

# *Contactors, Overloads and Manual Motor Starters*

## *Mini-Contactors and Overloads*

- Up to 20 Amps or 7.5HP

## *Midi-Contactors and Overloads*

- Up to 160 Amps or 75HP

## *Power-Contactors and Overloads*

- Up to 900 Amps or 600HP

## *Manual Motor Starters*

- 32, 63 and 100 Amp Frame Sizes



# Switch

## Introduction

CARLO GAVAZZI is proud to present our expanded range of contactors and overloads, as well as our comprehensive offering of manual motor starters.

The product offering starts with Mini-Contactors in a compact 12 amp frame size, followed by Midi-Contactors in up to 100 amp frame sizes, and topped off with the Power-Contactors which offer up to 800 amp frame sizes.

To complement the contactors, Thermal Overloads are offered for each frame size, available in several setting ranges. Additionally, the Manual Motor Starters are available in 32, 63 and 100 amp frame sizes.

Definite purpose contactors, electronic overloads, enclosed manual motor starters and other contactor accessories are also available. For these and more of our motor control products, such as push buttons, soft starts, variable frequency drives, see the back cover. Please contact us or visit our website for more details.

To specify our contactor products, we have also set up an easy-to-use **Product Selection Guide** at:

**[www.GavazziOnline.com/Contactors](http://www.GavazziOnline.com/Contactors)**



User  
Friendly



Diagnostic  
Warning



Long Term  
Reliability



Cost  
Saving



**CGM Mini-Contactors** for use with  
Overloads or Manual Motor Starters  
(Up to 20 Amps or 7.5HP)

**CC Midi-Contactors** for use with  
Overloads or Manual Motor Starters  
(Up to 160 Amps 75HP)

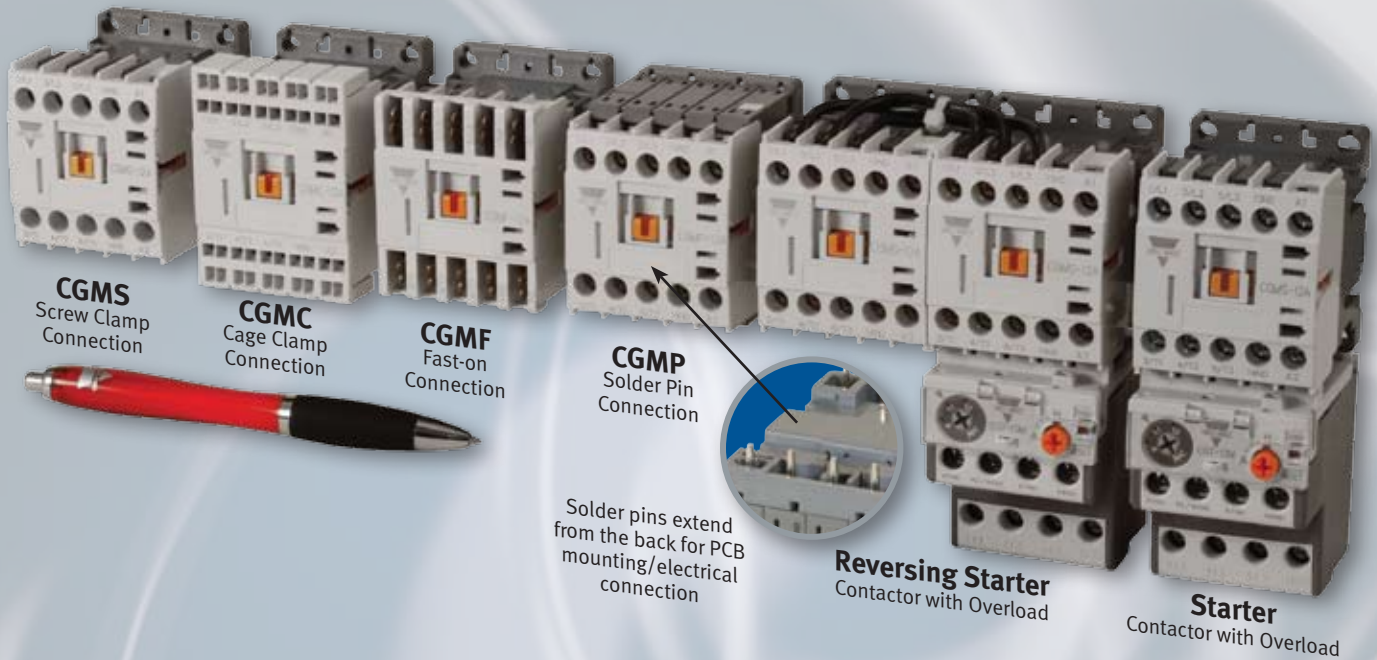
**CC Power-Contactors**  
for use with Overloads  
(Up to 900 Amps or 600HP)

# *Mini-Contactors and Overloads*

**Compact in size,  
yet powerful in  
performance...**



# Mini-Contactors and Overloads



## General

- Compact size with powerful performance
- Approx. 2 ¼ cubic inches (55 cubic mm)
- One frame size for three current ratings
- Up to 7.5HP motor rating
- Up to 20A resistive rating
- AC or DC control voltage
- Four connection types (shown in the picture above)

## Standards

- cUL, CE and RoHS

## Convenience

- Cost effective solution
- One NO or NC auxiliary contact (standard)
- DIN rail, back panel or PCB mounting
- Light in weight and requires minimal panel space
- Captive screw clamp terminals (on **CGMS** type)

## Accessories

- Bimetallic overloads
- Manual motor starters
- Side or top mounted auxiliary contact(s)
- Reversing interlock kit (with wires)
- Surge absorber unit
- Separate mounting unit for overloads
- Direct adaptor bridge for manual motor starter and mini-contactor
- Mounting unit for manual motor starter, direct adaptor bridge and mini-contactor

## Ordering Guide

### Mini-Contactor

CGM	S	9	A	120	10	CGT	12	M	0.16A
Magnetic 3-Pole Mini-Contactor	Application and Terminal Style	Amperage Size	Coil Type	Coil Voltage	Built-in Auxiliary Contact Combination	Bimetallic Mini-Overload	Amperage Size	Type	Setting Ranges (Use upper limit in part number)
	<u>Non-Reversing</u> S - Screw (std.) F - Fast On C - Cage Clamp P - Solder Pin <u>Reversing Type</u> U - Screw (standard) CU - Cage Clamp FU - Fast On PU - Solder Pin	6 - 6A 9 - 9A 12 - 12A	A - AC Coil D - DC Coil	24 - 24V 120 - 120V 480 - 480V ⚡ See data sheet for full offering	10 - 1 NO 01 - 1 NC		12 - Up to 12A	M - Mini	0.1 ~ 0.16A 0.16 ~ 0.25A 0.25 ~ 0.4A 0.4 ~ 0.63A 0.63 ~ 1A 1 ~ 1.6A 1.6 ~ 2.5A 2.5 ~ 4A 4 ~ 6A 5 ~ 8A 6 ~ 9A 7 ~ 10A 9 ~ 13A

# Mini-Contactors and Overloads



## Frame Size Type

### UL Ratings



Continuous Current Ith	
Motor AC Single Phase	115V
	230V
Three Phase	230V
	460V
	575V

### IEC Ratings



NEMA Size	
Motor AC AC3	AC1
	AC3
	200~240V
	380~440V
	690V

### Coil Voltages

AC Coil	VAC 50/60Hz
DC Coil (std. consumption)	VDC
DC Coil (low consumption)	VDC

### Basic Dimensions

(W x H x D) mm

### Accessories

Auxiliary Contacts	Standard
	Optional

Mechanical Interlocks  
Surge Units

## Thermal Overload Relays

### Manual Motor Starters

Type

Rated Operational current, Ie  
Rated Breaking Capacity, Icu

### Connecting Module

<b>GMS-32H</b> to <b>CGMS</b>	w/ AC coil
<b>GMS-32H</b> to <b>CGMS</b>	w/ DC coil
<b>GMS-32S</b> to <b>CGMS</b>	w/ AC coil
<b>GMS-32S</b> to <b>CGMS</b>	w/ DC coil

\* Maximum Ratings for CGMC-12 Cage Clamp Type: 10A Continuous Ith, 0.5HP 1-Phase 115VAC, 1.5HP 1-Phase 230VAC, and 5HP 3-Phase 460VAC

CGMS-6	CGMS-9 3-Pole	CGMS-12
20A	20A	20A *
0.5HP	0.5HP	1HP *
1HP	1.5HP	2HP *
1.5HP	3HP	3HP
3HP	5HP	7.5HP *
3HP	5HP	7.5HP
00	00	00
20A	20A	20A
1.5 kW 7A	2.2 kW 9A	3 kW 12A
2.5 kW 6A	4 kW 9A	5.5 kW 12A
3 kW 4A	4 kW 5A	4 kW 5A
24, 36, 42, 48, 110, 115, 120, 127, 200/208, 220, 220/230 230/240, 256, 277, 380/400, 400, 440, 480, 500, 550		
12, 20, 24, 36, 42, 48, 60, 72, 110, 120, 125, 200, 240, 250 12, 20, 24, 48, 72, 100, 110		
AC coil version: 45 x 58 x 57, DC coil version: 45 x 58 x 69		
1NO or 1NC		
Side Mount <b>AX-1M</b> (1NO or 1NC), Top Mount <b>AX-2M</b> (2NO, 1NC/1NO or 2NC) or Top Mount <b>AX-4M</b> (4NO, 3NO/1NC, 2NO/2NC, 1NO/3NC or 4NC)		
<b>AR-12MW</b>		
<b>AS-12M</b>		



### Available Ranges

0.1 – 0.16A



9 – 13A

See page 4 for all ranges

### Separate Mounting for DIN Rail AZ-12H



### GMS-32S and GMS-32H

0.1 ~ 32A

Max. 100kA

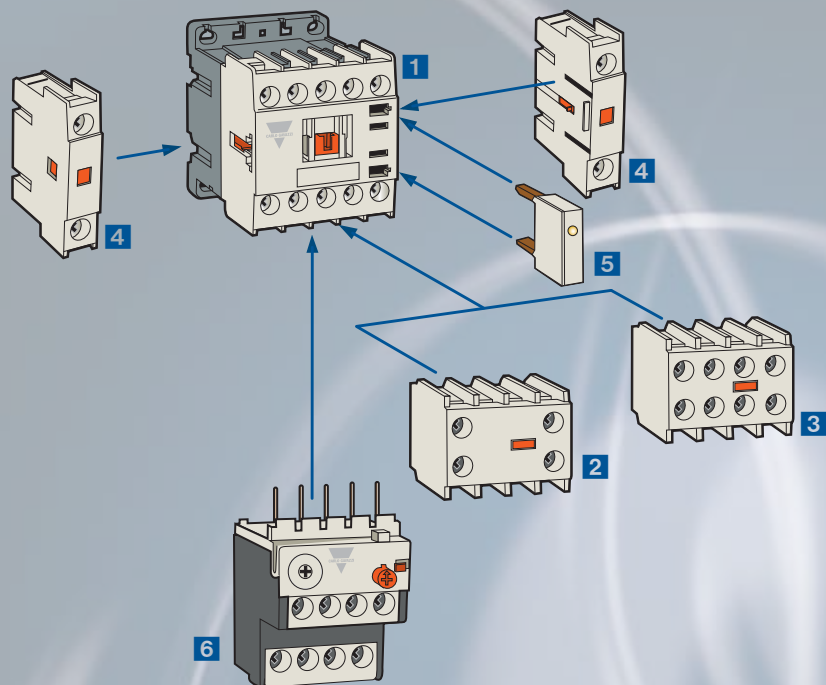
**GDA16HA**

**GDA16HD**

**GDA16SA**

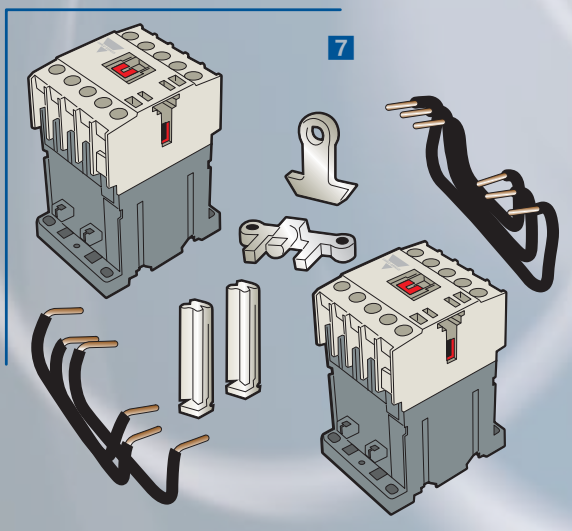
**GDA16SD**

# Mini-Contactors and Overloads



## Accessories

- 1 **CGMS** Mini-Contactor
- 2 **AX-2MS** 2-pole Front Mount Auxiliary Contact Unit
- 3 **AX-4MS** 4-pole Front Mount Auxiliary Contact Unit
- 4 **AX-1MS** 1-pole Side Mount Auxiliary Contact Unit
- 5 **AS-12M** Surge Absorber Unit
- 6 **CGT-12M** Overload Relay
- 7 **AR-12MW** Reversing Interlock Kit  
(Contactors not included)



# *Midi-Contactors and Overloads*



## The Complete Solution for Applications up to 140 Amps...



# Midi-Contactors and Overloads



## General

- Four frame sizes
- Motor ratings of each frame size:  
Up to 20, 30, 60 or 75HP
- Resistive rating  
Up to 40, 60, 100, 160A
- AC or DC coil voltage
- Two connection types:  
Screw terminal connections are available on all frame sizes  
Lug terminals connections are available on 63 and 100 amp sizes

## Standards

- cUL, CSA with special elevator ratings, CE and RoHS

## Convenience

- Four terminals for coil connection
- Easily interchangeable coils (in the event another coil voltage is required)
- Each contactor comes standard with a minimum of one auxiliary contact. (See pages 10 and 11 for more details, as some of the larger contactors come standard with more auxiliary contacts)
- DIN rail or back panel mounting

## Accessories

- Bimetallic overloads
- Electronic overloads
- Manual motor starters
- Side or top mounted auxiliary contact(s)
- Auxiliary safety cover
- Interlock unit
- Reversing interlock kit
- Surge absorber unit
- Separate mounting unit for overloads
- Remote reset unit for overloads
- Direct adaptor bridge for manual motor starter and midi-contactor
- Mounting unit for manual motor starter, direct adaptor bridge and midi-contactor
- Capacitor unit





# Ordering Guide

## Midi-Contactor

<b>CC</b> Magnetic 3-pole Midi-Contactor	<b>9</b> Amperage Size	<b>BLANK</b> Type	<b>S</b> Terminal Type	<b>A</b> Coil Type	<b>120</b> Coil Voltage	<b>BLANK</b> AC Coil Frequency	<b>BLANK</b> Auxiliary Contacts	<b>GT</b> Bimetallic Midi-Overload	<b>32</b> Frame Size	<b>BLANK - 10</b> Class	<b>S</b> Terminal Type (Must match contactor number)	<b>0.16A</b> Setting Ranges (Use upper limit in part)	
	9 - 9A 12 - 12A 18 - 18A 22 - 22A 32 - 32A 40 - 40A 50 - 50A 65 - 65A 75 - 75A 85 - 85A 100 - 100A	<b>BLANK</b> - 3-pole /4 - <b>4-pole</b>	<b>S</b> - Screw <b>L</b> - Lug (>50A)	<b>A</b> - AC type <b>D</b> - DC type	24 - 24V 120 - 120V & 600 - 600V	<b>BLANK</b> -50/60 Hz <b>50Hz</b> - 50Hz only <b>60Hz</b> - 60Hz only	<b>BLANK</b> -Standard arrangement <b>NOAUX</b> -No Aux. Contact (>=32A)			32 - 9, 12, 18A 22, 32, 40A 65 - 50, 65A 75 - 75, 85, 100A	<b>BLANK - 10</b> L - 20	<b>S</b> - Screw <b>L</b> - Lug (≥35A)	0.1 ~ 0.16A 0.16 ~ 0.25A 0.25 ~ 0.4A 0.4 ~ 0.63A 0.63 ~ 1A 1 ~ 1.6A 1.6 ~ 2.5A 2.5 ~ 4A 4 ~ 6A 5 ~ 8A 6 ~ 9A 7 ~ 10A 9 ~ 13A 12 ~ 18A 16 ~ 22A 18 ~ 25A 22 ~ 32A 24 ~ 36A 28 ~ 40A 34 ~ 50A 45 ~ 65A 54 ~ 75A 63 ~ 85A 70 ~ 95A 80 ~ 100A

## Preliminary Data

<b>CGE</b> Electronic Midi Overload	<b>22</b> Frame Size	<b>3P</b> Protection	<b>22AN</b> Setting Range (Use upper limit in part)
	22 - 9, 12, 18, 22A 40 - 32, 40A 80 - 50, 65, 75, 85A	Direct Mount 22 and 40AF <b>2P</b> - 2-Pole <b>3P</b> - 3-Pole <b>3PR</b> - 3-pole  Separate Mount All CGE sizes <b>2S</b> - 2-Pole <b>3S</b> - 3-Pole <b>3SR</b> - 3-Pole  Through-Hole 22 and 40AF <b>2T</b> - 2-Pole <b>3T</b> - 3-Pole <b>3TR</b> - 3-Pole	<b>CGE22</b> 0.3 ~ 1.5AN 1 ~ 5AN 4.4 ~ 22AN  <b>CGE40</b> 4 ~ 20AN 8 ~ 40AN  <b>CGE80</b> 16 ~ 80AN

(Setting Range Guide)  
**GT32**  
**GT65**  
**GT95**

# Midi-Contactors and Overloads



<b>Frame Size Type</b>	Available Output Terminal	
	Continuous Current	
<b>UL Rating 50/60Hz</b>	Motor AC Single Phase	110~120VAC
		220~240VAC
	Motor AC Three Phase	220~240VAC
		440~480VAC
	550~600VAC	
<b>UL LISTED</b>		
<b>NEMA Size</b>		
<b>CSA Elevator Rating</b>		
<b>IEC Rating</b>	Resistive AC1	690VAC max
<b>CE</b>	Motor AC3	200~240VAC
		380~440VAC
		500~550VAC
		690VAC max
<b>Coil Voltages</b>	AC Coil	VAC 50/60Hz
		VAC 60Hz
		VAC 50Hz
	DC Coil	VDC
<b>Basic Dimensions</b>	W x H x D mm	AC Coil
	(with standard set of aux. contacts)	DC Coil
<b>Accessories</b>	Auxiliary Contacts	Standard
		Optional
		Mechanical Interlock
	Power Connector for Reversing Contactors	
	Coil Surge Unit	Varistor
		RC+Varistor
	RC	

22AF			
CC9	CC12	CC18	CC22
Screw Clamp Only			
25A	25A	40A	40A
0.5HP	0.75HP	1HP	2HP
1.5HP	2HP	3HP	3HP
3HP	5HP	7.5HP	10HP
5HP	7.5HP	10HP	15HP
7.5HP	10HP	15HP	20HP
00	00	0	1
Pending	Pending	Pending	Pending
25A	25A	32A	40A
2.5 kW 11A	3.5 kW 13A	4.5kW 18A	5.5 kW 22A
4kW 9A	5.5kW 12A	7.5kW 18A	11kW 22A
4kW 7A	7.5kW 12A	7.5kW 12A	15kW 20A
4kW 6A	7.5kW 9A	7.5kW 9A	15kW 18A
<b>24, 48, 100, 110, 120, 200, 220, 230, 240, 277, 380, 440, 480, 600 VAC</b>			
<b>24, 32, 36, 42, 48, 80, 100, 110, 220, 230, 240, 380, 400, 415, 440, 500, 550 VAC</b>			
<b>12, 20, 24, 48, 60, 80, 100, 110, 125, 200, 220, 250 VDC</b>			
45 x 73.5 x 86			
45 x 73.5 x 118			
1NO1NC			
Side mount <b>GUA1</b> or Top Mount			
<b>GUR02</b>			
<b>G UW22</b>			
<b>GUS11</b> (for 24~48 VAC or VDC)			
<b>GUS1</b> (for 24~48VAC coils), <b>GUS2</b> (for 100~110VAC coils)			



<b>Thermal Overloads</b>	Bimetallic, 3-Pole Differential	Range
	Electronic	Range
		Available Mounting
<b>Matching Manual Motor Starter</b>		Type
	Connecting Module	AC Coil Contactor
		DC Coil Contactor

<b>GT32</b>		
0.1 ~ 0.16 to 28 ~ 40A		
<b>CGE22</b>		
0.3 ~ 1.5A to 4.4 ~ 22A		
Direct and Separate		
<b>GMS-32S</b>	<b>or</b>	<b>GMS-32H</b>
GDA22SA		GDA22HA
GDA22SD		GDA22HD



32AF		65AF		100AF		
CC32	CC40	CC50	CC65	CC75	CC85	CC100
Screw Clamp Only		Screw Clamp or Lug		Screw Clamp or Lug		
50A	60A	70A	100A	110A	135A	160A
2HP	3HP	3HP	5HP	5HP	7.5HP	10HP
5HP	7.5HP	10HP	15HP	15HP	15HP	20HP
10HP	15HP	25HP	30HP	30HP	40HP	40HP
20HP	30HP	40HP	50HP	50HP	60HP	75HP
25HP	30HP	50HP	60HP	60HP	75HP	75HP
1	1	2	2	2	3	3
Pending	Pending	Pending	Pending	Pending	Pending	Pending
50A	60A	70A	100A	110A	135A	160A
7.5kW 32A	11 kW 40A	15 kW 55A	18.5 kW 65A	22 kW 75A	25 kW 75A	30kW 105A
15kW 32A	18.5kW 40A	22kW 50A	30kW 65A	37kW 75A	45kW 85A	55kW 105A
18.5kW 28A	22kW 32A	30kW 43A	33kW 60A	37kW 64A	45kW 75A	55kW 85A
18.5kW 20A	22kW 23A	30kW 28A	33kW 35A	37kW 42A	45kW 45A	45kW 65A
24, 48, 100, 110, 120, 200, 220, 230, 240, 380, 415, 440, 500, 550 VAC						
24, 48, 100, 110, 120, 200, 208, 220, 230, 240, 277, 380, 440, 480, 600 VAC						
24, 32, 36, 42, 48, 80, 100, 110, 220, 230, 240, 380, 400, 415, 440, 500, 550 VAC						
12, 20, 24, 48, 60, 80, 100, 110, 125, 200, 220, 250 VDC						
69 x 83 x 90		79 x 106 x 119		94 x 140 x 136		
69 x 83 x 118		79 x 106 x 147		94 x 140 x 173		
2NO2NC		2NO2NC		2NO2NC		
Top Mount		Top Mount		Top Mount		
GUR02		GUR02		GUR02		
GUW32		GUW63		GUW95		
DC), GUS12 (for 100~125VAC or VDC), GUS13 (for 200~240VAC or VDC coils), GUS14 (for 380~440VAC or VDC coils)						
25VAC coils), GUS3 (for 200~240VAC coils), GUS4 (for 24~48VDC coils), GUS5 (for 100~125VDC coils), GUS6 (for 200~220VDC coils)						
GUS22 (for 100~125VAC coils)						

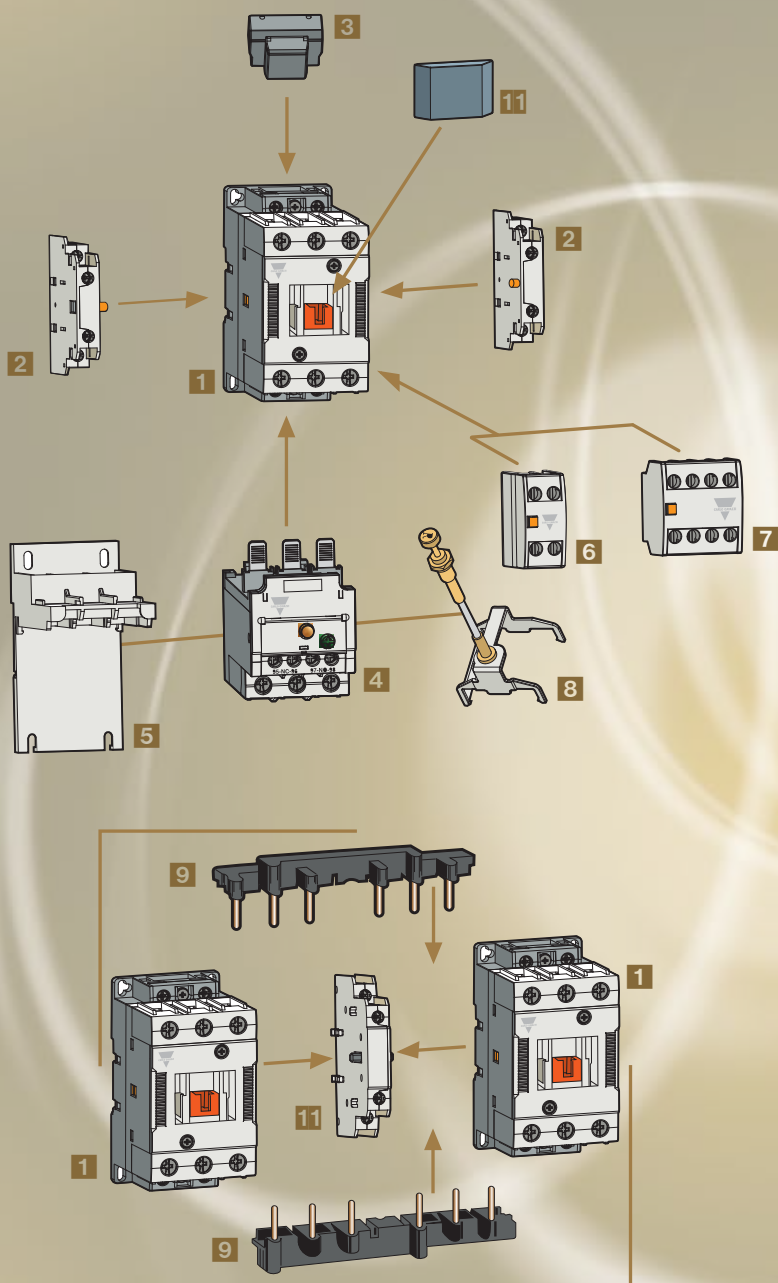


GT32		GT63		GT95				
0.1 ~ 0.16A to 28 ~ 40A		4 ~ 6A to 45 ~ 65A		7 ~ 10A to 80 ~ 100A				
CGE40		CGE80		CGE80				
4 ~ 20A to 8 ~ 40A		16 ~ 80A		16 ~ 80A				
Direct and Separate		Separate		Separate				
GMS-32S	or	GMS-32H	GMS63S	or	GMS63H	GMS100S	or	GMS100H
GDA22SA		GDA22HA	GDA63A		GDA63D	GDA95A		GDA95D
GDA22SD		GDA22HD	GDA63D			GDA95D		

# Midi-Contactors and Overloads

## Accessories

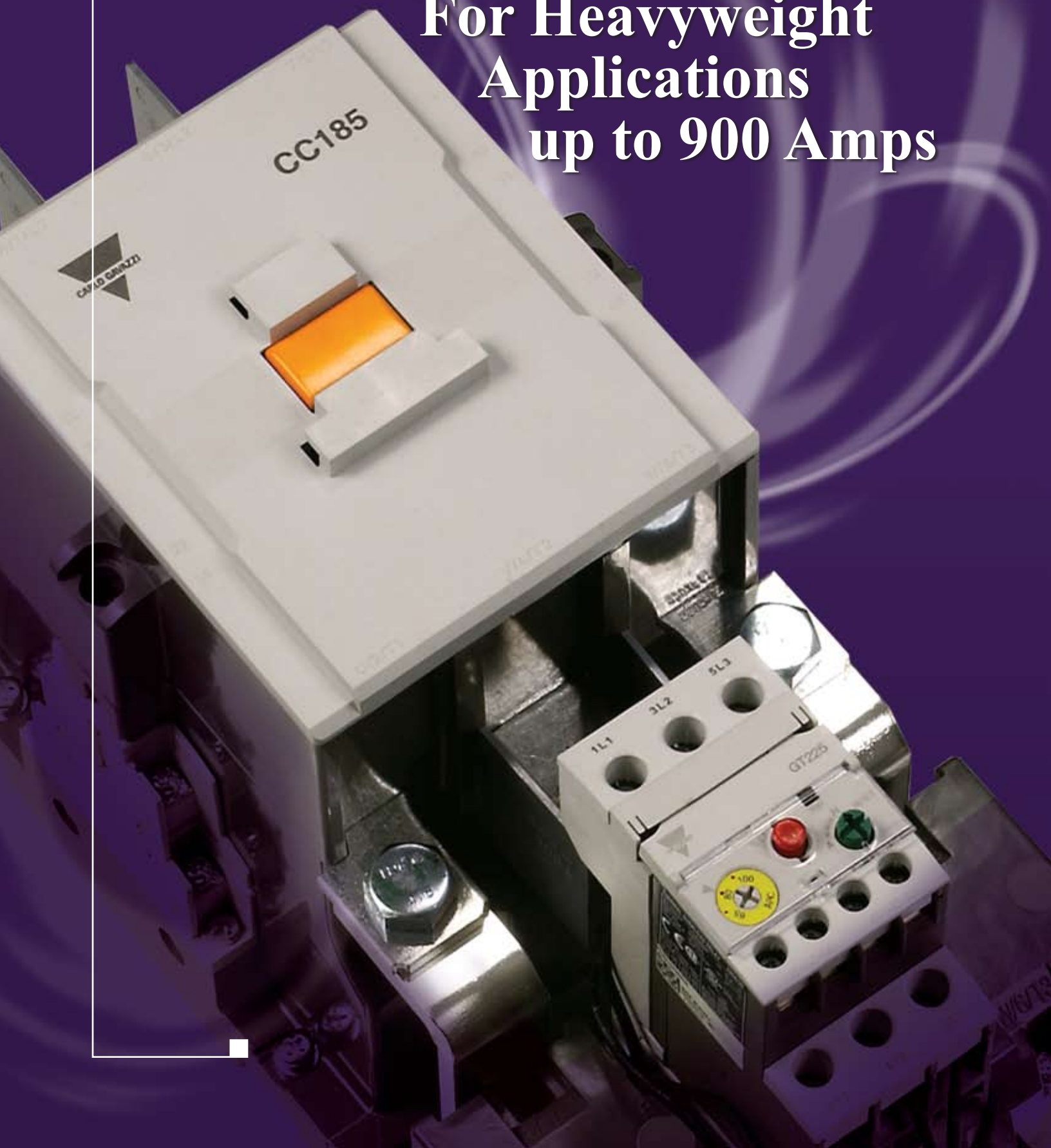
- 1 CC** Contactor
- 2 GUA1** 1-pole Side Mount Auxiliary Contact Unit  
(All types come standard with at least one auxiliary contact, see pages 10 and 11 for more details)
- 3 GUS** Surge Unit
- 4 GT** Overload Relay
- 5 GUZ** Separate Mounting Unit for Overload
- 6 GUA2** 2-pole Top Mount Auxiliary Contact Unit
- 7 GUA4** 4-pole Top Mount Auxiliary Contact Unit
- 8 GUM** Remote Reset Unit
- 9 GUW** Wire Kit for Reversing Contactor
- 10 GUR** Interlock Unit
- 11 GAP9** Auxiliary Safety Cover



# *Power-Contactors and Overloads*



## For Heavyweight Applications up to 900 Amps

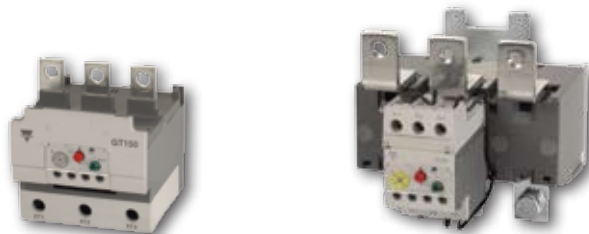


# Power-Contactors and Overloads



<b>Frame Size Type</b>	Available Output Terminal	
<b>UL Rating</b> 50/60Hz		Continuous Current
		Motor AC Single Phase
		Motor AC Three Phase
<b>NEMA Size</b>		
<b>IEC Rating</b>		Resistive AC1
		Motor AC3
<b>Coil Voltages</b>	AC Coil	VAC 50/60Hz
	DC Coil	VDC
	AC/DC Coil	VAC 50/60Hz / VDC
<b>Basic Dimensions</b>	W x H x D mm	
<b>Accessories</b>	Auxiliary Contacts	Standard
		Mechanical Interlock

150AF		225AF	
CC130	CC150	CC185	CC225
Screw Clamp or Lug		Screw Clamp Only	
160A	210A	230A	275A
10HP	15HP	15HP	15HP
20HP	25HP	30HP	40HP
40HP	50HP	60HP	75HP
75HP	100HP	125HP	150HP
75HP	75HP	125HP	150HP
3	4	4	4
160A	210A	230A	275A
37kW 130A	45kW 150A	55kW 185A	75kW 225A
60kW 130A	75kW 150A	90kW 185A	132kW 225A
60kW 90A	70kW 100A	110kW 180A	132kW 200A
55kW 60A	55kW 60A	110kW 120A	140kW 150A
24, 48, 110, 220, 300, 400, 500 VAC		300, 400, 500 VAC	
24, 48, 110, 220 VDC		-	
-		24, 48, 100/200 VAC/VDC	
119 x 158 x 131		162 x 203 x 185	
2NO2NC		2NO2NC	
<b>GUR02</b>		<b>AR-400</b>	

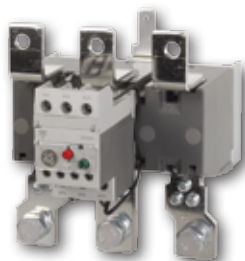


<b>Thermal Overloads</b>	Bimetallic, 3-Pole Differential	Range
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GT150	GT225
34 ~ 50A	65 ~ 100A
to	to
110 ~ 150A	160 ~ 240A

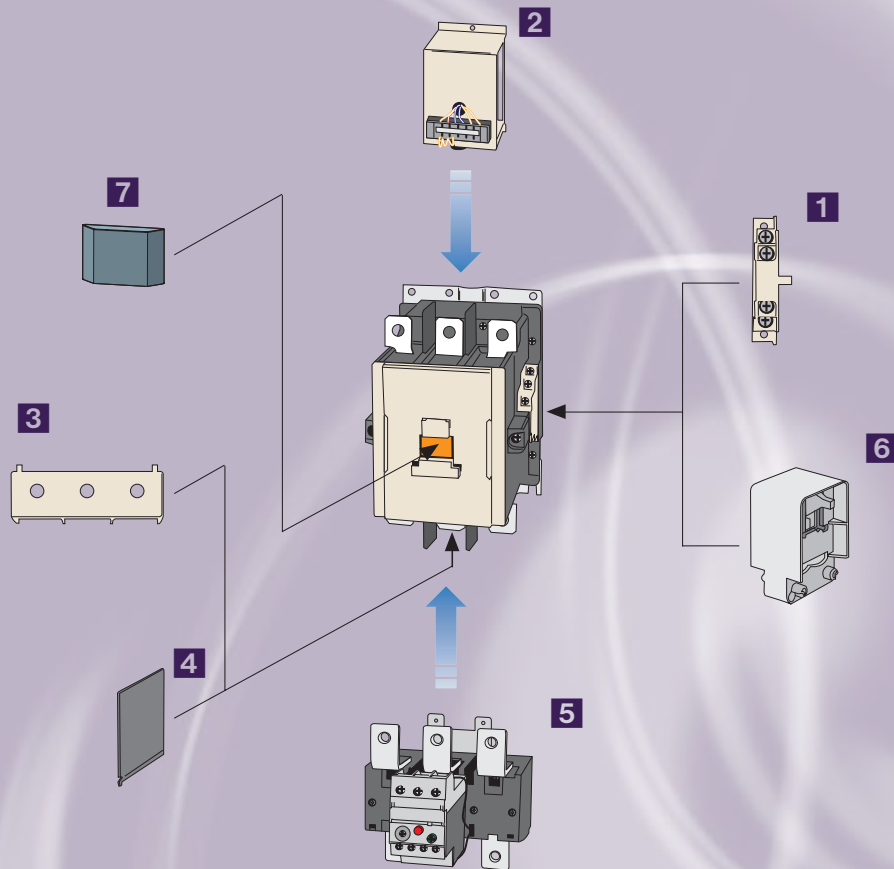


CC265	400AF CC330	CC400	CC500	800AF CC630	CC800
	Screw Clamp Only			Screw Clamp Only	
300A	350A	450A	580A	660A	900A
-	-	-	-	-	-
100HP	125HP	150HP	200HP	250HP	300HP
200HP	250HP	300HP	400HP	500HP	600HP
200HP	250HP	300HP	400HP	500HP	600HP
5	5	5	6	6	7
300A	350A	450A	580A	660A	900A
80kW 265A	90kW 330A	125kW 400A	147kW 500A	190kW 630A	220kW 800A
147kW 265A	160kW 330A	200kW 400A	265kW 500A	330kW 630A	440kW 800A
147kW 225A	160kW 280A	225kW 350A	265kW 400A	330kW 500A	500kW 720A
160kW 185A	200kW 225A	250kW 300A	300kW 380A	400kW 420A	500kW 630A
	300, 400, 500 VAC			300, 400, 500 VAC	
	-			-	
	100/200 VAC/VDC			100, 200 VAC/VDC	
	187 x 243 x 205			285 x 312 x 246	
	2NO2NC			2NO2NC	
	<b>AR-400</b>			<b>AR-800W</b>	



GT400	GT800
85 ~ 125A to 85 ~ 400A	200 ~ 300A to 520 ~ 800A

# Power-Contactors and Overloads



## Accessories

- 1 **AX-100** 2-pole Side Mount Auxiliary Contact Unit (two are included)
- 2 **AD** Delay Device
- 3 **AP** Terminal Cover for Contactors
- 4 **AI** Insulation Barrier
- 5 **GT** Thermal Overload
- 6 **AR** Interlock
- 7 **GAP9** Auxiliary Safety Cover

## Ordering Guide

### Power Contactor

CC	150		S	A	24
Magnetic Midi-Contactor	Amperage Size	Type	Terminal Type	Coil Type	Coil Voltage
	130 - 130A 150 - 150A 185 - 185A 225 - 225A 265 - 265A 330 - 330A 400 - 400A 500 - 500A 630 - 630A 800 - 800A	BLANK - 3-pole /4 - 4-pole	S - Screw L - Lug (130A) and 150 only	A - AC type D - DC type AD - AC/DC types	24 - 24V & 500 - 500V

### Overload

GT	150		S	50A
Bimetallic Midi-Overload	Frame Size	Class	Terminal Type	Setting Ranges
	150 - 130, 150A 225 - 185, 225A 400 - 265, 330, 400A 800 - 500, 630, 800A	BLANK - 10 L - 20	S - Screw L - Lug (150A only)	(Use upper limit in part) 34 ~ 50A 45 ~ 65A 54 ~ 75A 63 ~ 85A 65 ~ 100A 80 ~ 105A 85 ~ 125A 95 ~ 130A 110 ~ 150A 100 ~ 160A 120 ~ 185A 160 ~ 240A 200 ~ 330A 260 ~ 400A 400 ~ 600A 520 ~ 800A

GT150  
GT225  
GT400  
GT800





# The Ideal Complement for the CGM Series Mini- and CC Series Midi-Contactors



# Manual Motor Starters



## Function

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

## Standards

- cULus listed, CE and RoHS
- Complies with the specifications in accordance with IEC 60947-2 and IEC 60947-4-1, UL508 (Manual motor controller), UL508 (Combination motor controller Type E starter), CSA C22.2 NO.14, GB14048

## Features

- 45mm width up to 32 amps, 55mm width up to 63 amps and 70mm width rated to 100 amps
- 100A version features a three position operator: ON-OFF-TRIP
- Handle lock in the OFF position
- Class 10 overload trip characteristics (Class 20 is optional)
- Trip test
- Finger safe terminals
- DIN rail or back panel mounting
- Complete range of common accessories



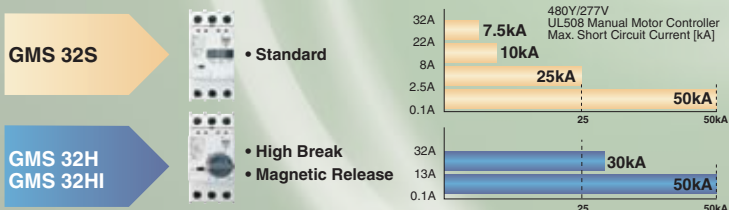
# High Performance Manual Motor Starters

This UL508 listed device features a maximum short circuit current rating of up to 50kA for all frame sizes, at 3-phase 480VAC.

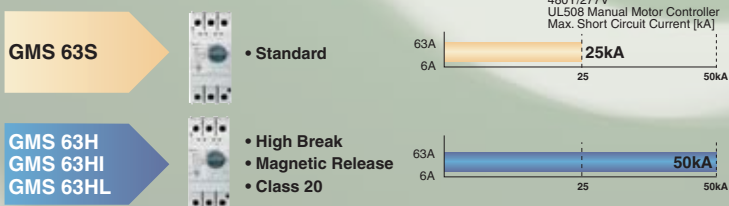
“Type E Starters” (for group installations) offer short circuit current ratings up to 65kA for all three ‘High Breaking’ type manual motor starters.

## UL508 Short Circuit Ratings

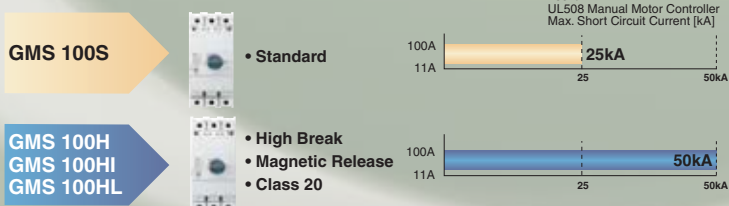
0.1-0.16...22-32A (16 steps)



6-10...45-63A (9 steps)



11-17...80-100A (10 steps)



## Ordering Guide

### Manual Motor Starter

<b>GMS</b>	<b>32</b>	<b>S</b>	<b>0.16A</b>
Manual Motor Starter	Frame Size	Breaking Type	Setting Ranges (Use upper limit in part number)
	32 - 32AF	S - Standard Break H - High Break HI - High Break, no TOR HL - High Break, with Class 20 TOR	0.1 ~ 0.16A 0.16 ~ 0.25A 0.25 ~ 0.4A 0.63 ~ 1A 1 ~ 1.6A 2.5 ~ 4A 4 ~ 6A 5 ~ 8A 6 ~ 10A 9 ~ 13A 11 ~ 17A 14 ~ 22A 18 ~ 26A 22 ~ 32A 28 ~ 40A 34 ~ 50A 45 ~ 63A 55 ~ 75A 70 ~ 90A 80 ~ 100A
	63 - 63AF		
	100 - 100AF		

(Setting Range Guide)

- GMS-32
- GMS-63
- GMS-100

# Manual Motor Starters



<b>Frame Size</b>		
<b>Type</b>	<b>Current Adjustable Type</b> <b>Instantaneous Type</b>	
<b>Breaking Capacity</b>		
<b>Handle Type</b>		
<b>Number of Poles</b>		
<b>Rated Operational Voltage [Ue]</b>		
<b>Mechanical / Electrical Endurance</b> [operations]		
<b>Max Operating Frequency Per Hour</b> [operations]		
<b>Temperature Compensation</b>		
<b>Instantaneous Short Circuit Release</b>		
Overload Protection**		
Phase Failure Protection**		
Short Circuit Protection		
<b>Dimensions (W x H x D) [mm]</b>		
<b>UL Interrupting Rating [kA]</b>	Type of Installation	
	Thermal Current Setting Range [A]	Rated Current [A]
	0.1-0.16	0.16
	0.16-0.25	0.25
	0.25-0.4	0.4
	0.4-0.63	0.63
	0.63-1	1
	1-1.6	1.6
	1.6-2.5	2.5
	2.5-4	4
	4-6	6
	5-8	8
	6-10	10
	9-13	13
	11-17	17
	14-22	22
	18-26	26
22-32	32	
28-40	40	
34-50	50	
45-63	63	
55-75	75	
70-90	90	
80-100	100	

<b>32AF</b>																			
<b>GMS-32S</b>									<b>GMS-32H</b>										
—									<b>GMS-32HI</b>										
Standard									High Breaking										
Toggle									Rotary										
3									3										
600V									600V										
100,000 / 100,000									100,000 / 100,000										
25									25										
-20~+60C *									-20~+60C *										
13 X Ie max									13 X Ie max										
YES									YES										
YES									YES										
YES									YES										
45 x 94 x 75									45 x 94 x 99.6										
Manual (UL508) Motor Controller				Manual Motor Controller Group Installation					Manual (UL508) Motor Controller				Manual Motor Controller Group Installation						
240V	480Y	600Y	277V	347V	Fuse Size [A]	Max Breaker Size [A]	240V	480Y	600Y	277V	347V	Fuse Size [A]	Max Breaker Size [A]	240V	480Y	600Y	277V	347V	Fuse or Breaker Size [A]
100	50	10	1	15	—	—	—	—	100	50	10	1	15	100	65	25	500		
100	50	10	1	15	—	—	—	—	100	50	10	1	15	100	65	25	500		
100	50	10	1	15	—	—	—	—	100	50	10	1	15	100	65	25	500		
100	50	10	1	15	—	—	—	—	100	50	10	1	15	100	65	25	500		
100	50	10	3	15	—	—	—	—	100	50	10	3	15	100	65	25	500		
100	50	10	6	15	—	—	—	—	100	50	10	6	15	100	65	25	500		
100	50	10	10	15	—	—	—	—	100	50	10	10	15	100	65	25	500		
100	50	5	15	15	—	—	—	—	100	50	10	15	15	100	65	25	500		
100	25	5	20	20	—	—	—	—	100	50	10	20	20	100	65	25	500		
100	25	5	30	30	—	—	—	—	100	50	10	30	30	100	65	25	500		
50	10	5	40	40	—	—	—	—	100	50	10	40	40	100	65	25	500		
50	10	5	50	50	—	—	—	—	100	50	10	50	50	100	65	25	500		
40	10	5	60	60	—	—	—	—	100	30	10	60	60	100	30	10	500		
30	10	5	80	80	—	—	—	—	100	30	10	80	80	100	30	10	500		
30	7.5	5	100	100	—	—	—	—	100	30	10	100	100	100	30	10	500		
20	7.5	5	125	125	—	—	—	—	100	30	10	125	125	100	30	10	500		
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\*Contact Carlo Gavazzi for further details.

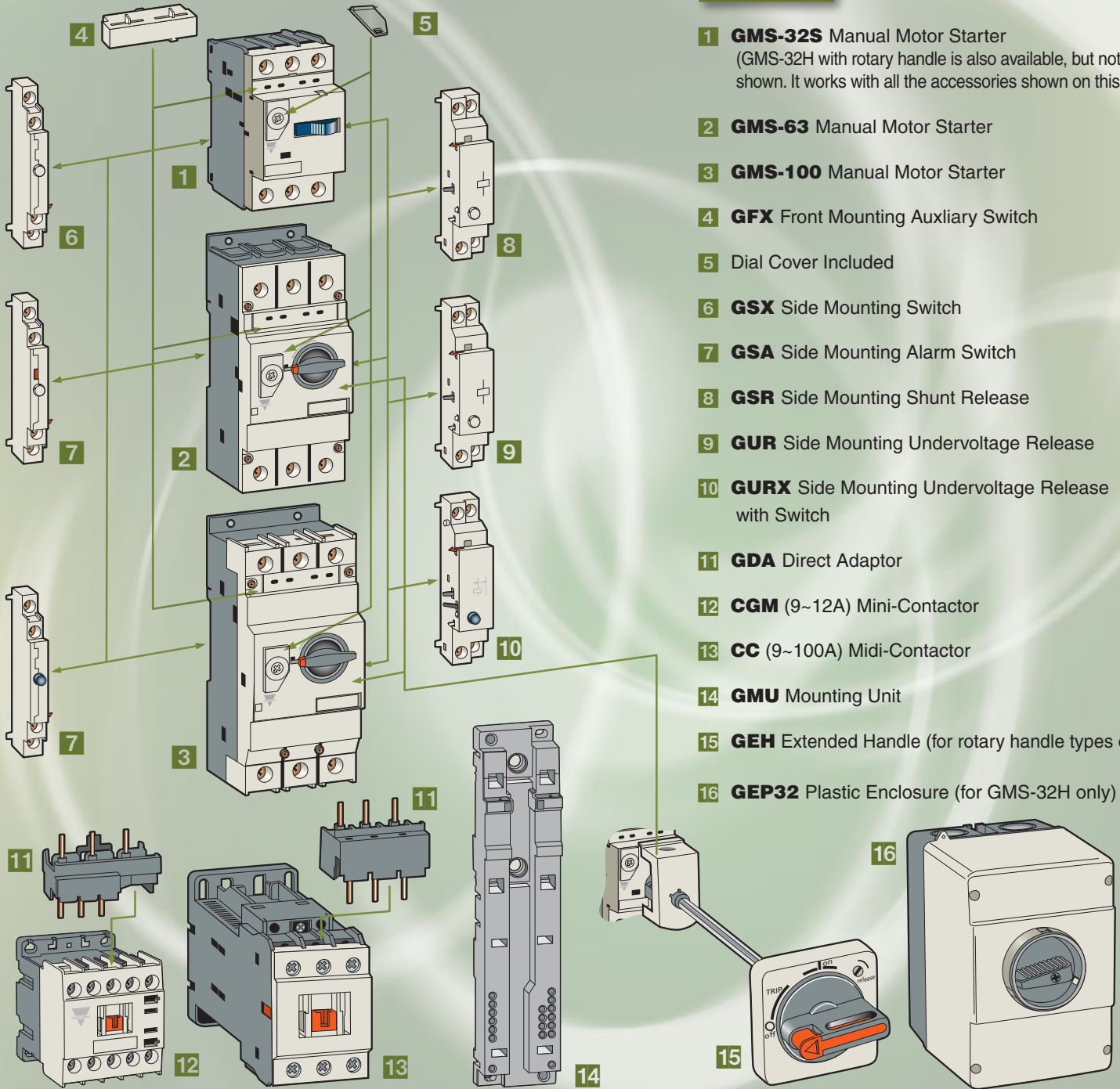
\*\*Except with instantaneous (HI) types.

To instantly view a data sheet and specify products, visit [www.GavazziOnline.com](http://www.GavazziOnline.com)



63AF										100AF											
GMS-63S					GMS-63H					GMS-100S					GMS-100H						
—					GMS-63HI					—					GMS-100HI						
Standard					High Breaking					Standard					High Breaking						
Rotary					Rotary					Rotary					Rotary						
3					3					3					3						
600V					600V					600V					600V						
50,000 / 25,000					50,000 / 25,000					50,000 / 25,000					50,000 / 25,000						
25					25					25					25						
-20→+60C *					-20→+60C *					-20→+60C *					-20→+60C *						
13 X le max					13 X le max					13 X le max					13 X le max						
YES					YES					YES					YES						
YES					YES					YES					YES						
YES					YES					YES					YES						
45 x 94 x 75					45 x 94 x 99.6					45 x 94 x 75					45 x 94 x 99.6						
Manual (UL508)		Manual Motor			Manual (UL508)		Manual Motor			Manual (UL508)		Manual Motor			Manual (UL508)		Manual Motor				
Motor		Controller			Motor		Controller			Motor		Controller			Motor		Controller				
Controller		Group			Controller		Group			Controller		Group			Controller		Group				
Installation		Installation			Installation		Installation			Installation		Installation			Installation		Installation				
Max	Max	Max		Max	Max	Max	Max	Max		Max	Max	Max		Max	Max	Max		Max	Max		
240V	480Y	600Y	Fuse	Breaker	240V	480Y	600Y	or	240V	480Y	600Y	Fuse	Breaker	240V	480Y	600Y	or	240V	480Y	600Y	
277V	347V	Size	Size	Breaker	277V	347V	Size	Size	277V	347V	Size	Size	Breaker	277V	347V	Size	Size	277V	347V	Breaker	
[A]	[A]	Size	[A]	Size	[A]	[A]	Size	[A]	Size	[A]	[A]	Size	[A]	Size	[A]	[A]	Size	[A]	Size	[A]	
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100	25	10	40	40	100	50	10	600	100	50	10	40	40	100	65	25	600	—	—	—	
100	25	10	50	50	100	50	10	600	100	50	10	50	50	100	65	25	600	—	—	—	
100	25	10	60	60	100	40	10	600	100	50	10	60	60	100	50	10	600	100	25	1000	
100	25	10	80	80	100	40	10	600	100	50	10	80	80	100	50	10	600	100	25	1000	
100	25	10	100	100	100	40	10	600	100	50	10	100	100	100	50	10	600	100	25	1000	
100	25	10	125	125	100	40	10	600	100	50	10	125	125	100	50	10	600	100	25	1000	
100	25	10	150	150	100	40	10	600	100	50	10	150	150	100	50	10	600	100	25	1000	
100	25	10	200	200	100	40	10	600	100	50	10	200	200	100	50	10	600	100	25	1000	
100	25	10	250	250	100	40	10	600	100	50	10	250	250	100	50	10	600	100	25	1000	
—	—	—	—	—	—	—	—	—	—	—	—	—	—	100	25	10	300	300	100	40	1000
—	—	—	—	—	—	—	—	—	—	—	—	—	—	100	25	10	350	350	100	40	1000
—	—	—	—	—	—	—	—	—	—	—	—	—	—	100	25	10	400	400	100	40	1000

# Manual Motor Starters



## Accessories

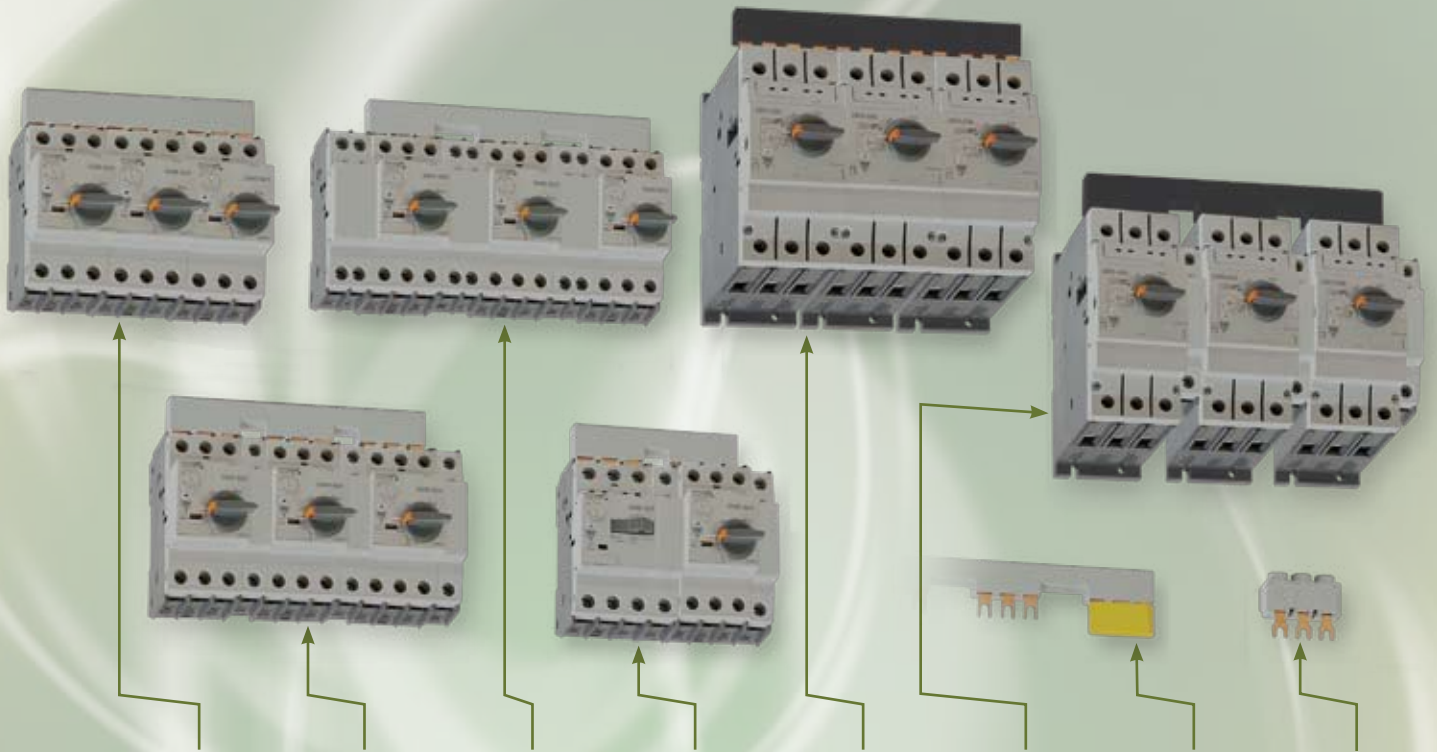
- 1 GMS-32S** Manual Motor Starter  
(GMS-32H with rotary handle is also available, but not shown. It works with all the accessories shown on this page.)
- 2 GMS-63** Manual Motor Starter
- 3 GMS-100** Manual Motor Starter
- 4 GFX** Front Mounting Auxiliary Switch
- 5** Dial Cover Included
- 6 GSX** Side Mounting Switch
- 7 GSA** Side Mounting Alarm Switch
- 8 GSR** Side Mounting Shunt Release
- 9 GUR** Side Mounting Undervoltage Release
- 10 GURX** Side Mounting Undervoltage Release with Switch
- 11 GDA** Direct Adaptor
- 12 CGM** (9~12A) Mini-Contactor
- 13 CC** (9~100A) Midi-Contactor
- 14 GMU** Mounting Unit
- 15 GEH** Extended Handle (for rotary handle types only)
- 16 GEP32** Plastic Enclosure (for GMS-32H only)



# Manual Motor Starters



## Accessories - Busbars



45mm Spacing  
(rated 63A)

54mm Spacing  
(rated 63A)

63mm Spacing  
(rated 63A)

Jumper

54mm Spacing  
(rated 120A)

63mm Spacing  
(rated 120A)

Terminal cover

Supply connector

<b>Type</b>	<b>MSVGW45-14-2</b>	<b>MSVGW54-14-2</b>	<b>MSVGW63-14-2</b>	<b>MSVGW45-SH</b>	<b>MSVCPM25412</b>	<b>MSVCP36312</b>	<b>MSVB54</b>	<b>MSVGE1-14</b>
<b>Description</b>	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	For 2 GMS-63	For 2 GMS-63 + accessories (side mnt aux sw)	3 Pole protective cover for MSVGW..	3 Phase input terminal 63A
<b>Type</b>	<b>MSVGW45-14-3</b>	<b>MSVGW54-14-3</b>	<b>MSVGW63-14-3</b>	<b>MSVCPM35412</b>	<b>MSVCP36312</b>	<b>MSVTA120</b>	<b>MSVBTC50E</b>	
<b>Description</b>	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)	For 3 GMS-63	For 3 GMS-63 + accessories (side mnt aux. sw)	3 Pole protective cover for MSVCP..	3 Phase Input terminal 120A	
<b>Type</b>	<b>MSVGW45-14-4</b>	<b>MSVGW54-14-4</b>	<b>MSVGW63-14-4</b>	<b>MSVCPM45412</b>	<b>MSVCP46312</b>			
<b>Description</b>	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)	For 4 GMS-63	For 4 GMS-63 + accessories (side mnt aux. sw)			
<b>Type</b>	<b>MSVGW45-14-5</b>	<b>MSVGW54-14-5</b>	<b>MSVGW63-14-5</b>					
<b>Description</b>	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)					

### Handle Lock



### Dial Cover



### GMS-32



### Terminals

#### GMS-63



#### GMS-100



Specifications are subject to change without notice.

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Inductive and Capacitive Sensors  
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Ultrasonic Sensors  
Wind Sensors  
Radar Sensors  
Motion/Presence Vision Sensors  
Conductive Level Sensors  
Limit Switches  
Magnetic Switches  
Safety Interlocks and Light Curtains

## Switch

Solid State Relays  
Contactors and Overloads  
Manual Motor Starters/Protectors  
Soft Starters  
Variable Frequency Drives  
Hybrid Relays  
Electromechanical Relays  
Push Buttons and Pilot Lights

## Control

Energy Management  
Switching Power Supplies  
Digital Panel Meters  
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Monitoring Controls  
Current Transformers/Shunts  
PID Controllers  
Surge Arresters  
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Solar Battery Chargers

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