



hubbell industrial controls, inc.

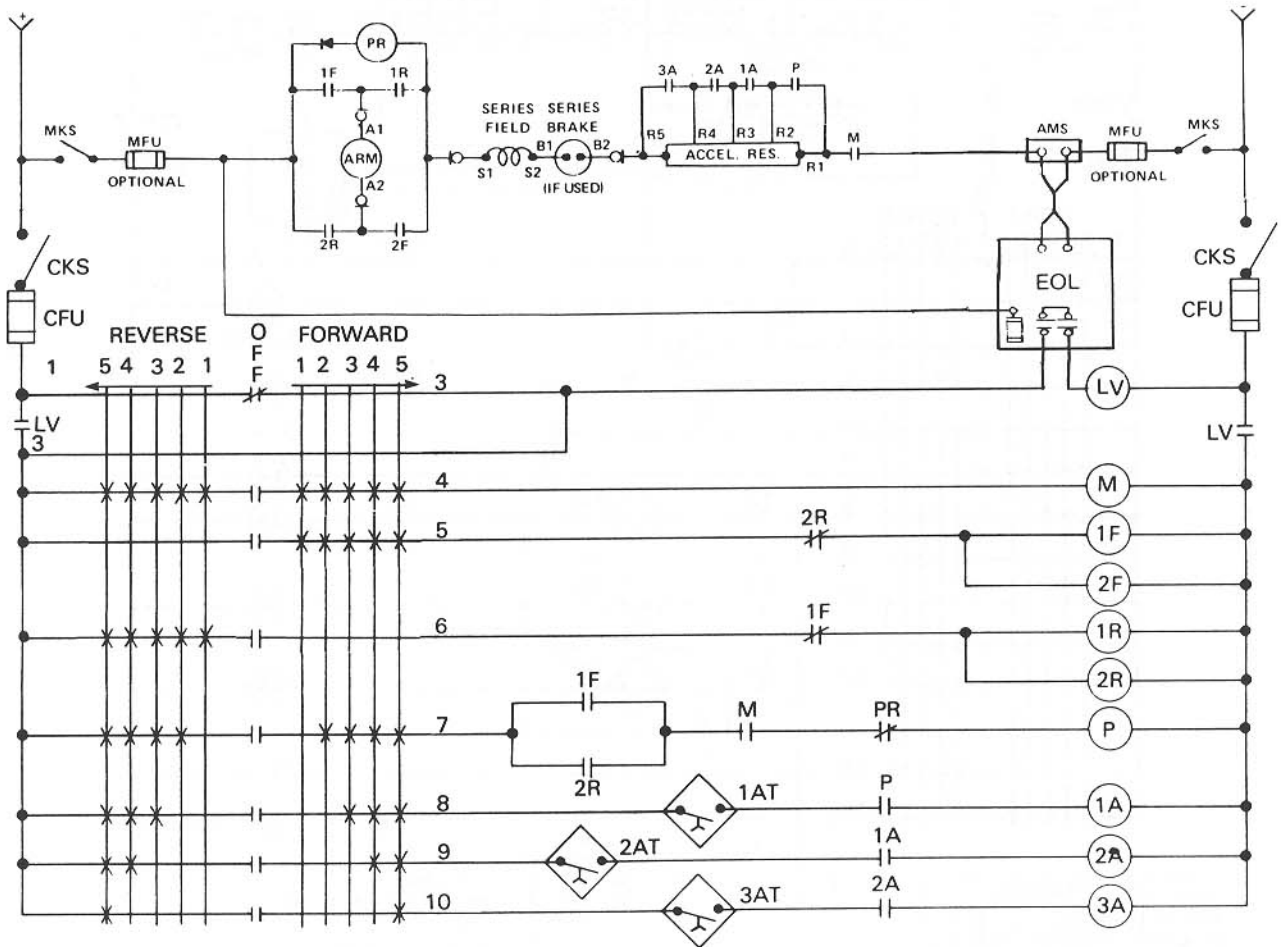
WIRING DIAGRAM

4110/4111

October, 1983
Repl.: March, 1981

ELEMENTARY DIAGRAM

TYPE 4110 DC REVERSING-PLUGGING TRAVEL CONTROLLER



CONTACT	REVERSE					OFF	FORWARD				
	5	4	3	2	1		1	2	3	4	5
M	X	X	X	X	X		X	X	X	X	X
1F						X	X	X	X	X	
2F							X	X	X	X	
1R	X	X	X	X	X						X
2R	X	X	X	X	X						X
P	X	X	X	X	X						X
1A											X
2A											X
3A											X

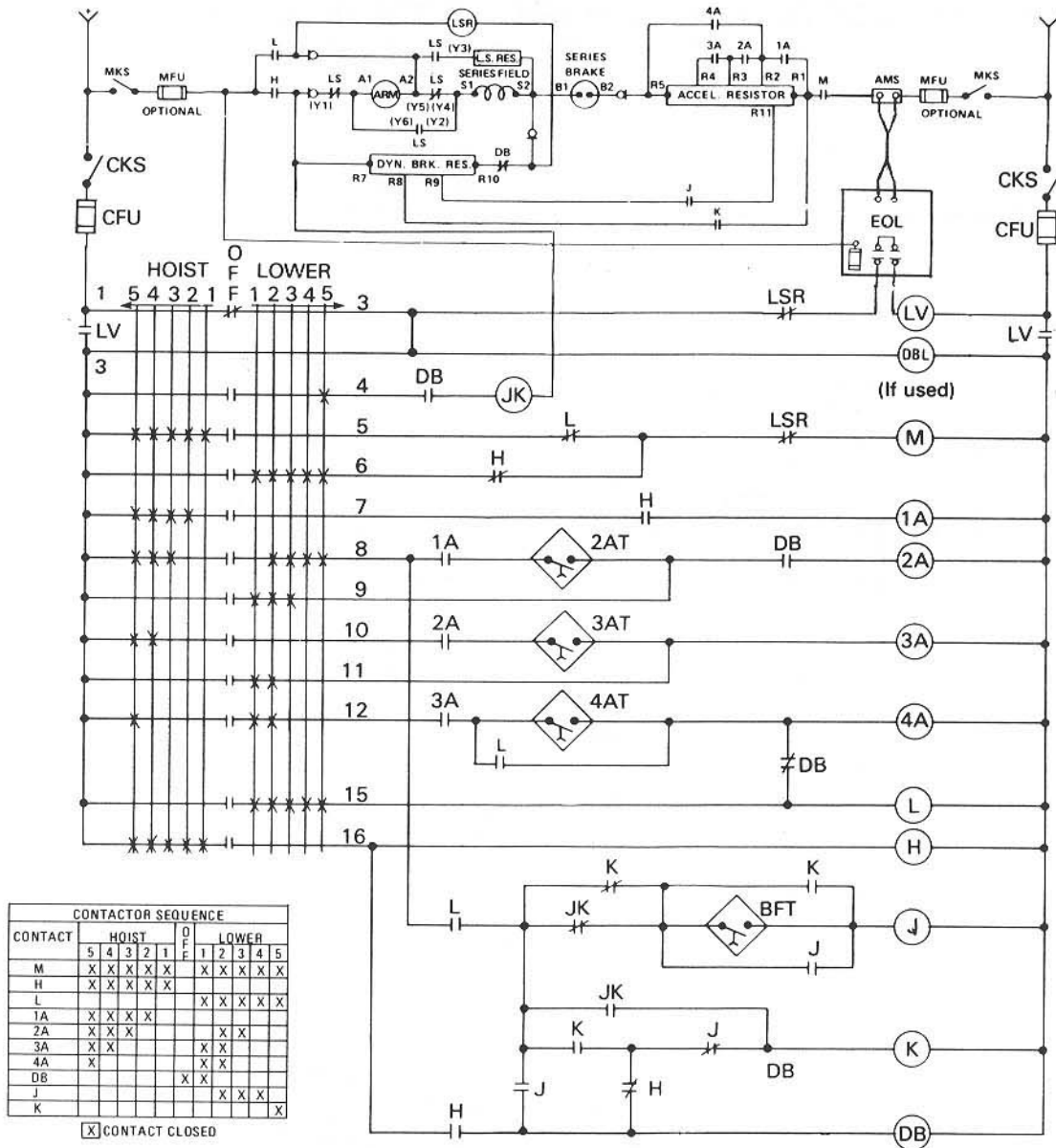
[X] CONTACT CLOSED

MAJOR COMPONENTS

SYM	FUNCTION	DESCRIPTION
M	MAINLINE CONTACTOR	1 POLE NORMALLY OPEN WITH 1 AUXILIARY
1F	FORWARD CONTACTOR	1 POLE NORMALLY OPEN WITH 1 AUXILIARY
1R	REVERSE CONTACTOR	1 POLE NORMALLY OPEN
2F	FORWARD CONTACTOR	1 POLE NORMALLY OPEN
2R	REVERSE CONTACTOR	1 POLE NORMALLY OPEN WITH 1 AUXILIARY
P	PLUGGING CONTACTOR	1 POLE NORMALLY OPEN WITH 1 AUXILIARY
1A	ACCELERATING CONTACTOR	1 POLE NORMALLY OPEN WITH 1 AUXILIARY
2A	ACCELERATING CONTACTOR	1 POLE NORMALLY OPEN WITH 1 AUXILIARY
3A	ACCELERATING CONTACTOR	1 POLE NORMALLY OPEN
LV	LOW VOLTAGE RELAY	2 POLE RELAY
PR	PLUGGING RELAY	TYPE VR RELAY
EOL	OVERLOAD RELAY	ELECTRONIC INV. TIME & INST. TRIP
CKS	CONTROL CIRCUIT KNIFE SWITCH	2 POLE UNFUSED KNIFE SWITCH, 30 AMP
CFU	CONTROL CIRCUIT FUSES	2 FUSES & CLIPS, 15 AMP, 250 V
1AT	ACCELERATING TIMER	STATIC INLINE TIMER
2AT	ACCELERATING TIMER	STATIC INLINE TIMER
3AT	ACCELERATING TIMER	STATIC INLINE TIMER
AMS	AMMETER SHUNT	50MV AMMETER SHUNT

ELEMENTARY DIAGRAM

TYPE 4111 DC DYNAMIC LOWERING HOIST CONTROLLER



MAJOR COMPONENTS

SYM	FUNCTION	DESCRIPTION
M	MAINLINE CONTACTOR	1 POLE NORMALLY OPEN
H	HOISTING CONTACTOR	1 POLE NORMALLY OPEN WITH 2 AUXILIARIES
L	LOWERING CONTACTOR	1 POLE NORMALLY OPEN WITH 2 AUXILIARIES
1A	ACCELERATING CONTACTOR	1 POLE NORMALLY OPEN WITH 1 AUXILIARY
2A	ACCELERATING CONTACTOR	1 POLE NORMALLY OPEN WITH 1 AUXILIARY
3A	ACCELERATING CONTACTOR	1 POLE NORMALLY OPEN WITH 1 AUXILIARY
4A	ACCELERATING CONTACTOR	1 POLE NORMALLY OPEN
J	LOWERING CONTACTOR	1 POLE NORMALLY OPEN WITH 2 AUXILIARIES
K	LOWERING CONTACTOR	1 POLE NORMALLY OPEN WITH 2 AUXILIARIES
DB	DYNAMIC BRAKING CONTACTOR	1 POLE NORMALLY CLOSED WITH 2 AUXILIARIES
LV	LOW VOLTAGE RELAY	2 POLE RELAY

MAJOR COMPONENTS

SYM	FUNCTION	DESCRIPTION
JK	VOLTAGE RELAY	TYPE VR RELAY D.C.
LSR	LIMIT SWITCH RELAY	TYPE VR RELAY D.C.
EOL	OVERLOAD RELAY	ELECTRONIC INV. TIME & INST. TRIP
MKS	MAINLINE KNIFE SWITCH	2 POLE UNFUSED KNIFE SWITCH
CKS	CONTROL CIRCUIT KNIFE SWITCH	2 POLE UNFUSED KNIFE SWITCH, 30 AMP
CFU	CONTROL CIRCUIT FUSES	2 FUSES AND CLIPS, 15 AMP, 250 V
BFT	TIMING RELAY	STATIC INLINE TIMER
2AT	ACCELERATING TIMER	STATIC INLINE TIMER
3AT	ACCELERATING TIMER	STATIC INLINE TIMER
4AT	ACCELERATING TIMER	STATIC INLINE TIMER
AMS	AMMETER SHUNT	50 MV AMMETER SHUNT



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