Franklin Electric

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CERUS X-DRIVE BYPASS

1/2–50HP (200/208VAC), 1/2–60HP (230VAC),
1/2–125HP (460VAC), 1/2–60HP (575VAC), 3-Phase Input
UL Type 3R Enclosed Smart Bypass

CERUS X-DRIVE

SPECIAL INSTRUCTIONS:

SIZING INFORMATION TABLES

Part Number	200VAC			208VAC			230VAC		
	HP	FLA	KAIC	HP	FLA	KAIC	HP	FLA	KAIC
CXD3-BYP0025-2V-2-5	1/2	2.5	100	1/2	2.4	100	1/2	2.2	100
CXD3-BYP0037-2V-4	3/4	3.7	100	3/4	3.5	100	3/4	3.2	100
CXD3-BYP0060-2V-6	1	4.8	100	1	4.6	100	1.5	6	100
CXD3-BYP0078-2V-8	2	7.8	100	2	7.5	100	2	6.8	100
CXD3-BYP096-2V-10	2	7.8	100	2	7.5	100	3	9.6	100
CXD3-BYP0110-2V-13	3	11	100	3	10.6	100	3	9.6	100
CXD3-BYP0152-2V-17	3	11	100	3	10.6	100	5	15.2	100
CXD3-BYP0220-2V-22	5	17.5	100	5	16.7	100	7.5	22	100
CXD3-BYP0253-2V-26	7.5	25.3	100	7.5	24.2	100	7.5	22	100
CXD3-BYP0280-2V-32	7.5	25.3	100	7.5	24.2	100	10	28	100
CXD3-BYP0322-2V-40	10	32.2	100	10	30.8	100	10	28	100
CXD3-BYP0483-2V-50	15	48.30	100	15	46.2	100	15	42	100
CXD3-BYP0594-2V-63	-	-	-	20	59.4	100	20	54	100
CXD3-BYP0680-2V-75	20	62.1	100	20	59.4	100	25	68	100
CXD3-BYP0782-2V-90	25	78.2	100	25	74.8	100	25	68	100
CXD3-BYP0920-2V-100	30	92	100	30	88	100	30	80	100
CXD3-BYP1200-2V-200	30	92	5	30	88	5	40	104	5
CXD3-BYP1300-2V-225	40	120	5	40	114	5	50	130	5
CXD3-BYP1540-2V-250	50	150	10	50	143	10	60	154	10

Part Number	460VAC		
	HP	FLA	KAIC
CXD3-BYP0011-4V-1	1/2	1.1	65
CXD3-BYP0016-4V-1-6	3/4	1.6	65
CXD3-BYP0021-4V-2-5	1	2.1	65
CXD3-BYP0034-4V-4	2	3.4	65
CXD3-BYP0048-4V-6	3	4.8	65
CXD3-BYP0076-4V-8	5	7.6	65
CXD3-BYP0110-4V-13	7.5	11	65
CXD3-BYP0140-4V-17	10	14	30
CXD3-BYP0210-4V-22	15	21	30
CXD3-BYP0270-4V-32	20	27	30
CXD3-BYP0340-4V-40	25	34	50
CXD3-BYP0400-4V-40	30	40	50
CXD3-BYP0520-4V-63	40	52	50
CXD3-BYP0650-4V-75	50	65	50
CXD3-BYP0770-4V-90	60	77	50
CXD3-BYP0960-4V-100	75	96	50
CXD3-BYP1240-4V-200	100	124	10
CXD3-BYP1560-4V-250	125	156	10

Part Number	575VAC		
	HP	FLA	KAIC
CXD3-BYP0009-6V-1	1/2	0.9	25
CXD3-BYP0013-6V-1-6	3/4	1.3	25
CXD3-BYP0024-6V-2-5	1.5	2.4	25
CXD3-BYP0039-6V-4	3	3.9	25
CXD3-BYP0061-6V-6	5	6.1	25
CXD3-BYP0090-6V-10	7.5	9	25
CXD3-BYP0110-6V-13	10	11	25
CXD3-BYP0170-6V-17	15	17	10
CXD3-BYP0220-6V-22	20	22	10
CXD3-BYP0270-6V-32	25	27	10
CXD3-BYP0320-6V-40	30	32	10
CXD3-BYP0410-6V-50	40	41	10
CXD3-BYP0520-6V-63	50	52	10
CXD3-BYP0620-6V-65	60	62	10

Note: All 575VAC packages come standard with output reactors for harmonic mitigation.

Factory Options (UL Type 3R)
Speed Potentiometer
Ethernet IP and Modbus TCP/IP Communications Card
3% Line Reactor
5% Line Reactor
dV/dT Filter [1]
EMI/FRI Filter [2]

Factory Options (UL Type 3R)
Surge Suppressor
UL Type 3R Enclosed Door-Mounted Keypad Cover
UL Type 12 Enclosed Door-Mounted Keypad Cover
Panel Space Heater
Free-standing Foot Kit (12 inches)

[1] Available only on 460 and 575VAC bypass panels. Selecting a dV/dT Filter for a 575VAC package will replace the 575VAC Output Reactor as the harmonic mitigation device.
[2] Available on 200, 208, 230, and 460VAC panels only.

Note: HP rating is based on standard NEMA B, 4-pole motor design as represented in NEC table 430.150 full-load current, 3-phase alternating current motors.

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SPECIFICATION TABLE

Cooling method			Forced air cooling by internal fans								
Short Circuit Rating			100kA								
Agency Approvals			UL and cUL listed, CE marked								
Motor Controls	Control Methods		**200/208/230VAC and 460VAC models:** V/F control, SVC (Sensorless Vector Control) **575/690VAC models:** V/F and SVC								
	Control Type		PWM (Pulse Width Modulation)								
	Frequency Setting Resolution		**Digital Reference:** 0.01 Hz (Below 100 Hz), 0.1 Hz (Over 100 Hz) **Analog Reference:** [Max. output frequency]x 0.03/60Hz (±11 bit)								
	Frequency Accuracy		**Digital:** 0.01 % of Max. Output Frequency **Analog:** 0.1 % of Max. Output Frequency								
	V/F Control Curve		12 preset V/F curves and four-point square curve								
	Speed Control Ratio		1:12 (5Hz-60Hz) at 60Hz maximum frequency								
	Maximum Output Frequency		**200/208/230VAC models:** 599Hz (55kW and above: 400Hz); **460VAC models:** 599Hz (90kW and above: 400Hz); **575/690VAC models:** 599Hz								
	Overload Capacity		**Variable Torque:** 120% of VFD rated current for 1 minute during every 5 minutes of operation. **Constant Torque:** 150% of VFD rated current for 1 minute during every 5 minutes of operation and 160% for 3 seconds during every 25 seconds of operation.								
	Starting Torque		Up to 150% or higher at 0.5Hz (Torque Accuracy ±5%).								
	Torque Limit (Stall level)		**Variable Torque:** Max. 130% torque current; **Constant Torque:** Max. 160% torque current								
Operation	Operation Method		Keypad / Terminals / Communication (Built-in Modbus and BACnet)								
	Frequency Setting		Two Analog Inputs 0- 10VDC/ 4- 20mA and One AI 0-10VDC. **Digital:** Keypad or Communication								
	By Digital Inputs	Start Signal	Forward, Reverse and Jog (some features can start and stop VFD based on analog signal).								
		Digital Inputs	8 programmable digital inputs can be set to any selection from long list of functions.								
		Multi-Step	Up to 17 Speeds can be set including Jog by Programmable Digital Inputs.								
		Accel/Decel Time and Presets	0.00- 600.00/0.0- 6000.0 seconds. Three ACC/DEC preset values switched by digital inputs or one by frequency. Additional adjustable Accel/Decel S-Curve pattern.								
		Emergency Stop	Ext. Trip and Shutdown immediately interrupt VFD output in any control method.								
		Jog	Jog operation with adjustable Jog frequency.								
		Fault Reset	Resets VFD faults via keypad, digital input or communication. Some critical faults can only be reset by cycling the VFD power.								
		Safety Inputs	SCM and STO terminals for safety circuit wiring.								
	Outputs	Three Multi-Function Relays	One relay with **Form C**: 250VAC 3A/30VDC 3A contact; Two relays with **Form A:** 250VAC 1.2A/30VDC 3A. Each relay can be programmed to any selection from the functions list.								
		Two Analog Outputs	**Selections:** Output Frequency, Output Current, Output Voltage, Output kW, DC Link Voltage, V1 or I input signal level. Both outputs are 0-10VDC scalable from 10 to 200%.								
	General Operation Functions		DC Braking, Frequency Limit, Jump Frequencies, 2nd ACC/DEC, Auto Restart, Auto-Tuning, PID w/sleep, Flying Start, Speed Search, DC Braking, Slip Compensation, Motor Pre-heat, Temperature Foldback, Damper Control, Fireman's Override, Shutdown, etc.								
	Pump Operation Functions/Protections		Pipe Fill, 2nd PID, Trigger by AI, Overpressure, ULD (Underload), HLD (High Load), Dual Demand, Pipe Leak, Broken Pipe, MMC, Multi-VFD with Lead/Lag/Standby and Jokey, Transducer redundancy, Lubrication, Screen Clean, etc.								
Protection	VFD Fault Trips		Over Voltage, Low Voltage, Over Current, Overload, Short Circuit, Ground Fault, VFD Overheat, Input Phase Loss, Output Phase Open, CPU Communication Error, Signal Loss, Hardware Fault, etc.								
	Motor Overload		Adjustable electronic motor overload protection.								
	Overcurrent		**200/208/230/460VAC Variable Torque:** At 200% of VFD rated current, **200/208/230/460VAC Constant Torque:** At 240% of VFD rated current, **Current clamp:** Variable Torque: 130- 135%, Constant Torque 170- 175% **575/690VAC models:** At 225% VFD rated current **Current clamp:** Variable Torque: 128- 141%, Constant Torque: 170- 175%								
	Overvoltage		**230VAC models:** At 410VDC DC bus voltage **460VAC models:** At 820VDC DC bus voltage **575VAC models:** At 1016VDC DC bus voltage **690VAC models:** At 1189VDC DC bus voltage								
	Overtemperature		Built-in IGBT and Capacitor Bank temperature sensors								
	Restart After IPF		Adjustable power loss duration up to 20 sec. Leakage current is greater than 50% of rated current of the drive.								
	VFD Alarm		Stall Prevention at ACC and DEC, Overload, Thermal Sensor Fault, Capacitors High Temperature, Signal Loss, Overpressure, Underload, High Load, etc.								
Keypad Display	Operation Information		Output Frequency, Output Current, Output Voltage, Frequency Reference, Operating Speed, DC Voltage, kWattmeter, Run-time, Last Trip Time, Pressure, etc.								
	Fault History		The VFD stores 5 last faults.								
Environment	Operating Temperature		**NEMA 1:** 14°F - 104°F (-10°C - 40°C), **Open Type:** 14°F - 122°F (-10°C - 50°C)								
	Storage Temperature		-13°F - 158°F (-25°C - 70°C)								
	Ambient Humidity		Up to 95% RH. (Non-Condensing)								
	Altitude		Normal up to 3,300ft (1,000m). At altitude up to 2,000 m, de-rate by 1% of rated current or lower 0.5 °C of temperature for every 100m above 1,000m. Maximum altitude for Corner Grounded TN system is 2,000m. For application over 2,000m, please contact FELE for more details.								
	Vibration and Impact		1mm peak to peak value from 2Hz to 13.2Hz; 0.7G- 1.0G from 13.2Hz to 55Hz; 1.0G from 55Hz to 512Hz. Comply with IEC 60068-2-6 and IEC/EN60068-2-27.								
	Environmental Conditions		Pollution degree 2. No Corrosive Gas, Combustible Gas, Oil Mist or Dust. IEC60721-3-3/ IEC60364-1/ IEC60664-1								
Inputtr Efficiency (>=X%)	**Drive Frame**		**Frame A**	**Frame B**	**Frame C**	**Frame D0**	**Frame D**	**Frame E**	**Frame F**	**Frame G**	**Frame H**
	Input Voltage	**200/208/230VAC**	96	96.5	96.5	-	97	97	-	-	-
		460VAC	96	96.5	96.5	97	97	97	97	97.5	97.5
		575VAC	97	98	97	-	97	97	97	98	98

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SUBMITTED EQUIPMENT SCHEDULE

QTY	Tag	Part #	HP	Voltage	Phase	Communication Card

- ☐ Speed Potentiometer
- ☐ Line Reactor, dV/dT Filter[1], or EMI/RFI Filter[2] –
- ☐ Surge Suppressor
- ☐ Panel Space Heater
- ☐ Free-Standing Foot Kit (12")[3]
- ☐ Door-Mounted Keypad

QTY	Tag	Part #	HP	Voltage	Phase	Communication Card

- ☐ Speed Potentiometer
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- ☐ Panel Space Heater
- ☐ Free-Standing Foot Kit (12")[3]
- ☐ Door-Mounted Keypad

[1] Available only on 460 and 575VAC bypass panels. Selecting a dV/dT Filter for a 575VAC package will replace the 575VAC Output Reactor as the harmonic mitigation device.

[2] Available on 200, 208, 230, and 460VAC panels only.

[3] The free-standing foot kit adds an additional 12 inches of height to the enclosure dimensions. Please use to the dimension sizing table titled 'UL Type 3R (w/ Free-Standing Foot Kit)' table to find your panel's enclosure dimensions.

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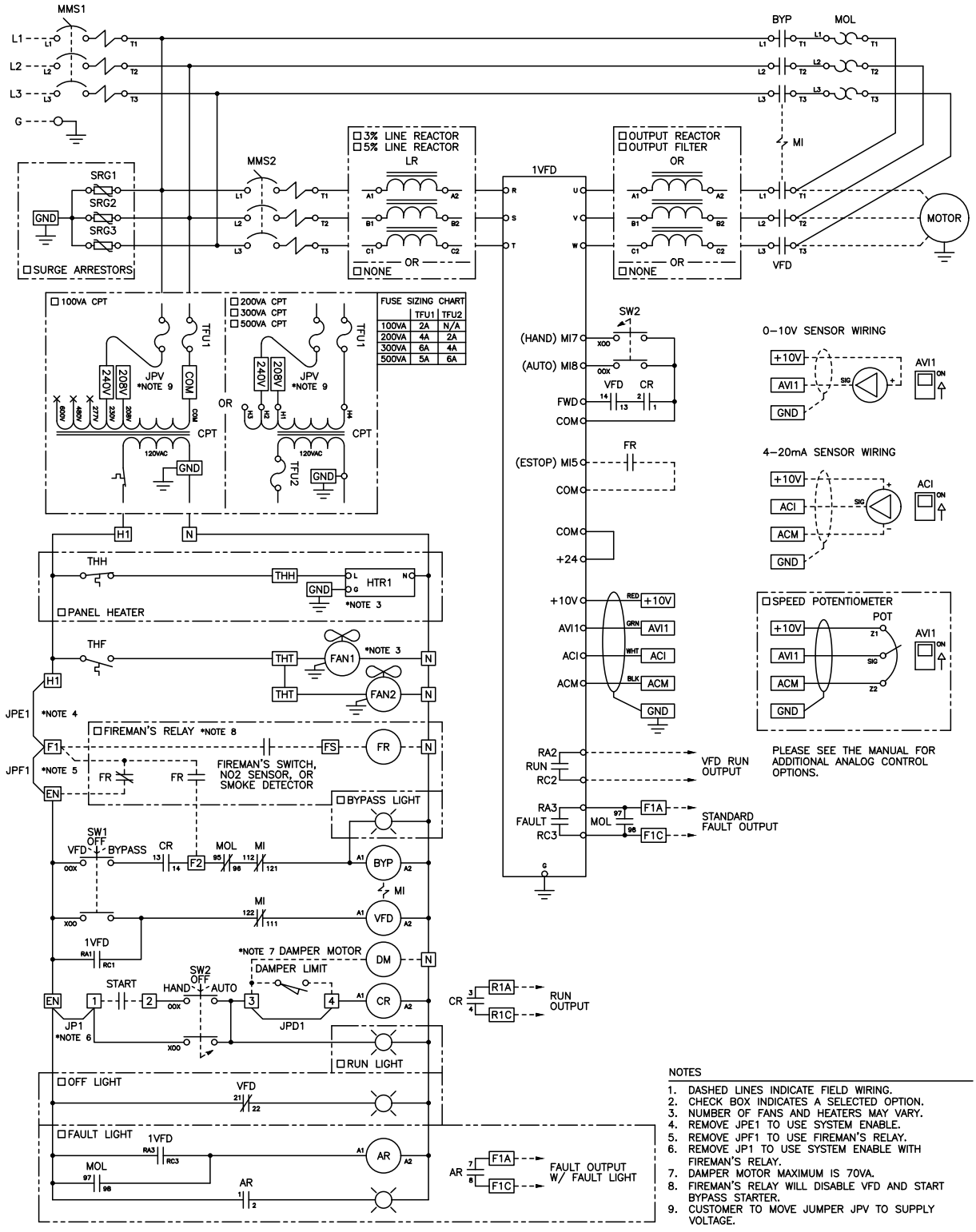
WIRING DIAGRAMS

200/208/230VAC



NOTES

1. DASHED LINES INDICATE FIELD WIRING.
2. CHECK BOX INDICATES A SELECTED OPTION.
3. NUMBER OF FANS AND HEATERS MAY VARY.
4. REMOVE JPE1 TO USE SYSTEM ENABLE.
5. REMOVE JPF1 TO USE FIREMAN'S RELAY.
6. REMOVE JP1 TO USE SYSTEM ENABLE WITH FIREMAN'S RELAY.
7. DAMPER MOTOR MAXIMUM IS 70VA.
8. FIREMAN'S RELAY WILL DISABLE VFD AND START BYPASS STARTER.
9. CUSTOMER TO MOVE JUMPER JPV TO SUPPLY VOLTAGE.

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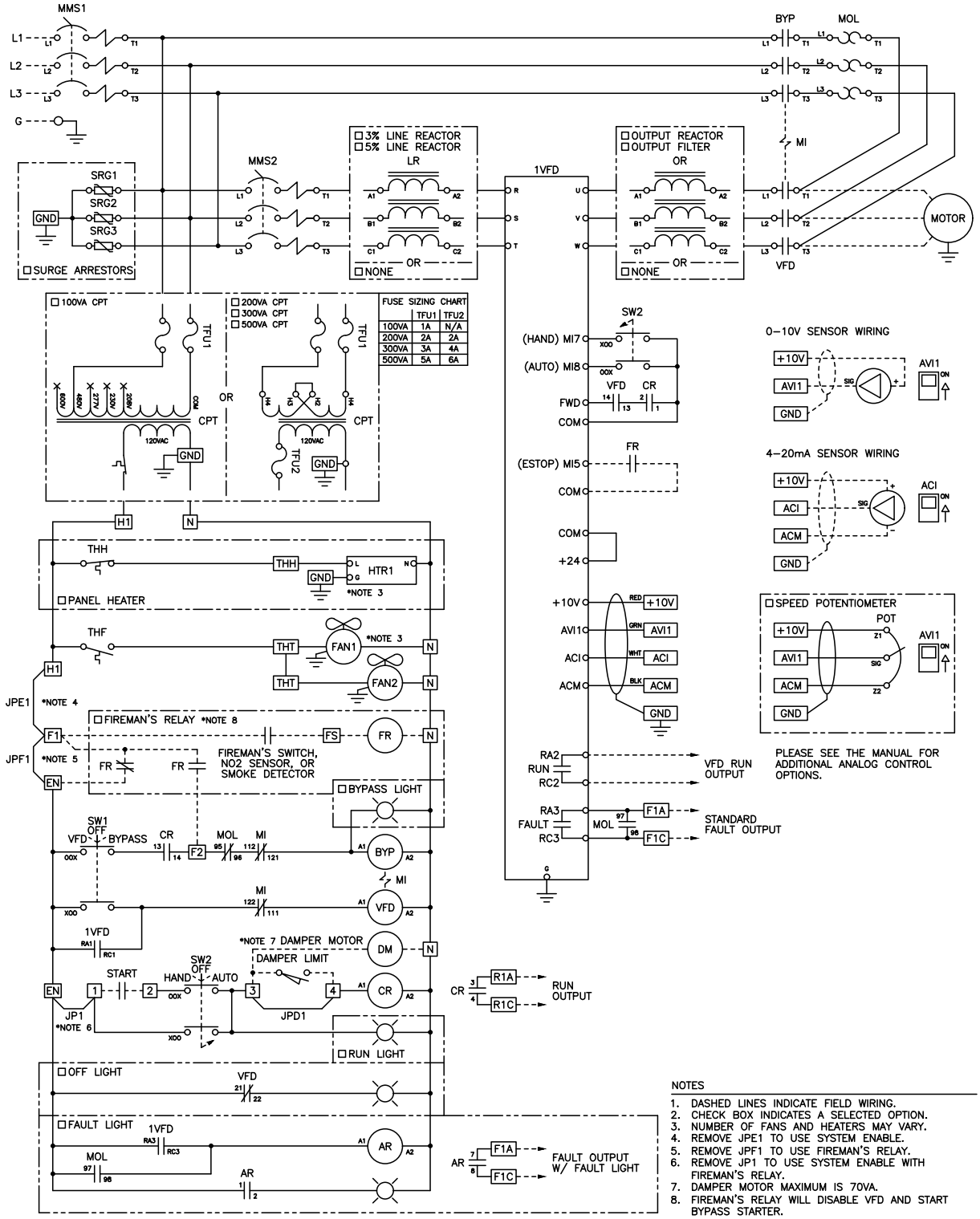
WIRING DIAGRAMS

460VAC



NOTES

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3. NUMBER OF FANS AND HEATERS MAY VARY.
4. REMOVE JPE1 TO USE SYSTEM ENABLE.
5. REMOVE JPF1 TO USE FIREMAN'S RELAY.
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8. FIREMAN'S RELAY WILL DISABLE VFD AND START BYPASS STARTER.

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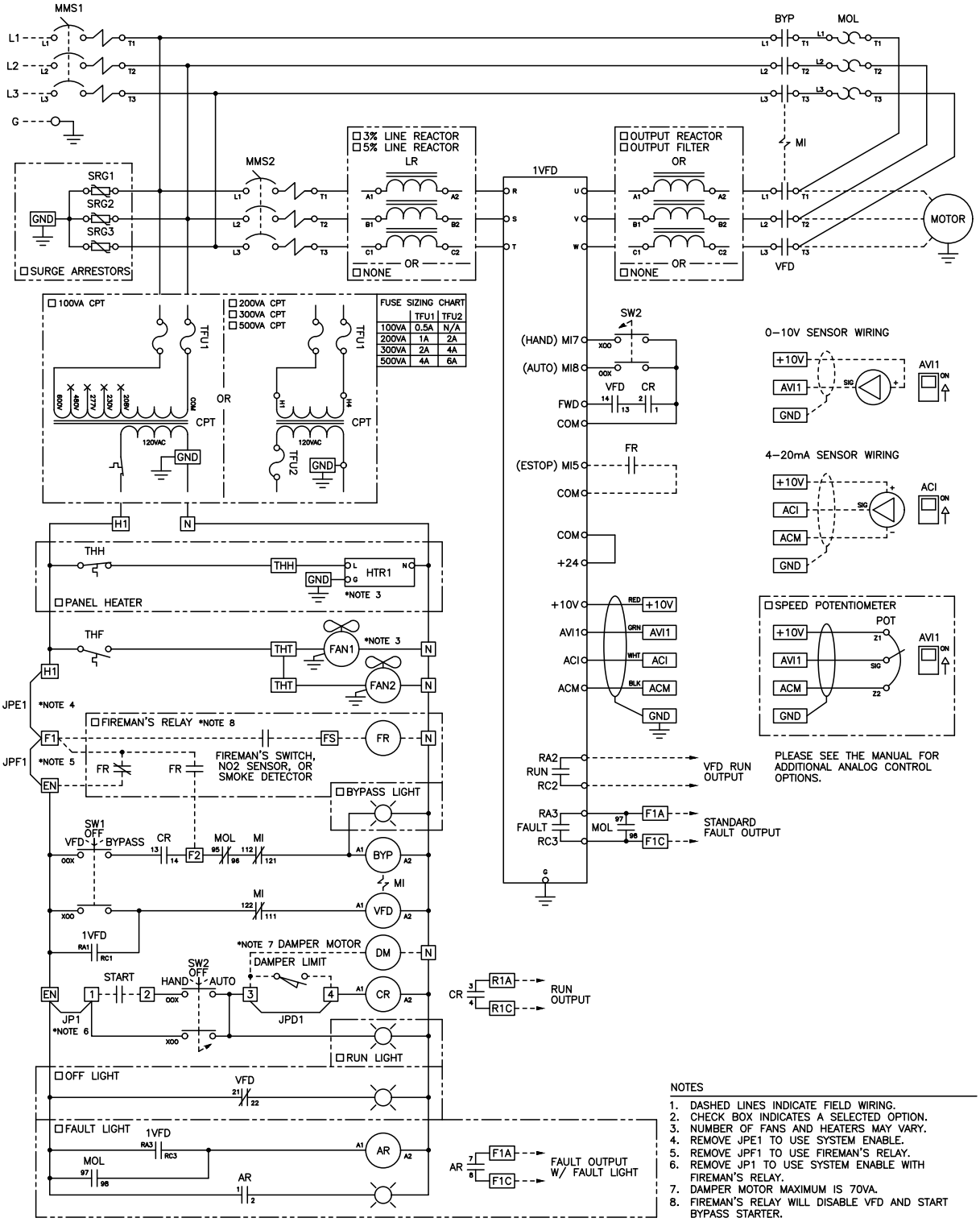
WIRING DIAGRAMS

575VAC



NOTES

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2. CHECK BOX INDICATES A SELECTED OPTION.
3. NUMBER OF FANS AND HEATERS MAY VARY.
4. REMOVE JPE1 TO USE SYSTEM ENABLE.
5. REMOVE JPF1 TO USE FIREMAN'S RELAY.
6. REMOVE JP1 TO USE SYSTEM ENABLE WITH FIREMAN'S RELAY.
7. DAMPER MOTOR MAXIMUM IS 70VA.
8. FIREMAN'S RELAY WILL DISABLE VFD AND START BYPASS STARTER.

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PANEL VFD SPECIFICATIONS

The following section details the Cerus X-Drive VFD model of the panel. To locate the VFD part number for your X-Drive Bypass panel, reference the information table below.

Panel VFD Reference Table

200/208/230VAC X-Drive Panel		460VAC X-Drive Panel		575VAC X-Drive Panel	
Bypass Part Number	VFD Part Number	Bypass Part Number	VFD Part Number	Bypass Part Number	VFD Part Number
CXD3-BYP0025-2V-2-5	CXD-005-2V	CXD3-BYP0011-4V-1	CXD-003-4V	CXD3-BYP0009-6V-1	CXD-003-6V
CXD3-BYP0037-2V-4	CXD-005-2V	CXD3-BYP0016-4V-1-6	CXD-003-4V	CXD3-BYP0013-6V-1-6	CXD-003-6V
CXD3-BYP0060-2V-6	CXD-007-2V	CXD3-BYP0021-4V-2-5	CXD-003-4V	CXD3-BYP0024-6V-2-5	CXD-003-6V
CXD3-BYP0078-2V-8	CXD-010-2V	CXD3-BYP0034-4V-4	CXD-004-4V	CXD3-BYP0039-6V-4	CXD-006-6V
CXD3-BYP0096-2V-10	CXD-010-2V	CXD3-BYP0048-4V-6	CXD-008-4V	CXD3-BYP0061-6V-6	CXD-006-6V
CXD3-BYP0110-2V-13	CXD-015-2V	CXD3-BYP0076-4V-8	CXD-010-4V	CXD3-BYP0090-6V-10	CXD-009-6V
CXD3-BYP0152-2V-17	CXD-021-2V	CXD3-BYP0110-4V-13	CXD-013-4V	CXD3-BYP0110-6V-13	CXD-012-6V
CXD3-BYP0220-2V-22	CXD-031-2V	CXD3-BYP0140-4V-17	CXD-018-4V	CXD3-BYP0170-6V-17	CXD-018-6V
CXD3-BYP0253-2V-26	CXD-031-2V	CXD3-BYP0210-4V-22	CXD-024-4V	CXD3-BYP0220-6V-22	CXD-024-6V
CXD3-BYP0280-2V-32	CXD-031-2V	CXD3-BYP0270-4V-32	CXD-032-4V	CXD3-BYP0270-6V-32	CXD-030A-6V
CXD3-BYP0322-2V-40	CXD-046-2V	CXD3-BYP0340-4V-40	CXD-038-4V	CXD3-BYP0320-6V-40	CXD-036A-6V
CXD3-BYP0483-2V-50	CXD-061-2V	CXD3-BYP0400-4V-40	CXD-045-4V	CXD3-BYP0410-6V-50	CXD-045A-6V
CXD3-BYP0594-2V-63	CXD-061-2V	CXD3-BYP0520-4V-63	CXD-060-4V	CXD3-BYP0520-6V-63	CXD-054A-6V
CXD3-BYP0680-2V-75	CXD-075-2V	CXD3-BYP0650-4V-75	CXD-073-4V	CXD3-BYP0620-6V-65	CXD-067A-6V
CXD3-BYP0782-2V-90	CXD-090-2V	CXD3-BYP0770-4V-90	CXD-091-4V	-	-
CXD3-BYP0920-2V-100	CXD-105-2V	CXD3-BYP0960-4V-100	CXD-110-4V	-	-
CXD3-BYP1200-2V-200	CXD-105A-2V	CXD3-BYP1240-4V-200	CXD-150A-4V	-	-
CXD3-BYP1300-2V-225	CXD-146A-2V	CXD3-BYP1560-4V-250	CXD-180A-4V	-	-
CXD3-BYP1540-2V-250	CXD-180A-2V	-	-	-	-

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CONTACTOR SPECIFICATIONS

The following section details the panel's three-pole contactor sizing and ratings. To locate the component part number for your X-Drive Bypass panel, reference the sizing information table below.

200/208/230VAC X-Drive Panel		460VAC X-Drive Panel		575VAC X-Drive Panel	
Bypass Part Number	Contactor Part Number	Bypass Part Number	Contactor Part Number	Bypass Part Number	Contactor Part Number
CXD3-BYP0025-2V-2-5	MRC-9B-24VAC	CXD3-BYP0011-4V-1	MRC-9B-24VAC	CXD3-BYP0009-6V-1	MRC-9B-24VAC
CXD3-BYP0037-2V-4		CXD3-BYP0016-4V-1-6		CXD3-BYP0013-6V-1-6	
CXD3-BYP0060-2V-6		CXD3-BYP0021-4V-2-5		CXD3-BYP0024-6V-2-5	
CXD3-BYP0078-2V-8		CXD3-BYP0034-4V-4		CXD3-BYP0039-6V-4	
CXD3-BYP0096-2V-10	MRC-12B-24VAC	CXD3-BYP0048-4V-6		CXD3-BYP0061-6V-6	
CXD3-BYP0110-2V-13		CXD3-BYP0076-4V-8		CXD3-BYP0090-6V-10	
CXD3-BYP0152-2V-17		CXD3-BYP0110-4V-13	MRC-12B-24VAC	CXD3-BYP0110-6V-13	MRC-12B-24VAC
CXD3-BYP0220-2V-22	MRC-18B-24VAC	CXD3-BYP0140-4V-17	MRC-18B-24VAC	CXD3-BYP0170-6V-17	MRC-18B-24VAC
CXD3-BYP0253-2V-26	MRC-22B-24VAC	CXD3-BYP0210-4V-22	MRC-22B-24VAC	CXD3-BYP0220-6V-22	MRC-22B-24VAC
CXD3-BYP0280-2V-32		CXD3-BYP0270-4V-32	MRC-32A-24VAC	CXD3-BYP0270-6V-32	MRC-50LA-24VAC
CXD3-BYP0322-2V-40	MRC-40A-24VAC	CXD3-BYP0340-4V-40	MRC-40A-24VAC	CXD3-BYP0320-6V-40	
CXD3-BYP0483-2V-50	MRC-50LA-24VAC	CXD3-BYP0400-4V-40	MRC-50LA-24VAC	CXD3-BYP0410-6V-50	
CXD3-BYP0594-2V-63		CXD3-BYP0520-4V-63		CXD3-BYP0520-6V-63	
CXD3-BYP0680-2V-75	MRC-75LA-24VAC	CXD3-BYP0650-4V-75	MRC-75LA-24VAC	CXD3-BYP0620-6V-65	MRC-65LA-24VAC
CXD3-BYP0782-2V-90		CXD3-BYP0770-4V-90	MRC-85LA-24VAC	-	-
CXD3-BYP0920-2V-100	MRC-85LA-24VAC	CXD3-BYP0960-4V-100	MRC-100LA-24VAC	-	-
CXD3-BYP1200-2V-200	MRC-130LA-24VAC	CXD3-BYP1240-4V-200	MRC-150LA-24VAC	-	-
CXD3-BYP1300-2V-225	MRC-150LA-24VAC	CXD3-BYP1560-4V-250	MRC-185A-24VAC	-	-
CXD3-BYP1540-2V-250	MRC-185A-24VAC	-	-	-	-

Type				MRC-9A	MRC-12B	MRC-18B	MRC-22B	MRC-32A	MRC-40A	MRC-50LA	MRC-65LA
Frame Size				**22AF**				**40AF**		**65AF**	
Terminal Type				Screw				Screw		Screw	
Number of poles				3 pole				3 pole		3 pole	
Rated operation voltage, Ue				690V				690V		690V	
Rated insulation voltage, Ui				690V				690V		1000V	
Rated frequency				50/60Hz				50/60Hz		50/60Hz	
Rated impulse withstand voltage, Uimp				6kV				6kV		8kV	
Max. operating rate in operating cycles per hour (AC3)				1800 operations per hour				1800 operations per hour		1800 operations per hour	
Durability			Mechanical	15 mil. operations				15 mil. operations		12 mil. operations	
			Electrical	2.5 mil. operations				1 mil. operations		2 mil. operations	
UL rating (50/60Hz)	Continuous Current		A	25	25	32	32	50	60	70	100
	Single Phase	110-120V	HP	0.5	0.75	1	2	2	3	3	5
		220-240V	HP	1.5	2	3	3	5	7.5	10	15
	Three Phase	200-208V	HP	2	3	5	7.5	7.5	15	20	25
		220-240V	HP	3	5	7.5	7.5	10	15	25	30
		440-480V	HP	5	7.5	10	10	20	30	40	50
		550-600V	HP	7.5	10	15	15	25	30	50	60
	NEMA size			00	–	0	–	1	–	2	–
Size and weight	MRC	Weight Size (WxHxD)	lbs in	0.73 lbs 1.77 x 2.89 x 3.39 in				1.21 lbs 2.24 x 3.27 x 3.54 in		1.98 lbs 2.17 x 4.17 x 4.69 in	
Auxiliary Contact*				1NO & 1NC				1NO & 1NC		1NO & 1NC	

**Minimum conduct current of auxiliary contactor is DC 17V 5mA, 10A max, not motor duty rated.*

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CONTACTOR SPECIFICATIONS (CONT.)

200/208/230VAC X-Drive Panel		460VAC X-Drive Panel		575VAC X-Drive Panel	
Bypass Part Number	Contactor Part Number	Bypass Part Number	Contactor Part Number	Bypass Part Number	Contactor Part Number
CXD3-BYP0025-2V-2-5	MRC-9B-24VAC	CXD3-BYP0011-4V-1	MRC-9B-24VAC	CXD3-BYP0009-6V-1	MRC-9B-24VAC
CXD3-BYP0037-2V-4		CXD3-BYP0016-4V-1-6		CXD3-BYP0013-6V-1-6	
CXD3-BYP0060-2V-6		CXD3-BYP0021-4V-2-5		CXD3-BYP0024-6V-2-5	
CXD3-BYP0078-2V-8		CXD3-BYP0034-4V-4		CXD3-BYP0039-6V-4	
CXD3-BYP0096-2V-10	MRC-12B-24VAC	CXD3-BYP0048-4V-6		CXD3-BYP0061-6V-6	
CXD3-BYP0110-2V-13		CXD3-BYP0076-4V-8		CXD3-BYP0090-6V-10	
CXD3-BYP0152-2V-17		CXD3-BYP0110-4V-13	MRC-12B-24VAC	CXD3-BYP0110-6V-13	MRC-12B-24VAC
CXD3-BYP0220-2V-22	MRC-18B-24VAC	CXD3-BYP0140-4V-17	MRC-18B-24VAC	CXD3-BYP0170-6V-17	MRC-18B-24VAC
CXD3-BYP0253-2V-26	MRC-22B-24VAC	CXD3-BYP0210-4V-22	MRC-22B-24VAC	CXD3-BYP0220-6V-22	MRC-22B-24VAC
CXD3-BYP0280-2V-32		CXD3-BYP0270-4V-32	MRC-32A-24VAC	CXD3-BYP0270-6V-32	MRC-50LA-24VAC
CXD3-BYP0322-2V-40	MRC-40A-24VAC	CXD3-BYP0340-4V-40	MRC-40A-24VAC	CXD3-BYP0320-6V-40	
CXD3-BYP0483-2V-50	MRC-50LA-24VAC	CXD3-BYP0400-4V-40	MRC-50LA-24VAC	CXD3-BYP0410-6V-50	
CXD3-BYP0594-2V-63		CXD3-BYP0520-4V-63		CXD3-BYP0520-6V-63	
CXD3-BYP0680-2V-75	MRC-75LA-24VAC	CXD3-BYP0650-4V-75	MRC-75LA-24VAC	CXD3-BYP0620-6V-65	MRC-65LA-24VAC
CXD3-BYP0782-2V-90		CXD3-BYP0770-4V-90	MRC-85LA-24VAC	-	-
CXD3-BYP0920-2V-100	MRC-85LA-24VAC	CXD3-BYP0960-4V-100	MRC-100LA-24VAC	-	-
CXD3-BYP1200-2V-200	MRC-130LA-24VAC	CXD3-BYP1240-4V-200	MRC-150LA-24VAC	-	-
CXD3-BYP1300-2V-225	MRC-150LA-24VAC	CXD3-BYP1560-4V-250	MRC-185A-24VAC	-	-
CXD3-BYP1540-2V-250	MRC-185A-24VAC	-	-	-	-

Type				MRC-75LA	MRC-85LA	MRC-130LA	MRC-150LA	MRC-185LA	MRC-225LA
Frame Size				**100AF**		**150AF**		**225AF**	
Terminal Type				Lug		Screw		Screw	
Number of poles				3 pole		3 pole		3 pole	
Rated operation voltage, Ue				690V		690V		690V	
Rated insulation voltage, Ui				1000V		1000V		1000V	
Rated frequency				50/60Hz		50/60Hz		50/60Hz	
Rated impulse withstand voltage, Uimp				6kV		8kV		8kV	
Max. operating rate in operating cycles per hour (AC3)				1800 operations per hour		1800 operations per hour		1800 operations per hour	
Durability			Mechanical	12 mil. operations		5 mil. operations		5 mil. operations	
			Electrical	2 mil. operations		1 mil. operations		1 mil. operations	
UL rating (50/60Hz)	Continuous current		A	110	135	160	210	230	275
	Single Phase	110-120V	HP	5	7.5	10	15	15	15
		220-240V	HP	15	15	20	25	30	40
	Three Phase	200-208V	HP	25	30	40	40	60	60
		220-240V	HP	30	40	40	50	60	75
		440-4 80V	HP	50	60	5	100	150	150
		550-600V	HP	60	75	75	75	125	125
	NEMA size			–	3	–	4	–	–
Size and weight	MRC	Weight Size (WxHxD)	lbs in	3.53 lbs 2.76 x 5.51 x 5.35 in		5.29 lbs 3.74 x 622 x 5.13 in		12.24 lbs 5.43 x 7.99 x 7.29 in	
	MRD	Weight Size (WxHxD)	lbs in	5.73 lbs 2.76 x 5.51 x 6.78 in					
Auxiliary (standard)				1NO & 1NC		1NO & 1NC		1NO & 1NC	
Auxiliary	Side mount			MA-1		MA-1		CA-100	
	Front mount			CA-2, CA-4		CA-2, CA-4		–	

**Minimum conduct current of auxiliary contactor is DC 17V 5mA*
***10A max, Not motor duty rated.*

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MCP DISCONNECT SPECIFICATIONS

The following section details the MCP Disconnect sizing and ratings. To locate the part number for your X-Drive Bypass panel, reference the sizing information table below.

200/208/230VAC X-Drive Panel		460VAC X-Drive Panel		575VAC X-Drive Panel	
Bypass Part Number	Contactor Part Number	Bypass Part Number	Contactor Part Number	Bypass Part Number	Contactor Part Number
CXD3-BYP0025-2V-2-5	CMS-32HI-2-5	CXD3-BYP0011-4V-1	CMS-32HI-1	CXD3-BYP0009-6V-1	CMS-32HI-1
CXD3-BYP0037-2V-4	CMS-32HI-4	CXD3-BYP0016-4V-1-6	CMS-32HI-1-6	CXD3-BYP0013-6V-1-6	CMS-32HI-1-6
CXD3-BYP0060-2V-6	CMS-32HI-6	CXD3-BYP0021-4V-2-5	CMS-32HI-2-5	CXD3-BYP0024-6V-2-5	CMS-32HI-2-5
CXD3-BYP0078-2V-8	CMS-32HI-8	CXD3-BYP0034-4V-4	CMS-32HI-4	CXD3-BYP0039-6V-4	CMS-32HI-4
CXD3-BYP0096-2V-10	CMS-32HI-10	CXD3-BYP0048-4V-6	CMS-32HI-6	CXD3-BYP0061-6V-6	CMS-32HI-6
CXD3-BYP0110-2V-13	CMS-32HI-13	CXD3-BYP0076-4V-8	CMS-32HI-8	CXD3-BYP0090-6V-10	CMS-32HI-10
CXD3-BYP0152-2V-17	CMS-32HI-17	CXD3-BYP0110-4V-13	CMS-32HI-13	CXD3-BYP0110-6V-13	CMS-32HI-13
CXD3-BYP0220-2V-22	CMS-32HI-22	CXD3-BYP0140-4V-17	CMS-32HI-17	CXD3-BYP0170-6V-17	CMS-32HI-17
CXD3-BYP0253-2V-26	CMS-32HI-26	CXD3-BYP0210-4V-22	CMS-32HI-22	CXD3-BYP0220-6V-22	CMS-32HI-22
CXD3-BYP0280-2V-32	CMS-32HI-32	CXD3-BYP0270-4V-32	CMS-32HI-32	CXD3-BYP0270-6V-32	CMS-63HI-32
CXD3-BYP0322-2V-40	CMS-32HI-40	CXD3-BYP0340-4V-40	CMS-32HI-40	CXD3-BYP0320-6V-40	CMS-63HI-40
CXD3-BYP0483-2V-50	CMS-63HI-50	CXD3-BYP0400-4V-40	CMS-63HI-40	CXD3-BYP0410-6V-50	CMS-63HI-50
CXD3-BYP0594-2V-63	CMS-63HI-63	CXD3-BYP0520-4V-63	CMS-63HI-63	CXD3-BYP0520-6V-63	CMS-100HI-63
CXD3-BYP0680-2V-75	CMS-100HI-75	CXD3-BYP0650-4V-75	CMS-100HI-75	CXD3-BYP0620-6V-65	CMS-100HI-65
CXD3-BYP0782-2V-90	CMS-100HI-90	CXD3-BYP0770-4V-90	CMS-100HI-90	-	-
CXD3-BYP0920-2V-100	CMS-100HI-100	CXD3-BYP0960-4V-100	CMS-100HI-100	-	-
CXD3-BYP1200-2V-200	UTS250NNU-FTU-200A	CXD3-BYP1240-4V-200	UTS250NNU-FTU-200A	-	-
CXD3-BYP1300-2V-225	UTS250NNU-FTU-225A	CXD3-BYP1560-4V-250	UTS250NNU-FTU-250A	-	-
CXD3-BYP1540-2V-250	UTS250NNU-FTU-250A	-	-	-	-

(MCP) DISCONNECT SIZING TABLE

Frame Size	Part #	Rated operational current Ie (A)	Magnetic release operating current (A)	KAIC Ratings [kA]			Disconnect Device
				240V	460V	575V	
32AF	CMS-32HI-1.6	1.6	20.8	100	65	25	Manual Motor Starter
	CMS-32HI-2.5	2.5	32.5	100	65	25	
	CMS-32HI-4	4	52	100	65	25	
	CMS-32HI-6	6	78	100	65	25	
	CMS-32HI-8	8	104	100	65	25	
	CMS-32HI-10	10	130	100	65	25	
	CMS-32HI-13	13	169	100	65	25	
	CMS-32HI-17	17	221	100	50	10	
	CMS-32HI-22	22	286	100	30	10	
	CMS-32HI-26	26	338	100	30	10	
	CMS-32HI-32	32	416	100	30	10	
	CMS-32HI-40	40	520	100	30	10	
63AF	CMS-63HI-32	32	416	100	50	10	
	CMS-63HI-40	40	520	100	50	10	
	CMS-63HI-50	50	650	100	50	10	
	CMS-63HI-63	63	819	100	50	10	
100AF	CMS-100HI-75	75	975	100	50	10	
	CMS-100HI-90	90	1170	100	50	10	
	CMS-100HI-100	100	1300	100	50	10	
250AF	UTS250NNU-FTU-200A	200	2000	65	35	18	Molded Case Circuit Breaker
	UTS250NNU-FTU-225A	225	2500	65	35	18	
	UTS250NNU-FTU-250A	250	2500	65	35	18	

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CERUS X-DRIVE BYPASS DIMENSIONS

All measurements in inches

UL TYPE 3R

200/208/230VAC X-Drive Bypass	H x W x D	Frame Size
CXD3-BYP0025-2V-2-5	36.5" x 26.0" x 16.375"	1
CXD3-BYP0037-2V-4		
CXD3-BYP0060-2V-6		
CXD3-BYP0078-2V-8		
CXD3-BYP096-2V-10		
CXD3-BYP0110-2V-13		
CXD3-BYP0152-2V-17		
CXD3-BYP0220-2V-22		
CXD3-BYP0253-2V-26		
CXD3-BYP0280-2V-32		
CXD3-BYP0322-2V-40		
CXD3-BYP0483-2V-50	41.5" x 29.0" x 16.375"	2
CXD3-BYP0594-2V-63		
CXD3-BYP0680-2V-75		
CXD3-BYP0782-2V-90	46.5" x 29.0" x 16.375"	3
CXD3-BYP0920-2V-100		
CXD3-BYP1200-2V-200		
CXD3-BYP1300-2V-225	51.5" x 34.0" x 20.5"	4
CXD3-BYP1540-2V-250		
CXD32-BYP180-2V-250		

460VAC X-Drive Bypass	H x W x D	Frame Size
CXD3-BYP0011-4V-1	36.5" x 26.0" x 16.375"	1
CXD3-BYP0016-4V-1-6		
CXD3-BYP0021-4V-2-5		
CXD3-BYP0034-4V-4		
CXD3-BYP0048-4V-6		
CXD3-BYP0076-4V-8		
CXD3-BYP0110-4V-13		
CXD3-BYP0140-4V-17		
CXD3-BYP0210-4V-22		
CXD3-BYP0270-4V-32		
CXD3-BYP0340-4V-40		
CXD3-BYP0400-4V-40		
CXD3-BYP0520-4V-63	41.5" x 29.0" x 16.375"	2
CXD3-BYP0650-4V-75		
CXD3-BYP0770-4V-90	46.5" x 29.0" x 16.375"	3
CXD3-BYP0960-4V-100		
CXD3-BYP1240-4V-200		
CXD3-BYP1560-4V-250	51.5" x 34.0" x 20.5"	4

575VAC X-Drive Bypass	H x W x D	Frame Size
CXD32-BYP003-6V-1	36.5" x 26.0" x 16.375"	1
CXD32-BYP003-6V-1-6		
CXD32-BYP003-6V-2-5		
CXD32-BYP006-6V-4		
CXD32-BYP006-6V-6		
CXD32-BYP009-6V-10		
CXD32-BYP012-6V-13		
CXD32-BYP018-6V-17		
CXD32-BYP024-6V-22		
CXD32-BYP030-6V-32	41.5" x 29.0" x 16.375"	2
CXD32-BYP036-6V-40		
CXD32-BYP045-6V-50		
CXD32-BYP054-6V-63	51.5" x 34.0" x 20.5"	4
CXD32-BYP067-6V-65		

UL TYPE 3R (W/FREE-STANDING FOOT KIT)

200/208/230VAC X-Drive Bypass	H x W x D	Frame Size
CXD3-BYP0025-2V-2-5	48.5" x 26.0" x 16.375"	1
CXD3-BYP0037-2V-4		
CXD3-BYP0060-2V-6		
CXD3-BYP0078-2V-8		
CXD3-BYP096-2V-10		
CXD3-BYP0110-2V-13		
CXD3-BYP0152-2V-17		
CXD3-BYP0220-2V-22		
CXD3-BYP0253-2V-26		
CXD3-BYP0280-2V-32		
CXD3-BYP0322-2V-40		
CXD3-BYP0483-2V-50	53.5" x 29.0" x 16.375"	2
CXD3-BYP0594-2V-63		
CXD3-BYP0680-2V-75		
CXD3-BYP0782-2V-90	58.5" x 29.0" x 16.375"	3
CXD3-BYP0920-2V-100		
CXD3-BYP1200-2V-200		
CXD3-BYP1300-2V-225	63.5" x 34.0" x 20.5"	4
CXD3-BYP1540-2V-250		
CXD32-BYP180-2V-250		

460VAC X-Drive Bypass	H x W x D	Frame Size
CXD3-BYP0011-4V-1	48.5" x 26.0" x 16.375"	1
CXD3-BYP0016-4V-1-6		
CXD3-BYP0021-4V-2-5		
CXD3-BYP0034-4V-4		
CXD3-BYP0048-4V-6		
CXD3-BYP0076-4V-8		
CXD3-BYP0110-4V-13		
CXD3-BYP0140-4V-17		
CXD3-BYP0210-4V-22		
CXD3-BYP0270-4V-32		
CXD3-BYP0340-4V-40		
CXD3-BYP0400-4V-40		
CXD3-BYP0520-4V-63	53.5" x 29.0" x 16.375"	2
CXD3-BYP0650-4V-75		
CXD3-BYP0770-4V-90	58.5" x 29.0" x 16.375"	3
CXD3-BYP0960-4V-100		
CXD3-BYP1240-4V-200		
CXD3-BYP1560-4V-250	63.5" x 34.0" x 20.5"	4

575VAC X-Drive Bypass	H x W x D	Frame Size
CXD32-BYP003-6V-1	48.5" x 26.0" x 16.375"	1
CXD32-BYP003-6V-1-6		
CXD32-BYP003-6V-2-5		
CXD32-BYP006-6V-4		
CXD32-BYP006-6V-6		
CXD32-BYP009-6V-10		
CXD32-BYP012-6V-13		
CXD32-BYP018-6V-17		
CXD32-BYP024-6V-22		
CXD32-BYP030-6V-32	53.5" x 29.0" x 16.375"	2
CXD32-BYP036-6V-40		
CXD32-BYP045-6V-50		
CXD32-BYP054-6V-63	63.5" x 34.0" x 20.5"	4
CXD32-BYP067-6V-65		