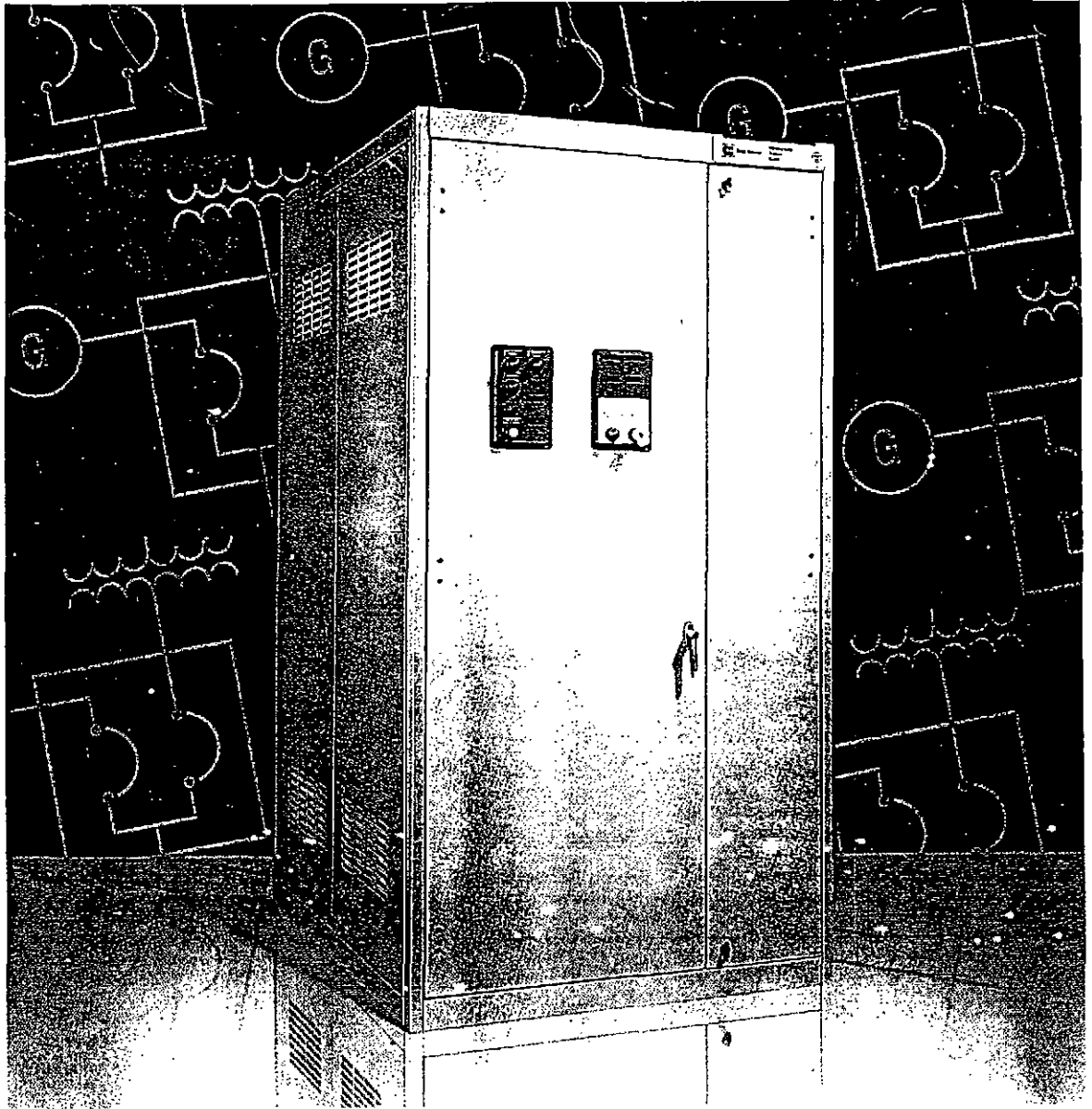


## Westinghouse Transfer Switch Equipment

Service Equipment Rated  
Transfer Switches  
100 - 4000 Amperes

Our exclusive Service Equipment rated transfer switches offer the ultimate in power loss protection. Located at the point of service entrance, they combine service disconnect, overcurrent protection and ATS functions—all in one compact assembly.



Cutler-Hammer

**EAT•N**



## AUTOMATIC TRANSFER SWITCH

### Enclosure:

Cutler-Hammer Nema 1 enclosures are constructed of high quality, 12 gauge steel with welded joints and include a key lockable door handle as standard. They meet all current, applicable NEMA and UL standards for conduit entry, cable bending, gutter space and shielding of live components.

### Neutrals:

All 4 pole switches are supplied with switched neutral contacts of identical construction and rating as the power poles. They are mounted on the power contact shaft with the enclosed contact assemblies.

### Standard Withstand, Closing and Interrupting Ratings:

Rating when used with upstream circuit breaker. All ratings are KA.

Rating when used with upstream fuse. All ratings are KA.

Switch Amp Rating	Rating when used with upstream circuit breaker. All ratings are KA.			Rating when used with upstream fuse. All ratings are KA.		
	240V	480V	600V	Max Fuse Rating	Fuse Type	480V
1200	85	65	42	1600	L	200

### Power Connections:

Breaker	Cables Per Phase	Range of Wiring Sizes	Type of Conductor
SPE	4	4/0 thru 500MCM	Cu/Al



## Automatic Transfer Switch Solid State Logic

The Cutler-Hammer Solid State Logic is a highly reliable, flexible intelligence system designed to comply with your most demanding standby power application. This field proven logic provides the ultimate in protection against power interruption by use of precision calibrated solid state components. Solid State logic features:

- Complete 3 phase, close differential undervoltage sensing of normal source is standard. Factory set at 70% dropout, 90% pickup and field adjustable for alternate settings.
- Most optional sensing and timing functions performed by solid state, plug-in printed circuit cards
- Solid state cards equipped with adjustable knobs and L.E.D. indicators for ease of field settings and diagnostics.
- Sensing cards (voltage and frequency) and timing cards are interchangeable by function, but are keyed to prevent improper insertion of card of dissimilar function. (i.e. timing card in sensing card slot).
- Multi-tap transformer package permits line voltage selection of 208, 220, 240, 380, 415, 480, or 600 volts AC, 50 or 60 Hz simply by proper insertion of voltage selection plug.
- Options 2, 30A, 32A, and, 35A performed by clearly marked universal solid state panel mounted timers with 10 amp contact ratings.
- Wide range of field installable option kits available with retention of UL label.
- Silver-cadmium plated engine start contacts are rated 10 amps at 30 VDC. They provide closure to Engine controller when the Normal source fails.



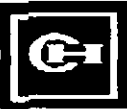
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## Automatic Transfer Switch Power Switching Panel

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The power switching panel consists of the main power contacts which connect and disconnect the load from the sources of power via the electrically driven, stored energy mechanism integral to the System Pow-R switching devices. The power switching panel includes the following features:

- Main contacts are two mechanically interlocked, high withstand Systems Pow-R insulated case switches.
- High speed, stored energy, switching mechanisms provide for fast transfer. Energized from power source to which transfer is made.
- Conservatively rated main contacts insure long life at 100% of nameplate rating.
- Meets or exceeds the standards set forth in UL1008, UL 1087, and UL 489.
- Mechanical and electrical interlocking insure that both power sources cannot be paralleled.
- Safe manual operation under full load accomplished via mechanical push-buttons on face of Systems Pow-R devices.
- Common load bus and power connections are located at the rear of the power panel and shielded by dead front to insure maximum personnel safety.
- Three normally open, three normally closed auxiliary contacts for both normal and emergency sources supplied as standard.
- Rear cable connected via solderless pressure type terminals. Rear bus connections available when Option 20A is selected.
- Power panel control wiring terminated to insulated, quick-disconnect plugs for interconnection with logic panel. Provides positive, safe disconnection for electrical isolation of electrical operator as well as corresponding logic panel.



## Options

Option	Description
12L	Amber pilot light indicates an overcurrent trip condition on the normal power source switching device.
12M	Amber pilot light indicates an overcurrent trip condition on the emergency power source switching device.
16B	Integral overcurrent protection on both power sources. Includes a lock-out function that prevents further automatic transfer operation until the appropriate breaker is manually reset. Units rated 1200 Amps and greater will also be supplied with an amber indicating light marked "TRIPPED CONDITION" indicating an overcurrent trip status.
37A	Service entrance rated without ground fault protection.

37B

# Cutler-Hammer Automatic Transfer Switch

## Voltage Sensing Card Style Number 7820C97G01

The voltage sensing card is a very versatile sensing card which may be used with a Westinghouse Transfer Switch. The card may be used as a replacement for older versions of the voltage sensing card in existing equipment.

The card may be "programmed" to perform either undervoltage, or overvoltage sensing, on single or three phase applications.

Programming of the card is accomplished by positioning jumpers on the positions labeled J1 through J7 on the board itself. This allows easy modification of the card at the users' discretion. Both function and the pickup and dropout values may be easily changed by following the instructions provided.

Cards shipped from the factory are programmed to the users' original specification, or to the standard pickup and dropout values as follows:

<b>Function</b>	<b>Pickup</b>	<b>Dropout</b>
Undervoltage	90%	80%
Overvoltage	110%	115%

### Programming the Card

Reprogramming of the card may be accomplished by using the attached instructions.

It is recommended that you remove ALL jumpers from J1 through J7. As supplied from the factory there are enough jumpers to program the card for either function, and value.

The card may be programmed for either UNDERVOLTAGE or OVERVOLTAGE, but NOT BOTH!! To attempt to program the card for both voltage sensing functions WILL CAUSE THE CARD TO MALFUNCTION, AND POSSIBLY DAMAGE THE ELECTRONICS ON THE CARD !!!

## Undervoltage Programming

1. Place a jumper on J6
2. Insure that there IS NOT a jumper on J7
3. Choose the desired pickup and dropout values from TABLE 1, and place jumpers on the pins indicated.
4. For THREE phase sensing place jumper on J1 (see CAUTION below)

**Table 1**  
**Undervoltage Pickup and Dropout**

Pickup (%)	Dropout (%)	Jumpers
95	90	J2
	85	J2,J4
	80	J2,J5
	75	J2,J4,J5
90	85	J3
	80	J3,J4
	75	J3,J5
	70	J3,J4,J5
85	80	J2,J3
	75	J2,J3,J4
	70	J2,J3,J5
	65	J2,J3,J4,J5

### CAUTION:

If the card is to be used for THREE PHASE sensing, you must insure that the sensing position (Normal or Emergency) is fed by a three phase transformer package. On three phase units sold by Westinghouse, the standard is three phase sensing on NORMAL, and single phase sensing on EMERGENCY.

THREE PHASE SENSING ON EMERGENCY IS AVAILABLE ONLY AS A FACTORY INSTALLED OPTION. If in doubt, contact the factory for assistance.

## Underfrequency Programming

1. Place a jumper on J8
2. Insure that there IS NOT a jumper on J9
3. Choose the desired pickup and dropout values from TABLE 3, and place jumpers on the indicated pins.

**Table 3  
Underfrequency Pickup and Dropout**

Pickup (Hz)	Dropout (Hz)	Jumpers
46	44	none
47	45	J11
48	46	J12
49	47	J11,J12
56	54	J10
57	55	J10,J11
58	56	J10,J12
59	57	J10,J11,J12

## Overfrequency Programming

1. Place a jumper on J9
2. Insure that there IS NOT a jumper on J8
3. Choose the desired pickup and dropout values from TABLE 4, and place jumpers on the indicated pins.

**Table 4  
Overfrequency Pickup and Dropout**

Pickup (Hz)	Dropout (Hz)	Jumpers
51	53	none
52	54	J11
53	55	J12
54	56	J11,J12
61	63	J10
62	64	J10,J11
63	65	J10,J12
64	65	J10,J11,J12

**Table 5**  
**Nominal System Voltages**

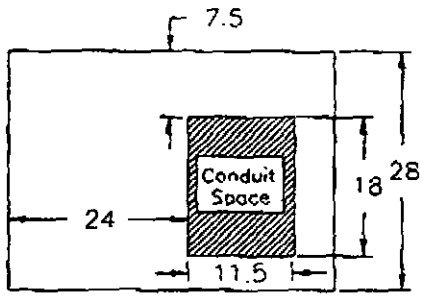
	120	208	220	240	380	415	480	600	
65%	78	135	143	156	247	270	312	390	
70%	84	146	154	168	266	291	336	420	
75%	90	156	165	180	285	311	360	450	
80%	96	166	176	192	304	332	384	480	Std UV Dropout
85%	102	177	187	204	323	353	408	510	
90%	108	187	198	216	342	374	432	540	Std UV Pickup
95%	114	198	209	228	361	394	456	570	
<b>100%</b>	<b>120</b>	<b>208</b>	<b>220</b>	<b>240</b>	<b>380</b>	<b>415</b>	<b>480</b>	<b>600</b>	
105%	126	218	231	252	399	435	504	630	
110%	132	229	242	264	418	457	528	660	Std OV Pickup
115%	138	239	253	276	437	477	552	690	Std OV Dropout
120%	144	249	264	288	456	498	576	720	
125%	150	260	275	300	475	519	600	750	
130%	156	270	286	312	494	540	624	780	
135%	162	281	297	324	513	560	648	810	

# STANDARD SENSING CARD PROGRAMMING

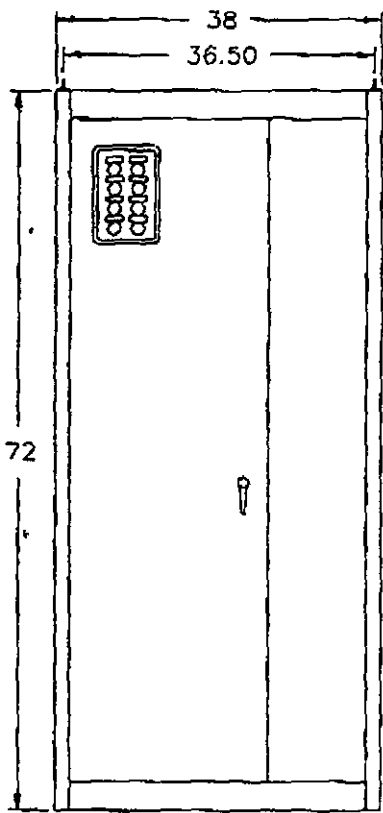
VOLTAGE SENSING CARD		
1 PHASE UV	UV PU = 90% UV DO = 80%	
3 PHASE UV	UV PU = 90% UV DO = 80%	
1 PHASE OV	OV PU = 110% OV DO = 115%	
3 PHASE OV	OV PU = 110% OV DO = 115%	
COMBINATION SENSING CARD		
1 PHASE UV/UF	UV PU = 90% UV DO = 80% F PU = 58Hz F DO = 56Hz	
3 PHASE UV/UF	UV PU = 90% UV DO = 80% F PU = 58Hz F DO = 56Hz	
1 PHASE OV/OF	OV PU = 110% OV DO = 115% OF PU = 62Hz OF DO = 64Hz	
3 PHASE OV/OF	OV PU = 110% OV DO = 115% OF PU = 62Hz OF DO = 64Hz	



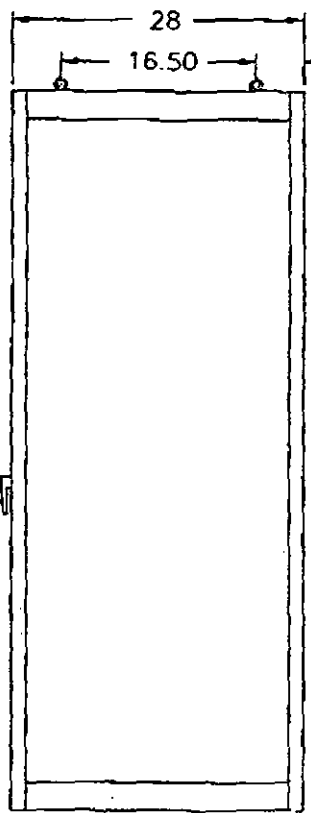
# Automatic Transfer Switch Dimensional Data 1200 Amps



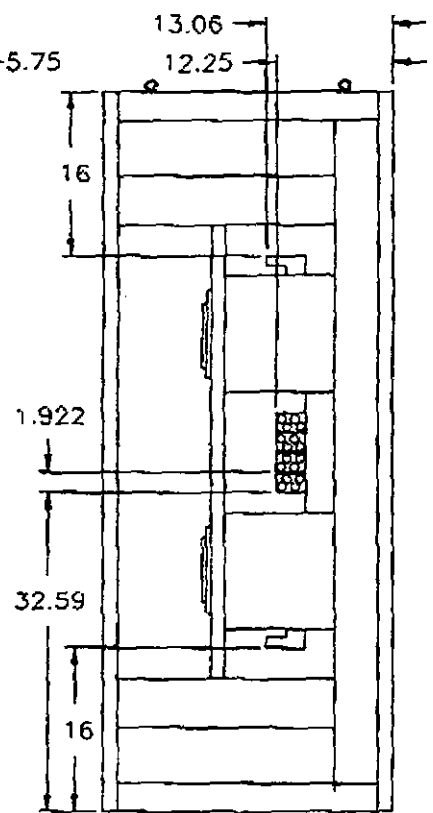
Top View



Front View



Side View



Side View

All dimensions are in inches

