

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

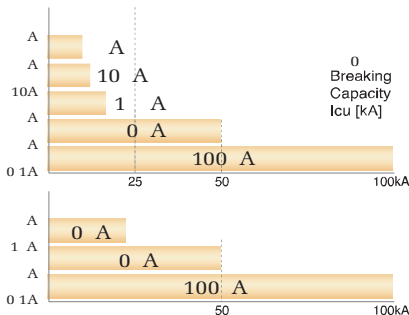


32AF


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


GMS S  Standard

GMS GMS  High break
Magnetic release

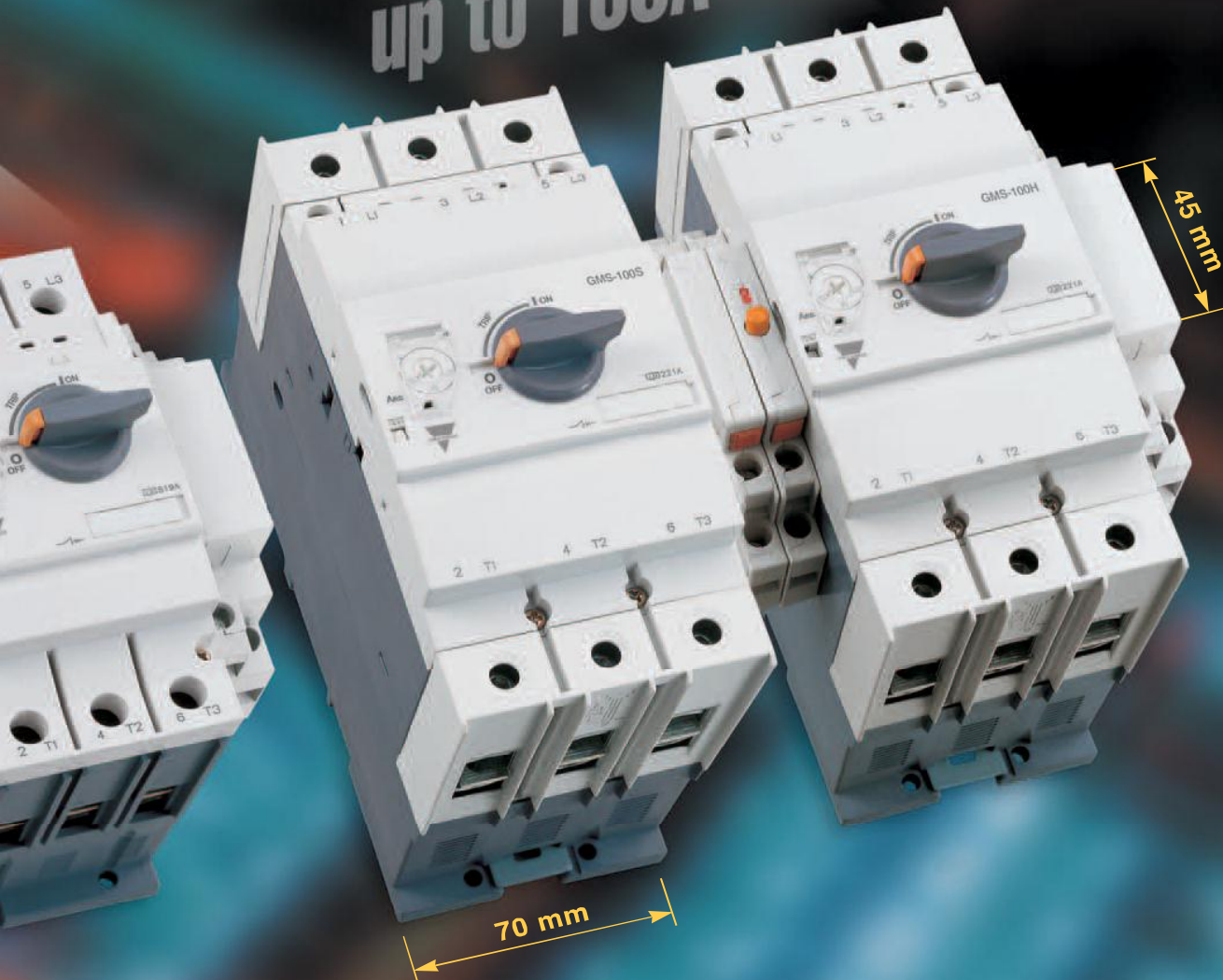


6~10... 45~63A (9 step)

GMS S  Standard

GMS GMS GMS  High break
Magnetic release
Class 20

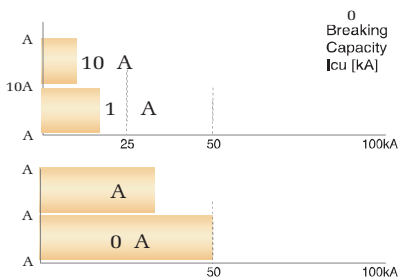
up to 100A



GMS

63AF

100AF

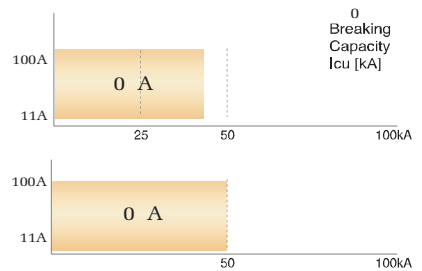


11~17... 80~100A (10 step)

GMS 100S

GMS 100
GMS 100
GMS 100

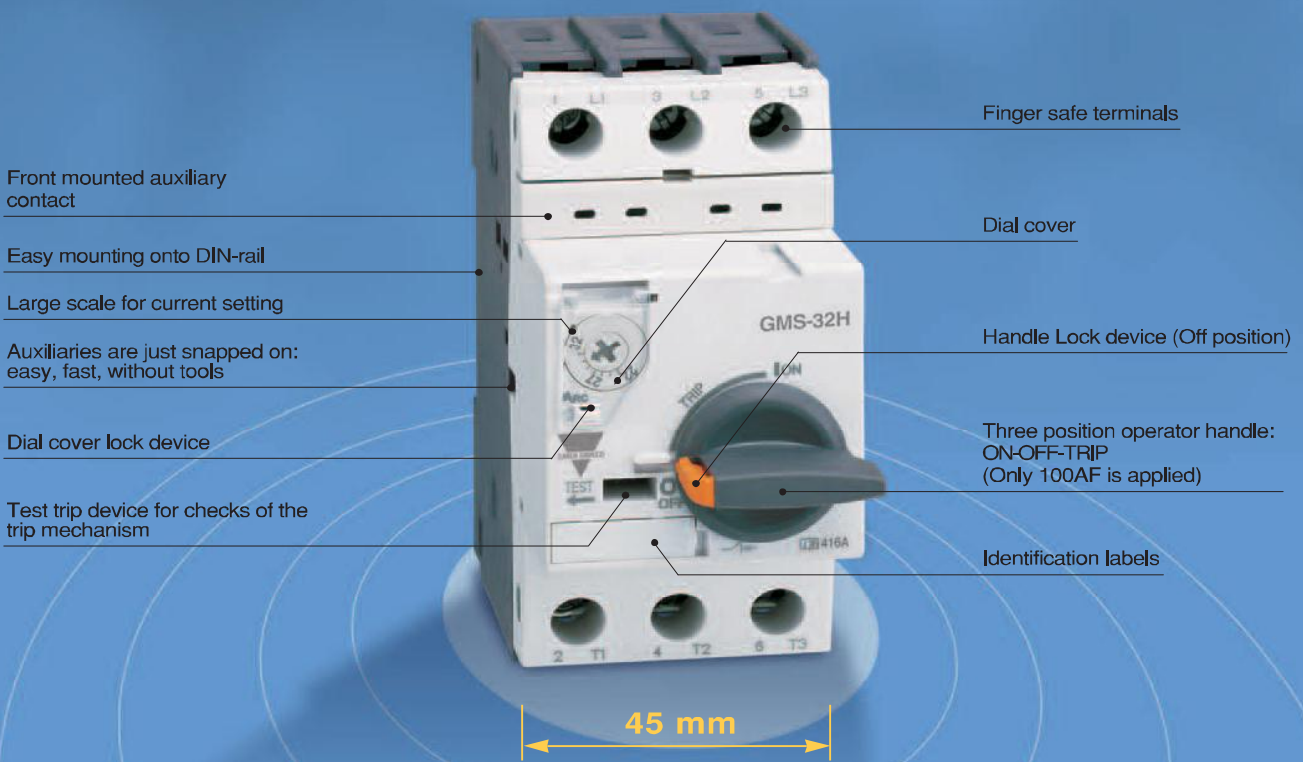
- Standard
- High break
- Magnetic release
- Class 20



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]



Handle Lock



Dial cover



GMS

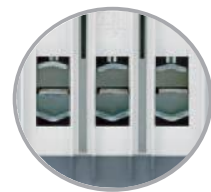


Terminals

GMS



GMS100

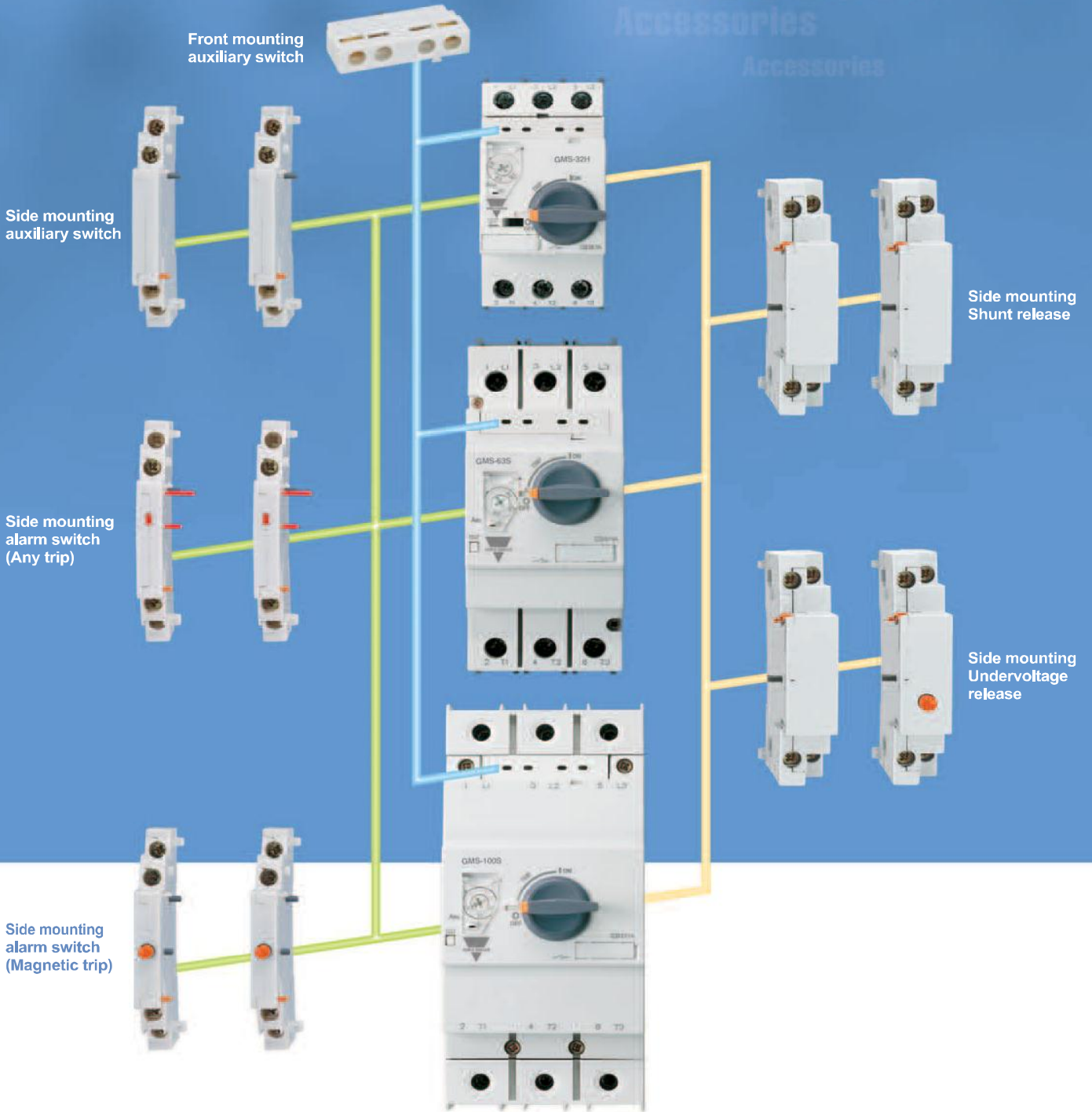


Common use from 32 to 100AF



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

Accessories
Accessories
Accessories



Specifications are subject to change without notice

Function

- protection of group installation
- protection of circuits
- Motor protection
- Starter protection
- wide range of ambient temperature compensation
- phase failure protection



Feature

- 150 mm width up to 400 A 100 mm width up to 200 A and 80 mm width rated to 100 amps
- three position operator
- only 100A is applied
- Complete range of common accessories
- handle lock in the on position
- Class 10-10 overload trip characteristics
- trip test
- finger safe terminal
- 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 IEC 60947



KEMA

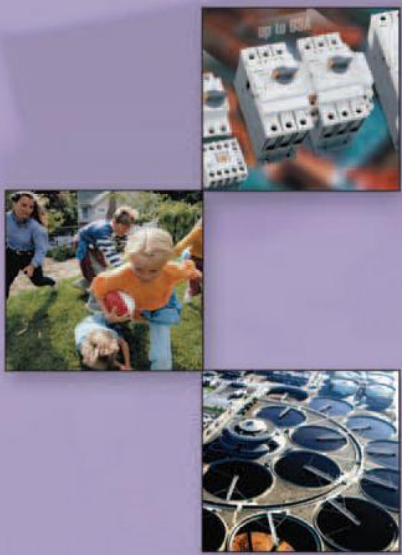


IEC 60947

UL 508, UL 508 Type E

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C performance data motor protection 1

C performance data Short circuit protection for starters 1

C performance data Motor protection Class 0 1

CSA performance data Motor protection 1

Manual Motor Controller 0 1

General data 1

Type coordination according to C 1 1

Time Current characteristic 1

Dimensions 1



Product Selection Guide

Quick selection table ... IEC rating



Frame			32AF																			
Type	Current adjustable type		GMS S						GMS													
	Instantaneous type		-						GMS													
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 °C						-20 ~ +60 °C													
Phase failure function			○						○													
Trip indicating function			×						×													
Test function			○						○													
Rated breaking capacity (kA)	Rated operational current (Ie)	Thermal release Adjustment range (A)	240V		415V		460V		525V		690V		240V		415V		460V		525V		690V	
			230V	400V	440V	500V	600V	230V	400V	440V	500V	600V	230V	400V	440V	500V	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	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	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	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	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	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	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	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	100	8	8
6	4~6	100	100	100	100	15	11	10	8	3	3	100	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	6
10	6~10	100	100	50	38	15	11	6	5	3	3	100	100	100	100	50	38	50	38	6	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	6
17	11~17	50	38	20	15	10	8	6	5	3	3	100	100	50	38	20	15	10	8	4	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	4
26	18~26	40	30	15	11	8	6	6	5	3	3	100	100	50	38	20	15	10	8	4	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	4
40	28~40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50	34~50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63	45~63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75	55~75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
90	70~90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100	80~100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Ordering sample Specified operational Current
 GMS S 0 1 0 1 to 0 1
 GMS S 0 0 1 to 0

Product Selection Guide

Motor protection

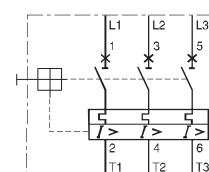
- Adjustable thermal release
- Magnetic release $13 \times I_e$ max.
- Trip class 10
- Ambient temperature compensation
- Phase-failure protection



GMS S



GMS



(Circuit diagram)

Type	Rated operational current I_e [A]	Thermal release Adjustment range [A]	Magnetic release Operating current [A]	Switching of 3 phase AC motors, AC-2, AC-3						0 0	
				3-phase [kW] (50/60Hz)			3-phase [HP] (60Hz)			I_{cu} [kA]	I_{cs} [kA]
				230V	400V	690V	230V	460V	575V		
GMS S (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	1 1/2	1 1/2	100	100
	4	2.5...4.0	52	0.75	1.5	3	1	2	3	0	
	6	4...6	78	1.5	2.2	4	1 1/2	5	5	1	11
	8	5...8	104	1.5	3	5.5	2	5	5	1	11
	10	6...10	130	3	4	7.5	3	7 1/2	10	1	11
	13	9...13	169	3	5.5	11	3	7 1/2	10	10	
	17	11...17	221	4	7.5	11	5	10	15	10	
	22	14...22	286	4	7.5	15	7 1/2	15	20		
26	18...26	338	5.5	11	18.5	7 1/2	15	20			
32	22...32	416	7.5	15	22	10	20	30			
GMS (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	1 1/2	1 1/2	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	1 1/2	5	5	100	100
	8	5...8	104	1.5	3	5.5	2	5	5	0	
	10	6...10	130	3	4	7.5	3	7 1/2	10	0	
	13	9...13	169	3	5.5	11	3	7 1/2	10	0	
	17	11...17	221	4	7.5	11	5	10	15	0	1
	22	14...22	286	4	7.5	15	7 1/2	15	20	0	1
26	18...26	338	5.5	11	18.5	7 1/2	15	20	0	1	
32	22...32	416	7.5	15	22	10	20	30	0	1	

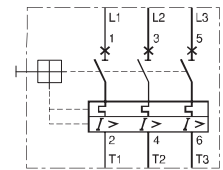
- Adjustable thermal release
- Magnetic release $13 \times I_e$ max.
- Trip class 10
- Ambient temperature compensation
- Phase-failure protection



GMS



GMS 100



(Circuit diagram)

Type	Rated operational current I_e [A]	Thermal release Adjustment range [A]	Magnetic release Operating current [A]	Switching of 3 phase AC motors, AC-2, AC-3						0 0	
				3-phase [kW] (50/60Hz)			3-phase [HP] (60Hz)			I_{cu} [kA]	I_{cs} [kA]
				230V	400V	690V	230V	460V	575V		
GMS S (Standard)	10	6~10	130	3	4	7,5	3	7½	10	1	1
	13	9~13	169	3	5,5	11	3	7½	10	10	
	17	11~17	221	4	7,5	11	5	10	15	10	
	22	14~22	286	4	7,5	15	7½	15	20	10	
	26	18~26	338	5,5	11	18,5	10	20	25	10	
	32	22~32	416	7,5	15	22	10	25	30	10	
	40	28~40	520	7,5	18,5	30	15	30	40	10	
	50	34~50	650	11	22	45	15	40	50	10	
GMS (High break)	63	45~63	819	15	30	55	20	50	60	10	
	10	6~10	130	3	4	7,5	3	7½	10	0	
	13	9~13	169	3	5,5	11	3	7½	10	0	
	17	11~17	221	4	7,5	11	5	10	15	0	
	22	14~22	286	4	7,5	15	7½	15	20	0	
	26	18~26	338	5,5	11	18,5	10	20	25		
	32	22~32	416	7,5	15	22	10	25	30		
	40	28~40	520	7,5	18,5	30	15	30	40		
GMS 100S (Standard)	50	34~50	650	11	22	45	15	40	50	0	0
	63	45~63	819	15	30	55	20	50	60	0	0
	75	55~75	975	22	37	63	25	60	75	0	0
	90	70~90	1170	30	45	75	30	75	100	0	0
	100	80~100	1300	30	45	90	40	75	100	0	0
	17	11~17	221	4	7,5	11	5	10	15	0	
	22	14~22	286	4	7,5	15	7½	15	20	0	
	26	18~26	338	5,5	11	18,5	10	20	25	0	
GMS 100 (High break)	32	22~32	416	7,5	15	22	10	25	30	0	
	40	28~40	520	7,5	18,5	30	15	30	40	0	
	50	34~50	650	11	22	45	15	40	50	0	
	63	45~63	819	15	30	55	20	50	60	0	
	75	55~75	975	22	37	63	25	60	75	0	
	90	70~90	1170	30	45	75	30	75	100	0	
	100	80~100	1300	30	45	90	40	75	100	0	

Product Selection Guide

Short-circuit protection for starters

- Without thermal releases
- Magnetic release $13 \times I_e$ max.



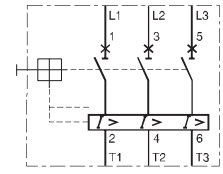
GMS



GMS



GMS 100



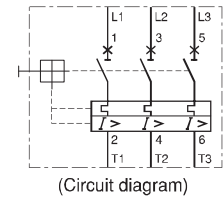
(Circuit diagram)

Type	Rated operational current I_e [A]	Thermal release Adjustment range [A]	Magnetic release Operating current [A]	Switching of 3 phase AC motors, AC-2, AC-3						0 0	
				3-phase [kW] (50/60Hz)			3-phase [HP] (60Hz)			I_{cu} [kA]	I_{cs} [kA]
				230V	400V	690V	230V	460V	575V		
GMS (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	1 1/2	1 1/2	100	100
	4	-	52	0.75	1.5	3	1	2	3	100	100
	6	-	78	1.5	2.2	4	1 1/2	5	5	100	100
	8	-	104	1.5	3	5.5	2	5	5	0	
	10	-	130	3	4	7.5	3	7 1/2	10	0	
	13	-	169	3	5.5	11	3	7 1/2	10	0	
	17	-	221	4	7.5	11	5	10	15	0	1
22	-	286	4	7.5	15	7 1/2	15	20	0	1	
26	-	338	5.5	11	18.5	7 1/2	15	20	0	1	
32	-	416	7.5	15	22	10	20	30	0	1	
GMS (High break)	10	-	130	3	4	7.5	3	7 1/2	10	0	
	13	-	169	3	5.5	11	3	7 1/2	10	0	
	17	-	221	4	7.5	11	5	10	15	0	
	22	-	286	4	7.5	15	7 1/2	15	20	0	
	26	-	338	5.5	11	18.5	10	20	25		
	32	-	416	7.5	15	22	10	25	30		
	40	-	520	7.5	18.5	30	15	30	40		
GMS 100 (High break)	50	-	650	11	22	45	15	40	50		
	63	-	819	15	30	55	20	50	60		
	17	-	221	4	7.5	11	5	10	15	0	
	22	-	286	4	7.5	15	7 1/2	15	20	0	
	26	-	338	5.5	11	18.5	10	20	25	0	
	32	-	416	7.5	15	22	10	25	30	0	
	40	-	520	7.5	18.5	30	15	30	40	0	
	50	-	650	11	22	45	15	40	50	0	
63	-	819	15	30	55	20	50	60	0		
75	-	975	22	37	63	25	60	75	0		
90	-	1170	30	45	75	30	75	100	0		
100	-	1300	30	45	90	40	75	100	0		



Motor protection ... Class 20


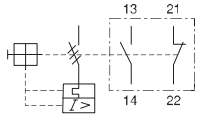
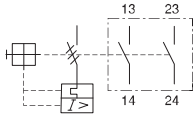
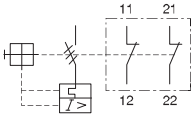

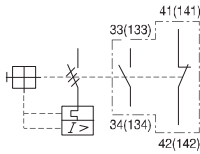
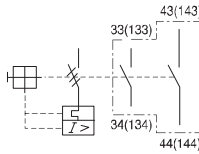
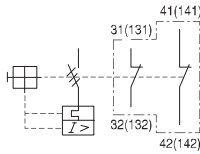

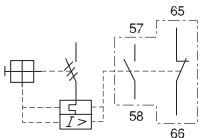
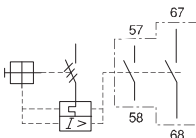
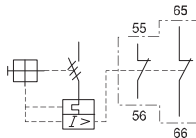

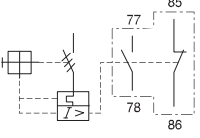
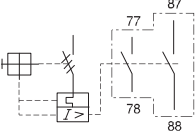
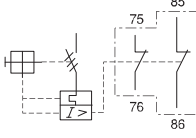
- Adjustable thermal release
- Magnetic release $13 \times I_e$ max.
- Trip class 20
- Ambient temperature compensation
- Phase-failure protection



Type	Rated operational current I_e [A]	Thermal release Adjustment range [A]	Magnetic release Operating current [A]	Switching of 3 phase AC motors, AC-2, AC-3						0 0	
				3-phase [kW] (50/60Hz)			3-phase [HP] (60Hz)			I_{cu} [kA]	I_{cs} [kA]
				230V	400V	690V	230V	460V	575V		
GMS (High break)	10	6~10	130	3	4	7,5	3	7½	10	0	
	13	9~13	169	3	5,5	11	3	7½	10	0	
	17	11~17	221	4	7,5	11	5	10	15	0	
	22	14~22	286	4	7,5	15	7½	15	20	0	
	26	18~26	338	5,5	11	18,5	10	20	25		
	32	22~32	416	7,5	15	22	10	25	30		
	40	28~40	520	7,5	18,5	30	15	30	40		
	50	34~50	650	11	22	45	15	40	50		
GMS 100 (High break)	63	45~63	819	15	30	55	20	50	60		
	17	11~17	221	4	7,5	11	5	10	15	0	
	22	14~22	286	4	7,5	15	7½	15	20	0	
	26	18~26	338	5,5	11	18,5	10	20	25	0	
	32	22~32	416	7,5	15	22	10	25	30	0	
	40	28~40	520	7,5	18,5	30	15	30	40	0	
	50	34~50	650	11	22	45	15	40	50	0	
	63	45~63	819	15	30	55	20	50	60	0	
	75	55~75	975	22	37	63	25	60	75	0	
	90	70~90	1170	30	45	75	30	75	100	0	
100	80~100	1300	30	45	90	40	75	100	0		


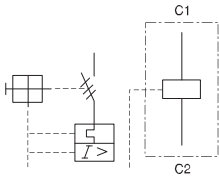

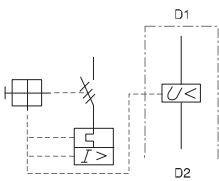

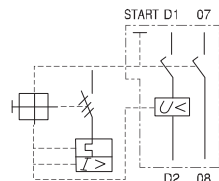
Product Selection Guide

Accessories



Type	Description	Connection diagram		
<p>G</p> 	<p>Auxiliary Switch</p> <ul style="list-style-type: none"> · Front mounting · 2-pole · One front mounting module per circuit breaker 	<p>1NO1NC</p>  <p>G 11</p>	<p>2NO</p>  <p>G 0</p>	<p>2NC</p>  <p>G 0</p>
<p>GS</p> 	<p>Auxiliary Switch</p> <ul style="list-style-type: none"> · Side mounting on the left · 2-pole · One side mounting module per circuit breaker 	<p>1NO1NC</p>  <p>GS 11</p>	<p>2NO</p>  <p>GS 0</p>	<p>2NC</p>  <p>GS 0</p>
<p>GSA</p> 	<p>Any Trip Alarm Switch</p> <ul style="list-style-type: none"> · Side mounting on the left · 2-pole · One side mounting module per circuit breaker. (Always directly fitted to the circuit breaker). 	<p>GSA 11</p> 	<p>GSA 0</p> 	<p>GSA 0</p> 
<p>GMA</p> 	<p>Magnetic Trip Alarm Switch</p> <ul style="list-style-type: none"> · 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). 	<p>GMA 11</p> 	<p>GMA 0</p> 	<p>GMA 0</p> 

Ordering example Specify Contact Arrangement

G 11 1 1 C
 G 0
 G 0 C

Type	Description	Connection diagram	
GS 	Shunt release <ul style="list-style-type: none"> 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
G 	Undervoltage release <ul style="list-style-type: none"> 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
G 	Undervoltage release with Switch (Rotary Handle Only) <ul style="list-style-type: none"> 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 <ul style="list-style-type: none"> For screwing the MMS on to mounting plates. 	GMS S GMS
IB100 	Insulation barriers <ul style="list-style-type: none"> Insulation barriers with increased creepage distances and clearances for UL 	GMS 100S GMS 100