## Section 17

## Motor Control Centers



Model 6 Unit


Model 6 Motor Control Center


Model 6 Motor Control Center

20-in. (508 mm)-wide Section with Standard Vertical Wireway


## Model 6 Structure Features

- Horizontal main bus use captive splice bar assembly; allows splicing without removing units
- Horizontal bus is located at the top of the structure for easy installation, inspection and maintenance
- Available ampacity 600 A, 800 A, 1200 A, 2000 A, 2500 A, and 3200 A
- Sliding non-conductive horizontal bus barrier
- 300 A, 600 A, and 1200 A vertical bus
- Vertical bus openings on 3-inch centers
- Optional automatic vertical bus shutters are available
- Base mounting channel includes lever notches for ease of alignment
- Full depth vertical wireway available, either 4 -inch or 9-inch width
- Vertical ground bus is standard


## Model 6 Arc Resistant

The Model 6 Arc Resistant Enclosure provides reliable arc flash containment through passive technology and design and has been witnessed and verified by UL for design and performance to the ANSI/IEEE C37.20.7 standard. Most of the standard offer configurations and units are available, making the Model 6 Arc Resistant MCC the industry's most complete offer.
Certification and Validation:

- Tested and certified performance to the industry's Arc Resistant Standard (ANSI/IEEE C37.20.7)
- Internal arc testing validated and witnessed by UL
- Industry's highest MCC arc duration rating of 100 milliseconds (6 Cycles)

Technical Specifications and Highlights:

- Up to 65 kA at 600 VAC Rated
- Accessibility Type 2A
- Main bus up to 2000 A amps
- Optional insulated bus (Epoxy or Heat Shrink)
- Optional automatic bus shutters
- Optional exhaust plenums
- Reinforced enclosure: 12 gage steel doors and covers, additional fasteners and hinges
- Reinforced frame with additional internal supports
- Pathways inside the enclosure manage arc by-products and pressure
- iMCC remote monitoring and controlling
- MasterPact type LF (designed to limit arc energy) circuit breakers are available in upstream gear


## Model 6 ArcBlok

The Square $D^{\text {TM }}$ brand Model 6 Low Voltage Motor Control Center (MCC) with ArcBlok ${ }^{\text {TM }}$ by Schneider Electric ${ }^{T M}$ is a game changer in electrical equipment protection and safetyrelated work practices. With ArcBlok arc isolation, the line side conductors are fully enclosed inside a cable vault, which has been tested for the ANSI/IEEE C37.20.7 requirements for arc containment. Not just a barrier, ArcBlok reduces the chance that an arc flash could occur and reduces and contains the arc energy if it does. Sensors inside the compartment continuously take thermal readings and communicate those to a mobile device, while maintenance personnel stand outside the arc flash zone to review.
Build features include:

- Steel barriers
- Lifting handles
- Bolts face outward for easy alignment
- Interior barriers separate phases
- Thermal sensors communicate data
- Absence of voltage tester
- Vents direct arc flash energy to minimize impact

Technical Details

- ArcBlok MCC: 100 kA at 208, 240 and $480 \mathrm{Vac} ; 50 \mathrm{kA}$ at 600 Vac , up to 1200 A
- Line side testing was UL ${ }^{\circledR}$ witnessed in accordance with ANSI/IEEE C37.20.7-2017
- Model 6 MCCs are Listed to UL845 Standard and Certified to Canadian Standard C22.2 No. 254 and Mexican Standard NOM-003-SCFI-2014 (NMX-J-515-ANCE)
- PowerPact ${ }^{\text {™ }} \mathrm{P}$ Molded Case Circuit Breakers with ArcBlok Technology are Listed to the UL489 Standard and Certified to Canadian Standard C22.2 No. 5


Model 6

## Model 6 Unit Features

- Metal operator handle, color coded for clear indication of disconnect position (including "Tripped")
- Twin-handle cam mechanism standard on all plug-on units (except Compac ${ }^{\text {TM }} 6$ )
- Rugged unit construction features solid rear sides and hinged bottom plates
- Forward tilted pull-apart control terminal blocks standard with NEMA Type B or C wiring
- Starter units available with Class 8536 Type S NEMA or D-Line IEC
- Available overload relays on starter include: melting alloy, Motor Logic ${ }^{\text {TM }}$, and TeSys ${ }^{\text {TM }}$ T
- Control station plate for pilot devices is mounted on front of unit
- Easily accessible control transformer
- Starter mounted on right-hand side of unit, adjacent to wireway, for ease of cable termination
Table 17.1: Available units include:
- Automation equipment
- Reduced voltage starters
- Full voltage non-reversing
- Altivar ${ }^{\text {TM }}$ AC drives
- Altistart ${ }^{\top \mathrm{M}}$ soft starts
- Surge Protection Device (SPD) units
- Distribution transformers and panelboards
- 3-inch accessory units
- Empty mounting units
- MasterPact ${ }^{\text {TM }}$ drawout main circuit breakers
- Master terminal compartments
- Automatic transfer switches
- Full voltage reversing
- Circuit breaker branch feeders
- Fusible switch branch feeders
- Full voltage 2-speed
- Programmable logic controllers
- Incoming devices
- Tie breakers


## Intelligent Motor Control Center-Model 6 iMCC

Maximize customer value with the industry's most comprehensive energy and asset management capabilities.

## Standard Architectures

SIMPLE, standardized network designs create consistency and familiarity, reduce changes, accelerate startup and commissioning, and ultimately drive efficiency in existing operations and future expansions.

## Reduced Lead Times

FASTER quotations, drawings, pricing, submittals, and manufacturing allow for shorter cycle times and increased flexibility to make changes later in the project as designs mature and requirements change.

## Ethernet Communications

OPEN protocols in Modbus ${ }^{\text {TM }}$ TCP and EtherNet/IP eliminate expensive proprietary software, hardware, and services. Both protocols provide the speed, reliability, and network services to easily and efficiently manage the entire network. Ethernet-based networks easily integrate with business systems for management across the enterprise.

## Integrated Wonderware Solution

COMPLETE Wonderware solution allows the end user to perform comprehensive asset and energy management through simple, organized, and role-based screens. Power and process data can be viewed in real time or in trended report, which increases user awareness and delivers actionable data. Local or remote configuration, monitoring, and control provides optimal flexibility. Maximizing uptime, slashing troubleshooting, and delivering true predictive maintenance strategies become a reality with all the right information at the right time. Seamless integration into enterprise-level Invensys-based SCADA/DCS systems will save countless hours of unnecessary programming, engineering, and troubleshooting during both startup and operation.

## Merchandised Units (shipment in as low as 3 days)

Model 6 Industrial Package units (white) are available for ordering by catalog number. A listing of types available by quick shipment may be found on the following pages. This limited offering includes popular combinations of types and options. Catalog numbers consist of class number (8998), disconnect and device types, horsepower or ampacity ratings and options (for example, 8998SBA001XFTMA). See table below. All units are UL Listed.

## Combination Starter Units Catalog Numbering System

Units rated as follows:

- Model 6 Industrial Package, 480 V, 60 Hz, NEMA 12 enclosure
- Type 1 B wiring, 100,000 AIR rating, 1 N.O./1 N.C. auxiliary interlock on each contactor

Table 17.2: Numbering System [1]

| First | Second | Third | Fourth | Fifth | Sixth | Seventh | Eighth |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 8998 | S | B | A | 005 | A | FT | MA |
| Class | Type | Disconnect | Device | Motor Hp | Pilot Device Function | Control Power | Overload Relay |
| 8998 | S- Standard Size H- High Density (Compac 6) [2] | B- Circuit Breaker (PowerPact ${ }^{\text {TM }}$ MCP) <br> F- Fusible (Class R except Compac 6 Class J) | A-FVNR C-FVR [3] | $001=1 \mathrm{hp}$ $02=2 \mathrm{hp}$ $003=3 \mathrm{hp}$ $05=5 \mathrm{hp}$ $007=7.5 \mathrm{hp}$ $010=10 \mathrm{hp}$ $015=15 \mathrm{hp}[3]$ $025=25 \mathrm{hp}[3]$ $040=40 \mathrm{hp}[3]$ $050=50 \mathrm{hp}[3]$ $060=60 \mathrm{hp}[3]$ $075=75 \mathrm{hp}[3]$ $100=100 \mathrm{hp}[3]$ | $\mathrm{X}=$ None <br> A=Start-Stop PB, On/Off Lights[4] <br> C=HOA Sel.Switch, On/Off Lights [2] | FT- 480-120 V CPT [5] FS-120 V Fused Separate Ctl w/intk | MA-Melting Alloy (Thermal Units not Included) SS-Motor Logic SSOL |

NOTE: For more information, contact your nearest Schneider Electric sales office.

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## Combination Starters Units with Motor Circuit Protector Disconnects

Model 6 NEMA-rated FVNR combination starter units use PowerPact ${ }^{\text {TM }}$ Motor Circuit Protectors.
Ratings: 480 V, NEMA 12, Type 1B-D wiring, 100,000 AIR. Units include 1 N.O./1 N.C. auxiliary contacts. Units with pilot devices use 22 mm type. Units without pilot devices include a station plate with knockouts for five 22 mm devices
Thermal units are not included with melting alloy overloads.
Table 17.3: FVNR Combination Starter Units with Motor Circuit Protector Disconnects

| Ratings |  |  | Control Transformer |  |  | Fused Separate Control |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | No Pilot Devices | Start-Stop PB, Red On/Green Off Lights | HOA Red On/Green Off Lights | No Pilot Devices | Start-Stop PB, Red On/Green Off Lights | HOA Red On/Green Off Lights |
| $\begin{gathered} \hline \text { NEMA } \\ \text { Size } \\ \hline \end{gathered}$ | Hp | $\begin{gathered} \text { Space } \\ \text { (IN) } \end{gathered}$ | Catalog Number | Catalog Number | Catalog Number | Catalog Number | Catalog Number | Catalog Number |


| 1 | 1 | 12 | SBA001XFTMA | SBA001AFTMA | SBA001CFTMA | SBA001XFSMA | SBA001AFSMA | SBA001CFSMA |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2 |  | SBA002XFTMA | SBA002AFTMA | SBA002CFTMA | SBA002XFSMA | SBA002AFSMA | SBA002CFSMA |
|  | 3 |  | SBA003XFTMA | SBA003AFTMA | SBA003CFTMA | SBA003XFSMA | BA003AFSMA | SBA003CFSMA |
|  | 5 |  | SBA005XFTMA | SBA005AFTMA | SBA005CFTMA | SBA005XFSMA | SBA005AFSMA | SBA005CFSMA |
|  | 7.5 |  | SBA007XFTMA | SBA007AFTMA | SBA007CFTMA | SBA007XFSMA | SBA007AFSMA | SBA007CFSMA |
|  | 10 |  | SBA010XFTMA | SBA010AFTMA | SBA010CFTMA | SBA010XFSMA | SBA010AFSMA | SBA010CFSMA |
| 2 | 15 | 12 | SBA015XFTMA | SBA015AFTMA | SBA015CFTMA | SBA015XFSMA | SBA015AFSMA | SBA015CFSMA |
|  | 25 |  | SBA025XFTMA | SBA025AFTMA | SBA025CFTMA | SBA025XFSMA | SBA025AFSMA | SBA025CFSMA |
| 3 | 40 | 18 | SBA040XFTMA | SBA040AFTMA | SBA040CFTMA | SBA040XFSMA | SBA040AFSMA | SBA040CFSMA |
|  | 50 |  | SBA050XFTMA | SBA050AFTMA | SBA050CFTMA | SBA050XFSMA | SBA050AFSMA | SBA050CFSMA |
| ${ }^{4}$ | 60 | 21 | SBA060XFTMA | SBA060AFTMA | SBA060CFTMA | SBA060XFSMA | SBA060AFSMA | SBA060CFSMA |
|  | 75 |  | SBA075XFTMA | SBA075AFTMA | SBA075CFTMA | SBA075XFSMA | SBA075AFSMA | SBA075CFSMA |
|  | 100 |  | SBA100XFTMA | SBA100AFTMA | SBA100CFTMA | SBA100XFSMA | SBA100AFSMA | SBA100CFSMA |
| Full Voltage Non-Reversing (FVNR) Starters With Motor Circuit Protector Disconnect and Solid State Overload Relay (Motor Logic ${ }^{\text {™ }}$ ) |  |  |  |  |  |  |  |  |
| 1 | 1 | 12 | SBA001XFTSS | SBA001AFTSS | SBA001CFTSS | SBA001XFSSS | SBA001AFSSS | SBA001CFSSS |
|  | 2 |  | SBA002XFTSS | SBA002AFTSS | SBA002CFTSS | SBA002XFSSS | SBA002AFSSS | SBA002CFSSS |
|  | 3 |  | SBA003XFTSS | SBA003AFTSS | SBA003CFTSS | SBA003XFSSS | SBA003AFSSS | SBA003CFSSS |
|  | 5 |  | SBA005XFTSS | SBA005AFTSS | SBA005CFTSS | SBA005XFSSS | SBA005AFSSS | SBA005CFSSS |
|  | 7.5 |  | SBA007XFTSS | SBA007AFTSS | SBA007CFTSS | SBA007XFSSS | SBA007AFSSS | SBA007CFSSS |
|  | 10 |  | SBA010XFTSS | SBA010AFTSS | SBA010CFTSS | SBA010XFSSS | SBA010AFSSS | SBA010CFSSS |
| 2 | 15 | 12 | SBA015XFTSS | SBA015AFTSS | SBA015CFTSS | SBA015XFSSS | SBA015AFSSS | SBA015CFSSS |
|  | 25 |  | SBA025XFTSS | SBA025AFTSS | SBA025CFTSS | SBA025XFSSS | SBA025AFSSS | SBA025CFSSS |
| 3 | 40 | 18 | SBA040XFTSS | SBA040AFTSS | SBA040CFTSS | SBA040XFSSS | SBA040AFSSS | SBA040CFSSS |
|  | 50 |  | SBA050XFTSS | SBA050AFTSS | SBA050CFTSS | SBA050XFSSS | SBA050AFSSS | SBA050CFSSS |
| 4 | 60 | 21 | SBA060XFTSS | SBA060AFTSS | SBA060CFTSS | SBA060XFSSS | SBA060AFSSS | SBA060CFSSS |
|  | 75 |  | SBA075XFTSS | SBA075AFTSS | SBA075CFTSS | SBA075XFSSS | SBA075AFSSS | SBA075CFSSS |
|  | 100 |  | SBA100XFTSS | SBA100AFTSS | SBA100CFTSS | SBA100XFSSS | SBA100AFSSS | SBA100CFSSS |

Table 17.4: FVR Combination Starter Units with Motor Circuit Protector Disconnects

| Ratings |  |  | Control Transformer |  | Fused Separate Control |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | No Pilot Devices | Forward-Rev.-Stop PB, Forward/Reverse Lights | No Pilot Devices | Forward-Rev.-Stop PB, Forward/Reverse Lights |
| NEMA Size | Hp | Space (IN) | Catalog Number | Catalog Number | Catalog Number | Catalog Number |
| Full Voltage Reversing (FVR) Starters With Motor Circuit Protector Disconnect and Melting Alloy Overload Relay |  |  |  |  |  |  |
| 1 | 1 | 18 | SBC001XFTMA | SBC001AFTMA | SBC001XFSMA | SBC001AFSMA |
|  | 2 |  | SBC002XFTMA | SBC002AFTMA | SBC002XFSMA | SBC002AFSMA |
|  | 3 |  | SBC003XFTMA | SBC003AFTMA | SBC003XFSMA | SBC003AFSMA |
|  | 5 |  | SBC005XFTMA | SBC005AFTMA | SBC005XFSMA | SBC005AFSMA |
|  | 7.5 |  | SBC007XFTMA | SBC007AFTMA | SBC007XFSMA | SBC007AFSMA |
|  | 10 |  | SBC010XFTMA | SBC010AFTMA | SBC010XFSMA | SBC010AFSMA |
| 2 | 15 | 18 | SBC015XFTMA | SBC015AFTMA | SBC015XFSMA | SBC015AFSMA |
|  | 25 |  | SBC025XFTMA | SBC025AFTMA | SBC025XFSMA | SBC025AFSMA |
| 3 | 40 | 27 | SBC040XFTMA | SBC040AFTMA | SBC040XFSMA | SBC040AFSMA |
|  | 50 |  | SBC050XFTMA | SBC050AFTMA | SBC050XFSMA | SBC050AFSMA |
| 4 | 60 | 33 | SBC060XFTMA | SBC060AFTMA | SBC060XFSMA | SBC060AFSMA |
|  | 75 |  | SBC075XFTMA | SBC075AFTMA | SBC075XFSMA | SBC075AFSMA |
|  | 100 |  | SBC100XFTMA | SBC100AFTMA | SBC100XFSMA | SBC100AFSMA |
| Full Voltage Reversing (FVR) Starters With Motor Circuit Protector Disconnect and Solid State Overload Relay (Motor Logic) |  |  |  |  |  |  |
| 1 | 1 | 18 | SBC001XFTSS | SBC001AFTSS | SBC001XFSSS | SBC001AFSSS |
|  | 2 |  | SBC002XFTSS | SBC002AFTSS | SBC002XFSSS | SBC002AFSSS |
|  | 3 |  | SBC003XFTSS | SBC003AFTSS | SBC003XFSSS | SBC003AFSSS |
|  | 5 |  | SBC005XFTSS | SBC005AFTSS | SBC005XFSSS | SBC005AFSSS |
|  | 7.5 |  | SBC007XFTSS | SBC007AFTSS | SBC007XFSSS | SBC007AFSSS |
|  | 10 |  | SBC010XFTSS | SBC010AFTSS | SBC010XFSSS | SBC010AFSSS |
| 2 | 15 | 18 | SBC015XFTSS | SBC015AFTSS | SBC015XFSSS | SBC015AFSSS |
|  | 25 |  | SBC025XFTSS | SBC025AFTSS | SBC025XFSSS | SBC025AFSSS |
| 3 | 40 | 27 | SBC040XFTSS | SBC040AFTSS | SBC040XFSSS | SBC040AFSSS |
|  | 50 |  | SBC050XFTSS | SBC050AFTSS | SBC050XFSSS | SBC050AFSSS |
| 4 | 60 | 33 | SBC060XFTSS | SBC060AFTSS | SBC060XFSSS | SBC060AFSSS |
|  | 75 |  | SBC075XFTSS | SBC075AFTSS | SBC075XFSSS | SBC075AFSSS |
|  | 100 |  | SBC100XFTSS | SBC100AFTSS | SBC100XFSSS | SBC100AFSSS |

Combination Starter Units with Fusible Switch Disconnects
Model 6 NEMA-rated FVNR combination starter units listed below use fusible switches with Class R fuse clips (fuses not included).
Ratings: 480 V, NEMA 12, Type 1B-D wiring, 100,000 AIR. Units include 1 N.O./1 N.C. auxiliary contacts. Units with pilot devices use 22 mm type. Units without pilot devices include a station plate with knockouts for five 22 mm devices.
Thermal units are not included with melting alloy overloads.
Table 17.5: FVNR Combination Starter Units with Fusible Switch Disconnects

| Ratings |  |  | Control Transformer |  |  | Fused Separate Control |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | No Pilot Devices | Start-Stop PB, Red On/Green Off Lights | HOA <br> Red On/Green Off Lights | No Pilot Devices | Start-Stop PB, Red On/Green Off Lights | HOA Red On/Green Off Lights |
| NEMA Size | Hp | Space (IN) | Catalog No. | Catalog No. | Catalog No. | Catalog No. | Catalog No. | Catalog No. |
| Full Voltage Non-Reversing (FVNR) Starters With Fusible Switch Disconnect and Melting Alloy Overload Relay |  |  |  |  |  |  |  |  |
| 1 | 1 | 12 | SFA001XFTMA | SFA001AFTMA | SFA001CFTMA | SFA001XFSMA | SFA001AFSMA | SFA001CFSMA |
|  | 2 |  | SFA002XFTMA | SFA002AFTMA | SFA002CFTMA | SFA002XFSMA | SFA002AFSMA | SFA002CFSMA |
|  | 3 |  | SFA003XFTMA | SFA003AFTMA | SFA003CFTMA | SFA003XFSMA | SFA003AFSMA | SFA003CFSMA |
|  | 5 |  | SFA005XFTMA | SFA005AFTMA | SFA005CFTMA | SFA005XFSMA | SFA005AFSMA | SFA005CFSMA |
|  | 7.5 |  | SFA007XFTMA | SFA007AFTMA | SFA007CFTMA | SFA007XFSMA | SFA007AFSMA | SFA007CFSMA |
|  | 10 |  | SFA010XFTMA | SFA010AFTMA | SFA010CFTMA | SFA010XFSMA | SFA010AFSMA | SFA010CFSMA |
| 2 | 15 | 12 | SFA015XFTMA | SFA015AFTMA | SFA015CFTMA | SFA015XFSMA | SFA015AFSMA | SFA015CFSMA |
|  | 25 |  | SFA025XFTMA | SFA025AFTMA | SFA025CFTMA | SFA025XFSMA | SFA025AFSMA | SFA025CFSMA |
| 3 | 40 | 18 | SFA040XFTMA | SFA040AFTMA | SFA040CFTMA | SFA040XFSMA | SFA040AFSMA | SFA040CFSMA |
|  | 50 |  | SFA050XFTMA | SFA050AFTMA | SFA050CFTMA | SFA050XFSMA | SFA050AFSMA | SFA050CFSMA |
| 4 | 60 | 30 | SFA060XFTMA | SFA060AFTMA | SFA060CFTMA | SFA060XFSMA | SFA060AFSMA | SFA060CFSMA |
|  | 75 |  | SFA075XFTMA | SFA075AFTMA | SFA075CFTMA | SFA075XFSMA | SFA075AFSMA | SFA075CFSMA |
|  | 100 |  | SFA100XFTMA | SFA100AFTMA | SFA100CFTMA | SFA100XFSMA | SFA100AFSMA | SFA100CFSMA |
| Full Voltage Non-Reversing (FVNR) Starters With Fusible Switch Disconnect and Solid State Overload Relay (Motor Logic ${ }^{\text {™ }}$ ) |  |  |  |  |  |  |  |  |
| 1 | 1 | 12 | SFA001XFTSS | SFA001AFTSS | SFA001CFTSS | SFA001XFSSS | SFA001AFSSS | SFA001CFSSS |
|  | 2 |  | SFA002XFTSS | SFA002AFTSS | SFA002CFTSS | SFA002XFSSS | SFA002AFSSS | SFA002CFSSS |
|  | 3 |  | SFA003XFTSS | SFA003AFTSS | SFA003CFTSS | SFA003XFSSS | SFA003AFSSS | SFA003CFSSS |
|  | 5 |  | SFA005XFTSS | SFA005AFTSS | SFA005CFTSS | SFA005XFSSS | SFA005AFSSS | SFA005CFSSS |
|  | 7.5 |  | SFA007XFTSS | SFA007AFTSS | SFA007CFTSS | SFA007XFSSS | SFA007AFSSS | SFA007CFSSS |
|  | 10 |  | SFA010XFTSS | SFA010AFTSS | SFA010CFTSS | SFA010XFSSS | SFA010AFSSS | SFA010CFSSS |
| 2 | 15 | 12 | SFA015XFTSS | SFA015AFTSS | SFA015CFTSS | SFA015XFSSS | SFA015AFSSS | SFA015CFSSS |
|  | 25 |  | SFA025XFTSS | SFA025AFTSS | SFA025CFTSS | SFA025XFSSS | SFA025AFSSS | SFA025CFSSS |
| 3 | 40 | 18 | SFA040XFTSS | SFA040AFTSS | SFA040CFTSS | SFA040XFSSS | SFA040AFSSS | SFA040CFSSS |
|  | 50 |  | SFA050XFTSS | SFA050AFTSS | SFA050CFTSS | SFA050XFSSS | SFA050AFSSS | SFA050CFSSS |
| 4 | 60 | 30 | SFA060XFTSS | SFA060AFTSS | SFA060CFTSS | SFA060XFSSS | SFA060AFSSS | SFA060CFSSS |
|  | 75 |  | SFA075XFTSS | SFA075AFTSS | SFA075CFTSS | SFA075XFSSS | SFA075AFSSS | SFA075CFSSS |
|  | 100 |  | SFA100XFTSS | SFA100AFTSS | SFA100CFTSS | SFA100XFSSS | SFA100AFSSS | SFA100CFSSS |

Table 17.6: FVR Combination Starter Units with Fusible Switch Disconnects

| Ratings |  |  | Control Transformer |  | Fused Separate Control |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | No Pilot Devices | Forward-Rev.-Stop PB, Forward/Reverse Lights | No Pilot Devices | Forward-Rev.-Stop PB, Forward/Reverse Lights |
| NEMA Size | Hp | Space (IN) | Catalog No. | Catalog No. | Catalog No. | Catalog No. |
| Full Voltage Reversing (FVR) Starters With Fusible Switch Disconnect and Melting Alloy Overload Relay |  |  |  |  |  |  |
| 1 | 1 | 18 | SFC001XFTMA | SFC001AFTMA | SFC001XFSMA | SFC001AFSMA |
|  | 2 |  | SFC002XFTMA | SFC002AFTMA | SFC002XFSMA | SFC002AFSMA |
|  | 3 |  | SFC003XFTMA | SFC003AFTMA | SFC003XFSMA | SFC003AFSMA |
|  | 5 |  | SFC005XFTMA | SFC005AFTMA | SFC005XFSMA | SFC005AFSMA |
|  | 7.5 |  | SFC007XFTMA | SFC007AFTMA | SFC007XFSMA | SFC007AFSMA |
|  | 10 |  | SFC010XFTMA | SFC010AFTMA | SFC010XFSMA | SFC010AFSMA |
| 2 | 15 | 18 | SFC015XFTMA | SFC015AFTMA | SFC015XFSMA | SFC015AFSMA |
|  | 25 |  | SFC025XFTMA | SFC025AFTMA | SFC025XFSMA | SFC025AFSMA |
| 3 | 40 | 27 | SFC040XFTMA | SFC040AFTMA | SFC040XFSMA | SFC040AFSMA |
|  | 50 |  | SFC050XFTMA | SFC050AFTMA | SFC050XFSMA | SFC050AFSMA |
| 4 | 60 | 39 | SFC060XFTMA | SFC060AFTMA | SFC060XFSMA | SFC060AFSMA |
|  | 75 |  | SFC075XFTMA | SFC075AFTMA | SFC075XFSMA | SFC075AFSMA |
|  | 100 |  | SFC100XFTMA | SFC100AFTMA | SFC100XFSMA | SFC100AFSMA |
| )Full Voltage Reversing (FVR) Starters with Fusible Switch Disconnect and Solid State Overload Relay (Motor Logic |  |  |  |  |  |  |
| 1 | 1 | 18 | SFC001XFTSS | SFC001AFTSS | SFC001XFSSS | SFC001AFSSS |
|  | 2 |  | SFC002XFTSS | SFC002AFTSS | SFC002XFSSS | SFC002AFSSS |
|  | 3 |  | SFC003XFTSS | SFC003AFTSS | SFC003XFSSS | SFC003AFSSS |
|  | 5 |  | SFC005XFTSS | SFC005AFTSS | SFC005XFSSS | SFC005AFSSS |
|  | 7.5 |  | SFC007XFTSS | SFC007AFTSS | SFC007XFSSS | SFC007AFSSS |
|  | 10 |  | SFC010XFTSS | SFC010AFTSS | SFC010XFSSS | SFC010AFSSS |
| 2 | 15 | 18 | SFC015XFTSS | SFC015AFTSS | SFC015XFSSS | SFC015AFSSS |
|  | 25 |  | SFC025XFTSS | SFC025AFTSS | SFC025XFSSS | SFC025AFSSS |
| 3 | 40 | 27 | SFC040XFTSS | SFC040AFTSS | SFC040XFSSS | SFC040AFSSS |
|  | 50 |  | SFC050XFTSS | SFC050AFTSS | SFC050XFSSS | SFC050AFSSS |
| 4 | 60 | 39 | SFC060XFTSS | SFC060AFTSS | SFC060XFSSS | SFC060AFSSS |
|  | 75 |  | SFC075XFTSS | SFC075AFTSS | SFC075XFSSS | SFC075AFSSS |
|  | 100 |  | SFC100XFTSS | SFC100AFTSS | SFC100XFSSS | SFC100AFSSS |

## Compac ${ }^{\text {TM }} 6$ Combination Starter Units with Motor Circuit Protector Disconnects

NEMA-rated Compac 6, half-height FVNR combination starters use TeSys BV4 Motor Circuit Protectors.

Ratings: 480 V, NEMA 12, Type 1B-D wiring, 100,000 AIR. Units include 1 N.O./1 N.C. auxiliary contacts. Units with pilot devices use 22 mm type.
Units without pilot devices include a station plate with knockouts for four 22 mm devices. Thermal units are not included with melting alloy overloads.

Table 17.7: Compac 6 Combination Starter Units with Motor Circuit Protector Disconnects

| Ratings |  |  | Control Transformer |  |  | Fused Separate Control |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | No Pilot Devices | Start-Stop PB, Red On/Green Off Lights | HOA, Red On/Green Off Lights | No Pilot Devices | Start-Stop PB, Red On/Green Off Lights | HOA, Red On/Green Off Lights |
| NEMA <br> Size | Hp | Space (IN) | Catalog No. | Catalog No. | Catalog No. | Catalog No. | Catalog No. | Catalog No. |
| Full Voltage Non-Reversing (FVNR) Starters With Motor Circuit Protector Disconnect and Melting Alloy Overload Relay |  |  |  |  |  |  |  |  |
| 1 | 1 | 6 | HBA001XFTMA | HBA001AFTMA | HBA001CFTMA | HBA001XFSMA | HBA001AFSMA | HBA001CFSMA |
|  | 2 |  | HBA002XFTMA | HBA002AFTMA | HBA002CFTMA | HBA002XFSMA | HBA002AFSMA | HBA002CFSMA |
|  | 3 |  | HBA003XFTMA | HBA003AFTMA | HBA003CFTMA | HBA003XFSMA | HBA003AFSMA | HBA003CFSMA |
|  | 5 |  | HBA005XFTMA | HBA005AFTMA | HBA005CFTMA | HBA005XFSMA | HBA005AFSMA | HBA005CFSMA |
|  | 7.5 |  | HBA007XFTMA | HBA007AFTMA | HBA007CFTMA | HBA007XFSMA | HBA007AFSMA | HBA007CFSMA |
|  | 10 |  | HBA010XFTMA | HBA010AFTMA | HBA010CFTMA | HBA010XFSMA | HBA010AFSMA | HBA010CFSMA |
| Full Voltage Non-Reversing (FVNR) Starters With Motor Circuit Protector Disconnect and Solid State Overload Relay (Motor Logic ${ }^{\text {TM }}$ ) |  |  |  |  |  |  |  |  |
| 1 | 1 | 6 | HBA001XFTSS | HBA001AFTSS | HBA001CFTSS | HBA001XFSSS | HBA001AFSSS | HBA001CFSSS |
|  | 2 |  | HBA002XFTSS | HBA002AFTSS | HBA002CFTSS | HBA002XFSSS | HBA002AFSSS | HBA002CFSSS |
|  | 3 |  | HBA003XFTSS | HBA003AFTSS | HBA003CFTSS | HBA003XFSSS | HBA003AFSSS | HBA003CFSSS |
|  | 5 |  | HBA005XFTSS | HBA005AFTSS | HBA005CFTSS | HBA005XFSSS | HBA005AFSSS | HBA005CFSSS |
|  | 7.5 |  | HBA007XFTSS | HBA007AFTSS | HBA007CFTSS | HBA007XFSSS | HBA007AFSSS | HBA007CFSSS |
|  | 10 |  | HBA010XFTSS | HBA010AFTSS | HBA010CFTSS | HBA010XFSSS | HBA010AFSSS | HBA010CFSSS |

## Compac ${ }^{\text {TM }} 6$ Combination Starter Units with Fusible Switch Disconnects

NEMA-rated Compac 6, half-height FVNR combination starters listed below use fusible switches with Class J fuse clips (fuses not included).
Ratings: 480 V, NEMA 12, Type 1B-D wiring, 100,000 AIR. Units include 1 N.O./1 N.C. auxiliary contacts.
Units with pilot devices use 22 mm type. Units without pilot devices include a station plate with knockouts for four 22 mm devices. Thermal units are not included with melting alloy overloads.

Table 17.8: Compac 6 Combination Starter Units with Fusible Switch Disconnects

| Ratings |  |  | Control Transformer |  |  | Fused Separate Control |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | No Pilot Devices | Start-Stop PB, Red On/Green Off Lights | HOA, <br> Red On/Green Off Lights | No Pilot Devices | Start-Stop PB, Red On/Green Off Lights | HOA, <br> Red On/Green Off Lights |
| NEMA Size | Hp | Space (IN) | Catalog No. | Catalog No. | Catalog No. | Catalog No. | Catalog No. | Catalog No. |
| Full Voltage Non-Reversing (FVNR) Starters with Fusible Switch Disconnect and Melting Alloy Overload Relay |  |  |  |  |  |  |  |  |
| 1 | 1 | 6 | HFA001XFTMA | HFA001AFTMA | HFA001CFTMA | HFA001XFSMA | HFA001AFSMA | HFA001CFSMA |
|  | 2 |  | HFA002XFTMA | HFA002AFTMA | HFA002CFTMA | HFA002XFSMA | HFA002AFSMA | HFA002CFSMA |
|  | 3 |  | HFA003XFTMA | HFA003AFTMA | HFA003CFTMA | HFA003XFSMA | HFA003AFSMA | HFA003CFSMA |
|  | 5 |  | HFA005XFTMA | HFA005AFTMA | HFA005CFTMA | HFA005XFSMA | HFA005AFSMA | HFA005CFSMA |
|  | 7.5 |  | HFA007XFTMA | HFA007AFTMA | HFA007CFTMA | HFA007XFSMA | HFA007AFSMA | HFA007CFSMA |
|  | 10 |  | HFA010XFTMA | HFA010AFTMA | HFA010CFTMA | HFA010XFSMA | HFA010AFSMA | HFA010CFSMA |
| Full Voltage Non-Reversing (FVNR) Starters With Fusible Switch Disconnect and Solid State Overload Relay (Motor Logic) |  |  |  |  |  |  |  |  |
| 1 | 1 | 6 | HFA001XFTSS | HFA001AFTSS | HFA001CFTSS | HFA001XFSSS | HFA001AFSSS | HFA001CFSSS |
|  | 2 |  | HFA002XFTSS | HFA002AFTSS | HFA002CFTSS | HFA002XFSSS | HFA002AFSSS | HFA002CFSSS |
|  | 3 |  | HFA003XFTSS | HFA003AFTSS | HFA003CFTSS | HFA003XFSSS | HFA003AFSSS | HFA003CFSSS |
|  | 5 |  | HFA005XFTSS | HFA005AFTSS | HFA005CFTSS | HFA005XFSSS | HFA005AFSSS | HFA005CFSSS |
|  | 7.5 |  | HFA007XFTSS | HFA007AFTSS | HFA007CFTSS | HFA007XFSSS | HFA007AFSSS | HFA007CFSSS |
|  | 10 |  | HFA010XFTSS | HFA010AFTSS | HFA010CFTSS | HFA010XFSSS | HFA010AFSSS | HFA010CFSSS |

Units rated as follows:

- 480 V, 60 Hz , NEMA Type 12 Enclosure, Industrial Package
- Short Circuit rating: 100,000 AIR

Circuit Breaker Branch Feeder Units
Table 17.9: Circuit Breaker Branch Feeder Units


Fusible Branch Feeder Units
Table 17.10: Fusible Branch Feeder Units

| First Position | Second Position | Third Position | Fourth Position | Fifth Position |
| :---: | :---: | :---: | :---: | :---: |
| 8998 | S | F | F | 015 |
| Class | Type | Disconnect | Device | Feeder Amps |
| 8998 | S- Standard Size <br> H- Compac 6 | F-Fusible [1] | F-Feeder | 030 |
|  |  |  |  | 060 |
|  |  |  |  | 100 |
|  |  |  |  | 200 [2] |
| Amps | Fuse Clips | Space (IN) | Catalog No. |  |
| $\begin{aligned} & 30 \\ & 60 \\ & \hline \end{aligned}$ | Class J | $\begin{gathered} 6 \\ \text { (Compac 6) } \end{gathered}$ | $\begin{aligned} & \hline \text { HFF030 } \\ & \text { HFF060 } \\ & \hline \end{aligned}$ |  |
| 100 |  |  | HFF100 |  |
| 30 60 | Class R | 12 | $\begin{aligned} & \hline \text { SFF030 } \\ & \text { SFF060 } \\ & \hline \end{aligned}$ |  |
| 100 |  |  | SFF100 |  |
| 200 |  | 24 | SFF200 |  |

## Model 6 Blank Doors

These doors may be used to cover an unused space in the MCC. A blank door will be required when placing a new unit in an existing space that is larger than the new unit.

Table 17.11: Model 6 Blank Doors

| Catalog Number |  |
| :---: | :--- |
| 8998CP03 | 3-Inch High Blank Cover Plate |
| 8998CP06 | 6-Inch High Blank Door |
| 8998CP09 | 9-Inch High Blank Door |
| 8998CP12 | 12-Inch High Blank Door |
| 8998CP15 | 15-Inch High Blank Door |
| 8998CP18 | 18-Inch High Blank Door |
| 8998CP24 | 24-Inch High Blank Door |


[^0]:    11] Complete Model 6 Motor Control Centers are available from the factory
    [2] Not available with FVR
    [3] Not available with Compac 6
    [4] Includes forward, reverse and stop push-buttons; and forward and reverse pilot lights with FVR starters
    [5] Includes extra 50 VA CPT on Sz 1 FVNR (T1)

