

# Product data sheet

Specifications



Motor circuit breaker, TeSys  
Deca, 3P, 0.4A, magnetic, toggle  
control, screw clamp terminals

GV2LE03

## Main

|                           |                       |
|---------------------------|-----------------------|
| Range of product          | TeSys GV2             |
| Range                     | TeSys Deca            |
| Device short name         | GV2LE                 |
| Product name              | TeSys GV2             |
| Product or component type | Motor circuit breaker |
| Device application        | Motor protection      |
| Trip unit technology      | Magnetic              |

## Complementary

|                                                     |                                                                                                                                                                                                                                                                                                                       |
|-----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Poles description                                   | 3P                                                                                                                                                                                                                                                                                                                    |
| Network type                                        | AC                                                                                                                                                                                                                                                                                                                    |
| Utilisation category                                | Category A conforming to IEC 60947-2<br>AC-3 conforming to IEC 60947-4-1                                                                                                                                                                                                                                              |
| Network frequency                                   | 50/60 Hz conforming to IEC 60947-2                                                                                                                                                                                                                                                                                    |
| Fixing mode                                         | 35 mm symmetrical DIN rail: clipped<br>Panel: screwed (with adaptor plate)                                                                                                                                                                                                                                            |
| Operating position                                  | Any position                                                                                                                                                                                                                                                                                                          |
| Motor power kW                                      | 0.09 kW at 400/415 V AC 50/60 Hz<br>0.06 kW at 400/415 V AC 50/60 Hz                                                                                                                                                                                                                                                  |
| Breaking capacity                                   | 100 kA Icu at 230/240 V AC 50/60 Hz conforming to IEC 60947-2<br>100 kA Icu at 400/415 V AC 50/60 Hz conforming to IEC 60947-2<br>100 kA Icu at 440 V AC 50/60 Hz conforming to IEC 60947-2<br>100 kA Icu at 500 V AC 50/60 Hz conforming to IEC 60947-2<br>100 kA Icu at 690 V AC 50/60 Hz conforming to IEC 60947-2 |
| [Ics] rated service short-circuit breaking capacity | 100 % at 690 V AC 50/60 Hz conforming to IEC 60947-2<br>100 % at 500 V AC 50/60 Hz conforming to IEC 60947-2<br>100 % at 230/240 V AC 50/60 Hz conforming to IEC 60947-2<br>100 % at 440 V AC 50/60 Hz conforming to IEC 60947-2<br>100 % at 400/415 V AC 50/60 Hz conforming to IEC 60947-2                          |
| Control type                                        | Toggle                                                                                                                                                                                                                                                                                                                |
| [In] rated current                                  | 0.4 A                                                                                                                                                                                                                                                                                                                 |
| Magnetic tripping current                           | 5 A                                                                                                                                                                                                                                                                                                                   |
| [Ue] rated operational voltage                      | 690 V AC 50/60 Hz conforming to IEC 60947-2                                                                                                                                                                                                                                                                           |
| [Ui] rated insulation voltage                       | 690 V AC 50/60 Hz conforming to IEC 60947-2                                                                                                                                                                                                                                                                           |
| [Ith] conventional free air thermal current         | 0.4 A conforming to IEC 60947-4-1                                                                                                                                                                                                                                                                                     |

|                                               |                                                                                                        |
|-----------------------------------------------|--------------------------------------------------------------------------------------------------------|
| <b>[Uimp] rated impulse withstand voltage</b> | 6 kV conforming to IEC 60947-2                                                                         |
| <b>Power dissipation per pole</b>             | 1.8 W                                                                                                  |
| <b>Mechanical durability</b>                  | 100000 cycles                                                                                          |
| <b>Electrical durability</b>                  | 100000 cycles for AC-3 at 415 V                                                                        |
| <b>Maximum operating rate</b>                 | 40 cyc/h                                                                                               |
| <b>Rated duty</b>                             | Continuous conforming to IEC 60947-4-1                                                                 |
| <b>Tightening torque</b>                      | 1.7 N.m on screw clamp terminals                                                                       |
| <b>Mechanical robustness</b>                  | Shocks: 30 Gn conforming to IEC 60068-2-27<br>Vibrations: 5 Gn, 5...150 Hz conforming to IEC 60068-2-6 |
| <b>Height</b>                                 | 89 mm                                                                                                  |
| <b>Width</b>                                  | 45 mm                                                                                                  |
| <b>Depth</b>                                  | 78.5 mm                                                                                                |
| <b>Net weight</b>                             | 0.33 kg                                                                                                |
| <b>Suitability for isolation</b>              | Yes conforming to IEC 60947-1 § 7-1-6                                                                  |

### Environment

|                                              |                                                                                                                  |
|----------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| <b>Standards</b>                             | EN/IEC 60947-2<br>EN/IEC 60947-4-1<br>UL 60947-4-1                                                               |
| <b>Product certifications</b>                | IECEE CB Scheme<br>UL<br>CSA<br>CCC<br>EAC<br>RINA<br>LROS (Lloyds register of shipping)<br>DNV-GL<br>BV<br>UKCA |
| <b>Climatic withstand</b>                    | conforming to IACS E10                                                                                           |
| <b>IK degree of protection</b>               | IK04                                                                                                             |
| <b>IP degree of protection</b>               | IP20 conforming to IEC 60529                                                                                     |
| <b>Ambient air temperature for storage</b>   | -40...80 °C                                                                                                      |
| <b>Fire resistance</b>                       | 960 °C conforming to IEC 60695-2-11                                                                              |
| <b>Operating altitude</b>                    | 2000 m                                                                                                           |
| <b>Ambient air temperature for operation</b> | -20...60 °C                                                                                                      |

### Packing Units

|                                     |          |
|-------------------------------------|----------|
| <b>Unit Type of Package 1</b>       | PCE      |
| <b>Number of Units in Package 1</b> | 1        |
| <b>Package 1 Weight</b>             | 223.0 g  |
| <b>Package 1 Height</b>             | 8.5 cm   |
| <b>Package 1 width</b>              | 9.3 cm   |
| <b>Package 1 Length</b>             | 4.8 cm   |
| <b>Unit Type of Package 2</b>       | S02      |
| <b>Number of Units in Package 2</b> | 24       |
| <b>Package 2 Weight</b>             | 5.651 kg |
| <b>Package 2 Height</b>             | 15.0 cm  |

|                  |         |
|------------------|---------|
| Package 2 width  | 30.0 cm |
| Package 2 Length | 40.0 cm |

Offer Sustainability

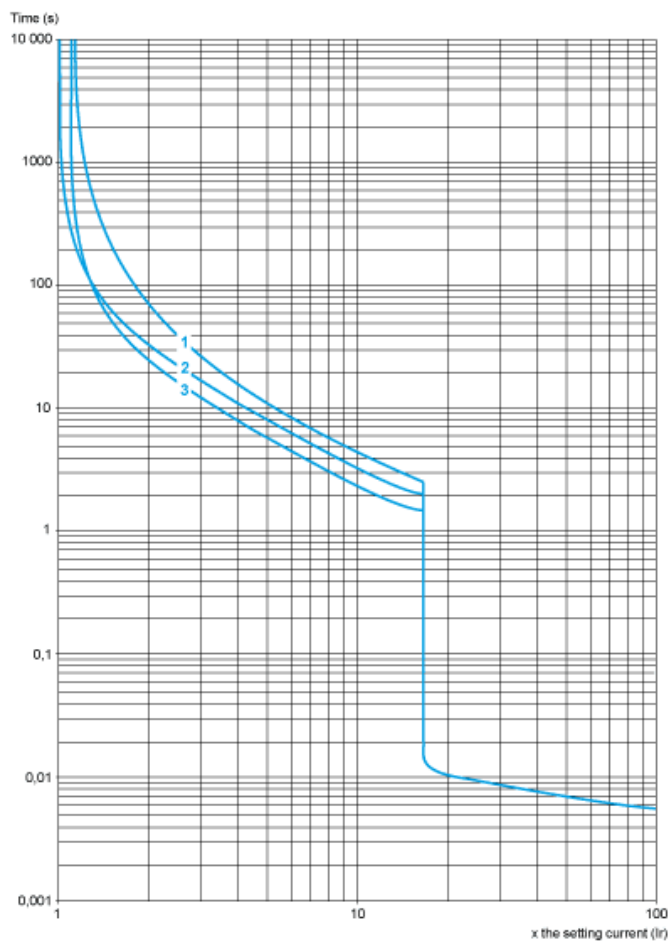
|                            |                                                                                                                                                                                                                                                           |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sustainable offer status   | Green Premium product                                                                                                                                                                                                                                     |
| REACH Regulation           | <a href="#">REACH Declaration</a>                                                                                                                                                                                                                         |
| 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                                                                                                                               |
| California proposition 65  | WARNING: This product can expose you to chemicals including: Antimony oxide & Antimony trioxide, which is known to the State of California to cause cancer. For more information go to <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a> |

Contractual warranty

|          |           |
|----------|-----------|
| Warranty | 18 months |
|----------|-----------|

Tripping Curves for GV2L or LE Combined with Thermal Overload Relay LRD or LR2K

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



- 1

2

3
- 3 poles from cold state

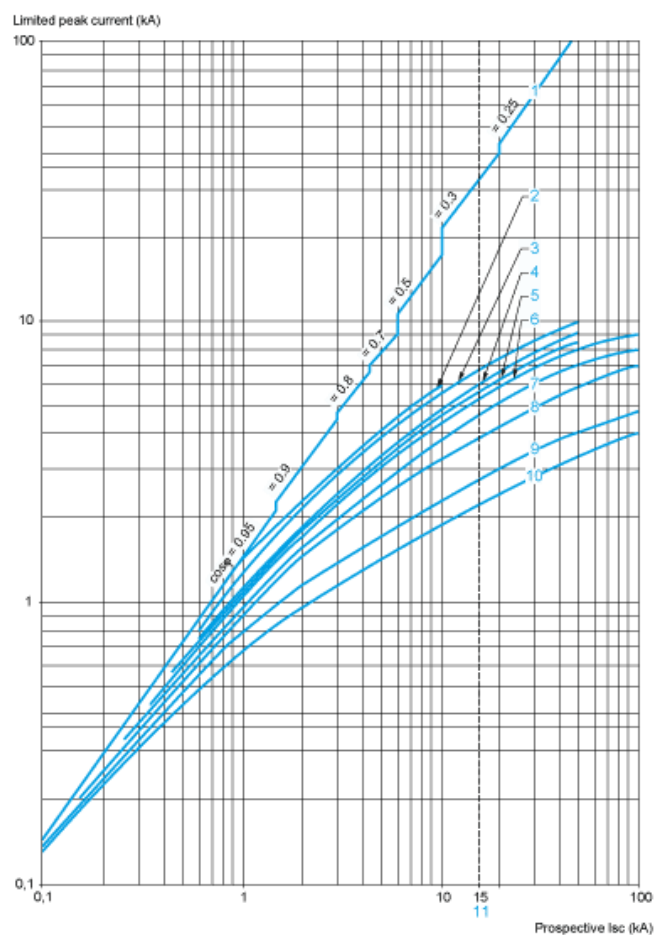
2 poles from cold state

3 poles from hot state

Current Limitation on Short-Circuit for GV2L and GV2LE Only (3-Phase 400/415 V)

Dynamic Stress

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

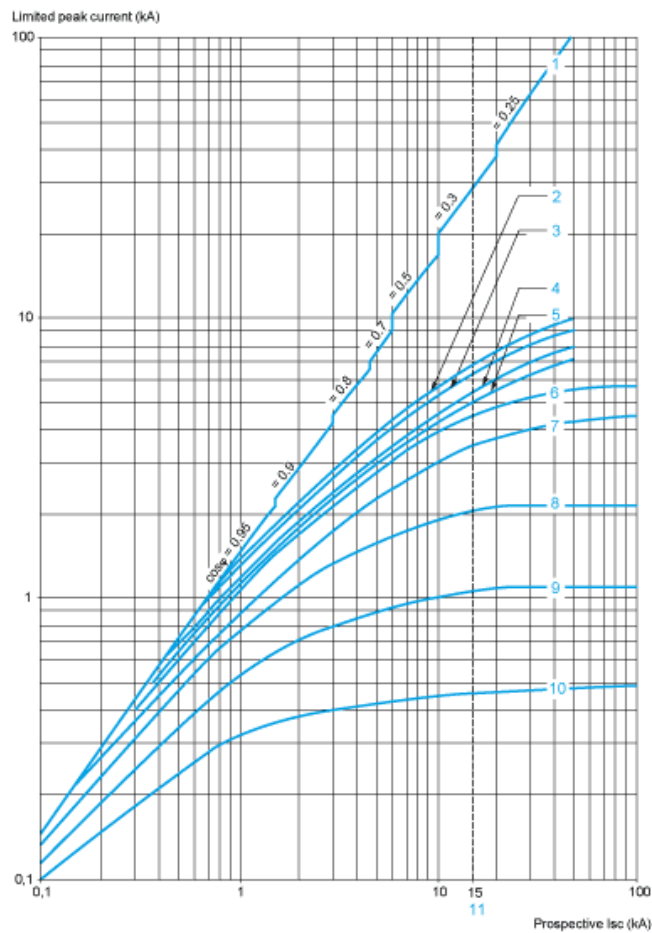


- 1 Maximum peak current
- 2 32 A
- 3 25 A
- 4 18 A
- 5 14 A
- 6 10 A
- 7 6.3 A
- 8 4 A
- 9 2.5 A
- 10 1.6 A
- 11 Limit of rated ultimate breaking capacity on short-circuit of GV2LE (14, 18, 23, and 25 A ratings).

### Current Limitation on Short-Circuit for GV2L and GV2LE + Thermal Overload Relay LRD or LR2K (3-Phase 400/415 V)

#### Dynamic Stress

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

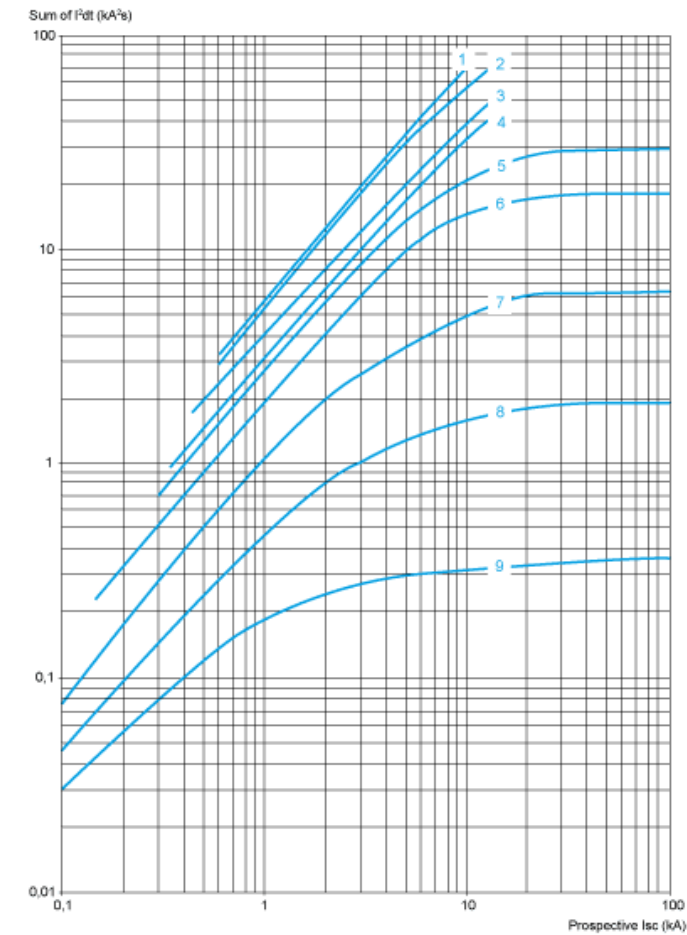


- 1 Maximum peak current
- 2 32 A
- 3 25 A
- 4 18 A
- 5 14 A
- 6 10 A
- 7 6.3 A
- 8 4 A
- 9 2.5 A
- 10 1.6 A
- 11 Limit of rated ultimate breaking capacity on short-circuit of GV2LE (14, 18, 23, and 25 A ratings).

### Thermal Limit on Short-Circuit for GV2LE Only

Thermal Limit in kA<sup>2</sup>s in the Magnetic Operating Zone

Sum of I<sup>2</sup>dt = f (prospective Isc) at 1.05 Ue = 435 V

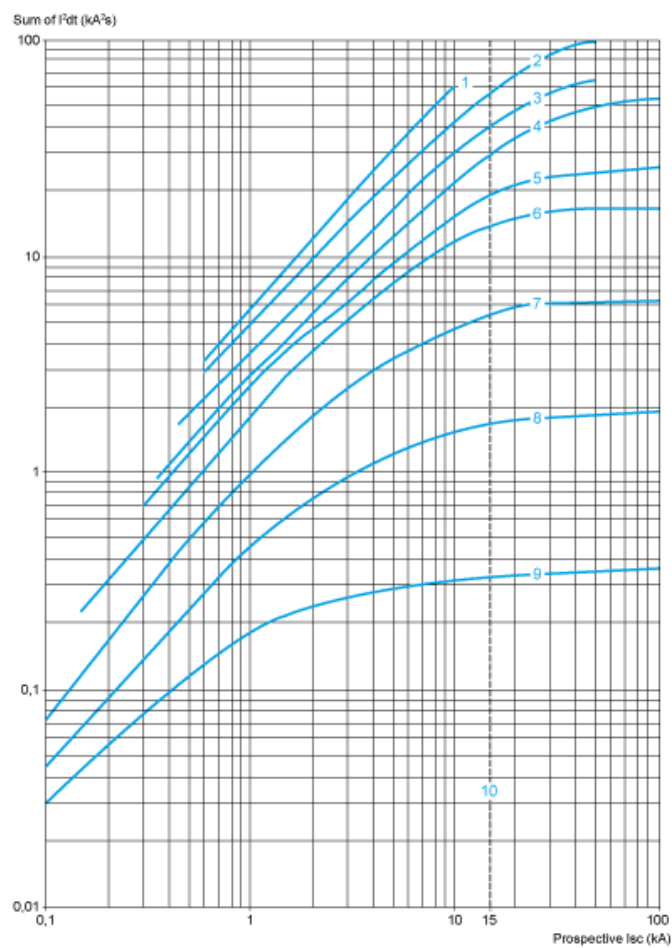


|   |       |
|---|-------|
| 1 | 32 A  |
| 2 | 25 A  |
| 3 | 18 A  |
| 4 | 14 A  |
| 5 | 10 A  |
| 6 | 6.3 A |
| 7 | 4 A   |
| 8 | 2.5 A |
| 9 | 1.6 A |

**Thermal Limit on Short-Circuit for GV2L and GV2LE + Thermal Overload Relay LRD or LR2K**

Thermal Limit in kA<sup>2</sup>s in the Magnetic Operating Zone

Sum of  $I^2dt = f$  (prospective  $I_{sc}$ ) at 1.05  $U_e = 435$  V

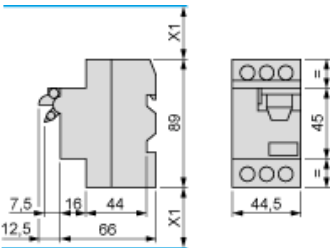


- 1 32 A (GV2LE32)
- 2 25 A and 32 A (GV2L32)
- 3 18 A
- 4 14 A
- 5 10 A
- 6 6.3 A
- 7 4 A
- 8 2.5 A
- 9 1.6 A
- 10 Limit of rated ultimate breaking capacity on short-circuit of GV2 LE (14, 18, 23, and 25 A ratings).



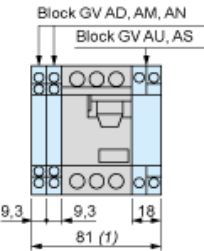
GV2LE

Dimensions



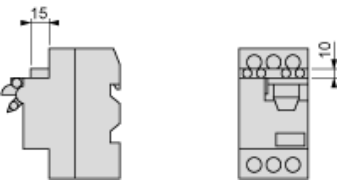
X1 Electrical clearance = 40 mm for Ue ≤ 690 V.

GVAD, AM, AN, AU, AS



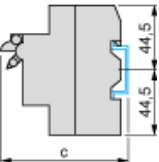
1 Maximum

GVAE



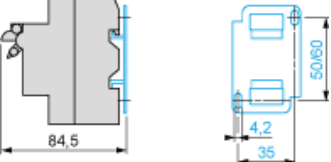
Mounting

On 35 mm rail

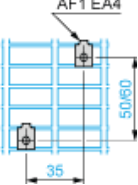


c = 80 on AM1 DP200 (35 x 7.5) and 88 on AM1 DE200, ED200 (35 x15)

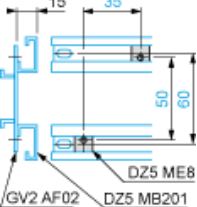
On panel with adapter plate GV2 AF02



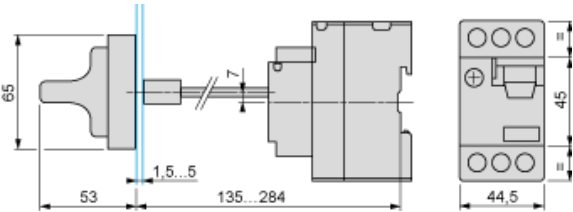
On pre-slotted plate AM1 PA



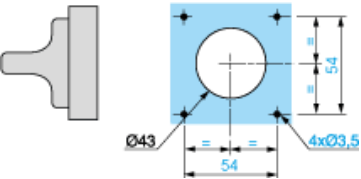
On rails DZ5 MB201



Mounting of External Operator GV2AP03 for GV2LE

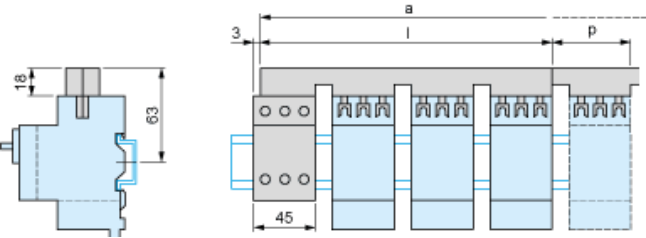


Door cut-out



GV2L and GV2LE

Sets of busbars GV2G445, GV2G454, GV2G472, with terminal block GV2G05

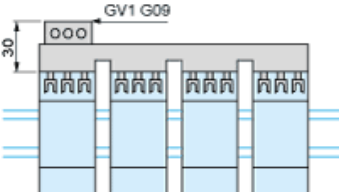


|                     | l   | p  |
|---------------------|-----|----|
| GV2G445 (4 x 45 mm) | 179 | 45 |
| GV2G454 (4 x 54 mm) | 206 | 54 |
| GV2G472 (4 x 72 mm) | 260 | 72 |

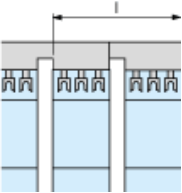
| Number of tap-offs | a   |     |     |     |
|--------------------|-----|-----|-----|-----|
|                    | 5   | 6   | 7   | 8   |
| GV2G445            | 224 | 269 | 314 | 359 |
| GV2G454            | 260 | 314 | 368 | 422 |
| GV2G472            | 332 | 404 | 476 | 548 |

Sets of Busbars for GV2L and GV2LE

Sets of busbars GV2G... with terminal block GV1G09

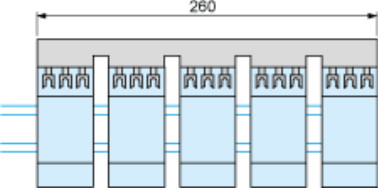


Sets of busbars GV2G245, GV2G254, GV2GR272

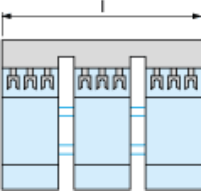


|                     | l   |
|---------------------|-----|
| GV2G245 (2 x 45 mm) | 89  |
| GV2G254 (2 x 54 mm) | 98  |
| GV2G272 (2 x 72 mm) | 116 |

Set of busbars GV2G554



Sets of busbars GV2G345 and GV2G354



|                     | l   |
|---------------------|-----|
| GV2G345 (3 x 45 mm) | 134 |
| GV2G354 (3 x 54 mm) | 152 |

GV2LE••

