

IEC Manual Motor Starters Selection Guide

Section 6

45 mm Standard Interruption Capacity (Toggle Operator)

Individual or Group Installation, with or without C-2000 contactors or mini-contactors

FLA Adjustment Range	Three Phase Horsepower @ 200-208V	Three Phase Horsepower @ 220-240V	Three Phase Horsepower @ 440-480V	Three Phase Horsepower @ 575-600V	Single Phase Horsepower @ 115V	Single Phase Horsepower @ 230V	Instantaneous Short Circuit Release Amps	Product Number	List Price GO-10A2C
0.1-0.16							2.1	GPS1BSAA	\$88.00
0.16-0.25							3.3	GPS1BSAB	\$88.00
0.25-0.4							5.2	GPS1BSAC	\$88.00
0.4-0.63							8.2	GPS1BSAD	\$88.00
0.63-1.0			1/2	1/2			13	GPS1BSAE	\$100.00
1-1.6	1/4	1/3	3/4	3/4		1/10	20.8	GPS1BSAF	\$100.00
1.6-2.5	1/2	1/2	1	1 1/2		1/6	32.5	GPS1BSAG	\$100.00
2.5-4	3/4	3/4	2	3	1/8	1/3	52	GPS1BSAH	\$100.00
4-6.3	1	1 1/2	3	5	1/4	1/2	81.9	GPS1BSAJ	\$100.00
6.3-10	2	3	5	7 1/2	1/2	1 1/2	130	GPS1BSAK	\$100.00
9-13	3	3	7 1/2	10	1/2	2	169	GPS1BSAL	\$120.00
11-16	3	5	10	10	1	2	208	GPS1BSAM	\$120.00
14-20	5	5	10	15	1 1/2	3	260	GPS1BSAN	\$120.00
19-25	7 1/2	7 1/2	15	20	2	3	325	GPS1BSAP	\$135.00
24-32	10	10	20	30	2	5	416	GPS1BSAR	\$135.00

45 mm High Interruption Capacity (Rotary Operator)

Individual, Group or Combination^{1, 2} Installation, with or without C-2000 contactors or mini-contactors

FLA Adjustment Range	Three Phase Horsepower @ 200-208V	Three Phase Horsepower @ 220-240V	Three Phase Horsepower @ 440-480V	Three Phase Horsepower @ 575-600V	Single Phase Horsepower @ 115V	Single Phase Horsepower @ 230V	Instantaneous Short Circuit Release Amps	Product Number	List Price GO-10A2C
0.1-0.16							2.1	GPS1BHAA	\$110.00
0.16-0.25							3.3	GPS1BHAB	\$110.00
0.25-0.4							5.2	GPS1BHAC	\$110.00
0.4-0.63							8.2	GPS1BHAD	\$110.00
0.63-1.0			1/2	1/2			13	GPS1BHAE	\$125.00
1-1.6	1/4	1/3	3/4	3/4		1/10	20.8	GPS1BHAF	\$125.00
1.6-2.5	1/2	1/2	1	1 1/2		1/6	32.5	GPS1BHAG	\$125.00
2.5-4	3/4	3/4	2	3	1/8	1/3	52	GPS1BHAH	\$125.00
4-6.3	1	1 1/2	3	5	1/4	1/2	81.9	GPS1BHAI	\$125.00
6.3-10	2	3	5	7 1/2	1/2	1 1/2	130	GPS1BHAK	\$125.00
9-13	3	3	7 1/2	10	1/2	2	169	GPS1BHAL	\$150.00
11-16	3	5	10	10	1	2	208	GPS1BHAM	\$150.00
14-20	5	5	10	15	1 1/2	3	260	GPS1BHAN	\$150.00
19-25	7 1/2	7 1/2	15	20	2	3	325	GPS1BHAP	\$165.00
24-32	10	10	20	30	2	5	416	GPS1BHAR	\$165.00

55 mm High Interruption Capacity (Rotary Operator)

Individual, Group or Combination² Installation, with or without C-2000 contactors or mini-contactors

FLA Adjustment Range	Three Phase Horsepower @ 200-208V	Three Phase Horsepower @ 220-240V	Three Phase Horsepower @ 440-480V	Three Phase Horsepower @ 575-600V	Single Phase Horsepower @ 115V	Single Phase Horsepower @ 230V	Instantaneous Short Circuit Release Amps	Product Number	List Price GO-10A2C
6.3-10	2	3	5	7 1/2	1/2	1 1/2	130	GPS2BHAK	\$245.00
9-13	3	3	7 1/2	10	1/2	2	169	GPS2BHAL	\$245.00
11-16	3	5	7 1/2	10	1	2	208	GPS2BHAM	\$245.00
14-20	5	5	10	15	1 1/2	2	260	GPS2BHAN	\$245.00
19-25	7 1/2	7 1/2	15	20	2	3	325	GPS2BHAP	\$245.00
24-32	10	10	20	25	2	5	416	GPS2BHAR	\$245.00
28-40	10	10	25	30	3	7 1/2	520	GPS2BHAS	\$275.00
35-50	15	15	30	40	3	10	650	GPS2BHAT	\$275.00
45-63	15	20	40	50	5	10	819	GPS2BHAU	\$302.00

¹When using manual starters in combination starter applications, use short circuit reset/indicator accessory. For GPS1BH_ starters add GPAPT1E terminal accessory.

²Maximum voltage for combination control is 277/480.

Product Number Selection Instructions

Selection of the starter depends on the actual motor full load current and service factor. For motors with service factor of 1.15 or greater, use motor full load current to select the appropriate current range. For motors with a service factor less than 1.15, multiply the normal full load current by .9 for the current setting. Single phase applications require all three overload legs to be energized for proper operation. Use separate conductor to connect terminal T2 to L3. Connect power to L1 and L2 and apply load between T1 and T3.



IEC Manual Motor Starters Accessories

Front Mounted (Internal) Accessories—Auxiliary and Alarm Contacts

Snap away the dust cover(s) and up to two front mounted accessories slide into the starter, increasing application flexibility without increasing width.

Accessory Type	For Use With	Mounting Position	Contact Configuration	Product Number	List Price GO-10A2C
Auxiliary Contact (Front Mount)	GPS1*/GPS2*	Left or right front	1NC	GPAC01FBA	\$12.00
Auxiliary Contact (Front Mount)	GPS1*/GPS2*	Left or right front	1NO	GPAC10FBA	\$12.00
Alarm Contact (Front Mount)	GPS1*/GPS2*	Right front	1NC	GPAL01FRA	\$14.00
Alarm Contact (Front Mount)	GPS1*/GPS2*	Right front	1NO	GPAL10FRA	\$14.00
Front Aux. Position Cover (Package of 10)	GPS1*/GPS2*	Left or right front	N/A	GPAC0VF1A	\$0.50

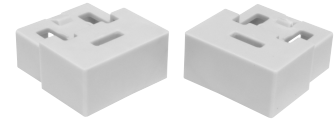


GPAC__FBA
Front Mounted Auxiliary Contacts

Side Mounted Accessories—Auxiliary and Alarm Contacts

Snap on accessories - maximum of [(2) auxiliary contact blocks] or [(1) auxiliary contact block plus (1) alarm/aux. block or (1) short circuit indicator] or [(1) alarm/auxiliary plus (1) short circuit indicator] left and (2) auxiliary contact blocks or (1) shunt trip or (1) under-voltage release right.

Accessory Type	For Use With	Mounting Position	Contact Configuration	Product Number	List Price GO-10A2C
Auxiliary Contact (Side Mount)	GPS1*/GPS2*	Left	2NC	GPAC02LLA ¹	\$18.00
Auxiliary Contact (Side Mount)	GPS1*/GPS2*	Left	1NO + 1NC	GPAC11LLA ¹	\$18.00
Auxiliary Contact (Side Mount)	GPS1*/GPS2*	Left	2NO	GPAC20LLA ¹	\$18.00
Auxiliary Contact (Side Mount)	GPS1*/GPS2*	Right	2NC	GPAC02LRA ¹	\$18.00
Auxiliary Contact (Side Mount)	GPS1*/GPS2*	Right	1NO + 1NC	GPAC11LRA ¹	\$18.00
Auxiliary Contact (Side Mount)	GPS1*/GPS2*	Right	2NO	GPAC20LRA ¹	\$18.00
Alarm/Auxiliary Contact (Side Mount)	GPS1*/GPS2*	Left	1NC Alarm + 1NC Aux.	GPAD0101LLA	\$24.00
Alarm/Auxiliary Contact (Side Mount)	GPS1*/GPS2*	Left	1NC Alarm + 1NO Aux.	GPAD0110LLA	\$24.00
Alarm/Auxiliary Contact (Side Mount)	GPS1*/GPS2*	Left	1NO Alarm + 1NC Aux.	GPAD1001LLA	\$24.00
Alarm/Auxiliary Contact (Side Mount)	GPS1*/GPS2*	Left	1NO Alarm + 1NO Aux.	GPAD1010LLA	\$24.00
Short Circuit Alarm (Side Mount)	GPS1*/GPS2*	Left	1NO + 1NC	GPAE11LLA ²	\$15.00



GPAC__FRA
Front Mounted Alarm Contacts

¹GPS1BSAR and GPS1BHAR (24-32 FLA starters) can accept all accessory combinations noted above except that only one lateral auxiliary contact block may be used on this size.

²GPAE11LLA short circuit alarm may not be used with non-metallic enclosures due to reset button interference.



GPAC__LLA/GPAC__LRA
Side Mounted Auxiliary Contacts



GPAD____LLA
Side Mounted Alarm/Auxiliary Contact



GPAE11LLA
Side Mounted Short Circuit Alarm



IEC Manual Motor Starters

Short Circuit Current Rating

Rated Breaking Capacity

Section 6

Toggle Operation, Standard Interruption

Product Number	FLA Adjustment Range	kAIC @ 240V	kAIC @ 480V	kAIC @ 600V	Max. Fuse Size (A)	Max. C.B. Size (A)	kAIC @ 240V-Group Installation	kAIC @ 480V-Group Installation	kAIC @ 600V-Group Installation	Max Fuse or C.B.-Size (A) Group Installation	Minimum Contactor Size
GPS1BSAA	0.1-0.16	100	50	10	0.75	15	100	65	25	500	CL00 or MCO
GPS1BSAB	0.16-0.25	100	50	10	1	15	100	65	25	500	CL00 or MCO
GPS1BSAC	0.25-0.4	100	50	10	1.5	15	100	65	25	500	CL00 or MCO
GPS1BSAD	0.4-0.63	100	50	10	2.5	15	100	65	25	500	CL00 or MCO
GPS1BSAE	0.63-1.0	100	50	10	4	15	100	65	25	500	CL00 or MCO
GPS1BSAF	1-1.6	100	50	10	6	15	100	65	25	500	CL00 or MCO
GPS1BSAG	1.6-2.5	100	50	10	10	15	100	65	25	500	CL00 or MCO
GPS1BSAH	2.5-4	100	50	10	16	15	100	65	25	500	CL00 or MCO
GPS1BSAJ	4-6.3	100	22	10	25	25	100	65	25	500	CL00 or MCO
GPS1BSAK	6.3-10	100	22	10	40	40	100	65	25	500	CL00 or MCO
GPS1BSAL	9-13	100	22	10	50	50	100	65	25	500	CL00
GPS1BSAM	11-16	65	22	10	60	60	65	50	18	500	CL01
GPS1BSAN	14-20	65	22	10	80	80	65	50	18	500	CL02
GPS1BSAP	19-25	65	22	10	100	100	65	50	18	500	CL25
GPS1BSAR	24-32	65	22	10	125	125	65	50	10	500	CL04

Manual motor starters are suitable for use with C-2000 contactors in series with the starter, but contactor rating must not be exceeded.

Rotary Operation, High Interruption

Product Number	FLA Adjustment Range	kAIC @ 240V	kAIC @ 480V	kAIC @ 600V	Max. Fuse Size (A)	Max. C.B. Size (A)	kAIC @ 240V-Group Installation	kAIC @ 480V-Group Installation	kAIC @ 600V-Group Installation	Max Fuse or C.B. Size(A)-Group Installation	kAIC @ 277Y/480V-Combination Starter	Minimum Contactor Size
GPS1BHAA	0.1-0.16	100	50	10	0.75	15	100	65	25	500	50	CL00 or MCO
GPS1BHAB	0.16-0.25	100	50	10	1	15	100	65	25	500	50	CL00 or MCO
GPS1BHAC	0.25-0.4	100	50	10	1.5	15	100	65	25	500	50	CL00 or MCO
GPS1BHAD	0.4-0.63	100	50	10	2.5	15	100	65	25	500	50	CL00 or MCO
GPS1BHAE	0.63-1.0	100	50	10	4	15	100	65	25	500	50	CL00 or MCO
GPS1BHAF	1-1.6	100	50	10	6	15	100	65	25	500	50	CL00 or MCO
GPS1BHAG	1.6-2.5	100	50	10	10	15	100	65	25	500	50	CL00 or MCO
GPS1BHAH	2.5-4	100	50	10	16	15	100	65	25	500	50	CL00 or MCO
GPS1BHAJ	4-6.3	100	50	10	25	25	100	65	25	500	50	CL00 or MCO
GPS1BHAK	6.3-10	100	50	10	40	40	100	65	25	500	50	CL00 or MC1
GPS1BHAL	9-13	100	50	10	50	50	100	65	25	500	50	CL00
GPS1BHAM	11-16	65	50	10	60	60	65	65	25	500	50	CL01
GPS1BHAN	14-20	65	50	10	80	80	65	65	25	500	50	CL02
GPS1BHAP	19-25	65	50	10	100	100	65	65	25	500	50	CL25
GPS1BHAR	24-32	65	50	10	125	125	65	65	10	500	50	CL04
GPS2BHAK	6.3-10	65	50	10	40	40	100	65	25	1500	50	CL00
GPS2BHAL	9-13	65	50	10	50	50	100	65	25	1500	50	CL00
GPS2BHAM	11-16	65	50	10	60	60	100	65	25	1500	50	CL01
GPS2BHAN	14-20	65	50	10	80	80	100	65	25	1500	50	CL02
GPS2BHAP	19-25	65	50	10	100	100	100	65	25	1500	50	CL02
GPS2BHAR	24-32	65	50	10	125	125	100	65	25	1500	50	CL04
GPS2BHAS	28-40	65	50	10	150	150	100	65	10	1500	50	CL06
GPS2BHAT	35-50	65	50	10	200	200	100	65	10	1500	50	CL06
GPS2BHAU	45-63	65	50	10	250	250	100	35	10	1500	50	CL07

When using manual starters in combination with starter applications, use short circuit reset/indicator accessory. For GPS1BH_ starters add GPAPTIE terminal accessory.

Maximum voltage for combination control is 277/480.

Manual motor starters are suitable for use with C-2000 contactors in series with the starter; contactor rating must not be exceeded. When used in a combination installation, the contactor is not self-protected.

Link available for GPS2* for CL04 and larger contactors only.



IEC Manual Motor Starters

Type 2 Short Circuit Rating

Individual Group and Combination Starters

Type 2 Coordination

Under short circuit conditions, the starter must not result in danger to persons or the installation. After short circuit, the starter shall be capable of further use. No damage to the overload relay or other parts shall occur, except that welding of the contactor contacts is permitted when they are easily separated (as by a screwdriver) without significant deformation. Minimum front electrical clearance is 1" with CL06 and CL07 contactors, 0.8" with all other contactors.

100kA@240V UL508E Investigation (Individual Group or Combination)*

Starter Type	FLA		Minimum Contactor Size	
	Adjustment Range	Product Number	@ 100kA @ 240V Interrupt Level	Link @ 100kA @ 240V Interrupt Level
GPS1	0.1-0.16	GPS1BHAA	CL00	GPF1L02*
GPS1	0.16-0.25	GPS1BHAB	CL00	GPF1L02*
GPS1	0.25-0.4	GPS1BHAC	CL00	GPF1L02*
GPS1	0.4-0.63	GPS1BHAD	CL00	GPF1L02*
GPS1	0.63-1.0	GPS1BHAE	CL00	GPF1L02*
GPS1	1-1.6	GPS1BHAF	CL00	GPF1L02*
GPS1	1.6-2.5	GPS1BHAG	CL00	GPF1L02*
GPS1	2.5-4	GPS1BHAH	CL00	GPF1L02*
GPS1	4-6.3	GPS1BHAJ	CL00	GPF1L02*
GPS1	6.3-10	GPS1BHAK	CL00	GPF1L02*
GPS1	9-13	GPS1BHAL	CL01	GPF1L02*
GPS1	11-16	GPS1BHAM	CL02	GPF1L02*
GPS1	14-20	GPS1BHAN	CL04	GPF1L04*
GPS1	19-25	GPS1BHAP	CL04	GPF1L04*
GPS1	24-32	GPS1BHAR	CL04	GPF1L04*
GPS2	6.3-10	GPS2BHAK	CL04	GPF2L04*
GPS2	9-13	GPS2BHAL	CL04	GPF2L04*
GPS2	11-16	GPS2BHAM	CL04	GPF2L04*
GPS2	14-20	GPS2BHAN	CL04	GPF2L04*
GPS2	19-25	GPS2BHAP	CL04	GPF2L04*
GPS2	24-32	GPS2BHAR	CL45	GPF2L45*
GPS2	28-40	GPS2BHAS	CL06	GPF2L07*
GPS2	35-50	GPS2BHAT	CL06	GPF2L07*
GPS2	45-63	GPS2BHAU	CL07	GPF2L07*

50kA@380/400V per IEC947 (Individual Group or Combination)*

Starter Type	FLA		Minimum Contactor Size	
	Adjustment Range	Product Number	@ 50kA @ 380/400V Interrupt Level	Link @ 50kA @ 380/400V Interrupt Level
GPS1	0.1-0.16	GPS1BHAA	CL00	GPF1L02*
GPS1	0.16-0.25	GPS1BHAB	CL00	GPF1L02*
GPS1	0.25-0.4	GPS1BHAC	CL00	GPF1L02*
GPS1	0.4-0.63	GPS1BHAD	LC00	GPF1L02*
GPS1	0.63-1.0	GPS1BHAE	CL00	GPF1L02*
GPS1	1-1.6	GPS1BHAF	CL00	GPF1L02*
GPS1	1.6-2.5	GPS1BHAG	CL01	GPF1L04*
GPS1	2.5-4	GPS1BHAH	CL01	GPF1L04*
GPS1	4-6.3	GPS1BHAJ	CL02	GPF1L04*
GPS1	6.3-10	GPS1BHAK	CL25	GPF1L25*
GPS1	9-13	GPS1BHAL	CL25	GPF1L25*
GPS1	11-16	GPS1BHAM	CL25	GPF1L25*
GPS1	14-20	GPS1BHAN	CL25	GPF1L25*
GPS1	19-25	GPS1BHAP	CL25	GPF1L25*
GPS1	24-32	GPS1BHAR	CL25	GPF1L25*
GPS2	6.3-10	GPS2BHAK	CL04	GPF2L04*
GPS2	9-13	GPS2BHAL	CL04	GPF2L04*
GPS2	11-16	GPS2BHAM	CL04	GPF2L04*
GPS2	14-20	GPS2BHAN	CL04	GPF2L04*
GPS2	19-25	GPS2BHAP	CL04	GPF2L04*
GPS2	24-32	GPS2BHAR	CL04	GPF2L04*
GPS2	28-40	GPS2BHAS	CL45	GPF2L45*
GPS2	35-50	GPS2BHAT	CL06	GPF2L07*
GPS2	45-63	GPS2BHAU	CL07	GPF2L07*

50kA@480V UL508E Investigation (Individual Group or Combination)*

Starter Type	FLA		Minimum Contactor Size	
	Adjustment Range	Product Number	@ 50kA @ 480V Interrupt Level	Link @ 50kA @ 480V Interrupt Level
GPS1	0.1-0.16	GPS1BHAA	CL01	GPF1L02*
GPS1	0.16-0.25	GPS1BHAB	CL01	GPF1L02*
GPS1	0.25-0.4	GPS1BHAC	CL01	GPF1L02*
GPS1	0.4-0.63	GPS1BHAD	CL01	GPF1L02*
GPS1	0.63-1.0	GPS1BHAE	CL01	GPF1L02*
GPS1	1-1.6	GPS1BHAF	CL01	GPF1L02*
GPS1	1.6-2.5	GPS1BHAG	CL25	GPF1L25*
GPS1	2.5-4	GPS1BHAH	CL25	GPF1L25*
GPS1	4-6.3	GPS1BHAJ	CL25	GPF1L25*
GPS1	6.3-10	GPS1BHAK	CL25	GPF1L25*
GPS1	9-13	GPS1BHAL	CL25	GPF1L25*
GPS1	11-16	GPS1BHAM	CL25	GPF1L25*
GPS1	14-20	GPS1BHAN	CL25	GPF1L25*
GPS1	19-25	GPS1BHAP	CL04	GPF1L04*
GPS1	24-32	GPS1BHAR	CL04 (35kA)	GPF1L04*
GPS2	6.3-10	GPS2BHAK	CL04	GPF2L04*
GPS2	9-13	GPS2BHAL	CL04	GPF2L04*
GPS2	11-16	GPS2BHAM	CL04	GPF2L04*
GPS2	14-20	GPS2BHAN	CL04	GPF2L04*
GPS2	19-25	GPS2BHAP	CL04	GPF2L04*
GPS2	24-32	GPS2BHAR	CL45	GPF2L45*
GPS2	28-40	GPS2BHAS	CL06	GPF2L07*
GPS2	35-50	GPS2BHAT	CL06	GPF2L07*
GPS2	45-63	GPS2BHAU	CL07	GPF2L07*

25kA (or as noted) @600V UL508E Investigation (Individual Group or Combination)*

Starter Type	FLA		Minimum Contactor Size	
	Adjustment Range	Product Number	@ 25kA @ 600V Interrupt Level	Link @ 25kA @ 600V Interrupt Level
GPS1	0.1-0.16	GPS1BHAA	CL00	GPF1L02*
GPS1	0.16-0.25	GPS1BHAB	CL00	GPF1L02*
GPS1	0.25-0.4	GPS1BHAC	CL00	GPF1L02*
GPS1	0.4-0.63	GPS1BHAD	CL00	GPF1L02*
GPS1	0.63-1.0	GPS1BHAE	CL00	GPF1L02*
GPS1	1-1.6	GPS1BHAF	CL00	GPF1L02*
GPS1	1.6-2.5	GPS1BHAG	CL04	GPF1L04*
GPS1	2.5-4	GPS1BHAH	CL04	GPF1L04*
GPS1	4-6.3	GPS1BHAJ	CL04	GPF1L04*
GPS1	6.3-10	GPS1BHAK	CL04	GPF1L04*
GPS1	9-13	GPS1BHAL	CL04	GPF1L04*
GPS1	11-16	GPS1BHAM	CL04	GPF1L04*
GPS1	14-20	GPS1BHAN	CL04	GPF1L04*
GPS1	19-25	GPS1BHAP	CL04	GPF1L04*
GPS1	24-32	GPS1BHAR	CL04	GPF1L04*
GPS2	6.3-10	GPS2BHAK	CL45 (5kA)	GPF2L45*
GPS2	9-13	GPS2BHAL	CL45 (5kA)	GPF2L45*
GPS2	11-16	GPS2BHAM	CL45 (5kA)	GPF2L45*
GPS2	14-20	GPS2BHAN	CL45 (5kA)	GPF2L45*
GPS2	19-25	GPS2BHAP	CL45 (5kA)	GPF2L45*
GPS2	24-32	GPS2BHAR	CL45 (5kA)	GPF2L45*
GPS2	28-40	GPS2BHAS	CL06 (10kA)	GPF2L07*
GPS2	35-50	GPS2BHAT	CL06 (10kA)	GPF2L07*
GPS2	45-63	GPS2BHAU	CL07 (10kA)	GPF2L07*

*Maximum voltage for combination control 277/480. Minimum front electrical clearance is 1" with CL06 and CL07 contactors, and 0.8" with all other contactors.

