CHESS CONTROLS INC.
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Motor Control Centres

Specification Checklist

Customer:	Prepared By:

Check boxes and fill in blanks as required.

STANDARDS

	☒ CSA	☐ NEMA	☐ Service Entrance ☐ Hydro Utility Company _____	

INCOMING POWER

* System Voltage:	☐ 208/120V 3p4w	☐ 380V 3p3w ☐ 380V 3p4w	☐ 480V 3p3w ☐ 480/277V 3p4w	☐ 600V 3p3w ☐ 600/347V 3p4w
* Power System Configuration:	☐ Wye	☐ Delta	☐ High Resistance Ground	☐ Other _____
* Available Fault Current:	☐ 18 000A ☐ 22 000A	☐ 25 000A ☐ 35 000A	☐ 42 000A ☐ 65 000A	☐ 85 000A ☐ 100 000A

STRUCTURE

* Enclosure:	☐ Type 1 - Indoor (Std.) ☐ Type 1A - Indoor, Gasketed ☐ Type 12 - Indoor, Industrial		☐ Type 2/1 - Indoor, Drip Proof ☐ Type 2/1A - Indoor, Drip Proof/Gasketed ☐ Type 2/12 - Indoor, Drip Proof/Industrial	
* Depth:	☐ 15" Deep, Front Only	☐ 20" Deep, Front Only	☐ 21" Deep, Back to Back	
Pullbox:	☐ 12" ☐ Incoming Section Only	☐ 18" ☐ All Sections	☐ 24"	
Options:	150 W Space Heater:	☐ None Power Source:	☐ 120V ☐ External	☐ 240V ☐ Internal
		☐ Thermostat Every Shipping Split		
	Modifications:	☐ 2 Piece Backplate (20W) ☐ Automatic Shutters		☐ Removable Bottom Plates ☐ Seismic Zone 4 (UBC)
	Paint:	☐ Gray ANSI 61 (Std)		☐ Custom Color - describe _____

BUS

* Power Bus Bracing (amperes rms symmetrical):		☐ 45 kA STD	☐ 65 kA	☐ 100 kA
* Horizontal Bus:	65°C Copper:	☐ 600A STD	☐ 800A STD	☐ 1200A STD _____
	Rating: 50°C Copper:	☐ 600A	☐ 600A	☐ 600A ☐ 1200A ☐ 1600A STD ☐ 2000A STD
Vertical Bus:	Main Vertical Bus:	☐ 300A F.O.B. STD	☐ 600A B.T.B. STD	☐ Option F.O.B. 600A
		☐ Insulated Barriers c/w Fish-Tape Barrier(s)		
* Ground Bus:	Horizontal Ground Bus:	☐ 300A 1/4 x 1	☐ 600A 1/4 x2	
	Ground Bus Location:	☐ Top Mounted	☐ Bottom Mounted	
	Note: 3 phase 3 wire (3p3w) - standard ground bus location bottom			
	Ground Bus Plating:	☐ Bare Copper STD	☐ Tin Plated Copper	☐ Silver Plated Copper- describe
	Vertical Ground Bus:	☐ Not required	☐ Required w/ Motor Terms	

Motor Control Centres

Specification Checklist

BUS - *continued*

Neutral Bus:

Rating: ☐ Full Rated: ☐ 600A ☐ 800A ☐ 1200A ☐ 1600A
☐ Half Rated: ☐ 600A ☐ 800A ☐ 1200A

Location: ☐ Incoming Section Only ☐ All Sections

INCOMING LINE TERMINATION

* INCOMING

Located in Section No. _____ ☐ Top ☐ Bottom

☐ 600A Inc. 2 x 350 MCM inside wireway "no loss of space"

Main Lug (MLO):

No. of cables per phase: _____ Cable Size:_____ ☐ Copper ☐ Alum

☐ Mechanical Lugs (Please check Tiastar MCC Instruction Guide for lugs detail)

☐ Compression Lugs (Provision for NEMA 2 holes pattern)

☐ Notes: _____

Main Circuit Breaker (MCB):

Located in Section No._____ ☐ Top ☐ Bottom

Breaker Rating, Frame:_____ Breaker Rating, Trip:_____

No. of cables per phase: _____ Cable Size:_____ ☐ Copper ☐ Alum

☐ Mechanical Lugs (Please check Tiastar MCC Instruction Guide for lugs detail)

☐ Notes: _____

Breaker Option: ☐ Alarm Contact ☐ Internal Ground Fault ☐ Shunt Trip
☐ Internal Aux. Switch ☐ Kirk Key ☐ Undervoltage Release

Main Fusible Disconnect (MFD):

Located in Section No. _____ ☐ Top ☐ Bottom

No. of cables per phase: _____ Cable Size:_____ ☐ Copper ☐ Alum

Ampere Rating: _____

Fuse Clip: ☐ Factory Supplied and Installed
☐ Supplied & Installed by Others
☐ Class J Current limiting, time delay
☐ Class L "for 800A and 1200A only"

Fuse Rating: _____

☐ Mechanical Lugs

☐ Notes: _____

Modification Option:

☐ Door Padlock Hasp ☐ Lighting Arrester ☐ Surge Capacitor
☐ Ground Detection Lights ☐ Phase Monitor

* Metering Options

☐ PAC3100 Power Meter, 3p4w, 2000A (3CT, 3PT)
☐ PAC3200 Power Meter, 3p4w, 2000A (3CT, 3PT)
☐ PAC4200 Power Meter, 3p4w, 2000A (3CT, 3PT)
☐ CT for Metering, 2000:X
☐ PT for Metering, Including fuses, 575V, 60Hz
☐ Phase Selector Switch for Ammeter or Voltmeter
☐ Extra Fuses (with Switch \-or\-Shorting Terminal Block)

Motor Control Centres

Specification Checklist

INCOMING LINE TERMINATION - *continued*

Surge Protection Device

Surge Current: ☐ None ☐ 100 kA ☐ 150 kA ☐ 200 kA ☐ 250 kA ☐ 300 kA

*Disconnect: ☐ Circuit Breaker Disconnect ☐ Fusible Disconnect ☐ Direct Connection (12")

Options: ☐ Surge Counter ☐ Remote Monitor (External to MCC) (RMSIE)

FEEDER UNITS

Fused Switch:

☐ Class J Clips for "Current Limiting Time Delay" Fuse

☐ Single Mounted (30a, 60A) ☐ Dual Mounted (30A, 60A)

☐ Quantity _____ ☐ 100 ☐ 200 ☐ 400 ☐ 600

Fuse Rating: _____

Other Options: _____

Circuit Breaker (Thermal Magnetic):

Interrupting Rating: _____

☐ Dual Mounted ☐ ED, 125A Frame Max 18 kA

☐ Dual Mounted ☐ CED, 125A Frame Max 100 kA

☐ Quantity _____ ☐ 250A F frame ☐ 400A J frame ☐ 600A L frame ☐ 800A M frame ☐ 1200A N frame

Other Options: _____

Breaker Option: ☐ Internal Aux. Switch ☐ Alarm Contact ☐ Shunt Trip ☐ Undervoltage Release ☐ Other Options: _____

External Option: ☐ Ground Fault Indication ☐ Ground Fault Trip

COMBINATION CONTACTOR/STARTER UNITS

* Wiring:

NEMA Wiring Class: ☐ I ☐ IS ☐ II ☐ IIS

NEMA Wiring Type:

☐ BD - Unit Terminal Block

☐ BT - Unit Terminal Block Load connected thru size 3

☐ C - Mater Terminal Block:

☐ Top 12" Wireway ☐ Bottom 6" Wireway ☐ Master Control Section

☐ Pull-apart Control Terminal STD

☐ Stationary Control Terminal

Contactor/Starter Types: ☐ FVC ☐ FVNR ☐ FVR ☐ 2S1W ☐ 2S2W

☐ Other: _____

Disconnecting Means - Fusible: ☐ Class J Clips for "Current Limiting Time Delay" Fuse

Fuses: ☐ Factory Supplied and Installed ☐ Supplied and Installed by Others

Disconnecting Means - Circuit Breaker: ☐ Motor Circuit Protector (magnetic/instantaneous only) ☐ Circuit Breaker (thermal-magnetic)

Accessories: _____

* = Required Field

Motor Control Centres

Specification Checklist

COMBINATION CONTACTOR/STARTER UNITS - *continued*

* Overload Relays:

☐ 3RB20 STD ☐ Option Electronic 3RB21 c/w ground fault
☐ Simocode Pro V **Note:** Max 30 Simocodes per network segment

Secondary Voltage: ☐ 120 VAC (std) ☐ Other: _____

☐ Factory wired with Profibus

Options: _____

☐ CT Module ☐ PT/CT Module in place of CT Module

☐ No Operator Control Panel/Door push button (label) Reset

☐ Operator Control Panel w/o LCD ☐ Operator Control Panel with LCD

Simocode Expansion Modules

☐ 4I/2O 110-240VAC Monostable Module
☐ 1I/1O Analog Module
☐ Temperature Module
☐ Decoupling Module use with PT/CT module
☐ Earth Fault Module
☐ Summation Current Transfomer
☐ 4I/2O 110-240VAC Bistable Module

Options: _____

* Unit Nameplate:

☐ None ☐ Self Adhesive STD ☐ Screw ☐ 1200A N frame
Colours ☐ Black letters on white ☐ White letters on black ☐ Other: _____

* Control Power:

STD ☐ Individual Control Transformer (CPT)

Secondary Voltage: ☐ 120 VAC (std) ☐ Other: _____

☐ Standard Capacity ☐ 100 VA extra
Option: ☐ No Interlock on Handle
☐ Interlock on Handle 1 NO, 1 NC
☐ Interlock Auxiliary Switch 1 NO, 1 NC

Option: ☐ Mater Control Transformer

Secondary Voltage: ☐ 120 VAC (std) ☐ Other: _____

☐ Factory Wiring ☐ Control Fuses Inside Starter
Standard: ☐ Interlock on Handle 1 NO, 1 NC
Option: ☐ Internal Auxiliary Switch 1 NO, 1 NC

Option: ☐ Separate Source (remote to MCC)

Secondary Voltage: ☐ 120 VAC (std) ☐ Other: _____

☐ Control Fuses Inside Starter
Standard: ☐ Interlock on Handle 1 NO, 1 NC
Option: ☐ Internal Auxiliary Switch 1 NO, 1 NC

* Starter Options:

☐ Starter Auxiliary Option - Qty._____N.O. Qty._____N.C.

☐ Pilot Devices ☐ Pushbuttons, Describe Function (such as start/stop): _____

☐ Selector Switches, Describe Function (such as off-on, hand-off-auto): _____

☐ Pilot Lights ☐ 22 mm ☐ STD Bulb Qty. _____ Colour(s): _____
☐ 30 mm ☐ LED Qty. _____ Colour(s): _____
☐ Push-to-test

☐ Relays or Timers, Describe: _____

☐ Others, Describe: _____

Motor Control Centres

Specification Checklist

OTHER UNIT/APPARATUS

Voltage: _____ Phase: _____ Wire: _____

IC Rating: _____

☐ Panelboard: ☐ Main Lug ☐ Main Breaker

Quantity and Pole Configuration: _____

☐ Soft Starters: ☐ Keypad ☐ Communication ☐ External Bypas ☐ Input Isolation ☐ Reset

Describe: _____

☐ Drives ☐ MM440 ☐ 6SE70 ☐ Keypad ☐ Communication

Contactors and Reactors:

Contactor Type: ☐ Input Isolation ☐ Output Isolation ☐ Bypass

Reactor Type: ☐ Line ☐ Load

Filter Type: ☐ DV/DT Filter ☐ RFI Filter

☐ Extra Space for Future Units: Describe: _____

☐ Additional Notes/Comments: _____