

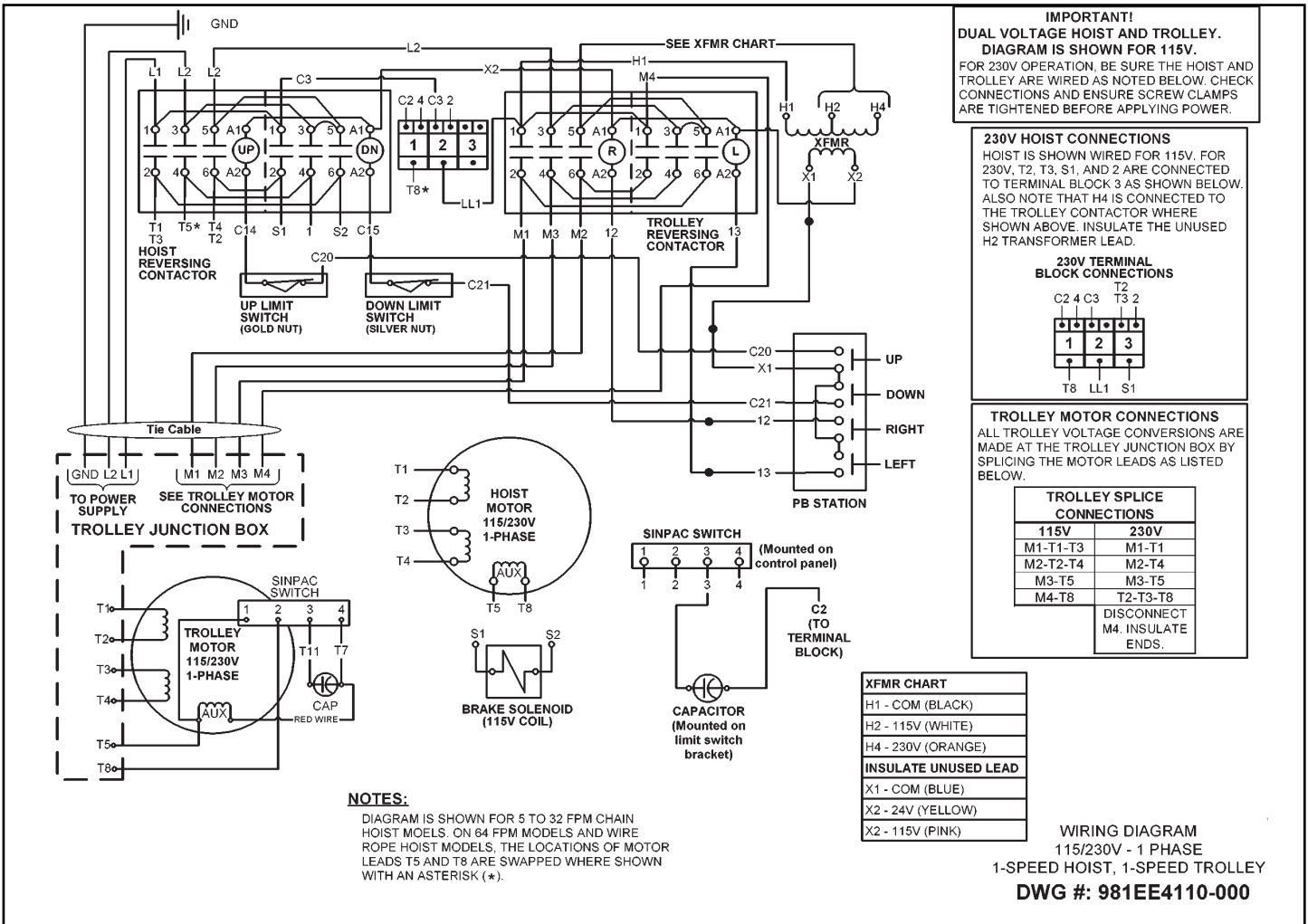
**ECMT & WRMT Hoists with
Motorized Trolley
(Small Frame Hoist)**

**Effective for units with serial numbers beginning with
"EC1D & WR1D".**

Serial numbers are stamped under the hoist on the transmission housing.

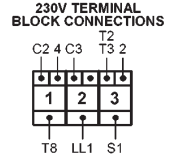
Changes have been made on the electrical controls that affect the control components, pushbutton assemblies, motors and wiring diagrams. Please refer to the following pages for reference.

**Wiring
Diagrams**



IMPORTANT!
DUAL VOLTAGE HOIST AND TROLLEY. DIAGRAM IS SHOWN FOR 115V.
FOR 230V OPERATION, BE SURE THE HOIST AND TROLLEY ARE WIRED AS NOTED BELOW. CHECK CONNECTIONS AND ENSURE SCREW CLAMPS ARE TIGHTENED BEFORE APPLYING POWER.

230V HOIST CONNECTIONS
HOIST IS SHOWN WIRED FOR 115V. FOR 230V, T2, T3, S1, AND 2 ARE CONNECTED TO TERMINAL BLOCK 3 AS SHOWN BELOW. ALSO NOTE THAT H4 IS CONNECTED TO THE TROLLEY CONTACTOR WHERE SHOWN ABOVE. INSULATE THE UNUSED H2 TRANSFORMER LEAD.



TROLLEY MOTOR CONNECTIONS
ALL TROLLEY VOLTAGE CONVERSIONS ARE MADE AT THE TROLLEY JUNCTION BOX BY SPLICING THE MOTOR LEADS AS LISTED BELOW.

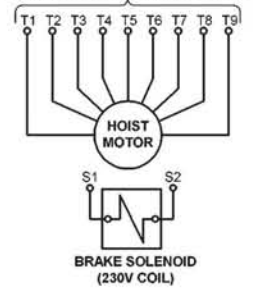
TROLLEY SPLICE CONNECTIONS	
115V	230V
M1-T1-T3	M1-T1
M2-T2-T4	M2-T4
M3-T5	M3-T5
M4-T8	T2-T3-T8
DISCONNECT M4. INSULATE ENDS.	

XFMR CHART	
H1	- COM. (BLACK)
H2	- 115V (WHITE)
H4	- 230V (ORANGE)
INSULATE UNUSED LEAD	
X1	- COM. (BLUE)
X2	- 24V (YELLOW)
X2	- 115V (PINK)

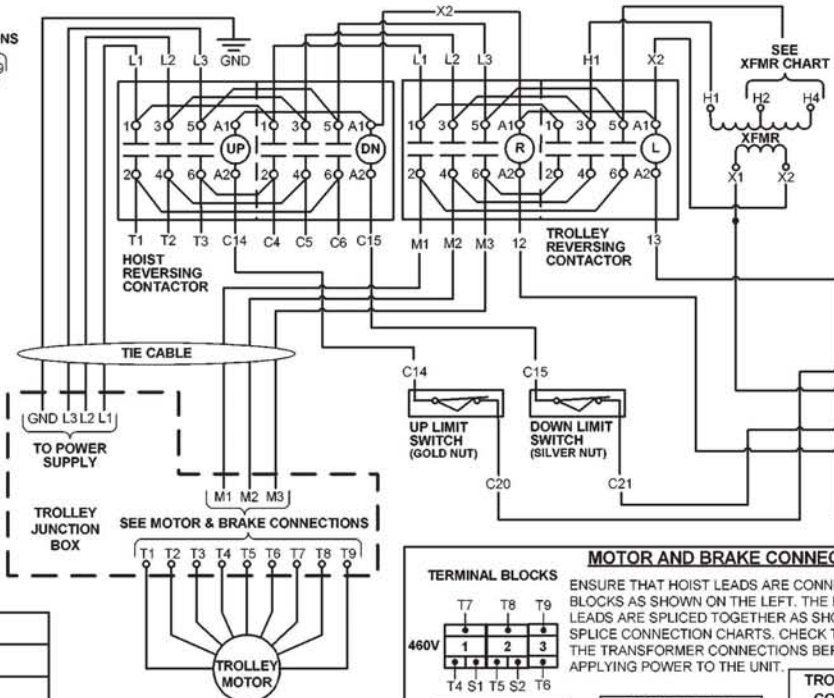
WIRING DIAGRAM
115/230V - 1 PHASE
1-SPEED HOIST, 1-SPEED TROLLEY
DWG #: 981EE4110-000

NOTES:
DIAGRAM IS SHOWN FOR 5 TO 32 FPM CHAIN HOIST MODELS. ON 64 FPM MODELS AND WIRE ROPE HOIST MODELS, THE LOCATIONS OF MOTOR LEADS T5 AND T8 ARE SWAPPED WHERE SHOWN WITH AN ASTERISK (*).

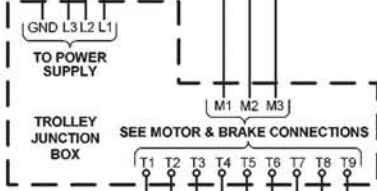
SEE MOTOR & BRAKE CONNECTIONS



BRAKE SOLENOID
(230V COIL)



**IMPORTANT!
DUAL VOLTAGE**
MOTOR, BRAKE, AND TRANSFORMER CONNECTIONS MUST BE MODIFIED TO CONVERT FROM 230 OR 460V. CHECK CONNECTIONS BEFORE APPLYING POWER.

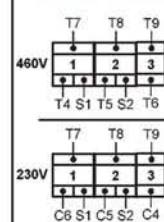


TO POWER SUPPLY

TROLLEY JUNCTION BOX

SEE MOTOR & BRAKE CONNECTIONS

TERMINAL BLOCKS



NOTE: C4, C5, AND C6 LEADS MUST HAVE FREE ENDS INSULATED WHEN THE HOIST IS WIRED FOR 460V.

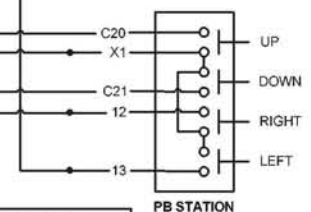
MOTOR AND BRAKE CONNECTIONS

ENSURE THAT HOIST LEADS ARE CONNECTED TO BLOCKS AS SHOWN ON THE LEFT. THE REMAINING LEADS ARE SPliced TOGETHER AS SHOWN IN THE SPlice CONNECTION CHARTS. CHECK THESE AND THE TRANSFORMER CONNECTIONS BEFORE APPLYING POWER TO THE UNIT.

HOIST SPlice CONNECTIONS	
230V	460V
T4-T5-T6	NONE

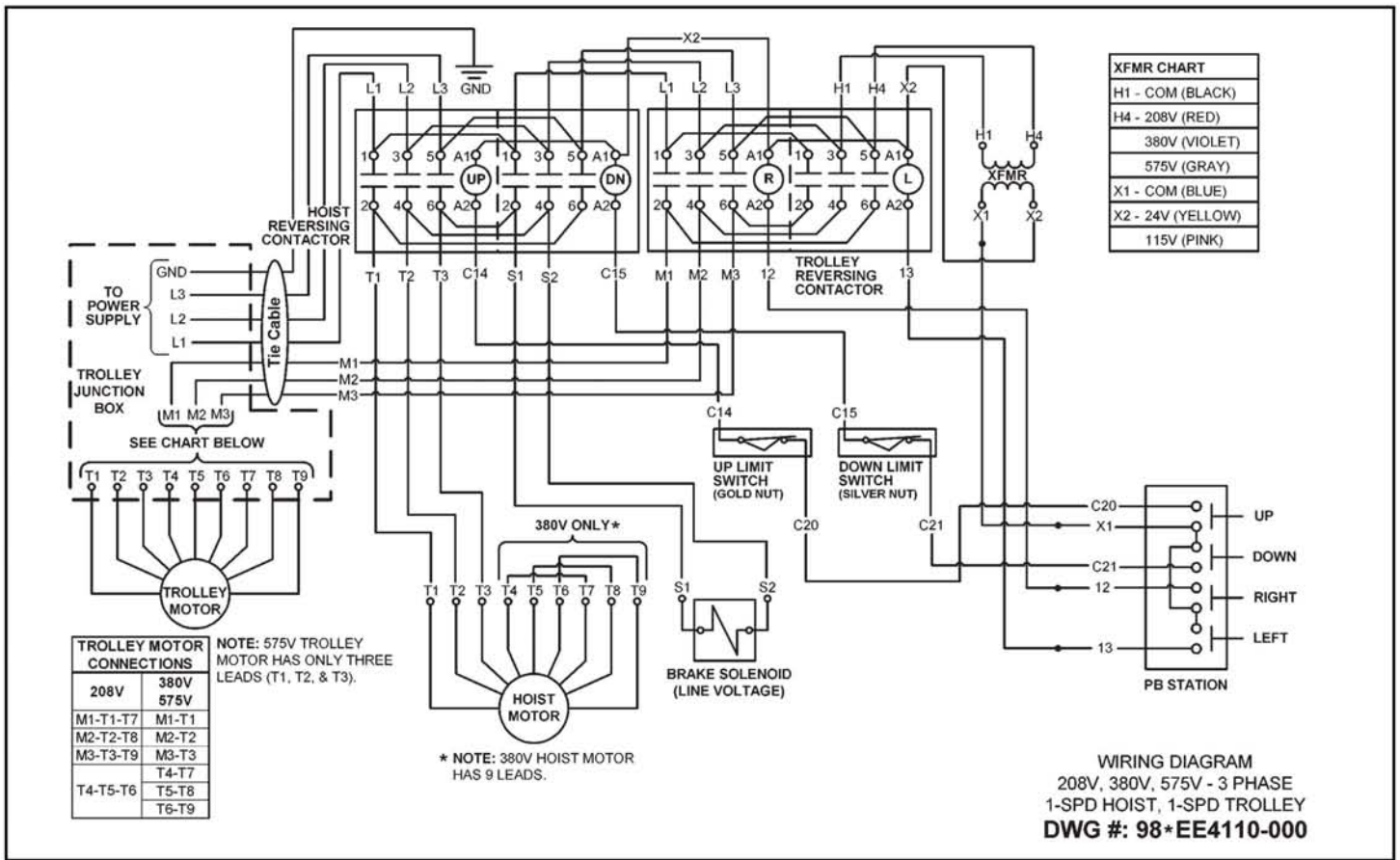
TROLLEY SPlice CONNECTIONS	
230V	460V
M1-T1-T7	M1-T1
M2-T2-T8	M2-T2
M3-T3-T9	M3-T3
	T4-T7
T4-T5-T6	T5-T8
	T6-T9

XFMR CHART	
H1 - COM	(BLACK)
H2 - 230V	(ORANGE)
H4 - 460V	(BLACK/RED)
(INSULATE UNUSED LEAD)	
X1 - COM	(BLUE)
X2 - 24V	(YELLOW)
X2 - 115V	(PINK)

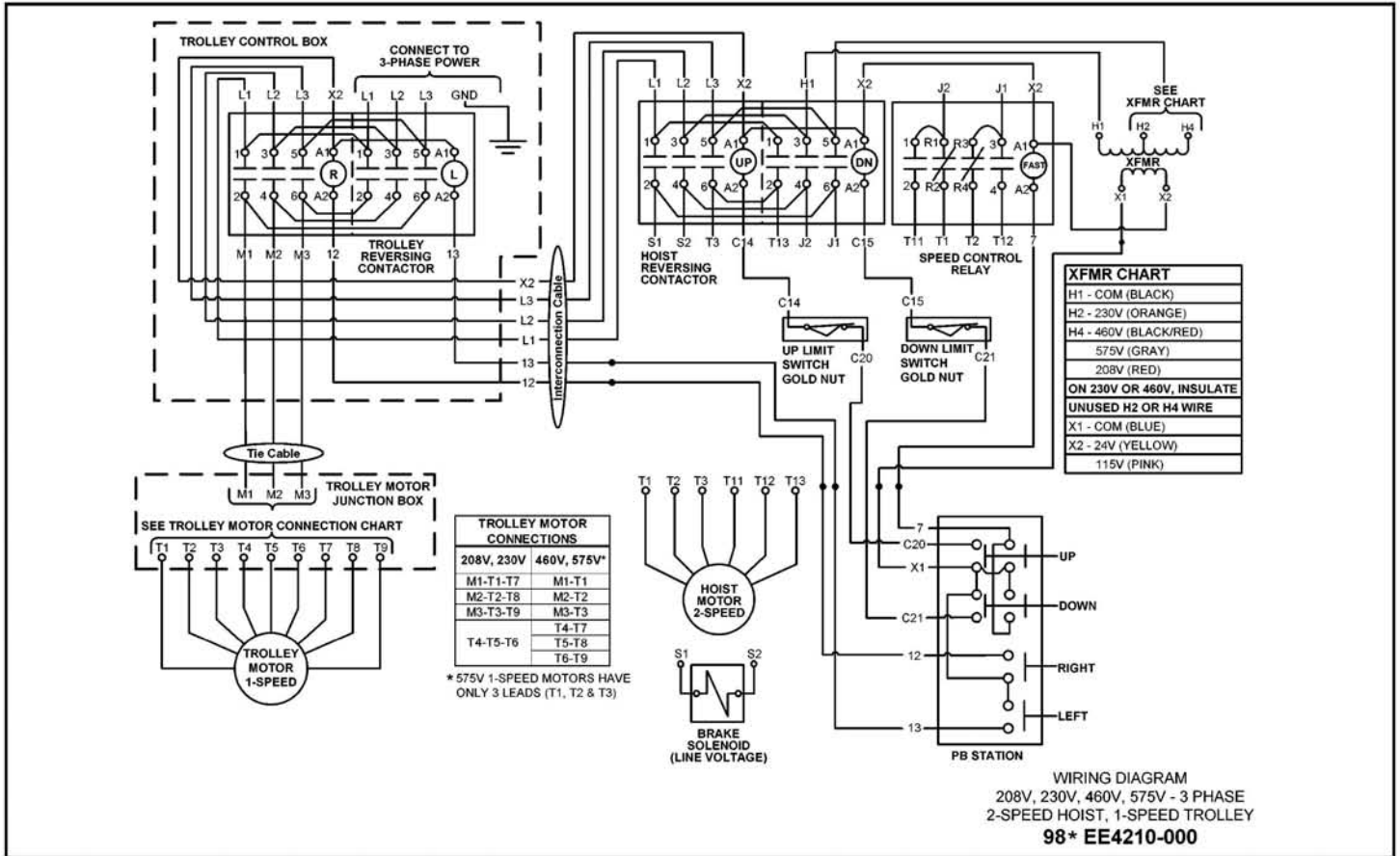


PB STATION

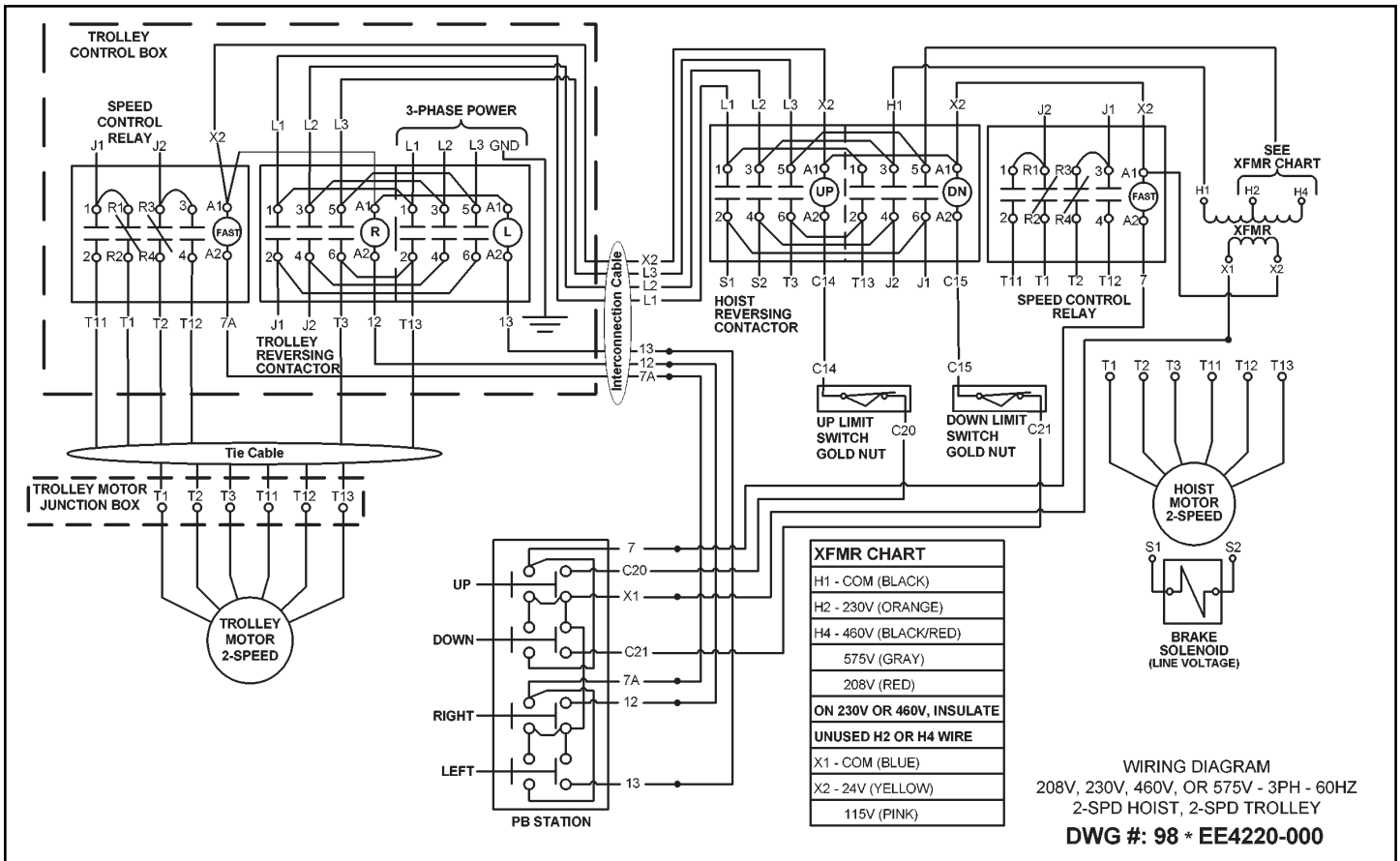
WIRING DIAGRAM
230/460V-3PH-60HZ
1-SPD HOIST, 1-SPD TROLLEY
DWG #: 983EE4110-000



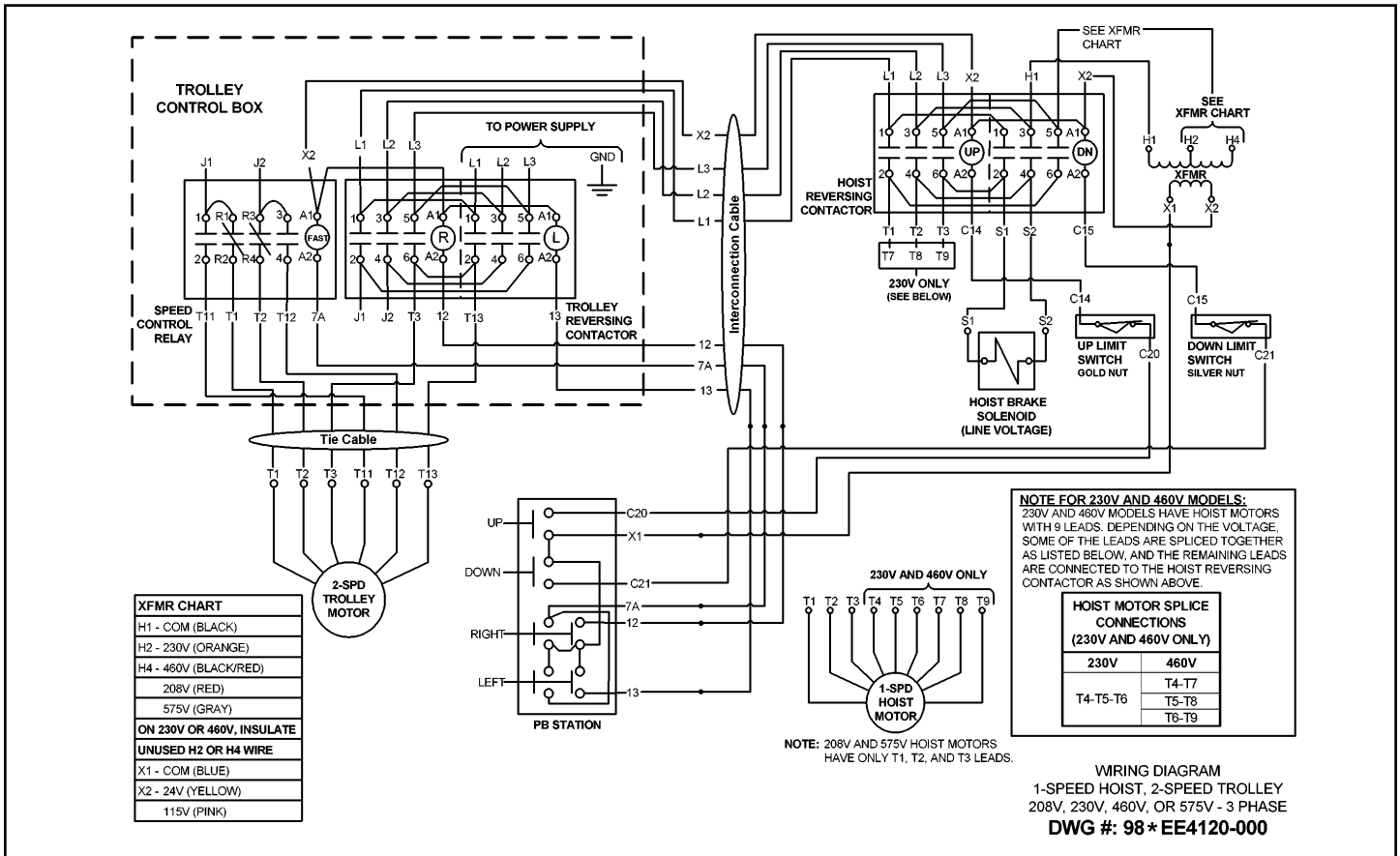
* Factory supplied wiring diagrams will have numbers beginning with 985 for 575V, 987 for 208V and 988 for 380V.



* Factory supplied wiring diagrams will have numbers beginning with 983 for 230/460V, 985 for 575V and 987 for 208V.



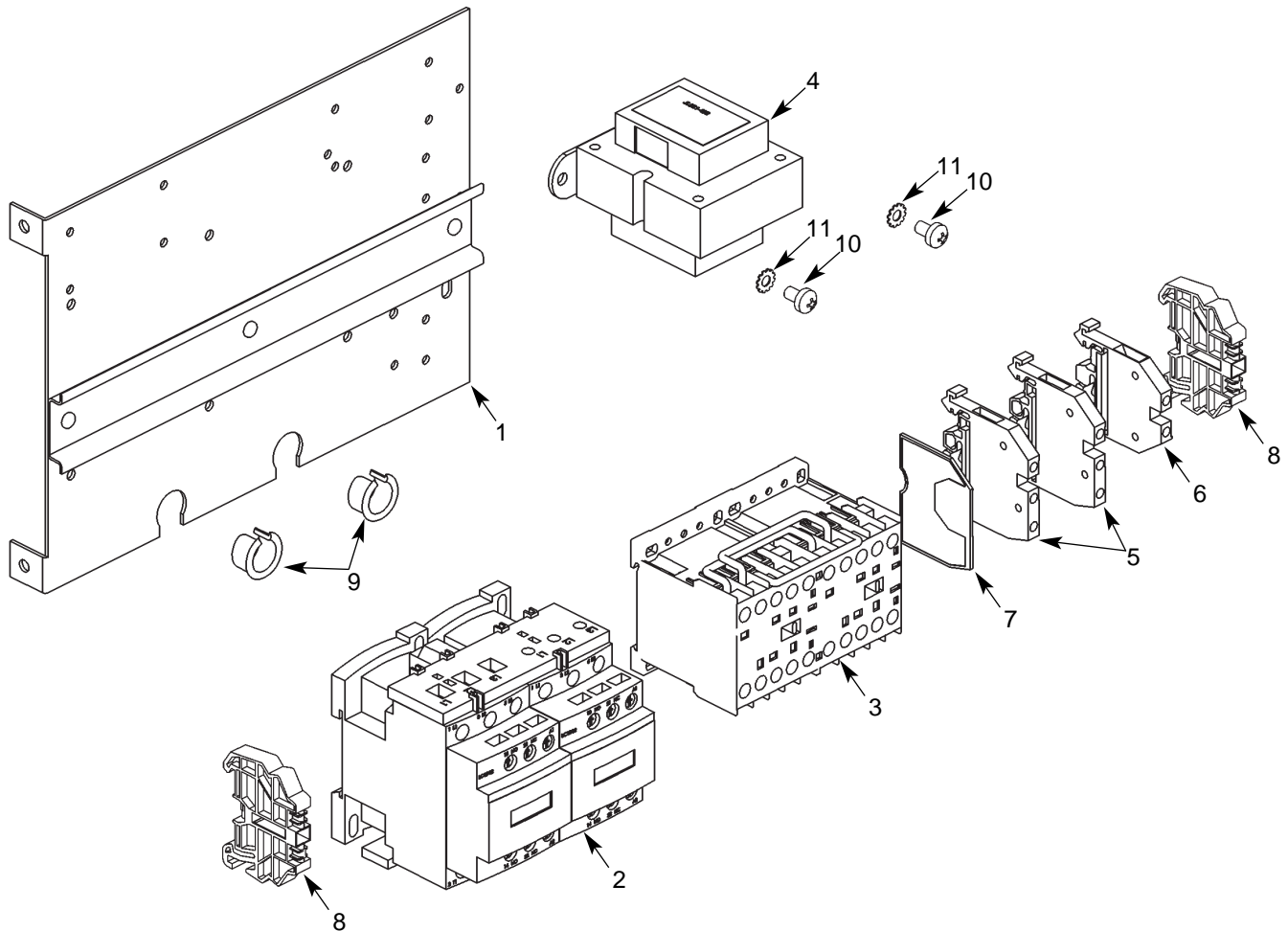
* Factory supplied wiring diagrams will have numbers beginning with 983 for 230/460V, 985 for 575V and 987 for 208V.



* Factory supplied wiring diagrams will have numbers beginning with 983 for 230/460V, 985 for 575V and 987 for 208V.

Electrical Parts

1-Speed, 1-Speed Models



Parts List for Electrical Parts for 1-Speed, 1-Speed Models

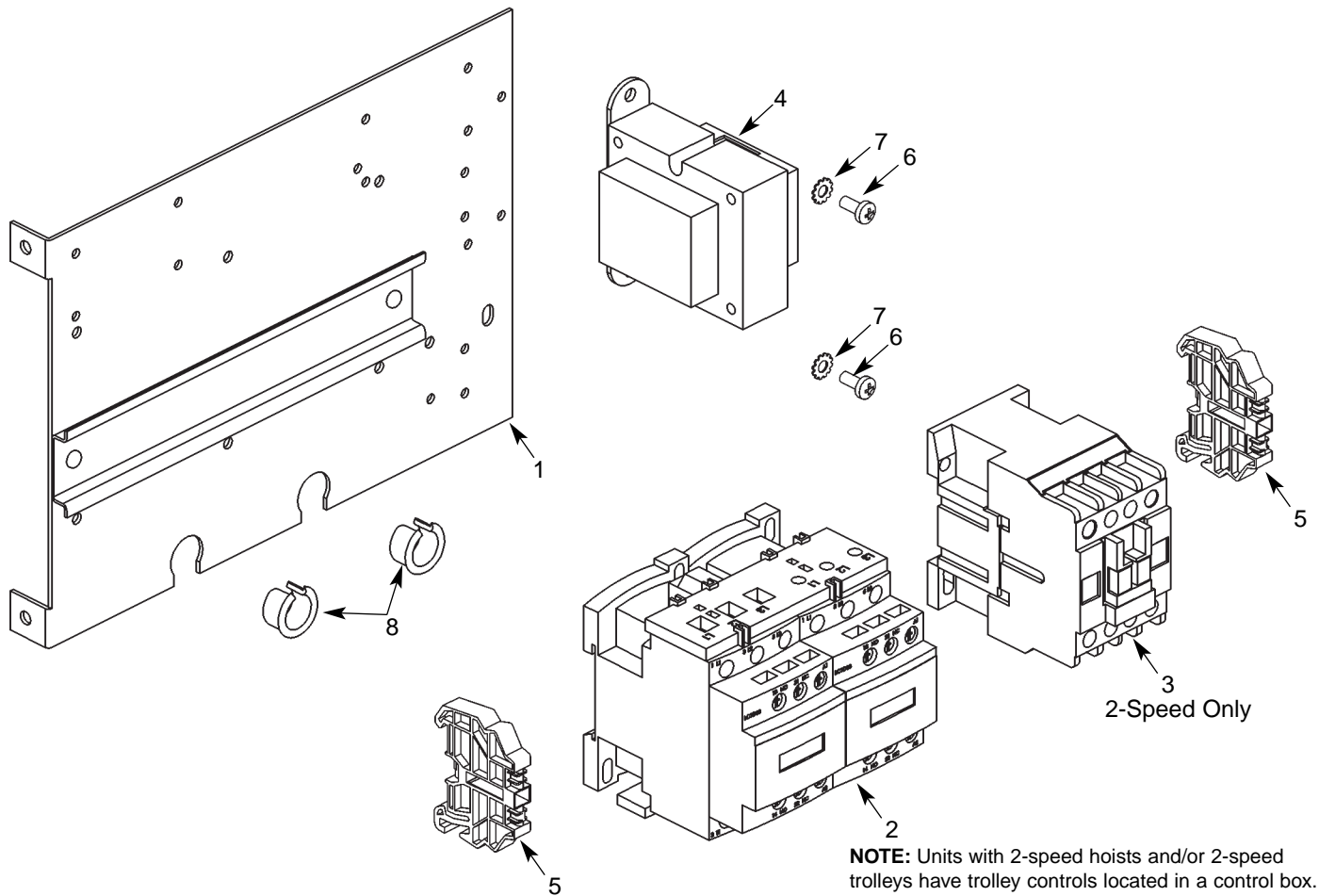
Ref. No.	Description	Part No.	Qty.	Ref. No.	Description	Part No.	Qty.
1	Panel Plate	257JG201	1	4	Pri.: 208V, Sec.: 24V	821J472	1
2	Hoist Reversing Contactor*				Pri.: 208V, Sec.: 115V	821J471	1
	1/2 hp & under:				Pri.: 380V, Sec.: 24V	821J482	1
	24V Coil	28860	1		Pri.: 380V, Sec.: 115V	821J481	1
	115V Coil	24799	1	5	Terminal Blocks, 115/230V	909J14	3
	1 hp, 1-Phase:				Terminal Blocks, 230/460V	909J14	2
	24V Coil	24791	1	6	Terminal Blocks, 230/460V	909J10	1
	115V Coil	28905	1	7	End Plate	909J15	1
	1 hp, 3-Phase:			8	End Clamp	909J13	2
	24V Coil	25943	1	9	Grommet	H7956	2
	115V Coil	24729	1	10	8-32UNC X 5/16" Screw	H2751	2
3	Trolley Reversing Contactor			11	#8 External-tooth lockwasher	H4158	2
	24V Coil	28860	1	△	Tie Cable, 115/230V	955JG44-1	1
	115V Coil	24799	1		Tie Cable, 3-Phase	955JG44	1
4	Transformer*			△	Starting Switch, 115/230V Only	839J3	1
	Pri.: 115/230V, Sec.: 24V	821J412	1	△	Capacitor, 115/230V Only		
	Pri.: 115/230V, Sec.: 115V	821J411	1		1 hp	JL810-4	1
	Pri.: 230/460V, Sec.: 24V	821J432	1		1/2 hp & Under	JL810-3	1
	Pri.: 230/460V, Sec.: 115V	821J431	1				
	Pri.: 575V, Sec.: 24V	821J452	1				
	Pri.: 575V, Sec.: 115V	821J451	1				

* Coil voltage of the contactor and the secondary voltage of the transformer are the same. This is referred to as the control voltage. Standard units are supplied with 24V Control.

△ Not Shown

Electrical Parts

Hoist Controls/2-Speed Combinations

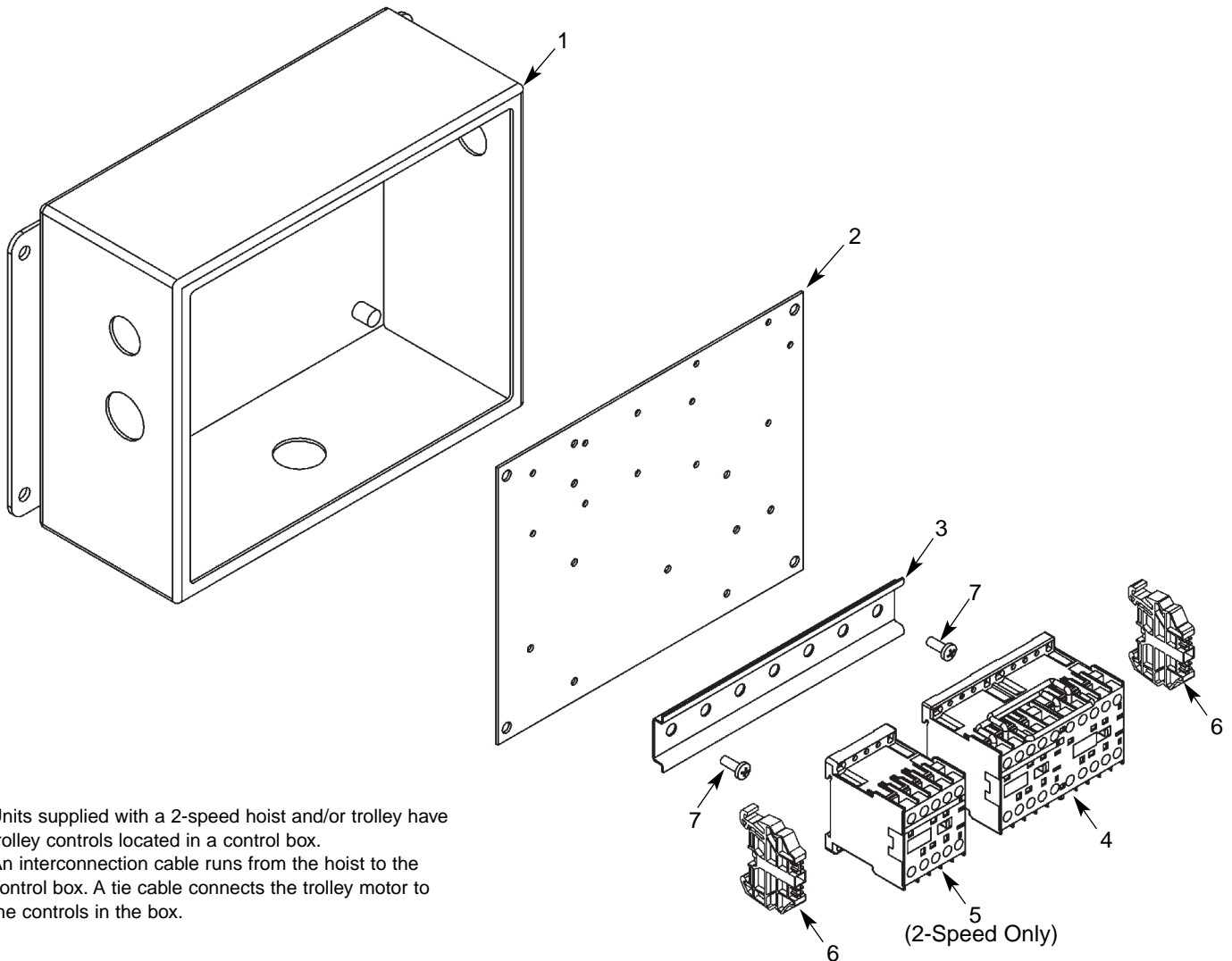


Parts List for Electrical Parts for 2-Speed Combinations

Ref. No.	Description	Part No.	Qty.	Ref. No.	Description	Part No.	Qty.
1	Panel Plate	257JG200	1	4	Pri.: 575V, Sec.: 24V	821J452	1
2	Reversing Contactor*				Pri.: 575V, Sec.: 115V	821J451	1
	1/4 & 1/2 hp:				Pri.: 208V, Sec.: 24V	821J472	1
	24V Coil	28860	1		Pri.: 208V, Sec.: 115V	821J471	1
	115V Coil	24799	1		Pri.: 380V, Sec.: 24V	821J482	1
	1 hp, 3-Phase:				Pri.: 380V, Sec.: 115V	821J481	1
	24V Coil	25943	1	5	End Clamp	909J13	2
	115V Coil	24729	1	6	8-32UNC X 5/16" Screw	H2751	2
3	Speed Control Relay* (2-Speed Only)			7	#8 External-tooth Lockwasher	H4158	2
	1/4 & 1/2 hp, 24V Coil	28878	1	8	Grommet	H7956	2
	1/4 & 1/2 hp, 115V Coil	28870	1				
	1 hp, 24V Coil	28885	1				
	1 hp, 115V Coil	28879	1				
4	Transformer*						
	Pri.: 230/460V, Sec.: 24V	821J432	1				
	Pri.: 230/460V, Sec.: 115V	821J431	1				

* Coil voltage of the contactor and the secondary voltage of the transformer are the same. This is referred to as the control voltage. Standard units are supplied with 24V Control.

Motorized Trolley Controls For 2-Speed Hoist and Trolley Combinations



† Units supplied with a 2-speed hoist and/or trolley have trolley controls located in a control box. An interconnection cable runs from the hoist to the control box. A tie cable connects the trolley motor to the controls in the box.

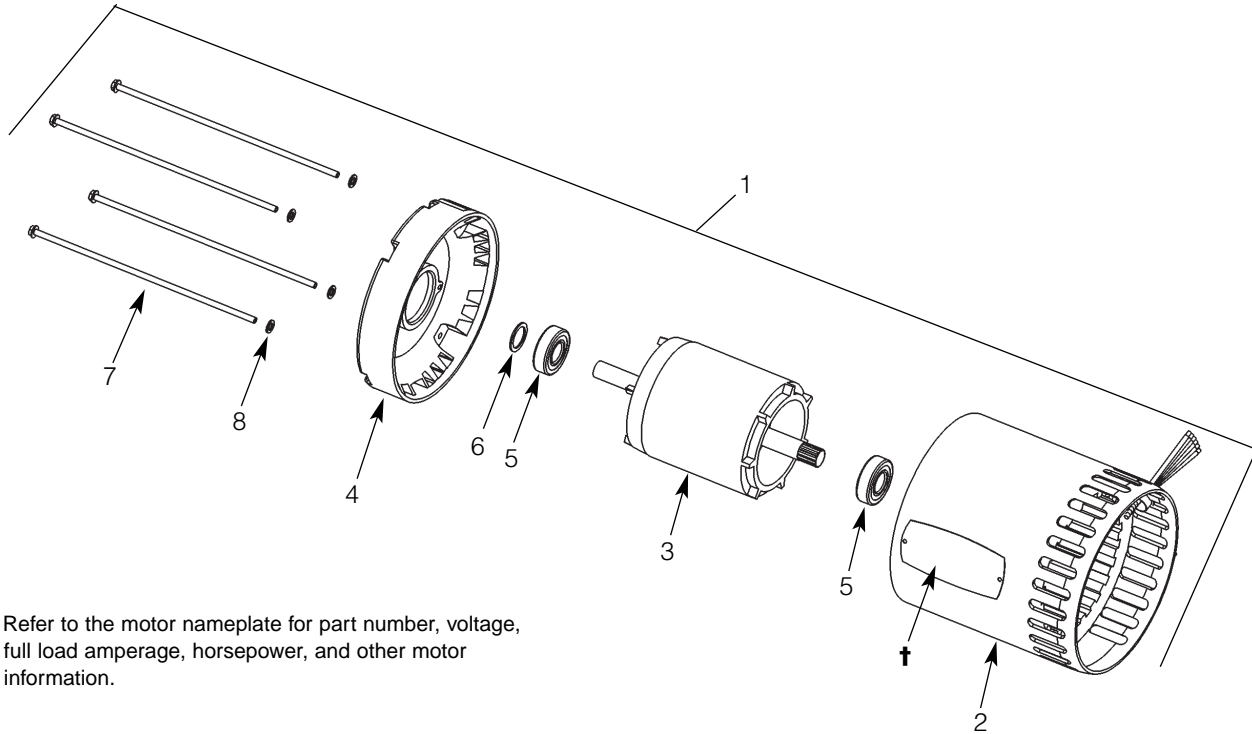
Parts List for Motorized Trolley Controls

Ref. No.	Description	Part No.	Qty.	Ref. No.	Description	Part No.	Qty.
1	Control Box	260K100-1	1	6	End Clamp	909J13	2
2	Panel Plate	257K640	1	7	10-32NF X 1/2" Screw	H2881	2
3	Din Rail	258J2000H	Sold Per Ft	△	Interconnection Cable	Consult Factory	1
4	Reversing Contactor*			△	Tie Cable		
	24V Coil	28860	1		1-Speed Trolley	955KG12	1
	115V Coil	24799	1		2-Speed Trolley	955KG12-1	1
5	Speed Control Relay*						
	24V Coil	28878	1				
	115V Coil	28870	1				

* Coil voltage of the contactor and the secondary voltage of the transformer are the same. This is referred to as the control voltage. Standard units are supplied with 24V Control.

△ Not Shown

Hoist Motor



† Refer to the motor nameplate for part number, voltage, full load amperage, horsepower, and other motor information.

Parts List for Hoist Motor

Ref. No.	Description	Part No.	Qty.	Ref. No.	Description	Part No.	Qty.
1	Hoist Motor (1-Speed)			2	Stator Assembly	*	1
	1/4 hp, 115/230V-1Ph	861J241	1	3	Rotor Assembly	*	1
	1/2 hp, 115/230V-1Ph	861J242	1	4	End Shield		
	1 hp, 115/230V-1Ph	861J144	1		1/4 & 1/2 hp	EC021000-01	1
	1/4 hp, 230/460V-3Ph-60Hz	863J241	1		1 hp	EC021201-01	1
	1/2 hp, 230/460V-3Ph-60Hz	863J242	1	5	Bearing	500K3	2
	1 hp, 230/460V-3Ph-60Hz	863J144	1	6	Shim Washer	JL4301-01	1
	1/4 hp, 575V-3Ph-60Hz	863J244	1	7	Thru Bolt (1-Phase, 1-Speed)		
	1/2 hp, 575V-3Ph-60Hz	863J245	1		1/4 hp	ECA003801-37	4
	1 hp, 575V-3Ph-60Hz	863J148	1		1/2 hp	ECA003801-36	4
	1/4 hp, 208V-3Ph-60Hz	863J247	1		1 hp	JL003801-19	4
	1/2 hp, 208V-3Ph-60Hz	863J248	1		Thru Bolt (3-Phase, 1-Speed)		
	1 hp, 208V-3Ph-60Hz	863J149	1		1/4 hp	ECA003801-34	4
	.21 hp, 380V-3Ph-50Hz	863J241	1		1/2 hp	ECA003801-37	4
	.42 hp, 380V-3Ph-50Hz	863J242	1		1 hp	JL003801-62	4
	.83 hp, 380V-3Ph-50Hz	863J144	1		Thru Bolt (3-Phase, 2-Speed)		
	Hoist Motor (2-Speed)				1/4 hp	ECA003801-36	4
	1/4 hp, 230V-3Ph-60Hz	873J241	1		1/2 hp	ECA003801-42	4
	1/2 hp, 230V-3Ph-60Hz	873J242	1		1 hp	JL003801-17	4
	1 hp, 230V-3Ph-60Hz	873J144	1	8	#10 Spring Lockwasher	H4082P	4
	1/4 hp, 460V-3Ph-60Hz	873J244	1				
	1/2 hp, 460V-3Ph-60Hz	873J245	1				
	1 hp, 460V-3Ph-60Hz	873J148	1				
	1/4 hp, 575V-3Ph-60Hz	873J247	1				
	1/2 hp, 575V-3Ph-60Hz	873J248	1				
	1 hp, 575V-3Ph-60Hz	873J152	1				
	1/4 hp, 208V-3Ph-60Hz	873J251	1				
	1/2 hp, 208V-3Ph-60Hz	873J249	1				
	1 hp, 208V-3Ph-60Hz	873J155	1				

* Not available as an individual part.