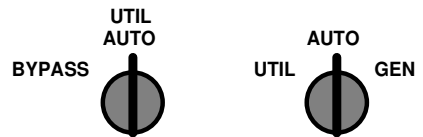
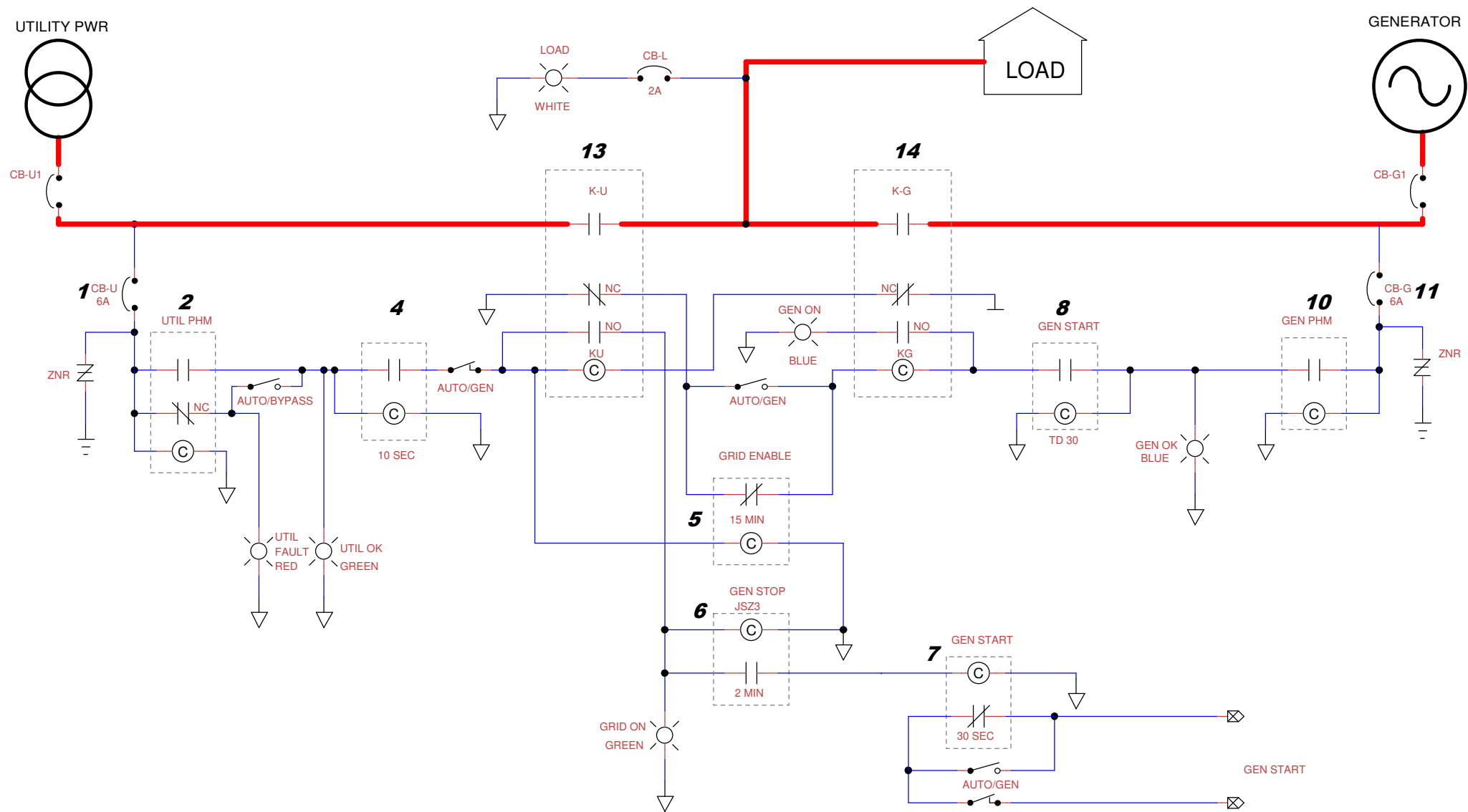


# AUTOMATIC TRANSFER SWITCH

## CONTROL BLOCK DIAGRAM



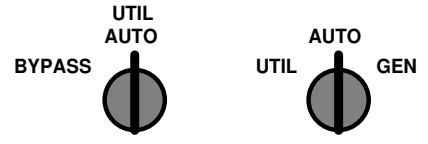
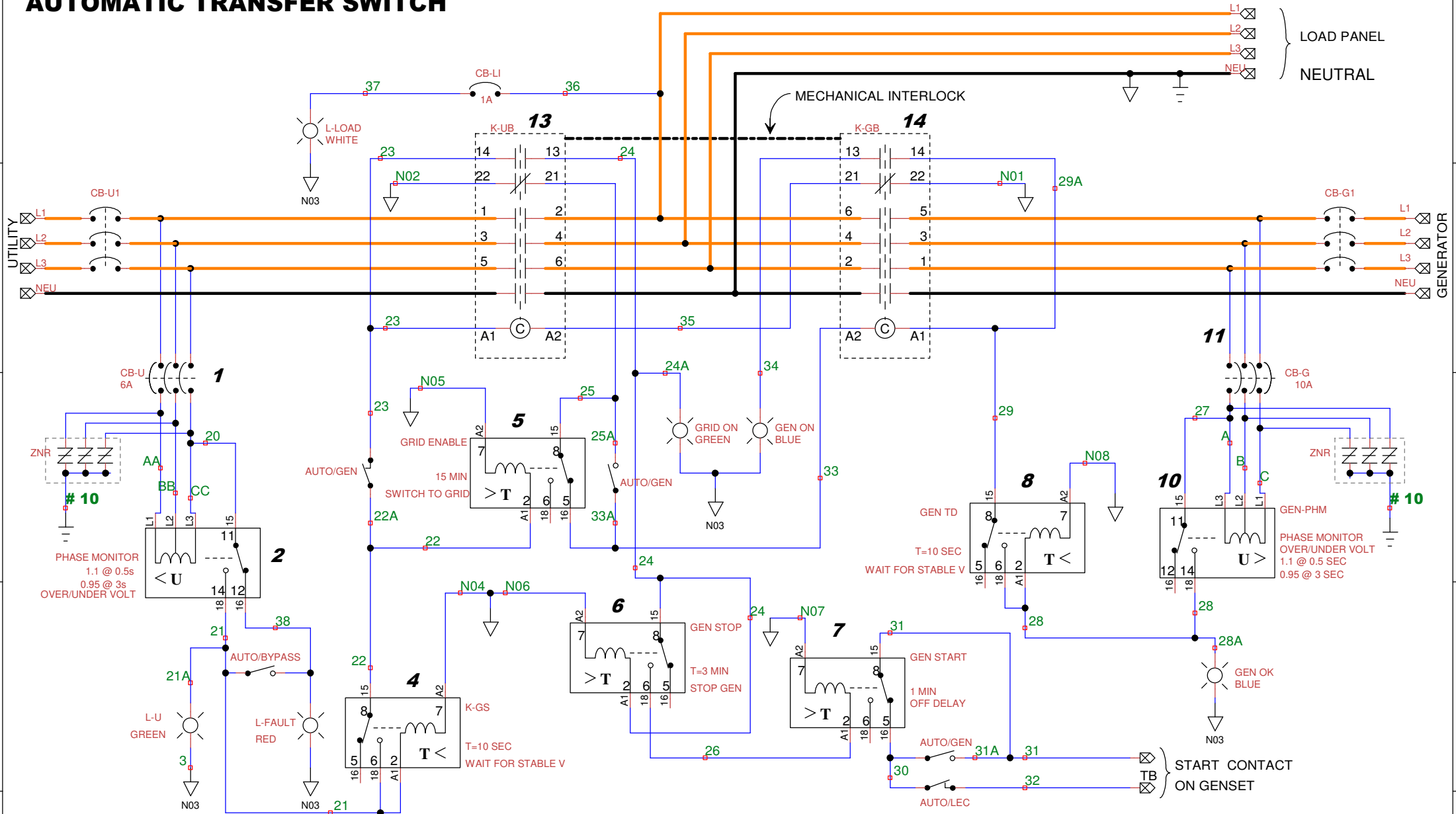
ALL SWITCHES SHOWN IN AUTO (CENTER POSITION)

ALL CONTROL WIRES #16AWG (1.5mm)

**CONSULT AN ELECTRICAL ENGINEER TO PROPERLY SELECT:**  
 UTILITY, GENERATOR & LOAD WIRE SIZES  
 CB-U1, CB-G1, K-U, K-G RATINGS

Title Automatic Transfer Switch		
Author Jeff Kennell, Alan Shea MetaTek.org		
File ... E116.1-3 r6 Auto Transfer Switch, Selector.dsn	Sheets 3	
Document E116.1	Date 2019-11-30	Revision 6

# AUTOMATIC TRANSFER SWITCH



ALL CONTROL WIRES #16AWG (1.5mm)  
**CONSULT AN ELECTRICAL ENGINEER TO PROPERLY SELECT:**  
 UTILITY, GENERATOR & LOAD WIRE SIZES  
 CB-U1, CB-G1, K-U, K-G RATING

Title Automatic Transfer Switch	
Author Jeff Kennell, Alan Shea MetaTek.org	
File ... E116.1-3 r6 Auto Transfer Switch, Selector.dsn	Sheets 3
Document E116.2	Date 2019-11-30
	Revision 6

# CONTACTOR TRANSFER SWITCH

## PARTS LIST

Except marked, parts from [www.factorymation.com](http://www.factorymation.com)

2 (+1)	METASOL #MC-400A-22-AC/DC100-200	POWER CONTACTOR
1	METASOL #AR180	MECHANICAL INTERLOCK
1	METASOL #RBP-300/400	REVERSING BASE PLATE
4	METASOL #AJ-400	LUG TERMINALS
2	METASOL #AP-400	TERMINAL COVER
2 +1	HRN-56-480	PHASE MONITOR
2 +1	HRN-33	HIGH VOLTAGE MONITOR
4	<b>TIMER, SEE OPTIONS BELOW.</b>	UNIVERSAL TIMER, SET AS DELAY ON
1 +1	CRM-82TO-UNI	GEN START TIMER
2 +1	NB1-B6-3P	3P 6A SUPPLEMENTARY CIRCUIT BREAKER FOR CONTROLS

## OPTIONAL

2 +1	FMD16-DS220V-2	GREEN INDICATOR-220V
2 +1	FMD16-DS220V-4	BLUE INDICATOR-220V
1 +1	FMD16-DS220V-0	WHITE INDICATOR-220V
1 +1	NB1-B6-1P	1P 6A SUPPLEMENTARY CIRCUIT BREAKER FOR INDICATOR
1	MPDB67111	NEUTRAL DISTRIBUTION BLOCK- \$36 (REALLY MAKES HOOKING UP ALL THOSE NEUTRAL WIRES EASY!)

\* +1 EACH UNIT FOR SPARE

## OTHER THINGS YOU MAY NEED:

DIN RAIL, ENCLOSURE, STEP DRILL TO 1", 14-16G WIRE IN VARIOUS COLORS, WIRE LABELS

## TIMER OPTIONS

OPTION 1--UNIVERSAL. MUST BE SET TO CORRECT FUNCTION, \$42 EACH

4 +1	CRM-61-UNI	UNIVERSAL TIMER, SET AS DELAY ON
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OPTION 2--DELAY ON ONLY, MUST GET RIGHT TIME RANGE FOR EACH. \$32 EACH

2 +1	CRM-81J-UNI-ZR-1M	DELAY ON, 6-60 S, STABILIZATION DELAY TIMER
1 +1	CRM-81J-UNI-ZR-10M	DELAY ON, 1-10 MIN, GENSET COOLDOWN DELAY TIMER
1 +1	CRM-81J-UNI-ZR-1H	DELAY ON, 6-60 MIN, UTILITY ENABLE DELAY TIMER

OPTION 3--WIDE RANGE DELAY ON. DOES NOT DIN RAIL MOUNT, \$30 EACH FROM ALLIED ELECTRONICS

4 +1	ARTISAN CONTROLS 438USAS	DELAY ON TIMER
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**(Allied Electronics)**

AS YOU CAN SEE, TIMERS CAN VARY WIDELY. GET THE CORRECT FUNCTION AND RANGE IF YOU SOURCE LOCALLY. NOTE THAT THE TIMES SHOWN ARE SUGGESTED, YOU MAY WANT DIFFERENT TIMES, WHICH MAY AFFECT THE CHOICES IN OPTION 2 ABOVE

Title Automatic Transfer Switch - Parts List		
Author Jeff Kennell, Alan Shea MetaTek.org		
File ... E116.1-3 r6 Auto Transfer Switch, Selector.dsn		Sheets 3
Document E116.3	Date 2015-09-7	Revision 6