



## US Series Heater Elements<sup>①</sup>

### Heaters (Class 20) for Overload Relays NEMA Sizes 0-5

Each heater is identified by a catalog number stamped on one terminal. The heater application table indicates the range of full load motor current to which a given heater may be applied.

Heaters should be selected on the basis of the actual full load current and service factor as shown on the motor

nameplate or in the manufacturer's published literature.

When motor and overload relay are in the same ambient and the service factor of the motor is 1.15 and 1.25, select heaters from the heater application table.

**If the service factor of the motor is 1.0, or there is no service factor shown, or a maximum of 115%**

**protection is desired, select one size smaller heater than indicated.**

For temperature compensated overload relays select heaters according to the table and selection information above regardless of the ambient temperature.

Protect the heater and starter against short circuits by providing branch circuit protection per National Electric Code.

### For Ambient Compensated Overload Relays, on Size 0,1 and 2 Starters<sup>②</sup>

Starter Size	FLA of Motor 40°C Ambient		Starter Size	Heater Catalog No
	Block Type Overload Using (3) Heaters	Single Pole Type Overload		
Size 0	.25- .27	.29- .31	Size 0	SFH03
	.28- .31	.32- .35		SFH04
	.32- .34	.36- .39		SFH05
	.35- .38	.40- .43		SFH06
	.39- .42	.44- .48		SFH07
	.43- .46	.49- .53		SFH08
	.47- .50	.54- .58		SFH09
	.51- .55	.59- .64		SFH10
	.56- .62	.65- .71		SFH11
	.63- .68	.72- .79		SFH12
Size 1	.69- .75	.80- .87	Size 1	SFH13
	.76- .83	.88- .96		SFH14
	.84- .91	.97- 1.06		SFH15
	.92- 1.00	1.07- 1.16		SFH16
	1.01- 1.11	1.17- 1.28		SFH17
	1.12- 1.22	1.29- 1.41		SFH18
	1.23- 1.34	1.42- 1.55		SFH19
	1.35- 1.47	1.56- 1.71		SFH20
	1.48- 1.62	1.72- 1.87		SFH21
	1.63- 1.78	1.88- 2.06		SFH22
Size 2	1.79- 1.95	2.07- 2.26	Size 2	SFH23
	1.96- 2.15	2.27- 2.48		SFH24
	2.16- 2.35	2.49- 2.72		SFH25
	2.36- 2.58	2.73- 2.99		SFH26
	2.59- 2.83	3.00- 3.28		SFH27
	2.84- 3.11	3.29- 3.60		SFH28
	3.12- 3.42	3.61- 3.95		SFH29
	3.43- 3.73	3.96- 4.31		SFH30
	3.74- 4.07	4.32- 4.71		SFH31
	4.08- 4.39	4.72- 5.14		SFH32
Size 0	4.40- 4.87	5.15- 5.6	Size 0	SFH33
	4.88- 5.3	5.7- 6.2		SFH34
	5.4- 5.9	6.3- 6.8		SFH35
	6.0- 6.4	6.9- 7.5		SFH36
	6.5- 7.1	7.6- 8.2		SFH37
	7.2- 7.8	8.3- 9.0		SFH38
	7.9- 8.5	9.1- 9.9		SFH39
	8.6- 9.4	10.0-10.8		SFH40
	9.5-10.3	10.9-11.9		SFH41
	10.4-11.3	12.0-13.1		SFH42
Size 1	11.4-12.4	13.2-14.3	Size 1	SFH43
	12.5-13.5	14.4-15.7		SFH44
	13.6-14.9	15.8-17.2		SFH45
	15.0-16.3	17.3-18.9		SFH46
	16.4-18.0	19.0-20.8		SFH47
	18.1-19.8	20.9-22.9		SFH48
	19.9-21.7	23.0-25.2		SFH49
	21.8-23.9	25.3-27.6		SFH50
	24.0-26.2	27.7-30.3		SFH51
	Size 2	26.3-28.7		30.4-33.3
28.8-31.4		33.4-36.4	SFH53	
31.5-34.0		36.5-39.9	SFH54	
34.6-37.9		40.0-43.9	SFH55	
38.0-41.5			SFH56	
41.6-45.0			SFH57	

For typical motor FLA values, see page 869.

①Heaters \$11.60 each.  
②Based on 60°C and 75°C wire size applications.

### For Ambient Compensated Overload Relays, on Size 3 and 4 Starters<sup>②</sup>

Starter Size	Full Load Current of Motor (Amperes) 40°C Ambient	Heater Catalog No
Size 3	11.9-13.0	SFH68
	13.1-14.3	SFH69
	14.4-15.9	SFH70
	16.0-17.4	SFH71
	19.0-20.8	SFH72
Size 4	20.9-22.9	SFH73
	23.0-25.2	SFH74
	25.3-27.8	SFH75
	27.9-30.6	SFH76
	30.7-33.5	SFH77
	33.6-37.5	SFH78
	37.6-41.5	SFH79
	41.6-46.3	SFH80
	46.4-50.	SFH81
	51.-55.	SFH82
Size 0	56-61	SFH83
	62-66	SFH84
	67-73	SFH85
	74-78	SFH86
	79-84	SFH87
	85-92	SFH88
	93-101	SFH89
	102-110	SFH90
	111-122	SFH91
	123-129	SFH92
130-133	SFH93	

### For Ambient Compensated Overload Relays, on Size 5 Starters<sup>③</sup>

FLA of Motor Amperes 40°C Ambient	Heater Catalog No	
Size 5 (with 300/5 current transformers)		
Size 5	118-129	SFH24
	130-141	SFH25
	142-155	SFH26
	156-170	SFH27
	171-187	SFH28
	188-205	SFH29
	206-224	SFH30
	225-244	SFH31
	245-263	SFH32
	264-292	SFH33
293-300	SFH34	

Heaters are individually boxed and available in convenient 12 pack open top master cartons for easy on the shelf stock handling. Heater racks are also available. Consult nearest Siemens sales office.

③Based on 75°C wire applications.