

Overload Relays

HP Rated starters are priced and stocked less the overload relays. The overload relays can be ordered separately for field installation or they can be factory installed.

Factory Installed Overload Relay:

A) Select the appropriate overload relay from the chart below. Then add the two digit suffix number (shown bold below) of the overload relay to the starter Catalog Number. See example shown. If the motor FLA is not

known, refer to Application Data Section for a typical value.

B) Add the price of the overload relay to the starter price to obtain the complete list price.

Example: 7½ Hp at 460 volts, 1800 RPM, 9.7 FLA The starter Catalog Number would be **SXLHB1460** The overload relay would be a 3UA5000-**1K** Add the suffix "**1K**" to the end of the starter Catalog Number **SXLHB14601K \$238.00 + \$72.00 = \$310.00** Total List Price.

Type "3UA" Overload Relay Setting Instructions:

For motors with a service factor of 1.00, multiply motor nameplate full load current (FLA) by 0.92 and set overload relay dial to that value.

For motors with a service factor of 1.15, with a marked temperature rise not exceeding 40°C, set dial to full load current marked on motor nameplate.

HP Rated Starter Size ^①	Overload Relay Setting Ranges In Amperes	Overload Relay For Full Voltage Starters HP Rated Type Only	Price \$	
HA HB	0.1-0.16	3UA50 00-0A	72.	
	0.16-0.25	3UA50 00-0C		
	0.25-0.4	3UA50 00-0E		
	0.4-0.63	3UA50 00-0G		
	0.63-1	3UA50 00-0J		
	0.8-1.25	3UA50 00-0K		
	1-1.6	3UA50 00-1A		
	1.25-2	3UA50 00-1B		
	1.6-2.5	3UA50 00-1C		
	2-3.2	3UA50 00-1D		
HC HD	2.5-4	3UA50 00-1E	72.	
	3.2-5	3UA50 00-1F		
	4-6.3	3UA50 00-1G		
	2-8	3UA50 00-1H		
	6.3-10	3UA50 00-1J		
	8-12.5	3UA50 00-1K		
	10-14.5	3UA50 00-2S		
	0.1-0.16	3UA52 00-0A		72.
	0.16-0.25	3UA52 00-0C		
	0.25-0.4	3UA52 00-0E		
0.4-0.63	3UA52 00-0G			
0.63-1	3UA52 00-0J			
0.8-1.25	3UA52 00-0K			
1-1.6	3UA52 00-1A			
1.25-2	3UA52 00-1B			
1.6-2.5	3UA52 00-1C			
2-3.2	3UA52 00-1D			
HE	2.5-4	3UA52 00-1E	78.	
	3.2-5	3UA52 00-1F		
	4-6.3	3UA52 00-1G		
	5-8	3UA52 00-1H		
	6.3-10	3UA52 00-1J		
	8-12.5	3UA52 00-1K		
	10-16	3UA52 00-2A		
	12.5-20	3UA52 00-2B		
	16-25	3UA52 00-2C		
	HE	0.10-0.16		3UA55 00-0A
0.16-0.25		3UA55 00-0C		
0.25-0.40		3UA55 00-0E		
0.40-0.63		3UA55 00-0G		
0.63-1.00		3UA55 00-0J		
0.80-1.25		3UA55 00-0K		
1-1.6		3UA55 00-1A		
1.25-2		3UA55 00-1B		
1.6-2.5		3UA55 00-1C		
2-3.2		3UA55 00-1D		
2.5-4	3UA55 00-1E			

HP Rated Starter Size ^①	Overload Relay Setting Ranges In Amperes	Overload Relay For Full Voltage Starters HP Rated Type Only	Price \$		
HE	3.2-5	3UA55 00-1F	78.		
	4-6.3	3UA55 00-1G			
	5-8	3UA55 00-1H			
	6.3-10	3UA55 00-1J			
	8-12.5	3UA55 00-1K			
	10-16	3UA55 00-2A			
	12.5-20	3UA55 00-2B			
	16-25	3UA55 00-2C			
	20-32	3UA55 00-2D			
	25-36	3UA55 00-2Q			
HG HH HJ	16-25	3UA58 00-2C	117.		
	20-32	3UA58 00-2D			
	25-40	3UA58 00-2E			
	32-50	3UA58 00-2F			
	40-57	3UA58 00-2T			
	50-63	3UA58 00-2P			
	57-70	3UA58 00-2V			
	63-80 ^②	3UA58 00-2U			
	70-88 ^②	3UA58 00-2W			
	55-88	3UA60 00-2H		215.	
63-90	3UA60 00-2W				
80-110	3UA60 00-2X				
90-120	3UA60 00-3H				
110-135	3UA60 00-3J				
HL	55-80	3UA62 00-2H	215.		
	63-90	3UA62 00-2W			
	80-110	3UA62 00-2X			
	90-120	3UA62 00-3H			
	110-135	3UA62 00-3J			
	120-150	3UA62 00-3K			
	135-160 ^②	3UA62 00-3L			
	150-180 ^②	3UA62 00-3M			
	HR HT	80-125		3UA66 00-2K	969.
		125-200		3UA66 00-3B	
160-250		3UA66 00-3C			
200-320		3UA66 00-3D			
250-400		3UA66 00-3E			

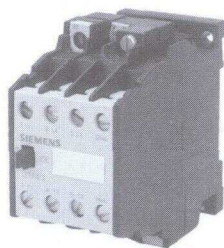
①Note the maximum UL operating current of the starter.

②To be used with size HH and HJ starters only.

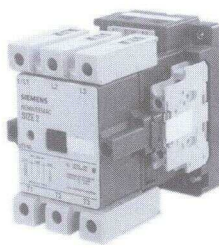
③Panel mounting must be used for setting ranges above 135 to 160 A in order to prevent overheating. Use 3UX1221 links for connection to the 3TF52 contactor see page 258.

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NEMA and HP
Rated Control

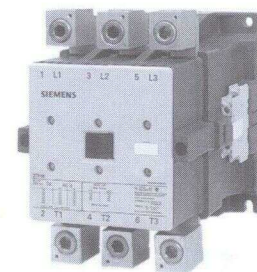
Technical Data



Size HA



Size HG



Size HT

HP Rated Key Features

- Horsepower Rated Sizes HA–HT
- Double Break Contacts
- Silver Tin Oxide Contacts, Cadmium-Free
- Higher Locked Rotor Current Ratings, Up to 840% (Sizes HG–HT)
- Arc Chutes with Arc Splitters; Fast Arc Quenching

- Touch Safe Power Terminals (Sizes HA–HL)
- Touch Safe Control Terminals (Sizes HA–HT)
- Snap-on 2 NO and 2 NC Auxiliary Contacts Standard (Sizes HE–HT)
- Visual ON-OFF Indicator
- Color-Coded Coils

- Fast Termination System—Wire Funnel, Wire Stops, Screwdriver Guide Holes, and Captive Hardware
- Long Mechanical Life—15 Million (Size HA–HD)—10 Million (Size HE–HT)
- UL Listed and CSA Certified

NEMA and HP Rated Control

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HP Rated Starters and Contactors Application Data

HP Rated Starter Size		HA	HB	HC	HD	HE	HG	HH	HJ	HL	HN	HR	HT				
Ampere Rating (Enclosed)	Amps	20	20	30	30	55	80	80	110	160	200	300	400				
Max LRA in % of FLA	Percent	600	600	600	600	600	840	840	840	840	840	840	840				
Maximum Voltage Rating	Volts	600	600	600	600	600	600	600	600	600	600	600	600				
Ambient Temperature Range	In Operation	Deg C	-25 to +55	-25 to +55	-25 to +55	-25 to +55	-25 to +55	-25 to +55	-25 to +55	-25 to +55	-25 to +55	-25 to +55	-25 to +55				
	When Stored	Deg C	-50 to +80	-50 to +80	-50 to +80	-50 to +80	-50 to +80	-50 to +80	-50 to +80	-50 to +80	-50 to +80	-50 to +80	-50 to +80				
Squirrel Cage Motor Maximum 3 Phase HP at Motor Voltages	200V, 60HZ	HP	2	3	5	7½	10	15	20	25	40	50	75	125			
	230V, 60HZ	HP	3	3	5	7½	10	20	25	30	50	60	100	150			
	380V, 50HZ	HP	5	5	10	15	20	30	40	50	75	125	150	250			
	460V, 60HZ	HP	5	7½	10	15	25	40	50	60	100	125	200	300			
575V, 60HZ	HP	7½	10	15	20	30	50	60	75	125	150	250	400				
AC Coil Ratings	Overall	HZ	50/60	50/60	50/60	50/60	50/60	50/60	50/60	50/60	50/60	50/60	50/60				
	Inrush	VA	77/71			121/117			225/192			398/345			660/575		
		PF	0.81/0.75			0.79/0.72			0.6/0.54			0.5/0.4			0.4		
	Sealed	VA	11/9			16.5/13			24/16			46/29			56/36		
PF		0.28/0.27			0.27/0.28			0.29			0.23/0.24			0.24/0.25			
AC Coil Voltage Range	85 to 110% Volts	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes				
Operating Times Valid for 20% Undervoltage to 10% Overvoltage, Warm or Cold Coil. (Total Opening Time Includes Arcing Time)																	
Closing Delay	MS	8-35	8-35	10-35	10-35	13-57	15-40	15-40	20-50	20-50	20-50	20-50	17-65				
Opening Delay	MS	4-18	4-18	5-20	5-20	5-10	5-25	5-25	5-30	8-30	10-30	10-30	8-20				
Resistance to Shock (Rectangular Pulse)	g/MS	7.7/5 and 4.4/10	4.4/10 and 7.7/5	5.5/5 and 3.2/10	3.2/10 and 5.5/10	5.7/5; 9.5	9.2/5	5.4/10	8.6/5	9.4/5 and 5.2/10	10.4/5 and 5.8/10	9.7/5 and 5.3/10	8.8/5 and 4.9/10				
Conductor Size/Phase	AWG	(2) 18-12	(2) 18-12	(2) 14-10	(2) 14-10	Max #3	Max #1/0	Max #1/0	Max #1/0	Max #2/0	1/0-250KCM	2/0-500KCM	2/0-500KCM				
Auxiliary Contact (Double Bridge NEMA A600/P600 Rating — Suitable for Electronic Interface Circuits)																	
Wire Size/Phase	AWG	(2) 18-12	(2) 18-12	(2) 18-12	(2) 18-12	(2) 18-12	(2) 18-12	(2) 18-12	(2) 18-12	(2) 18-12	(2) 18-12	(2) 18-12	(2) 18-12				
Auxiliary Contacts-Standard		1 NO, 1 NC	1 NO, 1 NC	1 NO, 1 NC	1 NO, 1 NC	2 NO, 2 NC	2 NO, 2 NC	2 NO, 2 NC	2 NO, 2 NC	2 NO, 2 NC	2 NO, 2 NC	2 NO, 2 NC	2 NO, 2 NC				
Auxiliary Contacts-Total		2 NO, 2 NC	2 NO, 2 NC	2 NO, 2 NC	2 NO, 2 NC	2 NO, 2 NC	4 NO, 4 NC	4 NO, 4 NC	4 NO, 4 NC	4 NO, 4 NC	4 NO, 4 NC	4 NO, 4 NC	4 NO, 4 NC				
Contactors Mechanical Life (Make/Break Operations)	Million	15	15	15	15	10	10	10	10	10	10	10	10				
Contactors UL Listing #		E31519	E31519	E31519	E31519	E31519	E31519	E31519	E31519	E31519	E31519	E31519	E31519				
Contactors CSA Certification #		LR12730	LR12730	LR12730	LR12730	LR12730	LR12730	LR12730	LR12730	LR12730	LR12730	LR12730	LR12730				
Starters UL Listing #		E32529	E32529	E32529	E32529	E32529	E32529	E32529	E32529	E32529	E32529	E32529	E32529				
Starters CSA Certification #		LR38590	LR38590	LR38590	LR38590	LR38590	LR38590	LR38590	LR38590	LR38590	LR38590	LR38590	LR38590				