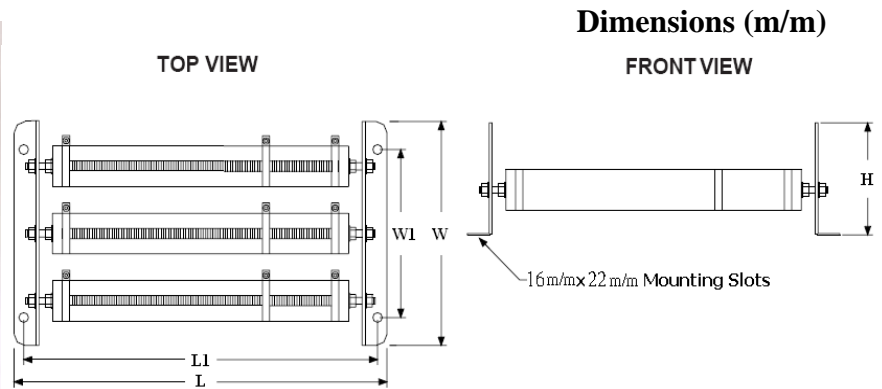


## 3- PHASE ADJUSTABLE BALLAST RESISTORS

### 1/4 to 10HP squirrel-cage induction motors for soft starting



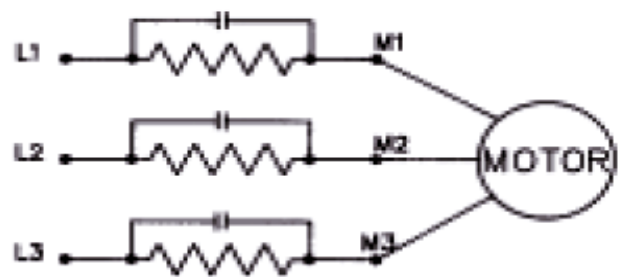
All units are provided with a mill galvanized louvered cover

PART NUMBER	MOTOR HP	MOTOR AMPS CONT.	OHMS PER PHASE	DIMENSIONS (m/m)				
				L length	W width	H high	L1 Mount-slots	W1 Mount-slots
<b>230 VOLTS</b>								
SA 230-H14	1/4	1.4	46.5	310	310	158	282	190
SA 230-H13	1/3	1.8	46.5	310	310	158	282	190
SA 230-H12	1/2	2.0	19.9	310	310	158	282	190
SA 230-H34	3/4	2.8	14.2	310	310	158	282	190
SA 230-1H	1	3.6	11.1	310	310	158	282	190
SA 230-1H5	1-1/2	5.2	7.7	310	310	158	282	190
SA 230-2H	2	6.8	5.9	310	310	158	282	190
SA 230-3H	3	9.6	4.1	310	310	158	282	190
SA 230-5H	5	15.2	2.6	490	310	158	458	190
SA 230-7H5	7-1/2	22.0	1.8	490	310	158	458	190
SA 230-10H	10	28.0	1.4	490	310	158	458	190
<b>460 VOLTS</b>								
SA 460-H14	1/4	0.7	150	310	310	158	282	190
SA 460-H13	1/3	0.9	150	310	310	158	282	190
SA 460-H12	1/2	1.0	79.9	310	310	158	282	190
SA 460-H34	3/4	1.4	56.9	310	310	158	282	190
SA 460-1H	1	1.8	44.3	310	310	158	282	190
SA 460-1H5	1-1/2	2.6	30.6	310	310	158	282	190
SA 460-2H	2	3.4	23.4	310	310	158	282	190
SA 460-3H	3	4.8	16.6	310	310	158	282	190
SA 460-5H	5	7.6	10.5	490	310	158	458	190
SA 460-7H5	7-1/2	11.0	7.2	490	310	158	458	190
SA 460-10H	10	14.0	5.7	490	310	158	458	190
<b>575 VOLTS</b>								
SA 575-H12	1/2	0.8	124.5	310	310	158	282	190
SA 575-H34	3/4	1.1	90.5	310	310	158	282	190
SA 575-1H	1	1.4	71.1	310	310	158	282	190
SA 575-1H5	1-1/2	2.1	47.4	310	310	158	282	190
SA 575-2H	2	2.7	36.9	310	310	158	282	190
SA 575-3H	3	3.9	25.5	310	310	158	282	190
SA 575-5H	5	6.1	16.3	490	310	158	458	190
SA 575-7H5	7-1/2	9.0	11.1	490	310	158	458	190
SA 575-10H	10	11.0	9.1	490	310	158	458	190

These resistors are factory set for 70% reduced voltage (50% of normal starting torque) and are reduced speed or two speed control of small cranes.

\*Continuous Amp Capacity at 375° rise

\*Resistance in Ohms at 25°C ± 10%



1 STEP/2 SPEED (IN MOST CASES)

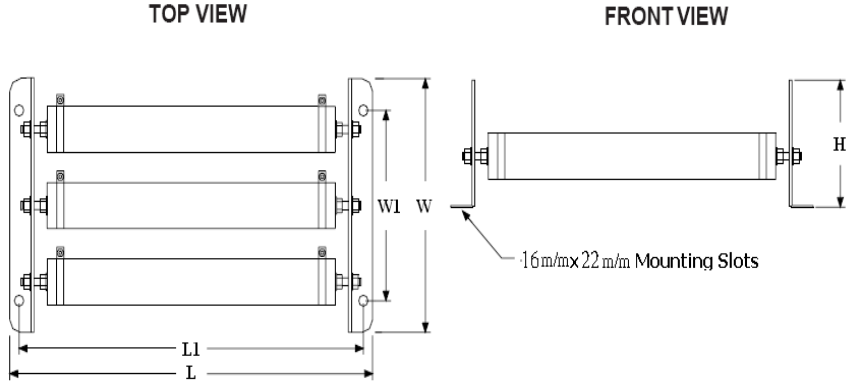
**Schematic for AC Squirrel Cage Motor Control.**



# Wye-Delta Closed Transition Starting Resistors

## 10-500HP Y- $\Delta$ Motors For Soft Starting

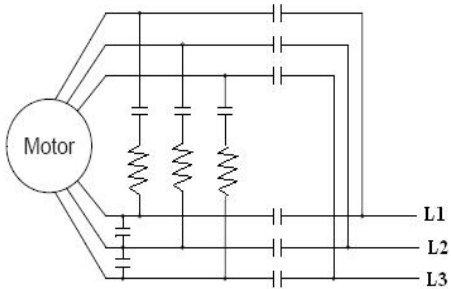
Dimensions (m/m)



All units are provided with a mill galvanized louvered cover

When transferring the motor from wye to delta connection, the resistor works as a reduced voltage starting resistor by starting a motor at 58% reduced voltage. Thus providing a smoother acceleration of the motor from reduced voltage to full voltage to eliminate the surge current that occurs.

### Schematic for a Wye-Delta Closed Transition Starting Resistors



# Wye-Delta Closed Transition Starting Resistors

## 10-500HP Y-△ Motors For Soft Starting

PART NUMBER	MOTOR H.P.	MOTOR AMPS	OHMS PER PHASE	BOX DIMENSIONS(m/m)				
				L length	W width	H high	L1 Mount-slots	W1 Mount-slots
For 230V								
YD230-10	10	28	4.70	310	310	158	282	190
YD230-15	15	42	3.20	310	310	158	282	190
YD230-20	20	54	2.50	310	310	158	282	190
YD230-25	25	68	1.90	310	310	158	282	190
YD230-30	30	80	1.70	310	310	158	282	190
YD230-40	40	104	1.30	310	310	158	282	190
YD230-50	50	130	1.00	490	310	158	458	190
YD230-60	60	154	0.85	490	310	158	458	190
YD230-75	75	192	0.70	490	310	158	458	190
YD230-100	100	248	0.55	490	310	158	458	190
YD230-125	125	312		490	310	158	458	190
YD230-150	150	360		490	310	158	458	190
YD230-200	200	480		673	310	158	642	190
YD230-250	250	600		673	310	316	642	190
YD230-300	300	720		673	310	316	642	190
YD230-350	350	840		673	310	474	642	190
YD230-400	400	960		673	310	474	642	190
YD230-450	450	1080		673	310	632	642	190
YD230-500	500	1200		673	310	632	642	190
For 380 V								
YD380-10	10	17	13.00	310	310	158	282	190
YD380-15	15	25	8.60	310	310	158	282	190
YD380-20	20	33	6.70	310	310	158	282	190
YD380-25	25	41	5.30	310	310	158	282	190
YD380-30	30	48	4.50	310	310	158	282	190
YD380-40	40	63	3.50	310	310	158	282	190
YD380-50	50	79	2.80	490	310	158	458	190
YD380-60	60	93	2.40	490	310	158	458	190
YD380-75	75	116	1.90	490	310	158	458	190
YD380-100	100	150	1.50	490	310	158	458	190
YD380-125	125	189		490	310	158	458	190
YD380-150	150	217		490	310	158	458	190
YD380-200	200	290		673	310	158	642	190
YD380-250	250	363		673	310	316	642	190
YD380-300	300	435		673	310	316	642	190
YD380-350	350	508		673	310	474	642	190
YD380-400	400	580		673	310	474	642	190
YD380-450	450	653		673	310	632	642	190
YD380-500	500	726		673	310	632	642	190

# Wye-Delta Closed Transition Starting Resistors

## 10-500HP Y-△ Motors For Soft Starting

PART NUMBER	MOTOR H.P.	MOTOR AMPS	OHMS PER PHASE	BOX DIMENSIONS(m/m)				
				L length	W width	H high	L1 Mount-slots	W1 Mount-slots
For 460V								
YD460-10	10	14	19.00	310	310	158	282	190
YD460-15	15	21	12.70	310	310	158	282	190
YD460-20	20	27	9.90	310	310	158	282	190
YD460-25	25	34	7.80	310	310	158	282	190
YD460-30	30	40	6.60	310	310	158	282	190
YD460-40	40	52	5.10	310	310	158	282	190
YD460-50	50	65	4.00	490	310	158	458	190
YD460-60	60	77	3.50	490	310	158	458	190
YD460-75	75	96	2.80	490	310	158	458	190
YD460-100	100	124	2.10	490	310	158	458	190
YD460-125	125	156		490	310	158	458	190
YD460-150	150	180		490	310	158	458	190
YD460-200	200	240		673	310	158	642	190
YD460-250	250	300		673	310	316	642	190
YD460-300	300	360		673	310	316	642	190
YD460-350	350	420		673	310	474	642	190
YD460-400	400	480		673	310	474	642	190
YD460-450	450	540		673	310	632	642	190
YD460-500	500	600		673	310	632	642	190
For 575 V								
YD575-10	10	11	30.00	310	310	158	282	190
YD575-15	15	17	19.50	310	310	158	282	190
YD575-20	20	22	15.00	310	310	158	282	190
YD575-25	25	27	12.30	310	310	158	282	190
YD575-30	30	32	10.40	310	310	158	282	190
YD575-40	40	41	8.10	310	310	158	282	190
YD575-50	50	52	6.40	490	310	158	458	190
YD575-60	60	62	5.40	490	310	158	458	190
YD575-75	75	77	4.30	490	310	158	458	190
YD575-100	100	99	3.40	490	310	158	458	190
YD575-125	125	125		490	310	158	458	190
YD575-150	150	144		490	310	158	458	190
YD575-200	200	192		673	310	158	673	190
YD575-250	250	240		673	310	316	673	190
YD575-300	300	288		673	310	316	673	190
YD575-350	350	336		673	310	474	673	190
YD575-400	400	384		673	310	474	673	190
YD575-450	450	432		673	310	632	673	190
YD575-500	500	480		673	310	632	673	190