

## Low Voltage Drives and Soft Starters

# Product Portfolio

### Low Voltage Variable Frequency Drives

#### CFW100 - Mini Drive



- 0.25, 0.50 and 1.0 HP
- Single-phase input
- 200-240 Vac
- Overload capacity: 150% during 60 sec.
- Degree of Protection: IP20
- Plug-in modules: I/O, USB, Bluetooth®, Infrared and Fieldbus communication (Modbus RTU and CANopen)
- SoftPLC function built-in
- Flash memory module: copy/paste parameters without applying power to the VFD



#### CFW300 - Micro Drive



- 0.25 to 5 HP
- Single-phase and three-phase input
- 100-127 Vac and 200-240 Vac
- Overload capacity: 150% for 60 sec.
- Degree of Protection: IP20
- Ambient temperature: -10°C to 50°C
- SoftPLC function built-in
- Plug-in modules: I/O, USB and Fieldbus communications
- Flash memory module: copy/paste parameters without applying power to the VFD

#### CFW500 - Machinery Drive



- 0.33 to 175 HP
- Single-phase and three-phase input
- 200-240 Vac, 380-480Vac, or 500-600Vac
- Overload capacity: 150% during 60 sec.
- Degree of Protection: IP20 (NEMA 1 with Kit)
- Up to 50°C Ambient (dependent on frame)
- 0 to 500 Hz output frequency
- 2.5 to 15 kHz adjustable switching frequency (5 kHz standard)
- Built-in RS-485 (Modbus RTU/BACnet)
- Four isolated programmable digital inputs
- One programmable relay output
- One programmable transistor output
- Isolated programmable analog I/O, 1 input and 1 output
- Optional SIL 3 Safe Torque off Module
- Pump Genius - Simplex, Multiplex (up to three pumps in parallel)
- Built-in soft PLC

#### CFW500 - NEMA 4X / IP66 Drive



- 0.33 to 25 HP
- Single-phase and three-phase input
- 200-240 Vac, 380-480Vac, or 500-600Vac
- Degree of Protection: (NEMA 4X / IP66 for indoor or outdoor use 40° C Ambient)
- Available with or without disconnect switch
- All other features the same as CFW500 IP20 / NEMA 1 VFD

#### CFW501 - HVAC-R Drive



- 0.33 to 25 HP
- Three-phase input
- 200-240 Vac, 380-480 Vac and 500-600 Vac
- V/F (scalar) and vector control (VWV)
- Overload capacity: 110% (ND) during 60 sec.
- Protection degree NEMA 1 / IP20
- Ambient temperature: -10°C to 50°C
- BACnet MS/TP, Metasys N2, Modbus RTU
- communication built-in
- HVAC functions: fire mode, dry pump, energy saving, bypass, 3 PID controllers, sleep and wake-up mode, engineering units available on keypad, filter maintenance, others
- RFI filter built-in
- Meets IEC 61000-3-12 with no additional line reactor, no minimum line impedance required
- USB port and PTC built-in
- Flash memory module: copy/paste parameters without applying power to the VFD
- Built-in SoftPLC

#### CFW11 / CFW11M - System Drive



- 1 to 2,500HP
- Single-phase and three-phase input
- 200-240 Vac, 380-480 Vac, 500-690 Vac
- V/F (scalar), sensorless and vector control
- Overload capacity: 110% (ND) and 150% (HD) during 60 sec.
- Protection degree NEMA1 / IP20 / IP21
- Ambient temperature: -10°C to 40 / 50°C
- Plug-in modules: I/O, PLC11, encoder and Fieldbus communication (Modbus RTU, CANopen, DeviceNet, Profibus DP/DPV1, Profinet, Modbus-TCP, EtherNET/IP, EtherCAT and BACnet)
- SoftPLC function built-in
- DC link reactor built-in
- USB port built-in
- Keypad with backlight, graphic display and softkeys, and real time clock
- Wmagnet Drive System®

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#### CFW11 - NEMA 12 / IP55 Drive



- 2 to 175HP
- Single-phase input
- 200-240 Vac or 380-480 Vac
- Degree of Protection: NEMA 12 / IP55
- Includes disconnect switch
- All other features the same as CFW11 NEMA 1 VFD

#### EDP11 – Enclosed Drive Panel



- Standard Panels
- 2 to 1,000HP
- Three-phase input
- 230Vac or 460Vac
- Utilizes CFW11 VFD
- Flange mount drives
- Door mount keypad with cover
- Circuit breaker with door handle
- Start / stop pushbuttons
- Run / fault pilot lights
- Fused Control Power Transformer
- NEMA 12 and NEMA 3R
- Options:
- 3-contactor by-pass
- HOA / POT / TB

Custom Panel Version Available

- Special customer specified options
- Low Harmonic Versions: Multi-Pulse, Passive Filters
- NEMA 4 and 4X, auxiliary cooling (air conditioner, etc.)

### Low Voltage Soft Starters

#### SSW05 – Light Duty



- 0.75 to 75 HP (3 to 85A)
- 220-240 Vac and 460-575 V
- 300% - 10sec., 4 starters per hour
- 2 phase control and by-pass built-in
- Ambient temperature up to 55 °C
- Control: voltage ramp
- Programming: dip-switches or remote keypad (optional)
- By-pass built-in

Motor and  
Soft  
Starter  
protection  
included

#### SSW07 – Heavy Duty



- 5 to 400 HP (17 to 412A)
- 220-575 Vac
- 300% - 30sec., 10 starters per hour
- 3 phase control and by-pass built in
- Ambient temperature up to 55 °C
- Control: voltage ramp, voltage kick start and current limit
- Programming: dip-switches or remote keypad (optional)
- Modbus RTU and DeviceNet (optional)

Rated  
65KAIC  
with  
Breaker

#### SSW900 – Heavy Duty



- 3 to 1,700 HP (10 to 1400A)
- 230Vac, 460Vac, 575Vac or 690Vac
- 300%, 30s up to 10 starts per hour
- 450%, 30s, 4 starters per hour
- Built in AC1 bypass contactors
- Detachable Text/Graphic Keypad with USB port & with built-in Bluetooth
- Real time clock with event log
- Oriented start-up and online help
- Voltage ramp, Voltage ramp + Current Limit, Current Limit, Pump Control, Torque control, Direct on-line (DOL) start modes
- Built-in SoftPLC
- Optional Communication: RS-485 (Modbus RTU), CANopen, DeviceNet, Profibus DP, Ethernet/IP, Modbus TCP/IP, ProfiNet IO

#### GPH2 or APS9 - Enclosed Soft Starters



Standard Stock Enclosed Panels

APS9 – 208 / 230 / 460Vac, 5 – 800HP

- Utilizes SSW900 and all features
- Rated for 350% for 30 s or 450% for 30 s
- NEMA 12 / 3R / 4 Enclosure
- AC3 full-rated bypass
- 65KAIC SSCR, Service Entrance Rated
- Door mounted graphic keypad, HOA, Start, Fault, operator devices

GPH2 - 230Vac, 460Vac, 5 – 350HP

- Utilizes SSW07 and all features
- Rated for 300% for 30 seconds
- Rated for 450% with derating
- NEMA 4 Enclosure
- Start / stop pushbuttons
- Run / fault pilot lights
- Options:
- AC3 rated by-pass
- Door mounted keypad