

# 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

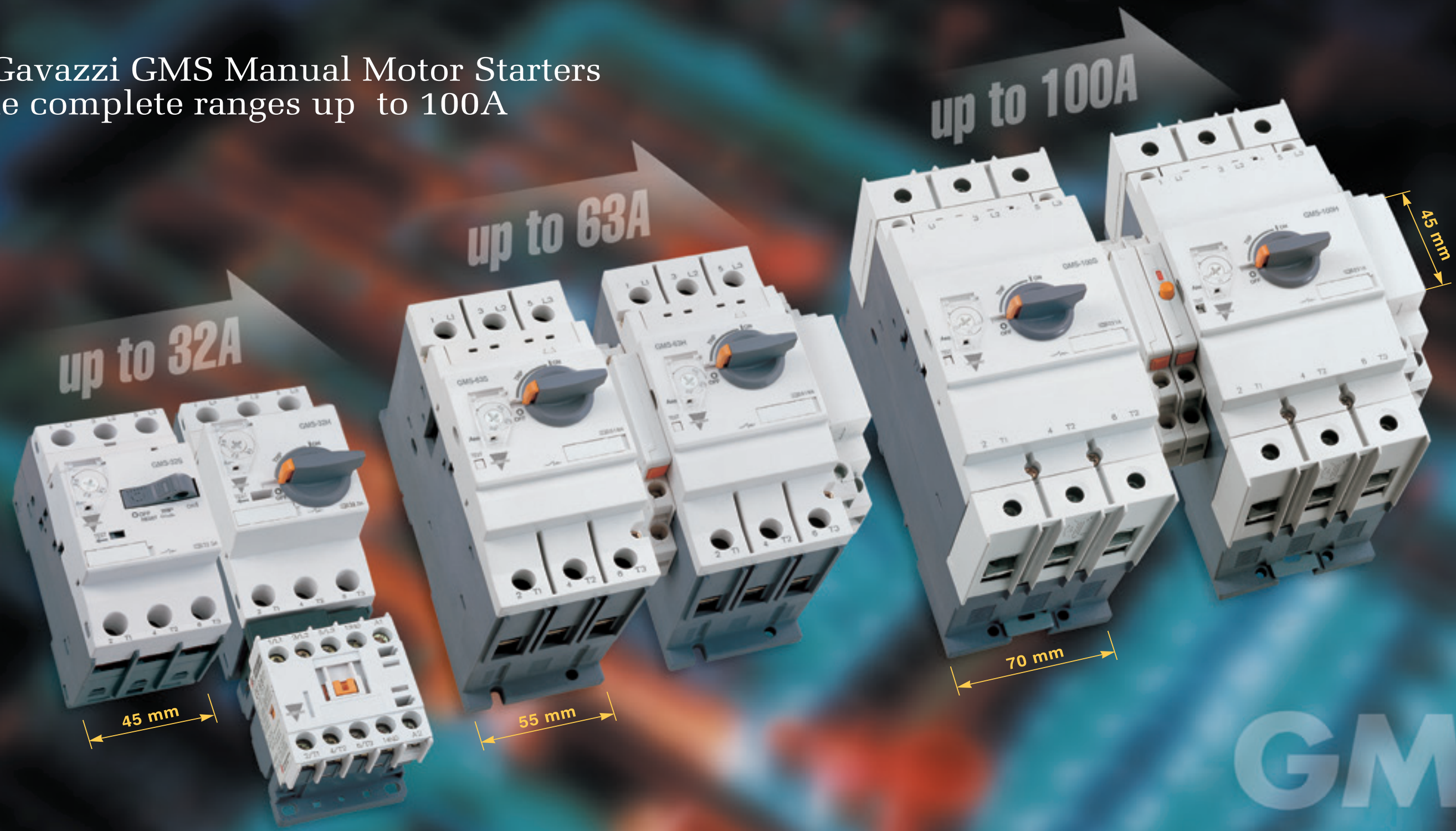


Switch





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

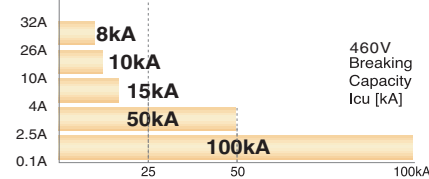


## 32AF

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

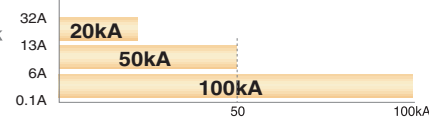
**GMS 32S**

Standard



**GMS 32H**  
**GMS 32HI**

High break  
Magnetic release



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

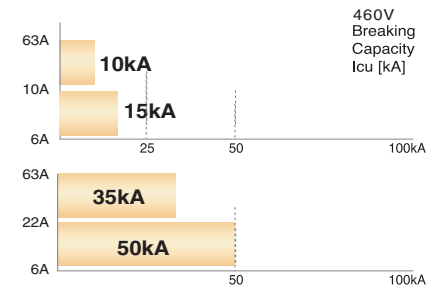
**GMS 63S**

Standard



**GMS 63H**  
**GMS 63HI**  
**GMS 63HL**

High break  
Magnetic release  
Class 20



## 63AF

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

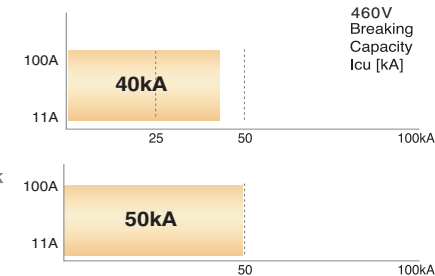
**GMS 100S**

Standard



**GMS 100H**  
**GMS 100HI**  
**GMS 100HL**

High break  
Magnetic release  
Class 20



## 100AF

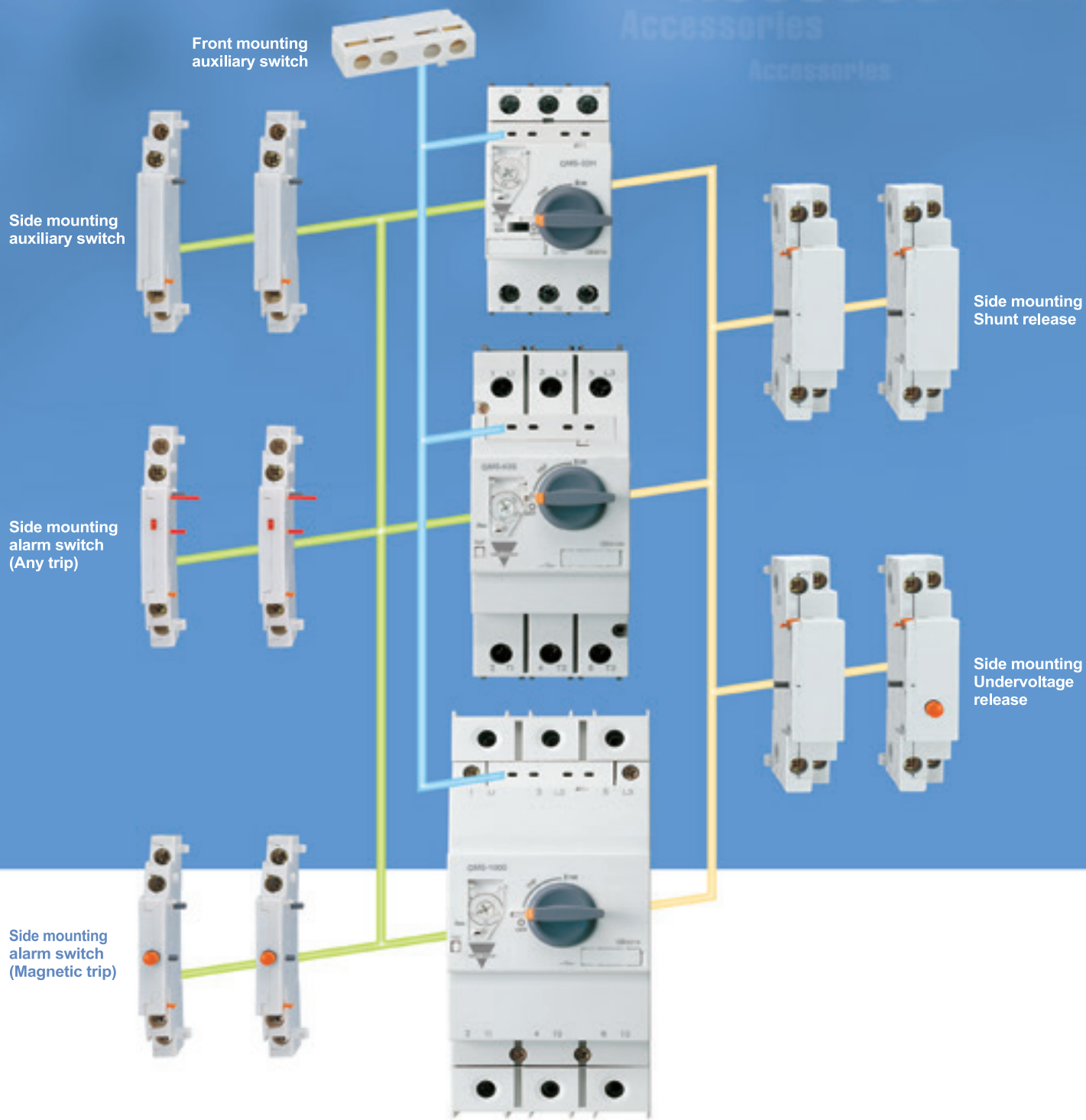


Carlo Gavazzi GMS Manual Motor Starters deliver more efficiency through various functions and compact design

Common use from 32 to 100AF  
A wide variety of accessories enables a flexible response to changes in specifications



[ Scale 1:1 ]



## 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.

# Contents

## Product Selection Guide

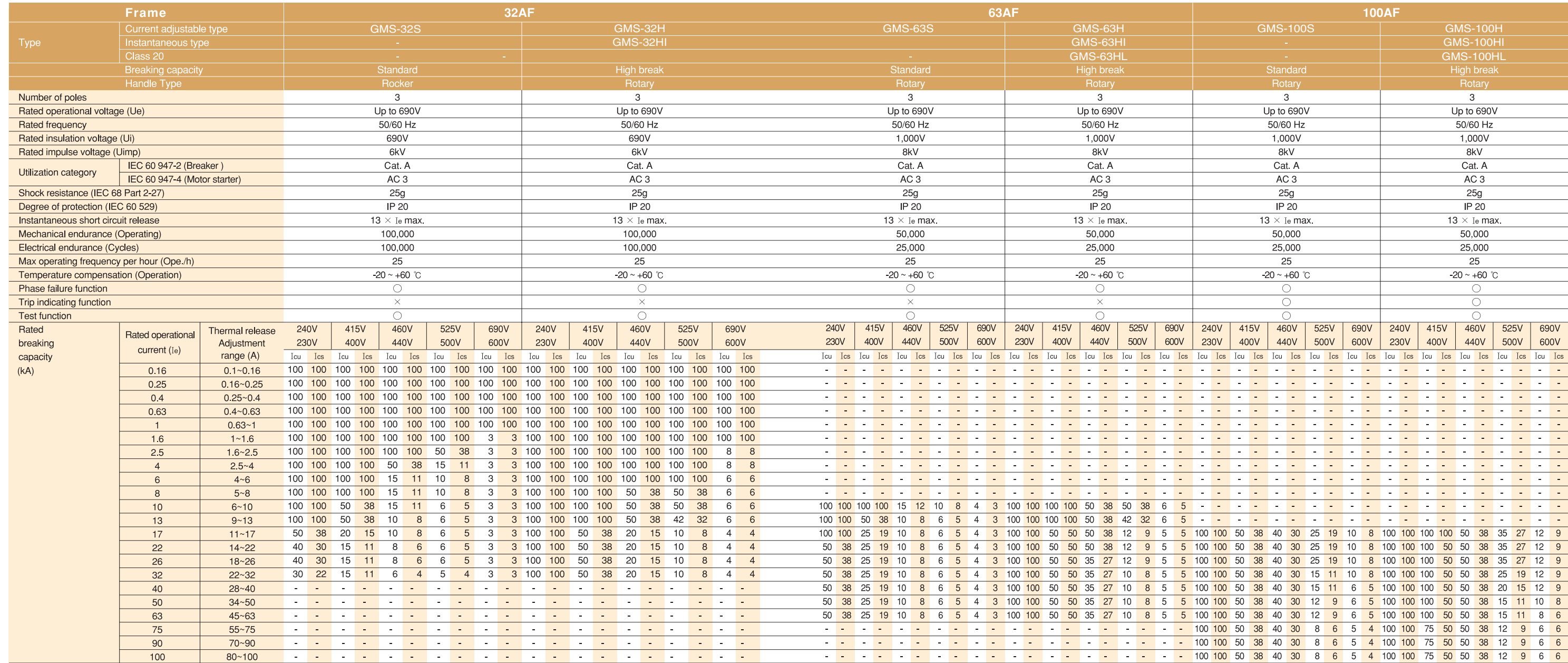
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Specifications are subject to change without notice.





Motor protection

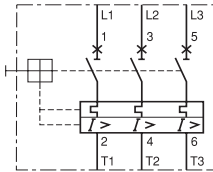
- Adjustable thermal release
- Magnetic release  $13 \times I_e$  max.
- Trip class 10
- Ambient temperature compensation
- Phase-failure protection



GMS-32S



GMS-32H



(Circuit diagram)

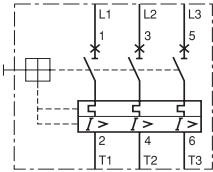
- Adjustable thermal release
- Magnetic release  $13 \times I_e$  max.
- Trip class 10
- Ambient temperature compensation
- Phase-failure protection



GMS-63H



GMS-100H



(Circuit diagram)

| Type                    | Rated<br>operational<br>current<br>I <sub>e</sub><br>[A] | Thermal<br>release<br>Adjustment<br>range<br>[A] | Magnetic<br>release<br>Operating<br>current<br>[A] | Switching of 3 phase AC motors, AC-2, AC-3 |      |      |                     |      |      | 440/460V                |                         |
|-------------------------|----------------------------------------------------------|--------------------------------------------------|----------------------------------------------------|--------------------------------------------|------|------|---------------------|------|------|-------------------------|-------------------------|
|                         |                                                          |                                                  |                                                    | 3-phase [kW] (50/60Hz)                     |      |      | 3-phase [HP] (60Hz) |      |      | I <sub>cu</sub><br>[kA] | I <sub>cs</sub><br>[kA] |
|                         |                                                          |                                                  |                                                    | 230V                                       | 400V | 690V | 230V                | 460V | 575V |                         |                         |
| GMS-32S<br>(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                       |
| GMS-32H<br>(High break) | 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                       |
|                         | 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                      |                         |

| Type                     | Rated<br>operational<br>current<br>I <sub>e</sub><br>[A] | Thermal<br>release<br>Adjustment<br>range<br>[A] | Magnetic<br>release<br>Operating<br>current<br>[A] | Switching of 3 phase AC motors, AC-2, AC-3 |      |      |                     |      |      | 440/460V                |                         |
|--------------------------|----------------------------------------------------------|--------------------------------------------------|----------------------------------------------------|--------------------------------------------|------|------|---------------------|------|------|-------------------------|-------------------------|
|                          |                                                          |                                                  |                                                    | 3-phase [kW] (50/60Hz)                     |      |      | 3-phase [HP] (60Hz) |      |      | I <sub>cu</sub><br>[kA] | I <sub>cs</sub><br>[kA] |
|                          |                                                          |                                                  |                                                    | 230V                                       | 400V | 690V | 230V                | 460V | 575V |                         |                         |
| GMS-63S<br>(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                       |
| GMS-63H<br>(High break)  | 63                                                       | 45~63                                            | 819                                                | 15                                         | 30   | 55   | 20                  | 50   | 60   | 10                      | 8                       |
|                          | 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                      |
| GMS-100S<br>(Standard)   | 50                                                       | 34~50                                            | 650                                                | 11                                         | 22   | 45   | 15                  | 40   | 50   | 35                      | 27                      |
|                          | 63                                                       | 45~63                                            | 819                                                | 15                                         | 30   | 55   | 20                  | 50   | 60   | 35                      | 27                      |
|                          | 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                      |
| GMS-100H<br>(High break) | 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                      |
|                          | 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                      |
| GMS-100H<br>(High break) | 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

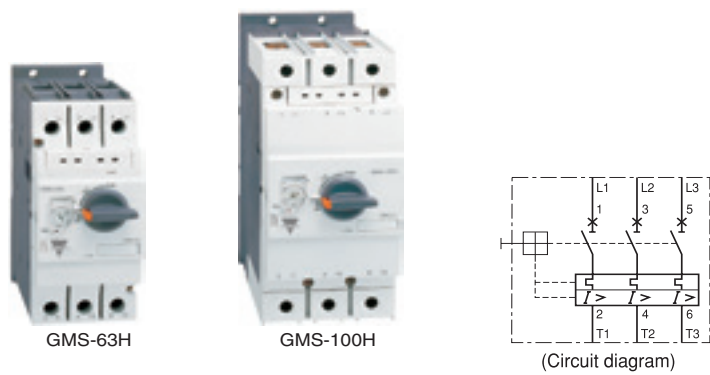
Motor protection ... Class 20



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



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

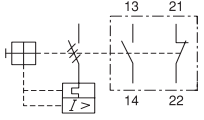
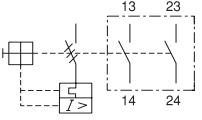
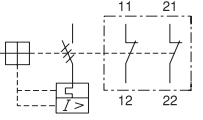
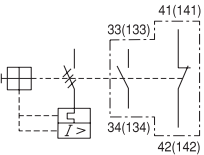
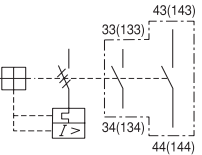
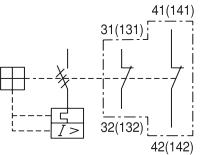
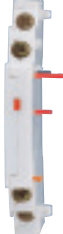
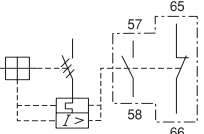
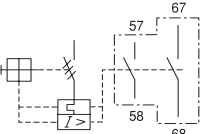
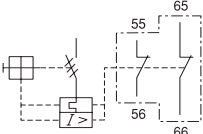
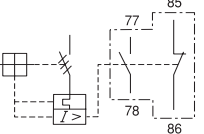
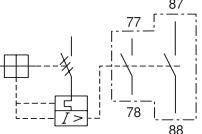
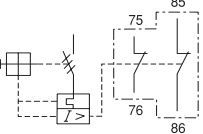


| Type                      | Rated operational current<br>$I_e$ [A] | Thermal release Adjustment range [A] | Magnetic release Operating current [A] | Switching of 3 phase AC motors, AC-2, AC-3 |      |      |                     |      |      | 440/460V      |               |
|---------------------------|----------------------------------------|--------------------------------------|----------------------------------------|--------------------------------------------|------|------|---------------------|------|------|---------------|---------------|
|                           |                                        |                                      |                                        | 3-phase [kW] (50/60Hz)                     |      |      | 3-phase [HP] (60Hz) |      |      | $I_{cu}$ [kA] | $I_{cs}$ [kA] |
|                           |                                        |                                      |                                        | 230V                                       | 400V | 690V | 230V                | 460V | 575V |               |               |
| GMS-32HI<br>(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            |
| GMS-63HI<br>(High break)  | 32                                     | -                                    | 416                                    | 7.5                                        | 15   | 22   | 10                  | 20   | 30   | 20            | 15            |
|                           | 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            |
| GMS-100HI<br>(High break) | 50                                     | -                                    | 650                                    | 11                                         | 22   | 45   | 15                  | 40   | 50   | 35            | 27            |
|                           | 63                                     | -                                    | 819                                    | 15                                         | 30   | 55   | 20                  | 50   | 60   | 35            | 27            |
|                           | 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            |

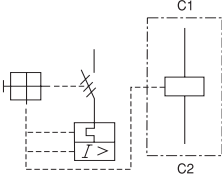
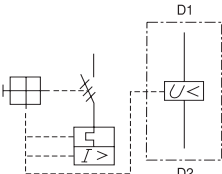
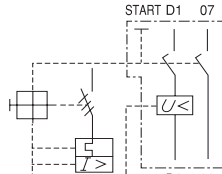
| Type                      | Rated operational current<br>$I_e$ [A] | Thermal release Adjustment range [A] | Magnetic release Operating current [A] | Switching of 3 phase AC motors, AC-2, AC-3 |      |      |                     |      |      | 440/460V      |               |
|---------------------------|----------------------------------------|--------------------------------------|----------------------------------------|--------------------------------------------|------|------|---------------------|------|------|---------------|---------------|
|                           |                                        |                                      |                                        | 3-phase [kW] (50/60Hz)                     |      |      | 3-phase [HP] (60Hz) |      |      | $I_{cu}$ [kA] | $I_{cs}$ [kA] |
|                           |                                        |                                      |                                        | 230V                                       | 400V | 690V | 230V                | 460V | 575V |               |               |
| GMS-63HL<br>(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<br>(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            |





| Type                                                                                                 | Description                                                                                                                                                                                                                                                        | Connection diagram                                                                                                           |                                                                                                                               |                                                                                                                                |
|------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| <b>GFX...</b><br>   | Auxiliary Switch <ul style="list-style-type: none"><li>Front mounting</li><li>2-pole</li><li>One front mounting module per circuit breaker</li></ul>                                                                                                               | 1NO1NC                                                                                                                       | 2NO                                                                                                                           | 2NC                                                                                                                            |
|                                                                                                      |                                                                                                                                                                                                                                                                    | <br><b>GFX-11</b>                           | <br><b>GFX-20</b>                           | <br><b>GFX-02</b>                           |
| <b>GSX...</b><br>   | Auxiliary Switch <ul style="list-style-type: none"><li>Side mounting on the left</li><li>2-pole</li><li>One side mounting module per circuit breaker</li></ul>                                                                                                     | 1NO1NC                                                                                                                       | 2NO                                                                                                                           | 2NC                                                                                                                            |
|                                                                                                      |                                                                                                                                                                                                                                                                    | <br><b>GSX-11</b>                           | <br><b>GSX-20</b>                           | <br><b>GSX-02</b>                           |
| <b>GSA...</b><br> | Any Trip Alarm Switch <ul style="list-style-type: none"><li>Side mounting on the left</li><li>2-pole</li><li>One side mounting module per circuit breaker. (Always directly fitted to the circuit breaker).</li></ul>                                              |                                                                                                                              |                                                                                                                               |                                                                                                                                |
|                                                                                                      |                                                                                                                                                                                                                                                                    | <br><b>GSA32-11</b><br><b>GSA63100-11</b> | <br><b>GSA32-20</b><br><b>GSA63100-20</b> | <br><b>GSA32-02</b><br><b>GSA63100-02</b> |
| <b>GMA...</b><br> | Magnetic Trip Alarm Switch <ul style="list-style-type: none"><li>Side mounting on the left</li><li>2-pole</li><li>One side mounting module per circuit breaker. (Always directly fitted to the circuit breaker except using with Any Trip Alarm Switch).</li></ul> |                                                                                                                              |                                                                                                                               |                                                                                                                                |
|                                                                                                      |                                                                                                                                                                                                                                                                    | <br><b>GMA-11</b>                         | <br><b>GMA-20</b>                         | <br><b>GMA-02</b>                         |

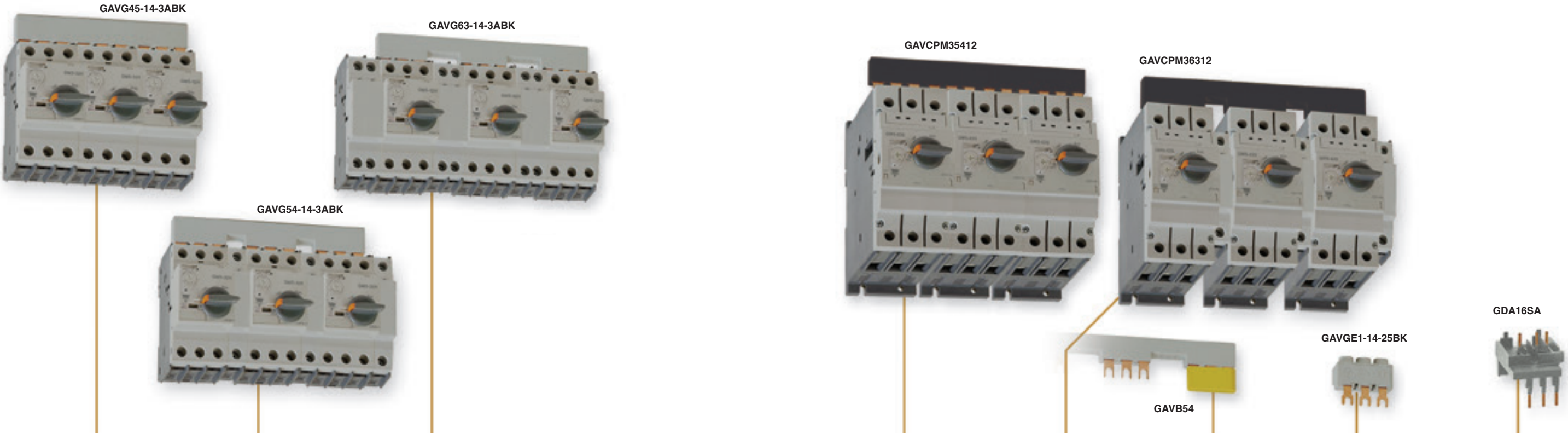
**Ordering Example: Specify Contact Arrangement**  
GFX-11 (1NO 1NC)  
GFX-20 (2NO)  
GFX-02 (2NC)

| Type                                                                                                    | Description                                                                                                                                                                                                                                                                   | Connection diagram                                                                    |                                                                                                                                                                              |
|---------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>GSR...</b><br>    | Shunt release <ul style="list-style-type: none"><li>Side mounting on the right</li><li>One side mounting module per circuit breaker. (Always directly fitted to the circuit breaker).</li></ul>                                                                               |    | 24V 50Hz / 28V 60Hz<br>110~127V 50Hz / 120V 60Hz<br>220~230V 50Hz / 240~260V 60Hz<br>240V 50Hz / 277V 60Hz<br>380~400V 50Hz / 440~460V 60Hz<br>415~440V 50Hz / 460~480V 60Hz |
| <b>GUR...</b><br>    | Undervoltage release <ul style="list-style-type: none"><li>Side mounting on the right</li><li>One side mounting module per circuit breaker. (Always directly fitted to the circuit breaker).</li></ul>                                                                        |    | 24V 50Hz / 28V 60Hz<br>110~127V 50Hz / 120V 60Hz<br>220~230V 50Hz / 240~260V 60Hz<br>240V 50Hz / 277V 60Hz<br>380~400V 50Hz / 440~460V 60Hz<br>415~440V 50Hz / 460~480V 60Hz |
| <b>GURX...</b><br> | Undervoltage release with Switch (Rotary Handle Only) <ul style="list-style-type: none"><li>Side mounting on the right</li><li>Include 2NO Auxiliary contact</li><li>One side mounting module per circuit breaker. (Always directly fitted to the circuit breaker).</li></ul> |  | 24V 50Hz / 28V 60Hz<br>110~127V 50Hz / 120V 60Hz<br>220~230V 50Hz / 240~260V 60Hz<br>240V 50Hz / 277V 60Hz<br>380~400V 50Hz / 440~460V 60Hz<br>415~440V 50Hz / 460~480V 60Hz |

Others

| Type                                                                                                  | Description                                                                                                                                            | Applied Type                       |
|-------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|
| <b>PIL32</b><br> | <b>Push-in lug</b> <ul style="list-style-type: none"><li>For screwing the MMS on to mounting plates.</li></ul>                                         | <b>GMS-32S</b><br><b>GMS-32H</b>   |
| <b>IB100</b><br> | <b>Insulation barriers</b> <ul style="list-style-type: none"><li>Insulation barriers with increased creepage distances and clearances for UL</li></ul> | <b>GMS-100S</b><br><b>GMS-100H</b> |

Busbar accessories



|             | 45mm Spacing<br>(rated 63A) | 54mm Spacing<br>(rated 63A)                            | 63mm Spacing<br>(rated 63A)                                                     | 54mm Spacing<br>(rated 120A) | 63mm Spacing<br>(rated 120A)                        | Terminal cover                             | Supply connector               | Connection<br>module                                  |
|-------------|-----------------------------|--------------------------------------------------------|---------------------------------------------------------------------------------|------------------------------|-----------------------------------------------------|--------------------------------------------|--------------------------------|-------------------------------------------------------|
| Type        | GAVG45-14-2ABK              | GAVG54-14-2ABK                                         | GAVG63-14-2ABK                                                                  | GAVCPM25412                  | GAVCPM26312                                         | GAVB54                                     | GAVGE1-14-25BK                 | GDA16SA                                               |
| Description | For 2 GMS-32S/H             | For 2 GMS-32S/H<br>+ accessories<br>(side mnt aux sw)  | For 2 GMS-32S/H<br>+ accessories<br>(side mnt<br>undervoltage<br>or shunt trip) | For 2 GMS-63                 | For 2 GMS-63<br>+ accessories<br>(side mnt aux sw)  | 3 Pole<br>protective cover<br>for GAVG.... | 3 Phase input<br>terminal 63A  | For connecting<br>GMS-32S to<br>CGMS-6A -<br>CGMS-12A |
| Type        | GAVG45-14-3ABK              | GAVG54-14-3ABK                                         | GAVG63-14-3ABK                                                                  | GAVCPM35412                  | GAVCPM36312                                         | GAVTA120                                   | GAVBTC50E                      | GDA16SD                                               |
| Description | For 3 GMS-32S/H             | For 3 GMS-32S/H<br>+ accessories<br>(side mnt aux. sw) | For 3 GMS-32S/H<br>+ accessories<br>(side mnt<br>undervoltage<br>or shunt trip) | For 3 GMS-63                 | For 3 GMS-63<br>+ accessories<br>(side mnt aux. sw) | 3 Pole<br>protective cover<br>for GAVCPM.. | 3 Phase Input<br>terminal 120A | For connecting<br>GMS-32S to<br>CGMS-6D -<br>CGMS-12D |
| Type        | GAVG45-14-4ABK              | GAVG54-14-4ABK                                         | GAVG63-14-4ABK                                                                  | GAVCPM45412                  | GAVCPM46312                                         |                                            |                                | GDA16HA                                               |
| Description | For 4 GMS-32S/H             | For 4 GMS-32S/H<br>+ accessories<br>(side mnt aux. sw) | For 4 GMS-32S/H<br>+ accessories<br>(side mnt<br>undervoltage<br>or shunt trip) | For 4 GMS-63                 | For 4 GMS-63<br>+ accessories<br>(side mnt aux. sw) |                                            |                                | For connecting<br>GMS-32H to<br>CGMS-6A -<br>CGMS-12A |
| Type        | GAVG45-14-5ABK              | GAVG54-14-5ABK                                         | GAVG63-14-5ABK                                                                  |                              |                                                     |                                            |                                | GDA16HD                                               |
| Description | For 5 GMS-32S/H             | For 5 GMS-32S/H<br>+ accessories<br>(side mnt aux. sw) | For 5 GMS-32S/H<br>+ accessories<br>(side mnt<br>undervoltage<br>or shunt trip) |                              |                                                     |                                            |                                | For connecting<br>GMS-32H to<br>CGMS-6D -<br>CGMS-12D |





● GMS-100S

| Rated operational current I <sub>e</sub> [A]                                       | 17    | 22  | 26   | 32   | 40   | 50  | 63  | 75  | 90  | 100 |
|------------------------------------------------------------------------------------|-------|-----|------|------|------|-----|-----|-----|-----|-----|
| <b>Switching of standard three-phase motors</b>                                    |       |     |      |      |      |     |     |     |     |     |
| 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  |
| <b>Back-up fuses</b>                                                               |       |     |      |      |      |     |     |     |     |     |
| gG, gL, only if I <sub>cc</sub> >I <sub>cu</sub><br>(* = 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  | 160 | 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 |
| <b>Ultimate short-circuit breaking capacity I<sub>cu</sub></b>                     |       |     |      |      |      |     |     |     |     |     |
| 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   |
| <b>Rated service short-circuit breaking capacity I<sub>cs</sub></b>                |       |     |      |      |      |     |     |     |     |     |
| 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 <sub>e</sub> [A]                                       | 17    | 22  | 26   | 32   | 40   | 50  | 63  | 75  | 90  | 100 |
|------------------------------------------------------------------------------------|-------|-----|------|------|------|-----|-----|-----|-----|-----|
| <b>Switching of standard three-phase motors</b>                                    |       |     |      |      |      |     |     |     |     |     |
| 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  |
| <b>Back-up fuses</b>                                                               |       |     |      |      |      |     |     |     |     |     |
| gG, gL, only if I <sub>cc</sub> >I <sub>cu</sub><br>(* = 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 |
| <b>Ultimate short-circuit breaking capacity I<sub>cu</sub></b>                     |       |     |      |      |      |     |     |     |     |     |
| 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   |
| <b>Rated service short-circuit breaking capacity I<sub>cs</sub></b>                |       |     |      |      |      |     |     |     |     |     |
| 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.

● GMS-32HI

| Rated operational current I <sub>e</sub> [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]                                                                      | -    | 0.06 | 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   | 11   | 15   | 18.5 |
| 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    | 15   | 18.5 | 22   |
| 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  | 15    | 18.5 | 22   |      |
| <b>Back-up fuses</b>                                                               |      |      |      |      |           |           |      |           |         |     |       |     |       |      |      |      |
| gG, gL, only if I <sub>cc</sub> >I <sub>cu</sub><br>(* = No back up fuse required) |      |      |      |      |           |           |      |           |         |     |       |     |       |      |      |      |
| 230/240V [A]                                                                       | *    | *    | *    | *    | *         | *         | *    | *         | *       | *   | *     | *   | *     | *    | *    | *    |
| 400/415V [A]                                                                       | *    | *    | *    | *    | *         | *         | *    | *         | *       | *   | *     | *   | 100   | 125  | 125  | 125  |
| 440/460V [A]                                                                       | *    | *    | *    | *    | *         | *         | *    | *         | *       | *   | 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   |
| <b>Ultimate short-circuit breaking capacity I<sub>cu</sub></b>                     |      |      |      |      |           |           |      |           |         |     |       |     |       |      |      |      |
| 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 | 100   | 100  | 100  | 100  |
| 440/460V [kA]                                                                      | 100  | 100  | 100  | 100  | 100       | 100       | 100  | 100       | 100     | 100 | 50    | 50  | 50    | 20   | 20   | 20   |
| 500V [kA]                                                                          | 100  | 100  | 100  | 100  | 100       | 100       | 100  | 100       | 100     | 100 | 50    | 50  | 42    | 10   | 10   | 10   |
| 690V [kA]                                                                          | 100  | 100  | 100  | 100  | 100       | 100       | 8    | 8         | 6       | 6   | 6     | 6   | 4     | 4    | 4    | 4    |
| <b>Rated service short-circuit breaking capacity I<sub>cs</sub></b>                |      |      |      |      |           |           |      |           |         |     |       |     |       |      |      |      |
| 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 | 100   | 38   | 38   | 38   |
| 440/460V [kA]                                                                      | 100  | 100  | 100  | 100  | 100       | 100       | 100  | 100       | 100     | 100 | 38    | 38  | 15    | 15   | 15   | 15   |
| 500V [kA]                                                                          | 100  | 100  | 100  | 100  | 100       | 100       | 100  | 100       | 100     | 100 | 38    | 38  | 32    | 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 <sub>e</sub> [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  |
| <b>Back-up fuses</b>                                                               |       |     |       |     |      |      |      |     |     |
| gG, gL, only if I <sub>cc</sub> >I <sub>cu</sub><br>(* = 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  |
| <b>Ultimate short-circuit breaking capacity I<sub>cu</sub></b>                     |       |     |       |     |      |      |      |     |     |
| 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   |
| <b>Rated service short-circuit breaking capacity I<sub>cs</sub></b>                |       |     |       |     |      |      |      |     |     |
| 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 <sub>e</sub> [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 I <sub>cc</sub> >I <sub>cu</sub><br>(* = 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 <sub>cu</sub>                           |      |       |     |      |      |      |     |     |     |     |     |
| 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 <sub>cs</sub>                      |      |       |     |      |      |      |     |     |     |     |     |
| 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   |



● GMS-100S

| Rated operational current I <sub>e</sub> [A]                                       | 17    | 22  | 26   | 32   | 40   | 50  | 63  | 75  | 90  | 100 |
|------------------------------------------------------------------------------------|-------|-----|------|------|------|-----|-----|-----|-----|-----|
| <b>Switching of standard three-phase motors</b>                                    |       |     |      |      |      |     |     |     |     |     |
| 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  |
| <b>Back-up fuses</b>                                                               |       |     |      |      |      |     |     |     |     |     |
| gG, gL, only if I <sub>cc</sub> >I <sub>cu</sub><br>(* = 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  | 160 | 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 |
| <b>Ultimate short-circuit breaking capacity I<sub>cu</sub></b>                     |       |     |      |      |      |     |     |     |     |     |
| 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   |
| <b>Rated service short-circuit breaking capacity I<sub>cs</sub></b>                |       |     |      |      |      |     |     |     |     |     |
| 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 <sub>e</sub> [A]                                       | 17    | 22  | 26   | 32   | 40   | 50  | 63  | 75  | 90  | 100 |
|------------------------------------------------------------------------------------|-------|-----|------|------|------|-----|-----|-----|-----|-----|
| <b>Switching of standard three-phase motors</b>                                    |       |     |      |      |      |     |     |     |     |     |
| 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  |
| <b>Back-up fuses</b>                                                               |       |     |      |      |      |     |     |     |     |     |
| gG, gL, only if I <sub>cc</sub> >I <sub>cu</sub><br>(* = 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 |
| <b>Ultimate short-circuit breaking capacity I<sub>cu</sub></b>                     |       |     |      |      |      |     |     |     |     |     |
| 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   |
| <b>Rated service short-circuit breaking capacity I<sub>cs</sub></b>                |       |     |      |      |      |     |     |     |     |     |
| 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.



● GMS-32HI

| Rated operational current I <sub>e</sub> [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]                                                                      | -    | 0.06 | 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   | 11   | 15   | 18.5 |
| 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    | 15   | 18.5 | 22   |
| 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  | 15    | 18.5 | 22   |      |
| <b>Back-up fuses</b>                                                               |      |      |      |      |           |           |      |           |         |     |       |     |       |      |      |      |
| gG, gL, only if I <sub>cc</sub> >I <sub>cu</sub><br>(* = No back up fuse required) |      |      |      |      |           |           |      |           |         |     |       |     |       |      |      |      |
| 230/240V [A]                                                                       | *    | *    | *    | *    | *         | *         | *    | *         | *       | *   | *     | *   | *     | *    | *    | *    |
| 400/415V [A]                                                                       | *    | *    | *    | *    | *         | *         | *    | *         | *       | *   | *     | *   | 100   | 125  | 125  | 125  |
| 440/460V [A]                                                                       | *    | *    | *    | *    | *         | *         | *    | *         | *       | *   | 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   |
| <b>Ultimate short-circuit breaking capacity I<sub>cu</sub></b>                     |      |      |      |      |           |           |      |           |         |     |       |     |       |      |      |      |
| 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 | 100   | 100  | 100  | 100  |
| 440/460V [kA]                                                                      | 100  | 100  | 100  | 100  | 100       | 100       | 100  | 100       | 100     | 100 | 50    | 50  | 50    | 20   | 20   | 20   |
| 500V [kA]                                                                          | 100  | 100  | 100  | 100  | 100       | 100       | 100  | 100       | 100     | 100 | 50    | 50  | 42    | 10   | 10   | 10   |
| 690V [kA]                                                                          | 100  | 100  | 100  | 100  | 100       | 100       | 8    | 8         | 6       | 6   | 6     | 6   | 4     | 4    | 4    | 4    |
| <b>Rated service short-circuit breaking capacity I<sub>cs</sub></b>                |      |      |      |      |           |           |      |           |         |     |       |     |       |      |      |      |
| 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     | 100 | 38    | 38  | 15    | 15   | 15   | 15   |
| 500V [kA]                                                                          | 100  | 100  | 100  | 100  | 100       | 100       | 100  | 100       | 100     | 100 | 38    | 38  | 32    | 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 <sub>e</sub> [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  |
| <b>Back-up fuses</b>                                                               |       |     |       |     |      |      |      |     |     |
| gG, gL, only if I <sub>cc</sub> >I <sub>cu</sub><br>(* = 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  |
| <b>Ultimate short-circuit breaking capacity I<sub>cu</sub></b>                     |       |     |       |     |      |      |      |     |     |
| 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   |
| <b>Rated service short-circuit breaking capacity I<sub>cs</sub></b>                |       |     |       |     |      |      |      |     |     |
| 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 <sub>e</sub> [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 I <sub>cc</sub> >I <sub>cu</sub><br>(* = 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<br>breaking capacity I <sub>cu</sub>                        |      |       |     |      |      |      |     |     |     |     |     |
| 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<br>breaking capacity I <sub>cs</sub>                   |      |       |     |      |      |      |     |     |     |     |     |
| 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   |





● GMS-63HL

| Rated operational current I <sub>e</sub> [A]                                                               |      | 10    | 13  | 17    | 22  | 26   | 32   | 40   | 50  | 63  |
|------------------------------------------------------------------------------------------------------------|------|-------|-----|-------|-----|------|------|------|-----|-----|
| <b>Switching of standard three-phase motors</b><br>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  |
| <b>Back-up fuses</b><br>gG, gL, only if I <sub>cc</sub> >I <sub>cu</sub><br>(* = 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  |
| <b>Ultimate short-circuit breaking capacity I<sub>cu</sub></b>                                             |      |       |     |       |     |      |      |      |     |     |
| 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  | 10   | 10   | 10   | 10  | 10  |
| 690V                                                                                                       | [kA] | 6     | 6   | 5     | 5   | 5    | 5    | 5    | 5   | 5   |
| <b>Rated service short-circuit breaking capacity I<sub>cs</sub></b>                                        |      |       |     |       |     |      |      |      |     |     |
| 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 <sub>e</sub> [A]                                                               |      | 17    | 22  | 26   | 32   | 40   | 50  | 63  | 75  | 90  | 100 |
|------------------------------------------------------------------------------------------------------------|------|-------|-----|------|------|------|-----|-----|-----|-----|-----|
| <b>Switching of standard three-phase motors</b><br>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  |
| <b>Back-up fuses</b><br>gG, gL, only if I <sub>cc</sub> >I <sub>cu</sub><br>(* = 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 |
| <b>Ultimate short-circuit breaking capacity I<sub>cu</sub></b>                                             |      |       |     |      |      |      |     |     |     |     |     |
| 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   |
| <b>Rated service short-circuit breaking capacity I<sub>cs</sub></b>                                        |      |       |     |      |      |      |     |     |     |     |     |
| 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.

Manual motor controller

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

● GMS-32S

| Rated operational current I <sub>e</sub> [A]    |           | 0.16 | 0.25 | 0.4 | 0.63 | 1   | 1.6  | 2.5 | 4   | 6   | 8   | 10  | 13  | 17  | 22  | 26  | 32  |
|-------------------------------------------------|-----------|------|------|-----|------|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <b>Max. short-circuit current</b>               |           |      |      |     |      |     |      |     |     |     |     |     |     |     |     |     |     |
| 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   |
| <b>Motor load</b>                               |           |      |      |     |      |     |      |     |     |     |     |     |     |     |     |     |     |
| 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  |
| <b>Maximum rated current of fuse or breaker</b> |           | [A]  | 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 I <sub>e</sub> [A]    |           | 0.16 | 0.25 | 0.4 | 0.63 | 1   | 1.6  | 2.5 | 4   | 6   | 8   | 10  | 13  | 17  | 22  | 26  | 32  |
|-------------------------------------------------|-----------|------|------|-----|------|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <b>Max. short-circuit current</b>               |           |      |      |     |      |     |      |     |     |     |     |     |     |     |     |     |     |
| 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  |
| <b>Motor load</b>                               |           |      |      |     |      |     |      |     |     |     |     |     |     |     |     |     |     |
| 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  |
| <b>Maximum rated current of fuse or breaker</b> |           | [A]  | 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 <sub>e</sub> [A]    |           | 10  | 13  | 17  | 22  | 26  | 32  | 40  | 50  | 63  |
|-------------------------------------------------|-----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <b>Max. short-circuit current</b>               |           |     |     |     |     |     |     |     |     |     |
| 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  |
| <b>Motor load</b>                               |           |     |     |     |     |     |     |     |     |     |
| 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  |
| <b>Maximum rated current of fuse or breaker</b> |           | [A] | 600 | 600 | 600 | 600 | 600 | 600 | 600 | 600 |



● GMS-63H

| Rated operational current I <sub>e</sub> [A]    |           | 10  | 13  | 17  | 22  | 26  | 32  | 40  | 50  | 63  |
|-------------------------------------------------|-----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| <b>Max. short-circuit current</b>               |           |     |     |     |     |     |     |     |     |     |
| 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  |
| <b>Motor load</b>                               |           |     |     |     |     |     |     |     |     |     |
| 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  |
| <b>Maximum rated current of fuse or breaker</b> |           | [A] | 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 <sub>e</sub> [A]    |           | 17  | 22   | 26   | 32   | 40   | 50   | 63   | 75   | 90   | 100  |
|-------------------------------------------------|-----------|-----|------|------|------|------|------|------|------|------|------|
| <b>Max. short-circuit current</b>               |           |     |      |      |      |      |      |      |      |      |      |
| 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   |
| <b>Motor load</b>                               |           |     |      |      |      |      |      |      |      |      |      |
| 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  |
| <b>Maximum rated current of fuse or breaker</b> |           | [A] | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |



● GMS-100H

| Rated operational current I <sub>e</sub> [A]    |           | 17  | 22   | 26   | 32   | 40   | 50   | 63   | 75   | 90   | 100  |
|-------------------------------------------------|-----------|-----|------|------|------|------|------|------|------|------|------|
| <b>Max. short-circuit current</b>               |           |     |      |      |      |      |      |      |      |      |      |
| 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   |
| <b>Motor load</b>                               |           |     |      |      |      |      |      |      |      |      |      |
| 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  |
| <b>Maximum rated current of fuse or breaker</b> |           | [A] | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 | 1000 |





● GMS-32S

| Rated operational current I <sub>e</sub> [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 | 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  |
| Max. fuse size                               |           |      | [A]  | 1    | 1   | 1    | 1   | 3    | 6   | 10  | 15  | 20  | 30  | 40  | 50 | 60  | 80  | 100 |
| Max. breaker size                            |           |      | [A]  | 15   | 15  | 15   | 15  | 15   | 15  | 15  | 20  | 30  | 40  | 50  | 60 | 80  | 100 | 125 |



● GMS-32H

| Rated operational current I <sub>e</sub> [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] | 50   | 50   | 50  | 50   | 50  | 50   | 50  | 50  | 50  | 50  | 50  | 30  | 30  | 30  | 30  | 30  |
|                                              | 600Y/347V | [kA] | 10   | 10   | 10  | 10   | 10  | 10   | 10  | 10  | 10  | 10  | 10  | 10  | 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  |
| Max. fuse size                               |           |      | [A]  | 1    | 1   | 1    | 1   | 3    | 6   | 10  | 15  | 20  | 30  | 40  | 50  | 60  | 80  | 100 |
| Max. breaker size                            |           |      | [A]  | 15   | 15  | 15   | 15  | 15   | 15  | 15  | 20  | 30  | 40  | 50  | 60  | 80  | 100 | 125 |



● GMS-63S

| Rated operational current I <sub>e</sub> [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] | 25  | 25  | 25  | 25  | 25  | 25  | 25  | 25  | 25  |
|                                              | 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  |
| Max. fuse size                               |           |      | [A] | 40  | 50  | 60  | 80  | 100 | 125 | 150 | 200 |
| Max. breaker size                            |           |      | [A] | 40  | 50  | 60  | 80  | 100 | 125 | 150 | 200 |



● GMS-63H

| Rated operational current I <sub>e</sub> [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  | 50  | 50  | 50  | 50  | 50  | 50  | 50  |
|                                              | 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  |
| Max. fuse size                               |           |      | [A] | 40  | 50  | 60  | 80  | 100 | 125 | 150 | 200 |
| Max. breaker size                            |           |      | [A] | 40  | 50  | 60  | 80  | 100 | 125 | 150 | 200 |

● GMS-100S

| Rated operational current I <sub>e</sub> [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] | 25  | 25  | 25  | 25  | 25  | 25  | 25  | 25  | 25  | 25  |
|                                              | 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 |
| Max. fuse size                               |           |      | [A] | 60  | 80  | 100 | 125 | 150 | 200 | 250 | 300 | 400 |
| Max. breaker size                            |           |      | [A] | 60  | 80  | 100 | 125 | 150 | 200 | 250 | 300 | 400 |

● GMS-100H

| Rated operational current I <sub>e</sub> [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  | 50  | 50  | 50  | 50  |
|                                              | 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 |
| Max. fuse size                               |           |      | [A] | 60  | 80  | 100 | 125 | 150 | 200 | 250 | 300 | 400 |
| Max. breaker size                            |           |      | [A] | 60  | 80  | 100 | 125 | 150 | 200 | 250 | 300 | 400 |



| Type                                                              |            | GMS-32S                                                                              | GMS-32H                                                                              | GMS-63S, 63H                                                                         | GMS-100S, 100H                                                                       |
|-------------------------------------------------------------------|------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| Rated insulation voltage                                          |            |                                                                                      |                                                                                      |                                                                                      |                                                                                      |
| IEC                                                               |            | 690V                                                                                 | 690V                                                                                 | 1000V                                                                                | 1000V                                                                                |
| UL, CSA                                                           |            | 600V                                                                                 | 600V                                                                                 | 600V                                                                                 | 600V                                                                                 |
| Rated impulse withstand voltage                                   |            |                                                                                      |                                                                                      |                                                                                      |                                                                                      |
| Uimp/Pollution degree                                             |            | 6kV / 3                                                                              | 6kV / 3                                                                              | 8kV / 3                                                                              | 8kV / 3                                                                              |
| Rated frequency                                                   |            | 50 / 60 Hz                                                                           | 50 / 60 Hz                                                                           | 50 / 60 Hz                                                                           | 50 / 60 Hz                                                                           |
| Utilization category:                                             |            |                                                                                      |                                                                                      |                                                                                      |                                                                                      |
| IEC 947-2 (Circuit breaker)                                       |            | Cat. A                                                                               | Cat. A                                                                               | Cat. A                                                                               | Cat. A                                                                               |
| IEC 947-4-1 (Motor starter)                                       |            | AC 3                                                                                 | AC 3                                                                                 | AC 3                                                                                 | AC 3                                                                                 |
| Life span                                                         |            |                                                                                      |                                                                                      |                                                                                      |                                                                                      |
| Mechanical                                                        | Operations | 100,000                                                                              | 100,000                                                                              | 50,000                                                                               | 50,000                                                                               |
| Electrical(le max.)                                               | Operations | 100,000                                                                              | 100,000                                                                              | 25,000                                                                               | 25,000                                                                               |
| Switching frequency                                               | Ope./h     | 25                                                                                   | 25                                                                                   | 25                                                                                   | 25                                                                                   |
| Ambient temperature                                               |            |                                                                                      |                                                                                      |                                                                                      |                                                                                      |
| Storage                                                           | °C         | -50 ~ +80                                                                            | -50 ~ +80                                                                            | -50 ~ +80                                                                            | -50 ~ +80                                                                            |
| Operation                                                         | °C         | -20 ~ +60                                                                            | -20 ~ +60                                                                            | -20 ~ +60                                                                            | -20 ~ +60                                                                            |
| Operation altitude                                                | m          | Up to 2000 (6500 Feet)                                                               | Up to 2000 (6500 Feet)                                                               | Up to 2000 (6500 Feet)                                                               | Up to 2000 (6500 Feet)                                                               |
| Protection class                                                  |            | IP 20<br>Safe from finger touch                                                      | IP 20<br>Safe from finger touch                                                      | IP 20<br>Safe from finger touch                                                      | IP 20<br>Safe from finger touch                                                      |
| Resistance to shock                                               | g          | 25                                                                                   | 25                                                                                   | 25                                                                                   | 25                                                                                   |
| Resistance to vibration                                           | Hz         | 5 ~ 150                                                                              | 5 ~ 150                                                                              | 5 ~ 150                                                                              | 5 ~ 150                                                                              |
| Rated thermal current Ith                                         |            |                                                                                      |                                                                                      |                                                                                      |                                                                                      |
| IEC                                                               | [A]        | 0.1 ... 32                                                                           | 0.1 ... 32                                                                           | 6 ...63                                                                              | 11 ...100                                                                            |
| up to 60 °C ambient temperature                                   |            |                                                                                      |                                                                                      |                                                                                      |                                                                                      |
| Overload protection                                               |            | ○                                                                                    | ○                                                                                    | ○                                                                                    | ○                                                                                    |
| Characteristics                                                   |            |                                                                                      |                                                                                      |                                                                                      |                                                                                      |
| Ambient temperature compensation, thermal current Ith adjustments |            | set one point lower <sup>3)</sup><br>automatic<br>set one point higher <sup>3)</sup> | set one point lower <sup>3)</sup><br>automatic<br>set one point higher <sup>3)</sup> | set one point lower <sup>3)</sup><br>automatic<br>set one point higher <sup>3)</sup> | set one point lower <sup>3)</sup><br>automatic<br>set one point higher <sup>3)</sup> |
| -20 °C ~ -5 °C                                                    |            |                                                                                      |                                                                                      |                                                                                      |                                                                                      |
| -5 °C ~ +40 °C                                                    |            |                                                                                      |                                                                                      |                                                                                      |                                                                                      |
| +40 °C ~ +60 °C                                                   |            |                                                                                      |                                                                                      |                                                                                      |                                                                                      |
| Phase-failure protection                                          |            | ○                                                                                    | ○                                                                                    | ○                                                                                    | ○                                                                                    |
| Trip class                                                        |            | 10                                                                                   | 10                                                                                   | 10 <sup>1)</sup>                                                                     | 10 <sup>1)</sup>                                                                     |
| Magnetic release                                                  |            |                                                                                      |                                                                                      |                                                                                      |                                                                                      |
| Response current                                                  |            | 13 × In <sup>2)</sup>                                                                | 13 × In <sup>2)</sup>                                                                | 13 × In <sup>2)</sup>                                                                | 13 × In <sup>2)</sup>                                                                |
| Total power loss Pv                                               |            |                                                                                      |                                                                                      |                                                                                      |                                                                                      |
| Circuit breaker at rated load                                     | [W]        | In = 0.16~4A : 9.8                                                                   | In = 0.16~4A : 9.8                                                                   | In = 10~22A : 13.3                                                                   | In = 17~63A : 11.9                                                                   |
| Operating temperature                                             |            | In = 6~26A : 8                                                                       | In = 6~26A : 8                                                                       | In = 26~63A : 12.6                                                                   | In = 75~100A : 15                                                                    |
|                                                                   |            | In = 32A : 3.9                                                                       | In = 32A : 3.9                                                                       |                                                                                      |                                                                                      |

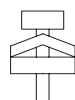
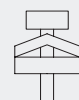
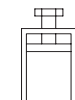
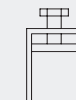
Note = 1) Class20; GMS-63HL, GMS-100HL  
2) In = Max. rated operational current Ie  
3) use Thermal Current dial to adjust accordingly

Specifications are subject to change without notice.

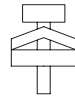




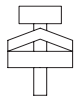
● Manual Motor Starter GMS-32...100

|                         |             |                |                    | GMS-32S                                                                           | GMS-32H                                                                           | GMS-32S, 63H                                                                        | GMS-100S, 100H                                                                      |
|-------------------------|-------------|----------------|--------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Conformity to standards |             |                |                    | IEC60947<br>UL508, UL508 Type E                                                   |                                                                                   |                                                                                     |                                                                                     |
| Approvals               |             |                |                    | CE, UL                                                                            |                                                                                   |                                                                                     |                                                                                     |
| Terminal parts          |             |                |                    |                                                                                   |                                                                                   |                                                                                     |                                                                                     |
|                         |             |                |                    |  |  |  |  |
| Screwdriver             |             |                |                    |                                                                                   |                                                                                   |                                                                                     |                                                                                     |
| Single-core             | 1.conductor | [mm²] / [AWG]  | 1...10 / 18...8    | 1...10 / 18...8                                                                   | 0.75...35 / 18...2                                                                | 2.5...70 / 12...2/0                                                                 |                                                                                     |
|                         | 2.conductor | [mm²] / [AWG]  | 1...6 / 18...10    | 1...6 / 18...10                                                                   | 0.75...25 / 18...4                                                                | 2.5...50 / 12...1/0                                                                 |                                                                                     |
| Stranded                | 1.conductor | [mm²] / [AWG]  | 1...6 / 18...10    | 1...6 / 18...10                                                                   | 0.75...35 / 18...2                                                                | 2.5...70 / 12...2/0                                                                 |                                                                                     |
|                         | 2.conductor | [mm²] / [AWG]  | 1...6 / 18...10    | 1...6 / 18...10                                                                   | 0.75...25 / 18...4                                                                | 2.5...50 / 12...1/0                                                                 |                                                                                     |
| Flexible                | 1.conductor | [mm²] / [AWG]  | 1...6 / 18...10    | 1...6 / 18...10                                                                   | 0.75...25 / 18...4                                                                | 2.5...50 / 12...1/0                                                                 |                                                                                     |
|                         | 2.conductor | [mm²] / [AWG]  | 0.75...4 / 18...10 | 0.75...4 / 18...10                                                                | 0.75...16 / 18...6                                                                | 2.5...35 / 10...2                                                                   |                                                                                     |
| Tightening torque       |             | [Nm] / [lb-in] | 0.8...2.5 / 7...22 | 0.8...2.5 / 7...22                                                                | 3...4.5 / 26...39                                                                 | 4...6 / 35...53                                                                     |                                                                                     |
|                         |             |                |                    |                                                                                   |                                                                                   |                                                                                     |                                                                                     |

● Accessories for Manual Motor Starter GMS-32...100

|                                                                           |             | Auxiliary contacts for front mounting<br>GFX...                                     |                      | Auxiliary contacts for left side mounting<br>GSX... |      | Alarm switch for left side mounting<br>GSA...       |      |
|---------------------------------------------------------------------------|-------------|-------------------------------------------------------------------------------------|----------------------|-----------------------------------------------------|------|-----------------------------------------------------|------|
| <b>Rated thermal current / th</b>                                         |             |                                                                                     |                      |                                                     |      |                                                     |      |
| at 40 °C ambient temperature                                              | [A]         | 5                                                                                   |                      | 1                      0                            |      | 1                      0                            |      |
| at 60 °C ambient temperature                                              | [A]         | 3                                                                                   |                      | 6                                                   |      | 6                                                   |      |
| <b>Contact class coordination according to NEMA</b><br>(UL/CSA-Standards) |             | B 600 Standard Pilot Duty<br>R 300 Light Pilot Duty                                 |                      | A 600 Standard Pilot Duty<br>Q 300 Light Pilot Duty |      | A 600 Standard Pilot Duty<br>Q 300 Light Pilot Duty |      |
| <b>Back-up fuses gG, gL</b>                                               | [A]         | 16                                                                                  |                      | 1                      6                            |      | 1                      6                            |      |
| <b>Rated supply current</b>                                               | [V]         | 24                                                                                  | 240                  | 24                                                  | 240  | 24                                                  | 240  |
| AC-15:                                                                    | [A]         | 3                                                                                   | 2                    | 6                                                   | 4    | 6                                                   | 4    |
| DC-13:                                                                    | [V]         | 24                                                                                  | 220                  | 24                                                  | 220  | 24                                                  | 220  |
|                                                                           | [A]         | 1                                                                                   | 0.1                  | 2                                                   | 0.25 | 2                                                   | 0.25 |
| <b>Terminal parts</b><br>Type of terminals                                |             |  |                      |                                                     |      |                                                     |      |
| Screwdriver                                                               |             | Pozidriv size 2                                                                     |                      |                                                     |      |                                                     |      |
| Single-core                                                               | 1.conductor | [mm²] / [AWG]                                                                       | 0.5...2.5 / 20...14  |                                                     |      |                                                     |      |
|                                                                           | 2.conductor | [mm²] / [AWG]                                                                       | 0.5...2.5 / 20...14  |                                                     |      |                                                     |      |
| Flexible                                                                  | 1.conductor | [mm²] / [AWG]                                                                       | 0.5...4 / 20...10    |                                                     |      |                                                     |      |
|                                                                           | 2.conductor | [mm²] / [AWG]                                                                       | 0.75...2.5 / 18...14 |                                                     |      |                                                     |      |
| <b>Tightening torque</b>                                                  |             | [Nm] / [lb-in]                                                                      |                      | 0.8...1.2 / 7...10                                  |      |                                                     |      |

● Accessories for Manual Motor Starter GMS-32...100

|                              | Undervoltage release<br>for right side mounting<br><b>GUR...</b>                    | Undervoltage release with 2 auxiliary<br>contacts for right side mounting<br><b>GURX...</b> | Shunt release<br>for right side mounting<br><b>GSR...</b> |                                        |
|------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|-----------------------------------------------------------|----------------------------------------|
| <b>Actuating voltage</b>     |                                                                                     |                                                                                             |                                                           |                                        |
| Pull-in                      | 0.85...1.1 × Us                                                                     | 0.85...1.1 × Us                                                                             | 0.7...1.1 × Us                                            |                                        |
| Drop-out                     | 0.7...0.35 × Us                                                                     | 0.7...0.35 × Us                                                                             |                                                           |                                        |
| <b>Rated control voltage</b> |                                                                                     |                                                                                             |                                                           |                                        |
| min.:                        | 24V 50Hz / 28V 60Hz                                                                 | 24V 50Hz / 28V 60Hz                                                                         | 24V 50Hz / 28V 60Hz                                       |                                        |
| max.:                        | 415~440V 50Hz / 460~480V 60Hz                                                       | 415~440V 50Hz / 460~480V 60Hz                                                               | 415~440V 50Hz / 460~480V 60Hz                             |                                        |
| <b>Coil rating</b>           |                                                                                     |                                                                                             |                                                           |                                        |
| Pull-in                      | 8.5VA, 6W                                                                           | 8.5VA, 6W                                                                                   | 8.5VA, 6W                                                 |                                        |
| Hold                         | 3VA, 1.2W                                                                           | 3VA, 1.2W                                                                                   | 3VA, 1.2W                                                 |                                        |
| On-Time                      | 100%                                                                                | 100%                                                                                        | 100%                                                      |                                        |
| <b>Terminal parts</b>        |  |                                                                                             |                                                           |                                        |
| Type of terminals            |                                                                                     |                                                                                             |                                                           |                                        |
| Screwdriver                  |                                                                                     |                                                                                             |                                                           |                                        |
| 1.conductor   [mm²] / [AWG]  |                                                                                     |                                                                                             |                                                           | Pozidriv size 2<br>0.5...2.5 / 20...14 |
| 2.conductor   [mm²] / [AWG]  |                                                                                     |                                                                                             |                                                           | 0.5...2.5 / 20...14                    |
| 1.conductor   [mm²] / [AWG]  | 0.5...4 / 20...10                                                                   |                                                                                             |                                                           |                                        |
| 2.conductor   [mm²] / [AWG]  | 0.75...2.5 / 18...14                                                                |                                                                                             |                                                           |                                        |
| <b>Tightening torque</b>     |                                                                                     |                                                                                             |                                                           |                                        |

● Weights

| Description          | Type                                                    | Weight [g] |
|----------------------|---------------------------------------------------------|------------|
| Circuit breaker      | GMS-32S                                                 | 320        |
|                      | GMS-32H                                                 | 360        |
|                      | GMS-63S                                                 | 1,000      |
|                      | GMS-100S                                                | 2,200      |
| Auxiliary switch     | GFX...(Front Auxiliary Switch)                          | 18         |
|                      | GSX...(Side Auxiliary Switch)                           | 30         |
|                      | GSA...(Alarm Switch)                                    | 40         |
| Undervoltage release | GUR...(Undervoltage release)                            | 110        |
|                      | GURX...(Undervoltage release with 2 auxiliary contacts) | 120        |
| Shunt release        | GSR...(Shunt release)                                   | 110        |

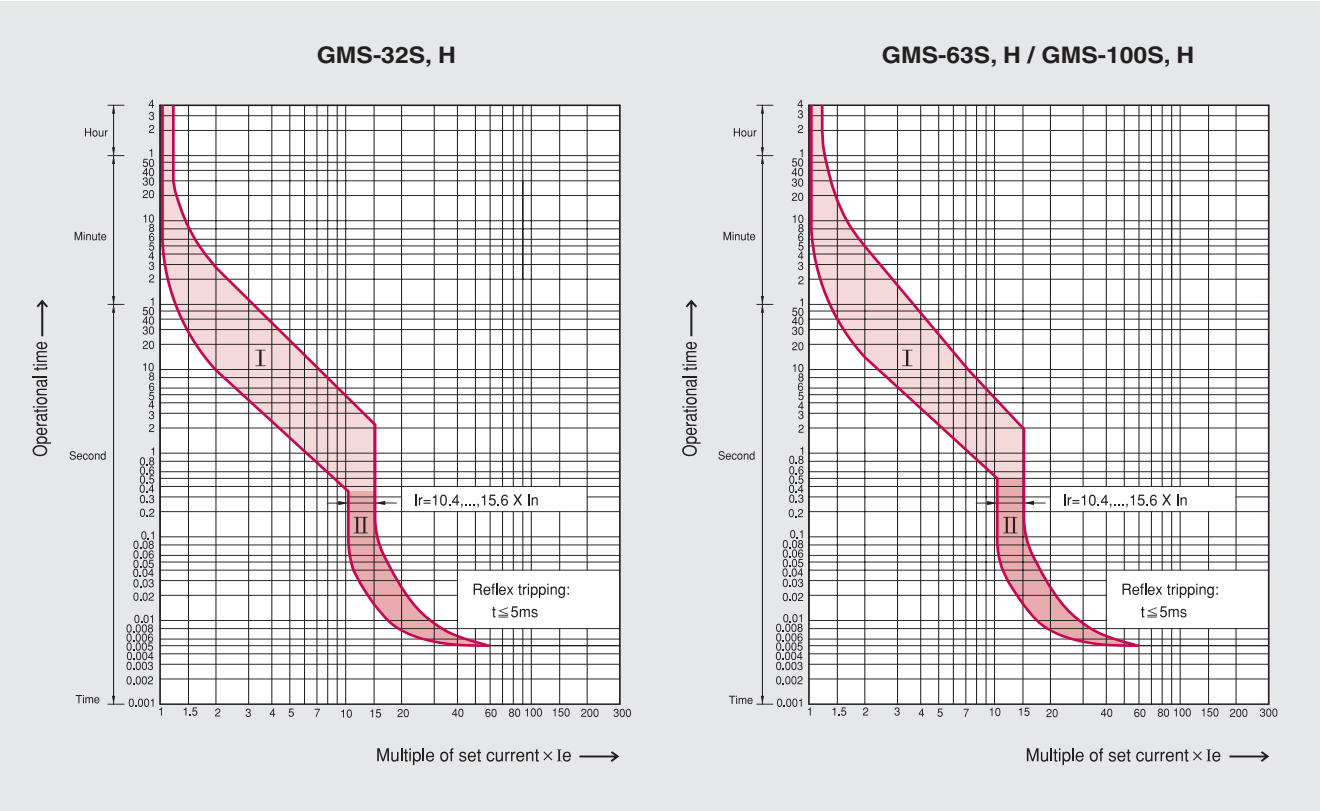


● Short-circuit current Iq = 50kA  
Voltage : 400/415V, 50/60Hz

| Standard motors                |      | Manual motor starter |                                              |                                      | Contactor      |     |
|--------------------------------|------|----------------------|----------------------------------------------|--------------------------------------|----------------|-----|
| AC-3<br>at 400/415V<br>1500rpm |      | Circuit breaker      | Thermal overload<br>release<br>setting range | Magnetic release<br>response current |                |     |
| [kW]                           | [A]  | Type                 | [A]                                          | [A]                                  | Type           | [A] |
| 0.06                           | 0.24 | GMS-32S 0.25A        | 0.16 ~0.25                                   | 3.25                                 | CGMS-6         | 6   |
| 0.09                           | 0.33 | GMS-32S 0.4A         | 0.25~0.4                                     | 5.2                                  | CGMS-6         | 6   |
| 0.12                           | 0.43 | GMS-32S 0.63A        | 0.4~0.63                                     | 8.19                                 | CGMS-6         | 6   |
| 0.18                           | 0.61 | GMS-32S 0.63A        | 0.4~0.63                                     | 8.19                                 | CGMS-6         | 6   |
| 0.25                           | 0.8  | GMS-32S 1A           | 0.63~1                                       | 13                                   | CGMS-6         | 6   |
| 0.37                           | 1.1  | GMS-32S 1.6A         | 1~1.6                                        | 20.8                                 | CGMS-6         | 6   |
| 0.55                           | 1.5  | GMS-32S 1.6A         | 1~1.6                                        | 20.8                                 | CGMS-6         | 6   |
| 0.75                           | 1.9  | GMS-32S 2.5A         | 1.6~2.5                                      | 32.5                                 | CGMS-9/CGC-9   | 9   |
| 1.1                            | 2.7  | GMS-32S 4A           | 2.5~4                                        | 52                                   | CGMS-9/CGC-9   | 9   |
| 1.5                            | 3.5  | GMS-32S 4A           | 2.5~4                                        | 52                                   | CGMS-12/CGC-12 | 12  |
| 2.2                            | 5.0  | GMS-32S 6A           | 4~6                                          | 78                                   | CGC-18         | 18  |
| 3.0                            | 6.6  | GMS-32S 8A           | 5~8                                          | 104                                  | CGC-18         | 18  |
| 4.0                            | 8.5  | GMS-32S 10A          | 6~10                                         | 130                                  | CGC-18         | 18  |
| 5.5                            | 11.0 | GMS-32S 13A          | 9~13                                         | 169                                  | CGC-22         | 22  |
| 7.5                            | 15.0 | GMS-32H 17A          | 11~17                                        | 221                                  | CGC-22         | 22  |
| 10.0                           | 20.0 | GMS-32H 22A          | 14~22                                        | 286                                  | CGC-32         | 32  |
| 11.0                           | 22.0 | GMS-32H 26A          | 18~26                                        | 338                                  | CGC-32         | 32  |
| 15.0                           | 29.0 | GMS-32H 32A          | 22~32                                        | 416                                  | CGC-32         | 32  |
| 18.5                           | 36.0 | GMS-63S 40A          | 28~40                                        | 520                                  | CGC-50         | 50  |
| 22.0                           | 41.0 | GMS-63S 50A          | 34~50                                        | 650                                  | CGC-50         | 50  |
| 30.0                           | 56.0 | GMS-63S 63A          | 45~63                                        | 819                                  | CGC-65         | 65  |
| 37.0                           | 68.0 | GMS-100S 75A         | 55~75                                        | 975                                  | CGC-75         | 75  |
| -                              | -    | GMS-100S 90A         | 70~90                                        | 1170                                 | CGC-85         | 85  |
| 45.0                           | 81.0 | GMS-100S 100A        | 80~100                                       | 1300                                 | CGC-85         | 85  |

Definition type '2' coordination according to IEC 947-4-1

- The contactor or the starter must not endanger persons or systems in the event of a short-circuit.
- The contactor or the starter must be suitable for further use.
- No damage to the overload relay or other parts may occur with the exception of welding of the contactor or starter contacts provided that these can be easily separated without significant deformation (such as with a screwdriver).



I ) Thermal release trip current :

The adjustable inverse bimetal trip reliability protects motors against overloads.  
The curve shows the mean operating current at an ambient temperature of 20 °C starting from cold.  
Careful testing and setting ensures effective motor protection even in the case of single-phasing.

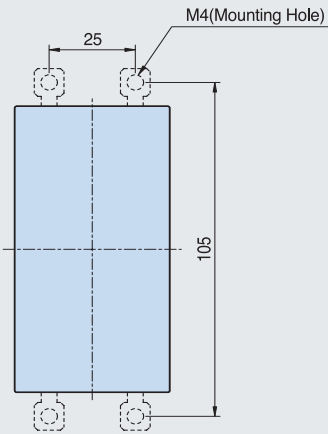
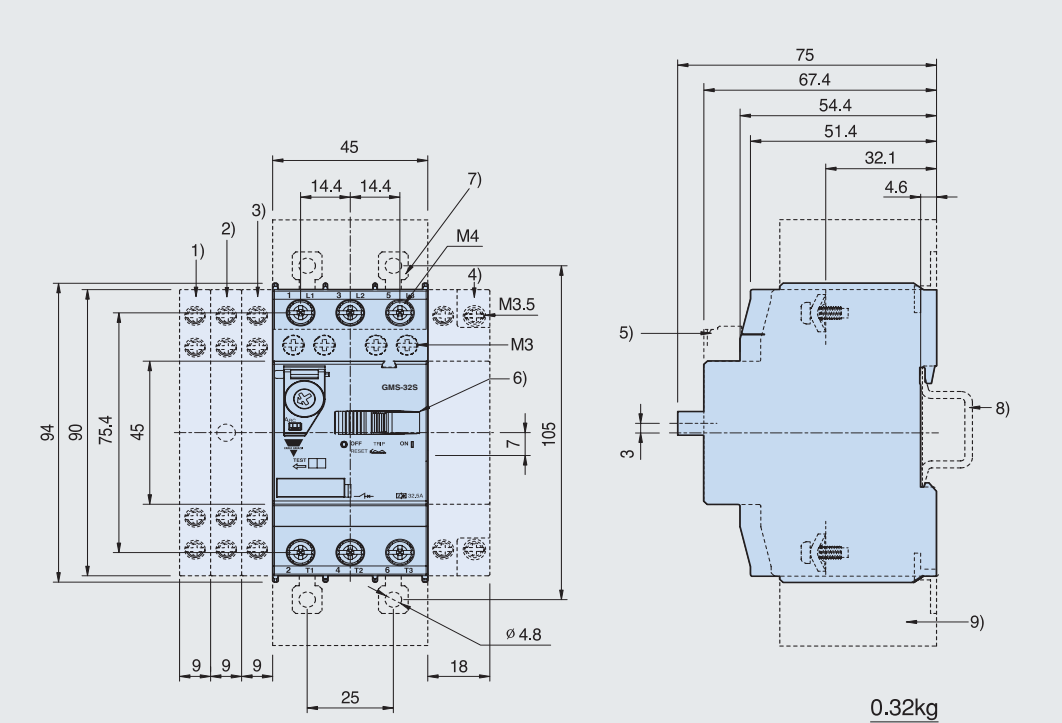
II ) Magnetic release trip current :

The instantaneous magnetic trip has a fixed operating current setting.  
This corresponds to 13times the maximum value of setting range,  
at a lower setting it is correspondingly higher.

Current setting Ie :

The overload trip corresponds to a thermal overload relay in a motor starter conforming to IEC 947-4-1.  
If a different value is prescribed (e.g. reduced Ie for cooling medium having a temperature higher than 40 °C or a place of installation higher than 2000m above sea level),  
the setting current is equal to the reduced rated current Ie of the motor.

● GMS-32S [mm]



Height of arcing spaces  
(Clearance from earthed parts)

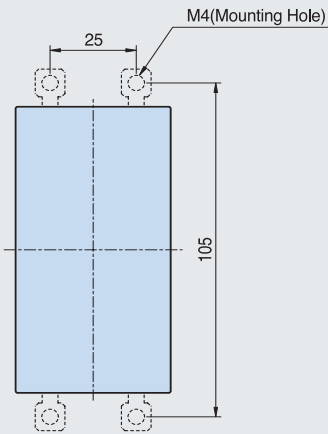
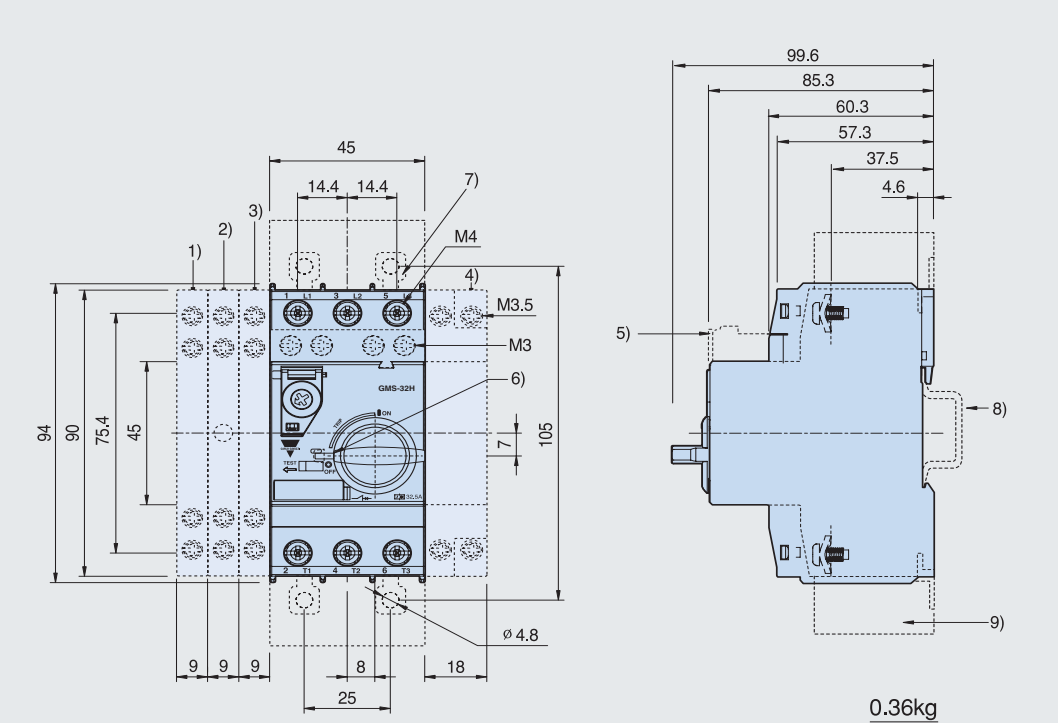
|       |     |     |     |     |     |
|-------|-----|-----|-----|-----|-----|
| Ue[V] | 240 | 415 | 460 | 525 | 690 |
| [mm]  | 20  | 20  | 20  | 20  | 20  |

Arcing spaces for limiter function

|       |            |            |            |            |
|-------|------------|------------|------------|------------|
| Ue[V] | 525        |            | 690        |            |
|       | left/right | top/bottom | left/right | top/bottom |
| [mm]  | 10         | 40         | 30         | 50         |

- 1) Side auxiliary switch
- 2) Side magnetic trip alarm switch
- 3) Side any trip alarm switch
- 4) Side shunt release or Side undervoltage release
- 5) Front auxiliary switch
- 6) Handle lock in OFF position(  $\varnothing$  5mm)
- 7) Push-in Lugs for screw mounting
- 8) 35mm standard mounting rail acc. to EN 50 022
- 9) Arcing space

● GMS-32H, 32HI [mm]



Height of arcing spaces  
(Clearance from earthed parts)

|       |     |     |     |     |     |
|-------|-----|-----|-----|-----|-----|
| Ue[V] | 240 | 415 | 460 | 525 | 690 |
| [mm]  | 30  | 30  | 30  | 30  | 50  |

Arcing spaces for limiter function

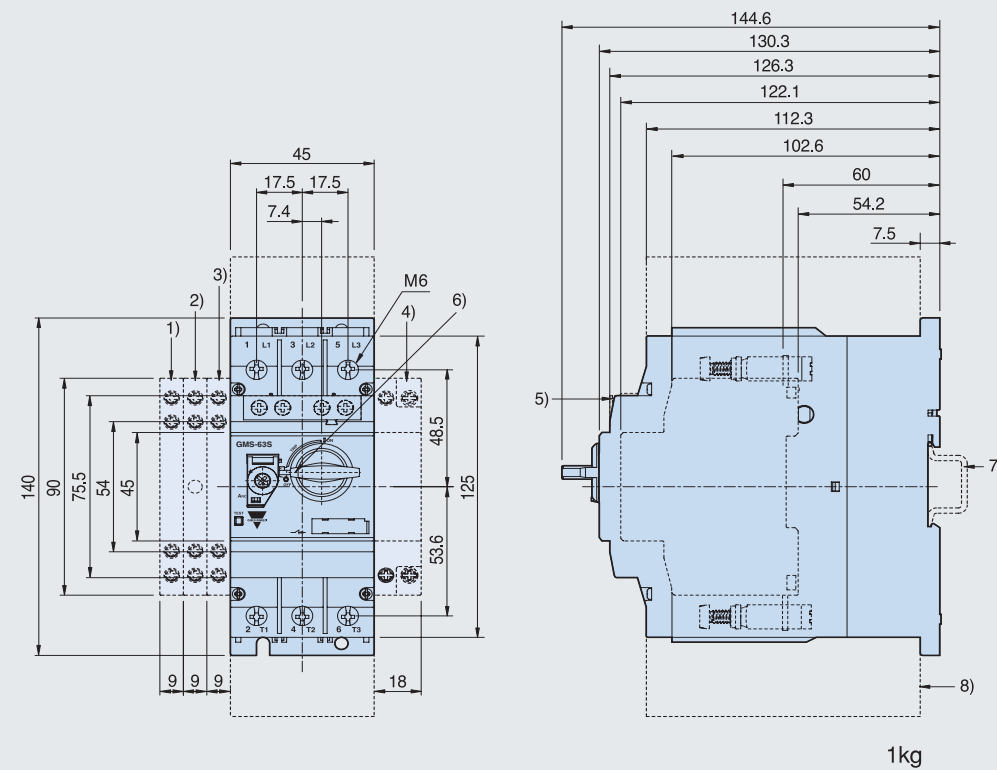
|       |            |            |            |            |
|-------|------------|------------|------------|------------|
| Ue[V] | 525        |            | 690        |            |
|       | left/right | top/bottom | left/right | top/bottom |
| [mm]  | 10         | 40         | 30         | 50         |

- 1) Side auxiliary switch
- 2) Side magnetic trip alarm switch
- 3) Side any trip alarm switch
- 4) Side shunt release or Side undervoltage release
- 5) Front auxiliary switch
- 6) Handle lock in OFF position(  $\varnothing$  5mm)
- 7) Push-in Lugs for screw mounting
- 8) 35mm standard mounting rail acc. to EN 50 022
- 9) Arcing space

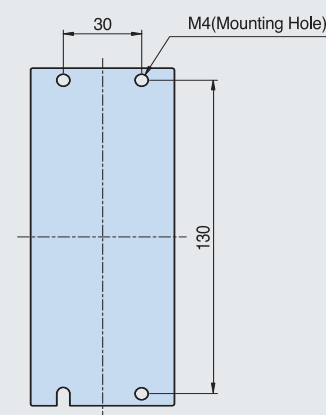


● **GMS-63S, 63H, 63HI, 63HL**

[mm]



1 kg



Height of arcing spaces  
(Clearance from earthed parts)

|       |     |     |     |     |     |
|-------|-----|-----|-----|-----|-----|
| Ue[V] | 240 | 415 | 460 | 525 | 690 |
| [mm]  | 50  | 50  | 50  | 50  | 50  |

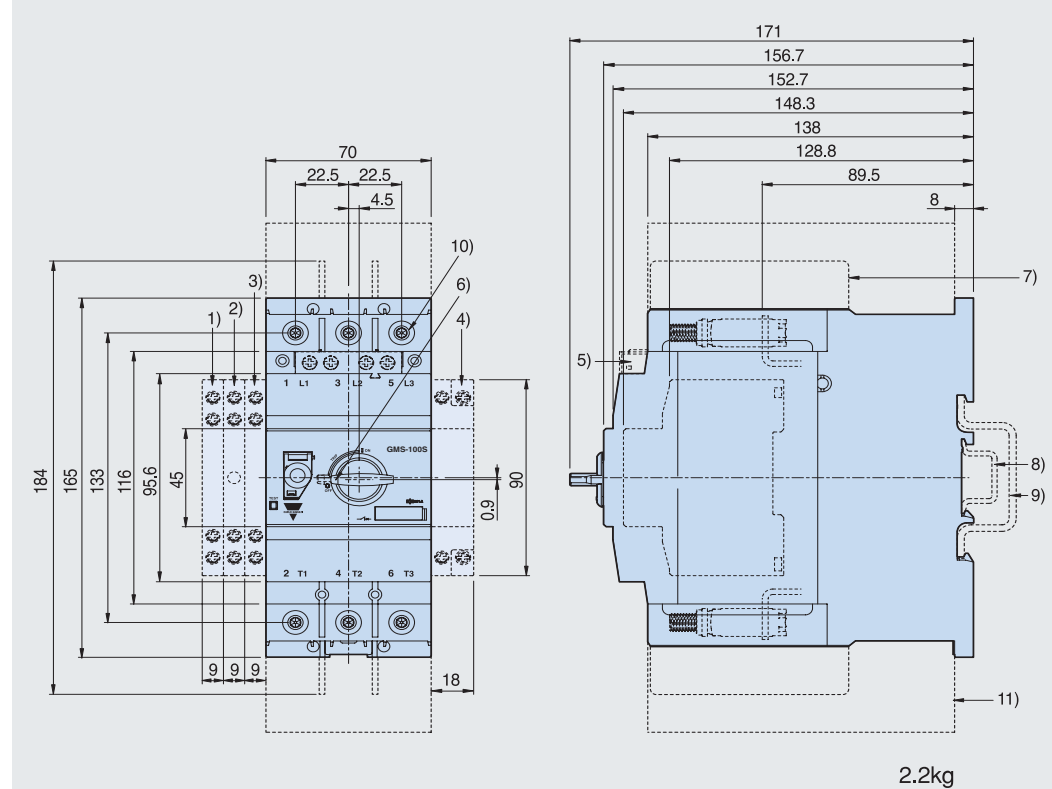
## Arcing spaces for limiter function

|       |            |            |            |            |
|-------|------------|------------|------------|------------|
| Ue[V] | 525        |            | 690        |            |
|       | left/right | top/bottom | left/right | top/bottom |
| [mm]  | 10         | 50         | 10         | 50         |

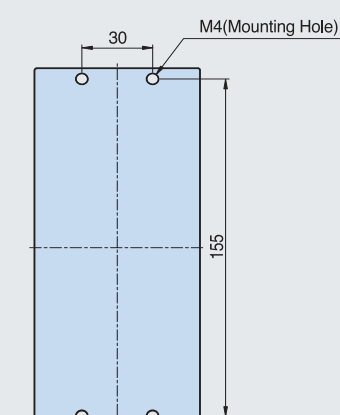
- 1) Side auxiliary switch
- 2) Side magnetic trip alarm switch
- 3) Side any trip alarm switch
- 4) Side shunt release or  
Side undervoltage release
- 5) Front auxiliary switch
- 6) Handle lock in OFF  
position (ø 5 mm)
- 7) 35 mm standard mounting  
rail acc. to EN 50 022
- 8) Arcing space

● **GMS-100S, 100H, 100HI, 100HL**

[mm]



2.2kg



Height of arcing spaces  
(Clearance from earthed parts)

|       |     |     |     |     |     |
|-------|-----|-----|-----|-----|-----|
| Ue[V] | 240 | 415 | 460 | 525 | 690 |
| [mm]  | 50  | 70  | 70  | 110 | 150 |

### Arcing spaces for limiter function

| Ue[V] | 525        |            | 690        |            |
|-------|------------|------------|------------|------------|
|       | left/right | top/bottom | left/right | top/bottom |
| [mm]  | 10         | 110        | 30         | 150        |

- 1) Side auxiliary switch
- 2) Side magnetic trip alarm switch
- 3) Side any trip alarm switch
- 4) Side shunt release or Side undervoltage release
- 5) Front auxiliary switch
- 6) Handle lock in OFF position (ø 5mm)
- 7) Insulation barrier
- 8) 35mm standard mounting rail acc. to EN 50 022
- 9) 75mm standard mounting rail acc. to EN 50 023
- 10) 4mm hexagon socket screw
- 11) Arcing space

Notes:





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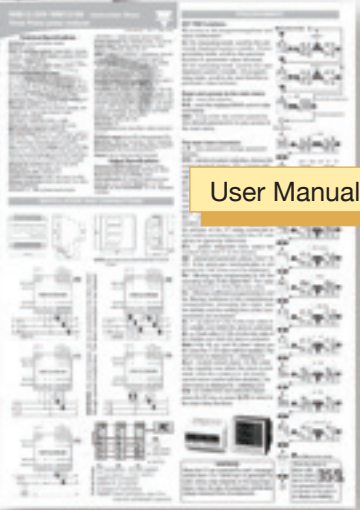
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