

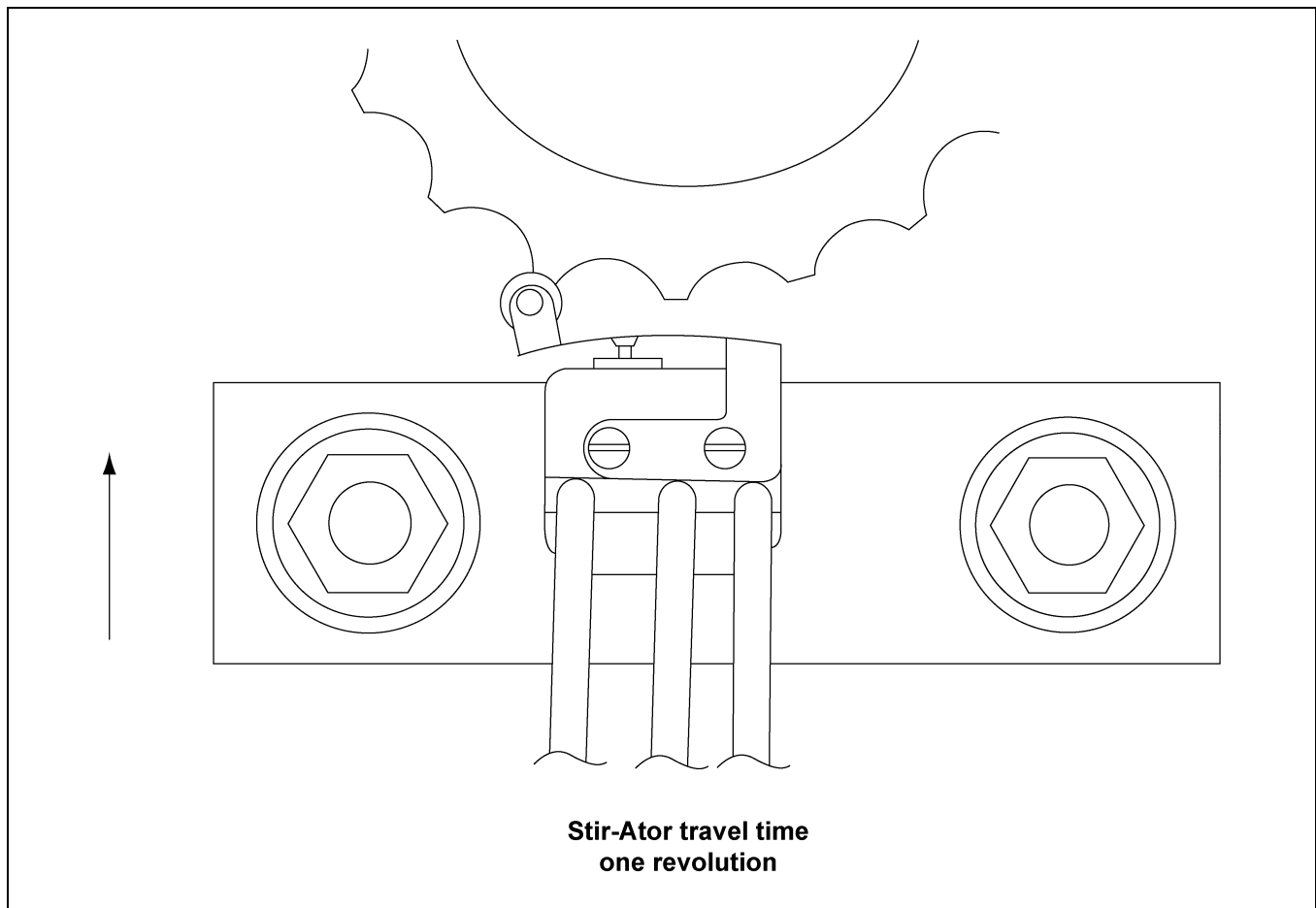


## Stir-Guard Operation

The Stir-Guard is designed to protect the grain by shutting off the Stir-Ator if the unit is not advancing around the bin normally. As the gear motor drives the unit around the bin, a microswitch actuator which rides on the lower notched swivel block sends a pulse to the solid state timer each time the roller advances one notch. If the unit does not advance forward enough to actuate the switch in 45 minute, the timer will run out and the power to the motors on the Stir-Ator will be shut off by the contactor located in the swivel box of the Stir-Ator.

To reset the Stir-Guard timer, move the switch box handle to the "OFF" position, and then back "ON". The unit will start-up again. Before the Stir-Guard is reset, the problem that caused the Stir-Guard to shut the unit off should be located and corrected.

If adjustment of the microswitch roller actuator becomes necessary, turn OFF the power to the swivel at the switch box. Remove the right swivel box cover and loosen the nuts on the roller switch plate. Rotate the swivel block so the switch roller is riding on the peak of a swivel cog. (See Figure 1.) Slide the roller switch plate slowly in until the microswitch just clicks, then move the switch an additional 1/16" and tighten the nuts. Rotate the swivel to assure the switch clicks "ON" and "OFF" as the roller rides in and out on the swivel cog. This is necessary for a pulse to be sent to the Stir-Guard timer.



**Figure 1**



### Design III Stir-Guard Option Installation Instructions

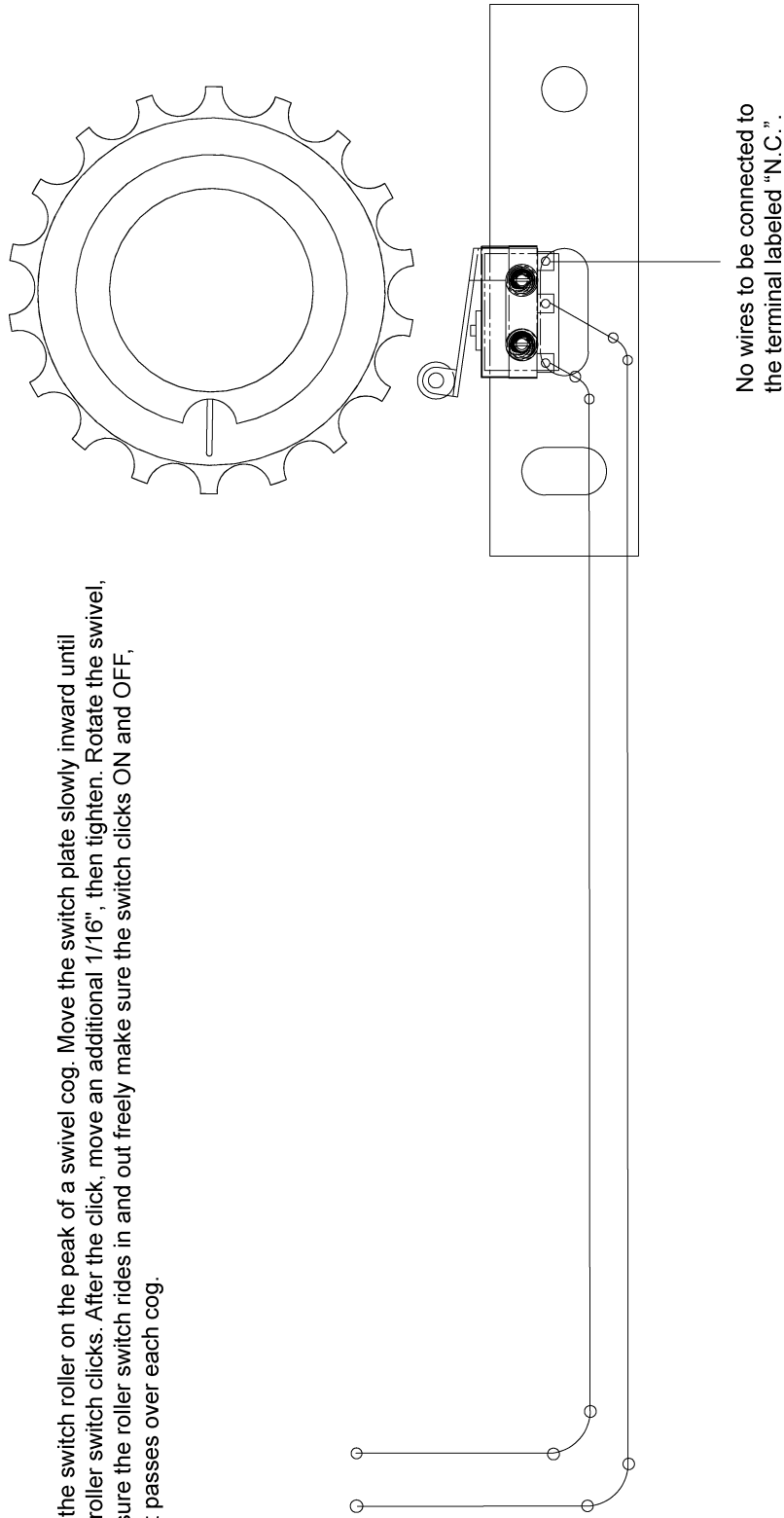
1. Disconnect power to the unit.
2. Remove the two (2) long swivel covers on the Stir-Ator yoke swivel housing.
3. For 230 volt units, [See Pages 4-6](#).

For 440 volt units, remove the two (2) self-tapping screws on the top of the swivel yoke enclosure. Position the solid state module #2EL1207 inside the top of the yoke swivel housing with the 5 terminals on the module pointing toward the Stir-Ator swivel. Bolt the module onto the yoke where the self-tapping screws were removed using two (2) #8 x 1/2" screws and whiz lock nuts.

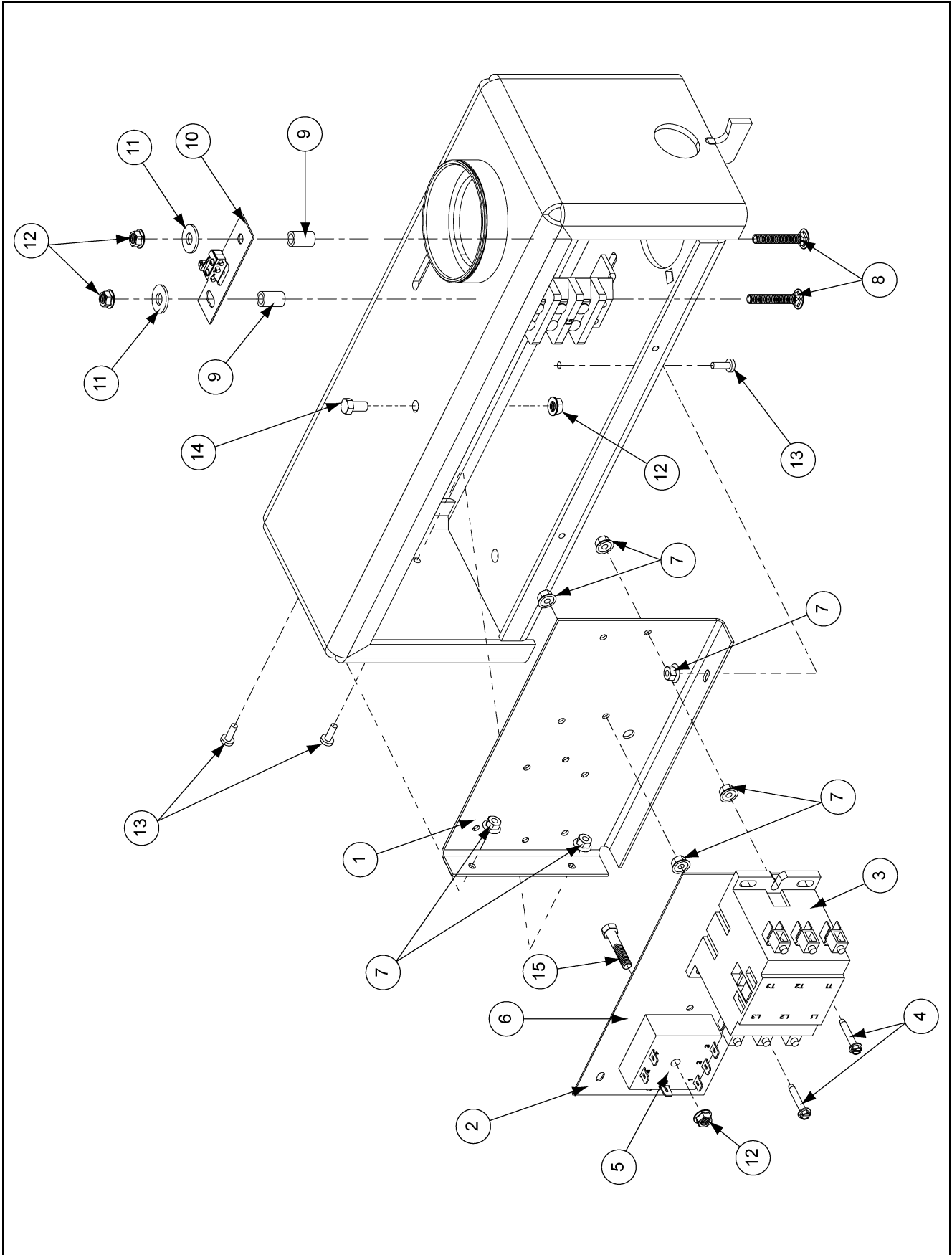
4. Fasten the Stir-Guard assembly plate onto the swivel housing with the Stir-Guard contactor toward the swivel, secure with the #8 whiz lock nuts. (Do not loosen the nuts holding the components on the Stir-Guard assembly plate.)
5. Place the two (2) small spacers onto the threaded studs welded in the swivel housing, next place the Stir-Guard switch and mounting plate onto the studs with the roller switch toward the cog swivel ring. Secure with whiz lock nuts. **DO NOT TIGHTEN AT THIS TIME.**
6. Adjust by putting the switch roller on the peak of a swivel cog. ([See Figure 1 on Page 1.](#)) Move the switch plate slowly inward until the roller switch clicks. After the click, move an additional 1/16", then tighten. Rotate the swivel, be sure the roller switch rides in and out freely and the switch clicks ON and OFF, as it passes over each cog. This is necessary for a pulse to be sent to the Stir-Guard timer. Without a pulse every 45 minute, the Stir-Guard will shut down the Stir-Ator operation.
7. Connect the roller switch wires to the Stir-Guard solid state module matching wire color to module color coded markings.
8. Remove lead-in wires coming from yoke pipe to the terminal strip EXCEPT GREEN WIRE. Cut off the spade terminal and strip the installation back 3/8". Reconnect these wires to the top and bottom lugs of the Stir-Guard contactor. (If 3 phase, connect red wire to center lug of Stir-Guard contactor.) Red wire is only used for 3 phase.
9. Connect the black jumper wires from left side of the Stir-Guard contactor to the terminal strip. (3 Phase will use the extra wire sent with the kit.)
10. Replace the swivel box covers.
11. Place the "STIR-GUARD" decals on the swivel covers over the "DMC" decal already on the cover. **DO NOT COVER THE CAUTION DECAL.**

# Switch Stir-Guard (SG230C)

Put the switch roller on the peak of a swivel cog. Move the switch plate slowly inward until the roller switch clicks. After the click, move an additional 1/16", then tighten. Rotate the swivel, be sure the roller switch rides in and out freely make sure the switch clicks ON and OFF, as it passes over each cog.



Stir-Guard 230V, Option (106N135)

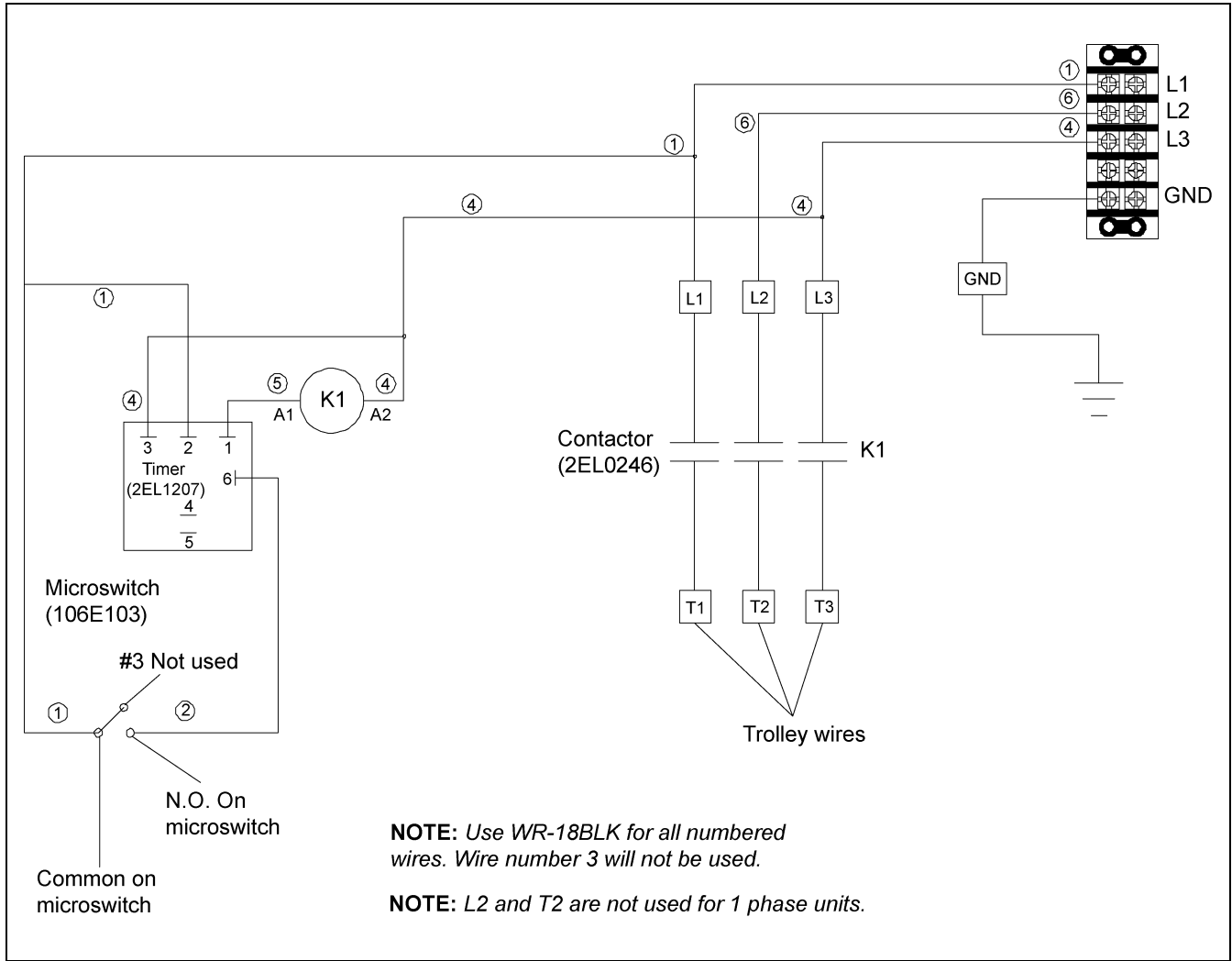


Stir-Guard 230V, Option (106N135) Parts List

Ref #	Part #	Description	Qty
1	106A083	Plate Stir-Guard Mount	1
2	106E064	Stir-Guard - 230V	1
3	2EL0245	Relay, Magnetic, 40A 40 Amp, 208/240V Coil	1
4	2FH0474	Screw, TCSF #8-32 x 1" HWHS ZN	2
5	2EL1207	Timer, 45 Minute	1
6	106E066	Plate, Stir-Guard	1
7	1FH0993	Flange Lock Nut #8-32 Plated	7
8	S-9317	Carriage Bolt 1/4"-20 x 1-1/2" ZN Grade 2	2
9	106E073	Stand Off Switch, Stir-Guard	2
10	106E103	Switch Stir-Guard	1
11	S-1430	Flat Washer 1/4" ZN Grade 2	2
12	S-7215	Flange Nut 1/4"-20 ZN	4
13	S-6337	Screw, MS #8-32 x 1/2" PHP ZN Grade 2	3
14	S-1101	Bolt HHCS 1/4"-20 x 1/2" ZN Grade 2	1
15	S-6997	Bolt HHCS 1/4"-20 x 1-1/4" ZN Grade 5	1

# Design III Stir-Guard Option

## Stir-Guard 230 VAC 1 Phase and 3 Phase (106N135)

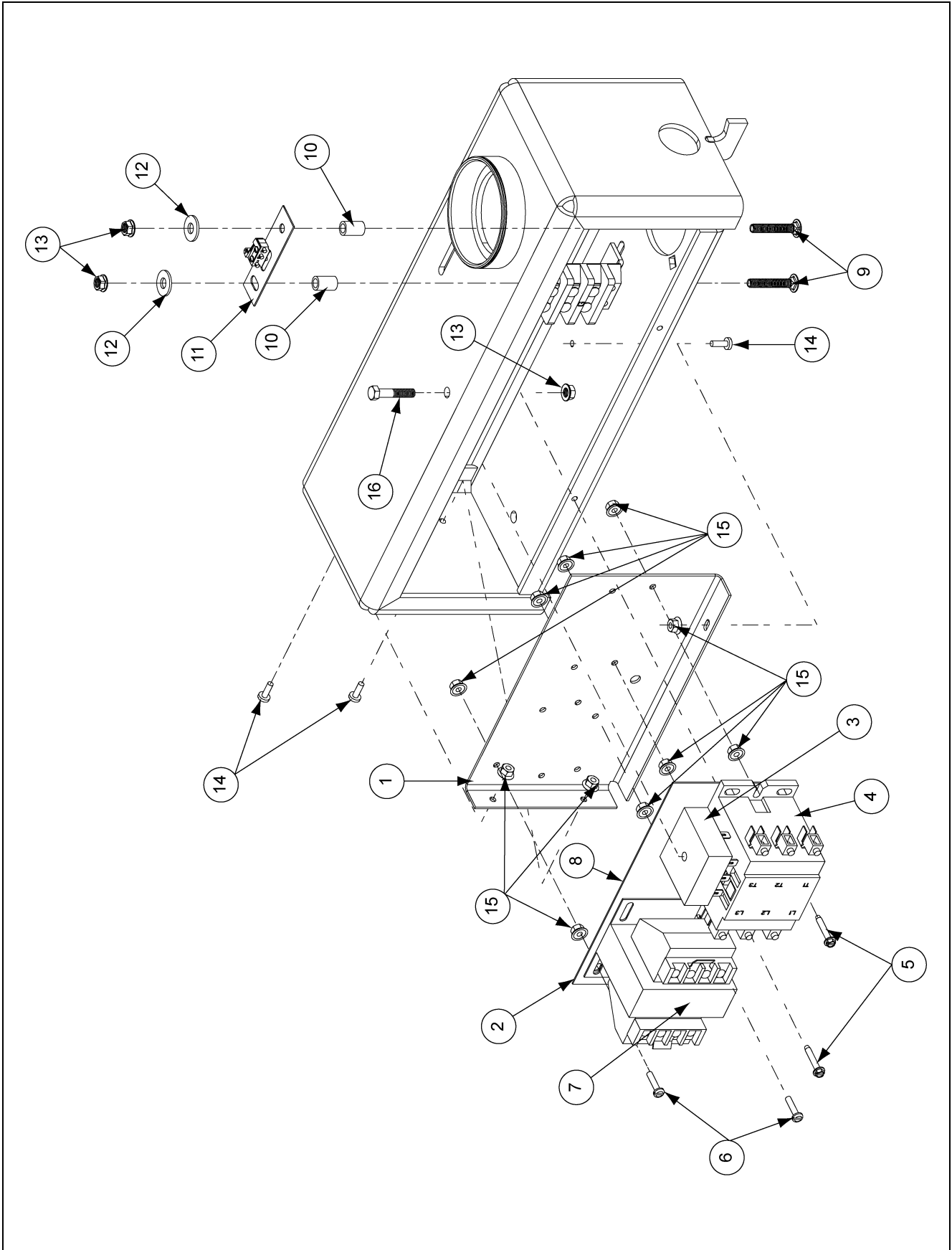


Wire Label	Wire Name	Wire Color	Total Length	Start Component	Start Component Description	Start Pin	Start Terminal	End Component	End Component Description	End Pin	End Terminal
1	DAVID2104	Black	12"	2EL0245	Contactor	L1	1EL0520		Terminal Block		1EL0534
1		Black	6-1/2"	2EL1207	Timer	2	1EL0520	2EL0245	Contactor	L1	1EL0520
1		Black		106E103	Switch	Common	Supplied with Switch	2EL1207	Timer	2	1EL0520
2		Black		106E103	Switch	N.O.	Supplied with Switch	2EL1207	Timer	6	1EL0520
4	DAVID1612	Orange	6-1/2"	2EL1207	Timer	3	1EL0520	2EL0245	Contactor	L3	1EL0520
4		Black	4"	2EL0245	Contactor	L3	1EL0520	2EL0245	Contactor	A2	1EL0520
4	DAVID2104	Black	12"	2EL0245	Contactor	L3	1EL0520		Terminal Block		1EL0534
5	DAVID1786	Brown	6-1/2"	2EL1207	Timer	1	1EL0520	2EL0245	Contactor	A1	1EL0520
6		Black		2EL0245	Contactor	L2	1EL0520		Terminal Block		1EL0534

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# NOTES

Stir-Guard 440V, Option (106N136)

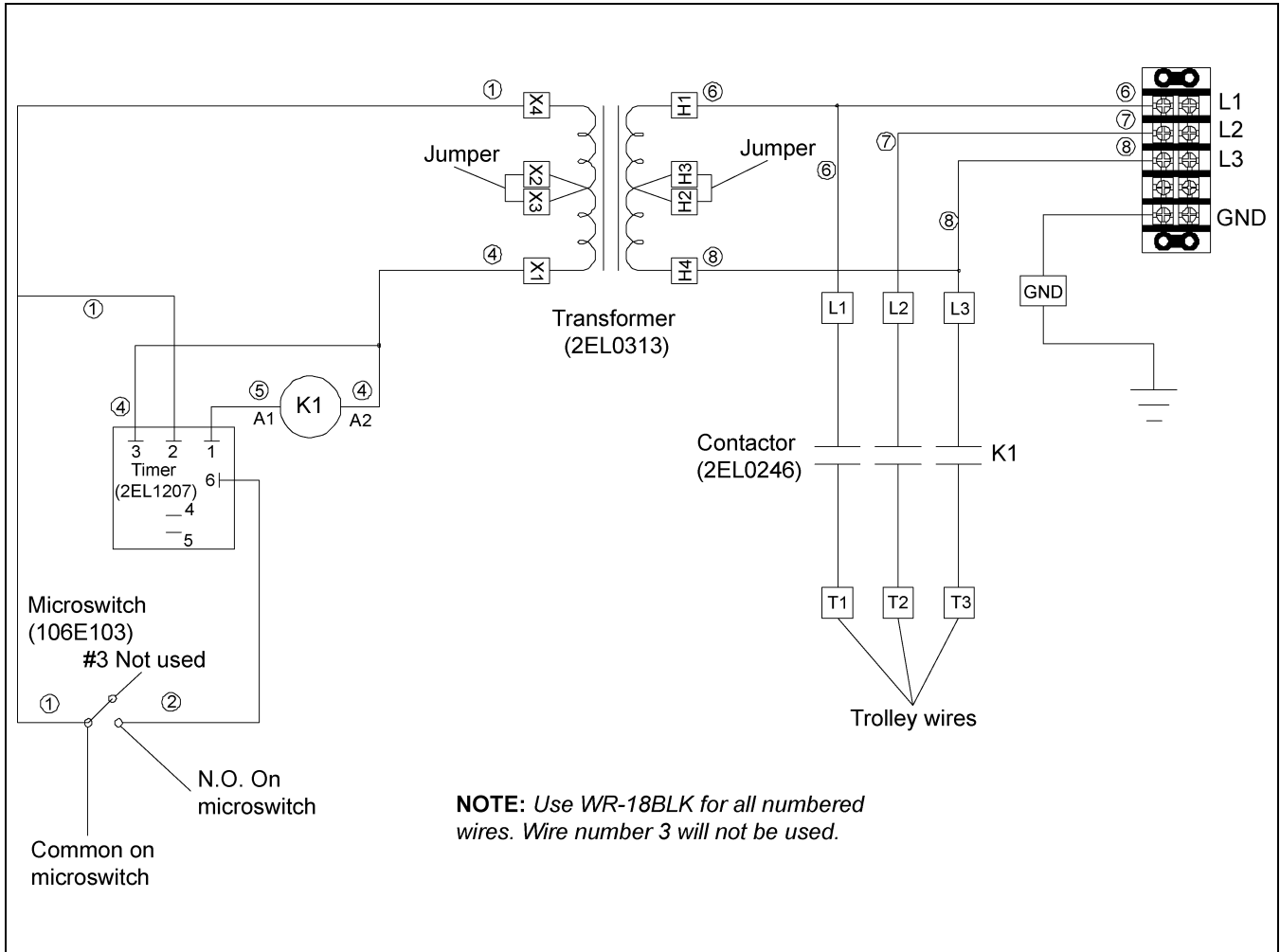




Stir-Guard 440V, Option (106N136) Parts List

Ref #	Part #	Description	Qty
1	106A083	Plate Stir-Guard Mount	1
2	106E065	Stir-Guard - 440V	1
3	2EL1207	Timer, 45 Minute	1
4	2EL0245	Relay, Magnetic, 40A 40 Amp, 208/240V Coil	1
5	2FH0474	Screw, TCSF #8-32 x 1" HWHS ZN	2
6	2FH0775	Screw, MS #8-32 x 3/4" PHS ZN	2
7	2EL0313	Transformer, Core and Coil	1
8	106E066	Plate, Stir-Guard	1
9	S-9317	Carriage Bolt 1/4"-20 x 1-1/2" ZN Grade 2	2
10	106E073	Stand Off Switch, Stir-Guard	2
11	106E103	Switch Stir-Guard	1
12	S-1430	Flat Washer 1/4" ZN Grade 2	2
13	S-7215	Flange Nut 1/4"-20 ZN	3
14	S-6337	Screw, MS #8-32 x 1/2" PHP ZN Grade 2	3
15	1FH0993	Flange Lock Nut #8-32 Plated	12
16	S-6997	Bolt, HHCS 1/4"-20 x 1-1/4" ZN Grade 5	1

Stir-Guard 440 VAC 3 Phase (106N136)

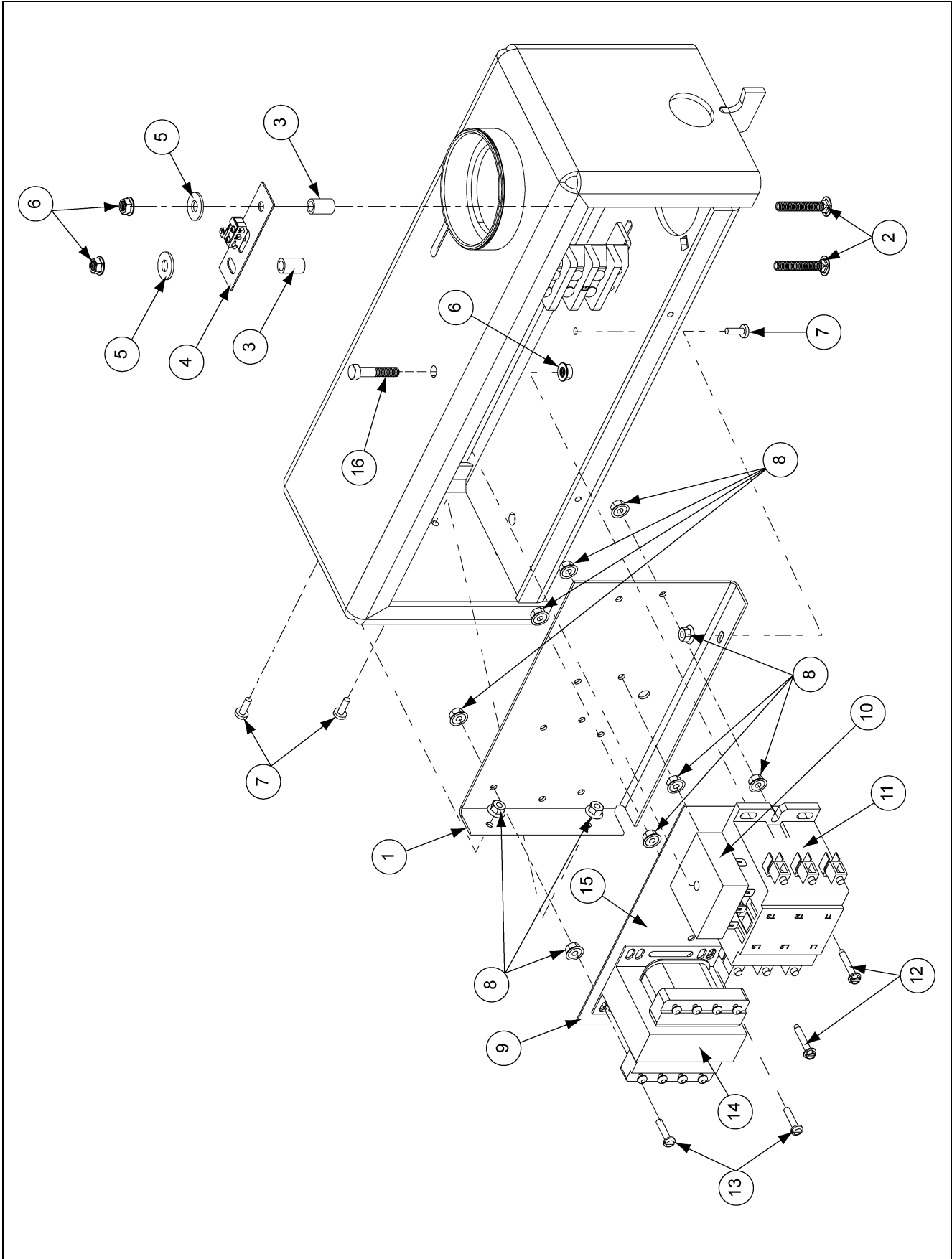


Wire Label	Wire Name	Wire Color	Total Length	Start Component	Start Component Description	Start Pin	Start Terminal	End Component	End Component Description	End Pin	End Terminal
1	DAVID1340	Orange	A/R	2EL1207	Timer	2	1EL0520	2EL0313	Transformer	X4	1EL0529
1		Black	A/R	106E103	Switch	Common	Supplied with Switch	2EL1207	Timer	2	1EL0520
2		Black	A/R	106E103	Switch	N.O.	Supplied with Switch	2EL1207	Timer	6	1EL0520
4	DAVID1340	Black	A/R	2EL1207	Timer	3	1EL0520	2EL0313	Transformer	X1	1EL0529
4	DAVID1340	Brown	A/R	2EL0245	Contactor	A1	1EL0520	2EL0313	Transformer	X1	1EL0529
5	DAVID1340	Black	A/R	2EL1207	Timer	1	1EL0520	2EL0245	Contactor	A2	1EL0520
6	DAVID1340	Black	A/R	2EL0245	Contactor	L1	1EL0520	2EL0313	Transformer	H1	1EL0529
6		Black	A/R	2EL0245	Contactor	L1	1EL0520		Terminal Block		1EL0534
7		Black	A/R	2EL0245	Contactor	L2	1EL0520		Terminal Block		1EL0534
8	DAVID1340	Black	A/R	2EL0245	Contactor	L3	1EL0520	2EL0313	Transformer	H4	1EL0529
8		Black	A/R	2EL0245	Contactor	L3	1EL0520		Terminal Block		1EL0534

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# NOTES

Stir-Guard 575V, Option (106N214)

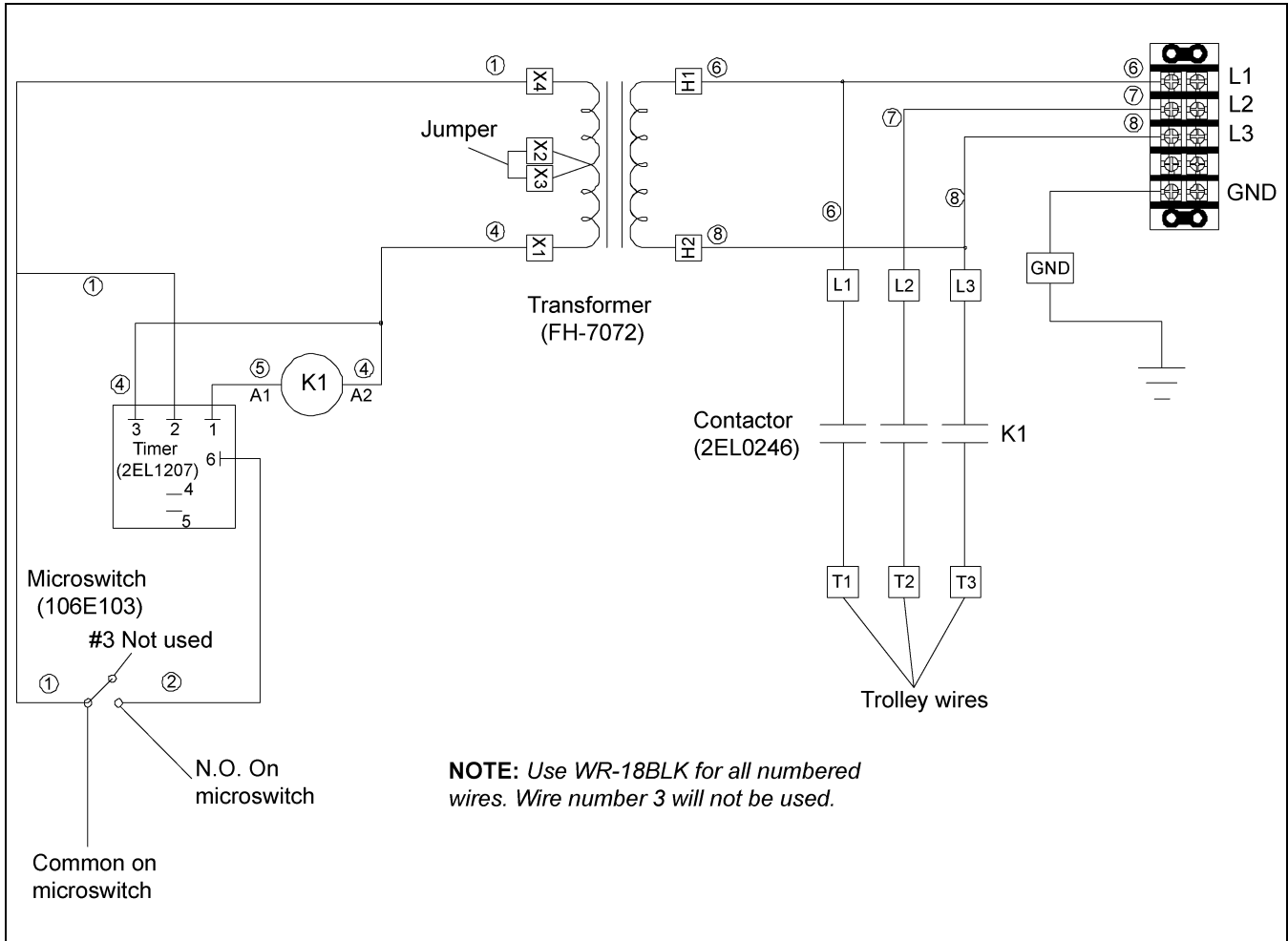


Stir-Guard 575V, Option (106N214) Parts List

Ref #	Part #	Description	Qty
1	106A083	Plate Stir-Guard Mount	1
2	S-9317	Carriage Bolt 1/4"-20 x 1-1/2" ZN Grade 2	2
3	106E073	Stand Off Switch, Stir-Guard	2
4	106E103	Switch Stir-Guard	1
5	S-1430	Flat Washer 1/4" ZN Grade 2	2
6	S-7215	Flange Nut 1/4"-20 ZN	3
7	S-6337	Screw, MS #8-32 x 1/2" PHP ZN Grade 2	3
8	1FH0993	Flange Lock Nut #8-32 Plated	12
9	106E087	Stir-Guard - 575V	1
10	2EL1207	Timer, 45 Minute	1
11	2EL0245	Relay, Magnetic, 40A 40 Amp, 208/240V Coil	1
12	2FH0474	Screw, TCSF #8-32 x 1" HWHS ZN	2
13	2FH0775	Screw, MS #8-32 x 3/4" PHS ZN	2
14	FH-7072	Transformer, 575/220V 50VA 575/230 Design III Stir-Guard Squared 907	1
15	106E066	Plate, Stir-Guard	1
16	S-6997	Bolt, HHCS 1/4"-20 x 1-1/4" ZN Grade 5	1

# Design III Stir-Guard Option

## Stir-Guard 575 VAC 3 Phase (106N214)



Wire Label	Wire Name	Wire Color	Total Length	Start Component	Start Component Description	Start Pin	Start Terminal	End Component	End Component Description	End Pin	End Terminal
1	DAVID1340	Orange	A/R	2EL1207	Timer	2	1EL0520	FH-7072	Transformer	X4	1EL0529
1		Black	A/R	106E103	Switch	Common	Supplied with Switch	2EL1207	Timer	2	1EL0520
2		Black	A/R	106E103	Switch	N.O.	Supplied with Switch	2EL1207	Timer	6	1EL0520
4	DAVID1340	Black	A/R	2EL1207	Timer	3	1EL0520	FH-7072	Transformer	X1	1EL0529
4	DAVID1340	Brown	A/R	2EL0245	Contactor	A1	1EL0520	FH-7072	Transformer	X1	1EL0529
5	DAVID1340	Black	A/R	2EL1207	Timer	1	1EL0520	2EL0245	Contactor	A2	1EL0520
6	DAVID1340	Black	A/R	2EL0245	Contactor	L1	1EL0520	FH-7072	Transformer	H1	1EL0529
6		Black	A/R	2EL0245	Contactor	L1	1EL0520		Terminal Block		1EL0534
7		Black	A/R	2EL0245	Contactor	L2	1EL0520		Terminal Block		1EL0534
8	DAVID1340	Black	A/R	2EL0245	Contactor	L3	1EL0520	FH-7072	Transformer	H4	1EL0529
8		Black	A/R	2EL0245	Contactor	L3	1EL0520		Terminal Block		1EL0534