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CARLO GAVAZZI
Automation Components

CARLO GAVAZZI

Manual Motor Starters

- Complete Ranges up to 100 Amps
- ON-OFF-Trip Three Position Operator
- Unique Handle Lock in the OFF Position
- Class 10, 20 Overload Trip Characteristics
- DIN Rail or Back Panel Mounting
- Finger Safe Terminals
- Trip Test

With Extended Warranty

Carlo Gavazzi GMS Manual Motor Starters provide complete ranges up to 100A

32AF

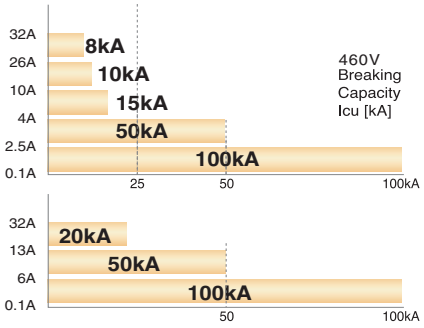
0.1~0.16... 22~32A (16 step)

GMS 32S

- Standard

GMS 32H
GMS 32HI

- High break
- Magnetic release



6~10... 45~63A (9 step)

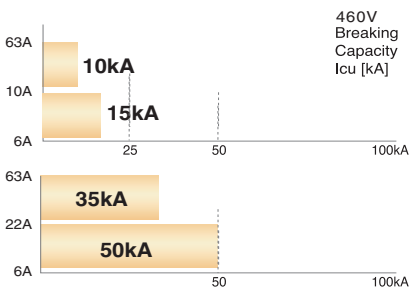
GMS 63S

- Standard

GMS 63H
GMS 63HI
GMS 63HL

- High break
- Magnetic release
- Class 20

63AF



11~17... 80~100A (10 step)

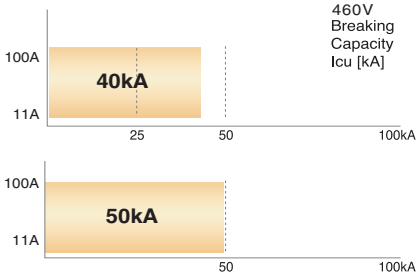
GMS 100S

- Standard

GMS 100H
GMS 100HI
GMS 100HL

- High break
- Magnetic release
- Class 20

100AF



Specifications are subject to change without notice.

Carlo Gavazzi GMS Manual Motor Starters deliver more efficiency through various functions and compact design

[Scale 1:1]

Front mounted auxiliary contact

Easy mounting onto DIN-rail

Large scale for current setting

Auxiliaries are just snapped on: easy, fast, without tools

Dial cover lock device

Test trip device for checks of the trip mechanism

Finger safe terminals

Dial cover

Handle Lock device (Off position)

Three position operator handle: ON-OFF-TRIP (Only 100AF is applied)

Identification labels

Handle Lock

Dial cover

Terminals

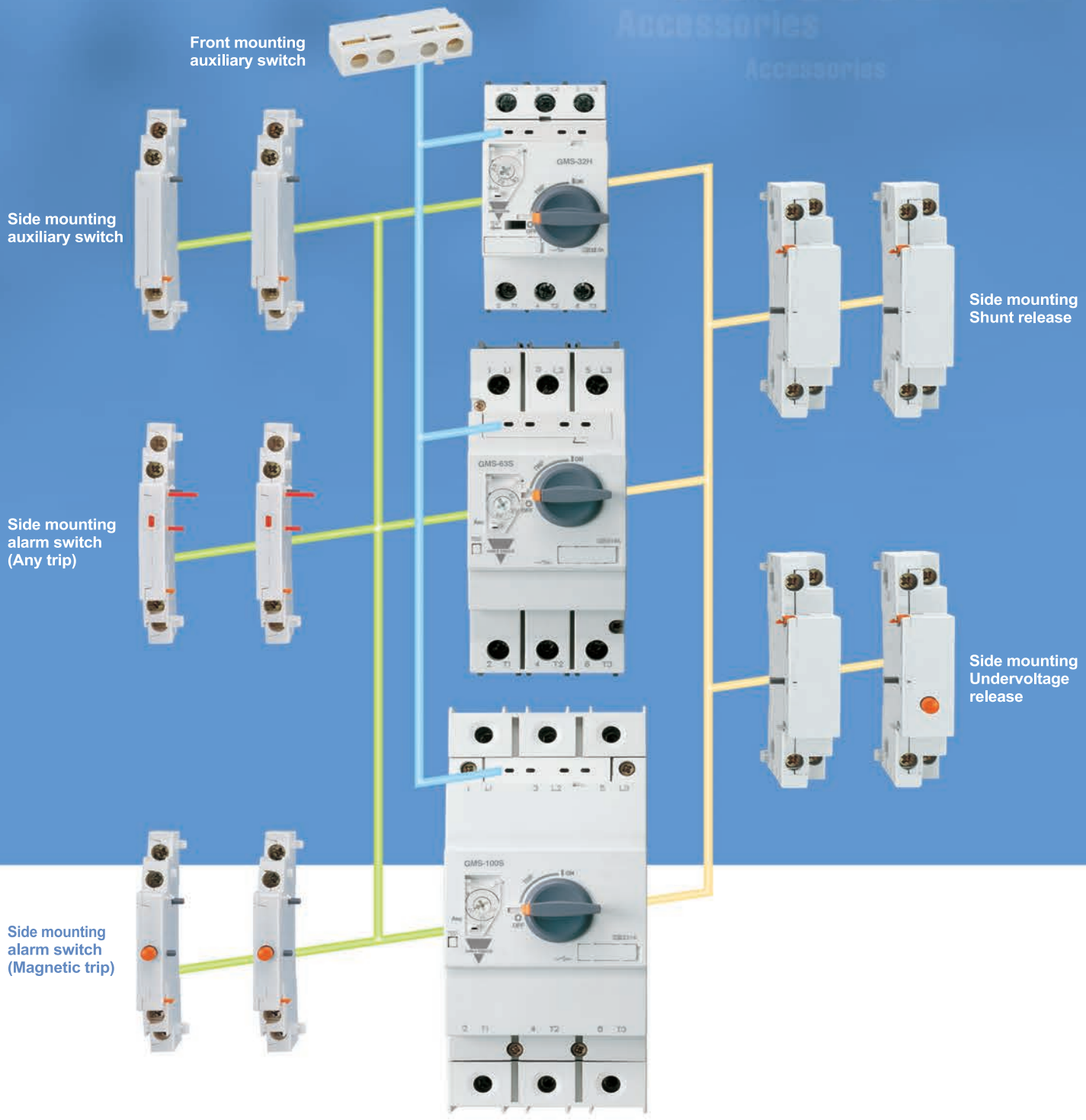
GMS32

GMS63

GMS100

Common use from 32 to 100AF

A wide variety of accessories enables a flexible response to changes in specifications



Function

- Protection of group installation
- Protection of circuits
- Motor protection
- Starter protection
- Wide range of ambient temperature compensation
- Phase failure protection

Feature

- 45mm width up to 32A, 55mm width up to 63A and 70mm width rated to 100 amps
- Three position operator: ON-OFF-TRIP (Only 100AF is applied)
- Complete range of common accessories
- Handle lock in the OFF position
- Class 10,20 overload trip characteristics
- Trip test
- Finger safe terminal
- DIN rail and screw mounting

Standard

- The components fulfill the international standard IEC 60947
- The devices can be used as Manual Motor Starter in Group Installations According to UL508.

CE KEMA c UL

IEC 60947

UL 508, UL 508 Type E

Contents

Product Selection Guide

Quick selection table ... IEC rating

Frame			32AF																			
Type	Current adjustable type		GMS-32S										GMS-32H									
	Instantaneous type		-										GMS-32HI									
	Class 20		-							-												
Breaking capacity			Standard										High break									
Handle Type			Rocker										Rotary									
Number of poles			3										3									
Rated operational voltage (Ue)			Up to 690V										Up to 690V									
Rated frequency			50/60 Hz										50/60 Hz									
Rated insulation voltage (Ui)			690V										690V									
Rated impulse voltage (Uimp)			6kV										6kV									
Utilization category	IEC 60 947-2 (Breaker)		Cat. A										Cat. A									
	IEC 60 947-4 (Motor starter)		AC 3										AC 3									
Shock resistance (IEC 68 Part 2-27)			25g										25g									
Degree of protection (IEC 60 529)			IP 20										IP 20									
Instantaneous short circuit release			13 × Ie max.										13 × Ie max.									
Mechanical endurance (Operating)			100,000										100,000									
Electrical endurance (Cycles)			100,000										100,000									
Max operating frequency per hour (Ope./h)			25										25									
Temperature compensation (Operation)			-20 ~ +60 ℃										-20 ~ +60 ℃									
Phase failure function			○										○									
Trip indicating function			×										×									
Test function			○										○									
Rated breaking capacity (kA)	Rated operational current (Ie)	Thermal release Adjustment range (A)	240V 230V		415V 400V		460V 440V		525V 500V		690V 600V		240V 230V		415V 400V		460V 440V		525V 500V		690V 600V	
			Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics
	0.16	0.1~0.16	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	0.25	0.16~0.25	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	0.4	0.25~0.4	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	0.63	0.4~0.63	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	1	0.63~1	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	1.6	1~1.6	100	100	100	100	100	100	100	100	3	3	100	100	100	100	100	100	100	100	100	100
	2.5	1.6~2.5	100	100	100	100	100	100	50	38	3	3	100	100	100	100	100	100	100	100	8	8
	4	2.5~4	100	100	100	100	50	38	15	11	3	3	100	100	100	100	100	100	100	100	8	8
	6	4~6	100	100	100	100	15	11	10	8	3	3	100	100	100	100	100	100	100	100	6	6
	8	5~8	100	100	100	100	15	11	10	8	3	3	100	100	100	100	50	38	50	38	6	6
	10	6~10	100	100	50	38	15	11	6	5	3	3	100	100	100	100	50	38	50	38	6	6
	13	9~13	100	100	50	38	10	8	6	5	3	3	100	100	100	100	50	38	42	32	6	6
	17	11~17	50	38	20	15	10	8	6	5	3	3	100	100	50	38	20	15	10	8	4	4
	22	14~22	40	30	15	11	8	6	6	5	3	3	100	100	50	38	20	15	10	8	4	4
	26	18~26	40	30	15	11	8	6	6	5	3	3	100	100	50	38	20	15	10	8	4	4
	32	22~32	30	22	15	11	6	4	5	4	3	3	100	100	50	38	20	15	10	8	4	4
	40	28~40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	50	34~50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	63	45~63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	75	55~75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	90	70~90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	100	80~100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Ordering Example: Specify Rated Operational Current

GMS-32S-0.16 (0.1 to 0.16)

GMS-32S-0.25 (0.16 to 0.25)

63AF		100AF	
GMS-63S	GMS-63H	GMS-100S	GMS-100H
	GMS-63HI	-	GMS-100HI
-	GMS-63HL	-	GMS-100HL
Standard	High break	Standard	High break
Rotary	Rotary	Rotary	Rotary
3	3	3	3
Up to 690V	Up to 690V	Up to 690V	Up to 690V
50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
1,000V	1,000V	1,000V	1,000V
8kV	8kV	8kV	8kV
Cat. A	Cat. A	Cat. A	Cat. A
AC 3	AC 3	AC 3	AC 3
25g	25g	25g	25g
IP 20	IP 20	IP 20	IP 20
13 × Ie max.	13 × Ie max.	13 × Ie max.	13 × Ie max.
50,000	50,000	50,000	50,000
25,000	25,000	25,000	25,000
25	25	25	25
-20 ~ +60 ℃	-20 ~ +60 ℃	-20 ~ +60 ℃	-20 ~ +60 ℃
○	○	○	○
×	×	○	○
○	○	○	○

240V 230V		415V 400V		460V 440V		525V 500V		690V 600V		240V 230V		415V 400V		460V 440V		525V 500V		690V 600V		240V 230V		415V 400V		460V 440V		525V 500V		690V 600V		240V 230V		415V 400V		460V 440V		525V 500V		690V 600V	
Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics
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100	100	100	100	15	12	10	8	4	3	100	100	100	100	50	38	50	38	6	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100	100	50	38	10	8	6	5	4	3	100	100	100	100	50	38	42	32	6	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100	100	25	19	10	8	6	5	4	3	100	100	50	50	50	38	12	9	5	5	100	100	50	38	40	30	25	19	10	8	100	100	100	100	50	38	35	27	12	9
50	38	25	19	10	8	6	5	4	3	100	100	50	50	50	38	12	9	5	5	100	100	50	38	40	30	25	19	10	8	100	100	100	50	50	38	35	27	12	9
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50	38	25	19	10	8	6	5	4	3	100	100	50	50	35	27	10	8	5	5	100	100	50	38	40	30	12	9	6	5	100	100	100	50	50	38	15	11	10	8
50	38	25	19	10	8	6	5	4	3	100	100	50	50	35	27	10	8	5	5	100	100	50	38	40	30	12	9	6	5	100	100	100	50	50	38	15	11	8	6
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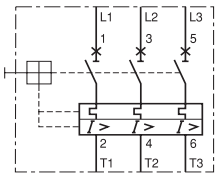
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	100	50	38	40	30	8	6	5	4	100	100	75	50	50	38	12	9	6	6
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	100	50	38	40	30	8	6	5	4	100	100	75	50	50	38	12	9	6	6

Motor protection

- Adjustable thermal release
- Magnetic release 13 × Ie max.
- Trip class 10
- Ambient temperature compensation
- Phase-failure protection

GMS-32S

GMS-32H



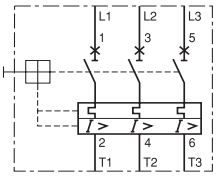
(Circuit diagram)

Type	Rated operational current Ie [A]	Thermal release Adjustment range [A]	Magnetic release Operating current [A]	Switching of 3 phase AC motors, AC-2, AC-3						440/460V	
				3-phase [kW] (50/60Hz)			3-phase [HP] (60Hz)				
				230V	400V	690V	230V	460V	575V	Icu [kA]	Ics [kA]
GMS-32S (Standard)	0.16	0.1...0.16	2.1	-	0.02	-	-	-	-	100	100
	0.25	0.16...0.25	3.3	0.03	0.06	-	-	-	-	100	100
	0.4	0.25...0.4	5.2	0.06	0.09	-	-	-	-	100	100
	0.63	0.4...0.63	8.2	0.09	0.12	0.25	-	-	-	100	100
	1	0.63...1.0	13	0.12	0.25	0.55	-	1/2	1/2	100	100
	1.6	1.0...1.6	20.8	0.25	0.55	1.1	1/3	3/4	1	100	100
	2.5	1.6...2.5	32.5	0.37	0.75	1.5	1/2	1½	1½	100	100
	4	2.5...4.0	52	0.75	1.5	3	1	2	3	50	38
	6	4...6	78	1.5	2.2	4	1½	5	5	15	11
	8	5...8	104	1.5	3	5.5	2	5	5	15	11
	10	6...10	130	3	4	7.5	3	7½	10	15	11
	13	9...13	169	3	5.5	11	3	7½	10	10	8
	17	11...17	221	4	7.5	11	5	10	15	10	8
	22	14...22	286	4	7.5	15	7½	15	20	8	6
	26	18...26	338	5.5	11	18.5	7½	15	20	8	6
	32	22...32	416	7.5	15	22	10	20	30	6	4
GMS-32H (High break)	0.16	0.1...0.16	2.1	-	0.02	-	-	-	-	100	100
	0.25	0.16...0.25	3.3	0.03	0.06	-	-	-	-	100	100
	0.4	0.25...0.4	5.2	0.06	0.09	-	-	-	-	100	100
	0.63	0.4...0.63	8.2	0.09	0.12	0.25	-	-	-	100	100
	1	0.63...1.0	13	0.12	0.25	0.55	-	1/2	1/2	100	100
	1.6	1.0...1.6	20.8	0.25	0.55	1.1	1/3	3/4	1	100	100
	2.5	1.6...2.5	32.5	0.37	0.75	1.5	1/2	1½	1½	100	100
	4	2.5...4.0	52	0.75	1.5	3	1	2	3	100	100
	6	4...6	78	1.5	2.2	4	1½	5	5	100	100
	8	5...8	104	1.5	3	5.5	2	5	5	50	38
	10	6...10	130	3	4	7.5	3	7½	10	50	38
	13	9...13	169	3	5.5	11	3	7½	10	50	38
	17	11...17	221	4	7.5	11	5	10	15	20	15
	22	14...22	286	4	7.5	15	7½	15	20	20	15
	26	18...26	338	5.5	11	18.5	7½	15	20	20	15
	32	22...32	416	7.5	15	22	10	20	30	20	15

- Adjustable thermal release
- Magnetic release 13 × Ie max.
- Trip class 10
- Ambient temperature compensation
- Phase-failure protection

GMS-63H

GMS-100H



(Circuit diagram)

Type	Rated operational current Ie [A]	Thermal release Adjustment range [A]	Magnetic release Operating current [A]	Switching of 3 phase AC motors, AC-2, AC-3						440/460V	
				3-phase [kW] (50/60Hz)			3-phase [HP] (60Hz)				
				230V	400V	690V	230V	460V	575V	Icu [kA]	Ics [kA]
GMS-63S (Standard)	10	6~10	130	3	4	7.5	3	7½	10	15	12
	13	9~13	169	3	5.5	11	3	7½	10	10	8
	17	11~17	221	4	7.5	11	5	10	15	10	8
	22	14~22	286	4	7.5	15	7½	15	20	10	8
	26	18~26	338	5.5	11	18.5	10	20	25	10	8
	32	22~32	416	7.5	15	22	10	25	30	10	8
	40	28~40	520	7.5	18.5	30	15	30	40	10	8
	50	34~50	650	11	22	45	15	40	50	10	8
	63	45~63	819	15	30	55	20	50	60	10	8
GMS-63H (High break)	10	6~10	130	3	4	7.5	3	7½	10	50	38
	13	9~13	169	3	5.5	11	3	7½	10	50	38
	17	11~17	221	4	7.5	11	5	10	15	50	38
	22	14~22	286	4	7.5	15	7½	15	20	50	38
	26	18~26	338	5.5	11	18.5	10	20	25	35	27
	32	22~32	416	7.5	15	22	10	25	30	35	27
	40	28~40	520	7.5	18.5	30	15	30	40	35	27
	50	34~50	650	11	22	45	15	40	50	35	27
	63	45~63	819	15	30	55	20	50	60	35	27
GMS-100S (Standard)	17	11~17	221	4	7.5	11	5	10	15	40	30
	22	14~22	286	4	7.5	15	7½	15	20	40	30
	26	18~26	338	5.5	11	18.5	10	20	25	40	30
	32	22~32	416	7.5	15	22	10	25	30	40	30
	40	28~40	520	7.5	18.5	30	15	30	40	40	30
	50	34~50	650	11	22	45	15	40	50	40	30
	63	45~63	819	15	30	55	20	50	60	40	30
	75	55~75	975	22	37	63	25	60	75	40	30
	90	70~90	1170	30	45	75	30	75	100	40	30
	100	80~100	1300	30	45	90	40	75	100	40	30
GMS-100H (High break)	17	11~17	221	4	7.5	11	5	10	15	50	38
	22	14~22	286	4	7.5	15	7½	15	20	50	38
	26	18~26	338	5.5	11	18.5	10	20	25	50	38
	32	22~32	416	7.5	15	22	10	25	30	50	38
	40	28~40	520	7.5	18.5	30	15	30	40	50	38
	50	34~50	650	11	22	45	15	40	50	50	38
	63	45~63	819	15	30	55	20	50	60	50	38
	75	55~75	975	22	37	63	25	60	75	50	38
	90	70~90	1170	30	45	75	30	75	100	50	38
	100	80~100	1300	30	45	90	40	75	100	50	38

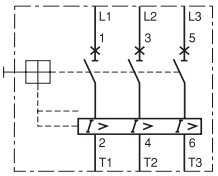
Short-circuit protection for starters

· Without thermal releases
· Magnetic release 13 × Ie max.


GMS-32HI


GMS-63HI


GMS-100HI



(Circuit diagram)

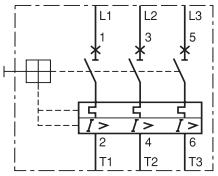
Type	Rated operational current Ie [A]	Thermal release Adjustment range [A]	Magnetic release Operating current [A]	Switching of 3 phase AC motors, AC-2, AC-3						440/460V	
				3-phase [kW] (50/60Hz)			3-phase [HP] (60Hz)				
				230V	400V	690V	230V	460V	575V	Icu [kA]	Ics [kA]
GMS-32HI (High break)	0.16	-	2.1	-	0.02	-	-	-	-	100	100
	0.25	-	3.3	0.03	0.06	-	-	-	-	100	100
	0.4	-	5.2	0.06	0.09	-	-	-	-	100	100
	0.63	-	8.2	0.09	0.12	0.25	-	-	-	100	100
	1	-	13	0.12	0.25	0.55	-	1/2	1/2	100	100
	1.6	-	20.8	0.25	0.55	1.1	1/3	3/4	1	100	100
	2.5	-	32.5	0.37	0.75	1.5	1/2	1½	1½	100	100
	4	-	52	0.75	1.5	3	1	2	3	100	100
	6	-	78	1.5	2.2	4	1½	5	5	100	100
	8	-	104	1.5	3	5.5	2	5	5	50	38
	10	-	130	3	4	7.5	3	7½	10	50	38
	13	-	169	3	5.5	11	3	7½	10	50	38
	17	-	221	4	7.5	11	5	10	15	20	15
	22	-	286	4	7.5	15	7½	15	20	20	15
	26	-	338	5.5	11	18.5	7½	15	20	20	15
	32	-	416	7.5	15	22	10	20	30	20	15
GMS-63HI (High break)	10	-	130	3	4	7.5	3	7½	10	50	38
	13	-	169	3	5.5	11	3	7½	10	50	38
	17	-	221	4	7.5	11	5	10	15	50	38
	22	-	286	4	7.5	15	7½	15	20	50	38
	26	-	338	5.5	11	18.5	10	20	25	35	27
	32	-	416	7.5	15	22	10	25	30	35	27
	40	-	520	7.5	18.5	30	15	30	40	35	27
	50	-	650	11	22	45	15	40	50	35	27
	63	-	819	15	30	55	20	50	60	35	27
GMS-100HI (High break)	17	-	221	4	7.5	11	5	10	15	50	38
	22	-	286	4	7.5	15	7½	15	20	50	38
	26	-	338	5.5	11	18.5	10	20	25	50	38
	32	-	416	7.5	15	22	10	25	30	50	38
	40	-	520	7.5	18.5	30	15	30	40	50	38
	50	-	650	11	22	45	15	40	50	50	38
	63	-	819	15	30	55	20	50	60	50	38
	75	-	975	22	37	63	25	60	75	50	38
	90	-	1170	30	45	75	30	75	100	50	38
	100	-	1300	30	45	90	40	75	100	50	38

Motor protection ··· Class 20

- Adjustable thermal release
- Magnetic release 13 × Ie max.
- Trip class 20
- Ambient temperature compensation
- Phase-failure protection


GMS-63H

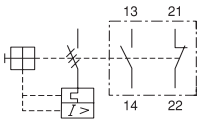
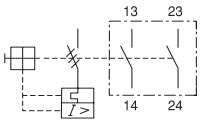
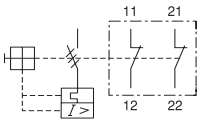
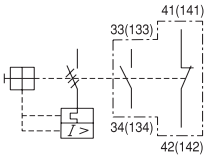
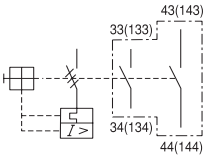
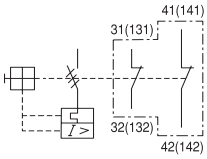
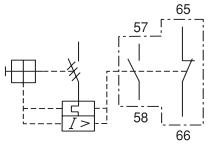
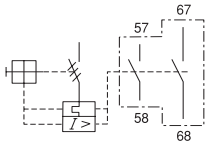
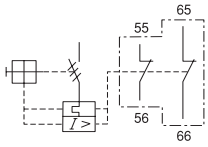
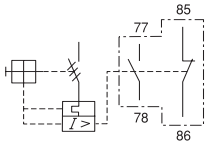
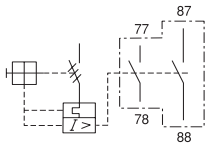
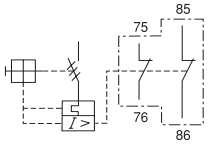

GMS-100H



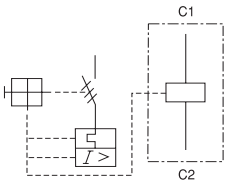
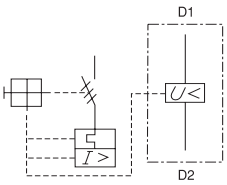
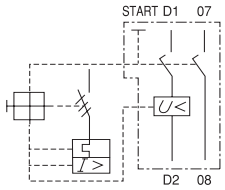
(Circuit diagram)

Type	Rated operational current Ie [A]	Thermal release Adjustment range [A]	Magnetic release Operating current [A]	Switching of 3 phase AC motors, AC-2, AC-3						440/460V	
				3-phase [kW] (50/60Hz)			3-phase [HP] (60Hz)				
				230V	400V	690V	230V	460V	575V	Icu [kA]	Ics [kA]
GMS-63HL (High break)	10	6~10	130	3	4	7.5	3	7½	10	50	38
	13	9~13	169	3	5.5	11	3	7½	10	50	38
	17	11~17	221	4	7.5	11	5	10	15	50	38
	22	14~22	286	4	7.5	15	7½	15	20	50	38
	26	18~26	338	5.5	11	18.5	10	20	25	35	27
	32	22~32	416	7.5	15	22	10	25	30	35	27
	40	28~40	520	7.5	18.5	30	15	30	40	35	27
	50	34~50	650	11	22	45	15	40	50	35	27
	63	45~63	819	15	30	55	20	50	60	35	27
GMS-100HL (High break)	17	11~17	221	4	7.5	11	5	10	15	50	38
	22	14~22	286	4	7.5	15	7½	15	20	50	38
	26	18~26	338	5.5	11	18.5	10	20	25	50	38
	32	22~32	416	7.5	15	22	10	25	30	50	38
	40	28~40	520	7.5	18.5	30	15	30	40	50	38
	50	34~50	650	11	22	45	15	40	50	50	38
	63	45~63	819	15	30	55	20	50	60	50	38
	75	55~75	975	22	37	63	25	60	75	50	38
	90	70~90	1170	30	45	75	30	75	100	50	38
	100	80~100	1300	30	45	90	40	75	100	50	38

Accessories

Type	Description	Connection diagram		
GFX... 	Auxiliary Switch · Front mounting · 2-pole · One front mounting module per circuit breaker	1NO1NC  **GFX-11**	2NO  **GFX-20**	2NC  **GFX-02**
GSX... 	Auxiliary Switch · Side mounting on the left · 2-pole · One side mounting module per circuit breaker	1NO1NC  **GSX-11**	2NO  **GSX-20**	2NC  **GSX-02**
GSA... 	Any Trip Alarm Switch · Side mounting on the left · 2-pole · One side mounting module per circuit breaker. (Always directly fitted to the circuit breaker). **GMS-32:** **GMS-63/100:**	 **GSA32-11** **GSA63100-11**	 **GSA32-20** **GSA63100-20**	 **GSA32-02** **GSA63100-02**
GMA... 	Magnetic Trip Alarm Switch · Side mounting on the left · 2-pole · One side mounting module per circuit breaker. (Always directly fitted to the circuit breaker except using with Any Trip Alarm Switch).	 **GMA-11**	 **GMA-20**	 **GMA-02**

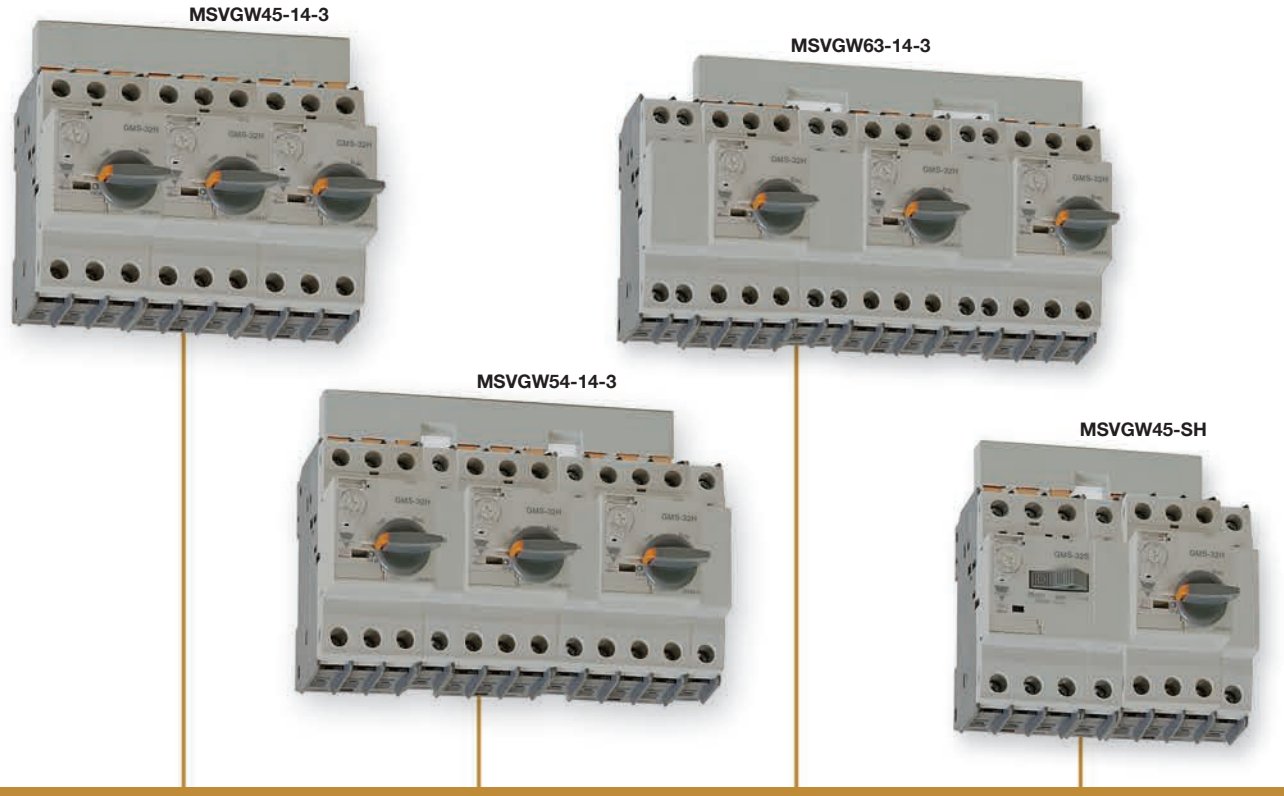
Ordering Example: Specify Contact Arrangement
GFX-11 (1NO 1NC)
GFX-20 (2NO)
GFX-02 (2NC)

Type	Description	Connection diagram	
GSR... 	Shunt release · Side mounting on the right · One side mounting module per circuit breaker. (Always directly fitted to the circuit breaker).		24V 50Hz / 28V 60Hz 110~127V 50Hz / 120V 60Hz 220~230V 50Hz / 240~260V 60Hz 240V 50Hz / 277V 60Hz 380~400V 50Hz / 440~460V 60Hz 415~440V 50Hz / 460~480V 60Hz
GUR... 	Undervoltage release · Side mounting on the right · One side mounting module per circuit breaker. (Always directly fitted to the circuit breaker).		24V 50Hz / 28V 60Hz 110~127V 50Hz / 120V 60Hz 220~230V 50Hz / 240~260V 60Hz 240V 50Hz / 277V 60Hz 380~400V 50Hz / 440~460V 60Hz 415~440V 50Hz / 460~480V 60Hz
GURX... 	Undervoltage release with Switch (Rotary Handle Only) · Side mounting on the right · Include 2NO Auxiliary contact · One side mounting module per circuit breaker. (Always directly fitted to the circuit breaker).		24V 50Hz / 28V 60Hz 110~127V 50Hz / 120V 60Hz 220~230V 50Hz / 240~260V 60Hz 240V 50Hz / 277V 60Hz 380~400V 50Hz / 440~460V 60Hz 415~440V 50Hz / 460~480V 60Hz

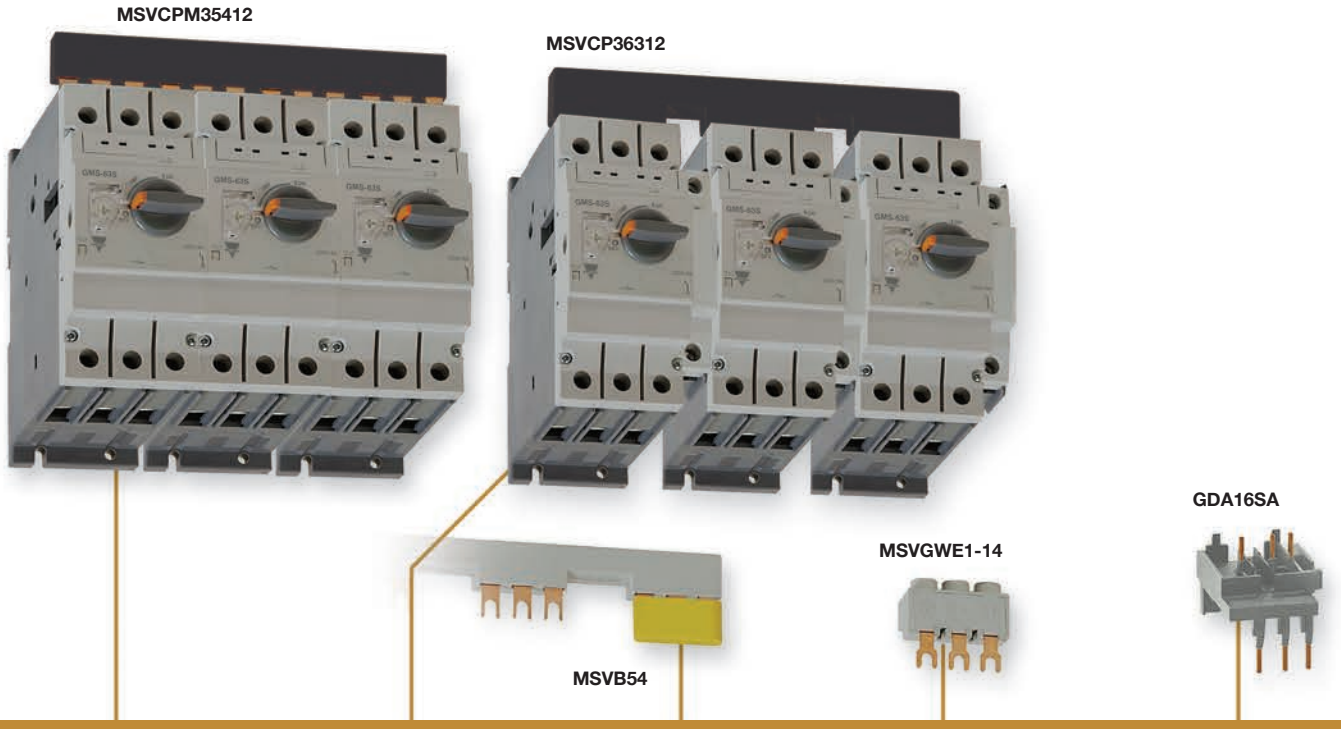
Others

Type	Description	Applied Type
PIL32 	**Push-in lug** · For screwing the MMS on to mounting plates.	**GMS-32S** **GMS-32H**
IB100 	**Insulation barriers** · Insulation barriers with increased creepage distances and clearances for UL	**GMS-100S** **GMS-100H**

Busbar accessories



	45mm Spacing (rated 63A)	54mm Spacing (rated 63A)	63mm Spacing (rated 63A)	Jumper
Type	**MSVGW45-14-2**	**MSVGW54-14-2**	**MSVGW63-14-2**	**MSVGW45-SH**
Description	For 2 GMS-32S/H	For 2 GMS-32S/H + accessories (side mnt aux sw)	For 2 GMS-32S/H + accessories (side mnt undervoltage or shunt trip)	For connecting GMS-32S W/ GMS-32H
Type	**MSVGW45-14-3**	**MSVGW54-14-3**	**MSVGW63-14-3**	
Description	For 3 GMS-32S/H	For 3 GMS-32S/H + accessories (side mnt aux. sw)	For 3 GMS-32S/H + accessories (side mnt undervoltage or shunt trip)	
Type	**MSVGW45-14-4**	**MSVGW54-14-4**	**MSVGW63-14-4**	
Description	For 4 GMS-32S/H	For 4 GMS-32S/H + accessories (side mnt aux. sw)	For 4 GMS-32S/H + accessories (side mnt undervoltage or shunt trip)	
Type	**MSVGW45-14-5**	**MSVGW54-14-5**	**MSVGW63-14-5**	
Description	For 5 GMS-32S/H	For 5 GMS-32S/H + accessories (side mnt aux. sw)	For 5 GMS-32S/H + accessories (side mnt undervoltage or shunt trip)	



54mm Spacing (rated 120A)	63mm Spacing (rated 120A)	Terminal cover	Supply connector	Connection module
MSVCPM25412	**MSVCP36312**	**MSVB54**	**MSVGWE1-14**	**GDA16SA**
For 2 GMS-63	For 2 GMS-63 + accessories (side mnt aux sw)	3 Pole protective cover for MSVGW..	3 Phase input terminal 63A	For connecting GMS-32S to CGMS-6A - CGMS-12A
MSVCPM35412	**MSVCP36312**	**MSVTA120**	**MSVBTC50E**	**GDA16SD**
For 3 GMS-63	For 3 GMS-63 + accessories (side mnt aux. sw)	3 Pole protective cover for MSVCP..	3 Phase Input terminal 120A	For connecting GMS-32S to CGMS-6D - CGMS-12D
MSVCPM45412	**MSVCP46312**			**GDA16HA**
For 4 GMS-63	For 4 GMS-63 + accessories (side mnt aux. sw)			For connecting GMS-32H to CGMS-6A - CGMS-12A
				GDA16HD
				For connecting GMS-32H to CGMS-6D - CGMS-12D

IEC performance data (Motor protection)

● GMS-100S

Rated operational current I_e	[A]	17	22	26	32	40	50	63	75	90	100
Switching of standard three-phase motors AC-2, AC-3											
230/240V	[kW]	3.7/4	4	5.5	7.5	7.5	11	15	22	30	30
400/415V	[kW]	7.5	7.5	11	15	18.5	22	30	37	45	45
500V	[kW]	11	11	15	18.5	22	30	37	45	55	63
690V	[kW]	11	15	18.5	22	30	45	55	63	75	90
Back-up fuses gG, gL,, only if Icc>Icu (* = No back up fuse required)											
230/240V	[A]	*	*	*	*	*	*	*	*	*	*
400/415V	[A]	100	125	125	125	160	160	160	160	160	160
440/460V	[A]	100	125	125	125	125	125	160	160	160	160
500V	[A]	100	100	100	100	100	100	100	125	125	125
690V	[A]	63	80	80	80	80	80	80	100	125	125
Ultimate short-circuit breaking capacity I_{cu}											
230/240V	[kA]	100	100	100	100	100	100	100	100	100	100
400/415V	[kA]	50	50	50	50	50	50	50	50	50	50
440/460V	[kA]	40	40	40	40	40	40	40	40	40	40
500V	[kA]	25	25	25	15	15	12	12	8	8	8
690V	[kA]	10	10	10	10	6	6	6	5	5	5
Rated service short-circuit breaking capacity I_{cs}											
230/240V	[kA]	100	100	100	100	100	100	100	100	100	100
400/415V	[kA]	38	38	38	38	38	38	38	38	38	38
440/460V	[kA]	30	30	30	30	30	30	30	30	30	30
500V	[kA]	19	19	19	11	11	9	9	6	6	6
690V	[kA]	8	8	8	8	5	5	5	4	4	4

● GMS-100H

Rated operational current I_e	[A]	17	22	26	32	40	50	63	75	90	100
Switching of standard three-phase motors AC-2, AC-3											
230/240V	[kW]	3.7/4	4	5.5	7.5	7.5	11	15	22	30	30
400/415V	[kW]	7.5	7.5	11	15	18.5	22	30	37	45	45
500V	[kW]	11	11	15	18.5	22	30	37	45	55	63
690V	[kW]	11	15	18.5	22	30	45	55	63	75	90
Back-up fuses gG, gL,, only if Icc>Icu (*= No back up fuse required)											
230/240V	[A]	*	*	*	*	*	*	*	*	*	*
400/415V	[A]	*	*	*	*	*	*	*	*	*	*
440/460V	[A]	125	125	125	160	160	160	200	200	200	200
500V	[A]	100	125	125	125	160	160	160	160	160	160
690V	[A]	80	80	80	80	80	100	100	125	160	160
Ultimate short-circuit breaking capacity I_{cu}											
230/240V	[kA]	100	100	100	100	100	100	100	100	100	100
400/415V	[kA]	100	100	100	100	100	100	100	75	75	75
440/460V	[kA]	50	50	50	50	50	50	50	50	50	50
500V	[kA]	35	35	35	25	20	15	15	12	12	12
690V	[kA]	12	12	12	12	12	10	8	6	6	6
Rated service short-circuit breaking capacity I_{cs}											
230/240V	[kA]	100	100	100	100	100	100	100	100	100	100
400/415V	[kA]	100	50	50	50	50	50	50	50	50	50
440/460V	[kA]	38	38	38	38	38	38	38	38	38	38
500V	[kA]	27	27	27	19	15	11	11	9	9	9
690V	[kA]	9	9	9	9	9	8	6	6	6	6

Note) * = Short circuit proof up to 50 or 100kA.
No back up fuse required.

IEC performance data (Short-circuit protection for starters)

CARLO GAVAZZI

● GMS-32HI

Rated operational current I_e	[A]	0.16	0.25	0.4	0.63	1	1.6	2.5	4	6	8	10	13	17	22	26	32
AC-2, AC-3																	
230/240V	[kW]	-	0.03	0.06	0.09	0.12	0.18/0.25	0.37	0.55/0.75	1.1/1.5	1.5	2.2/3	3	3.7/4	4	5.5	7.5
400/415V	[kW]	0.02	0.06	0.09	0.12	0.18/0.25	0.37/0.55	0.75	1.1/1.5	2.2	3	3.7/4	5.5	7.5	7.5	11	15
500V	[kW]	-	-	-	0.25	0.37	0.55/0.75	1.1	1.5/2.2	3	3.7	4/5.5	7.5	11	11	15	18.5
690V	[kW]	-	-	-	0.25	0.37/0.55	0.75/1.1	1.5	2.2/3	3.7/4	5.5	7.5	11	11	15	18.5	22
Back-up fuses gG, gL,, only if Icc>Icu (* = No back up fuse required)																	
230/240V	[A]	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
400/415V	[A]	*	*	*	*	*	*	*	*	*	*	*	*	100	125	125	125
440/460V	[A]	*	*	*	*	*	*	*	*	*	80	80	80	80	100	100	100
500V	[A]	*	*	*	*	*	*	*	*	*	63	80	80	80	80	80	80
690V	[A]	*	*	*	*	*	*	35	40	50	63	63	63	63	63	63	63
Ultimate short-circuit breaking capacity I_{cu}																	
230/240V	[kA]	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
400/415V	[kA]	100	100	100	100	100	100	100	100	100	100	100	100	50	50	50	50
440/460V	[kA]	100	100	100	100	100	100	100	100	100	50	50	50	20	20	20	20
500V	[kA]	100	100	100	100	100	100	100	100	100	50	50	42	10	10	10	10
690V	[kA]	100	100	100	100	100	100	8	8	6	6	6	6	4	4	4	4
Rated service short-circuit breaking capacity I_{cs}																	
230/240V	[kA]	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
400/415V	[kA]	100	100	100	100	100	100	100	100	100	100	100	100	38	38	38	38
440/460V	[kA]	100	100	100	100	100	100	100	100	100	38	38	38	15	15	15	15
500V	[kA]	100	100	100	100	100	100	100	100	100	38	38	32	8	8	8	8
690V	[kA]	100	100	100	100	100	100	8	8	6	6	6	6	4	4	4	4

● GMS-63HI

Rated operational current I_e	[A]	10	13	17	22	26	32	40	50	63
AC-2, AC-3										
230/240V	[kW]	2.2/3	3	3.7/4	4	5.5	7.5	7.5	11	15
400/415V	[kW]	3.7/4	5.5	7.5	7.5	11	15	18.5	22	30
500V	[kW]	4/5.5	7.5	11	11	15	18.5	22	30	37
690V	[kW]	7.5	11	11	15	18.5	22	30	45	55
Back-up fuses gG, gL,, only if Icc>Icu (* = No back up fuse required)										
230/240V	[A]	*	*	*	*	*	*	*	*	*
400/415V	[A]	*	*	100	125	125	125	160	160	160
440/460V	[A]	100	100	100	125	125	125	125	125	160
500V	[A]	100	100	100	100	100	100	100	100	100
690V	[A]	63	63	63	80	80	80	80	80	80
Ultimate short-circuit breaking capacity I_{cu}										
230/240V	[kA]	100	100	100	100	100	100	100	100	100
400/415V	[kA]	100	100	50	50	50	50	50	50	50
440/460V	[kA]	50	50	50	50	35	35	35	35	35
500V	[kA]	50	42	12	12	12	10	10	10	10
690V	[kA]	6	6	5	5	5	5	5	5	5
Rated service short-circuit breaking capacity I_{cs}										
230/240V	[kA]	100	100	100	100	100	100	100	100	100
400/415V	[kA]	100	100	50	50	50	50	50	50	50
440/460V	[kA]	38	38	38	38	27	27	27	27	27
500V	[kA]	38	32	9	9	9	8	8	8	8
690V	[kA]	5	5	5	5	5	5	5	5	5

● GMS-100HI

Rated operational current I_e	[A]	17	22	26	32	40	50	63	75	90	100
AC-2, AC-3											
230/240V	[kW]	3.7/4	4	5.5	7.5	7.5	11	15	22	30	30
400/415V	[kW]	7.5	7.5	11	15	18.5	22	30	37	45	45
500V	[kW]	11	11	15	18.5	22	30	37	45	55	63
690V	[kW]	11	15	18.5	22	30	45	55	63	75	90
Back-up fuses gG, gL,, only if Icc>Icu (* = No back up fuse required)											
230/240V	[A]	*	*	*	*	*	*	*	*	*	*
400/415V	[A]	*	*	*	*	*	*	*	*	*	*
440/460V	[A]	125	125	125	160	160	160	200	200	200	200
500V	[A]	100	125	125	125	160	160	160	160	160	160
690V	[A]	80	80	80	80	80	100	100	125	160	160
Ultimate short-circuit breaking capacity I_{cu}											
230/240V	[kA]	100	100	100	100	100	100	100	100	100	100
400/415V	[kA]	100	100	100	100	100	100	100	75	75	75
440/460V	[kA]	50	50	50	50	50	50	50	50	50	50
500V	[kA]	35	35	35	25	20	15	15	12	12	12
690V	[kA]	12	12	12	12	12	10	8	6	6	6
Rated service short-circuit breaking capacity I_{cs}											
230/240V	[kA]	100	100	100	100	100	100	100	100	100	100
400/415V	[kA]	100	50	50	50	50	50	50	50	50	50
440/460V	[kA]	38	38	38	38	38	38	38	38	38	38
500V	[kA]	27	27	27	19	15	11	11	9	9	9
690V	[kA]	9	9	9	9	9	8	6	6	6	6

IEC performance data (Motor protection)

● GMS-100S

Rated operational current I_e	[A]	17	22	26	32	40	50	63	75	90	100
Switching of standard three-phase motors AC-2, AC-3											
230/240V	[kW]	3.7/4	4	5.5	7.5	7.5	11	15	22	30	30
400/415V	[kW]	7.5	7.5	11	15	18.5	22	30	37	45	45
500V	[kW]	11	11	15	18.5	22	30	37	45	55	63
690V	[kW]	11	15	18.5	22	30	45	55	63	75	90
Back-up fuses gG, gL,, only if Icc>Icu (* = No back up fuse required)											
230/240V	[A]	*	*	*	*	*	*	*	*	*	*
400/415V	[A]	100	125	125	125	160	160	160	160	160	160
440/460V	[A]	100	125	125	125	125	125	160	160	160	160
500V	[A]	100	100	100	100	100	100	100	125	125	125
690V	[A]	63	80	80	80	80	80	80	100	125	125
Ultimate short-circuit breaking capacity I_{cu}											
230/240V	[kA]	100	100	100	100	100	100	100	100	100	100
400/415V	[kA]	50	50	50	50	50	50	50	50	50	50
440/460V	[kA]	40	40	40	40	40	40	40	40	40	40
500V	[kA]	25	25	25	15	15	12	12	8	8	8
690V	[kA]	10	10	10	10	6	6	6	5	5	5
Rated service short-circuit breaking capacity I_{cs}											
230/240V	[kA]	100	100	100	100	100	100	100	100	100	100
400/415V	[kA]	38	38	38	38	38	38	38	38	38	38
440/460V	[kA]	30	30	30	30	30	30	30	30	30	30
500V	[kA]	19	19	19	11	11	9	9	6	6	6
690V	[kA]	8	8	8	8	5	5	5	4	4	4

● GMS-100H

Rated operational current I_e	[A]	17	22	26	32	40	50	63	75	90	100
Switching of standard three-phase motors AC-2, AC-3											
230/240V	[kW]	3.7/4	4	5.5	7.5	7.5	11	15	22	30	30
400/415V	[kW]	7.5	7.5	11	15	18.5	22	30	37	45	45
500V	[kW]	11	11	15	18.5	22	30	37	45	55	63
690V	[kW]	11	15	18.5	22	30	45	55	63	75	90
Back-up fuses gG, gL,, only if Icc>Icu (*= No back up fuse required)											
230/240V	[A]	*	*	*	*	*	*	*	*	*	*
400/415V	[A]	*	*	*	*	*	*	*	*	*	*
440/460V	[A]	125	125	125	160	160	160	200	200	200	200
500V	[A]	100	125	125	125	160	160	160	160	160	160
690V	[A]	80	80	80	80	80	100	100	125	160	160
Ultimate short-circuit breaking capacity I_{cu}											
230/240V	[kA]	100	100	100	100	100	100	100	100	100	100
400/415V	[kA]	100	100	100	100	100	100	100	75	75	75
440/460V	[kA]	50	50	50	50	50	50	50	50	50	50
500V	[kA]	35	35	35	25	20	15	15	12	12	12
690V	[kA]	12	12	12	12	12	10	8	6	6	6
Rated service short-circuit breaking capacity I_{cs}											
230/240V	[kA]	100	100	100	100	100	100	100	100	100	100
400/415V	[kA]	100	50	50	50	50	50	50	50	50	50
440/460V	[kA]	38	38	38	38	38	38	38	38	38	38
500V	[kA]	27	27	27	19	15	11	11	9	9	9
690V	[kA]	9	9	9	9	9	8	6	6	6	6

Note) * = Short circuit proof up to 50 or 100kA.
No back up fuse required.

IEC performance data (Short-circuit protection for starters)

● GMS-32HI

Rated operational current I_e	[A]	0.16	0.25	0.4	0.63	1	1.6	2.5	4	6	8	10	13	17	22	26	32
AC-2, AC-3																	
230/240V	[kW]	-	0.03	0.06	0.09	0.12	0.18/0.25	0.37	0.55/0.75	1.1/1.5	1.5	2.2/3	3	3.7/4	4	5.5	7.5
400/415V	[kW]	0.02	0.06	0.09	0.12	0.18/0.25	0.37/0.55	0.75	1.1/1.5	2.2	3	3.7/4	5.5	7.5	7.5	11	15
500V	[kW]	-	-	-	0.25	0.37	0.55/0.75	1.1	1.5/2.2	3	3.7	4/5.5	7.5	11	11	15	18.5
690V	[kW]	-	-	-	0.25	0.37/0.55	0.75/1.1	1.5	2.2/3	3.7/4	5.5	7.5	11	11	15	18.5	22
Back-up fuses gG, gL,, only if Icc>I_{cu} (* = No back up fuse required)																	
230/240V	[A]	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
400/415V	[A]	*	*	*	*	*	*	*	*	*	*	*	*	100	125	125	125
440/460V	[A]	*	*	*	*	*	*	*	*	*	80	80	80	80	100	100	100
500V	[A]	*	*	*	*	*	*	*	*	*	63	80	80	80	80	80	80
690V	[A]	*	*	*	*	*	*	35	40	50	63	63	63	63	63	63	63
Ultimate short-circuit breaking capacity I_{cu}																	
230/240V	[kA]	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
400/415V	[kA]	100	100	100	100	100	100	100	100	100	100	100	100	50	50	50	50
440/460V	[kA]	100	100	100	100	100	100	100	100	100	50	50	50	20	20	20	20
500V	[kA]	100	100	100	100	100	100	100	100	100	50	50	42	10	10	10	10
690V	[kA]	100	100	100	100	100	100	8	8	6	6	6	6	4	4	4	4
Rated service short-circuit breaking capacity I_{cs}																	
230/240V	[kA]	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
400/415V	[kA]	100	100	100	100	100	100	100	100	100	100	100	100	38	38	38	38
440/460V	[kA]	100	100	100	100	100	100	100	100	100	38	38	38	15	15	15	15
500V	[kA]	100	100	100	100	100	100	100	100	100	38	38	32	8	8	8	8
690V	[kA]	100	100	100	100	100	100	8	8	6	6	6	6	4	4	4	4

● GMS-63HI

Rated operational current I_e	[A]	10	13	17	22	26	32	40	50	63
AC-2, AC-3										
230/240V	[kW]	2.2/3	3	3.7/4	4	5.5	7.5	7.5	11	15
400/415V	[kW]	3.7/4	5.5	7.5	7.5	11	15	18.5	22	30
500V	[kW]	4/5.5	7.5	11	11	15	18.5	22	30	37
690V	[kW]	7.5	11	11	15	18.5	22	30	45	55
Back-up fuses gG, gL,, only if Icc>I_{cu} (* = No back up fuse required)										
230/240V	[A]	*	*	*	*	*	*	*	*	*
400/415V	[A]	*	*	100	125	125	125	160	160	160
440/460V	[A]	100	100	100	125	125	125	125	125	160
500V	[A]	100	100	100	100	100	100	100	100	100
690V	[A]	63	63	63	80	80	80	80	80	80
Ultimate short-circuit breaking capacity I_{cu}										
230/240V	[kA]	100	100	100	100	100	100	100	100	100
400/415V	[kA]	100	100	50	50	50	50	50	50	50
440/460V	[kA]	50	50	50	50	35	35	35	35	35
500V	[kA]	50	42	12	12	12	10	10	10	10
690V	[kA]	6	6	5	5	5	5	5	5	5
Rated service short-circuit breaking capacity I_{cs}										
230/240V	[kA]	100	100	100	100	100	100	100	100	100
400/415V	[kA]	100	100	50	50	50	50	50	50	50
440/460V	[kA]	38	38	38	38	27	27	27	27	27
500V	[kA]	38	32	9	9	9	8	8	8	8
690V	[kA]	5	5	5	5	5	5	5	5	5

● GMS-100HI

Rated operational current I_e	[A]	17	22	26	32	40	50	63	75	90	100
AC-2, AC-3											
230/240V	[kW]	3.7/4	4	5.5	7.5	7.5	11	15	22	30	30
400/415V	[kW]	7.5	7.5	11	15	18.5	22	30	37	45	45
500V	[kW]	11	11	15	18.5	22	30	37	45	55	63
690V	[kW]	11	15	18.5	22	30	45	55	63	75	90
Back-up fuses gG, gL,, only if Icc>I_{cu} (* = No back up fuse required)											
230/240V	[A]	*	*	*	*	*	*	*	*	*	*
400/415V	[A]	*	*	*	*	*	*	*	*	*	*
440/460V	[A]	125	125	125	160	160	160	200	200	200	200
500V	[A]	100	125	125	125	160	160	160	160	160	160
690V	[A]	80	80	80	80	80	100	100	125	160	160
Ultimate short-circuit breaking capacity I_{cu}											
230/240V	[kA]	100	100	100	100	100	100	100	100	100	100
400/415V	[kA]	100	100	100	100	100	100	100	75	75	75
440/460V	[kA]	50	50	50	50	50	50	50	50	50	50
500V	[kA]	35	35	35	25	20	15	15	12	12	12
690V	[kA]	12	12	12	12	12	10	8	6	6	6
Rated service short-circuit breaking capacity I_{cs}											
230/240V	[kA]	100	100	100	100	100	100	100	100	100	100
400/415V	[kA]	100	50	50	50	50	50	50	50	50	50
440/460V	[kA]	38	38	38	38	38	38	38	38	38	38
500V	[kA]	27	27	27	19	15	11	11	9	9	9
690V	[kA]	9	9	9	9	9	8	6	6	6	6

IEC performance data (Motor protection ; Class 20)

● GMS-63HL

Rated operational current I_e	[A]	10	13	17	22	26	32	40	50	63
Switching of standard three-phase motors AC-2, AC-3										
230/240V	[kW]	2.2/3	3	3.7/4	4	5.5	7.5	7.5	11	15
400/415V	[kW]	3.7/4	5.5	7.5	7.5	11	15	18.5	22	30
500V	[kW]	4/5.5	7.5	11	11	15	18.5	22	30	37
690V	[kW]	7.5	11	11	15	18.5	22	30	45	55
Back-up fuses gG, gL,, only if Icc>Icu (* = No back up fuse required)										
230/240V	[A]	*	*	*	*	*	*	*	*	*
400/415V	[A]	*	*	100	125	125	125	160	160	160
440/460V	[A]	100	100	100	125	125	125	125	125	160
500V	[A]	100	100	100	100	100	100	100	100	100
690V	[A]	63	63	63	80	80	80	80	80	80
Ultimate short-circuit breaking capacity I_{cu}										
230/240V	[kA]	100	100	100	100	100	100	100	100	100
400/415V	[kA]	100	100	50	50	50	50	50	50	50
440/460V	[kA]	50	50	50	50	35	35	35	35	35
500V	[kA]	50	42	12	12	12	10	10	10	10
690V	[kA]	6	6	5	5	5	5	5	5	5
Rated service short-circuit breaking capacity I_{cs}										
230/240V	[kA]	100	100	100	100	100	100	100	100	100
400/415V	[kA]	100	100	50	50	50	50	50	50	50
440/460V	[kA]	38	38	38	38	27	27	27	27	27
500V	[kA]	38	32	9	9	9	8	8	8	8
690V	[kA]	5	5	5	5	5	5	5	5	5

● GMS-100HL

Rated operational current I_e	[A]	17	22	26	32	40	50	63	75	90	100
Switching of standard three-phase motors AC-2, AC-3											
230/240V	[kW]	3.7/4	4	5.5	7.5	7.5	11	15	22	30	30
400/415V	[kW]	7.5	7.5	11	15	18.5	22	30	37	45	45
500V	[kW]	11	11	15	18.5	22	30	37	45	55	63
690V	[kW]	11	15	18.5	22	30	45	55	63	75	90
Back-up fuses gG, gL,, only if Icc>Icu (* = No back up fuse required)											
230/240V	[A]	*	*	*	*	*	*	*	*	*	*
400/415V	[A]	*	*	*	*	*	*	*	*	*	*
440/460V	[A]	125	125	125	160	160	160	200	200	200	200
500V	[A]	100	125	125	125	160	160	160	160	160	160
690V	[A]	80	80	80	80	80	100	100	125	160	160
Ultimate short-circuit breaking capacity I_{cu}											
230/240V	[kA]	100	100	100	100	100	100	100	100	100	100
400/415V	[kA]	100	100	100	100	100	100	100	75	75	75
440/460V	[kA]	50	50	50	50	50	50	50	50	50	50
500V	[kA]	35	35	35	25	20	15	15	12	12	12
690V	[kA]	12	12	12	12	12	10	8	6	6	6
Rated service short-circuit breaking capacity I_{cs}											
230/240V	[kA]	100	100	100	100	100	100	100	100	100	100
400/415V	[kA]	100	50	50	50	50	50	50	50	50	50
440/460V	[kA]	38	38	38	38	38	38	38	38	38	38
500V	[kA]	27	27	27	19	15	11	11	9	9	9
690V	[kA]	9	9	9	9	9	8	6	6	6	6

Note) * = Short circuit proof up to 50 or 100kA.
No back up fuse required.

UL/CSA performance data (Motor protection)

Manual motor controller
(UL 508, CSA C22.2 as Manual motor controllers)

● GMS-32S

Rated operational current Ie		[A]	0.16	0.25	0.4	0.63	1	1.6	2.5	4	6	8	10	13	17	22	26	32
Max. short-circuit current																		
	240V	[kA]	100	100	100	100	100	100	100	100	100	100	50	50	40	30	30	20
	480Y/277V	[kA]	50	50	50	50	50	50	50	50	25	25	10	10	10	10	7.5	7.5
	600Y/347V	[kA]	10	10	10	10	10	10	10	5	5	5	5	5	5	5	5	5
Motor load																		
1 Phase	115V	[HP]	-	-	-	-	-	-	-	1/8	1/4	1/3	1/2	1/2	1	2	2	2
	230V	[HP]	-	-	-	-	-	1/10	1/6	1/3	3/4	1	1½	2	3	3	5	5
3 Phase	230V	[HP]	-	-	-	-	-	1/3	1/2	1	1½	2	3	3	5	7½	7½	10
	460V	[HP]	-	-	-	-	1/2	3/4	1½	2	5	5	7½	7½	10	15	15	20
	575V	[HP]	-	-	-	-	1/2	1	1½	3	5	5	10	10	15	20	20	30
Maximum rated current of fuse or breaker		[A]	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500

Manual motor controller "group installation" or "Type E starter"
(UL 508, CSA C22.2 No..14, for group installation, in connection with
a short-circuit protection device)

● GMS-32H

Rated operational current Ie		[A]	0.16	0.25	0.4	0.63	1	1.6	2.5	4	6	8	10	13	17	22	26	32
Max. short-circuit current																		
	240V	[kA]	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	480Y/277V	[kA]	65	65	65	65	65	65	65	65	65	65	65	65	30	30	30	30
	600Y/347V	[kA]	25	25	25	25	25	25	25	25	25	25	25	25	10	10	10	10
Motor load																		
1 Phase	115V	[HP]	-	-	-	-	-	-	-	1/8	1/4	1/3	1/2	1/2	1	2	2	2
	230V	[HP]	-	-	-	-	-	1/10	1/6	1/3	3/4	1	1½	2	3	3	5	5
3 Phase	230V	[HP]	-	-	-	-	-	1/3	1/2	1	1½	2	3	3	5	7½	7½	10
	460V	[HP]	-	-	-	-	1/2	3/4	1½	2	5	5	7½	7½	10	15	15	20
	575V	[HP]	-	-	-	-	1/2	1	1½	3	5	5	10	10	15	20	20	30
Maximum rated current of fuse or breaker		[A]	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500

UL/CSA performance data (Motor protection)

Manual motor controller "group installation" or "Type E starter"
(UL 508, CSA C22.2 No.14, for group installation, in connection with a short-circuit protection device)

● GMS-63S

Rated operational current I_e		[A]	10	13	17	22	26	32	40	50	63
Max. short-circuit current											
	240V	[kA]	100	100	100	100	100	100	100	100	100
	480Y/277V	[kA]	50	50	40	40	40	40	40	40	40
	600Y/347V	[kA]	10	10	10	10	10	10	10	10	10
Motor load											
1 Phase	115V	[HP]	1/2	1/2	1	2	2	3	3	5	5
	230V	[HP]	1½	2	3	3	5	5	7½	10	15
3 Phase	230V	[HP]	3	3	5	7½	10	10	15	15	20
	460V	[HP]	7½	7½	10	15	20	25	30	40	50
	575V	[HP]	10	10	15	20	25	30	40	50	60
Maximum rated current of fuse or breaker		[A]	600	600	600	600	600	600	600	600	600

● GMS-63H

Rated operational current I_e		[A]	10	13	17	22	26	32	40	50	63
Max. short-circuit current											
	240V	[kA]	100	100	100	100	100	100	100	100	100
	480Y/277V	[kA]	65	65	50	50	50	50	50	50	50
	600Y/347V	[kA]	25	25	10	10	10	10	10	10	10
Motor load											
1 Phase	115V	[HP]	1/2	1/2	1	2	2	3	3	5	5
	230V	[HP]	1½	2	3	3	5	5	7½	10	15
3 Phase	230V	[HP]	3	3	5	7½	10	10	15	15	20
	460V	[HP]	7½	7½	10	15	20	25	30	40	50
	575V	[HP]	10	10	15	20	25	30	40	50	60
Maximum rated current of fuse or breaker		[A]	600	600	600	600	600	600	600	600	600

Manual motor controller "group installation" or "Type E starter"
(UL 508, CSA C22.2 No..14, for group installation, in connection with a short-circuit protection device)

● GMS-100S

Rated operational current I_e		[A]	17	22	26	32	40	50	63	75	90	100
Max. short-circuit current												
	240V	[kA]	100	100	100	100	100	100	100	100	100	100
	480Y/277V	[kA]	50	50	50	50	50	50	40	40	40	40
	600Y/347V	[kA]	10	10	10	10	10	10	10	10	10	10
Motor load												
1 Phase	115V	[HP]	1	1½	2	3	3	5	5	7½	10	10
	230V	[HP]	3	3	5	5	7½	10	15	15	20	20
3 Phase	230V	[HP]	5	7½	10	10	15	15	20	25	30	40
	460V	[HP]	10	15	20	25	30	40	50	60	75	75
	575V	[HP]	15	20	25	30	40	50	60	75	100	100
Maximum rated current of fuse or breaker		[A]	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000

● GMS-100H

Rated operational current I_e		[A]	17	22	26	32	40	50	63	75	90	100
Max. short-circuit current												
	240V	[kA]	100	100	100	100	100	100	100	100	100	100
	480Y/277V	[kA]	65	65	65	65	65	65	50	50	50	50
	600Y/347V	[kA]	25	20	20	20	20	20	10	10	10	10
Motor load												
1 Phase	115V	[HP]	1	1½	2	3	3	5	5	7½	10	10
	230V	[HP]	3	3	5	5	7½	10	15	15	20	20
3 Phase	230V	[HP]	5	7½	10	10	15	15	20	25	30	40
	460V	[HP]	10	15	20	25	30	40	50	60	75	75
	575V	[HP]	15	20	25	30	40	50	60	75	100	100
Maximum rated current of fuse or breaker		[A]	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000