

TOUGH CUSTOMERS DESERVE A TOUGH DRIVE



- **True U.S. operating voltage design**
120V Class – 100 to 120V, +10% / -15%
240V Class – 200 to 240V, +10% / -15%
480V Class – 380 to 480V, +10% / -15%
- **Bring on the Heat**
Fully rated to operate in temperatures up to 122°F (50°C)

FEATURES

- TRUE 480V (480+10%) DESIGN**
- FULLY RATED @122°F(50°C) OPERATION**
- 2 YR WARRANTY**
- USER FRIENDLY INTERFACE**



ADVANCED MOTOR PARAMETERS

The TD200 shares the parameter structure with all other Tough Drive family AC drives. Common parameters are the same across the entire family; learn the parameter structure of one TD Series AC drive and you will know how to program other TD family AC drives.



Easy Auto Tuning

- With only 6 parameters you can easily tune the drive to your specific motor
- Static auto-tuning allows the drive to be tuned while motor is coupled



Directional Jog

- Digital inputs can be set to Forward Jog or Reverse Jog simultaneously with a custom jog frequency, acceleration time, and deceleration time

Input Voltage Models

120V (1PH)	0.25 to 1HP	240V (1PH)	0.25 to 3HP
240V (3PH)	1 to 3HP	480V (3PH)	1 to 3HP

Control Features

Pulse Width Modulation	PID Control	2 Analog Inputs
5 Digital Inputs	1 Analog Output	1 Digital Output
Braking Options	RS-485 Serial Port	Keypad POT

Built-in Control Modes

Volts per Hertz Regulation	Sensorless Vector Regulation
±2%	±0.5%



To Order Call 1.800.972.0436 or Visit factorymation.com

AC DRIVES

TD200 Series AC Drives



Features:

- Auto-tuning Sensorless Vector Control with V/Hz mode
- Pulse Width Modulation (PWM) utilizing IGBT Technology
- Built-in PID Control
- 150% rated current for 1 minute, 200% instantaneous
- 2 Analog Inputs: 0-10VDC and 4-20mA signals
- Digital Inputs: 5 NO/NC selectable
- 1 Analog Output (0-10VDC)
- 1 Multi-function Digital Relay Output
- Built-in dynamic braking transistor (480V models)
- Electronic overload protection and stall prevention
- Ground fault and short circuit protection
- Built-in RS485
- 2 year warranty

Part Number	Price	Constant Torque		Input Voltage	Output Voltage	Dimensions (Inches)				
		HP	Amps			H	W	D	Frame	
120V Class: Single-phase Input, Three-phase Output										
TD200-10P2-1PH	\$140.50	0.25	1.8	120V, 1 PH	240V, 3 PH	5.16	2.83	5.55	1	
TD200-10P5-1PH	\$144.70	0.5	2.6	120V, 1 PH	240V, 3 PH	5.16	2.83	5.55	1	
TD200-1001-1PH	\$159.30	1	4.3	120V, 1 PH	240V, 3 PH	5.16	4.65	5.91	2	
240V Class: Single-phase Input, Three-phase Output										
TD200-20P2-1PH	\$132.10	0.25	1.8	240V, 1 PH	240V, 3 PH	5.16	2.83	5.55	1	
TD200-20P5-1PH	\$138.40	0.5	2.6	240V, 1 PH	240V, 3 PH	5.16	2.83	5.55	1	
TD200-2001-1PH	\$142.60	1	4.3	240V, 1 PH	240V, 3 PH	5.16	2.83	5.55	1	
TD200-2002-1PH	\$196.10	2	7.5	240V, 1 PH	240V, 3 PH	5.16	4.65	5.91	2	
TD200-2003-1PH	\$222.70	3	10.5	240V, 1 PH	240V, 3 PH	5.16	4.65	5.91	2	
240V Class: Three-phase Input, Three-phase Output										
TD200-2001-3PH	\$146.85	1	4.3	240V, 3 PH	240V, 3 PH	5.16	2.83	5.55	1	
TD200-2002-3PH	\$185.80	2	7.5	240V, 3 PH	240V, 3 PH	5.16	4.65	5.91	2	
TD200-2003-3PH	\$208.90	3	10.5	240V, 3 PH	240V, 3 PH	5.16	4.65	5.91	2	
480V Class: Three-phase Input, Three-phase Output										
TD200-4001-3PH	\$211.80	1	2.3	480V, 3 PH	480V, 3 PH	5.16	4.65	5.91	2	
TD200-4002-3PH	\$220.20	2	3.8	480V, 3 PH	480V, 3 PH	5.16	4.65	5.91	2	
TD200-4003-3PH	\$265.30	3	5.2	480V, 3 PH	480V, 3 PH	5.16	4.65	5.91	2	

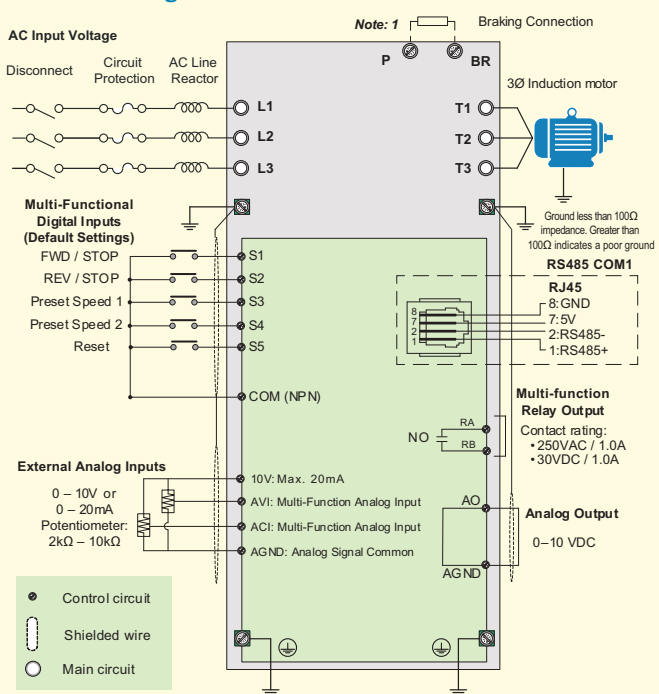
Accessories

Part Number	Price	Description
TDA-USBPC	\$39.35	FMX TD200 USB cable to connect TD200 to PC
TD200-DRM-F1	\$10.00	FMX TD200 Frame 1 DIN Rail Mounting Kit
TD200-DRM-F2	\$5.35	FMX TD200 Frame 2 DIN Rail Mounting Kit
PD22-POT10K	\$34.15	22mm potentiometer, 10kΩ, knob operator, UL Type 4X, IP66, (includes 1-10 scale legend plate)
PD22-USBBA	\$28.80	USB Comm. Interface, B/A female connection, UL Type 4X
PD22-RJ45	\$28.80	RJ45 Comm. Interface, Female/Female connection, UL Type 4X

General Specifications

Power Supply	Rated Input Power	120V Class - 100 to 120V, +10% / -15% 240V Class - 200 to 240V, +10% / -15% 480V Class - 380 to 480V, +10% / -15%
	Output Voltage Range	120/240V: 0-240V, 3-Phase 480V: 0-480V, 3-Phase
Output Characteristics	Rated Output Frequency	0-599Hz
	Output Frequency Accuracy	0.01Hz
	Control Mode	Sensorless Vector, V/Hz
Control Characteristics	Carrier Frequency	1 to 16kHz
	Frequency Control Range	0.01-599.00Hz
	Speed Control Accuracy	V/Hz: +/- 2% Sensorless Vector: +/- 0.5%
	Overload Capacity	150% Rated Output Current for 60 sec.
	Frequency Setting Signal	0-10VDC, 4-20mA
	Accel/Decel Time	0-3600 sec. (Independent Accel/Decel Times)
	Number of V/F Patterns	6 Preset V/F Patterns, 1 Custom V/F Pattern
	Braking Torque	Approximately 20%
Protective Functions		Stall Prevention, Instantaneous Overcurrent (200%), Motor Overload Protection, Undervoltage, Momentary Power Loss, Overheat Protection, Ground Fault
Environmental Conditions	Location	Indoor (IP20)
	Ambient Temperature	14 to 122 °F (-10 to 50 °C)
	Storage Temperature	-4 to 158 °F (-15 to 70 °C)
	Altitude	<1000m
	Humidity	<95% RH (Non-condensing)
Vibration	9.8m/s ² (1.0G)	
Agency Approvals	UL/cUL File# E503131, RoHS, CE 61800-3, IEC 60018-2-78	

Connection Diagram




Note:
1: Only 480V models have a built-in braking transistor. The braking resistor can be connected directly between P and BR. All other models do not have external braking capabilities.


TOUGH CUSTOMERS DESERVE A TOUGH DRIVE

- **True U.S. operating voltage design**
240V Class – 200 to 240V, +10% / -15%
480V Class – 380 to 480V, +10% / -15%
- **Brig on the Heat**
Fully rated to operate in temperatures up to 122°F (50°C)


FEATURES




TRUE 480V
(480+10%)
DESIGN



FULLY RATED
@128°F(50°C)
OPERATION



2 YR
WARRANTY



USER FRIENDLY
INTERFACE

FMX TOUGH DRIVE TD 400 SERIES



5-Digit LED Display

Status Indicators

8-button Keypad

Built-in Modbus RS-485 Port (RJ45 connector)

View Parameters, Run Speed & Diagnostics

Direction Indicator

Potentiometer included on all TD400 models

Control Terminals

Input power terminals. Single/Three Phase and Three Phase models available

Output terminals

440V 0.75kW

Hz/RPM FWD REV PARAM

FWD REV MODE PROG READ ENTER

SPEED

TD 400 SERIES

RESET

RUN STOP

UL E503831

CE

RoHS

Optional REMOTE LCD Keypad

The optional REMOTE LCD keypad features backlit, high-resolution screen for easier programming.

- Displays actual parameter names when programming, no need to remember group numbers.
- Engineering Units display data in a readable format.



- Adjustable backlight brightness
- Can function as a parameter settings copy device.

Input Voltage Models

240V (1/3PH)	0.5 to 3HP	240V (3PH)	5 to 40HP	480V (3PH)	1 to 75HP
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Built-in Control Modes

Volts per Hertz ±2% Regulation	Sensorless Vector ±0.5% Regulation	Permanent Magnet ±0.5% Regulation
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Control Features

Pulse Width Modulation	PID Control	Rated Current	2 Analog Inputs
6 Digital Inputs	1 Analog Output	2 Digital Outputs	Braking Options
Overload Protection	Ground Fault Protection	RS-485 Serial Port	Keypad POT



Features:

- Auto-tuning Sensorless Vector Control with V/HZ mode
- Pulse Width Modulation (PWM) utilizing IGBT Technology
- Built-in PID Control
- 150% rated current for 1 minute, 200% instantaneous
- 2 Analog Inputs: 0-10VDC and 4-20mA signals
- Digital Inputs: 6 PNP/NPN selectable
- 1 Analog Output (0-10VDC)
- 2 Multi-function Digital Relay Outputs
- Built-in dynamic braking transistor (Frames 1-4)
- Electronic overload, stall prevention, ground fault and short circuit protection
- Built-in RS485
- 2 year warranty

Built-in PLC functions at no extra cost:

- Ladder logic programming, up to 80 rungs of code
- Up to 6 Digital Inputs, 2 Relay Outputs, 2 Analog Inputs
- 7 Analog Comparators
- 7 Timers, 7 Counters, 15 Internal Relays

Part Number	Price	Constant Torque		Variable Torque		Input Voltage	Output Voltage	Dimensions (inches)			
		HP	Amps	HP	Amps			H	W	D	Frame
240V Class: Single/Three-phase Input, Three-phase Output											
TD400-20P5-13PH	\$221.80	0.5	3.1	0.5	3.1	240V, 1 PH	240V, 3 PH	6.46	3.57	5.96	1
TD400-2001-13PH	\$230.90	1	4.5	1	4.5	240V, 1 PH	240V, 3 PH	6.46	3.57	5.96	1
TD400-2002-13PH	\$283.65	2	7.5	2	7.5	240V, 1 PH	240V, 3 PH	7.39	5.07	6.00	2
TD400-2003-13PH	\$360.40	3	10.5	3	10.5	240V, 1 PH	240V, 3 PH	7.39	5.07	6.00	2
240V Class: Three-phase Input, Three-phase Output											
TD400-2005-3PH	\$369.85	5	17.5	5	17.5	240V, 3 PH	240V, 3 PH	7.39	5.07	6.00	2
TD400-27P5-3PH	\$531.85	7.5	26	7.5	26	240V, 3 PH	240V, 3 PH	10.27	7.36	7.98	3
TD400-2010-3PH	\$601.75	10	35	10	35	240V, 3 PH	240V, 3 PH	10.27	7.36	7.98	3
TD400-2015-3PH	\$925.95	15	48	15	48	240V, 3 PH	240V, 3 PH	12.66	8.84	8.11	4
TD400-2020-3PH	\$1,082.00	20	64	20	64	240V, 3 PH	240V, 3 PH	12.66	8.84	8.11	4
TD400-2025-3PH	\$1,429.25	25	73	30	80	240V, 3 PH	240V, 3 PH	14.17	10.43	9.38	5
TD400-2030-3PH	\$1,723.65	30	85	40	110	240V, 3 PH	240V, 3 PH	20.67	11.28	10.62	6
TD400-2040-3PH	\$2,371.95	40	115	50	138	240V, 3 PH	240V, 3 PH	20.67	11.28	10.62	6
480V Class: Three-phase Input, Three-phase Output											
TD400-4001-3PH	\$273.65	1	2.5	1	2.5	480V, 3 PH	480V, 3 PH	6.46	3.57	5.96	1
TD400-4002-3PH	\$282.75	2	3.8	2	3.8	480V, 3 PH	480V, 3 PH	6.46	3.57	5.96	1
TD400-4003-3PH	\$369.15	3	5.3	3	5.3	480V, 3 PH	480V, 3 PH	7.39	5.07	6.00	2
TD400-4005-3PH	\$382.80	5	9.2	5	9.2	480V, 3 PH	480V, 3 PH	7.39	5.07	6.00	2
TD400-47P5-3PH	\$559.35	7.5	13	7.5	13	480V, 3 PH	480V, 3 PH	10.27	7.36	7.98	3
TD400-4010-3PH	\$654.55	10	17.5	10	17.5	480V, 3 PH	480V, 3 PH	10.27	7.36	7.98	3
TD400-4015-3PH	\$707.45	15	24	15	24	480V, 3 PH	480V, 3 PH	10.27	7.36	7.98	3
TD400-4020-3PH	\$1,089.05	20	32	20	32	480V, 3 PH	480V, 3 PH	12.66	8.84	8.11	4
TD400-4025-3PH	\$1,304.70	25	40	25	40	480V, 3 PH	480V, 3 PH	12.66	8.84	8.11	4
TD400-4030-3PH	\$1,546.90	30	45	40	58	480V, 3 PH	480V, 3 PH	14.17	10.43	9.38	5
TD400-4040-3PH	\$2,008.30	40	60	50	73	480V, 3 PH	480V, 3 PH	20.67	11.28	10.62	6
TD400-4050-3PH	\$2,426.85	50	75	60	88	480V, 3 PH	480V, 3 PH	20.67	11.28	10.62	6
TD400-4060-3PH	\$2,756.90	60	91	75	103	480V, 3 PH	480V, 3 PH	20.67	11.28	10.62	6
TD400-4075-3PH	\$3,076.10	75	118	100	145	480V, 3 PH	480V, 3 PH	20.67	11.28	10.62	6

Accessories

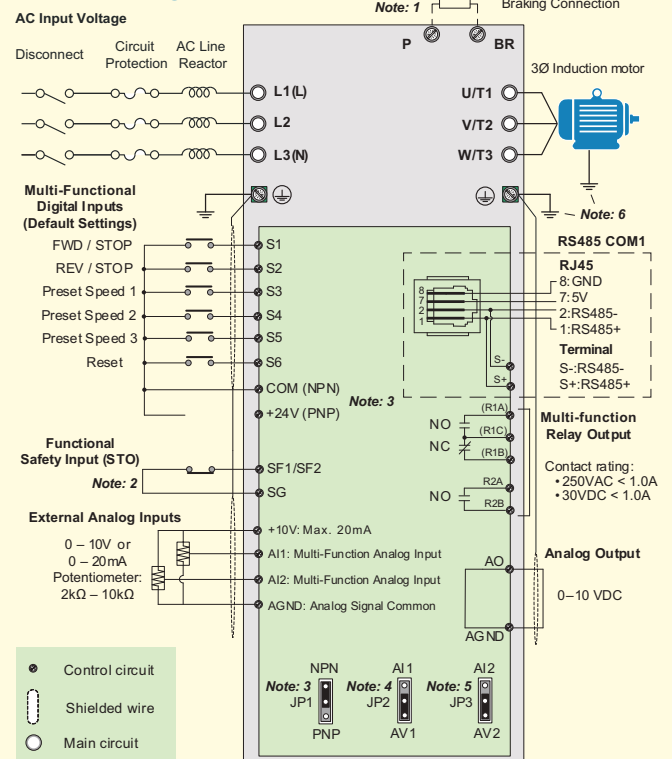
Part Number	Price	Description
TDA-USBPC	\$39.35	FMX TD400 USB cable to connect TD400 to PC
TDA-LCDKPD	\$102.90	FMX TD400 Optional LCD keypad with Copy Unit functionality. Displays parameters in real language. Ideal for extensive programming without a PC.
TD400-REMCPH	\$26.00	FMX TD400 Remote Keypad Holder
TDA-RKCBL-7	\$6	FMX TD400 Remote Keypad Cable 7ft
TDA-RKCBL-15	\$10	FMX TD400 Remote Keypad Cable 15ft
TD400-N1K-F1	\$21.55	FMX TD400 UL Type 1 Adaptor for Frame 1
TD400-N1K-F2	\$25.00	FMX TD400 UL Type 1 Adaptor for Frame 2
TD400-N1K-F3	\$28.45	FMX TD400 UL Type 1 Adaptor for Frame 3
TD400-N1K-F4	\$42.95	FMX TD400 UL Type 1 Adaptor for Frame 4
TD400-DRM-F1	\$11.20	FMX TD400 Frame 1 DIN Rail Mounting Kit
TD400-DRM-F2	\$8.20	FMX TD400 Frame 2 DIN Rail Mounting Kit
AMHMI108CCL	\$81.95	Keypad Access Panel, 10" x 8", mounts on enclosure exterior to protect and provide access to remote keypad without opening enclosure. Up to UL Type 4 rating.
PD22-POT010K	\$34.15	22mm potentiometer, 10kΩ, knob operator, UL Type 4X, IP66, (includes 1-10 scale legend plate)
PD22-USBBA	\$28.80	USB Comm. Interface, B/A female connection, UL Type 4X
PD22-RJ45	\$28.80	RJ45 Comm. Interface, Female/Female connection, UL Type 4X



General Specifications

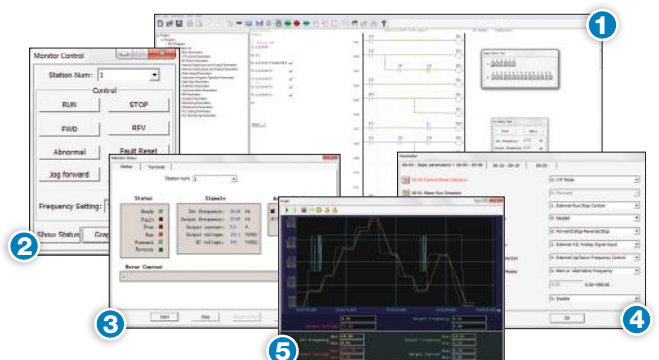
Power Supply	Rated Input Power	240V Class - 200 to 240V, +10% / -15% 480V Class - 380 to 480V, +10% / -15%	
	Output Voltage Range	230V: 0-240V, 3-Phase 460V: 0-480V, 3-Phase	
Output Characteristics	Rated Output Frequency	0-599Hz	
	Output Frequency Accuracy	0.01Hz	
	Control Mode	Sensorless Vector, V/Hz, PMSLV	
Control Characteristics	Carrier Frequency	1 to 16kHz	
	Frequency Control Range	0.01-599.00Hz	
	Speed Control Accuracy	V/Hz: +/- 2% Sensorless Vector: +/- 0.5%	
	Overload Capacity	150% Rated Output Current for 60 sec.	
	Frequency Setting Signal	0-10VDC, 4-20mA	
	Accel/Decel Time	0-3600 sec. (Independent Accel/Decel Times)	
	Number of V/F Patterns	30 Preset V/F Patterns, 2 Custom V/F Pattern	
	Braking Torque	Approximately 20%	
	Protective Functions	Stall Prevention, Instantaneous Overcurrent (200%), Motor Overload Protection, Overvoltage, Undervoltage, Momentary Power Loss, Overheat Protection, Ground Fault	
		Location	Indoor (IP20), UL Type 1 w/ optional conduit box
Environmental Conditions	Ambient Temperature	14 to 122 °F (-10 to 50 °C)	
	Storage Temperature	-4 to 158 °F (-15 to 70 °C)	
	Altitude	<1000m	
	Humidity	<95% RH (Non-condensing)	
	Vibration	20HP and less: 9.8m/s ² (1.0G) 25HP and more: 5.8m/s ² (0.6G)	
Agency Approvals	UL/cUL File# E503131, RoHS, CE 61800-3, IEC 60018-2-78		

Connection Diagram



FREE

TD LINK SOFTWARE

Available for **FREE** download at www.factorymation.com/tdlink**BUILT-IN PLC FUNCTIONALITY**

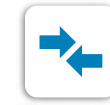
Powerful control with an easy-to-program interface. Up to 80 rungs of ladder logic can be stored in PLC program.

**TD LINK CONTROL**

Stop/start, change motor direction, and change speed of the AC drive.

**TD LINK LIVE MONITORING**

Show present status, output levels, and any active faults of the AC drive.

**COMPARE FUNCTION**

Allows for easy review of changes made to parameters before writing program to AC drive.

**PARAMETER OPTIONS**

Write individual parameters to the drive or write the entire group.

**FULLY CUSTOMIZABLE GRAPHING**

Plot up to 4 data points in real-time. Export graph data to file for review later or to send to a client.

To Order Call **1.800.972.0436** or Visit factorymation.com

Brake Resistors

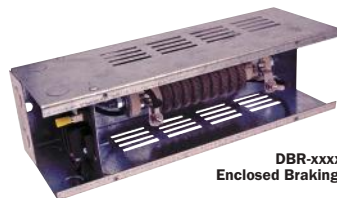
Certain AC drive applications may require more deceleration torque than can be provided by the standard AC drive. These applications typically include one or more of the following characteristics:

- Rapid deceleration
- High inertia loads
- Overhauling loads

Dynamic braking provides increased deceleration torque. TD400 AC drives with horsepower ratings of 20HP and less only require the addition of a braking resistor. TD400 AC drives with horsepower ratings 25HP and up require the addition of both a braking resistor and an externally mounted braking unit. For higher horsepower ratings, multiple resistors and braking units are required.



DBR-xxxx-C
Wire-wound Braking Resistor



DBR-xxxx
Enclosed Braking Resistor

FMX TOUGH DRIVE

TD400
SERIES

230V Braking Resistors and Resistor Kits								External Braking Units (Sold Separately)	
AC Drive HP	Part Number	Price	Resistor Qty	Ohms	Watts	Min. Ohm Value	Approx. Braking Torque	Braking Unit	Qty
0.5, 1	DBR-2001-C	\$21.20	1	200	150	-	-	Not Required	N/A
2	DBR-2002-C	\$24.75	1	100	150	-	-	Not Required	N/A
3	DBR-2003-C	\$38.25	1	70	260	-	-	Not Required	N/A
5	DBR-2005-C	\$53.60	1	40	390	-	-	Not Required	N/A
7.5	DBR-27P5-C	\$95.75	1	30	520	-	-	Not Required	N/A
10	DBR-2010-C	\$114.85	1	20	780	-	-	Not Required	N/A
15, 20	DBR-2015	\$815.35	1	13.6	2400	6.4	117%(10%ED)	Not Required	N/A
25	DBR-2025	\$1,061.55	1	8	4800	6.4	119%(10%ED)	TBU-230*	1
30	DBR-2030	\$1,061.55	1	6.8	4800	6.4	117%(10%ED)	TBU-230	1
40	DBR-2040-KIT	Online	2	10	3000	6.4	119%(10%ED)	TBU-230	2

Note: Multiple braking resistors are supplied where necessary.

*Models indicated have option to use either internal braking transistor or external braking unit. See TD400 user manual for details

460V Braking Resistors and Resistor Kits								External Braking Units (Sold Separately)	
AC Drive HP	Part Number	Price	Resistor Qty	Ohms	Watts	Min. Ohm Value	Approx. Braking Torque	Braking Unit	Qty
1	DBR-4001-C	\$21.20	1	750	150	-	-	Not Required	N/A
2	DBR-4002-C	\$24.75	1	400	150	-	-	Not Required	N/A
3	DBR-4003-C	\$38.25	1	250	260	-	-	Not Required	N/A
5	DBR-4005-C	\$57.45	1	150	400	-	-	Not Required	N/A
7.5	DBR-47P5-C	\$95.75	1	130	600	-	-	Not Required	N/A
10	DBR-4010-C	\$114.85	1	100	800	-	-	Not Required	N/A
15	DBR-4015	\$523.10	1	50	1600	19.2	126%(10%ED)	Not Required	N/A
20	DBR-4020	\$523.10	1	40	1500	19.2	119%(10%ED)	Not Required	N/A
25	DBR-4025	\$1,515.40	1	32	4800	19.2	119%(10%ED)	TBU-430	1
30	DBR-4030	\$1,515.40	1	27.2	4800	19.2	117%(10%ED)	TBU-430*	1
40	DBR-4040	\$1,641.65	1	20	6000	19.2	119%(10%ED)	TBU-430	1
50	DBR-4050-KIT	\$3,283.35	2	32	4800	19.2	119%(10%ED)	TBU-430	2
60	DBR-4060-KIT	\$3,283.35	2	27.2	4800	19.2	117%(10%ED)	TBU-430	2
75	DBR-4075-KIT	\$3,283.35	2	20	6000	19.2	126%(10%ED)	TBU-430	2

Note: Multiple braking resistors are supplied where necessary.

*Models indicated have option to use either internal braking transistor or external braking unit. See TD400 user manual for details

Brake Units



TECO Braking Units incorporate a robust power transistor for high duty cycles. The hinged UL Type 1 housing provides easy installation and maintenance. The power charge indicator lamp goes out when main circuit voltage drops below 50VDC. Parallel multiple units for higher HP applications.

Features:

- Hinged-door UL Type 1 Enclosure
- Heatsink overheat contact
- Operating temperature: +14 °F to 104 °F

Braking Unit	Price ea.	Dimensions (inches)	Description
TBU-230	\$339.30	7.24"L x 5.87"W x 5.74"D	240V, 70A Max Discharge Current
TBU-430	\$432.55	26.5"L x 13.0"W x 5.0"D	460V, 40A Max Discharge Current

Note: All Brake Units include thermal overload switches.

AC Drive Remote Operator Stations



Remote operator stations are pre-assembled enclosures that allow any AC Drive with external inputs to be controlled from a remote location.

Part Number	Price	Description
22PBA2-N4P-205-AS	\$98.65	2-hole 22mm Operator station OFF/ON; 2-position selector switch / one-turn 10kΩ potentiometer
22PBA2-N4P-206-AS	\$101.10	2-hole 22mm Operator station FWD/OFF/REV; 3-position selector switch / one-turn 10kΩ potentiometer
22PBA3-N4P-300-AS	\$114.75	3-hole 22mm Operator station START; flush green pushbutton / STOP; extended red pushbutton / one-turn 10kΩ potentiometer
22PBA4-N4P-400-AS	\$135.40	4-hole 22mm Operator station START; flush green pushbutton / STOP; extended red pushbutton / FWD/REV; 2-position selector switch / one-turn 10kΩ potentiometer
30PBA2-N4P-205-AS	\$152.10	2-hole 30mm Operator Station, OFF/ON; 2-position selector switch / one-turn 10kΩ potentiometer
30PBA2-N4P-206-AS	\$154.55	2-hole 30mm Operator Station, FWD/OFF/REV; 3-position selector switch / one-turn 10kΩ potentiometer
30PBA3-N4P-300-AS	\$174.05	3-hole 30mm Operator station START; flush green pushbutton / STOP; extended red pushbutton / one-turn 10kΩ potentiometer
30PBA4-N4P-400-AS	\$200.90	4-hole 30mm Operator station START; flush green pushbutton / STOP; extended red pushbutton / FWD/REV; 2-position selector switch / one-turn 10kΩ potentiometer

More configurations available in 22mm & 30mm Pushbutton Station sections

ONLINE ORDERS
FREESHIPPING

\$149 MIN. / \$1750 MIN.
SMALL PACKAGES LTL FREIGHT

SEE INSIDE BACK COVER
FOR MORE DETAILS

FactoryMation®



Advantages:

- Smallest VFD in the Market - Able to operate with 50 °C ambient temperature without derating
- Optional communication network and I/O modules are easily and quickly installed, allowing adaptation of the standard VFD to each application
- Built-in PLC, enabling the VFD, Motor, and Application to work interactively - allows the user to implement customized logic and applications
- Integral PID for process control that includes 'Sleep Mode' to allow the VFD to stop or resume modulating automatically
- 'Flying Start': Allows control of a motor that is turning freely, accelerating it from the speed at which it was running
- 'Ride Through' keeps the VFD in operation during voltage dips
- Optional Modbus (RS485) and CANopen

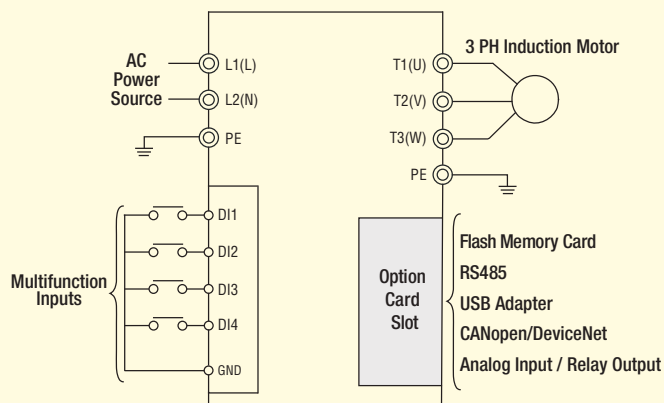
Features:

- 200-240V Single-Phase Input
- 0.33 to 1HP Models
- Sensorless Vector or V/Hz Control
- Digital Inputs
- Electronic protection against Motor Overload
- Surface or DIN Rail Mounting
- Free Programming Software

Applications:

- Roller Tables
- Blenders/Mixers
- Commercial Dryers
- Process Dosing Pumps
- Small Material Handling Applications
- Fans/Ventilation
- Rotary Filters
- Centrifugal Pumps
- Stackers/Palletizers

Connection Diagram



IP20 - Finger-safe Enclosure

Part Number	Price	HP	Input Voltage	Output Voltage	Output Amps	Dimensions (In.)			Frame
						H	W	D	
CFW100A01P6S220G2	\$188.90	0.33	240V, 1 PH	230V, 3 PH	1.6	4	2.2	5.1	A
CFW100B02P6S220G2	\$203.30	0.75	240V, 1 PH	230V, 3 PH	2.6	4.6	2.2	5.1	B
CFW100C04P2S220G2	\$216.35	1	240V, 1 PH	230V, 3 PH	4.2	5	2.2	5.1	C



CFW100-CRS485



CFW100-KHMIR



CFW100-CFW300-MMF

Options and Accessories

Part Number	Price	Description
CFW100-IOAR	\$54.10	Expansion Module, 1 Analog Input, 1 Relay Output
CFW100-IODR	\$145.30	Expansion Module, 4 Isolated NPN/PNP Digital Inputs, 1 PNP Encoder Input
CFW100-IOADR	\$136.50	Expansion Module, InfraRed Communication Module, 1 Analog Input, 3 Relay Outputs
CFW100-CCAN	\$127.75	Communication Module, CANopen/DeviceNet
CFW100-CRS485	\$54.20	Communication Module, RS-485
CFW100-CUSB	\$57.60	Communication Module, USB (Includes 2m Cable)
CFW100-CFW300-MMF	\$143.50	Flash Memory Module
CFW100-KHMIR	\$167.65	Remote Keypad Kit, IP54 (Includes CFW100-CRS485 Module, 3m USB Cable)

General Specifications

Main Supply	Voltage	1-Phase, 200-240VAC (+10% - 15%)
	Supply Frequency	50/60 Hz (48 Hz a 62 Hz)
Motor Connection	Voltage	3-Phase, 0-100% of Supply Voltage
	Output Frequency	0 to 300 Hz, Regulation of 0.1 Hz
	Displacement Power	>0.97
	Overload Capacity	1.5 x In (Drive) for 1 Minute Every 6 Minutes
	Switching Frequency	Default 5 kHz (Selectable 2.5 to 15 kHz)
	Acceleration Time	0.1 to 999s
Environmental Conditions	De-acceleration Time	0.1 to 999s
	Temperature	50°C - IP20 Without RFI Filter 2% Current Derating for Each °C Above the Specific Operating Temperature, Limited to 60°C
	Air Relative Humidity	5% to 90% Non-Condensing
	Altitude	Up to 1,000 m 1,000 m to 4,000 m - 1% Current Derating for Each 100 m Above 1,000 m
Performance	Degree of Protection	IP20
	V/Hz Control	Speed Regulation: 1% of the Rated Speed (with Slip Compensation) Speed Variation Range: 1:20
	Vector Control	Speed Regulation: 1% of the Rated Speed Speed Variation Range: 1:30
Safety	Protection	Overcurrent/Phase-Phase Short Circuit in the Output
		Overcurrent/Phase-Ground Short Circuit in the Output
		Under/Overvoltage
		Overtemperature in the Heatsink
		Overload in the Motor
		Overload in the Power Module (IGBTs)
Communication Protocol	Modbus-RTU	Plug-in Module for RS485
	CANopen	Plug-in Module CFW100-CCAN
Connectivity	USB	Plug-in Module CFW100-CUSB



CFW300 Series Easy Drive Variable Frequency Drives



FROM \$202.30



Features:

- 110-127V and 200-240V Input Voltage
- 0.33 to 5HP Models
- Voltage Vector Control or Scalar Control (V/Hz)
- 4 PNP or NPN Digital Inputs, 1 Relay Output, 1 Analog Input
- Two slots for expansion modules
- 3C2 Coating Class (IEC 60721-3-3) on the Internal Circuits

IP20 Finger Safe Enclosure

Part Number	Price	HP	Input Voltage	Output Voltage	Output Amps	Power Rating (kW)	Brake Trans.	Frame
CFW300A01P6S1NB20	\$227.05	0.33	110-127V, 1 PH	230V, 3PH	1.6	0.18	No	A
CFW300A02P6S1NB20	\$247.60	0.75			2.6	0.37	No	
CFW300A04P2S1NB20	\$263.50	1			4.2	0.75	No	
CFW300A06POS1NB20	\$318.85	1.5			6	1.32	No	
CFW300A01P6S2NB20	\$202.30	0.33	200-240V, 1 PH	230V, 3PH	1.6	0.18	No	A
CFW300A02P6S2NB20	\$218.40	0.75			2.6	0.37	No	
CFW300A04P2S2NB20	\$232.95	1			4.2	0.75	No	
CFW300A06POS2NB20	\$289.70	1.5			6	1.32	No	
CFW300A07P3S2NB20	\$340.65	2			7.3	1.5	No	
CFW300B10P0B2DB20	\$406.15	3			10	2.2	Yes	B
CFW300A01P6T2NB20	\$215.45	0.33	200-240V, 3 PH	230V, 3PH	1.6	0.18	No	A
CFW300A02P6T2NB20	\$235.85	0.75			2.6	0.37	No	
CFW300A04P2T2NB20	\$250.45	1			4.2	0.75	No	
CFW300A06P0T2NB20	\$304.30	1.5			6	1.32	No	
CFW300A07P3T2NB20	\$358.15	2			7.3	1.5	No	
CFW300B10P0B2DB20	\$406.15	3			10	2.2	Yes	B
CFW300B15P2T2DB20	\$496.50	5			15.2	3.7	Yes	

Options and Accessories

Part Number	Price	Description
CFW300-CRS485	\$52.35	Communication Module (upper slot), RS485
CFW300-CUSB	\$55.30	Communication Module (upper slot), USB, includes 2m Cable
CFW300-CRS232	\$52.35	Communication Module (upper slot), RS232
CFW300-CCAN	\$64.10	Communication Module (upper slot), CANopen/DeviceNet
CFW300-CPDP	\$184.90	Communication Module (upper slot), Profibus-DP
CFW300-IOAR	\$88.80	Expansion Module (lower slot), 1 Analog Input, 1 Analog Output, 3 Relay Outputs
CFW300-IODR	\$68.45	Expansion Module (lower slot), 4 Digital Inputs, NPN/PNP, 3 Relay Outputs
CFW300-IOAENC	\$90.25	Expansion Module (lower slot), 1 Analog Input, 2 Analog Outputs, 1 Incremental Encoder Input
CFW300-IOADR	\$131.05	Expansion Module (lower slot), 1 NTC Input, 3 Relay Outputs for Infrared Sensor, includes Infrared Sensor, NTC and Remote Control with Battery
CFW300-KHMIR	\$161.60	Remote Keypad Kit with Remote HMI, includes CFW300-CRS485 and 3m Cable
CFW100-CFW300-MMF	\$143.50	Flash Memory Module, includes 1m Cable
CFW300-KFA	\$51.50	CFW300 RFI Filter Kit, Frame Size A, 1 PH Input Models Only
CFW300-KFB	\$51.50	CFW300 RFI Filter Kit, Frame Size B, 1 PH Input Models Only

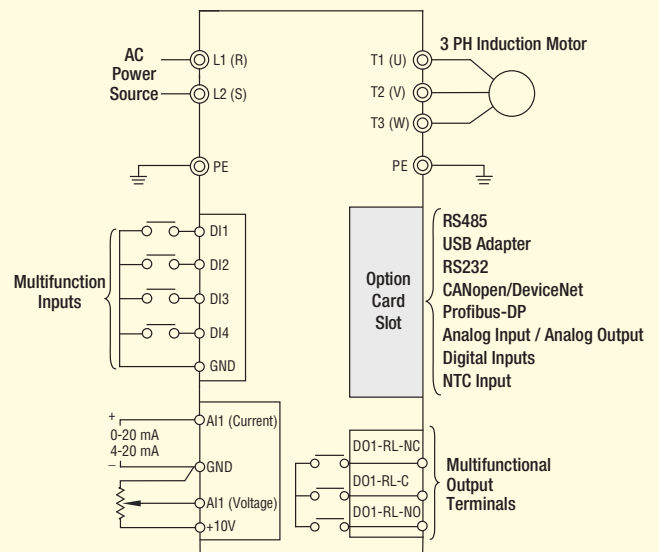
Dimensions

Dim	Frame A	Frame B
	in	
H	6.22	8.08
W	2.76	2.76
D	5.84	6.24

General Specifications

Power Supply	Voltage	110-127VAC (+10%, -15%)	
		200-240VAC (+10%, -15%)	
Output	Frequency	50/60 Hz (48 Hz to 62 Hz)	
	Voltage	0-230VAC Three Phase	
Control	Frequency	0-400 Hz, 0.1Hz Resolution	
	Control Modes	Volts per Hertz (Scalar) Sensorless Voltage Vector Sinusoidal PWM (Space Vector Modulation)	
	Switching Frequency	2.5, 5, 10 or 15kHz	
	Frequency Range	0-400 Hz	
	Overload Capacity	150% for 60 Seconds, Repeatable every 10 Min.	
	Control Inputs	4 Programmable Isolated Digital Inputs, NPN or 24VDC Logic (PNP) 1 Programmable Differential Analog Input; Programmable for Current or Voltage	
Control Outputs	1 Programmable Relay Output: One NO/NC (Form C) 250VAC / 0.5 A		
Communication	Field Bus	Optional Modules for RS485, RS232, CANopen, DeviceNet, Profibus-DP, USB	
Safety	Protections	Motor Over Current	DC Link Over Voltage
		Motor Overload	DC Link Under Voltage
		Output Phase-to-Phase Short Circuit	Drive Over Temperature
		Output Phase-to-Ground Short Circuit	External Fault
		Programming Error	
Enclosure	Degree of Protection	IP20	
	Mounting	Surface Mounting with Screws or DIN Rail Mounting	
Ambient	Temperature	14 - 122 °F (50 °C), up to 140 °F (60 °C) with 2% / 1.8 °F (1 °C) Output Current Derating	
	Humidity	5-95% Non Condensing	
	Altitude	0-3300 ft (1000m) - Up to 13,200 ft (4000m) with 1% / 330ft (100m) Output Current Derating	
Regulatory Conformance	EMC Directive 89/336/EEC	Electromagnetic Compatibility - Industrial Environment	
	ENC61800-2, 3, 5-1	EMC Emission and Immunity with Optional Filter	
	ENC61800-4-2, 3, 4, 5, 6		
	LVD 73/23/EEC	Low Voltage Directive	
Special Functions	UL 508C, UL 840, UL 50	Electrical Equipment Standards	
		Linear and "S" Ramp Accel and Decel, Local/Remote Control, FWD/REV Selection, DC Braking, Manual and Auto Torque Boost, Motor Slip Compensation, Electronic Pot, Two Skip Frequencies, Maximum and Minimum Adjustable Frequency Limits, Adjustable Output Current	
Keypad		4 Digit LCD Display and 4 Keys	
		Readouts for: Output Frequency (Hz), Output Current (A), Output Voltage (V), Motor Torque (%) in Vector Mode, DC Bus Voltage (V), Value Proportional to Frequency (Ex.: RPM), Fault and Status Messages	

Connection Diagram



CFW500 Series Variable Frequency Drives



Advantages:

- Built-in SoftPLC enables programming flexibility combined with network and Input/Output options
- 150% overload for one minute, repeatable every 6 minutes, based on ambient temperature of 50 °C
- Quickly replicate programming and application from one CFW500 to others without applying power to the drive
- Optional Communication Network and I/O Modules easily installed, allowing interface of the standard VFD to each application
- Integral PID for Process Control that includes 'Sleep Mode' to allow the VFD to stop or resume automatically
- 'Flying Start': allows control of a motor that is turning freely, accelerating it from the speed at which it was running
- 'Ride Through' keeps the VFD in operation during voltage sags
- Protection against ground fault, short circuit and over temperature

Features:

- 230V and 460V Input Voltage Models
- 0.33 to 40HP Models
- Control Mode: Voltage Vector, Scalar (V/Hz), Sensorless Vector or with Encoder and Energy Saving Mode (EOC)
- Built-in SoftPLC Function
- RS485 Port
- Multipump Applications
- Plug-in Cards for resource expansion
- Free Programming Software: WPS

Applications:

- Extruders
- Process Dosing Pumps
- Blenders / Mixers
- Conveyor Belts
- Granulators / Palletizers
- Commercial Dryers / Rotary Ovens
- Centrifugal Pumps
- Fans / Ventilators
- Compressors
- Roller Tables
- Rotary Filters

Dimensions

IP20 Enclosure					
Dim	Frame A	Frame B	Frame C	Frame D	Frame E
	in				
H	8.8	9.6	10.0	14.3	15.0
W	3.0	3.9	5.3	7.1	8.7
D	5.9	6.3	6.5	6.6	7.5

UL Type 4X / IP66 Enclosure		
Dim	Frame A	Frame B
	in	
H	10.4	13.4
W	6.5	8.5
D	8.9	8.9

IP20 Enclosure

Part Number	Price	HP	Input Voltage	Output Voltage	Output Amps	Brake Trans.	Frame
Input Power Supply: Single-Phase 200-240VAC							
CFW500A01P6S2NB20G2	\$283.40	0.33	230V, 1PH	230V, 3 PH	1.6	No	A
CFW500A02P6S2NB20G2	\$290.65	0.75	230V, 1PH	230V, 3 PH	2.6	No	
CFW500A04P3S2NB20G2	\$312.45	1.5	230V, 1PH	230V, 3 PH	4.3	No	
CFW500A07P0S2NB20G2	\$396.75	2	230V, 1PH	230V, 3 PH	7	No	
Input Power Supply: Single or Three-Phase 200-240VAC							
CFW500B10P6B2NB20G2	\$286.80	0.33	230V, 1/3PH	230V, 3 PH	1.6	No	A
CFW500A02P6B2NB20G2	\$292.65	0.75	230V, 1/3PH	230V, 3 PH	2.6	No	
CFW500A04P3B2NB20G2	\$317.40	1.5	230V, 1/3PH	230V, 3 PH	4.3	No	
CFW500B07P3B2DB20G2	\$425.10	2	230V, 1/3PH	230V, 3 PH	7.3	Yes	B
CFW500B10P0B2DB20G2	\$495.00	3	230V, 1/3PH	230V, 3 PH	10	Yes	
Input Power Supply: Three-Phase 200-240VAC							
CFW500B16P0T2DB20G2	\$528.50	5	230V, 3PH	230V, 3 PH	16	Yes	B
CFW500C24P0T2DB20G2	\$894.00	7.5	230V, 3PH	230V, 3 PH	24	Yes	C
CFW500D28P0T2DB20G2	\$1,113.80	10	230V, 3PH	230V, 3 PH	28	Yes	D
CFW500D33P0T2DB20G2	\$1,342.75	10	230V, 3PH	230V, 3 PH	33	Yes	
CFW500D47P0T2DB20G2	\$1,824.30	15	230V, 3PH	230V, 3 PH	47	Yes	E
CFW500E56P0T2DB20G2	\$2,117.85	20	230V, 3PH	230V, 3 PH	56	No	
Input Power Supply: Three-Phase 380-480VAC							
CFW500A01P0T4NB20G2	\$365.45	0.5	460V, 3PH	460V, 3 PH	1	No	A
CFW500A01P6T4NB20G2	\$378.55	1	460V, 3PH	460V, 3 PH	1.6	No	
CFW500A02P6T4NB20G2	\$407.70	2	460V, 3PH	460V, 3 PH	2.6	No	
CFW500A04P3T4NB20G2	\$500.85	3	460V, 3PH	460V, 3 PH	4.3	No	B
CFW500B06P5T4DB20G2	\$669.70	5	460V, 3PH	460V, 3 PH	6.5	Yes	
CFW500B10P0T4DB20G2	\$757.10	7.5	460V, 3PH	460V, 3 PH	10	Yes	C
CFW500C14P0T4DB20G2	\$937.65	10	460V, 3PH	460V, 3 PH	14	Yes	
CFW500D24P0T4DB20G2	\$1,397.75	15	460V, 3PH	460V, 3 PH	24	Yes	D
CFW500D31P0T4DB20G2	\$1,739.90	25	460V, 3PH	460V, 3 PH	31	Yes	
CFW500E39P0T4DB20G2	\$2,096.60	30	460V, 3PH	460V, 3 PH	39	No	E
CFW500E49P0T4DB20G2	\$2,641.10	40	460V, 3PH	460V, 3 PH	49	No	

UL Type 4X / IP66 Enclosure

Part Number	Price	HP	Input Voltage	Output Voltage	Output Amps	Frame
Input Power Supply: Single or Three-Phase 200-240VAC						
CFW500A01P6B2DB66G2	\$487.40	0.3	230V, 1/3 PH	230V, 3PH	1.6	A
CFW500A02P6B2DB66G2	\$503.15	0.75	230V, 1/3 PH	230V, 3PH	2.6	A
CFW500A04P3B2DB66G2	\$534.65	1.5	230V, 1/3 PH	230V, 3PH	4.3	A
CFW500A07P3B2DB66G2	\$638.45	2	230V, 1/3 PH	230V, 3PH	7.3	A
CFW500A10P0B2DB66G2	\$688.70	3	230V, 1/3 PH	230V, 3PH	10	A
CFW500A16P0T2DB66G2	\$849.10	5.5	230V, 1/3PH	230V, 3PH	16	A
CFW500B24P0T2DB66G2	\$1,226.50	7.5	230V, 1/3PH	230V, 3PH	24	B
CFW500B28P0T2DB66G2	\$1,430.90	10	230V, 1/3PH	230V, 3PH	28	B
CFW500B33P0T2DB66G2	\$1,682.50	12.5	230V, 1/3PH	230V, 3PH	7.3	B
Input Power Supply: Three-Phase 380-480VAC						
CFW500A01P0T4DB66G2	\$597.55	0.5	460V, 3 PH	460V, 3PH	1	A
CFW500A01P6T4DB66G2	\$613.25	0.75	460V, 3 PH	460V, 3PH	1.6	A
CFW500A02P6T4DB66G2	\$622.70	2	460V, 3 PH	460V, 3PH	2.6	A
CFW500A04P3T4DB66G2	\$739.10	3	460V, 3 PH	460V, 3PH	4.3	A
CFW500A06P5T4DB66G2	\$880.55	5	460V, 3 PH	460V, 3PH	6.5	A
CFW500A10P0T4DB66G2	\$1,037.80	7.5	460V, 3 PH	460V, 3PH	10	A
CFW500B14P0T4DB66G2	\$1,289.35	10	460V, 3 PH	460V, 3PH	14	B
CFW500B16P0T4DB66G2	\$1,430.90	10	460V, 3 PH	460V, 3PH	16	B
CFW500B24P0T4DB66G2	\$1,902.65	15	460V, 3 PH	460V, 3PH	24	B
CFW500B31P0T4DB66G2	\$2,295.75	25	460V, 3 PH	460V, 3PH	31	B
Input Power Supply: Three-Phase 380-600VAC						
CFW500B01P7T5DB66	\$1,000.10	1.5	575V, 3 PH	575V, 3PH	1.7	B
CFW500B03P0T5DB66	\$1,050.40	2	575V, 3 PH	575V, 3PH	3	B
CFW500B04P3T5DB66	\$1,188.80	3	575V, 3 PH	575V, 3PH	4.3	B
CFW500B07P0T5DB66	\$1,330.30	5	575V, 3 PH	575V, 3PH	7	B
CFW500B10P0T5DB66	\$1,465.50	10	575V, 3 PH	575V, 3PH	10	B
CFW500B12P0T5DB66	\$1,644.80	10	575V, 3 PH	575V, 3PH	12	B





CFW500-IOD CFW500-IOAD CFW500-IOR CFW500-CUSB

Plug-in Expansion Modules Specifications

Part Number	Price	Option Card Input / Output Table														
		Digital Input	Analog Input	Analog Output	Digital Output Relay	Digital Output Transistor	USB	CANopen	RS232	RS485	Profibus DP	Modbus TCP	ProfNet I/O	Ethernet IP	10VDC	24VDC
CFW500-IOS-G2 ¹	Included	4	1	1	1	1				1					1	1
CFW500-IOD	\$88.80	8	1	1	1	4				1					1	1
CFW500-IOAD	\$116.00	6	3	2	1	3				1					1	1
CFW500-IOR-B	\$78.60	5	1	1	4	1				1					1	1
CFW500-CUSB	\$132.50	4	1	1	1	1	1			1					1	1
CFW500-CCAN	\$87.40	2	1	1	1	1		1		1					1	1
CFW500-CRS232	\$87.40	2	1	1	1	1		1		1						1
CFW500-CRS485-B	\$92.40	4	2	1	2	1			2						1	1
CFW500-CPDP	\$254.80	2	1	1	1	1			1	1						1
CFW500-CPDP2	\$279.55	2	1	1	1	1			1	1						1
CFW500-CEMB-TCP	\$313.05	2	1	1	1	1			1		1					1
CFW500-CEPN-IO	\$313.05	2	1	1	1	1			1			1				1
CFW500-CETH-IP	\$313.05	2	1	1	1	1			1				1			1

1) CFW500-IOS I/O Module is included as standard with CFW500 Drives

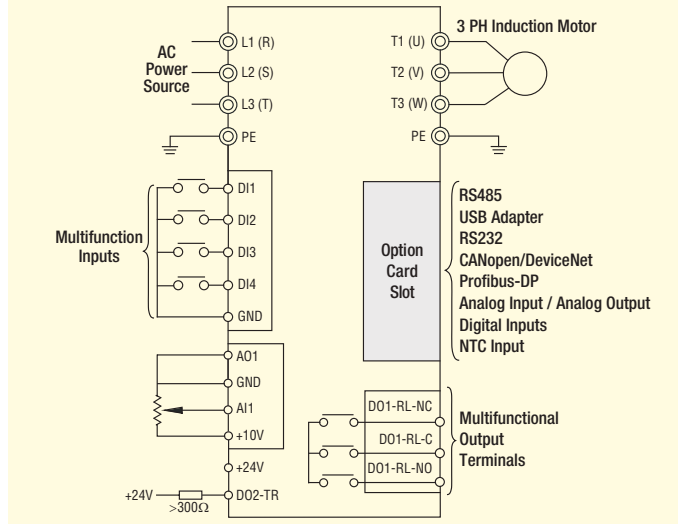


Options and Accessories

Part Number	Price	Description
CFW500-MMF	\$119.40	Flash Memory Module Saves and Reloads Program and Parameters to/from CFW500 Drive
CFW500-HMIR ¹	\$106.35	Remote Keypad for Mounting Through Enclosure Door
CFW500-CCHMIRO1M	\$14.55	Remote Keypad Cable, 3.3 ft (1 meter)
CFW500-CCHMIRO2M	\$20.40	Remote Keypad Cable, 6.6 ft (2 meters)
CFW500-CCHMIRO3M	\$26.25	Remote Keypad Cable, 9.9 ft (3 meters)
CFW500-CCHMIRO5M	\$32.00	Remote Keypad Cable, 16 ft (5 meters)
CFW500-CCHMIRO75M	\$39.30	Remote Keypad Cable, 25 ft (7.5 meters)
CFW500-CCHMIRO10M	\$45.10	Remote Keypad Cable, 33 ft (10 meters)
CFW500-USB02M	\$34.80	USB Communication Cable, 6.6 ft (2 meters)
CFW500-KPCSA	\$26.25	Cable Shield Clamp Kit for Frame A
CFW500-KPCSB	\$27.65	Cable Shield Clamp Kit for Frame B
CFW500-KPCSC	\$29.15	Cable Shield Clamp Kit for Frame C
CFW500-KN1A	\$18.95	NEMA 1 Kit for Frame A
CFW500-KN1B	\$21.85	NEMA 1 Kit for Frame B
CFW500-KN1C	\$27.65	NEMA 1 Kit for Frame C
CFW500-KN1D	\$38.05	NEMA 1 Kit for Frame D
CFW500-KN1E	\$40.75	NEMA 1 Kit for Frame E

1) CFW500-HMIR Remote Keypad requires Qty. (1) CFW500-CCHIROxM Cable. ("x" represents the cable length in meters)

Connection Diagram



General Specifications

Power Supply	Voltage	1-phase, 200-240VAC (+10%-15%) 1-phase/3-phase, 200-240VAC (+10%-15%) 3-phase, 200-240VAC (+10%-15%) 3-phase, 380-480VAC (+10%-15%)	
	Frequency	50/60 Hz (48 Hz to 62 Hz)	
Motor Connection	Voltage	3-phase, 0-100% of Supplied Voltage	
	Output	0 to 500 Hz	
	Displacement	>0.97	
	Overload	1.5 x In (Drive) for 1 Minute every 6 Minutes	
	Switching	Default 5 kHz (Selectable 2.5 to 15 kHz)	
Environment	Acceleration	0.1 to 999s	
	Deceleration	0.1 to 999s	
	Temperature	40°C - NEMA1 40°C - IP20 Side by Side and/or with RFI Filter 50°C - IP20 without RFI Filter (Except the Models for 9.6 A and 24 A for 200-240V) 2% of Current Derating for Each °C Above the Specific Operating Temperature, Limited to an Increase of 10°C	
	Humidity	5% to 95% Non-condensing	
	Altitude	Up to 1,000 m - Rated Conditions 1,000 m to 4,000 m - 1% of Current Derating for each 100 m Above 1,000 m of Altitude	
Performance	Degree of Protection	IP20 or NEMA1 (with NEMA1 kit)	
	V/Hz Control	Speed Regulation: 1% of the Rated Speed (With Slip Compensation) Speed Variation Range: 1:20	
	Vector Control	Speed Regulation: 1% of the Rated Speed Speed Variation Range: 1:30	
Braking Methods	DC Injection Braking	Available as Standard for Frame Sizes B and C, for Frame Size A "DB" Models Need to be Used, an Extra Resistor Must be Connected in for Dynamic Braking Capability	
Safety	Protection	Overcurrent/Phase-Phase Short Circuit in the Output	
		Overcurrent/Phase-Ground Short Circuit in the Output	
		Under/Overvoltage	
		Overtemperature in the Heatsink	
Communication	Protection	Overload in the Motor	
		Overload in the Power Module (IGBTs)	
		External Alarm / Fault	
External Chokes	Setting Error	Setting Error	
		Modbus-RTU	All Plug-in Modules for RS485 and RS232
		Profibus-DP	Plug-in Module CPDP
External Chokes	Setting Error	DeviceNet	Plug-in Module CCAN
		CANopen	Plug-in Module CCAN
		AC Input Chokes	For Reducing THD
External Chokes	Setting Error	AC Output Chokes	For Longer Motor Cables

LINE REACTORS



AC DRIVES

FROM \$68.65

UL US CE E116124

MORE OPTIONS ONLINE UP TO 200HP!

LIFETIME WARRANTY VALID FOR LIFE OF VFD

MADE IN THE USA

230V, 3 Phase

HP	Amps	Open Chassis Unit			UL Type 1 Enclosure			UL Type 3R Enclosure		
		Part Number	Price	HxWxD (in)	Part Number	Price	HxWxD (in)	Part Number	Price	HxWxD (in)
3% Impedance										
1	4.6	KDRMA24L1	\$86.60	3.63x4.5x1.78	KDRMA24LE01	\$212.95	12.25x12.5x6.75	KDRMA24LE3R1	\$388.70	11.5x10.0x12.0
1.5	6.6	KDRMA25L1	\$87.85	3.63x4.5x1.78	KDRMA25LE01	\$214.25	12.25x12.5x6.75	KDRMA25LE3R1	\$390.00	11.5x10.0x12.0
2	7.5	KDRMA27L1	\$89.20	3.63x4.5x1.78	KDRMA27LE01	\$215.55	12.25x12.5x6.75	KDRMA27LE3R1	\$391.25	11.5x10.0x12.0
3	10.6	KDRAA28L2	\$105.20	4.44x4.25x2.6	KDRAA28LE01	\$230.95	12.25x12.5x6.75	KDRAA28LE3R1	\$406.70	11.5x10.0x12.0
5	16.7	KDRULB22L	\$195.00	4.93x5.7x3.9	KDRULB22LE01	\$432.95	12.25x12.5x6.75	KDRULB22LE3R	\$545.20	11.5x10.0x12.0
7.5	24.2	KDRULB23L	\$234.75	4.93x5.7x3.9	KDRULB23LE01	\$472.75	12.25x12.5x6.75	KDRULB23LE3R	\$590.15	11.5x10.0x12.0
10	30.8	KDRULD25L	\$243.80	5.6x6.95x3.8	KDRULD25LE01	\$480.45	12.25x12.5x6.75	KDRULD25LE3R	\$594.60	11.5x10.0x12.0
15	46.2	KDRULD24L	\$298.90	5.6x6.95x3.8	KDRULD24LE01	\$536.25	12.25x12.5x6.75	KDRULD24LE3R	\$654.30	11.5x10.0x12.0
20	59.4	KDRULD26L	\$379.10	5.6x6.95x3.8	KDRULD26LE01	\$614.50	12.25x12.5x6.75	KDRULD26LE3R	\$734.45	11.5x10.0x12.0
25	74.8	KDRULC22L	\$416.95	5.93x6.94x4.9	KDRULC22LE01	\$653.00	12.25x12.5x6.75	KDRULC22LE3R	\$829.40	11.5x10.0x12.0
30	88	KDRULF24L	\$515.75	6.9x8.98x6.6	KDRULF24LE01	\$752.45	19.13x15.43x15.43	KDRULF24LE3R	\$998.75	19.18x15.62x19.5
40	114	KDRULF25L	\$533.70	6.9x8.98x6.6	KDRULF25LE01	\$994.25	19.13x15.43x15.43	KDRULF25LE3R	\$1,163.60	19.18x15.62x19.5
50	143	KDRULF26L	\$625.45	6.9x8.98x6.6	KDRULF26LE01	\$1,084.70	19.13x15.43x15.43	KDRULF26LE3R	\$1,264.30	19.18x15.62x19.5
60	169	KDRULH22L	\$689.60	8.3x10.3x6.97	KDRULH22LE01	\$1,533.05	22.12x20.43x24.37	KDRULH22LE3R	\$1,745.40	22.15x20.62x28.5
75	211	KDRULI23L	\$746.00	8.5x11.38x8.5	KDRULI23LE01	\$1,588.25	22.12x20.43x24.37	KDRULI23LE3R	\$1,811.50	22.15x20.62x28.5
5% Impedance										
1	4.6	KDRMA24H1	\$99.40	3.63x4.5x1.78	KDRMA24HE01	\$225.80	12.25x12.5x6.75	KDRMA24HE3R1	\$402.85	11.5x10.0x12.0
1.5	6.6	KDRMA25H1	\$102.65	3.63x4.5x1.78	KDRMA25HE01	\$229.00	12.25x12.5x6.75	KDRMA25HE3R1	\$404.75	11.5x10.0x12.0
2	7.5	KDRMA26H1	\$115.45	3.63x4.5x1.78	KDRMA26HE01	\$241.20	12.25x12.5x6.75	KDRMA26HE3R1	\$416.95	11.5x10.0x12.0
3	10.6	KDRAA28H2	\$119.95	4.44x4.25x2.6	KDRAA28HE01	\$246.30	12.25x12.5x6.75	KDRAA28HE3R1	\$422.10	11.5x10.0x12.0
5	16.7	KDRULB25H	\$204.00	4.93x5.7x3.9	KDRULB25HE01	\$442.00	12.25x12.5x6.75	KDRULB25HE3R	\$552.90	11.5x10.0x12.0
7.5	24.2	KDRULB26H	\$250.85	4.93x5.7x3.9	KDRULB26HE01	\$488.75	12.25x12.5x6.75	KDRULB26HE3R	\$602.30	11.5x10.0x12.0
10	30.8	KDRULD21H	\$273.90	5.6x6.95x3.8	KDRULD21HE01	\$511.90	12.25x12.5x6.75	KDRULD21HE3R	\$625.45	11.5x10.0x12.0
15	46.2	KDRULD22H	\$326.50	5.6x6.95x3.8	KDRULD22HE01	\$565.10	12.25x12.5x6.75	KDRULD22HE3R	\$683.15	11.5x10.0x12.0
20	59.4	KDRULC22H	\$428.50	5.7x6.94x4.14	KDRULC22HE01	\$665.80	12.25x12.5x6.75	KDRULC22HE3R	\$789.00	11.5x10.0x12.0
25	74.8	KDRULF28H	\$480.45	7.05x8.9x5.18	KDRULF28HE01	\$942.30	12.25x12.5x6.75	KDRULF28HE3R	\$1,041.75	11.5x10.0x12.0
30	88	KDRULF25H	\$647.90	6.9x8.98x6.6	KDRULF25HE01	\$982.70	19.13x15.43x15.43	KDRULF25HE3R	\$1,148.20	19.18x15.62x19.5
40	114	KDRULF26H	\$729.30	6.9x8.98x6.6	KDRULF26HE01	\$1,189.30	19.13x15.43x15.43	KDRULF26HE3R	\$1,359.90	19.18x15.62x19.5
50	143	KDRULH24H	\$912.75	8.3x10.3x6.97	KDRULH24HE01	\$1,372.75	19.13x15.43x15.43	KDRULH24HE3R	\$1,556.20	19.18x15.62x19.5
60	169	KDRULH23H	\$981.40	8.3x10.3x6.97	KDRULH23HE01	\$1,441.95	19.13x15.43x15.43	KDRULH23HE3R	\$1,621.60	22.15x20.62x28.5
75	211	KDRULI22H	\$1,035.95	8.5x11.38x8.5	KDRULI22HE01	\$1,881.40	22.12x20.43x24.37	KDRULI22HE3R	\$2,103.95	22.15x20.62x28.5

KDR Optimized Drive Reactors applied to the line side of a PWM drive will greatly improve the overall performance of the drive. The additional circuit inductance will reduce AC voltage waveform line notching, DC bus overvoltage trips, inverter overvoltage, poor total power factor, and cross-talk. Guaranteed for the lifetime of the drive.

Features:

- Universal mounting footprint
- 3 Phase, 600V Class
- UL and CUL recognized
- CE Marked
- UL Type 1 & 3R enclosures available
- Suitable for input
- 104 °F (40 °C) ambient temperature
- Minimum 95%L at 110% load
- Minimum 80%L at 150% load
- 200% rated current for a minimum of 3 minutes
- Guaranteed for the lifetime of the drive

For output side line reactors visit www.factorymation.com.

460V, 3 Phase

HP	Amps	Open Chassis Unit			UL Type 1 Enclosure			UL Type 3R Enclosure		
		Part Number	Price	HxWxD (in)	Part Number	Price	HxWxD (in)	Part Number	Price	HxWxD (in)
3% Impedance										
1	2.1	KDRMA5L1	\$68.65	3.63x4.5x1.78	KDRMA5LE01	\$195.00	12.25x12.5x6.75	KDRMA5LE3R1	\$370.80	11.5x10.0x12.0
1.5	3	KDRMA6L1	\$82.75	3.63x4.5x1.78	KDRMA6LE01	\$209.15	12.25x12.5x6.75	KDRMA6LE3R1	\$384.90	11.5x10.0x12.0
2	3.4	KDRMA7L1	\$84.05	3.63x4.5x1.78	KDRMA7LE01	\$210.40	12.25x12.5x6.75	KDRMA7LE3R1	\$386.15	11.5x10.0x12.0
3	4.8	KDRMA8L1	\$100.05	3.63x4.5x1.78	KDRMA8LE01	\$225.80	12.25x12.5x6.75	KDRMA8LE3R1	\$401.55	11.5x10.0x12.0
5	7.6	KDRAA3L2	\$102.65	4.44x4.25x2.6	KDRAA3LE01	\$229.00	12.25x12.5x6.75	KDRAA3LE3R1	\$404.75	11.5x10.0x12.0
7.5	11	KDRAA4L2	\$115.45	4.44x4.25x2.6	KDRAA4LE01	\$241.80	12.25x12.5x6.75	KDRAA4LE3R1	\$417.60	11.5x10.0x12.0
10	14	KDRAA5L2	\$119.95	4.44x4.25x2.6	KDRAA5LE01	\$246.30	12.25x12.5x6.75	KDRAA5LE3R1	\$422.10	11.5x10.0x12.0
15	21	KDRULB2L	\$205.90	4.93x5.7x3.9	KDRULB2LE01	\$420.80	12.25x12.5x6.75	KDRULB2LE3R	\$561.95	11.5x10.0x12.0
20	27	KDRULB1L	\$257.90	4.93x5.7x3.9	KDRULB1LE01	\$471.50	12.25x12.5x6.75	KDRULB1LE3R	\$613.25	11.5x10.0x12.0
25	34	KDRULD1L	\$270.05	5.6x6.95x3.8	KDRULD1LE01	\$506.75	12.25x12.5x6.75	KDRULD1LE3R	\$630.55	11.5x10.0x12.0
30	40	KDRULD2L	\$321.40	5.6x6.95x3.8	KDRULD2LE01	\$559.35	12.25x12.5x6.75	KDRULD2LE3R	\$678.00	11.5x10.0x12.0
40	52	KDRULC1L	\$429.80	5.7x6.94x4.14	KDRULC1LE01	\$667.75	12.25x12.5x6.75	KDRULC1LE3R	\$789.65	11.5x10.0x12.0
50	65	KDRULF2L	\$440.00	7.05x8.9x5.18	KDRULF2LE01	\$900.00	19.13x15.43x15.43	KDRULF2LE3R	\$992.35	19.18x15.62x19.5
60	77	KDRULF4L	\$495.20	7.05x8.9x5.18	KDRULF4LE01	\$956.45	19.13x15.43x15.43	KDRULF4LE3R	\$1,049.45	19.18x15.62x19.5
75	96	KDRULF3L	\$676.75	6.9x8.98x6.6	KDRULF3LE01	\$1,137.95	19.13x15.43x15.43	KDRULF3LE3R	\$1,313.70	19.18x15.62x19.5
100	150	KDRULH3L	\$774.90	8.3x10.3x6.97	KDRULH3LE01	\$1,234.15	19.13x15.43x15.43	KDRULH3LE3R	\$1,412.45	19.18x15.62x19.5
125	165	KDRULH2L	\$946.80	8.3x10.3x6.97	KDRULH2LE01	\$1,406.05	19.13x15.43x15.43	KDRULH2LE3R	\$1,588.85	19.18x15.62x19.5
5% Impedance										
1	2.1	KDRMA5H1	\$78.90	3.63x4.5x1.78	KDRMA5HE01	\$204.60	12.25x12.5x6.75	KDRMA5HE3R1	\$380.40	11.5x10.0x12.0
1.5	3	KDRMA6H1	\$96.25	3.63x4.5x1.78	KDRMA6HE01	\$221.90	12.25x12.5x6.75	KDRMA6HE3R1	\$398.30	11.5x10.0x12.0
2	3.4	KDRAA1H2	\$98.15	4.44x4.25x2.6	KDRAA1HE01	\$224.50	12.25x12.5x6.75	KDRAA1HE3R1	\$400.30	11.5x10.0x12.0
3	4.8	KDRAA2H2	\$101.35	4.44x4.25x2.6	KDRAA2HE01	\$227.70	12.25x12.5x6.75	KDRAA2HE3R1	\$403.45	11.5x10.0x12.0
5	7.6	KDRAA3H2	\$119.95	4.44x4.25x2.6	KDRAA3HE01	\$245.70	12.25x12.5x6.75	KDRAA3HE3R1	\$421.45	11.5x10.0x12.0
7.5	11	KDRAA4H2	\$129.55	4.44x4.25x2.6	KDRAA4HE01	\$255.95	12.25x12.5x6.75	KDRAA4HE3R1	\$431.70	11.5x10.0x12.0
10	14	KDRAA5H2	\$157.80	4.44x4.25x2.6	KDRAA5HE01	\$283.50	12.25x12.5x6.75	KDRAA5HE3R1	\$459.30	11.5x10.0x12.0
15	21	KDRULB2H	\$255.30	4.93x5.7x3.9	KDRULB2HE01	\$492.65	12.25x12.5x6.75	KDRULB2HE3R	\$611.30	11.5x10.0x12.0
20	27	KDRULC3H	\$313.00	5.7x6.94x4.14	KDRULC3HE01	\$549.75	12.25x12.5x6.75	KDRULC3HE3R	\$670.95	11.5x10.0x12.0
25	34	KDRULC1H	\$408.60	5.7x6.94x4.14	KDRULC1HE01	\$644.00	12.25x12.5x6.75	KDRULC1HE3R	\$767.85	11.5x10.0x12.0
30	40	KDRULE2H	\$416.30	5.7x6.96x4.6	KDRULE2HE01	\$654.30	12.25x12.5x6.75	KDRULE2HE3R	\$774.25	11.5x10.0x12.0
40	52	KDRULF4H	\$471.50	7.05x8.9x5.18	KDRULF4HE01	\$932.05	19.13x15.43x15.43	KDRULF4HE3R	\$1,025.05	19.18x15.62x19.5
50	65	KDRULF1H	\$679.30	7.02x9.0x7.0	KDRULF1HE01	\$1,138.55	19.13x15.43x15.43	KDRULF1HE3R	\$1,237.35	19.18x15.62x19.5
60	77	KDRULF2H	\$662.00	7.02x9.0x7.0	KDRULF2HE01	\$1,121.25	19.13x15.43x15.43	KDRULF2HE3R	\$1,220.05	19.18x15.62x19.5
75	96	KDRULH2H	\$806.95	8.3x10.3x6.97	KDRULH2HE01	\$1,268.15	19.13x15.43x15.43	KDRULH2HE3R	\$1,440.05	19.18x15.62x19.5
100	125	KDRULI2H	\$912.75	8.5x10.5x7.75	KDRULI2HE01	\$1,372.75	19.13x15.43x15.43	KDRULI2HE3R	\$1,545.25	19.13x15.43x15.43
125	160	KDRULG3H	\$1,013.50	10x10.75x6.75	KDRULG3HE01	\$1,857.65	22.12x20.43x24.37	KDRULG3HE3R	\$2,072.55	22.15x20.62x28.50



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