6S800E5W/ T6H800E5W	AF750N7-3011-70	UMC-FBP	T4250PSF1
		FVR	FULL					T4250PSF1
		2S2W	FULL					T4500PSF1
		2S1W	FULL					T4500PSF1
	350	FVNR	FULL	414	T6S800E5W/ T6H800E5W	AF750N7-3011-70	UMC-FBP	T4250PSF1
		FVR	FULL					T4250PSF1
		2S2W	FULL					T4500PSF1
		2S1W	FULL					T4500PSF1
	400	FVNR	FULL	477	T6S800E5W/ T6H800E5W	AF750N7-3011-70	UMC-FBP	T4250PSF1
		FVR	FULL					T4250PSF1
		2S2W	FULL					T4500PSF1
		2S1W	FULL					T4500PSF1

Starters with UMC

480V; 100kA

NEMA Size	HP (Max)	Type	Size (Min)	FLA (Max)	Disconnect	Contactor	Overload Relay	CPT
2	15	FVNR	18E	21	T4L100E5W	A50N2-30-11-84	UMC-FBP	T4075PSF1
		FVR	18E					
		2S2W	18E					
		2S1W	24E					
	20	FVNR	18E	27	T4L100E5W	A50N2-30-11-84	UMC-FBP	T4075PSF1
		FVR	18E					
		2S2W	18E					
		2S1W	24E					
	25	FVNR	18E	34	T4L100E5W	A50N2-30-11-84	UMC-FBP	T4075PSF1
		FVR	18E					
		2S2W	18E					
		2S1W	24E					
3	30	FVNR	18E	40	T4L100E5W	A75N3-30-11-84	UMC-FBP	T4075PSF1
		FVR	18E					
		2S2W	18E					
		2S1W	24E					
	40	FVNR	18E	52	T4L100E5W	A75N3-30-11-84	UMC-FBP	T4075PSF1
		FVR	24E					
		2S2W	24E					
		2S1W	24E					
	50	FVNR	24E	65	T4L150E5W	A75N3-30-11-84	UMC-FBP	T4075PSF1
		FVR	24E					
		2S2W	24E					
		2S1W	30E					
4	60	FVNR	24E	77	T4L150E5W	A75N3-30-11-84	UMC-FBP	T4075PSF1
		FVR	24E					
		2S2W	24E					
		2S1W	30E					
	75	FVNR	24E	96	T4L150E5W	A145N4-30-11-84	UMC-FBP	T4150PSF1
		FVR	30E					T4150PSF1
		2S2W	42E					T4200PSF1
		2S1W	48E					T4200PSF1
	100	FVNR	36E	124	T4L250E5W	A260N5-30-11-84	UMC-FBP	T4250PSF1
		FVR	48E					T4250PSF1
		2S2W	48E					T4350PSF1
		2S1W	FULL					T4350PSF1

Starters with UMC

480V; 100kA

NEMA Size	HP (Max)	Type	Size (Min)	FLA (Max)	Disconnect	Contactor	Overload Relay	CPT
5	125	FVNR	36E	156	T5L300E5W	A260N5-30-11-84	UMC-FBP	T4250PSF1
		FVR	48E					T4250PSF1
		2S2W	FULL					T4350PSF1
		2S1W	FULL					T4350PSF1
	150	FVNR	36E	180	T5L300E5W	AF460N6-3011-70	UMC-FBP	T4250PSF1
		FVR	FULL					T4150PSF1
		2S2W	FULL					T4250PSF1
		2S1W	FULL					T4250PSF1
	200	FVNR	36E	240	T5L400E5W	AF460N6-3011-70	UMC-FBP	T4250PSF1
		FVR	FULL					
		2S2W	FULL					
		2S1W	FULL					
6	250	FVNR	FULL	302	T6L600E5W	AF750N7-3011-70	UMC-FBP	T4250PSF1
		FVR	FULL					T4250PSF1
		2S2W	FULL					T4500PSF1
		2S1W	FULL					T4500PSF1
	300	FVNR	FULL	361	T6L800E5W	AF750N7-3011-70	UMC-FBP	T4250PSF1
		FVR	FULL					T4250PSF1
		2S2W	FULL					T4500PSF1
		2S1W	FULL					T4500PSF1
	350	FVNR	FULL	414	T6L800E5W	AF750N7-3011-70	UMC-FBP	T4250PSF1
		FVR	FULL					T4250PSF1
		2S2W	FULL					T4500PSF1
		2S1W	FULL					T4500PSF1
	400	FVNR	FULL	477	T6L800E5W	AF750N7-3011-70	UMC-FBP	T4250PSF1
		FVR	FULL					T4250PSF1
		2S2W	FULL					T4500PSF1
		2S1W	FULL					T4500PSF1

Starters with UMC

600V; 25kA

NEMA Size	HP (Max)	Type	Size (Min)	FLA (Max)	Disconnect	Contactor	Overload Relay	CPT
2	15	FVNR	n/a	17	T4S100E5W	A50N2-30-11-84	UMC-FBP	T6075PS1
		FVR	18E					
		2S2W	18E					
		2S1W	24E					
	20	FVNR	n/a	22	T4S100E5W	A50N2-30-11-84	UMC-FBP	T6075PS1
		FVR	18E					
		2S2W	18E					
		2S1W	24E					
	25	FVNR	18E	27	T4S100E5W	A50N2-30-11-84	UMC-FBP	T6075PS1
		FVR	18E					
		2S2W	18E					
		2S1W	24E					
3	30	FVNR	18E	32	T4S100E5W	A75N3-30-11-84	UMC-FBP	T6075PS1
		FVR	18E					
		2S2W	18E					
		2S1W	24E					
	40	FVNR	18E	41	T4S100E5W	A75N3-30-11-84	UMC-FBP	T6075PS1
		FVR	18E					
		2S2W	18E					
		2S1W	24E					
	50	FVNR	18E	52	T4S100E5W	A75N3-30-11-84	UMC-FBP	T6075PS1
		FVR	24E					
		2S2W	24E					
		2S1W	24E					
4	60	FVNR	18E	62	T4S100E5W	A75N3-30-11-84	UMC-FBP	T6075PS1
		FVR	24E					
		2S2W	24E					
		2S1W	24E					
	100	FVNR	30E	99	T4S150E5W	A145N4-30-11-84	UMC-FBP	T6150PS1
		FVR	36E					T6150PS1
		2S2W	42E					T6200PS1
		2S1W	48E					T6200PS1
5	125	FVNR	36E	125	T4S250E5W	A260N5-30-11-84	UMC-FBP	T6250PS1
		FVR	48E					T6250PS1
		2S2W	48E					T6350PS1
		2S1W	FULL					T6350PS1
	150	FVNR	36E	144	T5S300E5W	A260N5-30-11-84	UMC-FBP	T6250PS1
		FVR	FULL					T6250PS1
		2S2W	FULL					T6350PS1
		2S1W	FULL					T6350PS1
	200	FVNR	36E	192	T5S400E5W	AF460N6-3011-70	UMC-FBP	T6250PS1
		FVR	FULL					T6150PS1
		2S2W	FULL					T6250PS1
		2S1W	FULL					T6250PS1

Starters with UMC

600V; 25kA

NEMA Size	HP (Max)	Type	Size (Min)	FLA (Max)	Disconnect	Contactor	Overload Relay	CPT
6	250	FVNR	FULL	242	T6S800E5W	AF750N7-3011-70	UMC-FBP	T6250PS1
		FVR	FULL					T6250PS1
		2S2W	FULL					T6500PS1
		2S1W	FULL					T6500PS1
	300	FVNR	FULL	289	T6S600E5W	AF750N7-3011-70	UMC-FBP	T6250PS1
		FVR	FULL					T6250PS1
		2S2W	FULL					T4500PSF1
		2S1W	FULL					T4500PSF1
	350	FVNR	FULL	336	T6S600E5W	AF750N7-3011-70	UMC-FBP	T6250PS1
		FVR	FULL					T6250PS1
		2S2W	FULL					T4500PSF1
		2S1W	FULL					T4500PSF1
	400	FVNR	FULL	382	T6S800E5W	AF750N7-3011-70	UMC-FBP	T6250PS1
		FVR	FULL					T6250PS1
		2S2W	FULL					T6500PS1
		2S1W	FULL					T6500PS1
7	500	FVNR	FULL	472	T6S800E5W	AF750N7-3011-70	UMC-FBP	T6250PS1
		FVR	FULL					T6250PS1
		2S2W	FULL					T6500PS1
		2S1W	FULL					T6500PS1

Starters with UMC

600V; 42-65kA

NEMA Size	HP (Max)	Type	Size (Min)	FLA (Max)	Disconnect	Contactor	Overload Relay	CPT
2	15	FVNR	18E	17	T4S100E5W/T4L100E5W	A50N2-30-11-84	UMC-FBP	T6075PS1
		FVR	18E		T4L100E5W			
		2S2W	18E		T4L100E5W			
		2S1W	24E		T4L100E5W			
	20	FVNR	18E	22	T4S100E5W/T4L100E5W	A50N2-30-11-84	UMC-FBP	T6075PS1
		FVR	18E		T4L100E5W			
		2S2W	18E		T4L100E5W			
		2S1W	24E		T4L100E5W			
	25	FVNR	18E	27	T4L100E5W	A50N2-30-11-84	UMC-FBP	T6075PS1
		FVR	18E					
		2S2W	18E					
		2S1W	24E					
3	30	FVNR	18E	32	T4L100E5W	A75N3-30-11-84	UMC-FBP	T6075PS1
		FVR	18E					
		2S2W	18E					
		2S1W	24E					
	40	FVNR	18E	41	T4L100E5W	A75N3-30-11-84	UMC-FBP	T6075PS1
		FVR	18E					
		2S2W	18E					
		2S1W	24E					
	50	FVNR	18E	52	T4L100E5W	A75N3-30-11-84	UMC-FBP	T6075PS1
		FVR	24E					
		2S2W	24E					
		2S1W	24E					
4	60	FVNR	18E	62	T4L100E5W	A75N3-30-11-84	UMC-FBP	T6075PS1
		FVR	24E					
		2S2W	24E					
		2S1W	24E					
	75	FVNR	24E	77	T4H150E5W	A75N3-30-11-84	UMC-FBP	T6075PS1
		FVR	24E					
		2S2W	24E					
		2S1W	30E					
	100	FVNR	30E	99	T4L150E5W	A145N4-30-11-84	UMC-FBP	T6150PS1
		FVR	36E					T6150PS1
		2S2W	42E					T6200PS1
		2S1W	48E					T6200PS1

Starters with UMC

600V; 42-65kA

NEMA Size	HP (Max)	Type	Size (Min)	FLA (Max)	Disconnect	Contactor	Overload Relay	CPT
5	125	FVNR	36E	125	T4L250E5W	A260N5-30-11-84	UMC-FBP	T6250PS1
		FVR	48E					T6250PS1
		2S2W	48E					T6350PS1
		2S1W	FULL					T6350PS1
	150	FVNR	36E	144	T5L300E5W	A260N5-30-11-84	UMC-FBP	T6250PS1
		FVR	FULL					T6250PS1
		2S2W	FULL					T6350PS1
		2S1W	FULL					T6350PS1
	200	FVNR	36E	192	T5L400E5W	AF460N6-3011-70	UMC-FBP	T6250PS1
		FVR	FULL					T6150PS1
		2S2W	FULL					T6250PS1
		2S1W	FULL					T6250PS1
6	250	FVNR	FULL	242	T6L600E5W	AF750N7-3011-70	UMC-FBP	T6250PS1
		FVR	FULL					T6250PS1
		2S2W	FULL					T6500PS1
		2S1W	FULL					T6500PS1
	300	FVNR	FULL	289	T6L600E5W	AF750N7-3011-70	UMC-FBP	T6250PS1
		FVR	FULL					T6250PS1
		2S2W	FULL					T4500PSF1
		2S1W	FULL					T4500PSF1
	350	FVNR	FULL	336	T6L600E5W	AF750N7-3011-70	UMC-FBP	T6250PS1
		FVR	FULL					T6250PS1
		2S2W	FULL					T4500PSF1
		2S1W	FULL					T4500PSF1
	400	FVNR	FULL	382	T6L800E5W	AF750N7-3011-70	UMC-FBP	T6250PS1
		FVR	FULL					T6250PS1
		2S2W	FULL					T6500PS1
		2S1W	FULL					T6500PS1
7	500	FVNR	FULL	472	T6L800E5W	AF750N7-3011-70	UMC-FBP	T6250PS1
		FVR	FULL					T6250PS1
		2S2W	FULL					T6500PS1
		2S1W	FULL					T6500PS1

Softstarters

Softstarters Units

The MNS-MCC incorporates the PST series reduced voltage starter. Softstarter units are available in either withdrawable or fixed unit types, NEMA range Size 2 through 7. Refer to the selection tables for additional detail.

The MNS-MCC Combination Softstarter Units are provided with a combination of the following:

– An ABB control power transformer for 120VAC power
– An ABB PST series softstarter ranging from 20 HP to 250 HP (27 A to 302 A) or an ABB PSTB series softstarter with integrated bypass ranging from 300 HP to 500 HP (361 A to 590 A)
– An ABB disconnecting means
– Reversing units include a bypass contactor for PST series softstarter and a set of reversing contactors (A-line or AF type)
– Non-reversing units shall include a bypass contactor (A-line or AF type) for PST series softstarter

For information on the components and load terminals provided for softstarter units, please refer to the Components of Units section.

Combination Softstarter Selection
208V; 42kA

Nema Size	HP	Type	FLA (Max)	Unit Size	Softstarter	Disconnect	CPT (optional)	Bypass Contactor	Mains Contactor (Reversing Only)	Configuration
3	20	Non-Reversing	60	24E	PST72-600-70	T2S100MW	T4150PSF1	A75N3-30-11-84	-	Withdrawable-CCU300
		25	60	30E	PST72-600-70	T2S100MW	T4150PSF1	A75N3-30-11-84	A75N3-30-11-84	Withdrawable-CCU300
	25	Non-Reversing	75	30E	PST85-600-70	T2S100MW	T4150PSF1	A75N3-30-11-84	-	Withdrawable-CCU300
		40	75	36E	PST85-600-70	T4N100E5W	T4150PSF1	A75N3-30-11-84	A75N3-30-11-84	Withdrawable-CCU300
4	30	Non-Reversing	88	36E	PST105-600-70	T4N100E5W	T4250PSF1	A145N4-30-11-84	-	Withdrawable-CCU300
		60	88	Full	PST105-600-70	T4N100E5W	T4250PSF1	A145N4-30-11-84	A145N4-30-11-84	Fixed
	40	Non-Reversing	115	36E	PST142-600-70	T4N150E5W	T4250PSF1	A145N4-30-11-84	-	Withdrawable-CCU300
		100	115	Full	PST142-600-70	T4N150E5W	T4250PSF1	A145N4-30-11-84	A145N4-30-11-84	Fixed
5	50	Non-Reversing	143	Full	PST175-600-70	T4N150E5W	T4500PSF1	A260N5-30-11-84	-	Fixed
		150	143	Full	PST175-600-70	T4N150E5W	T4500PSF1	A260N5-30-11-84	A260N5-30-11-84	Fixed
	60	Non-Reversing	169	Full	PST210-600-70	T5N300E5W	T4500PSF1	A260N5-30-11-84	-	Fixed
		Reversing	169	Full	PST210-600-70	T5N300E5W	T4500PSF1	A260N5-30-11-84	A260N5-30-11-84	Fixed
	75	Non-Reversing	212	Full	PST250-600-70	T5N300E5W	T4500PSF1	A260N5-30-11-84	-	Fixed
		Reversing	212	Full	PST250-600-70	T5N300E5W	T4500PSF1	A260N5-30-11-84	A260N5-30-11-84	Fixed
6	100	Non-Reversing	273	Full	PST300-600-70	T5N400E5W	T4500PSF1	AF460N6-30-11-70	-	Fixed
		Reversing	273	Full	PST300-600-70	T5N400E5W	T4500PSF1	AF460N6-3011-70	AF460N6-3011-70	Fixed section 600mm
	125	Non-Reversing	344	Full	PSTB370-600-70	T6N600E5W	T4500PSF1	Built-in	-	Fixed
		Reversing	344	Full	PSTB370-600-70	T6N600E5W	T4500PSF1	Built-in	AF460N6-3011-70	Fixed section 600mm
	150	Non-Reversing	396	Full	PSTB470-600-70	T6N600E5W	T4500PSF1	Built-in	-	Fixed
		Reversing	396	Full	PSTB470-600-70	T6N600E5W	T4500PSF1	Built-in	AF460N6-3011-70	Fixed section 600mm
	200	Non-Reversing	528	Full	PSTB570-600-70	T6N800E5W	T4500PSF1	Built-in	-	Fixed
		Reversing	528	Full	PSTB570-600-70	T6N800E5W	T4500PSF1	Built-in	AF460N6-3011-70	Fixed section 600mm

Softstarters

Combination Softstarter Selection
208V; 65kA

Nema Size	HP	Type	FLA (Max)	Unit Size	Softstarter	Disconnect	CPT (optional)	Bypass Contactor	Mains Contactor (Reversing Only)	Configuration
3	40	Non-Reversing	41	24E	PST44-600-70	T4L100E5W	T6150PS1	A75N3-30-11-84	-	Withdrawable-CCU40
	40	Reversing	41	30E	PST44-600-70	T4L100E5W	T6150PS1	A75N3-30-11-84	A75N3-30-11-84	Withdrawable-CCU40
	50	Non-Reversing	52	24E	PST50-600-70	T4L100E5W	T6150PS1	A75N3-30-11-84	-	Withdrawable-CCU300
	50	Reversing	52	30E	PST50-600-70	T4L100E5W	T6150PS1	A75N3-30-11-84	A75N3-30-11-84	Withdrawable-CCU300
4	60	Non-Reversing	62	30E	PST72-600-70	T4L100E5W	T6200PS1	A145N4-30-11-84	-	Withdrawable-CCU300
	60	Reversing	62	Full	PST72-600-70	T4L100E5W	T6200PS1	A145N4-30-11-84	A145N4-30-11-84	Fixed
	75	Non-Reversing	77	36E	PST85-600-70	T4L100E5W	T6250PS1	A145N4-30-11-84	-	Withdrawable-CCU300
	75	Reversing	77	Full	PST85-600-70	T4L100E5W	T6250PS1	A145N4-30-11-84	A145N4-30-11-84	Fixed
	100	Non-Reversing	99	36E	PST105-600-70	T4L100E5W	T6250PS1	A145N4-30-11-84	-	Withdrawable-CCU300
	100	Reversing	99	Full	PST105-600-70	T4L100E5W	T6250PS1	A145N4-30-11-84	A145N4-30-11-84	Fixed
5	125	Non-Reversing	125	42E	PST142-600-70	T4L150E5W	T6350PS1	A260N5-30-11-84	-	Withdrawable-CCU300
	125	Reversing	125	Full	PST142-600-70	T4L150E5W	T6350PS1	A260N5-30-11-84	A260N5-30-11-84	Fixed
	150	Non-Reversing	144	Full	PST175-600-70	T4L150E5W	T6500PS1	A260N5-30-11-84	-	Fixed
	150	Reversing	144	Full	PST175-600-70	T4L150E5W	T6500PS1	A260N5-30-11-84	A260N5-30-11-84	Fixed
	200	Non-Reversing	192	Full	PST210-600-70	T5L300E5W	T6500PS1	A260N5-30-11-84	-	Fixed
	200	Reversing	192	Full	PST210-600-70	T5L300E5W	T6500PS1	A260N5-30-11-84	A260N5-30-11-84	Fixed
6	250	Non-Reversing	242	Full	PST250-600-70	T5L400E5W	T6500PS1	AF460N6-30-11-70	-	Fixed
	250	Reversing	242	Full	PST250-600-70	T5L400E5W	T6500PS1	AF460N6-30-11-70	AF460N6-30-11-70	Fixed
	300	Non-Reversing	289	Full	PST300-600-70	T6L600E5W	T6500PS1	AF460N6-30-11-70	-	Fixed
	300	Reversing	289	Full	PST300-600-70	T6L600E5W	T6500PS1	AF460N6-30-11-70	AF460N6-30-11-70	Fixed
	350	Non-Reversing	336	Full	PSTB370-600-70	T6L600E5W	T6500PS1	-	-	Fixed
	350	Reversing	336	Full	PSTB370-600-70	T6L600E5W	T6500PS1	-	AF460N6-30-11-70	Fixed
	400	Non-Reversing	382	Full	PSTB470-600-70	T6L600E5W	T6500PS1	-	-	Fixed
	400	Reversing	382	Full	PSTB470-600-70	T6L600E5W	T6500PS1	-	AF460N6-30-11-70	Fixed

Softstarters

Combination Softstarter Selection
208V; 100kA

Nema Size	HP	Type	FLA (Max)	Unit Size	Softstarter	Disconnect	CPT (optional)	Bypass Contactor	Mains Contactor (Reversing Only)	Configuration
3	20	Non-Reversing	60	24E	PST72-600-70	T4S100E5W	T4150PSF1	A75N3-30-11-84	-	Withdrawable-CCU300
		Reversing	60	30E	PST72-600-70	T4S100E5W	T4150PSF1	A75N3-30-11-84	A75N3-30-11-84	Withdrawable-CCU300
	25	Non-Reversing	75	30E	PST85-600-70	T4S100E5W	T4150PSF1	A75N3-30-11-84	-	Withdrawable-CCU300
		Reversing	75	36E	PST85-600-70	T4S100E5W	T4150PSF1	A75N3-30-11-84	A75N3-30-11-84	Withdrawable-CCU300
4	30	Non-Reversing	88	36E	PST105-600-70	T4S100E5W	T4250PSF1	A145N4-30-11-84	-	Withdrawable-CCU300
		Reversing	88	Full	PST105-600-70	T4S100E5W	T4250PSF1	A145N4-30-11-84	A145N4-30-11-84	Fixed
	40	Non-Reversing	115	36E	PST142-600-70	T4S150E5W	T4250PSF1	A145N4-30-11-84	-	Withdrawable-CCU300
		Reversing	115	Full	PST142-600-70	T4S150E5W	T4250PSF1	A145N4-30-11-84	A145N4-30-11-84	Fixed
5	50	Non-Reversing	143	Full	PST175-600-70	T4S150E5W	T4500PSF1	A260N5-30-11-84	-	Fixed
		Reversing	143	Full	PST175-600-70	T4S150E5W	T4500PSF1	A260N5-30-11-84	A260N5-30-11-84	Fixed
	60	Non-Reversing	169	Full	PST210-600-70	T5S300E5W	T4500PSF1	A260N5-30-11-84	-	Fixed
		Reversing	169	Full	PST210-600-70	T5S300E5W	T4500PSF1	A260N5-30-11-84	A260N5-30-11-84	Fixed
	75	Non-Reversing	212	Full	PST250-600-70	T5S300E5W	T4500PSF1	A260N5-30-11-84	-	Fixed
		Reversing	212	Full	PST250-600-70	T5S300E5W	T4500PSF1	A260N5-30-11-84	A260N5-30-11-84	Fixed
6	100	Non-Reversing	273	Full	PST300-600-70	T5S400E5W	T4500PSF1	AF460N6-30-11-70	-	Fixed
		Reversing	273	Full	PST300-600-70	T5S400E5W	T4500PSF1	AF460N6-3011-70	AF460N6-3011-70	Fixed section 600mm
	125	Non-Reversing	344	Full	PSTB370-600-70	T6S600E5W	T4500PSF1	Built-in	-	Fixed
		Reversing	344	Full	PSTB370-600-70	T6S600E5W	T4500PSF1	Built-in	AF460N6-3011-70	Fixed section 600mm
	150	Non-Reversing	396	Full	PSTB470-600-70	T6S600E5W	T4500PSF1	Built-in	-	Fixed
		Reversing	396	Full	PSTB470-600-70	T6S600E5W	T4500PSF1	Built-in	AF460N6-3011-70	Fixed section 600mm
	200	Non-Reversing	528	Full	PSTB570-600-70	T6S800E5W	T4500PSF1	Built-in	-	Fixed
		Reversing	528	Full	PSTB570-600-70	T6S800E5W	T4500PSF1	Built-in	AF460N6-3011-70	Fixed section 600mm

Softstarters

Combination Softstarter Selection
208V; 100kA

Nema Size	HP	Type	FLA (Max)	Unit Size	Softstarter	Disconnect	CPT (optional)	Bypass Contactor	Mains Contactor (Reversing Only)	Configuration
3	20	Non-Reversing	54	24E	PST50-600-70	T2S100MW	T4150PSF1	A75N3-30-11-84	-	Withdrawable-CCU300
		Reversing	54	30E	PST50-600-70	T2S100MW	T4150PSF1	A75N3-30-11-84	A75N3-30-11-84	Withdrawable-CCU300
	25	Non-Reversing	68	24E	PST72-600-70	T2S100MW	T4150PSF1	A75N3-30-11-84	-	Withdrawable-CCU300
		Reversing	68	30E	PST72-600-70	T4N100E5W	T4150PSF1	A75N3-30-11-84	A75N3-30-11-84	Withdrawable-CCU300
	30	Non-Reversing	80	30E	PST85-600-70	T2S100MW	T4150PSF1	A75N3-30-11-84	-	Withdrawable-CCU300
		Reversing	80	36E	PST85-600-70	T4N100E5W	T4150PSF1	A75N3-30-11-84	A75N3-30-11-84	Withdrawable-CCU300
4	40	Non-Reversing	104	36E	PST105-600-70	T4N150E5W	T4250PSF1	A145N4-30-11-84	-	Withdrawable-CCU300
		Reversing	104	Full	PST105-600-70	T4N150E5W	T4250PSF1	A145N4-30-11-84	A145N4-30-11-84	Fixed
	50	Non-Reversing	130	36E	PST142-600-70	T4N150E5W	T4250PSF1	A145N4-30-11-84	-	Withdrawable-CCU300
		Reversing	130	Full	PST142-600-70	T4N150E5W	T4250PSF1	A145N4-30-11-84	A145N4-30-11-84	Fixed
5	60	Non-Reversing	154	Full	PST175-600-70	T5N300E5W	T4500PSF1	A260N5-30-11-84	-	Fixed
		Reversing	154	Full	PST175-600-70	T5N300E5W	T4500PSF1	A260N5-30-11-84	A260N5-30-11-84	Fixed
	75	Non-Reversing	192	Full	PST210-600-70	T5N300E5W	T4500PSF1	A260N5-30-11-84	-	Fixed
		Reversing	192	Full	PST210-600-70	T5N300E5W	T4500PSF1	A260N5-30-11-84	A260N5-30-11-84	Fixed
	100	Non-Reversing	248	Full	PST250-600-70	T5N400E5W	T4500PSF1	A260N5-30-11-84	-	Fixed
		Reversing	248	Full	PST250-600-70	T5N400E5W	T4500PSF1	A260N5-30-11-84	A260N5-30-11-84	Fixed
6	125	Non-Reversing	312	Full	PSTB370-600-70	T6N600E5W	T4500PSF1	Built-in	-	Fixed
		Reversing	312	Full	PSTB370-600-70	T6N600E5W	T4500PSF1	Built-in	AF460N6-3011-70	Fixed section 600mm
	150	Non-Reversing	360	Full	PSTB370-600-70	T6N600E5W	T4500PSF1	Built-in	-	Fixed
		Reversing	360	Full	PSTB370-600-70	T6N600E5W	T4500PSF1	Built-in	AF460N6-3011-70	Fixed section 600mm
	200	Non-Reversing	480	Full	PSTB470-600-70	T6N800E5W	T4500PSF1	Built-in	-	Fixed
		Reversing	480	Full	PSTB470-600-70	T6N800E5W	T4500PSF1	Built-in	AF460N6-3011-70	Fixed section 600mm
7	250	Non-Reversing	604	Full	PSTB1050-600-70	T7S1000E5W	T4500PSF1	Built-in	-	Fixed section 600mm
		Reversing	604	Full	PSTB1050-600-70	T7S1000E5W	T4500PSF1	Built-in	AF750N7-3011-70	Fixed section 600mm

Softstarters

Combination Softstarter Selection
240V; 65kA

Nema Size	HP	Type	FLA (Max)	Unit Size	Softstarter	Disconnect	CPT (optional)	Bypass Contactor	Mains Contactor (Reversing Only)	Configuration
3	20	Non-Reversing	54	24E	PST50-600-70	T2S100MW	T4150PSF1	A75N3-30-11-84	-	Withdrawable-CCU300
		Reversing	54	30E	PST50-600-70	T2S100MW	T4150PSF1	A75N3-30-11-84	A75N3-30-11-84	Withdrawable-CCU300
	25	Non-Reversing	68	24E	PST72-600-70	T2S100MW	T4150PSF1	A75N3-30-11-84	-	Withdrawable-CCU300
		Reversing	68	30E	PST72-600-70	T4N100E5W	T4150PSF1	A75N3-30-11-84	A75N3-30-11-84	Withdrawable-CCU300
	30	Non-Reversing	80	30E	PST85-600-70	T2S100MW	T4150PSF1	A75N3-30-11-84	-	Withdrawable-CCU300
		Reversing	80	36E	PST85-600-70	T4N100E5W	T4150PSF1	A75N3-30-11-84	A75N3-30-11-84	Withdrawable-CCU300
4	40	Non-Reversing	104	36E	PST105-600-70	T4N150E5W	T4250PSF1	A145N4-30-11-84	-	Withdrawable-CCU300
		Reversing	104	Full	PST105-600-70	T4N150E5W	T4250PSF1	A145N4-30-11-84	A145N4-30-11-84	Fixed
	50	Non-Reversing	130	36E	PST142-600-70	T4N150E5W	T4250PSF1	A145N4-30-11-84	-	Withdrawable-CCU300
		Reversing	130	Full	PST142-600-70	T4N150E5W	T4250PSF1	A145N4-30-11-84	A145N4-30-11-84	Fixed
5	60	Non-Reversing	154	Full	PST175-600-70	T5N300E5W	T4500PSF1	A260N5-30-11-84	-	Fixed
		Reversing	154	Full	PST175-600-70	T5N300E5W	T4500PSF1	A260N5-30-11-84	A260N5-30-11-84	Fixed
	75	Non-Reversing	192	Full	PST210-600-70	T5N300E5W	T4500PSF1	A260N5-30-11-84	-	Fixed
		Reversing	192	Full	PST210-600-70	T5N300E5W	T4500PSF1	A260N5-30-11-84	A260N5-30-11-84	Fixed
	100	Non-Reversing	248	Full	PST250-600-70	T5N400E5W	T4500PSF1	A260N5-30-11-84	-	Fixed
		Reversing	248	Full	PST250-600-70	T5N400E5W	T4500PSF1	A260N5-30-11-84	A260N5-30-11-84	Fixed
6	125	Non-Reversing	312	Full	PSTB370-600-70	T6N600E5W	T4500PSF1	Built-in	-	Fixed
		Reversing	312	Full	PSTB370-600-70	T6N600E5W	T4500PSF1	Built-in	AF460N6-3011-70	Fixed section 600mm
	150	Non-Reversing	360	Full	PSTB370-600-70	T6N600E5W	T4500PSF1	Built-in	-	Fixed
		Reversing	360	Full	PSTB370-600-70	T6N600E5W	T4500PSF1	Built-in	AF460N6-3011-70	Fixed section 600mm
	200	Non-Reversing	480	Full	PSTB470-600-70	T6N800E5W	T4500PSF1	Built-in	-	Fixed
		Reversing	480	Full	PSTB470-600-70	T6N800E5W	T4500PSF1	Built-in	AF460N6-3011-70	Fixed section 600mm
7	250	Non-Reversing	604	Full	PSTB1050-600-70	T7S1000E5W	T4500PSF1	Built-in	-	Fixed section 600mm
		Reversing	604	Full	PSTB1050-600-70	T7S1000E5W	T4500PSF1	Built-in	AF750N7-3011-70	Fixed section 600mm

Softstarters

Combination Softstarter Selection
240V; 100kA

Nema Size	HP	Type	FLA (Max)	Unit Size	Softstarter	Disconnect	CPT (optional)	Bypass Contactor	Mains Contactor (Reversing Only)	Configuration
3	20	Non-Reversing	54	24E	PST50-600-70	T4S100E5W	T4150PSF1	A75N3-30-11-84	-	Withdrawable-CCU300
		Reversing	54	30E	PST50-600-70	T4S100E5W	T4150PSF1	A75N3-30-11-84	A75N3-30-11-84	Withdrawable-CCU300
	25	Non-Reversing	68	24E	PST72-600-70	T4S100E5W	T4150PSF1	A75N3-30-11-84	-	Withdrawable-CCU300
		Reversing	68	30E	PST72-600-70	T4S100E5W	T4150PSF1	A75N3-30-11-84	A75N3-30-11-84	Withdrawable-CCU300
	30	Non-Reversing	80	30E	PST85-600-70	T4S100E5W	T4150PSF1	A75N3-30-11-84	-	Withdrawable-CCU300
		Reversing	80	36E	PST85-600-70	T4S100E5W	T4150PSF1	A75N3-30-11-84	A75N3-30-11-84	Withdrawable-CCU300
4	40	Non-Reversing	104	36E	PST105-600-70	T4S150E5W	T4250PSF1	A145N4-30-11-84	-	Withdrawable-CCU300
		Reversing	104	Full	PST105-600-70	T4S150E5W	T4250PSF1	A145N4-30-11-84	A145N4-30-11-84	Fixed
	50	Non-Reversing	130	36E	PST142-600-70	T4S150E5W	T4250PSF1	A145N4-30-11-84	-	Withdrawable-CCU300
		Reversing	130	Full	PST142-600-70	T4S150E5W	T4250PSF1	A145N4-30-11-84	A145N4-30-11-84	Fixed
5	60	Non-Reversing	154	Full	PST175-600-70	T5S300E5W	T4500PSF1	A260N5-30-11-84	-	Fixed
		Reversing	154	Full	PST175-600-70	T5S300E5W	T4500PSF1	A260N5-30-11-84	A260N5-30-11-84	Fixed
	75	Non-Reversing	192	Full	PST210-600-70	T5S300E5W	T4500PSF1	A260N5-30-11-84	-	Fixed
		Reversing	192	Full	PST210-600-70	T5S300E5W	T4500PSF1	A260N5-30-11-84	A260N5-30-11-84	Fixed
	100	Non-Reversing	248	Full	PST250-600-70	T5S400E5W	T4500PSF1	A260N5-30-11-84	-	Fixed
		Reversing	248	Full	PST250-600-70	T5S400E5W	T4500PSF1	A260N5-30-11-84	A260N5-30-11-84	Fixed
6	125	Non-Reversing	312	Full	PSTB370-600-70	T6S600E5W	T4500PSF1	Built-in	-	Fixed
		Reversing	312	Full	PSTB370-600-70	T6S600E5W	T4500PSF1	Built-in	AF460N6-3011-70	Fixed section 600mm
	150	Non-Reversing	360	Full	PSTB370-600-70	T6S600E5W	T4500PSF1	Built-in	-	Fixed
		Reversing	360	Full	PSTB370-600-70	T6S600E5W	T4500PSF1	Built-in	AF460N6-3011-70	Fixed section 600mm
	200	Non-Reversing	480	Full	PSTB470-600-70	T6S800E5W	T4500PSF1	Built-in	-	Fixed
		Reversing	480	Full	PSTB470-600-70	T6S800E5W	T4500PSF1	Built-in	AF460N6-3011-70	Fixed section 600mm
7	250	Non-Reversing	604	Full	PSTB1050-600-70	T7H1000E5W	T4500PSF1	Built-in	-	Fixed section 600mm
		Reversing	604	Full	PSTB1050-600-70	T7H1000E5W	T4500PSF1	Built-in	AF750N7-3011-70	Fixed section 600mm

Softstarters

Combination Softstarter Selection
480V; 42kA

Nema Size	HP	Type	FLA (Max)	Unit Size	Softstarter	Disconnect	CPT (optional)	Bypass Contactor	Mains Contactor (Reversing Only)	Configuration
2	20	Non-Reversing	27	24E	PST30-600-70	T2H050MW	T4150PSF1	A50N2-30-11-84	-	Withdrawable-CCU40
		Reversing	27	30E	PST30-600-70	T2H050MW	T4150PSF1	A50N2-30-11-84	A50N2-30-11-84	Withdrawable-CCU40
	25	Non-Reversing	34	24E	PST37-600-70	T2H050MW	T4150PSF1	A50N2-30-11-84	-	Withdrawable-CCU40
		Reversing	34	30E	PST37-600-70	T2H050MW	T4150PSF1	A50N2-30-11-84	A50N2-30-11-84	Withdrawable-CCU40
	30	Non-Reversing	40	24E	PST44-600-70	T2H050MW	T4150PSF1	A75N3-30-11-84	-	Withdrawable-CCU40
		Reversing	40	30E	PST44-600-70	T2H050MW	T4150PSF1	A75N3-30-11-84	A75N3-30-11-84	Withdrawable-CCU40
3	40	Non-Reversing	52	24E	PST50-600-70	T2H100MW	T4150PSF1	A75N3-30-11-84	-	Withdrawable-CCU300
		Reversing	52	30E	PST50-600-70	T2H100MW	T4150PSF1	A75N3-30-11-84	A75N3-30-11-84	Withdrawable-CCU300
	50	Non-Reversing	65	24E	PST72-600-70	T2H100MW	T4150PSF1	A75N3-30-11-84	-	Withdrawable-CCU300
		Reversing	65	30E	PST72-600-70	T2H100MW	T4150PSF1	A75N3-30-11-84	A75N3-30-11-84	Withdrawable-CCU300
4	60	Non-Reversing	77	36E	PST85-600-70	T4H100E5W	T4250PSF1	A145N4-30-11-84	-	Withdrawable-CCU300
		Reversing	77	Full	PST85-600-70	T4H100E5W	T4250PSF1	A145N4-30-11-84	A145N4-30-11-84	Fixed
	75	Non-Reversing	96	36E	PST105-600-70	T4H100E5W	T4250PSF1	A145N4-30-11-84	-	Withdrawable-CCU300
		Reversing	96	Full	PST105-600-70	T4H100E5W	T4250PSF1	A145N4-30-11-84	A145N4-30-11-84	Fixed
	100	Non-Reversing	124	36E	PST142-600-70	T4H150E5W	T4250PSF1	A145N4-30-11-84	-	Withdrawable-CCU300
		Reversing	124	Full	PST142-600-70	T4H150E5W	T4250PSF1	A145N4-30-11-84	A145N4-30-11-84	Fixed
5	125	Non-Reversing	156	Full	PST175-600-70	T5H300E5W	T4500PSF1	A260N5-30-11-84	-	Fixed
		Reversing	156	Full	PST175-600-70	T5H300E5W	T4500PSF1	A260N5-30-11-84	A260N5-30-11-84	Fixed
	150	Non-Reversing	180	Full	PST210-600-70	T5H300E5W	T4500PSF1	A260N5-30-11-84	-	Fixed
		Reversing	180	Full	PST210-600-70	T5H300E5W	T4500PSF1	A260N5-30-11-84	A260N5-30-11-84	Fixed
	200	Non-Reversing	240	Full	PST250-600-70	T5H300E5W	T4500PSF1	A260N5-30-11-84	-	Fixed
		Reversing	240	Full	PST250-600-70	T5H300E5W	T4500PSF1	A260N5-30-11-84	A260N5-30-11-84	Fixed
6	250	Non-Reversing	302	Full	PST300-600-70	T6S600E5W	T4500PSF1	AF460N6-30-11-70	-	Fixed
		Reversing	302	Full	PSTB370-600-70	T6H600E5W	T4500PSF1	Built-in	AF460N6-3011-70	Fixed section 600mm
	300	Non-Reversing	361	Full	PSTB370-600-70	T6S600E5W	T4500PSF1	Built-in	-	Fixed
		Reversing	361	Full	PSTB370-600-70	T6S600E5W	T4500PSF1	Built-in	AF460N6-3011-70	Fixed section 600mm
	350	Non-Reversing	414	Full	PSTB470-600-70	T6S600E5W	T4500PSF1	Built-in	-	Fixed
		Reversing	414	Full	PSTB470-600-70	T6S600E5W	T4500PSF1	Built-in	AF460N6-3011-70	Fixed section 600mm
	400	Non-Reversing	477	Full	PSTB470-600-70	T6S800E5W	T4500PSF1	Built-in	-	Fixed
		Reversing	477	Full	PSTB470-600-70	T6S800E5W	T4500PSF1	Built-in	AF460N6-3011-70	Fixed section 600mm
7	450	Non-Reversing	515	Full	PSTB1050-600-70	T7H1000E5W	T4500PSF1	Built-in	-	Fixed section 600mm
		Reversing	515	Full	PSTB1050-600-70	T7H1000E5W	T4500PSF1	Built-in	AF750N7-3011-70	Fixed section 600mm
	500	Non-Reversing	590	Full	PSTB1050-600-70	T7H1000E5W	T4500PSF1	Built-in	-	Fixed section 600mm
		Reversing	590	Full	PSTB1050-600-70	T7H1000E5W	T4500PSF1	Built-in	AF750N7-3011-70	Fixed section 600mm

Softstarters

Combination Softstarter Selection
480V; 65kA

Nema Size	HP	Type	FLA (Max)	Unit Size	Softstarter	Disconnect	CPT (optional)	Bypass Contactor	Mains Contactor (Reversing Only)	Configuration
2	20	Non-Reversing	27	24E	PST30-600-70	T2H050MW	T4150PSF1	A50N2-30-11-84	-	Withdrawable-CCU40
		Reversing	27	30E	PST30-600-70	T2H050MW	T4150PSF1	A50N2-30-11-84	A50N2-30-11-84	Withdrawable-CCU40
	25	Non-Reversing	34	24E	PST37-600-70	T2H050MW	T4150PSF1	A50N2-30-11-84	-	Withdrawable-CCU40
		Reversing	34	30E	PST37-600-70	T2H050MW	T4150PSF1	A50N2-30-11-84	A50N2-30-11-84	Withdrawable-CCU40
	30	Non-Reversing	40	24E	PST44-600-70	T2H050MW	T4150PSF1	A75N3-30-11-84	-	Withdrawable-CCU40
		Reversing	40	30E	PST44-600-70	T2H050MW	T4150PSF1	A75N3-30-11-84	A75N3-30-11-84	Withdrawable-CCU40
3	40	Non-Reversing	52	24E	PST50-600-70	T2H100MW	T4150PSF1	A75N3-30-11-84	-	Withdrawable-CCU300
		Reversing	52	30E	PST50-600-70	T2H100MW	T4150PSF1	A75N3-30-11-84	A75N3-30-11-84	Withdrawable-CCU300
	50	Non-Reversing	65	24E	PST72-600-70	T2H100MW	T4150PSF1	A75N3-30-11-84	-	Withdrawable-CCU300
		Reversing	65	30E	PST72-600-70	T2H100MW	T4150PSF1	A75N3-30-11-84	A75N3-30-11-84	Withdrawable-CCU300
4	60	Non-Reversing	77	36E	PST85-600-70	T4H100E5W	T4250PSF1	A145N4-30-11-84	-	Withdrawable-CCU300
		Reversing	77	Full	PST85-600-70	T4H100E5W	T4250PSF1	A145N4-30-11-84	A145N4-30-11-84	Fixed
	75	Non-Reversing	96	36E	PST105-600-70	T4H100E5W	T4250PSF1	A145N4-30-11-84	-	Withdrawable-CCU300
		Reversing	96	Full	PST105-600-70	T4H100E5W	T4250PSF1	A145N4-30-11-84	A145N4-30-11-84	Fixed
	100	Non-Reversing	124	36E	PST142-600-70	T4H150E5W	T4250PSF1	A145N4-30-11-84	-	Withdrawable-CCU300
		Reversing	124	Full	PST142-600-70	T4H150E5W	T4250PSF1	A145N4-30-11-84	A145N4-30-11-84	Fixed
5	125	Non-Reversing	156	Full	PST175-600-70	T5H300E5W	T4500PSF1	A260N5-30-11-84	-	Fixed
		Reversing	156	Full	PST175-600-70	T5H300E5W	T4500PSF1	A260N5-30-11-84	A260N5-30-11-84	Fixed
	150	Non-Reversing	180	Full	PST210-600-70	T5H300E5W	T4500PSF1	A260N5-30-11-84	-	Fixed
		Reversing	180	Full	PST210-600-70	T5H300E5W	T4500PSF1	A260N5-30-11-84	A260N5-30-11-84	Fixed
	200	Non-Reversing	240	Full	PST250-600-70	T5H300E5W	T4500PSF1	A260N5-30-11-84	-	Fixed
		Reversing	240	Full	PST250-600-70	T5H300E5W	T4500PSF1	A260N5-30-11-84	A260N5-30-11-84	Fixed
6	250	Non-Reversing	302	Full	PST300-600-70	T6H600E5W	T4500PSF1	AF460N6-30-11-70	-	Fixed
		Reversing	302	Full	PSTB370-600-70	T6H600E5W	T4500PSF1	Built-in	AF460N6-3011-70	Fixed section 600mm
	300	Non-Reversing	361	Full	PSTB370-600-70	T6H600E5W	T4500PSF1	Built-in	-	Fixed
		Reversing	361	Full	PSTB370-600-70	T6H600E5W	T4500PSF1	Built-in	AF460N6-3011-70	Fixed section 600mm
	350	Non-Reversing	414	Full	PSTB470-600-70	T6H600E5W	T4500PSF1	Built-in	-	Fixed
		Reversing	414	Full	PSTB470-600-70	T6H600E5W	T4500PSF1	Built-in	AF460N6-3011-70	Fixed section 600mm
	400	Non-Reversing	477	Full	PSTB470-600-70	T6H800E5W	T4500PSF1	Built-in	-	Fixed
		Reversing	477	Full	PSTB470-600-70	T6H800E5W	T4500PSF1	Built-in	AF460N6-3011-70	Fixed section 600mm
7	450	Non-Reversing	515	Full	PSTB1050-600-70	T7H1000E5W	T4500PSF1	Built-in	-	Fixed section 600mm
		Reversing	515	Full	PSTB1050-600-70	T7H1000E5W	T4500PSF1	Built-in	AF750N7-3011-70	Fixed section 600mm
	500	Non-Reversing	590	Full	PSTB1050-600-70	T7H1000E5W	T4500PSF1	Built-in	-	Fixed section 600mm
		Reversing	590	Full	PSTB1050-600-70	T7H1000E5W	T4500PSF1	Built-in	AF750N7-3011-70	Fixed section 600mm

Softstarters

Combination Softstarter Selection
480V; 100kA

Nema Size	HP	Type	FLA (Max)	Unit Size	Softstarter	Disconnect	CPT (optional)	Bypass Contactor	Mains Contactor (Reversing Only)	Configuration
2	20	Non-Reversing	27	24E	PST30-600-70	T4L040TW	T4150PSF1	A50N2-30-11-84	-	Withdrawable-CCU40
		Reversing	27	30E	PST30-600-70	T4L040TW	T4150PSF1	A50N2-30-11-84	A50N2-30-11-84	Withdrawable-CCU40
	25	Non-Reversing	34	24E	PST37-600-70	T4L050TW	T4150PSF1	A50N2-30-11-84	-	Withdrawable-CCU40
		Reversing	34	30E	PST37-600-70	T4L050TW	T4150PSF1	A50N2-30-11-84	A50N2-30-11-84	Withdrawable-CCU40
	30	Non-Reversing	40	24E	PST44-600-70	T4L050TW	T4150PSF1	A75N3-30-11-84	-	Withdrawable-CCU40
		Reversing	40	30E	PST44-600-70	T4L100E5W	T4150PSF1	A75N3-30-11-84	A75N3-30-11-84	Withdrawable-CCU40
3	40	Non-Reversing	52	24E	PST50-600-70	T4L100E5W	T4150PSF1	A75N3-30-11-84	-	Withdrawable-CCU300
		Reversing	52	30E	PST50-600-70	T4L100E5W	T4150PSF1	A75N3-30-11-84	A75N3-30-11-84	Withdrawable-CCU300
	50	Non-Reversing	65	24E	PST72-600-70	T4L100E5W	T4150PSF1	A75N3-30-11-84	-	Withdrawable-CCU300
		Reversing	65	30E	PST72-600-70	T4L100E5W	T4150PSF1	A75N3-30-11-84	A75N3-30-11-84	Withdrawable-CCU300
4	60	Non-Reversing	77	36E	PST85-600-70	T4L100E5W	T4250PSF1	A145N4-30-11-84	-	Withdrawable-CCU300
		Reversing	77	Full	PST85-600-70	T4L100E5W	T4250PSF1	A145N4-30-11-84	A145N4-30-11-84	Fixed
	75	Non-Reversing	96	36E	PST105-600-70	T4L100E5W	T4250PSF1	A145N4-30-11-84	-	Withdrawable-CCU300
		Reversing	96	Full	PST105-600-70	T4L100E5W	T4250PSF1	A145N4-30-11-84	A145N4-30-11-84	Fixed
	100	Non-Reversing	124	36E	PST142-600-70	T4L150E5W	T4250PSF1	A145N4-30-11-84	-	Withdrawable-CCU300
		Reversing	124	Full	PST142-600-70	T4L150E5W	T4250PSF1	A145N4-30-11-84	A145N4-30-11-84	Fixed
5	125	Non-Reversing	156	Full	PST175-600-70	T5L300E5W	T4500PSF1	A260N5-30-11-84	-	Fixed
		Reversing	156	Full	PST175-600-70	T5L300E5W	T4500PSF1	A260N5-30-11-84	A260N5-30-11-84	Fixed
	150	Non-Reversing	180	Full	PST210-600-70	T5L300E5W	T4500PSF1	A260N5-30-11-84	-	Fixed
		Reversing	180	Full	PST210-600-70	T5L300E5W	T4500PSF1	A260N5-30-11-84	A260N5-30-11-84	Fixed
	200	Non-Reversing	240	Full	PST250-600-70	T5L300E5W	T4500PSF1	A260N5-30-11-84	-	Fixed
		Reversing	240	Full	PST250-600-70	T5L300E5W	T4500PSF1	A260N5-30-11-84	A260N5-30-11-84	Fixed
6	250	Non-Reversing	302	Full	PST300-600-70	T6L600E5W	T4500PSF1	AF460N6-30-11-70	-	Fixed
		Reversing	302	Full	PSTB370-600-70	T6L600E5W	T4500PSF1	Built-in	AF460N6-3011-70	Fixed section 600mm
	300	Non-Reversing	361	Full	PSTB370-600-70	T6L600E5W	T4500PSF1	Built-in	-	Fixed
		Reversing	361	Full	PSTB370-600-70	T6L600E5W	T4500PSF1	Built-in	AF460N6-3011-70	Fixed section 600mm
	350	Non-Reversing	414	Full	PSTB470-600-70	T6L600E5W	T4500PSF1	Built-in	-	Fixed
		Reversing	414	Full	PSTB470-600-70	T6L600E5W	T4500PSF1	Built-in	AF460N6-3011-70	Fixed section 600mm
	400	Non-Reversing	477	Full	PSTB470-600-70	T6L800E5W	T4500PSF1	Built-in	-	Fixed
		Reversing	477	Full	PSTB470-600-70	T6L800E5W	T4500PSF1	Built-in	AF460N6-3011-70	Fixed section 600mm
7	450	Non-Reversing	515	Full	PSTB1050-600-70	T7L1000E5W	T4500PSF1	Built-in	-	Fixed section 600mm
		Reversing	515	Full	PSTB1050-600-70	T7L1000E5W	T4500PSF1	Built-in	AF750N7-3011-70	Fixed section 600mm
	500	Non-Reversing	590	Full	PSTB1050-600-70	T7L1000E5W	T4500PSF1	Built-in	-	Fixed section 600mm
		Reversing	590	Full	PSTB1050-600-70	T7L1000E5W	T4500PSF1	Built-in	AF750N7-3011-70	Fixed section 600mm

Softstarters

Combination Softstarter Selection
600V; 25kA

Nema Size	HP	Type	FLA (Max)	Unit Size	Softstarter	Disconnect	CPT (optional)	Bypass Contactor	Mains Contactor (Reversing Only)	Configuration
3	40	Non-Reversing	41	24E	PST44-600-70	T4S050MW	T6150PS1	A75N3-30-11-84	-	Withdrawable-CCU40
		Reversing	41	30E	PST44-600-70	T4S100E5W	T6150PS1	A75N3-30-11-84	A75N3-30-11-84	Withdrawable-CCU40
	50	Non-Reversing	52	24E	PST50-600-70	T4S100MW	T6150PS1	A75N3-30-11-84	-	Withdrawable-CCU300
		Reversing	52	30E	PST50-600-70	T4S100E5W	T6150PS1	A75N3-30-11-84	A75N3-30-11-84	Withdrawable-CCU300
4	60	Non-Reversing	62	30E	PST72-600-70	T4S100E5W	T6200PS1	A145N4-30-11-84	-	Withdrawable-CCU300
		Reversing	62	Full	PST72-600-70	T4S100E5W	T6200PS1	A145N4-30-11-84	A145N4-30-11-84	Fixed
	75	Non-Reversing	77	36E	PST85-600-70	T4S100E5W	T6250PS1	A145N4-30-11-84	-	Withdrawable-CCU300
		Reversing	77	Full	PST85-600-70	T4S100E5W	T6250PS1	A145N4-30-11-84	A145N4-30-11-84	Fixed
	100	Non-Reversing	99	36E	PST105-600-70	T4S100E5W	T6250PS1	A145N4-30-11-84	-	Withdrawable-CCU300
		Reversing	99	Full	PST105-600-70	T4S100E5W	T6250PS1	A145N4-30-11-84	A145N4-30-11-84	Fixed
5	125	Non-Reversing	125	42E	PST142-600-70	T4S150E5W	T6350PS1	A260N5-30-11-84	-	Withdrawable-CCU300
		Reversing	125	Full	PST142-600-70	T4S150E5W	T6350PS1	A260N5-30-11-84	A260N5-30-11-84	Fixed
	150	Non-Reversing	144	Full	PST175-600-70	T4S150E5W	T6500PS1	A260N5-30-11-84	-	Fixed
		Reversing	144	Full	PST175-600-70	T4S150E5W	T6500PS1	A260N5-30-11-84	A260N5-30-11-84	Fixed
	200	Non-Reversing	192	Full	PST210-600-70	T5S300E5W	T6500PS1	A260N5-30-11-84	-	Fixed
		Reversing	192	Full	PST210-600-70	T5S300E5W	T6500PS1	A260N5-30-11-84	A260N5-30-11-84	Fixed
6	250	Non-Reversing	242	Full	PST250-600-70	T6S600E5W	T6500PS1	AF460N6-30-11-70	-	Fixed
		Reversing	242	Full	PST250-600-70	T5S300E5W	T6500PS1	AF460N6-30-11-70	AF460N6-3011-70	Fixed section 600mm
	300	Non-Reversing	289	Full	PST300-600-70	T6S600E5W	T6500PS1	AF460N6-30-11-70	-	Fixed
		Reversing	289	Full	PSTB370-600-70	T6S600E5W	T6500PS1	Built-in	AF460N6-3011-70	Fixed section 600mm
	350	Non-Reversing	336	Full	PSTB370-600-70	T6S600E5W	T6500PS1	Built-in	-	Fixed
		Reversing	336	Full	PSTB370-600-70	T6S600E5W	T6500PS1	Built-in	AF460N6-3011-70	Fixed section 600mm
	400	Non-Reversing	382	Full	PSTB470-600-70	T6S600E5W	T6500PS1	Built-in	-	Fixed
		Reversing	382	Full	PSTB470-600-70	T6S600E5W	T6500PS1	Built-in	AF460N6-3011-70	Fixed section 600mm
7	500	Non-Reversing	412/472	Full	PSTB1050-600-70	T7S1000E5W	T6500PS1	Built-in	-	Fixed section 600mm
		Reversing	412/472	Full	PSTB1050-600-70	T7S1000E5W	T6500PS1	Built-in	AF750N7-3011-70	Fixed section 600mm

Softstarters

Combination Softstarter Selection
600V; 42kA

Nema Size	HP	Type	FLA (Max)	Unit Size	Softstarter	Disconnect	CPT (optional)	Bypass Contactor	Mains Contactor (Reversing Only)	Configuration
3	40	Non-Reversing	41	24E	PST44-600-70	T4L100E5W	T6150PS1	A75N3-30-11-84	-	Withdrawable-CCU40
		Reversing	41	30E	PST44-600-70	T4L100E5W	T6150PS1	A75N3-30-11-84	A75N3-30-11-84	Withdrawable-CCU40
	50	Non-Reversing	52	24E	PST50-600-70	T4L100E5W	T6150PS1	A75N3-30-11-84	-	Withdrawable-CCU300
		Reversing	52	30E	PST50-600-70	T4L100E5W	T6150PS1	A75N3-30-11-84	A75N3-30-11-84	Withdrawable-CCU300
4	60	Non-Reversing	62	30E	PST72-600-70	T4L100E5W	T6200PS1	A145N4-30-11-84	-	Withdrawable-CCU300
		Reversing	62	Full	PST72-600-70	T4L100E5W	T6200PS1	A145N4-30-11-84	A145N4-30-11-84	Fixed
	75	Non-Reversing	77	36E	PST85-600-70	T4L100E5W	T6250PS1	A145N4-30-11-84	-	Withdrawable-CCU300
		Reversing	77	Full	PST85-600-70	T4L100E5W	T6250PS1	A145N4-30-11-84	A145N4-30-11-84	Fixed
	100	Non-Reversing	99	36E	PST105-600-70	T4L100E5W	T6250PS1	A145N4-30-11-84	-	Withdrawable-CCU300
		Reversing	99	Full	PST105-600-70	T4L100E5W	T6250PS1	A145N4-30-11-84	A145N4-30-11-84	Fixed
5	125	Non-Reversing	125	42E	PST142-600-70	T4L150E5W	T6350PS1	A260N5-30-11-84	-	Withdrawable-CCU300
		Reversing	125	Full	PST142-600-70	T4L150E5W	T6350PS1	A260N5-30-11-84	A260N5-30-11-84	Fixed
	150	Non-Reversing	144	Full	PST175-600-70	T4L150E5W	T6500PS1	A260N5-30-11-84	-	Fixed
		Reversing	144	Full	PST175-600-70	T4L150E5W	T6500PS1	A260N5-30-11-84	A260N5-30-11-84	Fixed
	200	Non-Reversing	192	Full	PST210-600-70	T5L300E5W	T6500PS1	A260N5-30-11-84	-	Fixed
		Reversing	192	Full	PST210-600-70	T5L300E5W	T6500PS1	A260N5-30-11-84	A260N5-30-11-84	Fixed
6	250	Non-Reversing	242	Full	PST250-600-70	T6L600E5W	T6500PS1	AF460N6-30-11-70	-	Fixed
		Reversing	242	Full	PST250-600-70	T5L300E5W	T6500PS1	AF460N6-30-11-70	AF460N6-3011-70	Fixed section 600mm
	300	Non-Reversing	289	Full	PST300-600-70	T6L600E5W	T6500PS1	AF460N6-30-11-70	-	Fixed
		Reversing	289	Full	PSTB370-600-70	T6L600E5W	T6500PS1	Built-in	AF460N6-3011-70	Fixed section 600mm
	350	Non-Reversing	336	Full	PSTB370-600-70	T6L600E5W	T6500PS1	Built-in	-	Fixed
		Reversing	336	Full	PSTB370-600-70	T6L600E5W	T6500PS1	Built-in	AF460N6-3011-70	Fixed section 600mm
	400	Non-Reversing	382	Full	PSTB470-600-70	T6L600E5W	T6500PS1	Built-in	-	Fixed
		Reversing	382	Full	PSTB470-600-70	T6L600E5W	T6500PS1	Built-in	AF460N6-3011-70	Fixed section 600mm
7	500	Non-Reversing	412/472	Full	PSTB1050-600-70	T7L1000E5W	T6500PS1	Built-in	-	Fixed section 600mm
		Reversing	412/472	Full	PSTB1050-600-70	T7L1000E5W	T6500PS1	Built-in	AF750N7-3011-70	Fixed section 600mm

Drives

Variable Frequency Drive Units

MNS-MCC Variable Frequency Drive units utilize the industry leading ACS line of drives from ABB. Depending on the VFD size, the units may either be withdrawable or fixed mounted in a full size MCC enclosure. Refer to the selection tables for additional details.

VFD units for MNS-MCC include the following ACS VFD product families:

– ABB ACS350 up to 25 HP (38A)
– ABB ACS550 up to 150 HP (180 A)
– ABB ACS800 up to 150 HP (180 A)

A typical MCC VFD unit is designed as a packaged system that contains the following basic components:

– An ABB ACS variable frequency drive with door-mounted keypad for control and programming
– ABB/SACE circuit breaker disconnect
– ABB industrial control transformer (for 120VAC control power)

For information on the components and load terminals provided for variable frequency drive units, please refer to the Components of Units section.

Drives

Variable Frequency Drive Selection
ACS550; 208-240V; 42kA

HP	Duty (standard / heavy)*	FLA (Max)	Unit Size	Drive frame size	Drive	Disconnect	CPT (optional)	Configuration
0.75	standard (n/a)	-	-	-	-	-	-	-
	heavy	3.5	30E	R1	ACS550-U1-06A6-2	T2S015TW	T4045SF1	Withdrawable-CCU40
1	standard	4.6	30E	R1	ACS550-U1-06A6-2	T2S015TW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R1	ACS550-U1-07A5-2	T2S015TW	T4045SF1	Withdrawable-CCU40
1.5	standard	6.6	30E	R1	ACS550-U1-07A5-2	T2S015TW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R1	ACS550-U1-012A-2	T2S025BW	T4045SF1	Withdrawable-CCU40
2	standard	7.5	30E	R1	ACS550-U1-012A-2	T2S025BW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R1	ACS550-U1-017A-2	T2S025BW	T4045SF1	Withdrawable-CCU40
3	standard	11.8	30E	R1	ACS550-U1-017A-2	T2S025BW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R2	ACS550-U1-024A-2	T2S060BW	T4045SF1	Withdrawable-CCU40
5	standard	16.7	30E	R2	ACS550-U1-024A-2	T2S060BW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R2	ACS550-U1-031A-2	T2S060BW	T4045SF1	Withdrawable-CCU40
7.5	standard	24.2	30E	R2	ACS550-U1-031A-2	T2S060BW	T4045SF1	Withdrawable-CCU40
	heavy		42E	R3	ACS550-U1-046A-2	T2S060BW	T4045SF1	Withdrawable-CCU40
10	standard	30.8	42E	R3	ACS550-U1-046A-2	T2S060BW	T4045SF1	Withdrawable-CCU40
	heavy		42E	R3	ACS550-U1-059A-2	T2S100BW	T4045SF1	Withdrawable-CCU300
15	standard	46.2	42E	R3	ACS550-U1-059A-2	T2S100BW	T4045SF1	Withdrawable-CCU300
	heavy		48E	R4	ACS550-U1-075A-2	T4N100BW	T4045SF1	Withdrawable-CCU300
20	standard	59.4	48E	R4	ACS550-U1-075A-2	T4N100BW	T4045SF1	Withdrawable-CCU300
	heavy		48E	R4	ACS550-U1-088A-2	T4N150BW	T4045SF1	Withdrawable-CCU300
25	standard	74.8	48E	R4	ACS550-U1-088A-2	T4N150BW	T4045SF1	Withdrawable-CCU300
	heavy		48E	R4	ACS550-U1-114A-2	T4N150BW	T4045SF1	Withdrawable-CCU300
30	standard	88	48E	R4	ACS550-U1-114A-2	T4N150BW	T4045SF1	Withdrawable-CCU300
	heavy		Full	R6	ACS550-U1-143A-2	T4N250BW	T4045SF1	Fixed
40	standard	114	Full	R6	ACS550-U1-143A-2	T4N250BW	T4045SF1	Fixed
	heavy		Full	R6	ACS550-U1-178A-2	T4N250BW	T4045SF1	Fixed
50	standard	143	Full	R6	ACS550-U1-178A-2	T4N250BW	T4045SF1	Fixed
	heavy		Full	R6	ACS550-U1-221A-2	T5N300BW	T4045SF1	Fixed
60	standard	178	Full	R6	ACS550-U1-221A-2	T5N300BW	T4045SF1	Fixed
	heavy		Full	R6	ACS550-U1-248A-2	T5N400BW	T4045SF1	Fixed
75	standard	221	Full	R6	ACS550-U1-248A-2	T5N400BW	T4045SF1	Fixed
	heavy (n/a)	-	-	-	-	-	-	-

*Note: Standard-duty drives are rated for 110% nominal current for 1 minute; heavy-duty drives rated for 150% nominal current for 1 minute

Drives

Variable Frequency Drive Selection
ACS550; 208-240V; 65kA

HP	Duty (standard / heavy)*	FLA (Max)	Unit Size	Drive frame size	Drive	Disconnect	CPT (optional)	Configuration
0.75	standard (n/a)	-	-	-	-	-	-	-
	heavy	3.5	30E	R1	ACS550-U1-06A6-2	T2S015TW	T4045SF1	Withdrawable-CCU40
1	standard	4.6	30E	R1	ACS550-U1-06A6-2	T2S015TW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R1	ACS550-U1-07A5-2	T2S015TW	T4045SF1	Withdrawable-CCU40
1.5	standard	6.6	30E	R1	ACS550-U1-07A5-2	T2S015TW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R1	ACS550-U1-012A-2	T2S025BW	T4045SF1	Withdrawable-CCU40
2	standard	7.5	30E	R1	ACS550-U1-012A-2	T2S025BW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R1	ACS550-U1-017A-2	T2S025BW	T4045SF1	Withdrawable-CCU40
3	standard	11.8	30E	R1	ACS550-U1-017A-2	T2S025BW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R2	ACS550-U1-024A-2	T2S060BW	T4045SF1	Withdrawable-CCU40
5	standard	16.7	30E	R2	ACS550-U1-024A-2	T2S060BW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R2	ACS550-U1-031A-2	T2S060BW	T4045SF1	Withdrawable-CCU40
7.5	standard	24.2	30E	R2	ACS550-U1-031A-2	T2S060BW	T4045SF1	Withdrawable-CCU40
	heavy		42E	R3	ACS550-U1-046A-2	T2S060BW	T4045SF1	Withdrawable-CCU40
10	standard	30.8	42E	R3	ACS550-U1-046A-2	T2S060BW	T4045SF1	Withdrawable-CCU40
	heavy		42E	R3	ACS550-U1-059A-2	T2S100BW	T4045SF1	Withdrawable-CCU300
15	standard	46.2	42E	R3	ACS550-U1-059A-2	T2S100BW	T4045SF1	Withdrawable-CCU300
	heavy		48E	R4	ACS550-U1-075A-2	T4N100BW	T4045SF1	Withdrawable-CCU300
20	standard	59.4	48E	R4	ACS550-U1-075A-2	T4N100BW	T4045SF1	Withdrawable-CCU300
	heavy		48E	R4	ACS550-U1-088A-2	T4N150BW	T4045SF1	Withdrawable-CCU300
25	standard	74.8	48E	R4	ACS550-U1-088A-2	T4N150BW	T4045SF1	Withdrawable-CCU300
	heavy		48E	R4	ACS550-U1-114A-2	T4N150BW	T4045SF1	Withdrawable-CCU300
30	standard	88	48E	R4	ACS550-U1-114A-2	T4N150BW	T4045SF1	Withdrawable-CCU300
	heavy		Full	R6	ACS550-U1-143A-2	T4N250BW	T4045SF1	Fixed
40	standard	114	Full	R6	ACS550-U1-143A-2	T4N250BW	T4045SF1	Fixed
	heavy		Full	R6	ACS550-U1-178A-2	T4N250BW	T4045SF1	Fixed
50	standard	143	Full	R6	ACS550-U1-178A-2	T4N250BW	T4045SF1	Fixed
	heavy		Full	R6	ACS550-U1-221A-2	T5N300BW	T4045SF1	Fixed
60	standard	178	Full	R6	ACS550-U1-221A-2	T5N300BW	T4045SF1	Fixed
	heavy		Full	R6	ACS550-U1-248A-2	T5N400BW	T4045SF1	Fixed
75	standard	221	Full	R6	ACS550-U1-248A-2	T5N400BW	T4045SF1	Fixed
	heavy (n/a)	-	-	-	-	-	-	-

*Note: standard duty drives rated for 110% nominal current for 1 minute, heavy duty drives rated for 150% nominal current for 1 minute

Drives

Variable Frequency Drive Selection
ACS550; 208-240V; 100kA

HP	Duty (standard / heavy)*	FLA (Max)	Unit Size	Drive frame size	Drive	Disconnect	CPT (optional)	Configuration
0.75	standard (n/a)	-	-	-	-	-	-	-
	heavy	3.5	30E	R1	ACS550-U1-06A6-2	T4S020TW	T4045SF1	Withdrawable-CCU40
1	standard	4.6	30E	R1	ACS550-U1-06A6-2	T4S020TW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R1	ACS550-U1-07A5-2	T4S020TW	T4045SF1	Withdrawable-CCU40
1.5	standard	6.6	30E	R1	ACS550-U1-07A5-2	T4S020TW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R1	ACS550-U1-012A-2	T4S020TW	T4045SF1	Withdrawable-CCU40
2	standard	7.5	30E	R1	ACS550-U1-012A-2	T4S020TW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R1	ACS550-U1-017A-2	T4S030TW	T4045SF1	Withdrawable-CCU40
3	standard	11.8	30E	R1	ACS550-U1-017A-2	T4S030TW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R2	ACS550-U1-024A-2	T4S040TW	T4045SF1	Withdrawable-CCU40
5	standard	16.7	30E	R2	ACS550-U1-024A-2	T4S040TW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R2	ACS550-U1-031A-2	T4S040TW	T4045SF1	Withdrawable-CCU40
7.5	standard	24.2	30E	R2	ACS550-U1-031A-2	T4S040TW	T4045SF1	Withdrawable-CCU40
	heavy		42E	R3	ACS550-U1-046A-2	T4S100BW	T4045SF1	Withdrawable-CCU40
10	standard	30.8	42E	R3	ACS550-U1-046A-2	T4S100BW	T4045SF1	Withdrawable-CCU40
	heavy		42E	R3	ACS550-U1-059A-2	T4S100BW	T4045SF1	Withdrawable-CCU300
15	standard	46.2	42E	R3	ACS550-U1-059A-2	T4S100BW	T4045SF1	Withdrawable-CCU300
	heavy		48E	R4	ACS550-U1-075A-2	T4S100BW	T4045SF1	Withdrawable-CCU300
20	standard	59.4	48E	R4	ACS550-U1-075A-2	T4S100BW	T4045SF1	Withdrawable-CCU300
	heavy		48E	R4	ACS550-U1-088A-2	T4S150BW	T4045SF1	Withdrawable-CCU300
25	standard	74.8	48E	R4	ACS550-U1-088A-2	T4S150BW	T4045SF1	Withdrawable-CCU300
	heavy		48E	R4	ACS550-U1-114A-2	T4S150BW	T4045SF1	Withdrawable-CCU300
30	standard	88	48E	R4	ACS550-U1-114A-2	T4S150BW	T4045SF1	Withdrawable-CCU300
	heavy		Full	R6	ACS550-U1-143A-2	T4S250BW	T4045SF1	Fixed
40	standard	114	Full	R6	ACS550-U1-143A-2	T4S250BW	T4045SF1	Fixed
	heavy		Full	R6	ACS550-U1-178A-2	T4S250BW	T4045SF1	Fixed
50	standard	143	Full	R6	ACS550-U1-178A-2	T4S250BW	T4045SF1	Fixed
	heavy		Full	R6	ACS550-U1-221A-2	T5S300BW	T4045SF1	Fixed
60	standard	178	Full	R6	ACS550-U1-221A-2	T5S300BW	T4045SF1	Fixed
	heavy		Full	R6	ACS550-U1-248A-2	T5S400BW	T4045SF1	Fixed
75	standard	221	Full	R6	ACS550-U1-248A-2	T5S400BW	T4045SF1	Fixed
	heavy (n/a)	-	-	-	-	-	-	-

*Note: standard duty drives rated for 110% nominal current for 1 minute, heavy duty drives rated for 150% nominal current for 1 minute

Drives

Variable Frequency Drive Selection
ACS550; 480V; 42kA

HP	Duty (standard / heavy)*	FLA (Max)	Unit Size	Drive frame size	Drive	Disconnect	CPT (optional)	Configuration
1	standard (n/a)	-	-	-	-	-	-	-
	heavy	2.4	30E	R1	ACS550-U1-04A1-4	T2H015TW	T4045SF1	Withdrawable-CCU40
1.5	standard	3.3	30E	R1	ACS550-U1-04A1-4	T2H015TW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R1	ACS550-U1-06A9-4	T2H015TW	T4045SF1	Withdrawable-CCU40
2	standard	4.1	30E	R1	ACS550-U1-06A9-4	T2H015TW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R1	ACS550-U1-08A8-4	T2H015TW	T4045SF1	Withdrawable-CCU40
3	standard	6.9	30E	R1	ACS550-U1-08A8-4	T2H015TW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R1	ACS550-U1-012A-4	T2H025BW	T4045SF1	Withdrawable-CCU40
5	standard	8.8	30E	R1	ACS550-U1-012A-4	T2H025BW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R2	ACS550-U1-015A-4	T2H025BW	T4045SF1	Withdrawable-CCU40
7.5	standard	11.9	30E	R2	ACS550-U1-015A-4	T2H025BW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R2	ACS550-U1-023A-4	T2H030TW	T4045SF1	Withdrawable-CCU40
10	standard	15.4	30E	R2	ACS550-U1-023A-4	T2H030TW	T4045SF1	Withdrawable-CCU40
	heavy		42E	R3	ACS550-U1-031A-4	T2H060BW	T4045SF1	Withdrawable-CCU40
15	standard	23	42E	R3	ACS550-U1-031A-4	T2H060BW	T4045SF1	Withdrawable-CCU40
	heavy		42E	R3	ACS550-U1-038A-4	T2H060BW	T4045SF1	Withdrawable-CCU40
20	standard	31	42E	R3	ACS550-U1-038A-4	T2H060BW	T4045SF1	Withdrawable-CCU40
	heavy		42E	R3	ACS550-U1-045A-4	T2H060BW	T4045SF1	Withdrawable-CCU40
25	standard	38	42E	R3	ACS550-U1-045A-4	T2H060BW	T4045SF1	Withdrawable-CCU40
	heavy		48E	R4	ACS550-U1-059A-4	T2H100BW	T4045SF1	Withdrawable-CCU300
30	standard	45	48E	R4	ACS550-U1-059A-4	T2H100BW	T4045SF1	Withdrawable-CCU300
	heavy		48E	R4	ACS550-U1-072A-4	T4H100BW	T4045SF1	Withdrawable-CCU300
40	standard	59	48E	R4	ACS550-U1-072A-4	T4H100BW	T4045SF1	Withdrawable-CCU300
	heavy		48E	R4	ACS550-U1-078A-4	T4H100BW	T4045SF1	Withdrawable-CCU300
50	standard	72	48E	R4	ACS550-U1-078A-4	T4H100BW	T4045SF1	Withdrawable-CCU300
	heavy		48E	R4	ACS550-U1-097A-4	T4H150BW	T4045SF1	Withdrawable-CCU300
60	standard	77	48E	R4	ACS550-U1-097A-4	T4H150BW	T4045SF1	Withdrawable-CCU300
	heavy		Full	R5	ACS550-U1-125A-4	T4H250BW	T4045SF1	Fixed
75	standard	96	Full	R5	ACS550-U1-125A-4	T4H250BW	T4045SF1	Fixed
	heavy (n/a)		Full	R6	ACS550-U1-157A-4	T4H250BW	T4045SF1	Fixed
100	standard	125	Full	R6	ACS550-U1-157A-4	T4H250BW	T4045SF1	Fixed
	heavy (n/a)		Full	R6	ACS550-U1-180A-4	T4H250BW	T4045SF1	Fixed
125	standard	157	Full	R6	ACS550-U1-180A-4	T4H250BW	T4045SF1	Fixed
	heavy (n/a)		Full	R6	ACS550-U1-246A-4	T5H400BW	T4045SF1	Fixed
150	standard	180	Full	R6	ACS550-U1-246A-4	T5H400BW	T4045SF1	Fixed
	heavy (n/a)	-	-	-	-	-	-	-

*Note: standard duty drives rated for 110% nominal current for 1 minute, heavy duty drives rated for 150% nominal current for 1 minute

Drives

Variable Frequency Drive Selection
ACS550; 480V; 65kA

HP	Duty (standard / heavy)*	FLA (Max)	Unit Size	Drive frame size	Drive	Disconnect	CPT (optional)	Configuration
1	standard (n/a)	-	-	-	-	-	-	-
	heavy	2.4	30E	R1	ACS550-U1-04A1-4	T2H015TW	T4045SF1	Withdrawable-CCU40
1.5	standard	3.3	30E	R1	ACS550-U1-04A1-4	T2H015TW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R1	ACS550-U1-06A9-4	T2H015TW	T4045SF1	Withdrawable-CCU40
2	standard	4.1	30E	R1	ACS550-U1-06A9-4	T2H015TW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R1	ACS550-U1-08A8-4	T2H015TW	T4045SF1	Withdrawable-CCU40
3	standard	6.9	30E	R1	ACS550-U1-08A8-4	T2H015TW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R1	ACS550-U1-012A-4	T2H025BW	T4045SF1	Withdrawable-CCU40
5	standard	8.8	30E	R1	ACS550-U1-012A-4	T2H025BW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R2	ACS550-U1-015A-4	T2H025BW	T4045SF1	Withdrawable-CCU40
7.5	standard	11.9	30E	R2	ACS550-U1-015A-4	T2H025BW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R2	ACS550-U1-023A-4	T2H030TW	T4045SF1	Withdrawable-CCU40
10	standard	15.4	30E	R2	ACS550-U1-023A-4	T2H030TW	T4045SF1	Withdrawable-CCU40
	heavy		42E	R3	ACS550-U1-031A-4	T2H060BW	T4045SF1	Withdrawable-CCU40
15	standard	23	42E	R3	ACS550-U1-031A-4	T2H060BW	T4045SF1	Withdrawable-CCU40
	heavy		42E	R3	ACS550-U1-038A-4	T2H060BW	T4045SF1	Withdrawable-CCU40
20	standard	31	42E	R3	ACS550-U1-038A-4	T2H060BW	T4045SF1	Withdrawable-CCU40
	heavy		42E	R3	ACS550-U1-045A-4	T2H060BW	T4045SF1	Withdrawable-CCU40
25	standard	38	42E	R3	ACS550-U1-045A-4	T2H060BW	T4045SF1	Withdrawable-CCU40
	heavy		48E	R4	ACS550-U1-059A-4	T2H100BW	T4045SF1	Withdrawable-CCU300
30	standard	45	48E	R4	ACS550-U1-059A-4	T2H100BW	T4045SF1	Withdrawable-CCU300
	heavy		48E	R4	ACS550-U1-072A-4	T4H100BW	T4045SF1	Withdrawable-CCU300
40	standard	59	48E	R4	ACS550-U1-072A-4	T4H100BW	T4045SF1	Withdrawable-CCU300
	heavy		48E	R4	ACS550-U1-078A-4	T4H100BW	T4045SF1	Withdrawable-CCU300
50	standard	72	48E	R4	ACS550-U1-078A-4	T4H100BW	T4045SF1	Withdrawable-CCU300
	heavy		48E	R4	ACS550-U1-097A-4	T4H150BW	T4045SF1	Withdrawable-CCU300
60	standard	77	48E	R4	ACS550-U1-097A-4	T4H150BW	T4045SF1	Withdrawable-CCU300
	heavy		Full	R5	ACS550-U1-125A-4	T4H250BW	T4045SF1	Fixed
75	standard	96	Full	R5	ACS550-U1-125A-4	T4H250BW	T4045SF1	Fixed
	heavy (n/a)		Full	R6	ACS550-U1-157A-4	T4H250BW	T4045SF1	Fixed
100	standard	125	Full	R6	ACS550-U1-157A-4	T4H250BW	T4045SF1	Fixed
	heavy (n/a)		Full	R6	ACS550-U1-180A-4	T4H250BW	T4045SF1	Fixed
125	standard	157	Full	R6	ACS550-U1-180A-4	T4H250BW	T4045SF1	Fixed
	heavy (n/a)		Full	R6	ACS550-U1-246A-4	T5H400BW	T4045SF1	Fixed
150	standard	180	Full	R6	ACS550-U1-246A-4	T5H400BW	T4045SF1	Fixed
	heavy (n/a)	-	-	-	-	-	-	-

*Note: standard duty drives rated for 110% nominal current for 1 minute, heavy duty drives rated for 150% nominal current for 1 minute

Drives

Variable Frequency Drive Selection
ACS550; 480V; 100kA

HP	Duty (standard / heavy)*	FLA (Max)	Unit Size	Drive frame size	Drive	Disconnect	CPT (optional)	Configuration
1	standard (n/a)	-	-	-	-	-	-	-
	heavy	2.4	30E	R1	ACS550-U1-04A1-4	T4L020TW	T4045SF1	Withdrawable-CCU40
1.5	standard	3.3	30E	R1	ACS550-U1-04A1-4	T4L020TW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R1	ACS550-U1-06A9-4	T4L020TW	T4045SF1	Withdrawable-CCU40
2	standard	4.1	30E	R1	ACS550-U1-06A9-4	T4L020TW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R1	ACS550-U1-08A8-4	T4L020TW	T4045SF1	Withdrawable-CCU40
3	standard	6.9	30E	R1	ACS550-U1-08A8-4	T4L020TW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R1	ACS550-U1-012A-4	T4L020TW	T4045SF1	Withdrawable-CCU40
5	standard	8.8	30E	R1	ACS550-U1-012A-4	T4L020TW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R2	ACS550-U1-015A-4	T4L020TW	T4045SF1	Withdrawable-CCU40
7.5	standard	11.9	30E	R2	ACS550-U1-015A-4	T4L020TW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R2	ACS550-U1-023A-4	T4L030TW	T4045SF1	Withdrawable-CCU40
10	standard	15.4	30E	R2	ACS550-U1-023A-4	T4L030TW	T4045SF1	Withdrawable-CCU40
	heavy		42E	R3	ACS550-U1-031A-4	T4L040TW	T4045SF1	Withdrawable-CCU40
15	standard	23	42E	R3	ACS550-U1-031A-4	T4L040TW	T4045SF1	Withdrawable-CCU40
	heavy		42E	R3	ACS550-U1-038A-4	T4L050TW	T4045SF1	Withdrawable-CCU40
20	standard	31	42E	R3	ACS550-U1-038A-4	T4L050TW	T4045SF1	Withdrawable-CCU40
	heavy		42E	R3	ACS550-U1-045A-4	T4L100BW	T4045SF1	Withdrawable-CCU40
25	standard	38	42E	R3	ACS550-U1-045A-4	T4L100BW	T4045SF1	Withdrawable-CCU40
	heavy		48E	R4	ACS550-U1-059A-4	T4L100BW	T4045SF1	Withdrawable-CCU300
30	standard	45	48E	R4	ACS550-U1-059A-4	T4L100BW	T4045SF1	Withdrawable-CCU300
	heavy		48E	R4	ACS550-U1-072A-4	T4L100BW	T4045SF1	Withdrawable-CCU300
40	standard	59	48E	R4	ACS550-U1-072A-4	T4L100BW	T4045SF1	Withdrawable-CCU300
	heavy		48E	R4	ACS550-U1-078A-4	T4L100BW	T4045SF1	Withdrawable-CCU300
50	standard	72	48E	R4	ACS550-U1-078A-4	T4L100BW	T4045SF1	Withdrawable-CCU300
	heavy		48E	R4	ACS550-U1-097A-4	T4L150BW	T4045SF1	Withdrawable-CCU300
60	standard	77	48E	R4	ACS550-U1-097A-4	T4L150BW	T4045SF1	Withdrawable-CCU300
	heavy		Full	R5	ACS550-U1-125A-4	T4L250BW	T4045SF1	Fixed
75	standard	96	Full	R5	ACS550-U1-125A-4	T4L250BW	T4045SF1	Fixed
	heavy (n/a)		Full	R6	ACS550-U1-157A-4	T4L250BW	T4045SF1	Fixed
100	standard	125	Full	R6	ACS550-U1-157A-4	T4L250BW	T4045SF1	Fixed
	heavy (n/a)		Full	R6	ACS550-U1-180A-4	T4L250BW	T4045SF1	Fixed
125	standard	157	Full	R6	ACS550-U1-180A-4	T4L250BW	T4045SF1	Fixed
	heavy (n/a)		Full	R6	ACS550-U1-246A-4	T5L400BW	T4045SF1	Fixed
150	standard	180	Full	R6	ACS550-U1-246A-4	T5L400BW	T4045SF1	Fixed
	heavy (n/a)	-	-	-	-	-	-	-

*Note: standard duty drives rated for 110% nominal current for 1 minute, heavy duty drives rated for 150% nominal current for 1 minute

Drives

Variable Frequency Drive Selection
ACS550; 480V; 100kA

HP	Duty (standard / heavy)*	FLA (Max)	Unit Size	Drive frame size	Drive	Disconnect	CPT (optional)	Configuration
1.5	standard	2.4	30E	R2	ACS550-U1-02A7-6	T4S020TW	T6045S1	Withdrawable-CCU40
	heavy		30E	R2	ACS550-U1-03A9-6	T4S020TW	T6045S1	Withdrawable-CCU40
2	standard	2.7	30E	R2	ACS550-U1-03A9-6	T4S020TW	T6045S1	Withdrawable-CCU40
	heavy		30E	R2	ACS550-U1-06A1-6	T4S020TW	T6045S1	Withdrawable-CCU40
3	standard	3.9	30E	R2	ACS550-U1-06A1-6	T4S020TW	T6045S1	Withdrawable-CCU40
	heavy		30E	R2	ACS550-U1-09A0-6	T4S020TW	T6045S1	Withdrawable-CCU40
5	standard	6.1	30E	R2	ACS550-U1-09A0-6	T4S020TW	T6045S1	Withdrawable-CCU40
	heavy		30E	R2	ACS550-U1-011A-6	T4S020TW	T6045S1	Withdrawable-CCU40
7.5	standard	9	30E	R2	ACS550-U1-011A-6	T4S020TW	T6045S1	Withdrawable-CCU40
	heavy		30E	R2	ACS550-U1-017A-6	T4S030TW	T6045S1	Withdrawable-CCU40
10	standard	11	30E	R2	ACS550-U1-017A-6	T4S030TW	T6045S1	Withdrawable-CCU40
	heavy		42E	R3	ACS550-U1-022A-6	T4S030TW	T6045S1	Withdrawable-CCU40
15	standard	17	42E	R3	ACS550-U1-022A-6	T4S030TW	T6045S1	Withdrawable-CCU40
	heavy		42E	R3	ACS550-U1-027A-6	T4S040TW	T6045S1	Withdrawable-CCU40
20	standard	22	42E	R3	ACS550-U1-027A-6	T4S040TW	T6045S1	Withdrawable-CCU40
	heavy		48E	R4	ACS550-U1-032A-6	T4S050TW	T6045S1	Withdrawable-CCU40
25	standard	27	48E	R4	ACS550-U1-032A-6	T4S050TW	T6045S1	Withdrawable-CCU40
	heavy		48E	R4	ACS550-U1-041A-6	T4S100BW	T6045S1	Withdrawable-CCU40
30	standard	32	48E	R4	ACS550-U1-041A-6	T4S100BW	T6045S1	Withdrawable-CCU40
	heavy		48E	R4	ACS550-U1-052A-6	T4S100BW	T6045S1	Withdrawable-CCU300
40	standard	41	48E	R4	ACS550-U1-052A-6	T4S100BW	T6045S1	Withdrawable-CCU300
	heavy		48E	R4	ACS550-U1-062A-6	T4S100BW	T6045S1	Withdrawable-CCU300
50	standard	52	48E	R4	ACS550-U1-062A-6	T4S100BW	T6045S1	Withdrawable-CCU300
	heavy		Full	R6	ACS550-U1-077A-6	T4S100BW	T6045S1	Fixed
60	standard	62	Full	R6	ACS550-U1-077A-6	T4S100BW	T6045S1	Fixed
	heavy		Full	R6	ACS550-U1-099A-6	T4S150BW	T6045S1	Fixed
75	standard	77	Full	R6	ACS550-U1-099A-6	T4S150BW	T6045S1	Fixed
	heavy (n/a)		Full	R6	ACS550-U1-125A-6	T4S250BW	T6045S1	Fixed
100	standard	99	Full	R6	ACS550-U1-125A-6	T4S250BW	T6045S1	Fixed
	heavy (n/a)		Full	R6	ACS550-U1-144A-6	T4S250BW	T6045S1	Fixed
125	standard	125	Full	R6	ACS550-U1-144A-6	T4S250BW	T6045S1	Fixed
	heavy (n/a)	-	-	-	-	-	-	-

*Note: standard duty drives rated for 110% nominal current for 1 minute, heavy duty drives rated for 150% nominal current for 1 minute

Drives

Variable Frequency Drive Selection
ACS550; 600V; 42kA

HP	Duty (standard / heavy)*	FLA (Max)	Unit Size	Drive frame size	Drive	Disconnect	CPT (optional)	Configuration
1.5	standard	2.4	30E	R2	ACS550-U1-02A7-6	T4L020TW	T6045S1	Withdrawable-CCU40
	heavy		30E	R2	ACS550-U1-03A9-6	T4L020TW	T6045S1	Withdrawable-CCU40
2	standard	2.7	30E	R2	ACS550-U1-03A9-6	T4L020TW	T6045S1	Withdrawable-CCU40
	heavy		30E	R2	ACS550-U1-06A1-6	T4L020TW	T6045S1	Withdrawable-CCU40
3	standard	3.9	30E	R2	ACS550-U1-06A1-6	T4L020TW	T6045S1	Withdrawable-CCU40
	heavy		30E	R2	ACS550-U1-09A0-6	T4L020TW	T6045S1	Withdrawable-CCU40
5	standard	6.1	30E	R2	ACS550-U1-09A0-6	T4L020TW	T6045S1	Withdrawable-CCU40
	heavy		30E	R2	ACS550-U1-011A-6	T4L020TW	T6045S1	Withdrawable-CCU40
7.5	standard	9	30E	R2	ACS550-U1-011A-6	T4L020TW	T6045S1	Withdrawable-CCU40
	heavy		30E	R2	ACS550-U1-017A-6	T4L030TW	T6045S1	Withdrawable-CCU40
10	standard	11	30E	R2	ACS550-U1-017A-6	T4L030TW	T6045S1	Withdrawable-CCU40
	heavy		42E	R3	ACS550-U1-022A-6	T4L030TW	T6045S1	Withdrawable-CCU40
15	standard	17	42E	R3	ACS550-U1-022A-6	T4L030TW	T6045S1	Withdrawable-CCU40
	heavy		42E	R3	ACS550-U1-027A-6	T4L040TW	T6045S1	Withdrawable-CCU40
20	standard	22	42E	R3	ACS550-U1-027A-6	T4L040TW	T6045S1	Withdrawable-CCU40
	heavy		48E	R4	ACS550-U1-032A-6	T4L050TW	T6045S1	Withdrawable-CCU40
25	standard	27	48E	R4	ACS550-U1-032A-6	T4L050TW	T6045S1	Withdrawable-CCU40
	heavy		48E	R4	ACS550-U1-041A-6	T4L100BW	T6045S1	Withdrawable-CCU40
30	standard	32	48E	R4	ACS550-U1-041A-6	T4L100BW	T6045S1	Withdrawable-CCU40
	heavy		48E	R4	ACS550-U1-052A-6	T4L100BW	T6045S1	Withdrawable-CCU300
40	standard	41	48E	R4	ACS550-U1-052A-6	T4L100BW	T6045S1	Withdrawable-CCU300
	heavy		48E	R4	ACS550-U1-062A-6	T4L100BW	T6045S1	Withdrawable-CCU300
50	standard	52	48E	R4	ACS550-U1-062A-6	T4L100BW	T6045S1	Withdrawable-CCU300
	heavy		Full	R6	ACS550-U1-077A-6	T4L100BW	T6045S1	Fixed
60	standard	62	Full	R6	ACS550-U1-077A-6	T4L100BW	T6045S1	Fixed
	heavy		Full	R6	ACS550-U1-099A-6	T4L150BW	T6045S1	Fixed
75	standard	77	Full	R6	ACS550-U1-099A-6	T4L150BW	T6045S1	Fixed
	heavy (n/a)		Full	R6	ACS550-U1-125A-6	T4L250BW	T6045S1	Fixed
100	standard	99	Full	R6	ACS550-U1-125A-6	T4L250BW	T6045S1	Fixed
	heavy (n/a)		Full	R6	ACS550-U1-144A-6	T4L250BW	T6045S1	Fixed
125	standard	125	Full	R6	ACS550-U1-144A-6	T4L250BW	T6045S1	Fixed
	heavy (n/a)	-	-	-	-	-	-	-

*Note: standard duty drives rated for 110% nominal current for 1 minute, heavy duty drives rated for 150% nominal current for 1 minute

Drives

Variable Frequency Drive Selection
ACS550; 600V; 65kA

HP	Duty (standard / heavy)*	FLA (Max)	Unit Size	Drive frame size	Drive	Disconnect	CPT (optional)	Configuration
1.5	standard	2.4	30E	R2	ACS550-U1-02A7-6	T4L020TW	T6045S1	Withdrawable-CCU40
	heavy		30E	R2	ACS550-U1-03A9-6	T4L020TW	T6045S1	Withdrawable-CCU40
2	standard	2.7	30E	R2	ACS550-U1-03A9-6	T4L020TW	T6045S1	Withdrawable-CCU40
	heavy		30E	R2	ACS550-U1-06A1-6	T4L020TW	T6045S1	Withdrawable-CCU40
3	standard	3.9	30E	R2	ACS550-U1-06A1-6	T4L020TW	T6045S1	Withdrawable-CCU40
	heavy		30E	R2	ACS550-U1-09A0-6	T4L020TW	T6045S1	Withdrawable-CCU40
5	standard	6.1	30E	R2	ACS550-U1-09A0-6	T4L020TW	T6045S1	Withdrawable-CCU40
	heavy		30E	R2	ACS550-U1-011A-6	T4L020TW	T6045S1	Withdrawable-CCU40
7.5	standard	9	30E	R2	ACS550-U1-011A-6	T4L020TW	T6045S1	Withdrawable-CCU40
	heavy		30E	R2	ACS550-U1-017A-6	T4L030TW	T6045S1	Withdrawable-CCU40
10	standard	11	30E	R2	ACS550-U1-017A-6	T4L030TW	T6045S1	Withdrawable-CCU40
	heavy		42E	R3	ACS550-U1-022A-6	T4L030TW	T6045S1	Withdrawable-CCU40
15	standard	17	42E	R3	ACS550-U1-022A-6	T4L030TW	T6045S1	Withdrawable-CCU40
	heavy		42E	R3	ACS550-U1-027A-6	T4L040TW	T6045S1	Withdrawable-CCU40
20	standard	22	42E	R3	ACS550-U1-027A-6	T4L040TW	T6045S1	Withdrawable-CCU40
	heavy		48E	R4	ACS550-U1-032A-6	T4L050TW	T6045S1	Withdrawable-CCU40
25	standard	27	48E	R4	ACS550-U1-032A-6	T4L050TW	T6045S1	Withdrawable-CCU40
	heavy		48E	R4	ACS550-U1-041A-6	T4L100BW	T6045S1	Withdrawable-CCU40
30	standard	32	48E	R4	ACS550-U1-041A-6	T4L100BW	T6045S1	Withdrawable-CCU40
	heavy		48E	R4	ACS550-U1-052A-6	T4L100BW	T6045S1	Withdrawable-CCU300
40	standard	41	48E	R4	ACS550-U1-052A-6	T4L100BW	T6045S1	Withdrawable-CCU300
	heavy		48E	R4	ACS550-U1-062A-6	T4L100BW	T6045S1	Withdrawable-CCU300
50	standard	52	48E	R4	ACS550-U1-062A-6	T4L100BW	T6045S1	Withdrawable-CCU300
	heavy		Full	R6	ACS550-U1-077A-6	T4L100BW	T6045S1	Fixed
60	standard	62	Full	R6	ACS550-U1-077A-6	T4L100BW	T6045S1	Fixed
	heavy		Full	R6	ACS550-U1-099A-6	T4L150BW	T6045S1	Fixed
75	standard	77	Full	R6	ACS550-U1-099A-6	T4L150BW	T6045S1	Fixed
	heavy (n/a)		Full	R6	ACS550-U1-125A-6	T4L250BW	T6045S1	Fixed
100	standard	99	Full	R6	ACS550-U1-125A-6	T4L250BW	T6045S1	Fixed
	heavy (n/a)		Full	R6	ACS550-U1-144A-6	T4L250BW	T6045S1	Fixed
125	standard	125	Full	R6	ACS550-U1-144A-6	T4L250BW	T6045S1	Fixed
	heavy (n/a)	-	-	-	-	-	-	-

*Note: standard duty drives rated for 110% nominal current for 1 minute, heavy duty drives rated for 150% nominal current for 1 minute

Drives

Variable Frequency Drive Selection
ACS355; 208-240V; 42kA

HP	FLA (Max)	Unit Size	Drive frame size	Drive	Disconnect	CPT (optional)	Configuration
0.5	2.4	12E	R0	ACS355-03U-03A5-2	T2S015TW	T4045SF1	Withdrawable-CCU40
0.75	3.5	12E	R1	ACS355-03U-04A7-2	T2S015TW	T4045SF1	Withdrawable-CCU40
1	4.7	12E	R1	ACS355-03U-06A7-2	T2S015TW	T4045SF1	Withdrawable-CCU40
1.5	6.7	12E	R1	ACS355-03U-07A5-2	T2S015TW	T4045SF1	Withdrawable-CCU40
2	7.5	18E	R2	ACS355-03U-09A8-2	T2S020TW	T4045SF1	Withdrawable-CCU40
3	9.8	18E	R2	ACS355-03U-17A6-2	T2S030TW	T4045SF1	Withdrawable-CCU40
4	13.3	18E	R2	ACS355-03U-17A6-2	T2S030TW	T4045SF1	Withdrawable-CCU40
5	17.6	18E	R3	ACS355-03U-24A4-2	T2S060BW	T4045SF1	Withdrawable-CCU40
7.5	24.4	24E	R4	ACS355-03U-31A0-2	T2S060BW	T4045SF1	Withdrawable-CCU40
10	31	24E	R4	ACS355-03U-46A2-2	T2S100BW	T4045SF1	Withdrawable-CCU40

*Note: standard duty drives rated for 110% nominal current for 1 minute, heavy duty drives rated for 150% nominal current for 1 minute

ACS355; 208-240V; 65kA

HP	FLA (Max)	Unit Size	Drive frame size	Drive	Disconnect	CPT (optional)	Configuration
0.5	2.4	12E	R0	ACS355-03U-03A5-2	T2S015TW	T4045SF1	Withdrawable-CCU40
0.75	3.5	12E	R1	ACS355-03U-04A7-2	T2S015TW	T4045SF1	Withdrawable-CCU40
1	4.7	12E	R1	ACS355-03U-06A7-2	T2S015TW	T4045SF1	Withdrawable-CCU40
1.5	6.7	12E	R1	ACS355-03U-07A5-2	T2S015TW	T4045SF1	Withdrawable-CCU40
2	7.5	18E	R2	ACS355-03U-09A8-2	T2S020TW	T4045SF1	Withdrawable-CCU40
3	9.8	18E	R2	ACS355-03U-17A6-2	T2S030TW	T4045SF1	Withdrawable-CCU40
4	13.3	18E	R2	ACS355-03U-17A6-2	T2S030TW	T4045SF1	Withdrawable-CCU40
5	17.6	18E	R3	ACS355-03U-24A4-2	T2S060BW	T4045SF1	Withdrawable-CCU40
7.5	24.4	24E	R4	ACS355-03U-31A0-2	T2S060BW	T4045SF1	Withdrawable-CCU40
10	31	24E	R4	ACS355-03U-46A2-2	T2S100BW	T4045SF1	Withdrawable-CCU40

*Note: standard duty drives rated for 110% nominal current for 1 minute, heavy duty drives rated for 150% nominal current for 1 minute

ACS355; 208-240V; 100kA

HP	FLA (Max)	Unit Size	Drive frame size	Drive	Disconnect	CPT (optional)	Configuration
0.5	2.4	12E	R0	ACS355-03U-03A5-2	T2S015TW	T4045SF1	Withdrawable-CCU40
0.75	3.5	12E	R1	ACS355-03U-04A7-2	T2S015TW	T4045SF1	Withdrawable-CCU40
1	4.7	12E	R1	ACS355-03U-06A7-2	T2S015TW	T4045SF1	Withdrawable-CCU40
1.5	6.7	12E	R1	ACS355-03U-07A5-2	T2S015TW	T4045SF1	Withdrawable-CCU40
2	7.5	18E	R2	ACS355-03U-09A8-2	T2S020TW	T4045SF1	Withdrawable-CCU40
3	9.8	18E	R2	ACS355-03U-17A6-2	T2S030TW	T4045SF1	Withdrawable-CCU40
4	13.3	18E	R2	ACS355-03U-17A6-2	T2S030TW	T4045SF1	Withdrawable-CCU40
5	17.6	18E	R3	ACS355-03U-24A4-2	T2S060BW	T4045SF1	Withdrawable-CCU40
7.5	24.4	24E	R4	ACS355-03U-31A0-2	T2S060BW	T4045SF1	Withdrawable-CCU40
10	31	24E	R4	ACS355-03U-46A2-2	T2S100BW	T4045SF1	Withdrawable-CCU40

*Note: standard duty drives rated for 110% nominal current for 1 minute, heavy duty drives rated for 150% nominal current for 1 minute

Drives

Variable Frequency Drive Selection
ACS355; 480V; 42kA

HP	FLA (Max)	Unit Size	Drive frame size	Drive	Disconnect	CPT (optional)	Configuration
0.5	1.1	12E	R0	ACS355-03U-01A9-4	T2H015TW	T4045SF1	Withdrawable-CCU40
0.75	1.9	12E	R1	ACS355-03U-02A4-4	T2H015TW	T4045SF1	Withdrawable-CCU40
1	2.1	12E	R1	ACS355-03U-03A3-4	T2H015TW	T4045SF1	Withdrawable-CCU40
1.5	3	12E	R1	ACS355-03U-04A1-4	T2H015TW	T4045SF1	Withdrawable-CCU40
2	3.4	12E	R1	ACS355-03U-05A6-4	T2H015TW	T4045SF1	Withdrawable-CCU40
3	5.6	12E	R1	ACS355-03U-08A8-4	T2H020TW	T4045SF1	Withdrawable-CCU40
4	7.3	12E	R1	ACS355-03U-08A8-4	T2H020TW	T4045SF1	Withdrawable-CCU40
5	8.8	18E	R3	ACS355-03U-12A5-4	T2H025BW	T4045SF1	Withdrawable-CCU40
7.5	12.5	18E	R3	ACS355-03U-15A6-4	T2H030TW	T4045SF1	Withdrawable-CCU40
10	15.6	18E	R3	ACS355-03U-23A1-4	T2H060BW	T4045SF1	Withdrawable-CCU40
15	23.1	24E	R4	ACS355-03U-31A0-4	T2H060BW	T4045SF1	Withdrawable-CCU40
20	31	24E	R4	ACS355-03U-38A0-4	T2H100BW	T4045SF1	Withdrawable-CCU40
25	38	24E	R4	ACS355-03U-44A0-4	T2H100BW	T4045SF1	Withdrawable-CCU40

*Note: standard duty drives rated for 110% nominal current for 1 minute, heavy duty drives rated for 150% nominal current for 1 minute

ACS355; 480V; 65kA

HP	FLA (Max)	Unit Size	Drive frame size	Drive	Disconnect	CPT (optional)	Configuration
0.5	1.1	12E	R0	ACS355-03U-01A9-4	T2H015TW	T4045SF1	Withdrawable-CCU40
0.75	1.9	12E	R1	ACS355-03U-02A4-4	T2H015TW	T4045SF1	Withdrawable-CCU40
1	2.1	12E	R1	ACS355-03U-03A3-4	T2H015TW	T4045SF1	Withdrawable-CCU40
1.5	3	12E	R1	ACS355-03U-04A1-4	T2H015TW	T4045SF1	Withdrawable-CCU40
2	3.4	12E	R1	ACS355-03U-05A6-4	T2H015TW	T4045SF1	Withdrawable-CCU40
3	5.6	12E	R1	ACS355-03U-08A8-4	T2H020TW	T4045SF1	Withdrawable-CCU40
4	7.3	12E	R1	ACS355-03U-08A8-4	T2H020TW	T4045SF1	Withdrawable-CCU40
5	8.8	18E	R3	ACS355-03U-12A5-4	T2H025BW	T4045SF1	Withdrawable-CCU40
7.5	12.5	18E	R3	ACS355-03U-15A6-4	T2H030TW	T4045SF1	Withdrawable-CCU40
10	15.6	18E	R3	ACS355-03U-23A1-4	T2H060BW	T4045SF1	Withdrawable-CCU40
15	23.1	24E	R4	ACS355-03U-31A0-4	T2H060BW	T4045SF1	Withdrawable-CCU40
20	31	24E	R4	ACS355-03U-38A0-4	T2H100BW	T4045SF1	Withdrawable-CCU40
25	38	24E	R4	ACS355-03U-44A0-4	T2H100BW	T4045SF1	Withdrawable-CCU40

*Note: standard duty drives rated for 110% nominal current for 1 minute, heavy duty drives rated for 150% nominal current for 1 minute

Drives

Variable Frequency Drive Selection
ACS355; 480V; 100kA

HP	FLA (Max)	Unit Size	Drive frame size	Drive	Disconnect	CPT (optional)	Configuration
0.5	1.1	12E	R0	ACS355-03U-01A9-4	T2H015TW	T4045SF1	Withdrawable-CCU40
0.75	1.9	12E	R1	ACS355-03U-02A4-4	T2H015TW	T4045SF1	Withdrawable-CCU40
1	2.1	12E	R1	ACS355-03U-03A3-4	T2H015TW	T4045SF1	Withdrawable-CCU40
1.5	3	12E	R1	ACS355-03U-04A1-4	T2H015TW	T4045SF1	Withdrawable-CCU40
2	3.4	12E	R1	ACS355-03U-05A6-4	T2H015TW	T4045SF1	Withdrawable-CCU40
3	5.6	12E	R1	ACS355-03U-08A8-4	T2H020TW	T4045SF1	Withdrawable-CCU40
4	7.3	12E	R1	ACS355-03U-08A8-4	T2H020TW	T4045SF1	Withdrawable-CCU40
5	8.8	18E	R3	ACS355-03U-12A5-4	T2H025BW	T4045SF1	Withdrawable-CCU40
7.5	12.5	18E	R3	ACS355-03U-15A6-4	T2H030TW	T4045SF1	Withdrawable-CCU40
10	15.6	18E	R3	ACS355-03U-23A1-4	T2H060BW	T4045SF1	Withdrawable-CCU40
15	23.1	24E	R4	ACS355-03U-31A0-4	T2H060BW	T4045SF1	Withdrawable-CCU40
20	31	24E	R4	ACS355-03U-38A0-4	T2H100BW	T4045SF1	Withdrawable-CCU40
25	38	24E	R4	ACS355-03U-44A0-4	T2H100BW	T4045SF1	Withdrawable-CCU40

*Note: standard duty drives rated for 110% nominal current for 1 minute, heavy duty drives rated for 150% nominal current for 1 minute

Drives

Variable Frequency Drive Selection
ACS800; 208-240V; 42kA

HP	Duty (standard / heavy)*	FLA (Max)	Unit Size	Drive frame size	Drive	Disconnect	CPT (optional)	Configuration
0.75	standard (n/a)	-	-	-	-	-	-	-
	heavy	3.5	30E	R2	ACS800-U1-0002-2	T2S015TW	T4045SF1	Withdrawable-CCU40
1	standard	4.6	30E	R2	ACS800-U1-0002-2	T2S015TW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R2	ACS800-U1-0003-2	T2S015TW	T4045SF1	Withdrawable-CCU40
1.5	standard	6.6	30E	R2	ACS800-U1-0003-2	T2S015TW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R2	ACS800-U1-0004-2	T2S025BW	T4045SF1	Withdrawable-CCU40
2	standard	7.5	30E	R2	ACS800-U1-0004-2	T2S025BW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R3	ACS800-U1-0006-2	T2S025BW	T4045SF1	Withdrawable-CCU40
3	standard	13	30E	R3	ACS800-U1-0006-2	T2S025BW	T4045SF1	Withdrawable-CCU40
	heavy	9.8	30E	R3	ACS800-U1-0009-2	T2S060BW	T4045SF1	Withdrawable-CCU40
5	standard	17	30E	R3	ACS800-U1-0009-2	T2S060BW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R3	ACS800-U1-0011-2	T2S060BW	T4045SF1	Withdrawable-CCU40
7.5	standard	25	30E	R3	ACS800-U1-0011-2	T2S060BW	T4045SF1	Withdrawable-CCU40
	heavy	24.2	Full	R4	ACS800-U1-0016-2	T2S060BW	T4045SF1	Fixed
10	standard	30.8	Full	R4	ACS800-U1-0016-2	T2S060BW	T4045SF1	Fixed
	heavy		Full	R4	ACS800-U1-0020-2	T2S100BW	T4045SF1	Fixed
15	standard	46.2	Full	R4	ACS800-U1-0020-2	T2S100BW	T4045SF1	Fixed
	heavy		Full	R5	ACS800-U1-0025-2	T4N100BW	T4045SF1	Fixed
20	standard	59.4	Full	R5	ACS800-U1-0025-2	T4N100BW	T4045SF1	Fixed
	heavy		Full	R5	ACS800-U1-0030-2	T4N100BW	T4045SF1	Fixed
25	standard	74.8	Full	R5	ACS800-U1-0030-2	T4N100BW	T4045SF1	Fixed
	heavy		Full	R5	ACS800-U1-0040-2	T4N150BW	T4045SF1	Fixed
30	standard	88	Full	R5	ACS800-U1-0040-2	T4N150BW	T4045SF1	Fixed
	heavy		Full	R6	ACS800-U1-0050-2	T4N250BW	T4045SF1	Fixed
40	standard	114	Full	R6	ACS800-U1-0050-2	T4N250BW	T4045SF1	Fixed
	heavy		Full	R6	ACS800-U1-0060-2	T4N250BW	T4045SF1	Fixed
50	standard	143	Full	R6	ACS800-U1-0060-2	T4N250BW	T4045SF1	Fixed
	heavy		Full	R6	ACS800-U1-0070-2	T4N250BW	T4045SF1	Fixed
60	standard	169	Full	R6	ACS800-U1-0070-2	T4N250BW	T4045SF1	Fixed
	heavy (n/a)	-	-	-	-	-	-	-

*Note: standard duty drives rated for 110% nominal current for 1 minute, heavy duty drives rated for 150% nominal current for 1 minute

Drives

Variable Frequency Drive Selection
ACS800; 208-240V; 65kA

HP	Duty (standard / heavy)*	FLA (Max)	Unit Size	Drive frame size	Drive	Disconnect	CPT (optional)	Configuration
0.75	standard (n/a)	-	-	-	-	-	-	-
	heavy	3.5	30E	R2	ACS800-U1-0002-2	T2S015TW	T4045SF1	Withdrawable-CCU40
1	standard	4.6	30E	R2	ACS800-U1-0002-2	T2S015TW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R2	ACS800-U1-0003-2	T2S015TW	T4045SF1	Withdrawable-CCU40
1.5	standard	6.6	30E	R2	ACS800-U1-0003-2	T2S015TW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R2	ACS800-U1-0004-2	T2S025BW	T4045SF1	Withdrawable-CCU40
2	standard	7.5	30E	R2	ACS800-U1-0004-2	T2S025BW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R3	ACS800-U1-0006-2	T2S025BW	T4045SF1	Withdrawable-CCU40
3	standard	13	30E	R3	ACS800-U1-0006-2	T2S025BW	T4045SF1	Withdrawable-CCU40
	heavy	9.8	30E	R3	ACS800-U1-0009-2	T2S060BW	T4045SF1	Withdrawable-CCU40
5	standard	17	30E	R3	ACS800-U1-0009-2	T2S060BW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R3	ACS800-U1-0011-2	T2S060BW	T4045SF1	Withdrawable-CCU40
7.5	standard	25	30E	R3	ACS800-U1-0011-2	T2S060BW	T4045SF1	Withdrawable-CCU40
	heavy	24.2	Full	R4	ACS800-U1-0016-2	T2S060BW	T4045SF1	Fixed
10	standard	30.8	Full	R4	ACS800-U1-0016-2	T2S060BW	T4045SF1	Fixed
	heavy		Full	R4	ACS800-U1-0020-2	T2S100BW	T4045SF1	Fixed
15	standard	46.2	Full	R4	ACS800-U1-0020-2	T2S100BW	T4045SF1	Fixed
	heavy		Full	R5	ACS800-U1-0025-2	T4N100BW	T4045SF1	Fixed
20	standard	59.4	Full	R5	ACS800-U1-0025-2	T4N100BW	T4045SF1	Fixed
	heavy		Full	R5	ACS800-U1-0030-2	T4N100BW	T4045SF1	Fixed
25	standard	74.8	Full	R5	ACS800-U1-0030-2	T4N100BW	T4045SF1	Fixed
	heavy		Full	R5	ACS800-U1-0040-2	T4N150BW	T4045SF1	Fixed
30	standard	88	Full	R5	ACS800-U1-0040-2	T4N150BW	T4045SF1	Fixed
	heavy		Full	R6	ACS800-U1-0050-2	T4N250BW	T4045SF1	Fixed
40	standard	114	Full	R6	ACS800-U1-0050-2	T4N250BW	T4045SF1	Fixed
	heavy		Full	R6	ACS800-U1-0060-2	T4N250BW	T4045SF1	Fixed
50	standard	143	Full	R6	ACS800-U1-0060-2	T4N250BW	T4045SF1	Fixed
	heavy		Full	R6	ACS800-U1-0070-2	T4N250BW	T4045SF1	Fixed
60	standard	169	Full	R6	ACS800-U1-0070-2	T4N250BW	T4045SF1	Fixed
	heavy (n/a)	-	-	-	-	-	-	-

*Note: standard duty drives rated for 110% nominal current for 1 minute, heavy duty drives rated for 150% nominal current for 1 minute

Drives

Variable Frequency Drive Selection
ACS800; 208-240V; 100kA

HP	Duty (standard / heavy)*	FLA (Max)	Unit Size	Drive frame size	Drive	Disconnect	CPT (optional)	Configuration
0.75	standard (n/a)	-	-	-	-	-	-	-
	heavy	3.5	30E	R2	ACS800-U1-0002-2	T2S015TW	T4045SF1	Withdrawable-CCU40
1	standard	4.6	30E	R2	ACS800-U1-0002-2	T2S015TW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R2	ACS800-U1-0003-2	T2S015TW	T4045SF1	Withdrawable-CCU40
1.5	standard	6.6	30E	R2	ACS800-U1-0003-2	T2S015TW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R2	ACS800-U1-0004-2	T2S025BW	T4045SF1	Withdrawable-CCU40
2	standard	7.5	30E	R2	ACS800-U1-0004-2	T2S025BW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R3	ACS800-U1-0006-2	T2S025BW	T4045SF1	Withdrawable-CCU40
3	standard	13	30E	R3	ACS800-U1-0006-2	T2S025BW	T4045SF1	Withdrawable-CCU40
	heavy	9.8	30E	R3	ACS800-U1-0009-2	T2S060BW	T4045SF1	Withdrawable-CCU40
5	standard	17	30E	R3	ACS800-U1-0009-2	T2S060BW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R3	ACS800-U1-0011-2	T2S060BW	T4045SF1	Withdrawable-CCU40
7.5	standard	25	30E	R3	ACS800-U1-0011-2	T2S060BW	T4045SF1	Withdrawable-CCU40
	heavy	24.2	Full	R4	ACS800-U1-0016-2	T2S060BW	T4045SF1	Fixed
10	standard	30.8	Full	R4	ACS800-U1-0016-2	T2S060BW	T4045SF1	Fixed
	heavy		Full	R4	ACS800-U1-0020-2	T2S100BW	T4045SF1	Fixed
15	standard	46.2	Full	R4	ACS800-U1-0020-2	T2S100BW	T4045SF1	Fixed
	heavy		Full	R5	ACS800-U1-0025-2	T4N100BW	T4045SF1	Fixed
20	standard	59.4	Full	R5	ACS800-U1-0025-2	T4N100BW	T4045SF1	Fixed
	heavy		Full	R5	ACS800-U1-0030-2	T4N100BW	T4045SF1	Fixed
25	standard	74.8	Full	R5	ACS800-U1-0030-2	T4N100BW	T4045SF1	Fixed
	heavy		Full	R5	ACS800-U1-0040-2	T4N150BW	T4045SF1	Fixed
30	standard	88	Full	R5	ACS800-U1-0040-2	T4N150BW	T4045SF1	Fixed
	heavy		Full	R6	ACS800-U1-0050-2	T4N250BW	T4045SF1	Fixed
40	standard	114	Full	R6	ACS800-U1-0050-2	T4N250BW	T4045SF1	Fixed
	heavy		Full	R6	ACS800-U1-0060-2	T4N250BW	T4045SF1	Fixed
50	standard	143	Full	R6	ACS800-U1-0060-2	T4N250BW	T4045SF1	Fixed
	heavy		Full	R6	ACS800-U1-0070-2	T4N250BW	T4045SF1	Fixed
60	standard	169	Full	R6	ACS800-U1-0070-2	T4N250BW	T4045SF1	Fixed
	heavy (n/a)	-	-	-	-	-	-	-

*Note: standard duty drives rated for 110% nominal current for 1 minute, heavy duty drives rated for 150% nominal current for 1 minute

Drives

Variable Frequency Drive Selection
ACS800; 480V; 42kA

HP	Duty (standard / heavy)*	FLA (Max)	Unit Size	Drive frame size	Drive	Disconnect	CPT (optional)	Configuration
2	standard	4.2	30E	R2	ACS800-U1-0005-5	T2H015TW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R2	ACS800-U1-0006-5	T2H015TW	T4045SF1	Withdrawable-CCU40
3	standard	6.2	30E	R2	ACS800-U1-0006-5	T2H015TW	T4045SF1	Withdrawable-CCU40
	heavy	5.6	30E	R2	ACS800-U1-0009-5	T2H025BW	T4045SF1	Withdrawable-CCU40
5	standard	8.1	30E	R2	ACS800-U1-0009-5	T2H025BW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R2	ACS800-U1-0011-5	T2H025BW	T4045SF1	Withdrawable-CCU40
7.5	standard	11	30E	R2	ACS800-U1-0011-5	T2H025BW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R3	ACS800-U1-0016-5	T2H025BW	T4045SF1	Withdrawable-CCU40
10	standard	14	30E	R3	ACS800-U1-0016-5	T2H025BW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R3	ACS800-U1-0020-5	T2H060BW	T4045SF1	Withdrawable-CCU40
15	standard	21	30E	R3	ACS800-U1-0020-5	T2H060BW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R3	ACS800-U1-0025-5	T2H060BW	T4045SF1	Withdrawable-CCU40
20	standard	27	30E	R3	ACS800-U1-0025-5	T2H060BW	T4045SF1	Withdrawable-CCU40
	heavy		Full	R4	ACS800-U1-0030-5	T2H060BW	T4045SF1	Fixed
25	standard	34	Full	R4	ACS800-U1-0030-5	T2H060BW	T4045SF1	Fixed
	heavy		Full	R4	ACS800-U1-0040-5	T2H100BW	T4045SF1	Fixed
30	standard	40	Full	R4	ACS800-U1-0040-5	T2H100BW	T4045SF1	Fixed
	heavy		Full	R5	ACS800-U1-0050-5	T2H100BW	T4045SF1	Fixed
40	standard	52	Full	R5	ACS800-U1-0050-5	T2H100BW	T4045SF1	Fixed
	heavy		Full	R5	ACS800-U1-0060-5	T4H100BW	T4045SF1	Fixed
50	standard	65	Full	R5	ACS800-U1-0060-5	T4H100BW	T4045SF1	Fixed
	heavy		Full	R5	ACS800-U1-0070-5	T4H150BW	T4045SF1	Fixed
60	standard	77	Full	R5	ACS800-U1-0070-5	T4H150BW	T4045SF1	Fixed
	heavy		Full	R6	ACS800-U1-0100-5	T4H250BW	T4045SF1	Fixed
75	standard	98	Full	R6	ACS800-U1-0100-5	T4H250BW	T4045SF1	Fixed
	heavy		Full	R6	ACS800-U1-0120-5	T4H250BW	T4045SF1	Fixed
100	standard	124	Full	R6	ACS800-U1-0120-5	T4H250BW	T4045SF1	Fixed
	heavy		Full	R6	ACS800-U1-0140-5	T4H250BW	T4045SF1	Fixed
125	standard	156	Full	R6	ACS800-U1-0140-5	T4H250BW	T4045SF1	Fixed
	heavy		Full	R6	ACS800-U1-0205-5	T5H400BW	T4045SF1	Fixed
150	standard	180	Full	R6	ACS800-U1-0205-5	T5H400BW	T4045SF1	Fixed
	heavy (n/a)	-	-	-	-	-	-	-

*Note: standard duty drives rated for 110% nominal current for 1 minute, heavy duty drives rated for 150% nominal current for 1 minute

Drives

Variable Frequency Drive Selection
ACS800; 480V; 65kA

HP	Duty (standard / heavy)*	FLA (Max)	Unit Size	Drive frame size	Drive	Disconnect	CPT (optional)	Configuration
2	standard	4.2	30E	R2	ACS800-U1-0005-5	T2H015TW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R2	ACS800-U1-0006-5	T2H015TW	T4045SF1	Withdrawable-CCU40
3	standard	6.2	30E	R2	ACS800-U1-0006-5	T2H015TW	T4045SF1	Withdrawable-CCU40
	heavy	5.6	30E	R2	ACS800-U1-0009-5	T2H025BW	T4045SF1	Withdrawable-CCU40
5	standard	8.1	30E	R2	ACS800-U1-0009-5	T2H025BW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R2	ACS800-U1-0011-5	T2H025BW	T4045SF1	Withdrawable-CCU40
7.5	standard	11	30E	R2	ACS800-U1-0011-5	T2H025BW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R3	ACS800-U1-0016-5	T2H025BW	T4045SF1	Withdrawable-CCU40
10	standard	14	30E	R3	ACS800-U1-0016-5	T2H025BW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R3	ACS800-U1-0020-5	T2H060BW	T4045SF1	Withdrawable-CCU40
15	standard	21	30E	R3	ACS800-U1-0020-5	T2H060BW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R3	ACS800-U1-0025-5	T2H060BW	T4045SF1	Withdrawable-CCU40
20	standard	27	30E	R3	ACS800-U1-0025-5	T2H060BW	T4045SF1	Withdrawable-CCU40
	heavy		Full	R4	ACS800-U1-0030-5	T2H060BW	T4045SF1	Fixed
25	standard	34	Full	R4	ACS800-U1-0030-5	T2H060BW	T4045SF1	Fixed
	heavy		Full	R4	ACS800-U1-0040-5	T2H100BW	T4045SF1	Fixed
30	standard	40	Full	R4	ACS800-U1-0040-5	T2H100BW	T4045SF1	Fixed
	heavy		Full	R5	ACS800-U1-0050-5	T2H100BW	T4045SF1	Fixed
40	standard	52	Full	R5	ACS800-U1-0050-5	T2H100BW	T4045SF1	Fixed
	heavy		Full	R5	ACS800-U1-0060-5	T4H100BW	T4045SF1	Fixed
50	standard	65	Full	R5	ACS800-U1-0060-5	T4H100BW	T4045SF1	Fixed
	heavy		Full	R5	ACS800-U1-0070-5	T4H150BW	T4045SF1	Fixed
60	standard	77	Full	R5	ACS800-U1-0070-5	T4H150BW	T4045SF1	Fixed
	heavy		Full	R6	ACS800-U1-0100-5	T4H250BW	T4045SF1	Fixed
75	standard	98	Full	R6	ACS800-U1-0100-5	T4H250BW	T4045SF1	Fixed
	heavy		Full	R6	ACS800-U1-0120-5	T4H250BW	T4045SF1	Fixed
100	standard	124	Full	R6	ACS800-U1-0120-5	T4H250BW	T4045SF1	Fixed
	heavy		Full	R6	ACS800-U1-0140-5	T4H250BW	T4045SF1	Fixed
125	standard	156	Full	R6	ACS800-U1-0140-5	T4H250BW	T4045SF1	Fixed
	heavy		Full	R6	ACS800-U1-0205-5	T5H400BW	T4045SF1	Fixed
150	standard	180	Full	R6	ACS800-U1-0205-5	T5H400BW	T4045SF1	Fixed
	heavy (n/a)	-	-	-	-	-	-	-

*Note: standard duty drives rated for 110% nominal current for 1 minute, heavy duty drives rated for 150% nominal current for 1 minute

Drives

Variable Frequency Drive Selection
ACS800; 480V; 100kA

HP	Duty (standard / heavy)*	FLA (Max)	Unit Size	Drive frame size	Drive	Disconnect	CPT (optional)	Configuration
2	standard	4.2	30E	R2	ACS800-U1-0005-5	T2H015TW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R2	ACS800-U1-0006-5	T2H015TW	T4045SF1	Withdrawable-CCU40
3	standard	6.2	30E	R2	ACS800-U1-0006-5	T2H015TW	T4045SF1	Withdrawable-CCU40
	heavy	5.6	30E	R2	ACS800-U1-0009-5	T2H025BW	T4045SF1	Withdrawable-CCU40
5	standard	8.1	30E	R2	ACS800-U1-0009-5	T2H025BW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R2	ACS800-U1-0011-5	T2H025BW	T4045SF1	Withdrawable-CCU40
7.5	standard	11	30E	R2	ACS800-U1-0011-5	T2H025BW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R3	ACS800-U1-0016-5	T2H025BW	T4045SF1	Withdrawable-CCU40
10	standard	14	30E	R3	ACS800-U1-0016-5	T2H025BW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R3	ACS800-U1-0020-5	T2H060BW	T4045SF1	Withdrawable-CCU40
15	standard	21	30E	R3	ACS800-U1-0020-5	T2H060BW	T4045SF1	Withdrawable-CCU40
	heavy		30E	R3	ACS800-U1-0025-5	T2H060BW	T4045SF1	Withdrawable-CCU40
20	standard	27	30E	R3	ACS800-U1-0025-5	T2H060BW	T4045SF1	Withdrawable-CCU40
	heavy		Full	R4	ACS800-U1-0030-5	T2H060BW	T4045SF1	Fixed
25	standard	34	Full	R4	ACS800-U1-0030-5	T2H060BW	T4045SF1	Fixed
	heavy		Full	R4	ACS800-U1-0040-5	T2H100BW	T4045SF1	Fixed
30	standard	40	Full	R4	ACS800-U1-0040-5	T2H100BW	T4045SF1	Fixed
	heavy		Full	R5	ACS800-U1-0050-5	T2H100BW	T4045SF1	Fixed
40	standard	52	Full	R5	ACS800-U1-0050-5	T2H100BW	T4045SF1	Fixed
	heavy		Full	R5	ACS800-U1-0060-5	T4H100BW	T4045SF1	Fixed
50	standard	65	Full	R5	ACS800-U1-0060-5	T4H100BW	T4045SF1	Fixed
	heavy		Full	R5	ACS800-U1-0070-5	T4H150BW	T4045SF1	Fixed
60	standard	77	Full	R5	ACS800-U1-0070-5	T4H150BW	T4045SF1	Fixed
	heavy		Full	R6	ACS800-U1-0100-5	T4H250BW	T4045SF1	Fixed
75	standard	98	Full	R6	ACS800-U1-0100-5	T4H250BW	T4045SF1	Fixed
	heavy		Full	R6	ACS800-U1-0120-5	T4H250BW	T4045SF1	Fixed
100	standard	124	Full	R6	ACS800-U1-0120-5	T4H250BW	T4045SF1	Fixed
	heavy		Full	R6	ACS800-U1-0140-5	T4H250BW	T4045SF1	Fixed
125	standard	156	Full	R6	ACS800-U1-0140-5	T4H250BW	T4045SF1	Fixed
	heavy		Full	R6	ACS800-U1-0205-5	T5H400BW	T4045SF1	Fixed
150	standard	180	Full	R6	ACS800-U1-0205-5	T5H400BW	T4045SF1	Fixed
	heavy (n/a)	-	-	-	-	-	-	-

*Note: standard duty drives rated for 110% nominal current for 1 minute, heavy duty drives rated for 150% nominal current for 1 minute

Drives

Variable Frequency Drive Selection
ACS800; 600V; 25kA

HP	Duty (standard / heavy)*	FLA (Max)	Unit Size	Drive frame size	Drive	Disconnect	CPT (optional)	Configuration
5	standard (n/a)	-	-	-	-	-	-	-
	heavy	6.1	Full	R4	ACS800-U1-0011-7	T4S020TW	T6045S1	Fixed
7.5	standard	9	Full	R4	ACS800-U1-0011-7	T4S020TW	T6045S1	Fixed
	heavy		Full	R4	ACS800-U1-0016-7	T4S020TW	T6045S1	Fixed
10	standard	11	Full	R4	ACS800-U1-0020-7	T4S030TW	T6045S1	Fixed
	heavy		Full	R4	ACS800-U1-0020-7	T4S030TW	T6045S1	Fixed
15	standard	17	Full	R4	ACS800-U1-0025-7	T4S030TW	T6045S1	Fixed
	heavy		Full	R4	ACS800-U1-0025-7	T4S030TW	T6045S1	Fixed
20	standard	22	Full	R4	ACS800-U1-0030-7	T4S040TW	T6045S1	Fixed
	heavy		Full	R4	ACS800-U1-0030-7	T4S040TW	T6045S1	Fixed
25	standard	27	Full	R4	ACS800-U1-0040-7	T4S050TW	T6045S1	Fixed
	heavy		Full	R4	ACS800-U1-0040-7	T4S050TW	T6045S1	Fixed
30	standard	32	Full	R5	ACS800-U1-0050-7	T4S100BW	T6045S1	Fixed
	heavy		Full	R5	ACS800-U1-0050-7	T4S100BW	T6045S1	Fixed
40	standard	41	Full	R5	ACS800-U1-0060-7	T4S100BW	T6045S1	Fixed
	heavy		Full	R6	ACS800-U1-0070-7	T4S100BW	T6045S1	Fixed
50	standard	52	Full	R6	ACS800-U1-0070-7	T4S100BW	T6045S1	Fixed
	heavy		Full	R6	ACS800-U1-0100-7	T4S150BW	T6045S1	Fixed
60	standard	62	Full	R6	ACS800-U1-0100-7	T4S150BW	T6045S1	Fixed
	heavy		Full	R6	ACS800-U1-0120-7	T4S150BW	T6045S1	Fixed
75	standard	77	Full	R6	ACS800-U1-0120-7	T4S150BW	T6045S1	Fixed
	heavy		Full	R6	ACS800-U1-0145-7	T4S250BW	T6045S1	Fixed
100	standard	99	Full	R6	ACS800-U1-0145-7	T4S250BW	T6045S1	Fixed
	heavy		Full	R6	ACS800-U1-0175-7	T4S250BW	T6045S1	Fixed
125	standard	125	Full	R6	ACS800-U1-0175-7	T4S250BW	T6045S1	Fixed
	heavy		Full	R6	ACS800-U1-0205-7	T4S250BW	T6045S1	Fixed
150	standard	-	-	-	-	-	-	-
	heavy (n/a)	14	Full	R6	ACS800-U1-0205-7	T4S250BW	T6045S1	Fixed

*Note: standard duty drives rated for 110% nominal current for 1 minute, heavy duty drives rated for 150% nominal current for 1 minute

Drives

Variable Frequency Drive Selection
ACS800; 600V; 42kA

HP	Duty (standard / heavy)*	FLA (Max)	Unit Size	Drive frame size	Drive	Disconnect	CPT (optional)	Configuration
5	standard (n/a)	-	-	-	-	-	-	-
	heavy	6.1	Full	R4	ACS800-U1-0011-7	T4S020TW	T6045S1	Fixed
7.5	standard	9	Full	R4	ACS800-U1-0011-7	T4S020TW	T6045S1	Fixed
	heavy		Full	R4	ACS800-U1-0016-7	T4S020TW	T6045S1	Fixed
10	standard	11	Full	R4	ACS800-U1-0020-7	T4S030TW	T6045S1	Fixed
	heavy		Full	R4	ACS800-U1-0020-7	T4S030TW	T6045S1	Fixed
15	standard	17	Full	R4	ACS800-U1-0025-7	T4S030TW	T6045S1	Fixed
	heavy		Full	R4	ACS800-U1-0025-7	T4S030TW	T6045S1	Fixed
20	standard	22	Full	R4	ACS800-U1-0030-7	T4S040TW	T6045S1	Fixed
	heavy		Full	R4	ACS800-U1-0030-7	T4S040TW	T6045S1	Fixed
25	standard	27	Full	R4	ACS800-U1-0040-7	T4S050TW	T6045S1	Fixed
	heavy		Full	R4	ACS800-U1-0040-7	T4S050TW	T6045S1	Fixed
30	standard	32	Full	R5	ACS800-U1-0050-7	T4S100BW	T6045S1	Fixed
	heavy		Full	R5	ACS800-U1-0050-7	T4S100BW	T6045S1	Fixed
40	standard	41	Full	R5	ACS800-U1-0060-7	T4S100BW	T6045S1	Fixed
	heavy		Full	R6	ACS800-U1-0070-7	T4S100BW	T6045S1	Fixed
50	standard	52	Full	R6	ACS800-U1-0070-7	T4S100BW	T6045S1	Fixed
	heavy		Full	R6	ACS800-U1-0100-7	T4S150BW	T6045S1	Fixed
60	standard	62	Full	R6	ACS800-U1-0100-7	T4S150BW	T6045S1	Fixed
	heavy		Full	R6	ACS800-U1-0120-7	T4S150BW	T6045S1	Fixed
75	standard	77	Full	R6	ACS800-U1-0120-7	T4S150BW	T6045S1	Fixed
	heavy		Full	R6	ACS800-U1-0145-7	T4S250BW	T6045S1	Fixed
100	standard	99	Full	R6	ACS800-U1-0145-7	T4S250BW	T6045S1	Fixed
	heavy		Full	R6	ACS800-U1-0175-7	T4S250BW	T6045S1	Fixed
125	standard	125	Full	R6	ACS800-U1-0175-7	T4S250BW	T6045S1	Fixed
	heavy		Full	R6	ACS800-U1-0205-7	T4S250BW	T6045S1	Fixed
150	standard	-	-	-	-	-	-	-
	heavy (n/a)	14	Full	R6	ACS800-U1-0205-7	T4S250BW	T6045S1	Fixed

*Note: standard duty drives rated for 110% nominal current for 1 minute, heavy duty drives rated for 150% nominal current for 1 minute

Drives

Variable Frequency Drive Selection
ACS800; 600V; 65kA

HP	Duty (standard / heavy)*	FLA (Max)	Unit Size	Drive frame size	Drive	Disconnect	CPT (optional)	Configuration
5	standard (n/a)	-	-	-	-	-	-	-
	heavy	6.1	Full	R4	ACS800-U1-0011-7	T4S020TW	T6045S1	Fixed
7.5	standard	9	Full	R4	ACS800-U1-0011-7	T4S020TW	T6045S1	Fixed
	heavy		Full	R4	ACS800-U1-0016-7	T4S020TW	T6045S1	Fixed
10	standard	11	Full	R4	ACS800-U1-0020-7	T4S030TW	T6045S1	Fixed
	heavy		Full	R4	ACS800-U1-0020-7	T4S030TW	T6045S1	Fixed
15	standard	17	Full	R4	ACS800-U1-0025-7	T4S030TW	T6045S1	Fixed
	heavy		Full	R4	ACS800-U1-0025-7	T4S030TW	T6045S1	Fixed
20	standard	22	Full	R4	ACS800-U1-0030-7	T4S040TW	T6045S1	Fixed
	heavy		Full	R4	ACS800-U1-0030-7	T4S040TW	T6045S1	Fixed
25	standard	27	Full	R4	ACS800-U1-0040-7	T4S050TW	T6045S1	Fixed
	heavy		Full	R4	ACS800-U1-0040-7	T4S050TW	T6045S1	Fixed
30	standard	32	Full	R5	ACS800-U1-0050-7	T4S100BW	T6045S1	Fixed
	heavy		Full	R5	ACS800-U1-0050-7	T4S100BW	T6045S1	Fixed
40	standard	41	Full	R5	ACS800-U1-0060-7	T4S100BW	T6045S1	Fixed
	heavy		Full	R6	ACS800-U1-0070-7	T4S100BW	T6045S1	Fixed
50	standard	52	Full	R6	ACS800-U1-0070-7	T4S100BW	T6045S1	Fixed
	heavy		Full	R6	ACS800-U1-0100-7	T4S150BW	T6045S1	Fixed
60	standard	62	Full	R6	ACS800-U1-0100-7	T4S150BW	T6045S1	Fixed
	heavy		Full	R6	ACS800-U1-0120-7	T4S150BW	T6045S1	Fixed
75	standard	77	Full	R6	ACS800-U1-0120-7	T4S150BW	T6045S1	Fixed
	heavy		Full	R6	ACS800-U1-0145-7	T4S250BW	T6045S1	Fixed
100	standard	99	Full	R6	ACS800-U1-0145-7	T4S250BW	T6045S1	Fixed
	heavy		Full	R6	ACS800-U1-0175-7	T4S250BW	T6045S1	Fixed
125	standard	125	Full	R6	ACS800-U1-0175-7	T4S250BW	T6045S1	Fixed
	heavy		Full	R6	ACS800-U1-0205-7	T4S250BW	T6045S1	Fixed
150	standard	-	-	-	-	-	-	-
	heavy (n/a)	14	Full	R6	ACS800-U1-0205-7	T4S250BW	T6045S1	Fixed

*Note: standard duty drives rated for 110% nominal current for 1 minute, heavy duty drives rated for 150% nominal current for 1 minute

Components of Units

Terminal Blocks

ABB uses a unique terminal block system for each of the withdrawable units that creates the connection between the unit and the external terminal without any additional wiring. The terminal plugs consist of two-pole individual elements that are supplied as a completely labeled, 12-pole or a 24-pole terminal block assembly.

Control Terminal Technical Data	
Rated Voltage	300V
Rated Current/Pole	10A
Tightening Torque	0.8 Nm
Maximun Temperature Limit	105° C
Fire Rating	UL 486
Connection Type	Clamp Terminal
(Per Pole)	(2) Spade Terminals
Wire Range	22-10 awg

Control Terminal Quantities	
Type of starter	**No. of terminals (Standard)**
FVNR	12
FVR	24
2S1W	24
2S2W	24
Softstarter	24
VFD	24

Note: 32 terminals as maximum for units 18E and larger

ABB 30mm Metal Bezel Pilot Devices

	Size door	Max number of selectors and push	Max number of pilot devices
Starters	6E	1 Selector	1
	12E	1 Selector	1, 2 or 3
		2 Push buttons	1 or 2
	18E to Full section	1 Selector	1, 2 or 3
		2 Push buttons	1, 2 or 3
		3 Push buttons	1, 2 or 3
Softstarters	24E to Full section	1 Selector with Keypad	1, 2 or 3
		Keypad	1, 2 or 3
VFD	12E	Keypad	1
	18E and 24E	Keypad	1
		1 Selector with speed pot	1
	30E to Full section	Keypad	1, 2 or 3
		1 Selector with speed pot	1, 2 or 3

Pilot Devices/Selector Switches

The MNS-MCC utilizes ABB 30 mm metal bezel pilot devices mounted on the unit door. The push functions available are: Start/Stop, Stop/Rev/Fwd, Stop/Slow/Fast. The following functions are available on selector switches: H/O/A, Fwd/Rev/Off/Auto, Fast/Slow/Off/Auto. Indicating lamps are also available in Red, Green, and Yellow. Nameplates are provided standard on all pilot devices. See the table on this page for the maximum number of pilot devices available with various unit types and sizes.

Pilot devices (Configuration options)
Green OFF
Green ON
Red OFF
Red ON
Yellow OL TRIP
Red OFF + Green ON
Red ON + Green OFF
Red OFF + Yellow OL TRIP
Red OFF + Green ON + Yellow OL TRIP
Red ON + Green OFF + Yellow OL TRIP

Push buttons (Configuration options)
Hand-Off-Auto (HOA)
Hand-Off-Auto + Keypad
Keypad only
Rev-Off-Auto-Fwd
Rev-Off-Auto-Fwd + Keypad
Slow-Off-Auto-Fast
Slow-Off-Auto-Fast + Keypad
Start + Stop
Stop + Rev + Fwd
Stop + Slow + Fast

Components of Units

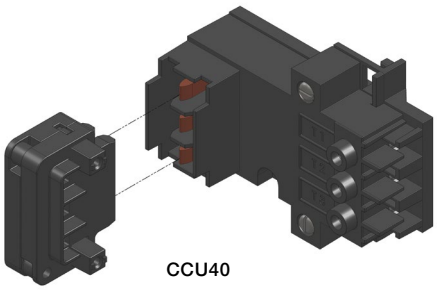
Load Terminal Blocks

The CCU40 and CCU300 connectors are used as load-side terminal blocks for withdrawable units. With the CCU connectors, the connection to a unit's output is made in the vertical wireway, further eliminating the need to perform work inside the withdrawable unit.

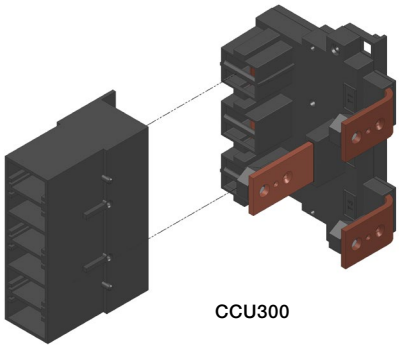
The CCU40 and CCU300 each consist of two parts. The stationary part is mounted to the MCC frame in the vertical wireway, and the movable part is installed in the withdrawable MCC unit. Connections between movable and stationary parts are made when the unit is plugged in.

The CCU40 is used for load currents less than 50A, and is rated for 600V. It will accept wire sizes from 12AWG up to 6AWG.

The CCU300 is used for load currents less than 300A, and is also rated for 600V. Connections to the CCU300 are made with standard compression lugs bolted to an extended bus bar. An acrylic protective cover is provided.



CCU40



CCU300

Control Power Transformer

Description

– Epoxy encapsulated coils up through 750VA
– Epoxy resin impregnated coils from 1 kVA to 5 kVA
– Provides stepped down voltages for machine tool control devices and industrial control panels
– Laminations of high-quality silicon steel
– Minimum core loss
– Optimized performance
– Copper magnet wire providing the highest quality and efficient operation
– Molded-in terminals
– 80°C rise, 130°C insulation system
– 50/60 Hz
– UL File # E175311
– CSA File #LR27533
– IP20 Touch safe covers available as an option

For further information please see product catalog: Product Selector 1SXU0000023C0202 or visit website at http://www.abb.us

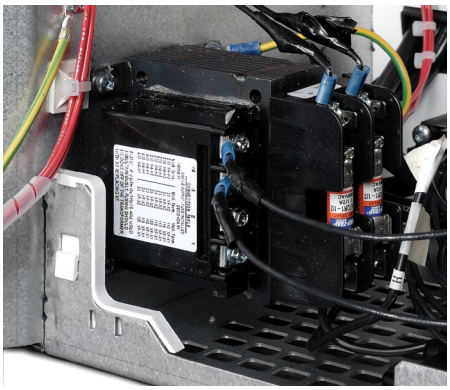


ABB Control Power Transformer

X 4 100 PS F1 /C

T - Industrial control transformer
X - New generation industrial control transformer

Primary voltage rating 1
4 - 460V, 230V & 208V
6 - 575V & 600V

VA rating
045 = 45VA 350 = 350VA
050 = 50VA 500 = 500VA
075 = 75VA 750 = 750VA
100 = 100VA 1K = 1000VA
150 = 150VA 1.5K = 1500VA
200 = 200VA 2K = 2000VA
250 = 250VA 3K = 3000VA
300 = 300VA 5K = 5000VA

Example: **T4100PSF1**
• ABB Industrial control transformer
• Primary voltage: 460V, 230V and 208V
• 100 VA rating
• Primary & secondary fuse blocks provided
• Secondary voltage 115/24V
• Optional IP 20 terminal covers

Option 3
Add $15 to list price

IP 20 Terminal covers
Meets finger safe or touch safe requirements for IEC specification 529. Available 50VA thru 750VA

Secondary voltage(s) 2
F = 24V
1 = 115V
F1 = 115/24V dual secondary 2

Fuse blocks
P = primary fuse block (2 pole Class CC, less fuses)
S = secondary fuse clip (13/32" x 1 1/2", less fuse)

Components of Units

Contactors

Application

A-Line and AF contactors are mainly used for controlling 3-phase motors and for controlling power circuits corresponding to their operating characteristics up to 600VAC.

Description of 3 pole contactors A

All A-line and AF contactors can be assembled side by side. The add-on or built-in auxiliary contacts are suitable for low level currents.

Control circuit types

– A-line types: AC operated with laminated magnetic circuit.
– AF types: AC/DC operated with laminated magnetic circuit

Contactor types

– 3 pole contactors with NO or NC built in auxiliary contact for A9-A40 contactors; factory assembled auxiliary contacts for A50-A300
– 4 pole contactors: 4 NO or 2 NO & 2 NC without any auxiliary contacts. (A9-A75)
– 3 pole contactors with 1 NO 1 NC factory assembled auxiliary contacts for AF50-AF1650

For further information, see the 1SXU0000023C0202 Product Selector document or visit www.abb.us.

Catalog number explanation

A9-30-10-84

Frame size

Power pole
30 = 3 NO
40 = 4 NO
22 = 2 NO & 2 NC

Coil voltage
(see coil voltage selection chart)

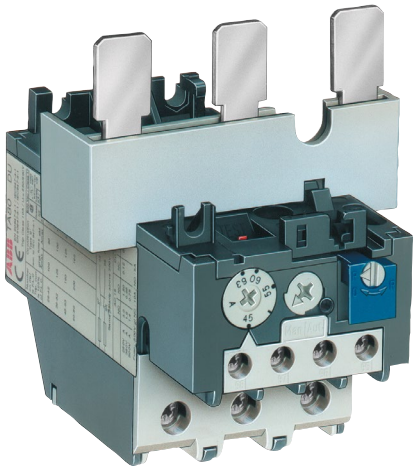
Auxiliary contacts
10 = 1 NO & 0 NC
01 = 0 NO & 1 NC
11 = 1 NO & 1 NC
00 = No auxiliary provided
22 = 2 NO & 2 NC

Coil voltage selection chart

Hz	Cntr type	Volts															
		12	24	48	110	120	125	208	220	240	277	380	415	440	480	500	600
60	A		81	83	84	84		34	36	80	42		86	86	51	53	55
50	A		81	83	84				80			85	86			55	

For other voltages, see page 1.26.

Components of Units



Thermal Overloads

TA thermal overload relays are used with A Line contactors for the protection of motors having a nominal voltage of up to 600VAC max per UL/CSA (690VAC).

Product range

– Standard relays:
  Types: TA25DU, TA42DU, TA75DU, TA80DU, TA110DU, TA200DU and TA450DU
– TA25 to TA110 and TA200 are directly connected in the motor circuit.
– TA450DU relays are fed through a linear type transformer
– Special construction
  Thermal overload relays with different certifications and approvals.
– Relays for protection EExe motors.

Construction and function - General

Thermal O/L relays and their accessories meet UL, CSA and most other important international standards (IEC), European standards (EN) and the most important national standards (DINVDE, NFC-UTE, BS, etc.). They meet the certification and approval directives required throughout the world.

Thermal overload relays are 3 pole. The motor current flows through their bimetals (1 per phase) which are indirectly heated. Under the effect of the heating, the bimetals bend; cause the relay to trip and the position of the auxiliary contacts to change. The relay setting range is graduated in amps. In compliance with international and national standards, the setting current is the motor nominal current and not the tripping current (no tripping at 1.05 x setting current, tripping at 1.2 times setting current).

The relays are built to be self protecting in the event of an overload until the short circuit protection device is activated.

For further information, see the 1SXU0000023C0202 Product Selector document or visit www.abb.us.

Electronic Overloads

Description

– Available for starter construction with A Line contactors and separate panel mounting
– Designed for close couple mounting
– Separate base mounting available for all overload relays
– E16DU Class 10, 20, & 30, field selectable
– E200DU – E800DU Class 10, 20 & 30, field selectable
– Stop button
– Screwdriver guide holes
– All terminal screws are available from the front
– Single phase and phase unbalance protection
– Isolated alarm circuit (N.O.) contact
– Ambient compensation: -25°C to +70°C (-13°F to +158°F)
– Manual test
– Manual or automatic reset
– Factory calibrated and tested
– Wide adjustment range
– UL File No: E48139
– CSA File No: LR98336

For further information, see the 1SXU0000023C0202 Product Selector document or visit www.abb.us.

Components of Units

UMC100 Overload Relay

The highlights

– Compact housing with integrated measuring system
– Overload protection for nominal motor currents up to 850 A
– Integrated thermistor motor protection
– Integrated ground fault protection
– Up to 14 digital inputs and 9 outputs
– Voltage measurement up to 690 V
– Power factor (cos φ), energy
– Flexible communication via all fieldbuses
– PROFIBUS DP
– DeviceNet
– Modbus RTU
– CANopen

Motor protection

– The UMC100-FBP provides comprehensive motor protection for three-phase AC motors
– Overload protection with adjustable tripping class 5E, 10E, 20E, 30E, 40E
– Locked rotor protection
– Phase failure detection
– Asymmetry detection
– Phase sequence detection
– Undercurrent/overcurrent protection
– Thermistor motor protection with PTC
– Ground leakage detection – internally or using CEM11-FBP sensor
– Limitation of the motor starts per time unit
– Rated motor current 240 mA to 63 A with a single version, no accessories required
– Rated motor current > 63 A with external current transformer
– Independent motor protection, fully operational even without bus connection sequence

Motor control

– Integration of the most important motor control functions as ready, easily parametrizable blocks
– Direct, reversing, star-delta starters
– Pole reversal/Dahlander pole-changing
– Actuator
– Inching
– Adjustable restart strategy (load shedding)

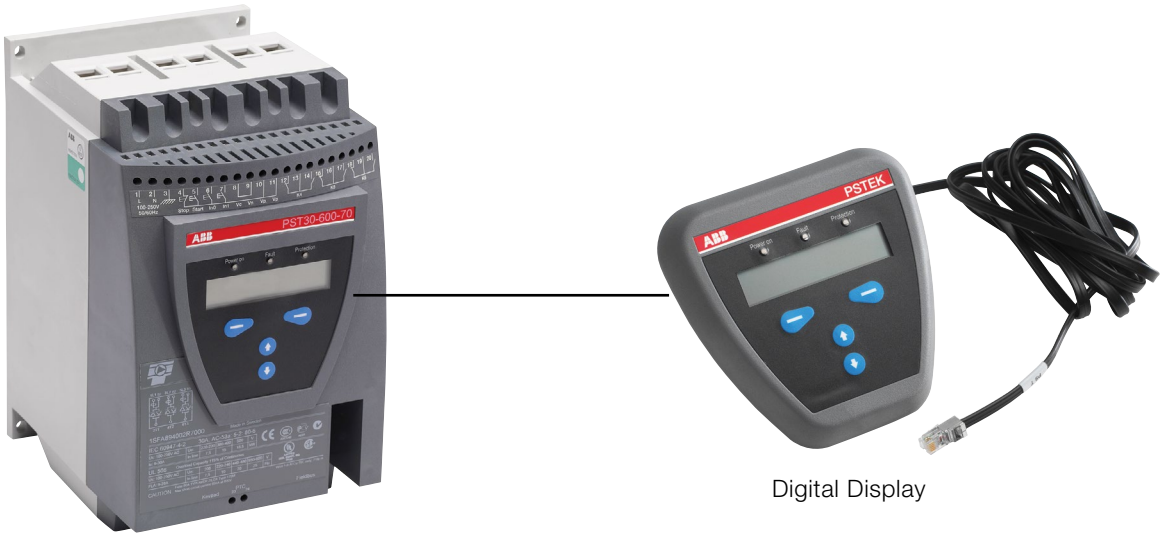
Extended motor control

– Freely programmable for special, application-specific control functions
– Simple adaptation to specified control functions
– Comprehensive library
– Blocks for logic, counters, timing
– Access to all I/Os and internal signals

Control stations

– Individual configuration of control points
– Operation via DCS
– Local control
– Control panel

Components of Units



Digital Display

Softstarters

Application

The PST range is a microprocessor based softstarter designed with the latest technology for soft start and soft stop of motors. The PST Softstarter has several advanced motor protection features as standard. The four button key pad and the logic structure of the menu make the installation, commissioning and operation easy. It is possible to choose between 14 different languages.

The PST Softstarter can be used with or without a by-pass contactor. The larger sizes, PSTB370 – PSTB1050, include a built-in by-pass contactor.

The PST Softstarter can be selected according to the rated motor power in normal duty applications like pumps, compressors, elevators, escalators, short conveyor belts and bow thrusters.

Product Range and Offering

– Wide main voltage range, 200 - 690 VAC
– Wide control voltage range, 100 - 250 V, 50/60 Hz
– Current ratings 30 to 1050 A (In Line) and 52
– 1800 A (Inside Delta)
– Same unit can be used for both In Line and Inside Delta connection
– Premium adjustable Softstarter functions like start/stop ramp, kick start, jog, step down voltage and sequential starts
– Current limit adjustable between 200% to 700% of motor FLA
– Thermistor (PTC) supervision of motor winding
– Real time clock
– Logging of last 20 events with time stamp
– Prepared for Field-bus communication
– Programmable electronic overloads: Classes 10A, 10, 20 & 30
– Locked rotor protection
– Motor underload protection
– Phase imbalance protection
– Phase reversal protection
– Torque control
– Analog outputs
– UL File #E161428

Digital Display

The PST display gives you information presented in plain words – in your language. You can choose between 14 languages including English, German, Italian, Chinese, Finnish, Swedish, French, Spanish, Dutch, Russian, Turkish, Polish, Czech and Portuguese. On the PST display, you get all the information you need to setup, adjust and trouble-shoot. This makes the PST extremely easy to handle and reduces the risk of misinterpretations.

At any time, you can read output current, output voltage, number of starts, total run time and motor temperature on the display. If a fault should occur, this is also indicated on the display. The fault messages are presented in clear text in the selected language.

For further information, see the 1SXU0000023C0202 Product Selector document or visit www.abb.us.

Components of Units

Variable Frequency Drives (ACS355)

The ACS355 is designed to be the fastest drive in terms of installation, setting parameters and commissioning. The ACS355 has been designed to be as user-friendly as possible, yet provide high application flexibility. The ACS355 offers diverse functionality to cater to the most demanding needs.

Application macros

– 2-wire, 3-wire, Alternate, Motor Potentiometer, Hand/Auto, PID & Torque Control

Power Range

– 1-phase supply 240V, 0.5 to 3 Hp
– 3-phase supply 240V, 0.5 to 15 Hp
– 3-phase supply 480V, 0.5 to 30 Hp

Features

– Sensorless Vector Motor Control
– (8) Sequence programming
– Optimized interfaces for users and machines
– Built-in brake chopper as standard
– Built-in 2nd environment EMC filter
– IP 20 (Finger Safe)

Highlights/Options

– NEMA 1 Enclosure Kit
– UL, cUL approved
– FlashDrop with DrivePM (Parameter Manager)
– MPOT (Speed Pot, Start/Stop & Fwd/Rev Switch)
– Modbus, Modbus TCP, EtherNet IP, Profibus, DeviceNet, CAN
– Unified height and depth
– Coated boards as standard
– Pulse train frequency input
– I/O (2 AI, 2AO, 5 DI, 1 RO, 1DO)

Please refer to the Drive Selection Guide LVD-PHPG01U-EN for further information or visit the website at www.abb.us.

Components of Units

Variable Frequency Drives (ACS550)

The ABB ACS550 has common user and process interface with fieldbus, common software tools for sizing, commissioning, maintenance and common spare parts.

The ABB ACS550 is ideal for those situations where there is a need for simplicity to install, commission and use and where customizing or special product engineering is not required.

Application macros

– ABB standard, 3-wire, Alternate, Motor Potentiometer, Hand/Auto, PID, PFC & Torque Control

Power Range

– 3-phase supply 240V, 1 to 100 Hp
– 3-phase supply 480V, 1.5 to 550 Hp
– 3-phase supply 600V, 2 to 150 HP

Features

– IP21 (NEMA 1) & IP54 (NEMA 12)
– Scalar, Open Loop, and Closed Loop Vector
– Built-in brake chopper up to 15Hp
– Built-in 1st environment EMC filter

Highlights/Options

– UL, cUL approved (600V product is CSA only)
– FlashDrop with DrivePM (Parameter Manager)
– Start-up Assistants (Diagnostic, Maintenance, Start-up, PID Controller, Real-time Clock, Serial Comm, Drive Optimizer)
– DeviceNet, ControlNet, Profibus, Modbus TCP, EtherNet IP, CAN Open, ProfiNet IO
– Patented swinging choke for superior harmonic reduction
– Coated boards as standard
– Flange Mounting
– I/0 (2 AI, 2 AO, 6 DI, 3 RO)

Please refer to the Drive Selection Guide LVD-PHPG01U-EN for further information or visit the website at www.abb.us.

Components of Units

Variable Frequency Drives (ACS800)

The ACS800 family of AC drives offers a wide range of products with common technologies. This includes Start-up Assistant, Adaptive Programming and DTC- Direct Torque Control, common user and process interfaces, software tools for sizing, commissioning and maintenance with common spare parts.

The heart of the ACS800 is DTC, ABB's premier motor control technology. The consistently excellent performance of the ACS800 assures that this drive will not be the limiting factor in your process.

Application macros

– ABB standard, 3-wire, Alternate, Motor Potentiometer, Hand/Auto, PID, PFC & Torque Control

Power Range

– 3-phase supply 240V, 1 to 100 Hp
– 3-phase supply 480V, 1.5 to 550 Hp
– 3-phase supply 600V, 2 to 150 HP

Features

– IP21 (NEMA 1) & IP54 (NEMA 12)
– Scalar, Open Loop, and Closed Loop Vector
– Built-in brake chopper up to 15Hp
– Built-in 1st environment EMC filter

Highlights/Options

– UL, cUL approved (600V product is CSA only)
– FlashDrop with DrivePM (Parameter Manager)
– DeviceNet, ControlNet, Profibus, Modbus TCP, EtherNet IP, CAN Open, ProfiNet IO
– Patented swinging choke for superior harmonic reduction
– Coated boards as standard
– Flange Mounting
– I/0 (2 AI, 2 AO, 6 DI, 3 RO)

Please refer to the Drive Selection Guide LVD-PHPG01U-EN for further information or visit the website at www.abb.us.

Components of Units

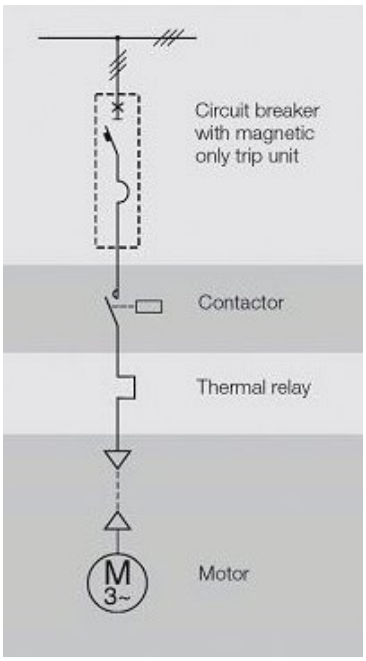
TMAX Circuit Breakers

The circuit breakers utilized as disconnecting means in the MNS-MCC are ABB Tmax molded case breakers.

The Tmax are UL489 certified and offer the following features:

- Double insulation – this construction characteristic allows for the UL listed field installation for the UL Listed field installation of internal accessories without exposure to energized parts.
- Complete range of electrical and mechanical accessories.
- Positive operation – breakers from ABB ensure that the toggle indicates precise position of the moving contacts. This provides a level of safety and reliability signaling of the device.
- Interrupting ratings at 480VAC up to 150kAIC.
- Compact Size.

There are two types of molded case breakers used in the units of an MNS-MCC: MCP and Thermal Magnetic type. The MCP circuit breakers are used to protect three phase asynchronous motors in combination with a contactor and a thermal overload relay.



Components of Units

EMAX Circuit Breakers

All Emax power circuit breakers have as a minimum the following features:
– Manual charging lever and “Charged” indication
– Manual Open/Close push buttons
– Mechanical “Open”/”Closed” indication
– Mechanical signaling of “Overcurrent” release
– 4 Auxiliary contacts

Additional options are available for project specific requirements:
– Shunt opening/closing release
– Spring Charging Motor
– Closing Coil
– Bell Alarm and contact
– Undervoltage release
– Additional auxiliary contacts (10 or 15)
– Key locking
– Shutter padlocking
– Button Guard and Padlocking provisions
– Mechanical Operation Counter
– Configuration and test unit

In addition, the Emax circuit breaker offers three different types of trip units: PR121, PR122, and PR123. Each of the trip units offers a combination of protection functions that may be selected such as:
– Overload protection – L
– Selective short circuit protection – S
– Instantaneous short circuit protection – I
– Ground Fault - G

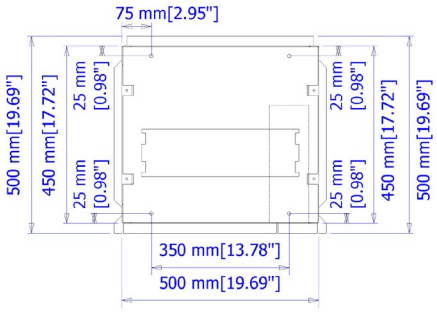
The trip units also allow for modular accessories to be installed on the PR122 and PR123 in order to provide additional functions. Those modules are:
– PR120/V – Measurement module (Provides metering capabilities)
– PR120/D-M – Modbus Communication module (Provides communication capabilities to the trip unit)
– PR120/K – Signaling module (Provides four independent power relays to enable electrical signaling of the following: timing for protections L, S, G, and protections for L, S, I, G, etc. and other events)

For further information please refer to Emax Technical Catalog – 1SDC200005D0201 or visit our website at www.abb.us.

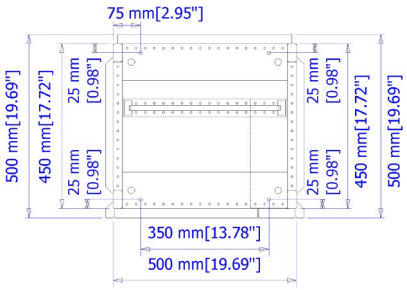
Layouts

Securing and Conduit Entry Details

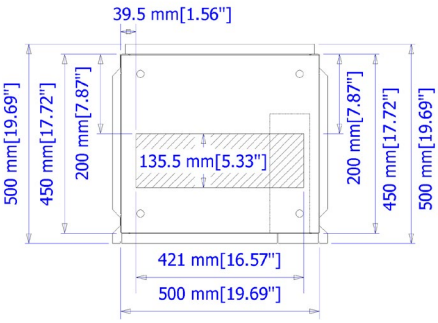
500mm Wide Modular Section



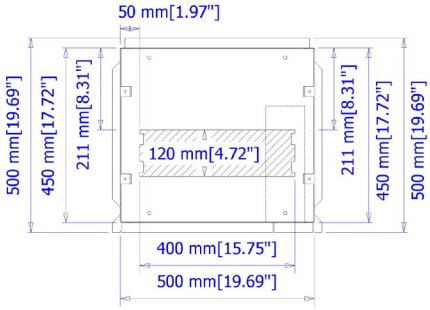
Anchoring Plan with Bottom Plate



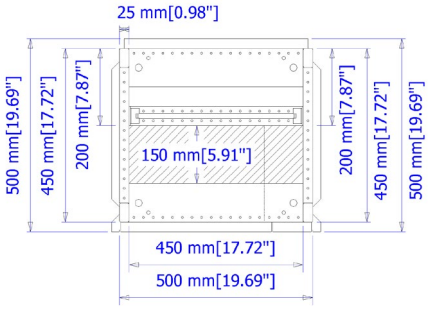
Anchoring Plan without Bottom Plate



Top Conduit Entry

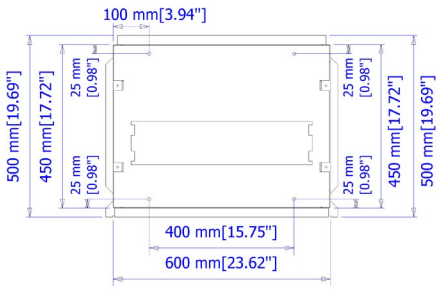


Bottom Conduit Entry with Bottom Plate

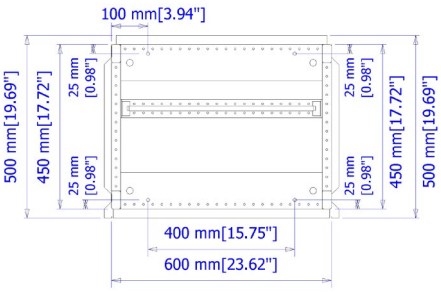


Bottom Conduit Entry without Bottom Plate

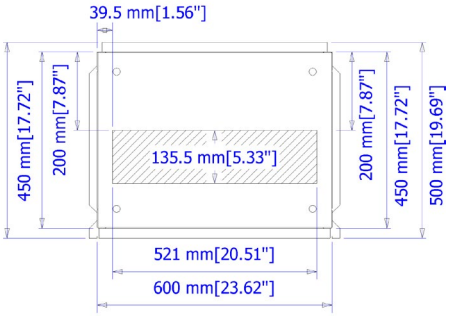
600mm Fixed Section



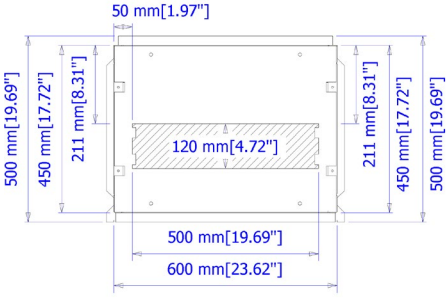
Anchoring Plan with Bottom Plate



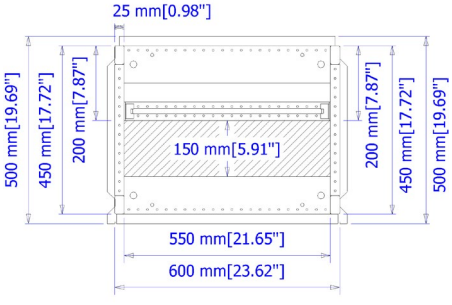
Anchoring Plan without Bottom Plate



Top Conduit Entry



Bottom Conduit Entry with Bottom Plate

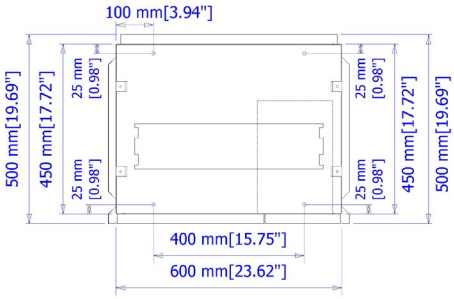


Bottom Conduit Entry without Bottom Plate

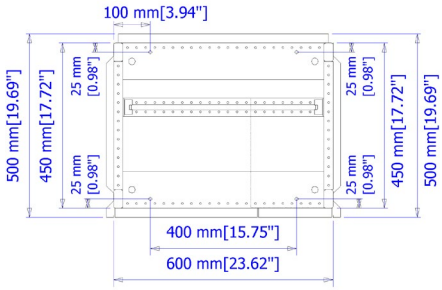
Layouts

Securing and Conduit Entry Details

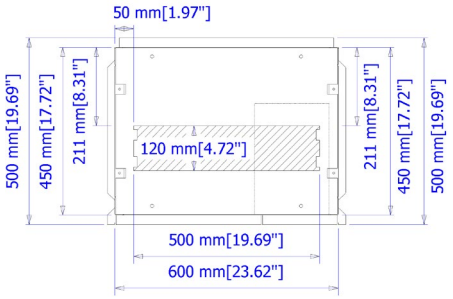
600mm Wide Modular Section



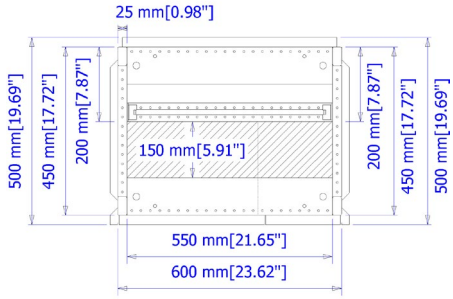
Anchoring Plan with Bottom Plate



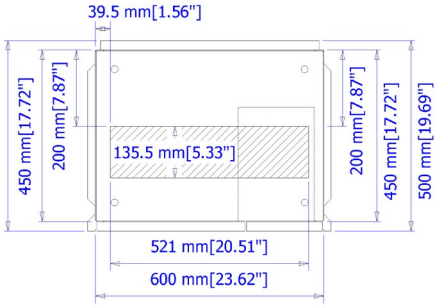
Anchoring Plan without Bottom Plate



Bottom Conduit Entry with Bottom Plate

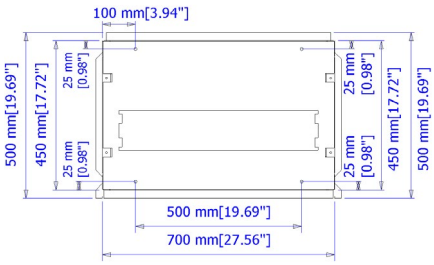


Bottom Conduit Entry without Bottom Plate

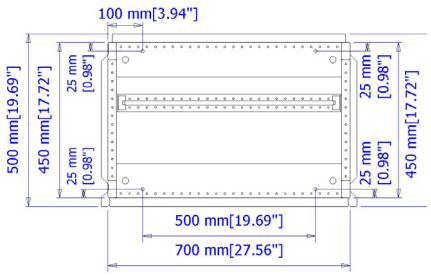


Top Conduit Entry

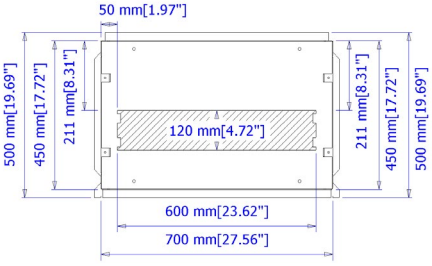
700mm Fixed Section



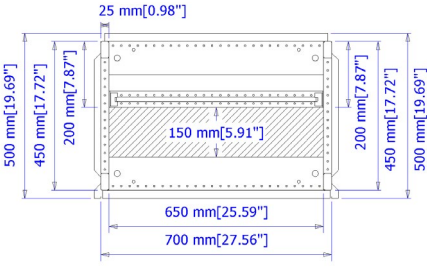
Anchoring Plan with Bottom Plate



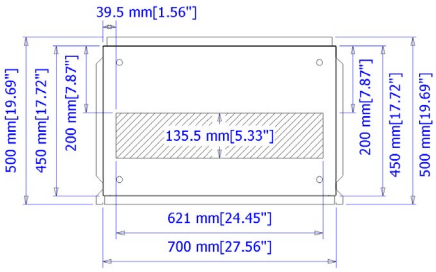
Anchoring Plan without Bottom Plate



Bottom Conduit Entry with Bottom Plate



Bottom Conduit Entry without Bottom Plate

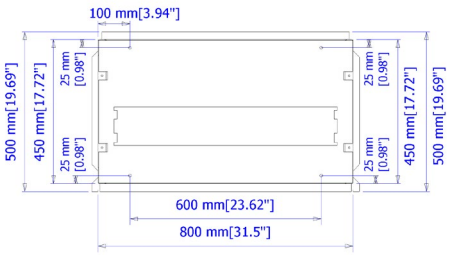


Top Conduit Entry

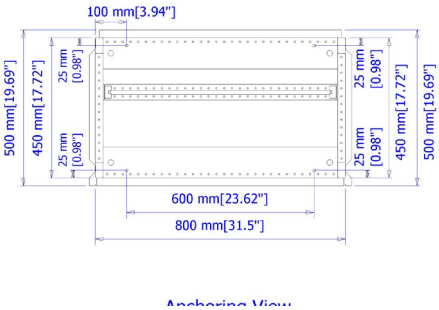
Layouts

Securing and Conduit Entry Details

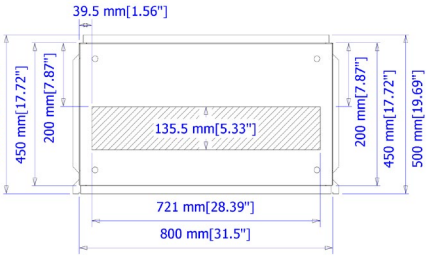
800mm Fixed Section



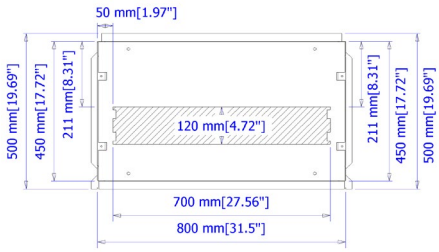
Anchoring Plan with Bottom Plate



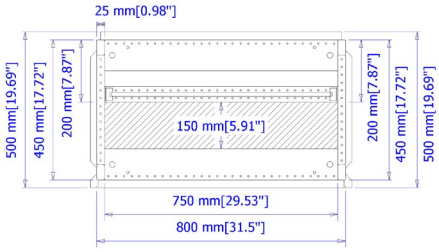
Anchoring Plan without Bottom Plate



Top Conduit Entry

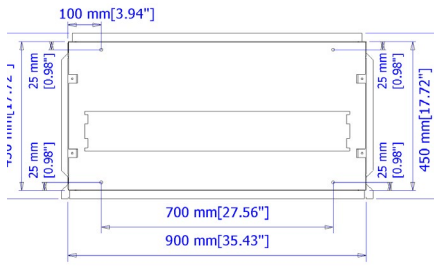


Bottom Conduit Entry with Bottom Plate

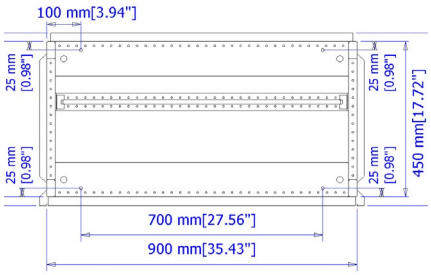


Bottom Conduit Entry without Bottom Plate

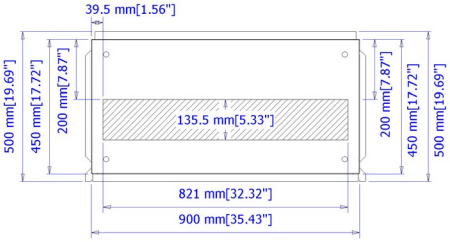
900mm Fixed Section



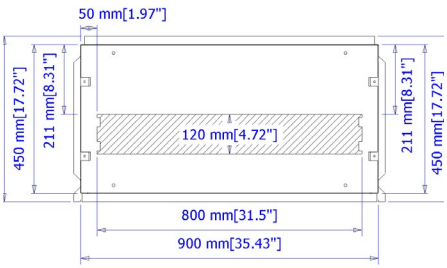
Anchoring Plan with Bottom Plate



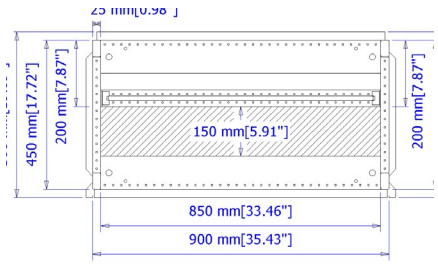
Anchoring Plan without Bottom Plate



Top Conduit Entry



Bottom Conduit Entry with Bottom Plate

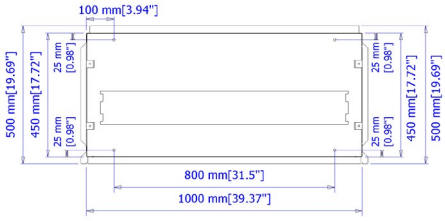


Bottom Conduit Entry without Bottom Plate

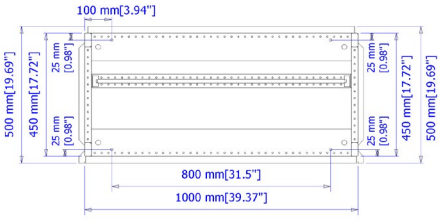
Layouts

Securing and Conduit Entry Details

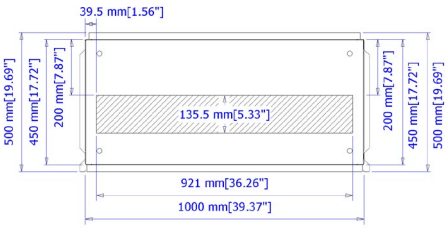
1000mm Fixed Section



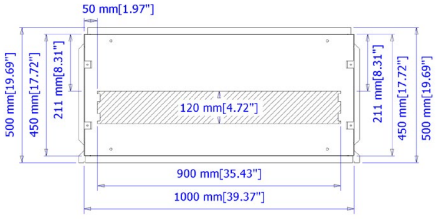
Anchoring Plan with Bottom Plate



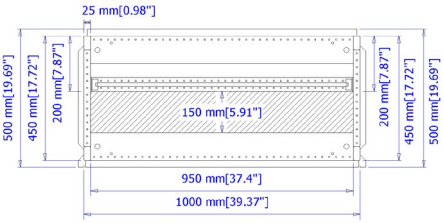
Anchoring Plan without Bottom Plate



Top Conduit Entry

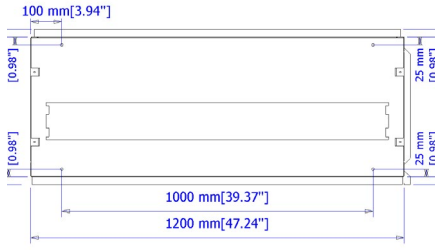


Bottom Conduit Entry with Bottom Plate

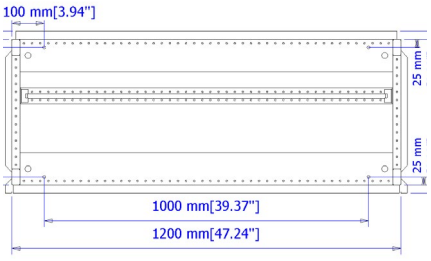


Bottom Conduit Entry without Bottom Plate

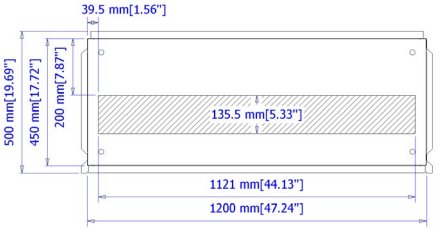
1200mm Fixed Section



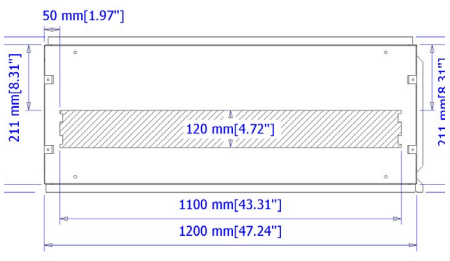
Anchoring Plan with Bottom Plate



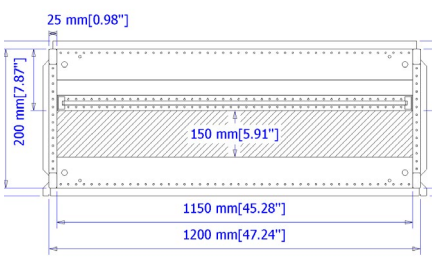
Anchoring Plan without Bottom Plate



Top Conduit Entry



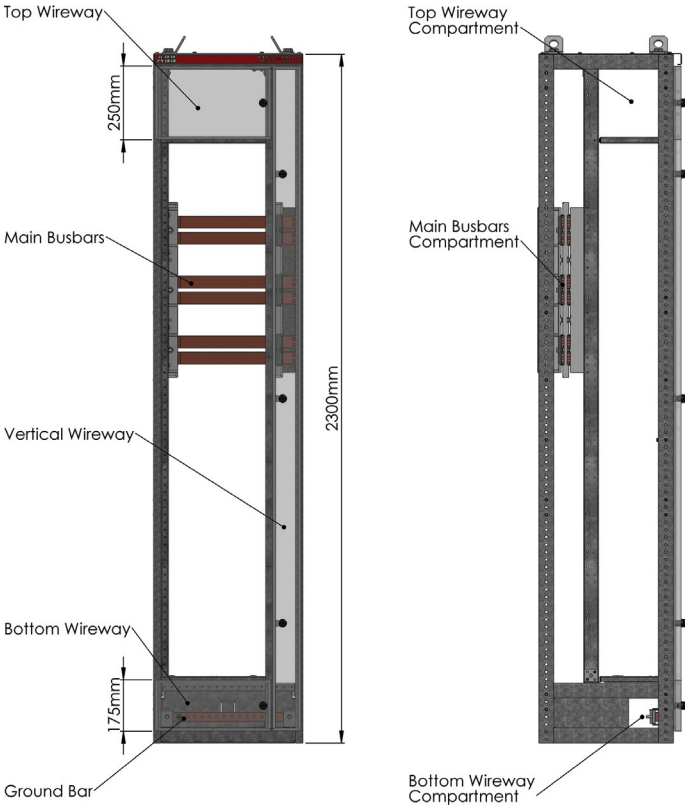
Bottom Conduit Entry with Bottom Plate



Bottom Conduit Entry without Bottom Plate

Layouts

MCC Mounting



Notes: Use four bolts per vertical section to fasten the MCC through its internal mounting angles to the foundation. Use HSL3 M8/20 or hex bolt M8X20 Grade 8.8, depending on the mounting surface. See the illustrations and tables for general dimensions. Exact dimensions matching your equipment can be found on the elevation drawings shipped with your MCC. Installing switchgear with bottom cable entries requires a foundation with an opening or cable duct. The sections should be installed on a base frame that is either embedded in the concrete floor or rests as a false floor on supports.

Notes

Notes

Notes

Notes

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