

INSTALLATION & MAINTENANCE INSTRUCTIONS

For Chemline Electromni Electric Actuators

Positioning:

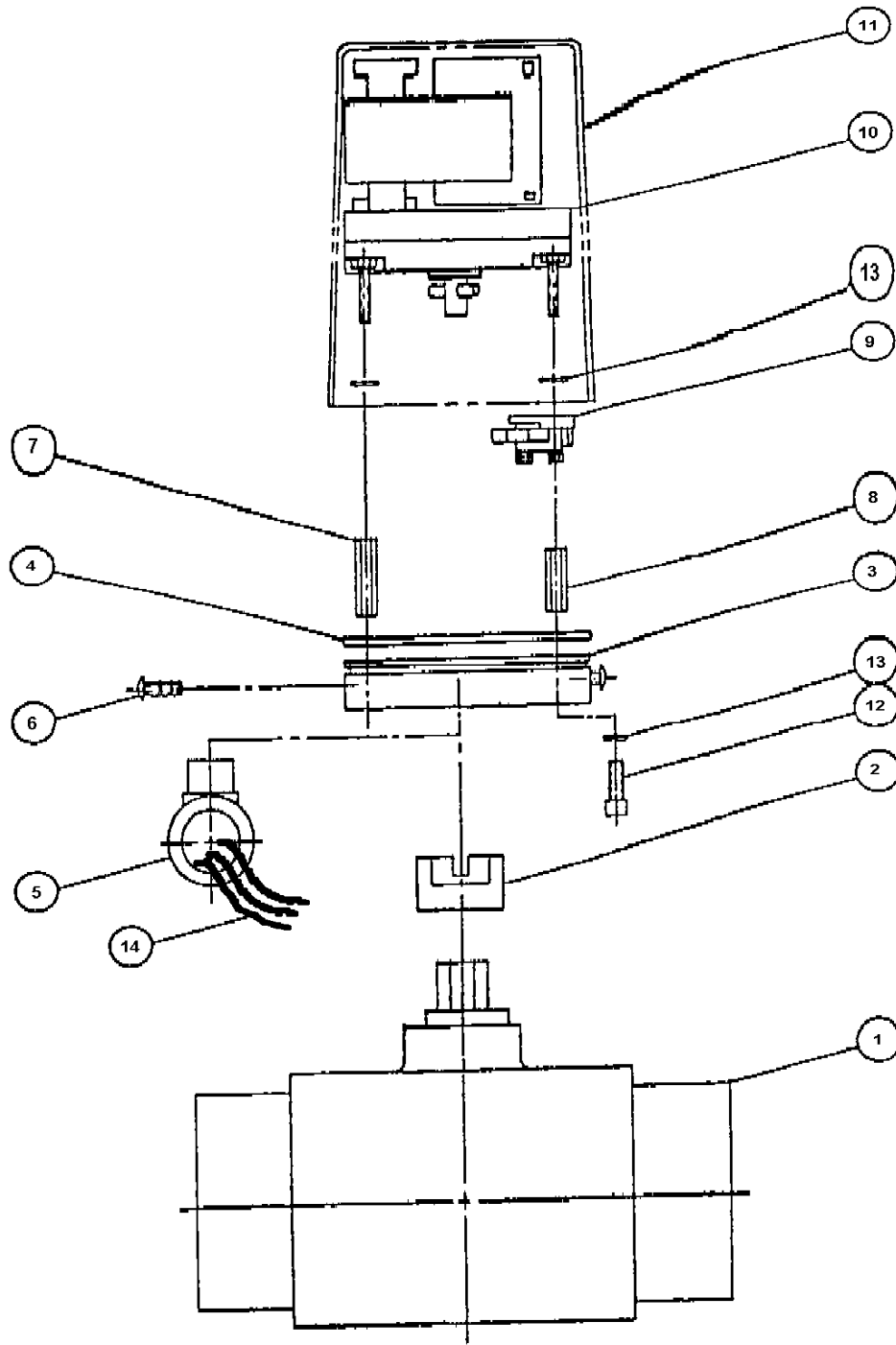
Refer to **ASSEMBLY DRAWING ELACT rev 0.**

1. Electromni actuators are recommended for Chemline safe-bloc, compact and multi-port ball valves. For positioning of actuator on valve refer to drawing.
2. The 12 & 24 VAC & VDC Electromni actuators utilize a DC motor wired for reversible action, with rectifiers (diodes) in the lead wires of the VAC units. This results in a powerful motor at relatively low current draw.
3. The motor requires a three way (SPDT) control switch, since power is required for the full travel in either cycle. The optional extra limit switch is 90 degrees out of phase with the motor's switch. Chemline presets the extra switch so that it trips slightly ahead of the motor's switch.
4. Standard enclosure for the above is weather resistant (NEMA 4X).
5. Standard switches in actuator can be used for light indication utilizing the un-used conductors.
6. Travel is controlled by an internal single pole double throw limit switch activated by a cam/coupling with 90° positive and negative lobes. Power must be maintained for the full travel time of the unit.
7. Current draw values are maximum , i.e. for locked rotor position. Running current draw will be less.
8. Position indicator lights are built into actuator base. However activation is optional and may require an additional limit switch.

Model Number		Volts	Hz	Speed	Duty Cycle	Current Draw
Lights	No Lights			sec/90°		Amps
EL1	EO1	120vac	60/50	5	25%	2.1
EL2	EO2	220vac	60/50	5	25%	0.6
EL3	EO3	12 vdc	-	5	75%	1.0
EL4	EO4	24 vdc	-	5	75%	1.0
EL5	EO5	12 vac	60/50	5	75%	2.25
EL6	EO6	24 vac	60/50	5	75%	4.0

Installation & Maintenance Instructions A-Series Actuators cont.
Troubleshooting

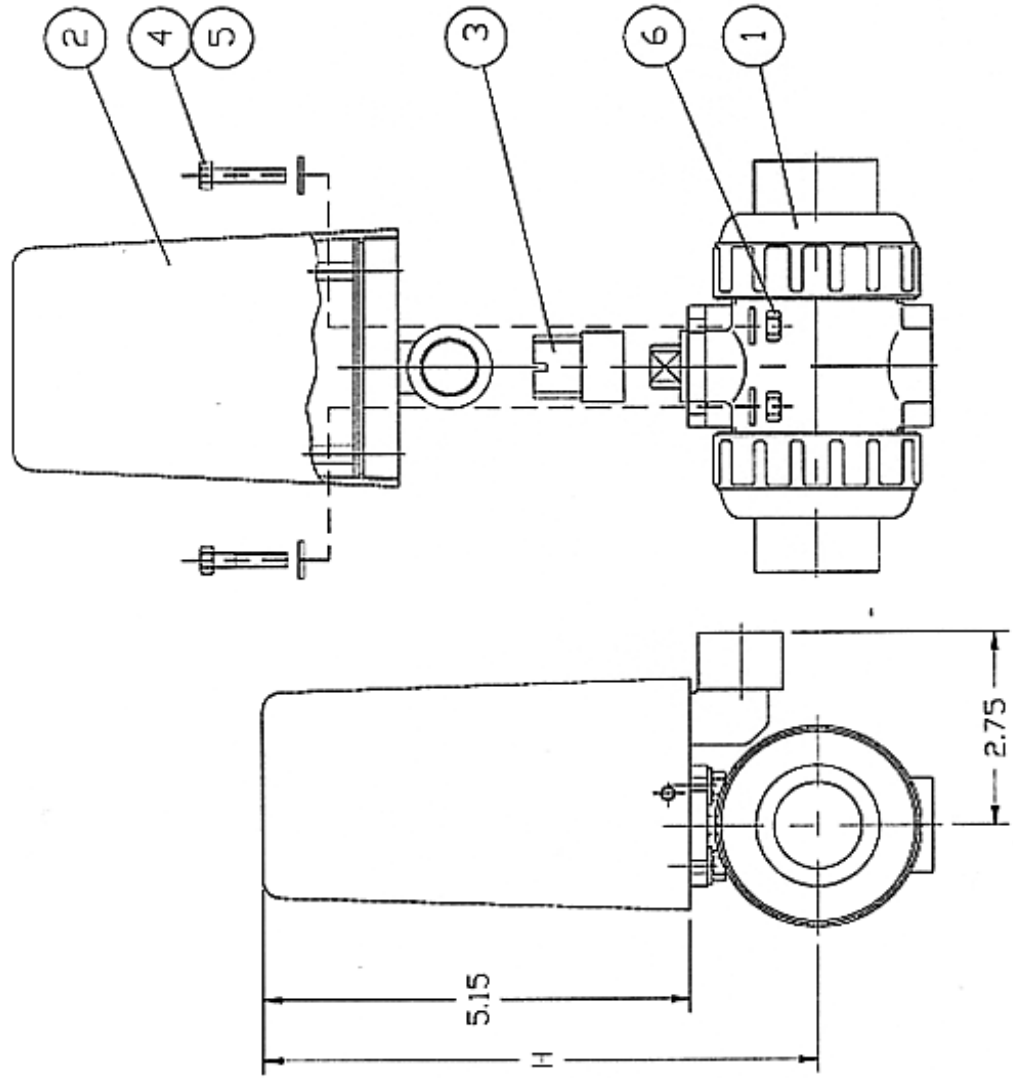
Problem	Cause	Action
The actuator does not operate.	The power source is off.	Check/turn on the power source.
	Wrong or low supply voltage to the actuator.	Check voltage with a tester and set as specified.
	The wiring is incorrect.	Check wiring against the supplied diagram (inside actuator cover).
	Internal bolts may be loose.	Check/tighten all visible internal bolts.
	Travel stop cams may be loose/misadjusted.	Check/tighten/adjust all travel stop cam setscrews.
	Not enough operating torque.	Consult with Chemline technical staff.
	An obstruction may be in the valve.	Remove/check the valve.
The actuator operates, but the valve doesn't open or close.	The drive coupling is broken or disconnected.	Check/replace the coupling.
	The stem of the valve is broken.	Remove/check the valve.
Option doesn't function or functions erratically.	Option is misadjusted.	Adjust as per the drawing below.



		DATE		REV.	0
		SCALE		DWG. NO.	ELACT
TITLE CHEMLINE ELECTROMINIACTUATOR REFERENCE		DR. BY		CHKD. BY	
		APP. BY			

PARTS LIST

ITEM	DESCRIPTION	MATERIAL	QTY
1	VALVE		1
2	CAM / COUPLING	ALUMINUM	1
3	PLATE BASE	PVC	1
4	O RING	EPDM	1
5	1/2 NPT CONDUIT CONN	PVC	1
6	SCREW NO. 10-24 X 1/2	300 SS	2
7	STAND OFF	ALUMINUM	3
8	STAND OFF LIMIT SW ASST	ALUMINUM	1
9	LIMIT SWITCH A357	MICRO SWITCH	1
10	MOTOR ACTUATOR	OEM	1
11	COVER	ABS	1
12	BOLT NO. 10-32 X 3/4	300 SS	4
13	WASHER INT TOOTH NO. 10	410 SS	8
14	LEAD WIRE		3



UNIT: INCH

SIZE	1/2"	3/4"	1"	1-1/2"	2"
H	6.33	6.59	6.86	7.55	8.00

NOTE. The shape and appearance of assembly differ a little with nominal size compared to this drawing.

ITEM	DESCRIPTION	MATERIAL	QTY
6 ^{PH}	NUT	STAINLESS STEEL	4
5 ^{PH}	FLAT WASHER	STAINLESS STEEL	8
4 ^{PH}	BOLT	STAINLESS STEEL	4
3	COUPLING	303 STAINLESS STEEL	1
2 ^{PH}	ELECTROMNI ACTUATOR	ABS & PVC	1
1	BALL VALVE TYPE 21	PVC,CPVC,PP,PVDF	1

- 1 - ELECTROMNI (SERIES 83) ACTUATOR IS AVAILABLE IN 110 VAC, 220 VAC, 24 VAC, 12 VAC, 24 VDC AND 12 VDC MODELS.
- 2 - FOR 1/2" THRU 1" VALVES USE:
BOLT M5.0x8-30 LG, FLAT WASHER M5, NUT M5x8
FOR 1-1/2" THRU 2" VALVES USE:
BOLT M6.0x1-35 LG, FLAT WASHER M6, NUT M6.0x1

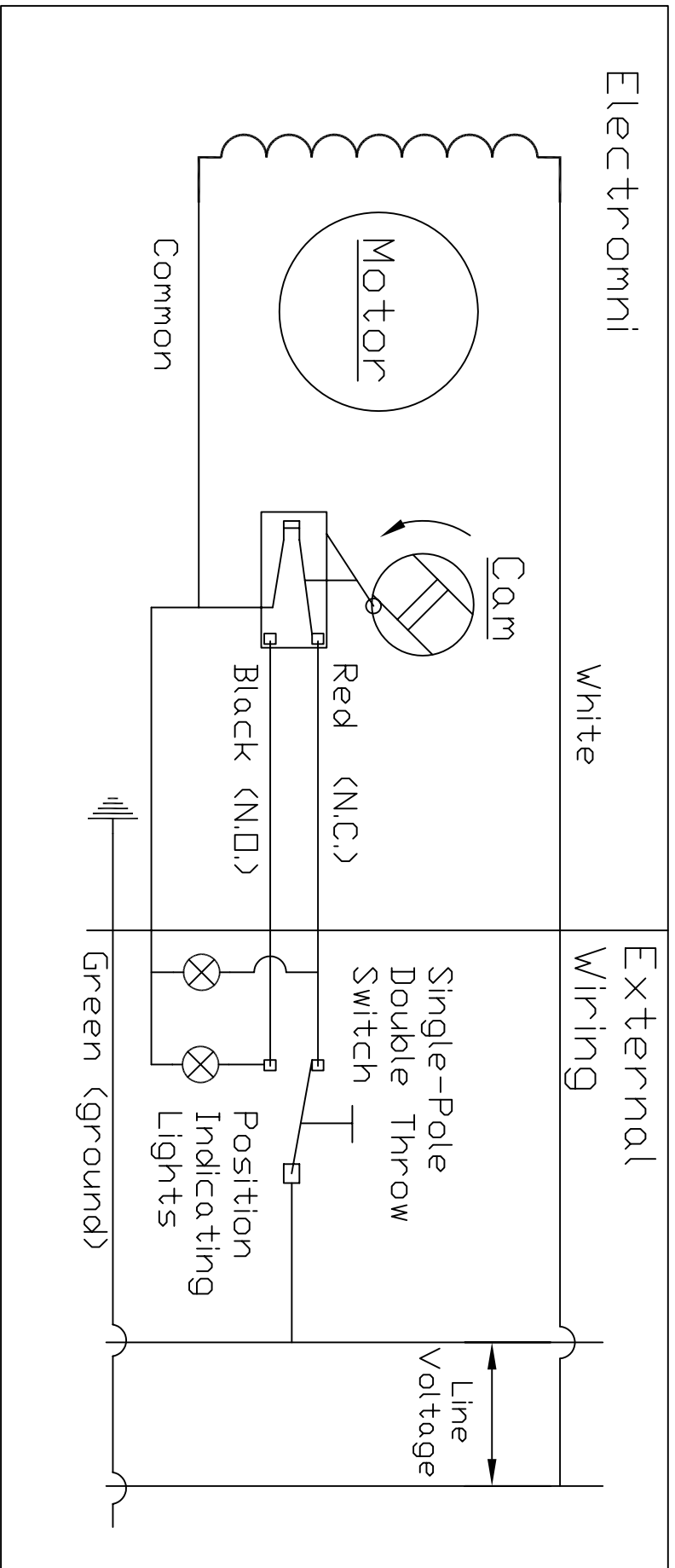
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NAME	DATE
DR KENICHI MIYAZAKI	8/29/01
APPD DAVE HURLEY	8/29/01
PROD LEO LESIER	8/29/01
MO# / CO#	
FILE	

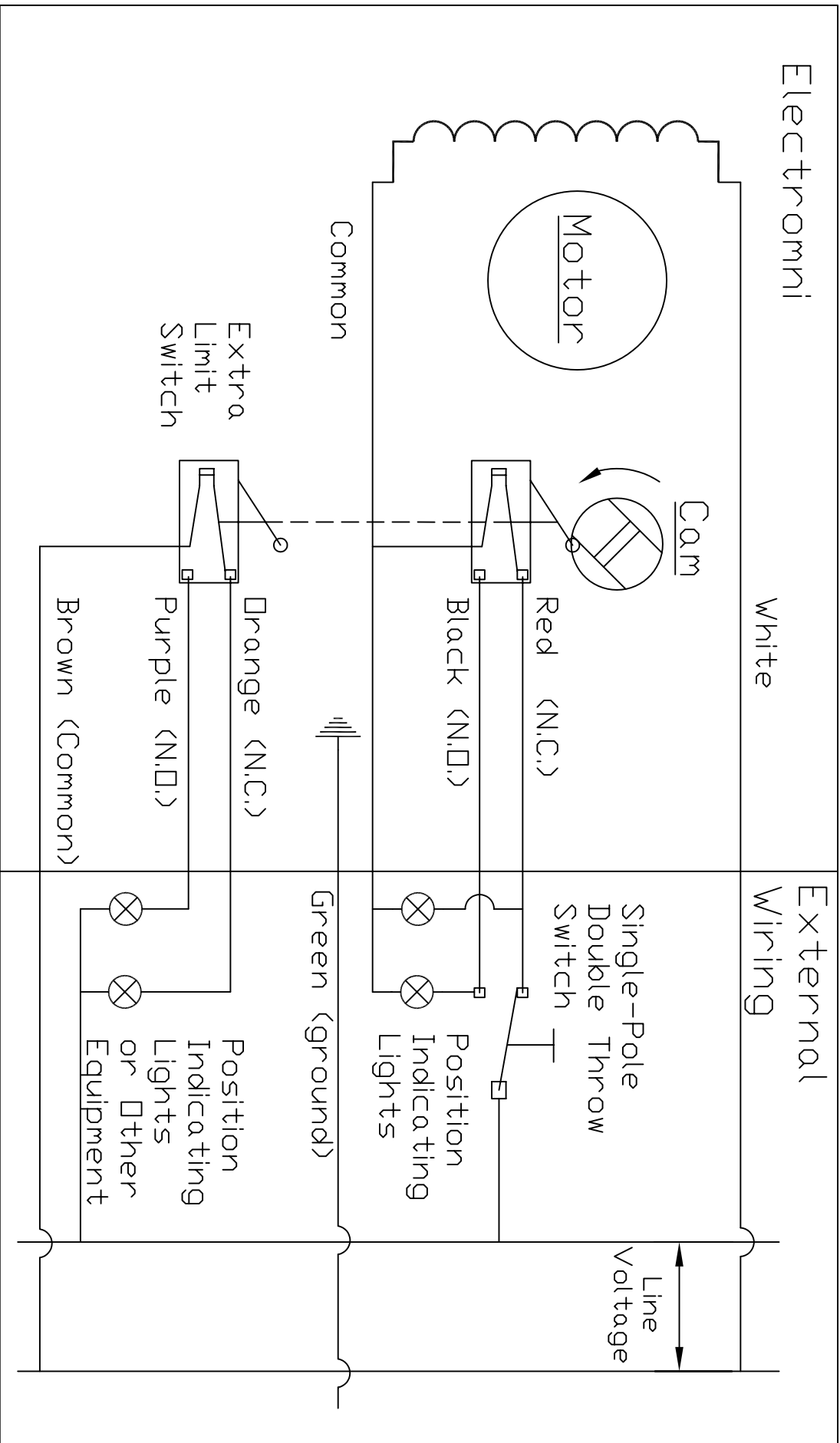
CHEMLINE PLASTICS

ELECTROMNI ACTUATOR WITH TYPE 21 BALL VALVE 1/2" - 2"

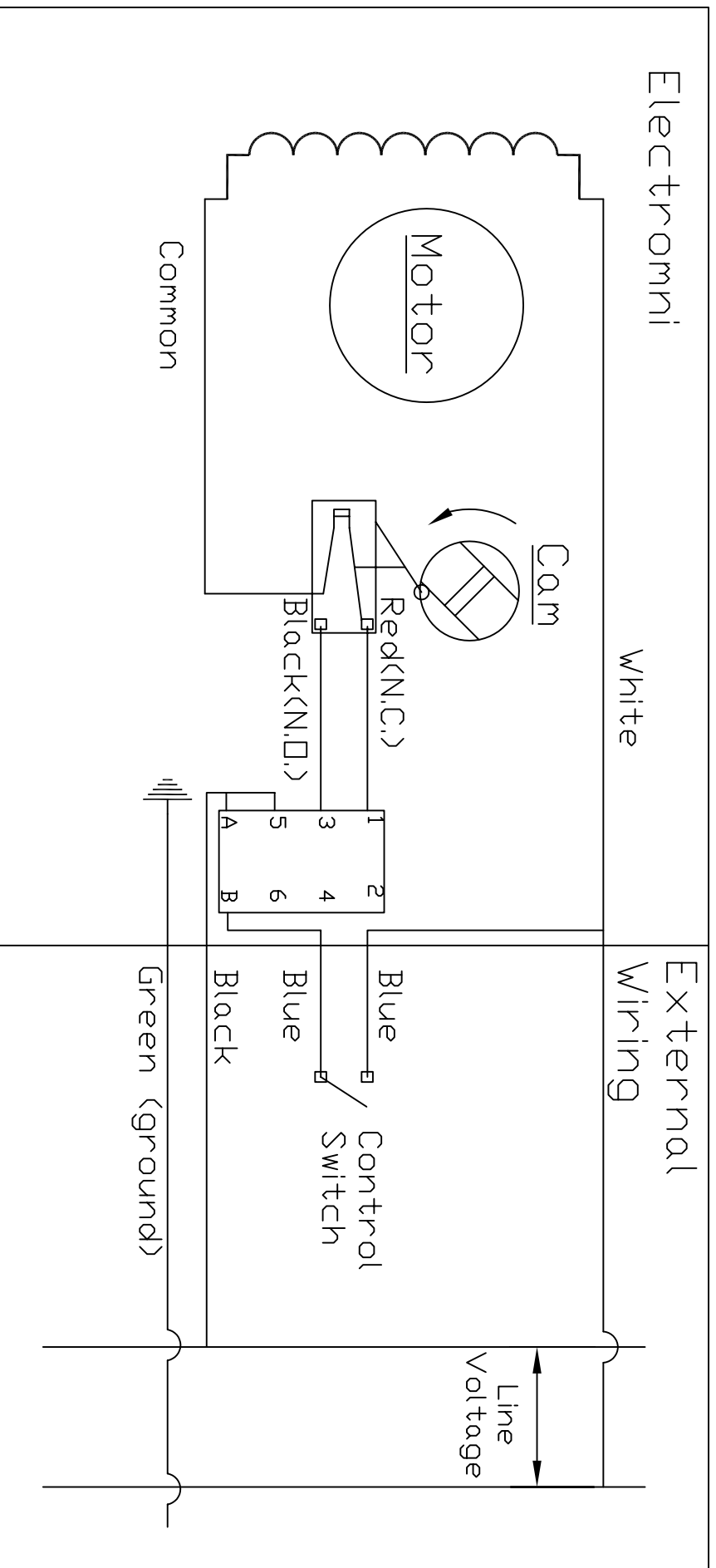
SIZE	A	DWG. NO.	0046BV	REV	A
SCALE	N1S	SHEET	1	OF	1



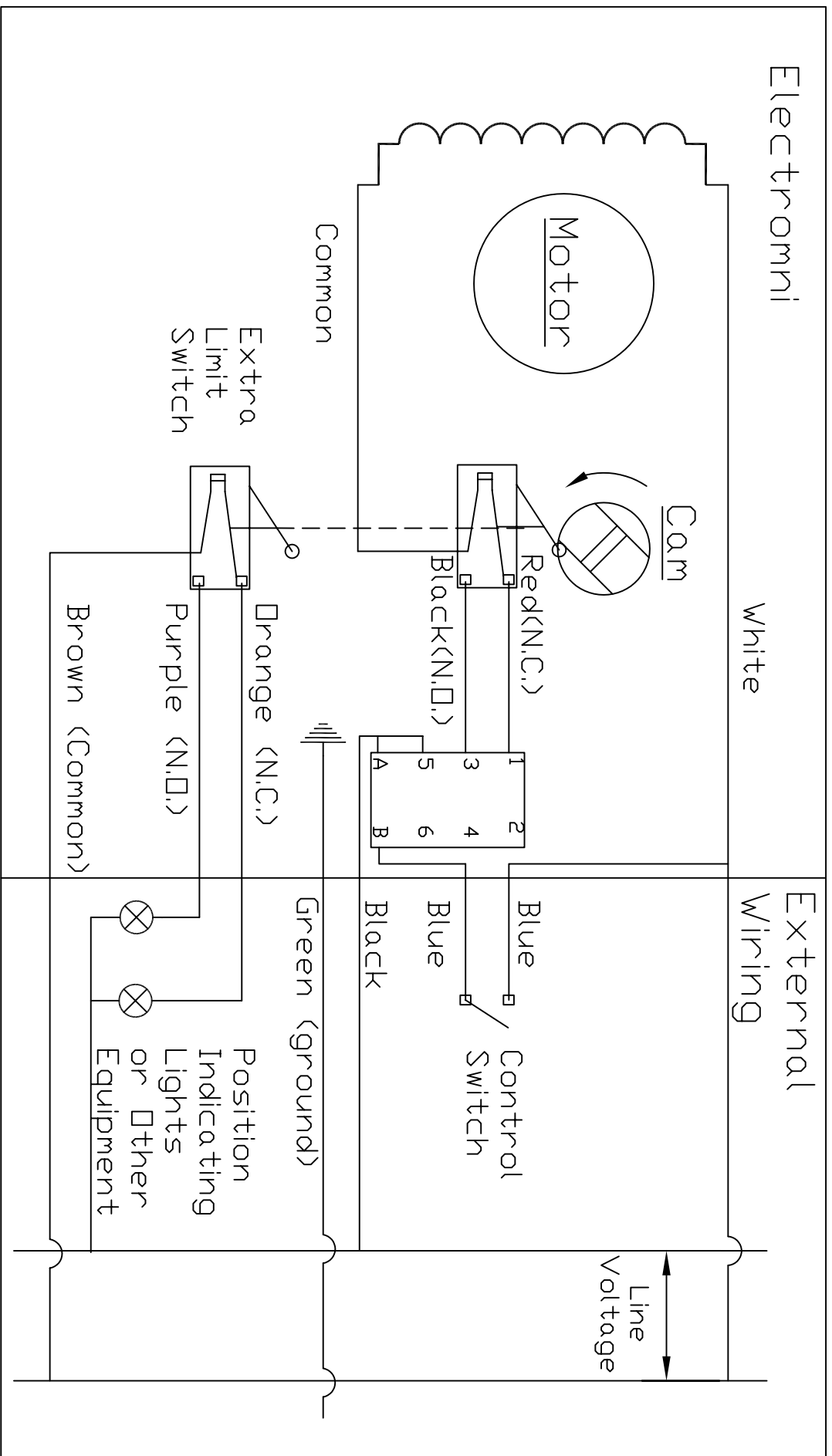
TITLE	Wiring diagram for			SCALE	NTS	DATE	CHEMLINE
	Electromni 120/240 VAC						
REFERENCE				CHKD BY			DWG. NO
				APP. BY			00001EEL
							REV.



TITLE		SCALE		DATE		CHEMLINE	
Wiring diagram - Electromni		NTS		04/05		PLASTICS	
120/240 VAC		PJ				DWG. NO	
REFERENCE with extra limit switch		CHKD BY				00002EL	
		APP. BY				REV.	



TITLE	Wiring diagram - Electromni			SCALE	NTS	DATE	CHEMLINE PLASTICS	
	120/240 VAC							DR. BY
REFERENCE	with 2-wire control			CHKD BY			DWG. NO	
				APP. BY			00003ELL	
							REV.	

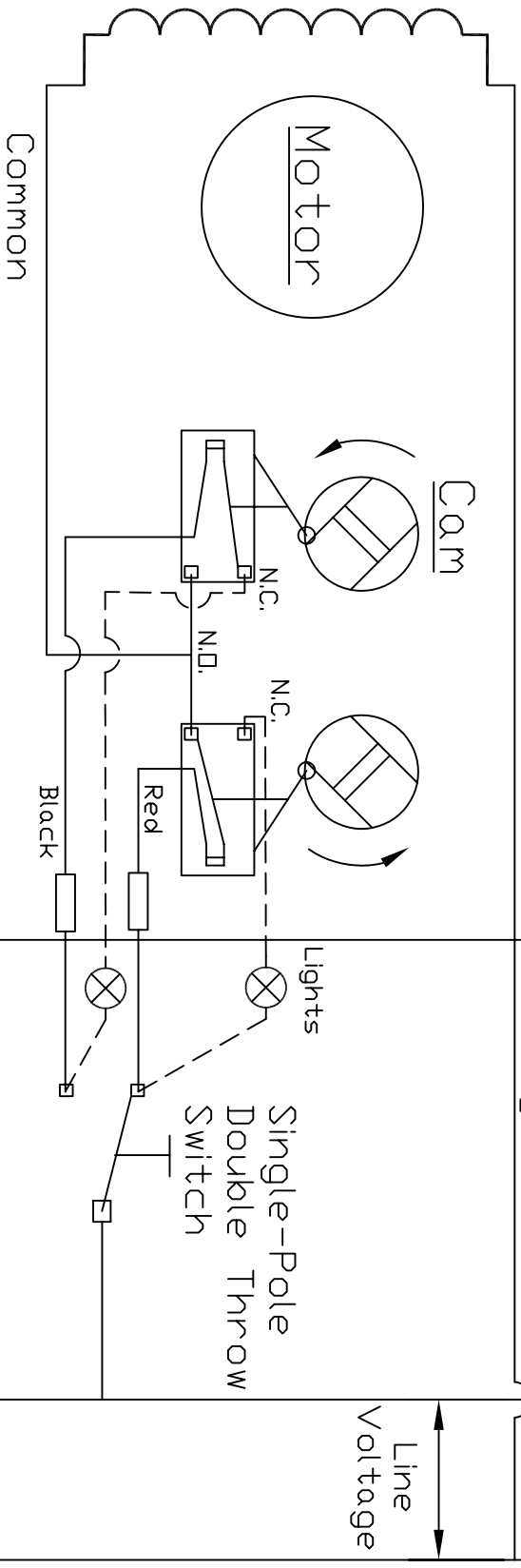


TITLE		Wiring diagram - Electromni	
REFERENCE		with extra limit switch and 2-wire control	
SCALE	NTS	DATE	CHEMLINE PLASTICS
DR. BY	PJ	04/05	
CHKD BY			
APP. BY			
DWG. NO		00004EL	
REV.			

Electromni

White

External Wiring



Line Voltage

Common

Motor

Cam

N.C.

N.O.

Lights

Single-Pole Double Throw Switch

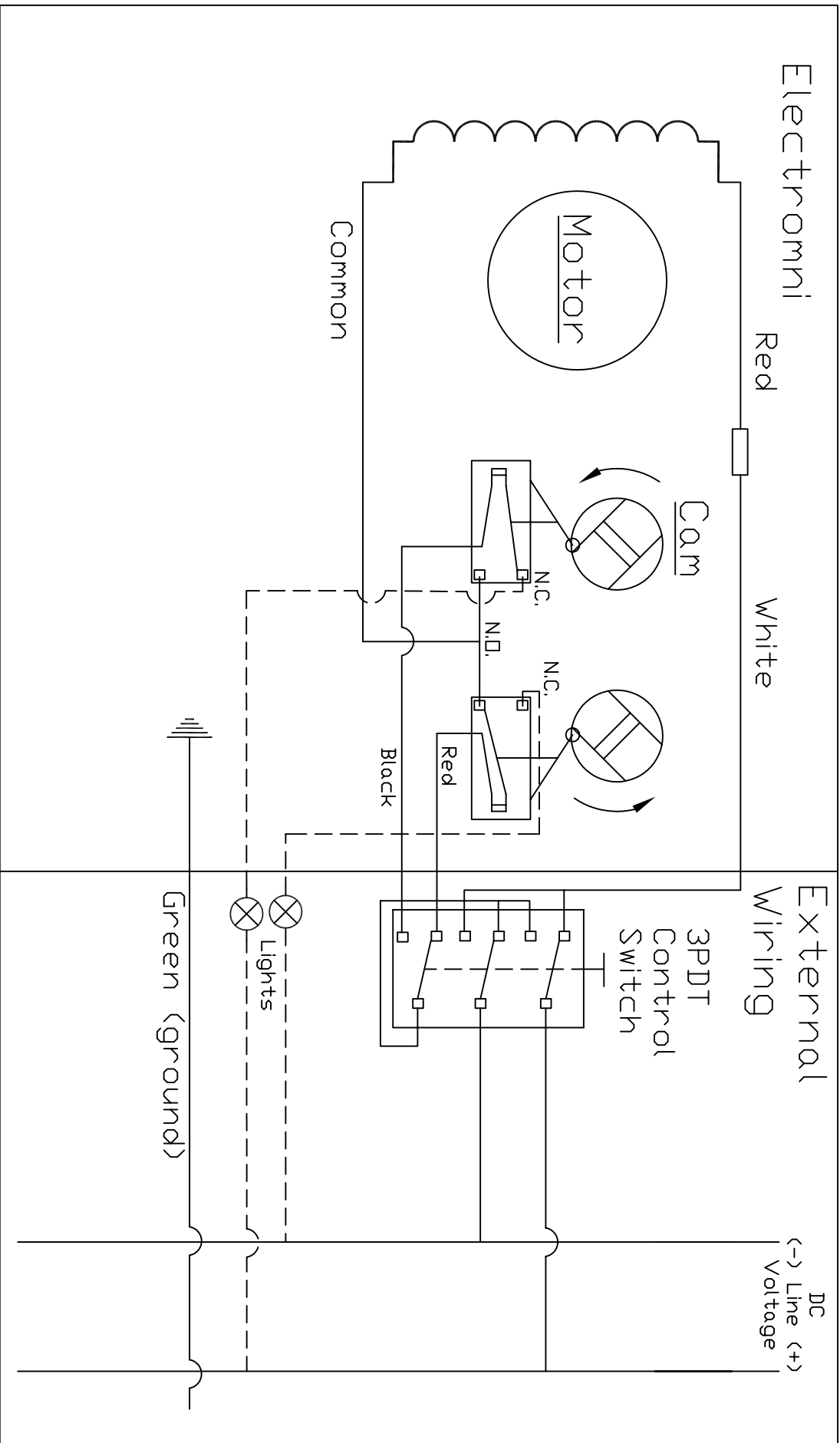
Green (ground)

Black

Red

TITLE	Wiring diagram - Electromni			SCALE	NTS	DATE	CHEMLINE PLASTICS	
REFERENCE	12/24 VAC			DR. BY	PJ	04/05	DWG. NO 00005ELL	
				CHKD BY			REV.	
				APP. BY				

To Close: Neg. to White, Pos to Black.
 To Open: Pos. to White, Neg. to Red



Electromotor

Red

White

External
Wiring

3PDT
Control
Switch

Motor

Cam

N.C.

N.O.

Red

Black

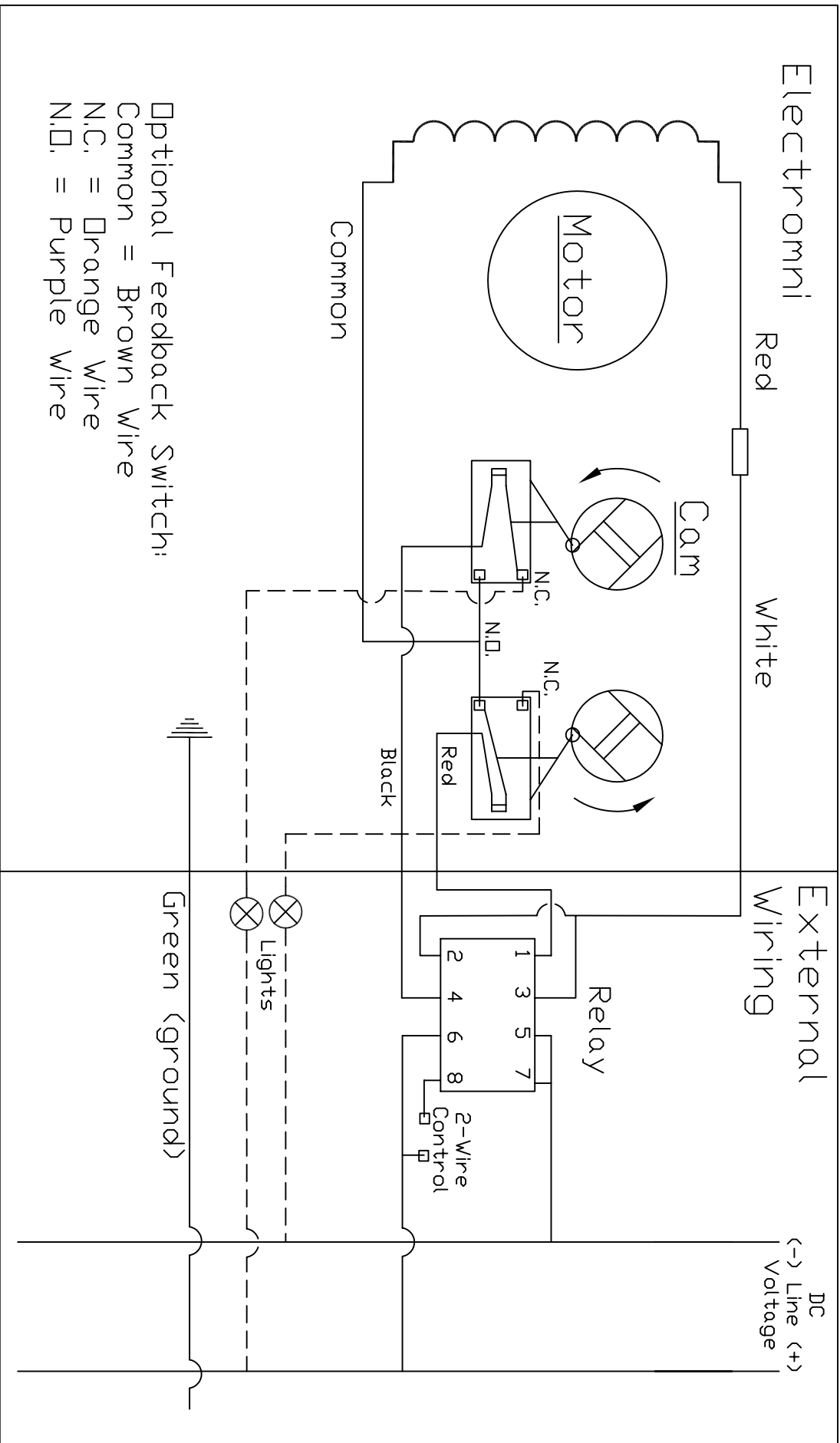
Common

Lights

Green (ground)

DC
(-) Line (+)
Voltage

TITLE	Wiring diagram - Electromotor			SCALE	NTS	DATE	CHEMLINE PLASTICS
REFERENCE	12/24 VDC	DR. BY	PJ	04/05	CHKD BY		DWG. NO 00006EL
		APP. BY					REV.



Optional Feedback Switch:
 Common = Brown Wire
 N.C. = Orange Wire
 N.D. = Purple Wire

TITLE		SCALE		DATE		CHEMLINE	
Wiring diagram - Electromni		NTS		04/05		PLASTICS	
12/24 VDC		DR. BY PJ		CHKD BY		DWG. NO	
REFERENCE with 2-wire control		APP. BY				00007EL	
							REV.