



### Main

|                                       |                                                                                                                                                                                                                                                                                                                                                                                          |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range                                 | TeSys                                                                                                                                                                                                                                                                                                                                                                                    |
| Product name                          | TeSys GV4                                                                                                                                                                                                                                                                                                                                                                                |
| Device short name                     | GV4L                                                                                                                                                                                                                                                                                                                                                                                     |
| Product or component type             | Circuit breaker                                                                                                                                                                                                                                                                                                                                                                          |
| Device application                    | Motor protection                                                                                                                                                                                                                                                                                                                                                                         |
| Poles description                     | 3P                                                                                                                                                                                                                                                                                                                                                                                       |
| Utilisation category                  | Category A                                                                                                                                                                                                                                                                                                                                                                               |
| Trip unit technology                  | Magnetic<br>Electronic                                                                                                                                                                                                                                                                                                                                                                   |
| Protection type                       | Short-circuit                                                                                                                                                                                                                                                                                                                                                                            |
| [In] rated current                    | 3.5 A                                                                                                                                                                                                                                                                                                                                                                                    |
| Breaking capacity                     | Icu 120 kA at 220...240 V AC 50/60 Hz conforming to IEC 60947-2<br>Icu 100 kA at 380...415 V AC 50/60 Hz conforming to IEC 60947-2<br>Icu 70 kA at 440 V AC 50/60 Hz conforming to IEC 60947-2<br>Icu 30 kA at 500 V AC 50/60 Hz conforming to IEC 60947-2<br>Icu 18 kA at 525 V AC 50/60 Hz conforming to IEC 60947-2<br>Icu 10 kA at 660...690 V AC 50/60 Hz conforming to IEC 60947-2 |
| [Ics] rated service breaking capacity | 120 kA at 220...240 V AC 50/60 Hz conforming to IEC 60947-2<br>100 kA at 380...415 V AC 50/60 Hz conforming to IEC 60947-2<br>70 kA at 440 V AC 50/60 Hz conforming to IEC 60947-2<br>30 kA at 500 V AC 50/60 Hz conforming to IEC 60947-2<br>18 kA at 525 V AC 50/60 Hz conforming to IEC 60947-2<br>2.5 kA at 660...690 V AC 50/60 Hz conforming to IEC 60947-2                        |
| Magnetic setting range                | 21...49 A                                                                                                                                                                                                                                                                                                                                                                                |
| Control type                          | Toggle                                                                                                                                                                                                                                                                                                                                                                                   |

### Complementary

|                                |                                                                                                                                         |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| [Ue] rated operational voltage | 690 V AC 50/60 Hz conforming to IEC 60947-2                                                                                             |
| Motor power kW                 | 0.55 kW at 400...415 V AC 50/60 Hz<br>0.75 kW at 400...415 V AC 50/60 Hz<br>0.75 kW at 500 V AC 50/60 Hz<br>1.1 kW at 500 V AC 50/60 Hz |

|                                        |                                                                                                                                                                                                             |
|----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                        | 1.1 kW at 660...690 V AC 50/60 Hz<br>1.5 kW at 660...690 V AC 50/60 Hz<br>1.5 kW at 500 V AC 50/60 Hz<br>2.2 kW at 660...690 V AC 50/60 Hz<br>1.1 kW at 400...415 V AC 50/60 Hz                             |
| [Uimp] rated impulse withstand voltage | 8 kV IEC 60947-2                                                                                                                                                                                            |
| [Ui] rated insulation voltage          | 800 V conforming to IEC 60947-2                                                                                                                                                                             |
| Mounting mode                          | By clips<br>By screws                                                                                                                                                                                       |
| Mounting support                       | 35 mm symmetrical DIN rail<br>75 mm symmetrical DIN rail<br>Plate                                                                                                                                           |
| Suitability for isolation              | Yes conforming to IEC 60947-1                                                                                                                                                                               |
| Mechanical durability                  | 40000 cycles                                                                                                                                                                                                |
| Electrical durability                  | 40000 cycles for AC-3 at 440 V In/2<br>40000 cycles for AC-3 at 440 V In                                                                                                                                    |
| Local signalling                       | Green indicatorpresence of auxiliary contacts:                                                                                                                                                              |
| Number of slots                        | 1 slot(s) for alarm switch for fault signalling contact, plug-in<br>1 slot(s) for voltage release for electrical remote tripping, plug-in<br>1 slot(s) for auxiliary switch for open/close contact, plug-in |
| Connection pitch                       | 27 mm                                                                                                                                                                                                       |
| Connections - terminals                | lugs-ring terminals                                                                                                                                                                                         |
| Tightening torque                      | 9 N.m for 16...95 mm <sup>2</sup><br>5 N.m for 1.5...10 mm <sup>2</sup>                                                                                                                                     |
| Quality labels                         | CE                                                                                                                                                                                                          |
| Standards                              | EN/IEC 60947-2<br>EN/IEC 60947-4-1                                                                                                                                                                          |
| Height                                 | 155 mm                                                                                                                                                                                                      |
| Width                                  | 81 mm                                                                                                                                                                                                       |
| Depth                                  | 116 mm                                                                                                                                                                                                      |
| Product weight                         | 1.5 kg                                                                                                                                                                                                      |
| Colour                                 | Grey (RAL 7016)                                                                                                                                                                                             |

## Environment

|                                       |                                                                                                                                                                                  |
|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product certifications                | IEC<br>CCC<br>EAC<br>EU-RO MR                                                                                                                                                    |
| Tropicalisation                       | 2 conforming to IEC 68-2                                                                                                                                                         |
| IP degree of protection               | IP40 front face conforming to IEC 60529                                                                                                                                          |
| IK degree of protection               | IK07 conforming to IEC 62262                                                                                                                                                     |
| Pollution degree                      | 3 conforming to IEC 60947-1                                                                                                                                                      |
| Mechanical robustness                 | Vibrations: +/- 1 mm 2...13.2 Hz conforming to IEC 60068-2-6<br>Vibrations: 0.7 gn 13.2...100 Hz conforming to IEC 60068-2-6<br>Shocks: 15 gn 11 ms conforming to IEC 60068-2-27 |
| Ambient air temperature for operation | -25...70 °C                                                                                                                                                                      |
| Ambient air temperature for storage   | -50...85 °C                                                                                                                                                                      |
| Operating altitude                    | 0...2000 m without derating<br>2000...5000 m with derating                                                                                                                       |

## Offer Sustainability

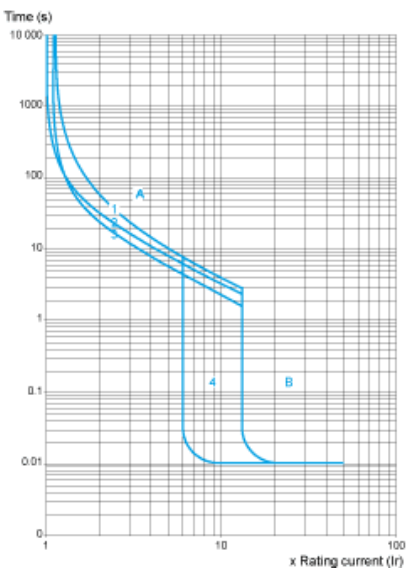
|                            |                                                                                                                       |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------|
| Sustainable offer status   | Green Premium product                                                                                                 |
| EU RoHS Directive          | Compliant<br><a href="#">EU RoHS Declaration</a>                                                                      |
| Mercury free               | Yes                                                                                                                   |
| RoHS exemption information | <a href="#">Yes</a>                                                                                                   |
| China RoHS Regulation      | <a href="#">China RoHS declaration</a><br>Product out of China RoHS scope. Substance declaration for your information |

|                             |                                                                                                                             |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Environmental Disclosure    | <a href="#">Product Environmental Profile</a>                                                                               |
| Circularity Profile         | <a href="#">End of Life Information</a>                                                                                     |
| WEEE                        | The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins |
| <b>Contractual warranty</b> |                                                                                                                             |
| Warranty                    | 18 months                                                                                                                   |

Tripping Curves for GV4L and GV4LE Combined with Thermal Overload Relay LRD or LR9

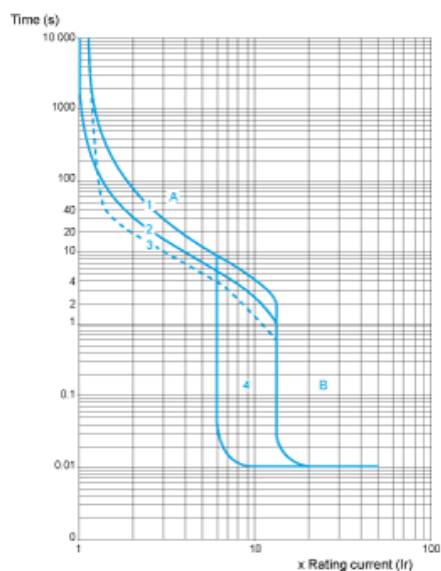
Average Operating Times at 20 °C Related to Multiples of the Setting Current

GV4L02 and GV4LE02 to 12 with LRD05 to LRD14, GV4L80 and GV4LE80 with LRD3363



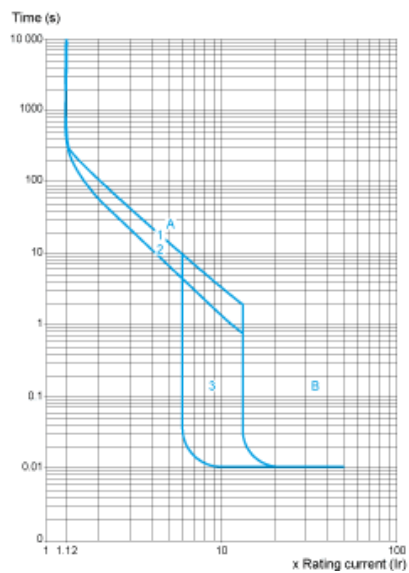
- 1 3 poles from cold state
- 2 2 poles from cold state
- 3 3 poles from hot state
- 4 6...14 Ir
- A Thermal overload relay protection zone
- B GV4L protection zone

GV4L25 and GV4LE25 with LRD 318, LRD325 GV4L50 AND GV4LE50 with LRD 332, LRD 340, LRD 350



- 1 3 poles from cold state
- 2 2 poles from cold state
- 3 3 poles from hot state
- 4 6...14 Ir
- A Thermal overload relay protection zone
- B GV4L protection zone

GV4L115 and GV4LE115 with Class 10 LR9F5367, LR9D5369 and Class 20 LR9D5567, LR9F5569

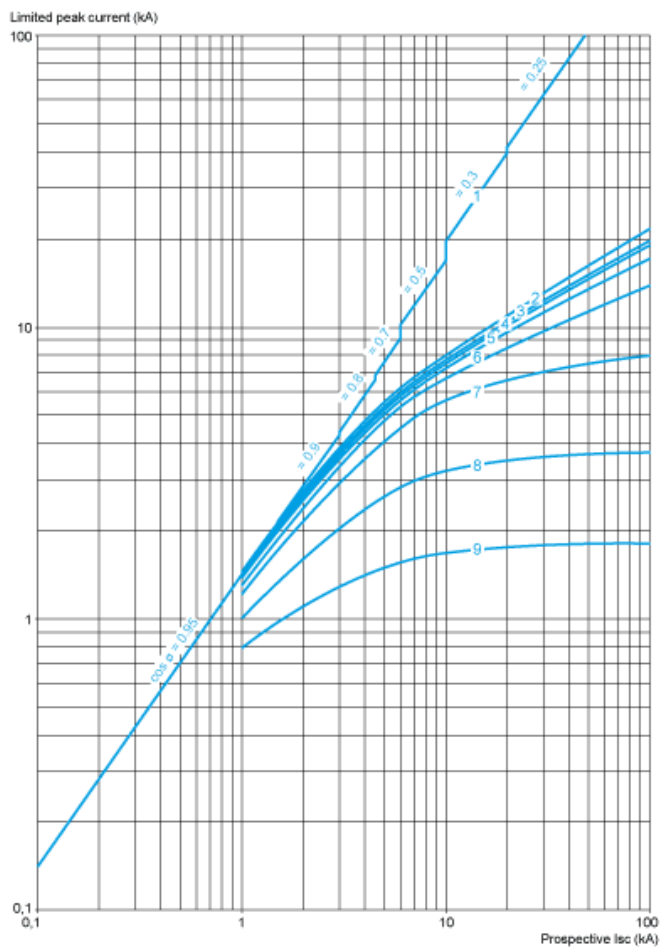


- 1 Cold state curve
- 2 Hot state curve
- 3 6...14 Ir

### Current Limitation on Short-Circuit for GV4L, GV4LE (3-Phase 400/415 V)

Dynamic Stress

$I_{peak} = f(\text{prospective } I_{sc}) \text{ at } 1.05 U_e = 435 \text{ V}$

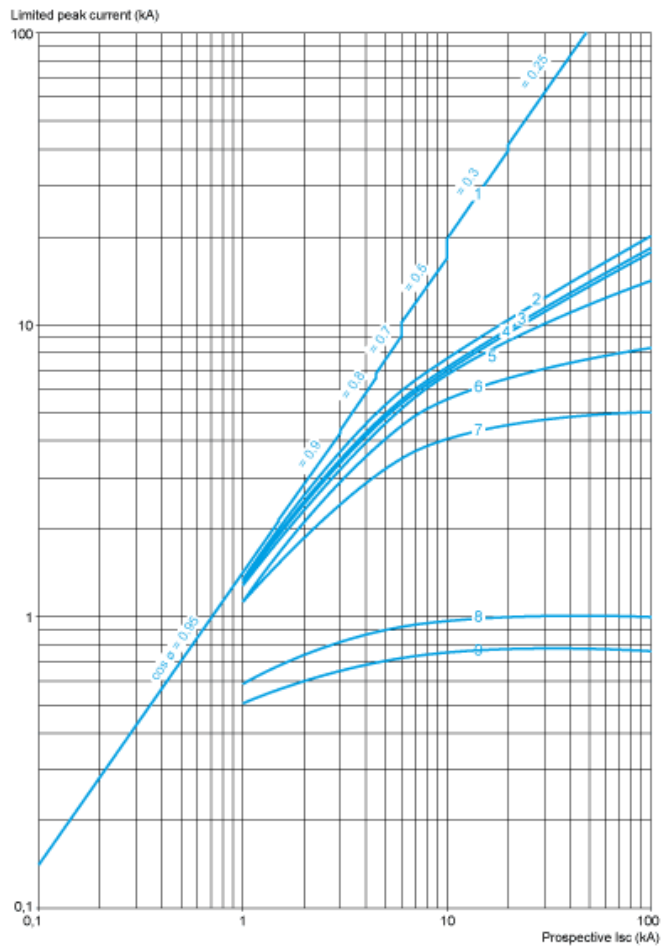


- 1 Maximum peak current
- 2 GV4L115
- 3 GV4L80
- 4 GV4L50
- 5 GV4L25
- 6 GV4L12
- 7 GV4L07
- 8 GV4L03
- 9 GV4L02

### Current Limitation on Short-Circuit for GV4L, GV4LE + Thermal Overload Relay LRD or LR9 (3-Phase 400/415 V)

Dynamic Stress

$I_{peak} = f(\text{prospective } I_{sc}) \text{ at } 1.05 U_e = 435 \text{ V}$

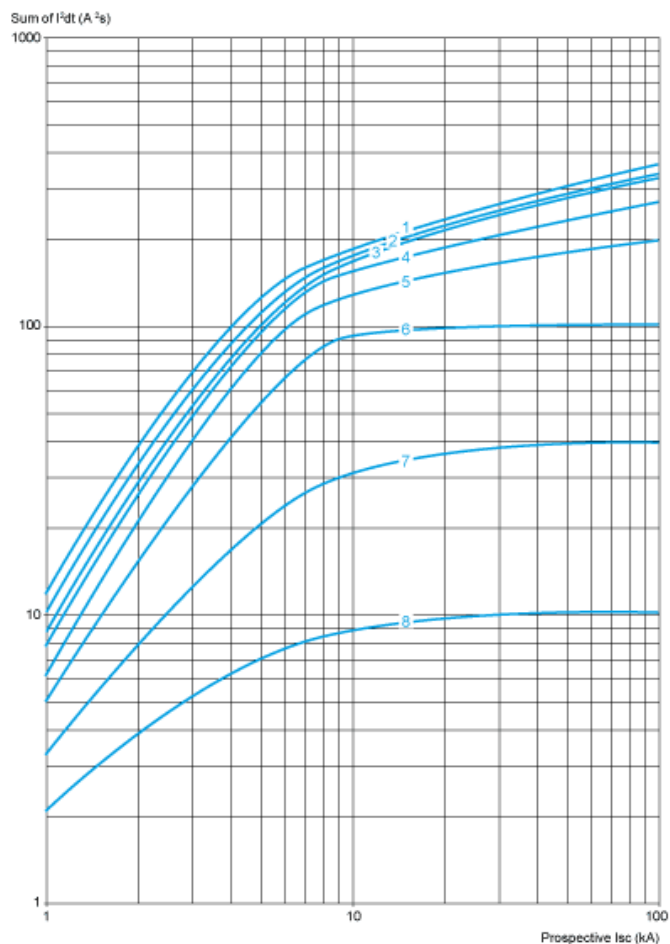


- 1 Maximum peak current
- 2 GV4L115 + LR9D5367 or LR9F5367
- 3 GV4L80 + LRD3361
- 4 GV4L50 + LRD340
- 5 GV4L25 + LRD325
- 6 GV4L12 + LRD313
- 7 GV4L07 + LRD12
- 8 GV4L03 + LRD07
- 9 GV4L02 + LRD07

### Thermal Limit on Short-Circuit for GV4L, GV4LE

Thermal Limit in  $A^2s$

Sum of  $I^2dt = f$  (prospective Isc) at  $1.05 U_e = 435 V$

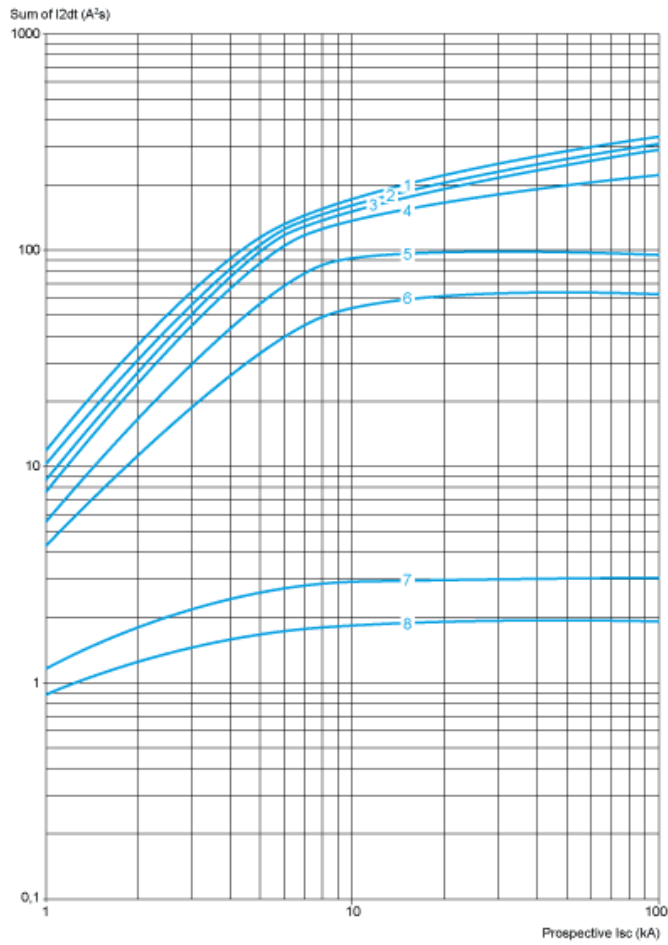


- 1 GV4L115
- 2 GV4L80
- 3 GV4L50
- 4 GV4L25
- 5 GV4L12
- 6 GV4L07
- 7 GV4L03
- 8 GV4L02

### Current Limitation on Short-Circuit for GV4L, GV4LE + Thermal Overload Relay LRD or LR9

Thermal Limit in kA in the Magnetic Operating Zone

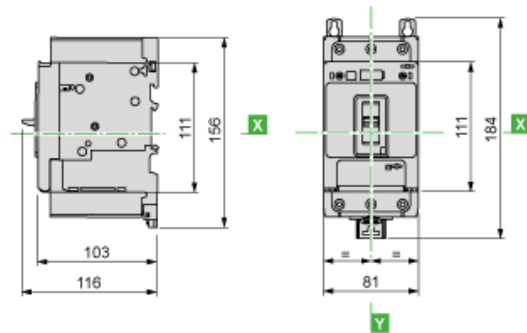
Sum of  $I^2dt = f$  (prospective Isc) at 1.05 Ue = 435 V



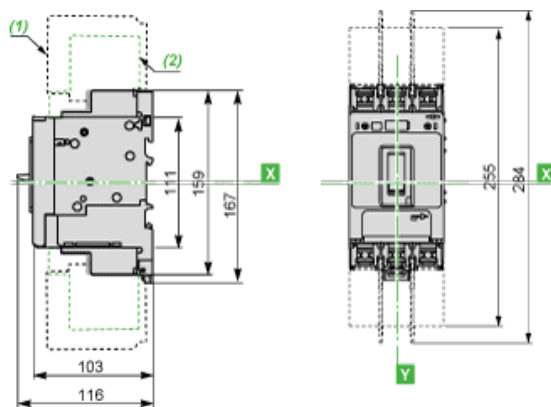
- 1 GV4L115 + LR9D5367 or LR9F5367
- 2 GV4L80 + LRD3361
- 3 GV4L50 + LRD340
- 4 GV4L25 + LRD325
- 5 GV4L12 + LRD313
- 6 GV4L07+ LRD12
- 7 GV4L03+ LRD07
- 8 GV4L02 + LRD07

GV4 with Toggle: GV4LE, GV4PE, GV4PEM

With EverLink® Connector



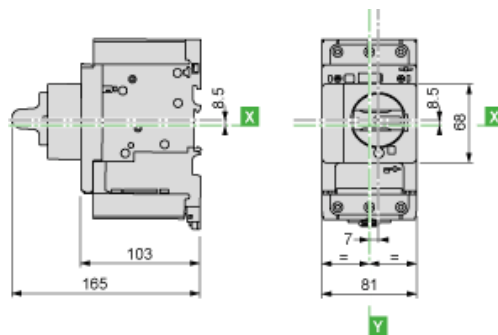
With Crimp Lug Connector



- (1) Interphases barriers
- (2) Long terminal shield

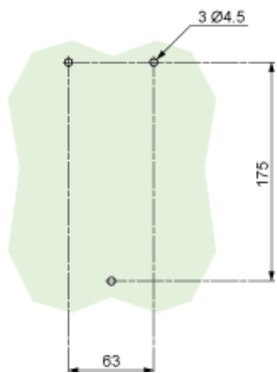
GV4 with Rotary Handle: GV4L, GV4P, or GV4LE, GV4PE, GV4PEM with GV4ADN01, GV4ADN02 Direct Mounting Rotary Handle

Dimensions

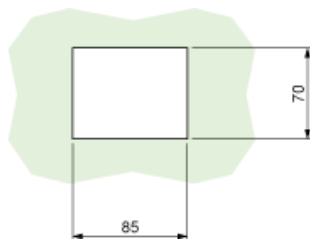


GV4L, GV4P, GV4LE, GV4PE, GV4PEM

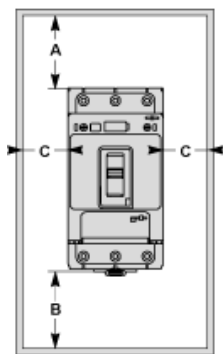
Panel Mounting with M4 Screws



Door Cut-Out for Rotary Handle



Minimum Safety Clearance



Toggle-type, rotary handle-type: identical clearance values.

| Safety Clearance (mm) |                     |   |   |                  |   |   |
|-----------------------|---------------------|---|---|------------------|---|---|
|                       | Painted Sheet Metal |   |   | Bare Sheet Metal |   |   |
|                       | A                   | B | C | A                | B | C |
| No accessory          | 30                  | 0 | 0 | 40               | 0 | 5 |
| Interphase barriers   | 0                   | 0 | 0 | 0                | 0 | 5 |
| Long terminal shield  | 0                   | 0 | 0 | 0                | 0 | 5 |

Magnetic Motor Circuit Breakers

GV4L, GV4LE

