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# Contactors, Overloads and Manual Motor Starters

## Mini-Contactors and Overloads

- Up to 20 Amps or 7.5HP

## Midi-Contactors and Overloads

- Up to 140 Amps or 75HP
- With CSA Elevator Ratings

## Power-Contactors and Overloads

- Up to 900 Amps or 600HP

## Manual Motor Starters

- 32, 63 and 100 Amp Frame Sizes



# 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 95 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 starters, 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)**



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

**GC Midi-Contactors** for use with Overloads or Manual Motor Starters (Up to 140 Amps or 75HP)

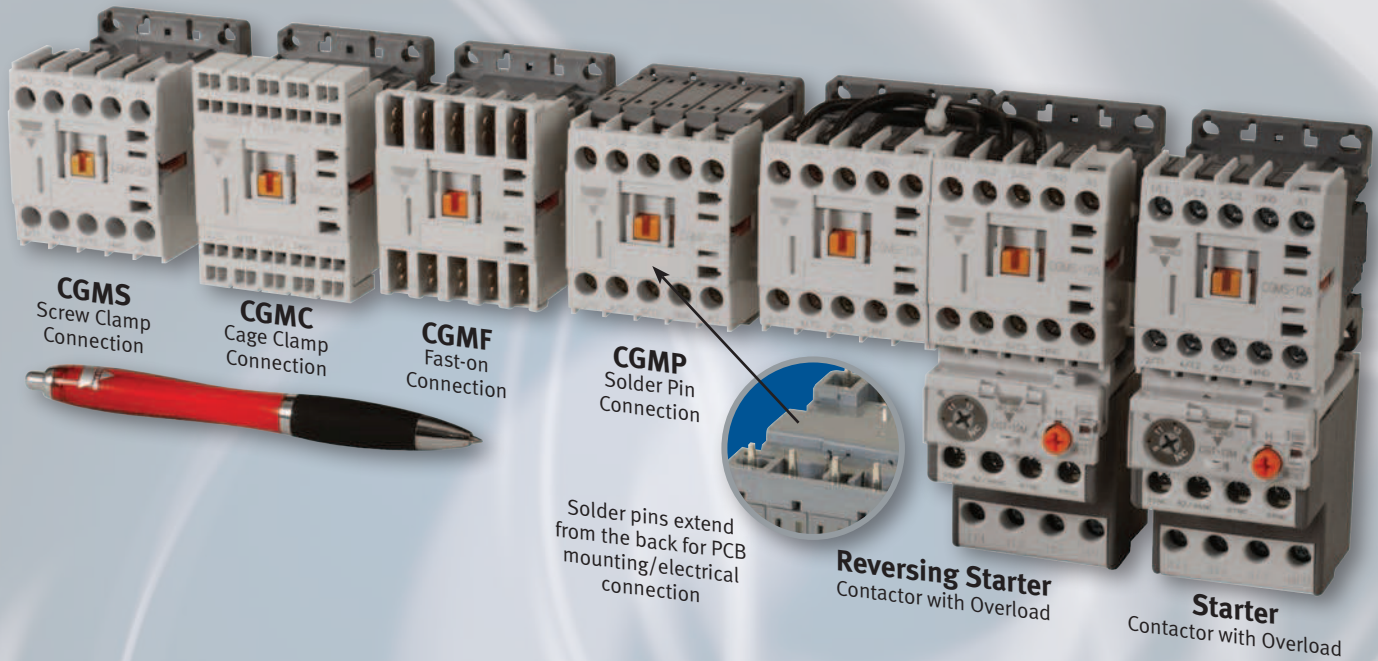
**CGC Power-Contactors** for use with Overloads (Up to 900 Amps or 600HP)

## 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

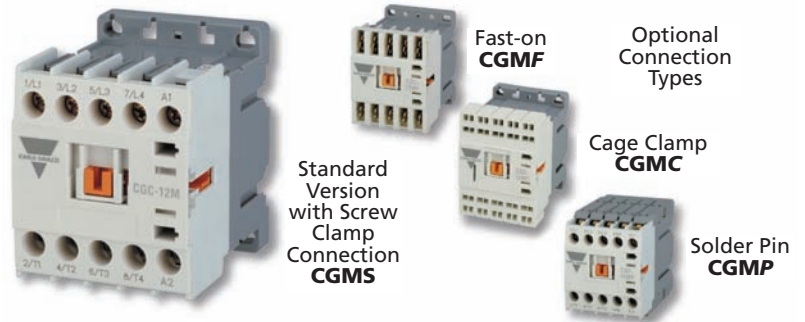
### Mini-Contactor

<b>CGM</b>	<b>S</b>	<b>9</b>	<b>A</b>	<b>120</b>	<b>10</b>
Magnetic 3-Pole Mini-Contactor	Application and Terminal Style	Amperage Size	Coil Type	Coil Voltage	Built-in Auxiliary Contact Combination
	Non-Reversing S - Screw (std.) F - Fast On C - Cage Clamp P - Solder Pin	6 - 6A 9 - 9A 12 - 12A	A - AC Coil D - DC Coil	24 - 24V 120 - 120V  480 - 480V	10 - 1 NO 01 - 1 NC
	Reversing Type U - Screw (standard) CU - Cage Clamp FU - Fast On PU - Solder Pin			See data sheet for full offering	

### Overload

<b>CGT</b>	<b>12</b>	<b>M</b>	<b>0.16A</b>
Bimetallic Mini-Overload	Amperage Size	Type	Setting Ranges (Use upper limit in part number)
	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 I <sub>th</sub>	
Motor AC Single Phase	115V
	230V
Three Phase	230V
	460V
	575V

### IEC Ratings



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

### Coil Voltages

AC Coil	VAC 50/60Hz
DC Coil (std. consumption)	VDC
(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, I<sub>e</sub>  
Rated Breaking Capacity, I<sub>cu</sub>

### 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 I<sub>th</sub>, 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

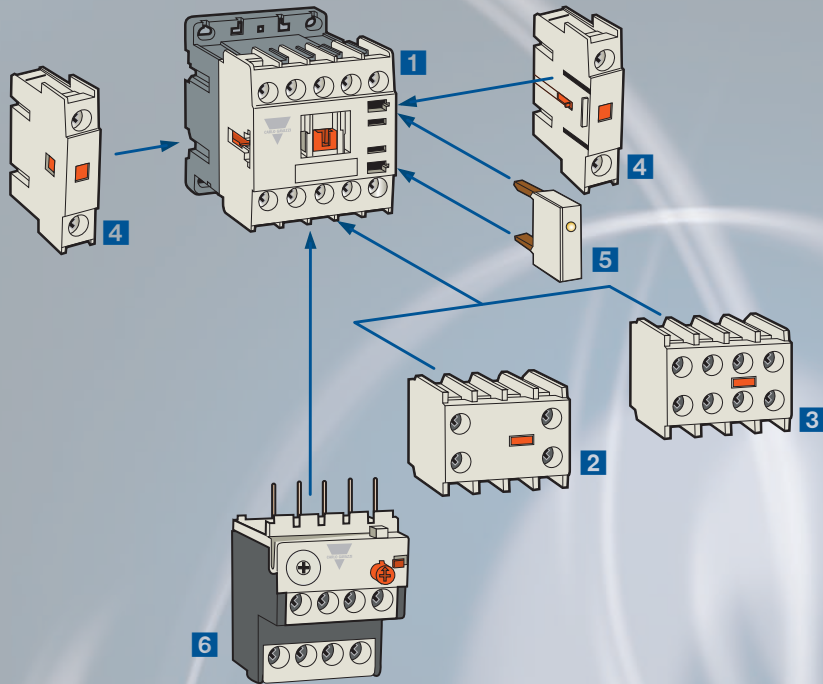
**GDA16HA**

**GDA16HD**

**GDA16SA**

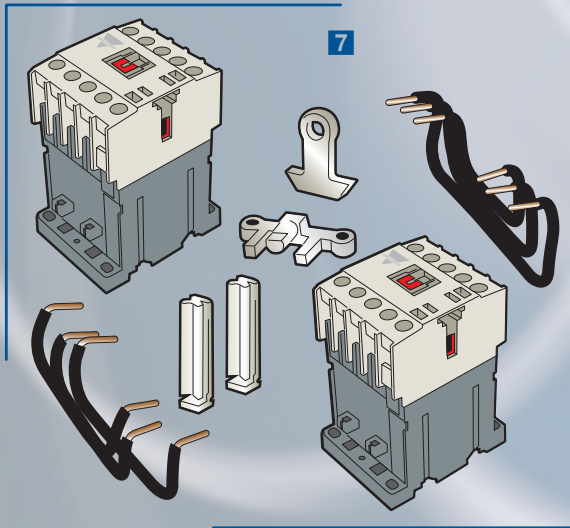
**GDA16SD**

# 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 10, 25, 50 or 75HP
- Resistive ratings of each frame size:  
Up to 25, 50, 75 or 140A
- AC or DC coil voltage
- Two connection types:  
Screw terminal connections are available on all frame sizes  
Lug terminal connections (line/load) are available on 63 and 95 amp frame sizes

## Standards

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

## Convenience

- Captive screw terminals
- 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 NO or NC 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
- Manual motor starters
- Side or top mounted auxiliary contact(s)
- 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

GC	9		S	A	120		GT	12	S	0.16A
Magnetic 3-pole Midi-Contactor	Amperage Size	Application	Terminal Type	Coil Type	Coil Voltage	Built-in Auxiliary Contact Combination: Only on 9 & 12A Midi-Contactors	Bimetallic Midi-Overload	Frame Size	Terminal Type (Must match contactor terminal type)	Setting Ranges (Use upper limit in part number)
	9 - 9A 12 - 12A 18 - 18A 25 - 25A 32 - 32A 35 - 35A 40 - 40A 50 - 50A 63 - 63A 65 - 65A 75 - 75A 85 - 85A 95 - 95A	BLANK - Non-Reversing R - Reversing C - Capacitive	S - Screw L - Lug (≥35A)	A - AC D - DC	24 - 24V 120 - 120V } 480 - 480V  See data sheet for more details	BLANK - 1NO 01 - 1NC  The following sizes come standard with the auxiliary outputs listed below:  <u>18, 25 &amp; 32A:</u> 1NO & 1NC  <u>35, 40, 50, 63, 65, 75, 85 &amp; 95A:</u> 2NO & 2NC  See pages 10 & 11 for more details		12 - 9 & 12A 32 - 18, 25 & 32A  63 - 35, 40, 50 & 63A  95 - 65, 75, 85 & 95A	S - Screw L - 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
(Setting Range Guide)										
<span style="background-color: #00A0C0; color: white; padding: 2px;">GT12</span> <span style="background-color: #808080; color: white; padding: 2px;">GT32</span> <span style="background-color: #FFD700; color: black; padding: 2px;">GT63</span> <span style="background-color: #FF8C00; color: white; padding: 2px;">GT95</span>										

# Midi-Contactors and Overloads



## Frame Size Type

### Available Output Terminal Type

UL & CSA Ratings	Continuous Current Ith
	Motor AC Single Phase
	Three Phase
	115V
	230V
	230V
	460V
	575V

### Rated Operational Current 440VAC Motor Load

CSA Elevator Ratings	Three Phase	200~600V
	Motor AC AC1	690 VAC max
	Motor AC AC3	200~240V
		380~440V
		690V

Coil Voltages	AC Coil	VAC 60 Hz
		VAC 50 Hz
		VAC 50/60 Hz
	DC Coil	VDC

Basic Dimensions	(W x H x D) mm	AC coil
		DC Coil

Accessories	Auxiliary Contacts	Standard
		Optional
		Mechanical/Electrical Interlock

### Power Connectors for Reversing Contactors

Coil Surge Units	Varistor
	RC+Varistor
	RC

12AF		32AF		
GC9	GC12	GC18	GC25	GC32
3-Pole		3-Pole		
Screw Clamp Only		Screw Clamp Only		
25A	25A	40A	40A	50A
0.5HP	0.75HP	1HP	2HP	2HP
1.5HP	2HP	3HP	3HP	5HP
3HP	5HP	7.5HP	10HP	10HP
5HP	7.5HP	10HP	15HP	20HP
7.5HP	10HP	15HP	20HP	25HP
9A	12A	18A	25A	32A
Available in 2009		20A	20A	25A
25A	25A	40A	40A	50A
2.5 kW 11A	3.5 kW 13A	4.5 kW 18A	5.5 kW 25A	7.5 kW 32A
4 kW 9A	5.5 kW 12A	7.5 kW 18A	11 kW 25A	15 kW 32A
4 kW 5A	7.5 kW 9A	7.5 kW 9A	15 kW 18A	18.5 kW 20A
24, 48, 110, 120, 208, 220, 240, 277, 380, 440, 480, 600				
24, 42, 48, 100, 110, 220, 240, 380, 400, 415, 440, 500, 550				
24, 48, 120, 220, 230, 240, 380, 400, 415, 440, 500, 560				
12, 24, 48, 60, 80, 100, 110, 125, 200, 220, 250				
45 x 74 x 82		45 x 83 x 93		
45 x 74 x 114		45 x 83 x 118		
1NO or 1NC		One Side Mount <b>GUA1</b> (1NO and 1NC)		
Side Mount <b>GUA1</b> (1NO/1NC) or Top Mount <b>AX2 OR AX4</b>				
		<b>GUR02*</b>		
<b>GUW12**</b>		<b>GUW32</b>		
<b>GUS11</b> (for 24~48 VAC or VDC coils),				
<b>GUS1</b> (for 24~48 VAC coils), <b>GUS2</b> (for 100~125 VAC coils),				



## Thermal Overloads

Matching Manual Motor Starters	Type
Rated Operational Current, Ie	
Rated Breaking Capacity, Icu	
Connecting Module	AC Coil Contactor
	DC Coil Contactor

GT12		GT32	
Range		Range	
0.1~0.16A		0.1~0.16A	
9~13A		22~32A	
See page 9 for all ranges		See page 9 for all ranges	
<b>GMS-32S</b>	<b>GMS-32H</b>	<b>GMS-32S</b>	<b>GMS-32H</b>
0.1 ~ 32A	0.1 ~ 32A	0.1 ~ 32A	0.1 ~ 32A
8~100kA	20~100kA	8~100kA	20~100kA
<b>GDA12SA**</b>	<b>GDA12HA**</b>	<b>GDA32SA</b>	<b>GDA32HA</b>
<b>GDA12SD**</b>	<b>GDA12HD**</b>	<b>GDA32SD</b>	<b>GDA32HD</b>



63AF				95AF				
GG35	GC40	GC50	GC63	GC65	GC75	GC85	GC95	
3-Pole				3-Pole				
Screw Clamp or Lug				Screw Clamp or Lug				
55A	60A	70A	75A	100A	110A	135A	140A	
2HP	3HP	3HP	5HP	5HP	5HP	7.5HP	10HP	
5HP	7.5HP	10HP	10HP	15HP	15HP	15HP	20HP	
15HP	20HP	25HP	25HP	30HP	30HP	40HP	40HP	
25HP	30HP	40HP	40HP	50HP	50HP	60HP	75HP	
30HP	40HP	50HP	50HP	60HP	60HP	75HP	75HP	
35A	40A	50A	63A	65A	75A	85A	95A	
30A	32.5A	37.5A	42A	55A	60A	70A	75A	
55A	60A	70A	75A	100A	110A	135A	140A	
11 kW 35A	11 kW 40A	15 kW 55A	15 kW 63A	18.5 kW 65A	22 kW 75A	25 kW 85A	25 kW 95A	
18.5 kW 35A	18.5 kW 40A	22 kW 50A	25kW 63A	30 kW 65A	37 kW 75A	45 kW 85A	45 kW 95A	
22 kW 21A	22 kW 23A	30 kW 28A	30 kW 30A	33 kW 35A	37 kW 42A	45 kW 45A	45 kW 50A	
24, 48, 110, 120, 208, 220, 240, 277, 380, 440, 480, 600								
24, 42, 48, 100, 110, 220, 240, 380, 400, 415, 440, 500, 550								
24, 48, 120, 220, 230, 240, 380, 400, 415, 440, 500, 560								
12, 24, 48, 60, 80, 100, 110, 125, 200, 220, 250								
55 x 106 x 122				70 x 140 x 137				
55 x 106 x 161				70 x 140 x 173				
Two Side Mount <b>GUA1</b> (2NO and 2NC)								
Top Mount <b>AX2</b> (2NO, 1NC/1NO or 2NC) or Top Mount <b>AX4</b> (4NO, 3NO/1NC, 2NO/2NC, 1NO/3NC or 4NC)								
<b>GUR02*</b>								
<b>GUW63</b>				<b>GUW95</b>				
<b>GUS12</b> (for 100~125 VAC or VDC coils), <b>GUS13</b> (for 200~240 VAC or VDC coils), <b>GUS14</b> (for 380~440 VAC coils)								
<b>GUS3</b> (for 200~240 VAC coils), <b>GUS4</b> (for 24~48 VDC coils), <b>GUS5</b> (for 100~125 VDC coils), <b>GUS6</b> (for 200~220 VDC coils)								
<b>GUS22</b> (for 100~125 VAC coils)								

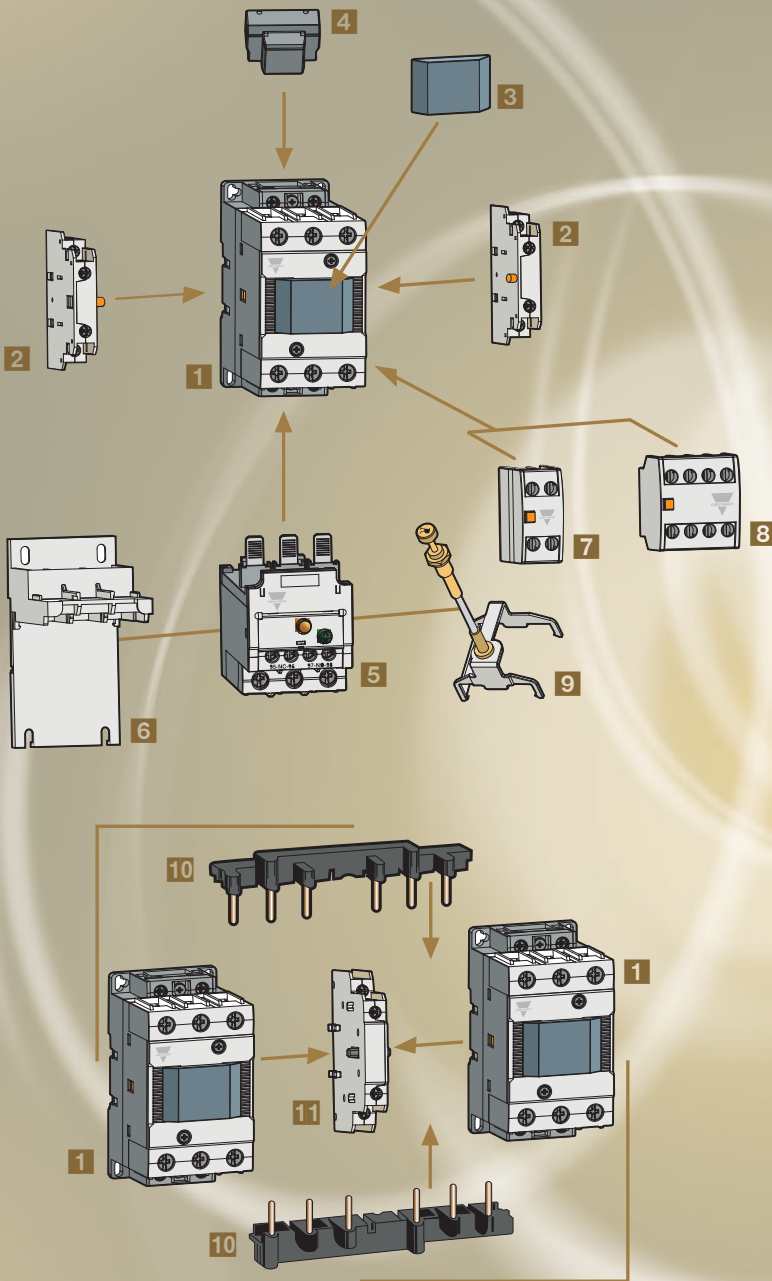


GT63	GT95
Range 4~6A	Range 4~10A
45~65A	70~95A
See page 9 for all ranges	See page 9 for all ranges
<b>GMS-63S</b> and <b>GMS-63H</b>	<b>GMS-100S</b> and <b>GMS-100H</b>
6~63A	11~100
Max. 100kA	Max. 100kA
<b>GDA63A</b>	<b>GDA95A</b>
<b>GDA63D</b>	<b>GDA95D</b>

# Midi-Contactors and Overloads

## Accessories

- 1 **GC** 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 **Safety Cover** (included)
- 4 **GUS** Surge Unit
- 5 **GT** Overload Relay
- 6 **GUZ** Separate Mounting Unit for Overload
- 7 **AX2** 2-pole Top Mount Auxiliary Contact Unit
- 8 **AX4** 4-pole Top Mount Auxiliary Contact Unit
- 9 **GUM** Remote Reset Unit
- 10 **GUW** Wire Kit for Reversing Contactor
- 11 **GUR** Interlock Unit



## *Power-Contactors and Overloads*

*For Heavyweight  
Applications  
up to 900 Amps*



# Power-Contactors and Overloads



## Frame Size Type

### UL Ratings



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

### NEMA Size

### IEC Ratings



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

### Coil Voltages

AC Coil	VAC 50/60Hz
DC Coil	VDC

### Basic Dimensions

(W x H x D) mm

### Accessories

Auxiliary Contacts	Standard
Mechanical Interlock with Wires	
Mechanical Latch Unit	
Terminal Covers	
Lug Terminals	
Coil Surge Units	Varistor
	RC+Varistor
Insulation Barrier	

125AF		150AF
CGC-100	CGC-125	CGC-150
3-pole		
160A	160A	210A
7.5HP	10HP	15HP
15HP	20HP	25HP
30HP	40HP	50HP
60HP	75HP	100HP
60HP	75HP	100HP
--	--	4
160A	160A	210A
30 kW 105A	37 kW 125A	45 kW 150A
55 kW 105A	60 kW 120A	75 kW 150A
55 kW 65A	60 kW 90A	90 kW 100A
24(VAC/DC), 48(VAC/DC)		
100~240(VAC/DC), 265~347, 380~450, 480~600(VAC/DC)		
24(VAC/DC), 48(VAC/DC), 100~220(VAC/DC)		
126 x 166 x 147		144 x 176 x 157
<b>AR-150W-100/125</b>		<b>AR-150W-150</b>
<b>AL-125</b>		<b>AL-150</b>
<b>AP125</b>		<b>AP150</b>
<b>AJ125</b>		<b>AJ150</b>
<b>AI-150</b>		



## Thermal Overloads

CGT-125	CGT-150
Range	Range
34~50A	34~50A
85~125A	100~150A
See page 16 for all ranges	See page 16 for all ranges



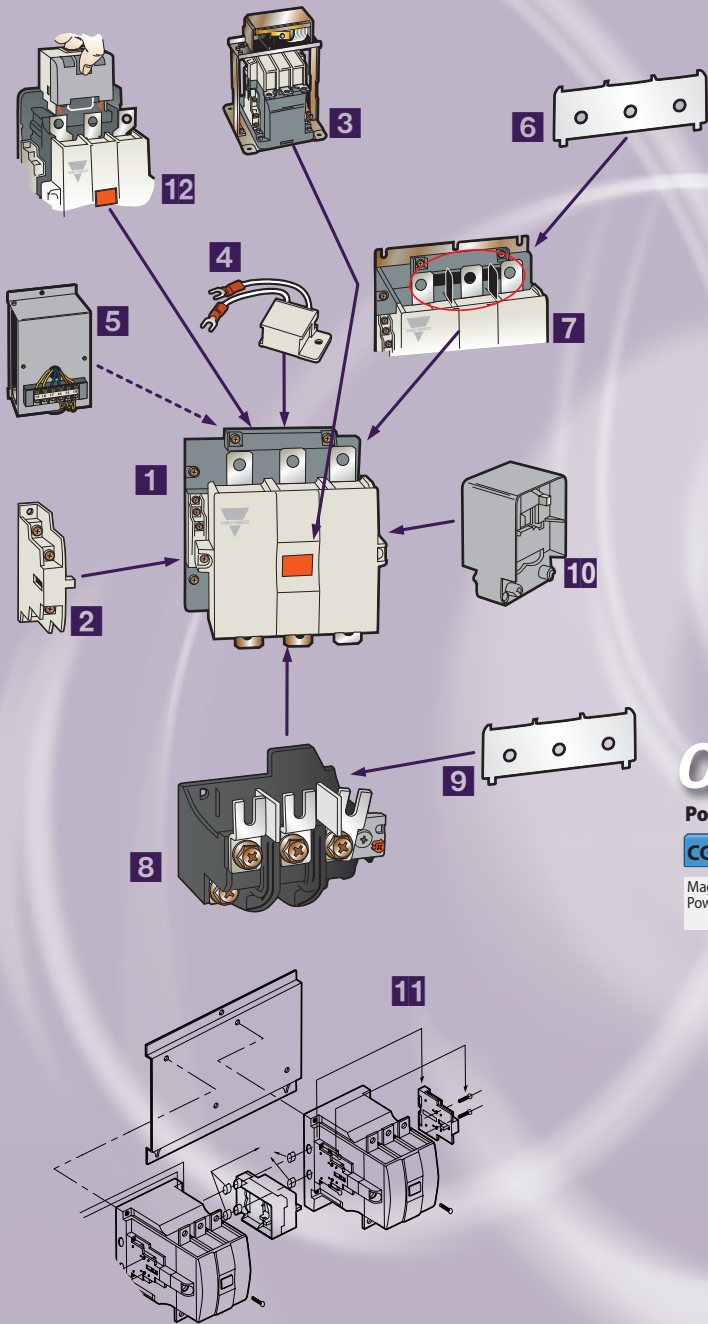
220AF		400AF		800AF	
CGC-180	CGC-220	CGC-300	CGC-400	CGC-600	CGC-800
3-pole		3-pole		3-pole	
230A	275A	350A	450A	660A	900A
15HP	15HP	--	--	--	--
30HP	40HP	--	--	--	--
60HP	75HP	100HP	150HP	200HP	300HP
125HP	150HP	200HP	300HP	400HP	600HP
125HP	150HP	200HP	300HP	400HP	600HP
--	--	5	--	6	--
230A	275A	350A	450A	660A	900A
55 kW 180A	75 kW 250A	90 kW 300A	125 kW 400A	190 kW 630A	220 kW 800A
90 kW 180A	132 kW 250A	160 kW 300A	220 kW 400A	330 kW 630A	440 kW 800A
110 kW 120A	132 kW 150A	200 kW 220A	225 kW 300A	330 kW 420A	500 kW 630A
40~575 (VAC)		100~240(VAC/DC)		100~127(VAC/DC), 200~240(VAC/DC)	
VAC/DC)		265~347, 380~450, 440~575VAC		265~347, 380~450, 440~575VAC	
		100~220(VAC/DC)		100~220(VAC/DC)	
	162 x 203 x 181		187 x 243 x 198		285 x 290 x 242
Two Side Mount <b>AX-100</b> (2NO and 2NC)					
<b>AR-400W-180/220</b>		<b>AR-400W-300/400</b>		<b>AR-800W</b>	
<b>AL-220</b>		<b>AL-400</b>		--	
<b>AP220</b>		<b>AP400</b>		<b>AP800</b>	
<b>AJ220</b>		<b>AJ400</b>		<b>AJ800</b>	
<b>AS-11, AS-12, AS-13, AS-14</b>					
<b>AS-1, AS-2, AS-3, AS-4, AS-5, AS-6</b>					
<b>AI-400</b>				<b>AI-800</b>	



CGT-220	CGT-400	CGT-800
Range	Range	Range
65~100A	85~125A	220~300A
160~240A	260~400A	520~800A
See page 16 for all ranges	See page 16 for all ranges	See page 16 for all ranges



# Power-Contactors and Overloads



## Accessories

- 1 **CGC** Power-Contactor
- 2 **AX-100** 2-pole Side Mount Auxiliary Contact Unit (two are included)
- 3 **AL** Mechanical Latch
- 4 **AS** Surge Absorber Unit
- 5 **AD** Delay Device
- 6 **AP** Terminal Cover for Contactors
- 7 **AI** Insulation Barrier
- 8 **CGT** Thermal Overload
- 9 **APT** Terminal Cover for Overloads
- 10 **AR-150/400W** Mechanical Interlock
- 11 **AR W** Reversing Interlock Kit, (wires not shown and contactors not included)
- 12 **Roll-out Cartridge Coil** (included)

## Ordering Guide

### Power Contactor

<b>CGC</b>
Magnetic 3-pole Power Contactors

<b>100</b>
Amperage Size

100 - 100A  
125 - 125A  
150 - 150A  
180 - 180A  
220 - 220A  
300 - 300A  
400 - 400A  
600 - 600A  
800 - 800A

<b>120</b>
Coil Voltage

24 - 24V AC/DC  
48 - 48V AC/DC  
}

500 - 440~575VAC

See catalog for full listing  
**Note:**  
Coil voltages 240V and below are both AC/DC. Those above 240V are AC only. See data sheet for full details.

### Overload

<b>CGT</b>
Bimetallic Overload

<b>125</b>
Frame Size

125 - 100 & 125A  
150 - 150A  
  
220 - 180 & 220A  
400 - 300 & 400A  
  
800 - 600 & 800A

<b>50A</b>
Setting Ranges (Use upper limit in part number)

34 ~ 50A  
39 ~ 57A  
43 ~ 65A  
54 ~ 80A  
65 ~ 100A  
85 ~ 125A  
100 ~ 150A  
100 ~ 160A  
120 ~ 180A  
160 ~ 240A  
220 ~ 300A  
260 ~ 400A  
400 ~ 600A  
520 ~ 800A

(Setting Range Guide)

**GT-125**  
**GT-150**  
**GT-220**  
**GT-400**  
**GT-800**



## Manual Motor Starters

*The Ideal Complement  
for the CGM Series  
Mini- and GC 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



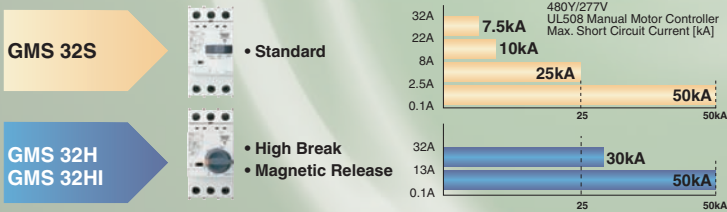
# High Performance Manual Motor Starters

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

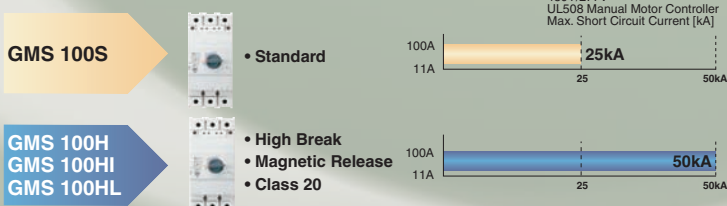
0.1~0.16...22~32A (16 steps)



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



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



## Ordering Guide

Manual Motor Starter

GMS	32	S	0.16A
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**		
<b>Main Functions</b>	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

32AF																				
GMS-32S								GMS-32H												
—								GMS-32HI												
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 Size [A]	Max 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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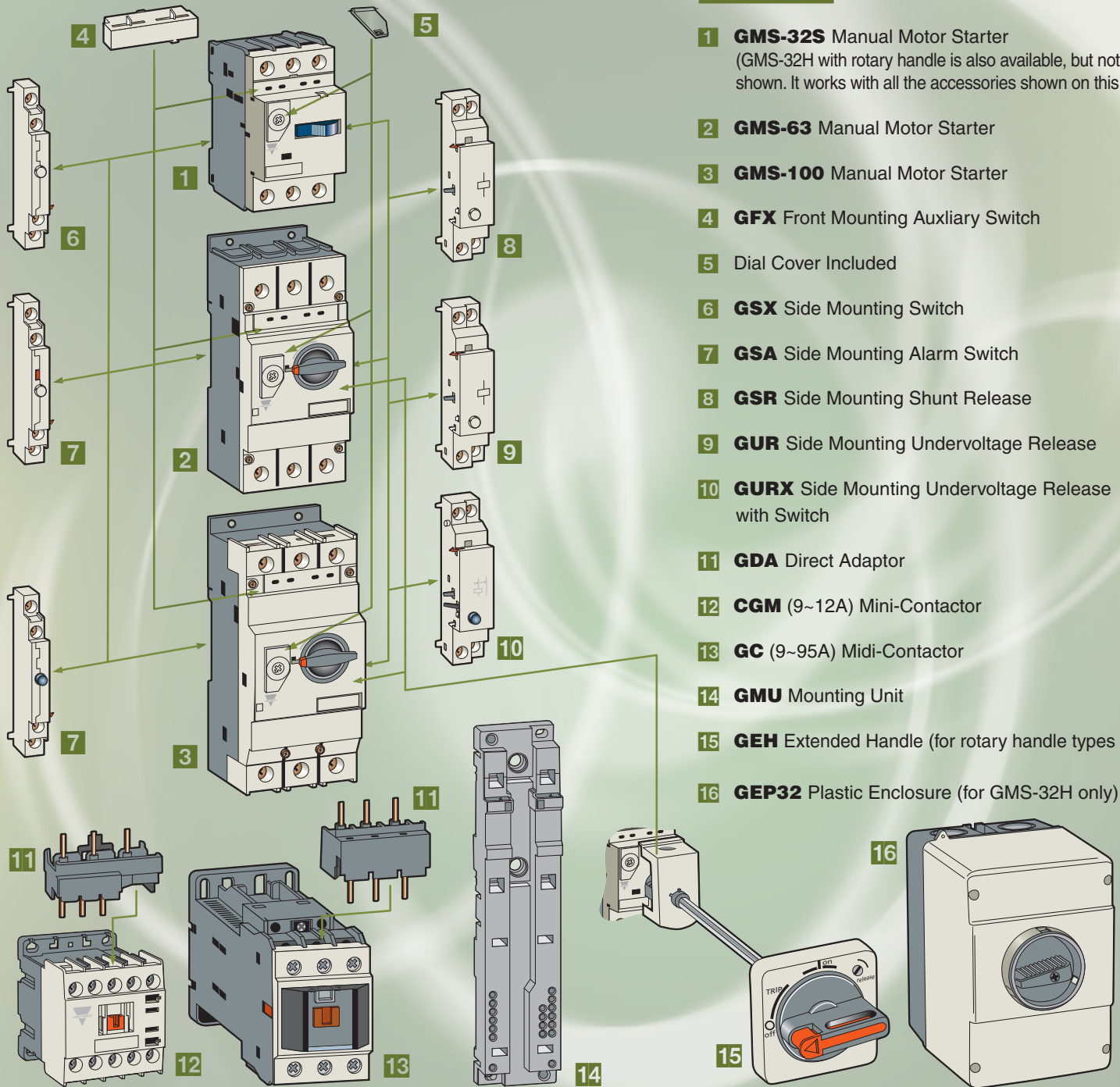
\*Contact Carlo Gavazzi for further details. \*\*Except with instantaneous (HI) types.

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 Ie max			13 X Ie max			13 X Ie max				13 X Ie 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) Motor Controller		Manual Motor Controller Group Installation		Manual (UL508) Motor Controller		Manual Motor Controller Group Installation		Manual (UL508) Motor Controller		Manual Motor Controller Group Installation		Manual (UL508) Motor Controller		Manual Motor Controller Group Installation			
Max 240V 277V	Max 480Y 347V Size [A]	Max 600Y 600Y 347V Breaker Size [A]	Max Fuse or Breaker Size [A]	Max 240V 277V	Max 480Y 347V Size [A]	Max 600Y 600Y 347V Breaker Size [A]	Max Fuse or Breaker Size [A]	Max 240V 277V	Max 480Y 347V Size [A]	Max 600Y 600Y 347V Breaker Size [A]	Max Fuse or Breaker Size [A]	Max 240V 277V	Max 480Y 347V Size [A]	Max 600Y 600Y 347V Breaker Size [A]	Max Fuse or Breaker Size [A]		
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—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
100	25	10	40	40	100	50	10	600	100	50	10	600	100	50	10	600	
100	25	10	50	50	100	50	10	600	100	50	10	600	100	50	10	600	
100	25	10	60	60	100	50	10	600	100	50	10	600	100	50	10	600	
100	25	10	80	80	100	50	10	600	100	50	10	600	100	50	10	600	
100	25	10	100	100	100	50	10	600	100	50	10	600	100	50	10	600	
100	25	10	125	125	100	50	10	600	100	50	10	600	100	50	10	600	
100	25	10	150	150	100	50	10	600	100	50	10	600	100	50	10	600	
100	25	10	200	200	100	50	10	600	100	50	10	600	100	50	10	600	
100	25	10	250	250	100	50	10	600	100	50	10	600	100	50	10	600	
—	—	—	—	—	—	—	—	—	100	25	10	300	300	100	50	10	1000
—	—	—	—	—	—	—	—	—	100	25	10	350	350	100	50	10	1000
—	—	—	—	—	—	—	—	—	100	25	10	400	400	100	50	10	1000

# Manual Motor Starters



## Accessories

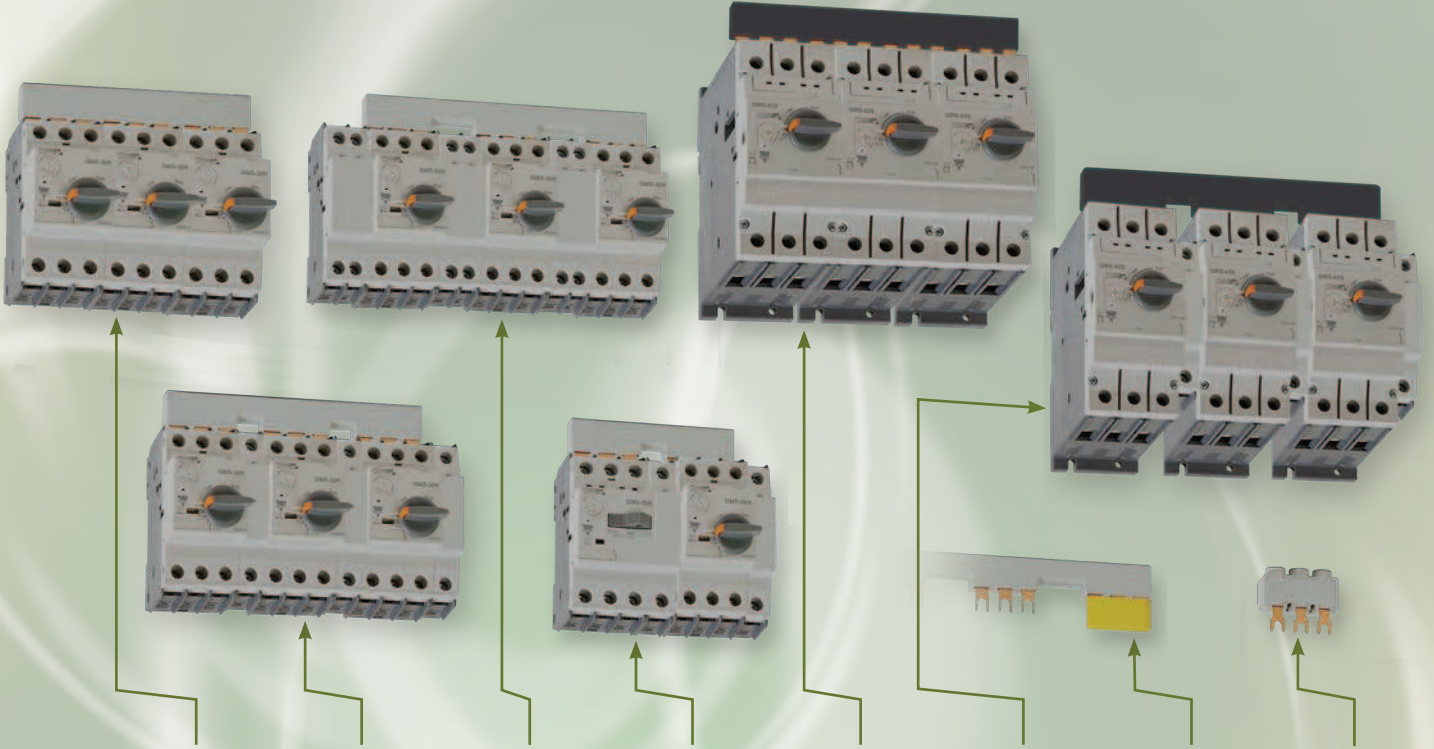
- 1 **GMS-32S** Manual Motor Starter  
(GMS-32H with rotary handle is also available, but not shown. It works with all the accessories shown on this page.)
- 2 **GMS-63** Manual Motor Starter
- 3 **GMS-100** Manual Motor Starter
- 4 **GFX** Front Mounting Auxliary Switch
- 5 Dial Cover Included
- 6 **GSX** 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 **GC** (9~95A) 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>MSVGWE1-14</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)					

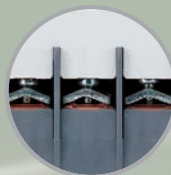
### Handle Lock



### Dial Cover



GMS-32



### Terminals

GMS-63



GMS-100



Specifications are subject to change without notice.



# The Complete Product Package



## Sense

Inductive Proximity Sensors  
 Tripleshield™ Capacitive Sensors  
 Photoelectric Sensors  
 Inductive Loop Detectors  
 Ultrasonic Sensors  
 Radar Sensors  
 Level Sensors  
 Limit Switches  
 Magnetic Switches



## Switch

Solid State Relays  
 Contactors and Overloads  
 Manual Motor Starters  
 Motor Controllers  
 Variable Frequency Drives  
 Electromechanical Relays  
 Pilot Devices  
 Cam Switches  
 Rotary Disconnects



## Control

Energy Management  
 Digital Panel Meters  
 PID Controllers  
 Switching Power Supplies  
 Time Delay Relays  
 Current Monitoring Relays  
 Voltage Monitoring Relays  
 Three Phase Monitoring Relays  
 Current Transformers



## Safety

Control Modules  
 Interlock Switches  
 Magnetic Sensors  
 Light Curtains  
 Stack Lights  
 Mat Systems



## Fieldbus

Dupline Field & Installation Bus  
 Building Automation Systems  
 Elevator Systems

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