

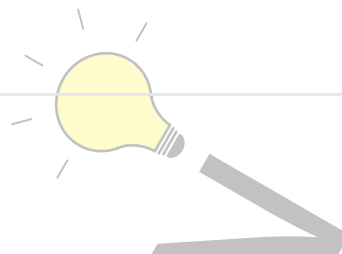
# Product data sheet

Specifications



## Motor circuit breaker, TeSys Deca, 3P, 18 A, magnetic, rotary handle, screw clamp terminals

GV2L20



### Main

|                           |                         |
|---------------------------|-------------------------|
| Range of product          | TeSys GV2<br>TeSys Deca |
| Range                     | TeSys<br>TeSys Deca     |
| Device short name         | GV2L                    |
| Product name              | TeSys GV2<br>TeSys Deca |
| Product or component type | Circuit breaker         |
| Device application        | Motor                   |
| 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 2 x M4 screws)                                                                                                                                                                                                                                       |
| Operating position                                  | Any position                                                                                                                                                                                                                                                                                                     |
| Motor power kW                                      | 7.5 kW at 400/415 V AC 50/60 Hz<br>9 kW at 500 V AC 50/60 Hz<br>15 kW at 690 V AC 50/60 Hz                                                                                                                                                                                                                       |
| Breaking capacity                                   | 100 kA Icu at 230/240 V AC 50/60 Hz conforming to IEC 60947-2<br>4 kA Icu at 690 V AC 50/60 Hz conforming to IEC 60947-2<br>10 kA Icu at 500 V AC 50/60 Hz conforming to IEC 60947-2<br>20 kA Icu at 440 V AC 50/60 Hz conforming to IEC 60947-2<br>50 kA Icu at 400/415 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 230/240 V AC 50/60 Hz conforming to IEC 60947-2<br>75 % at 440 V AC 50/60 Hz conforming to IEC 60947-2<br>75 % at 500 V AC 50/60 Hz conforming to IEC 60947-2<br>50 % at 400/415 V AC 50/60 Hz conforming to IEC 60947-2                        |
| Control type                                        | Rotary knob                                                                                                                                                                                                                                                                                                      |
| [In] rated current                                  | 18 A                                                                                                                                                                                                                                                                                                             |
| Magnetic tripping current                           | 223 A                                                                                                                                                                                                                                                                                                            |
| [Ue] rated operational voltage                      | 690 V AC 50/60 Hz conforming to IEC 60947-2                                                                                                                                                                                                                                                                      |

|                                               |                                                                                                        |
|-----------------------------------------------|--------------------------------------------------------------------------------------------------------|
| <b>[Ui] rated insulation voltage</b>          | 690 V AC 50/60 Hz conforming to IEC 60947-2                                                            |
| <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>                                  | 97 mm                                                                                                  |
| <b>Net weight</b>                             | 0.33 kg                                                                                                |
| <b>Suitability for isolation</b>              | Yes conforming to IEC 60947-1                                                                          |

## Environment

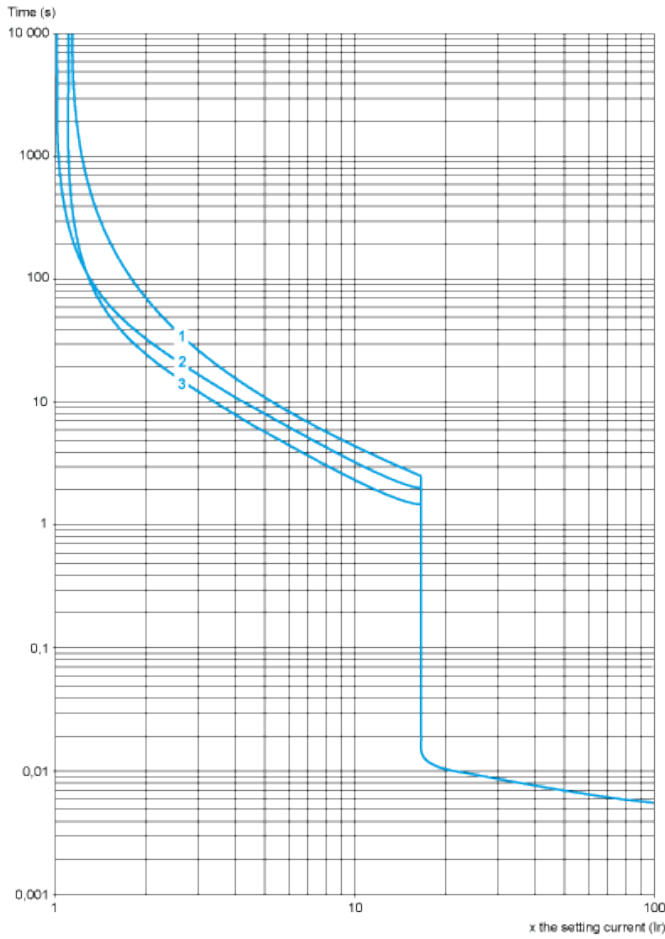
|                                              |                                                                                               |
|----------------------------------------------|-----------------------------------------------------------------------------------------------|
| <b>Standards</b>                             | UL 60947-4-1<br>EN/IEC 60947-2<br>EN/IEC 60947-4-1                                            |
| <b>Product certifications</b>                | CCC<br>EAC<br>BV<br>LROS (Lloyds register of shipping)<br>DNV-GL<br>RINA<br>UL<br>CSA<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 60695-2-1                                                            |
| <b>Operating altitude</b>                    | 0...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>             | 330.0 g |
| <b>Package 1 Height</b>             | 4.6 cm  |
| <b>Package 1 width</b>              | 9.3 cm  |
| <b>Package 1 Length</b>             | 10 cm   |
| <b>Unit Type of Package 2</b>       | S02     |
| <b>Number of Units in Package 2</b> | 20      |
| <b>Package 2 Weight</b>             | 6.93 kg |
| <b>Package 2 Height</b>             | 15 cm   |



**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

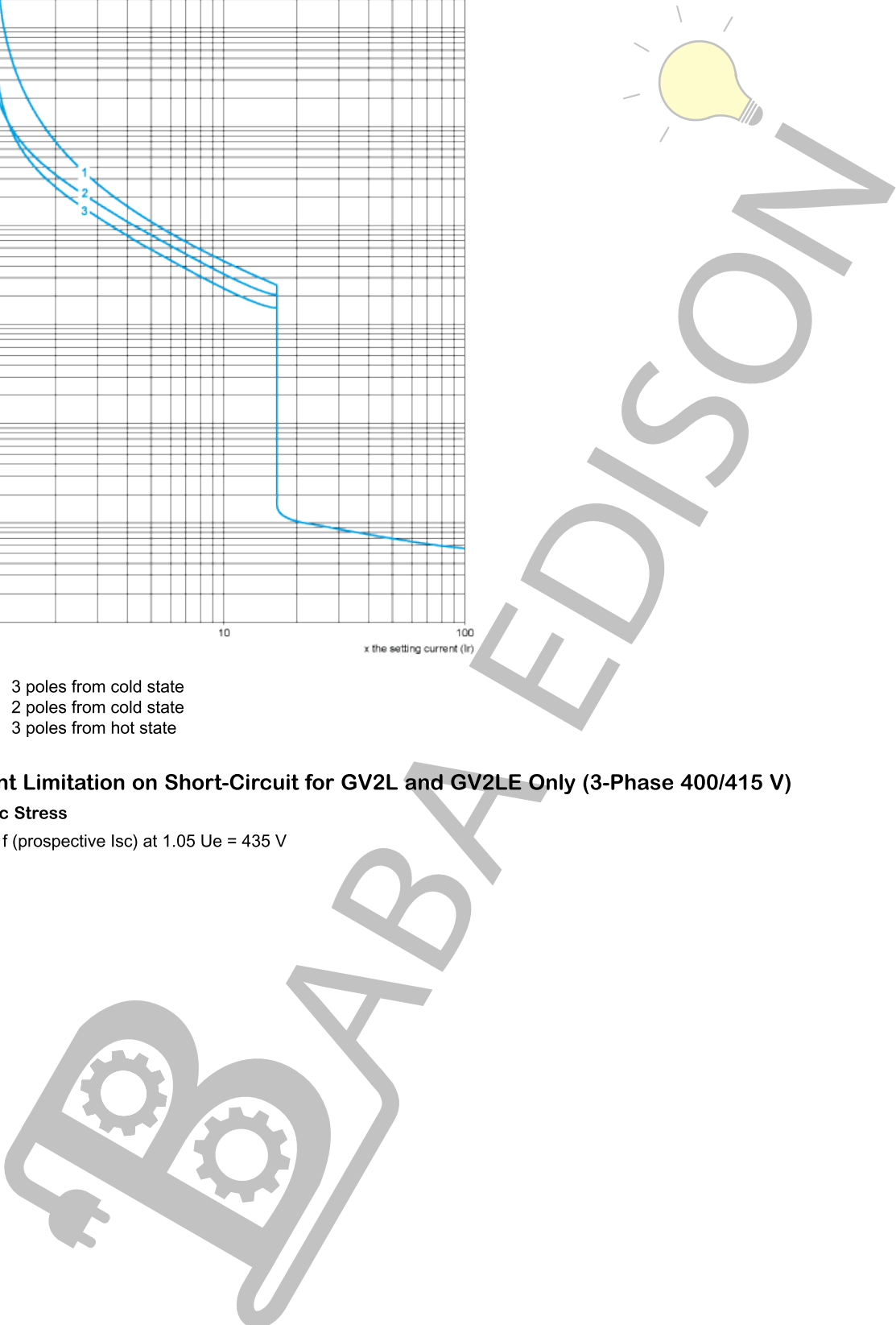


- 1 3 poles from cold state
- 2 2 poles from cold state
- 3 3 poles from hot state

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

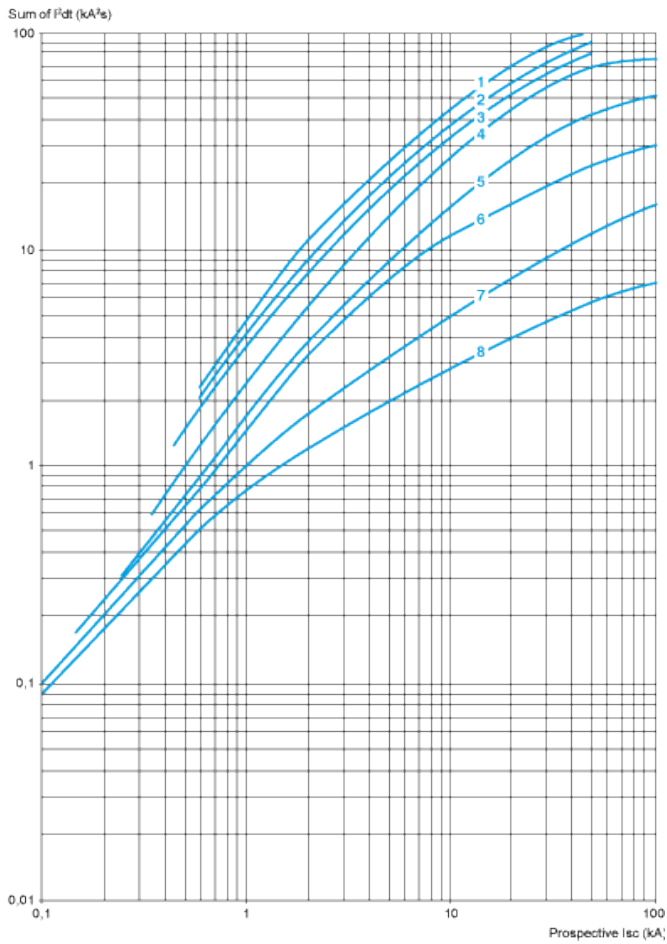
**Dynamic Stress**

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









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

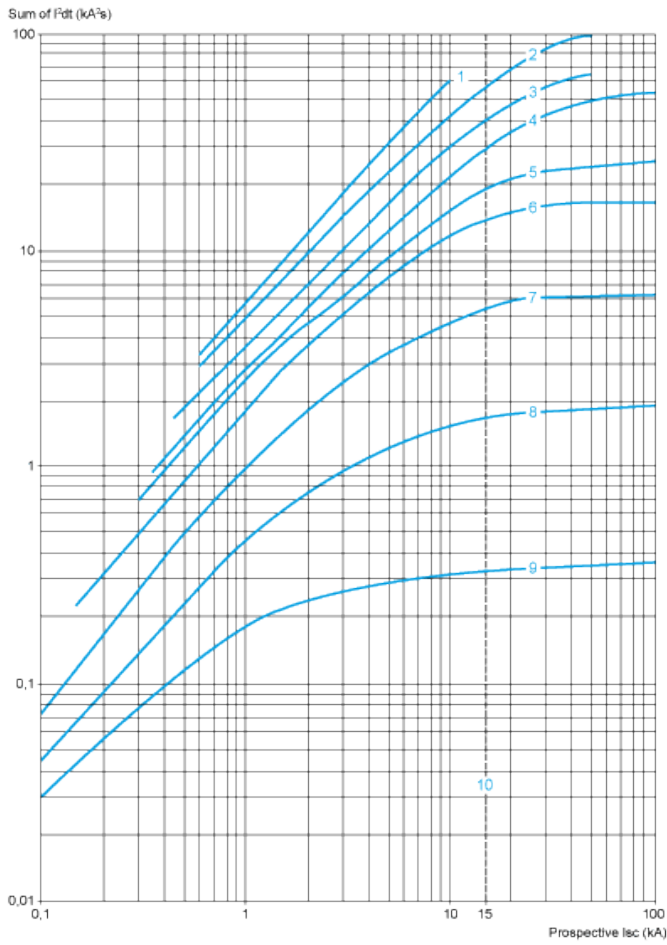
**Thermal Limit on Short-Circuit for GV2L and GV2LE + Thermal Overload Relay LRD or LR2K**

Thermal Limit in  $\text{kA}^2\text{s}$  in the Magnetic Operating Zone

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



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- 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).

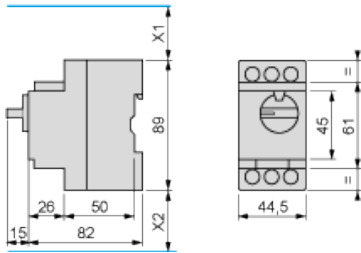


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**GV2L**

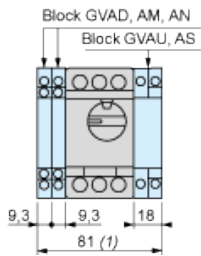
**Dimensions**



X1 Electrical clearance = 40 mm for  $U_e \leq 415$  V, or 80 mm for  $U_e = 440$  V, or 120 mm for  $U_e = 500$  and  $690$  V.

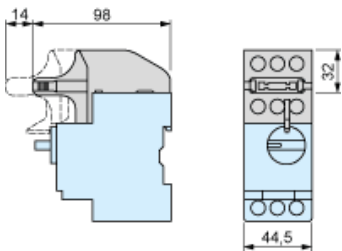
X2 = 40 mm.

**GVAD, AM, AN, AU, AS**



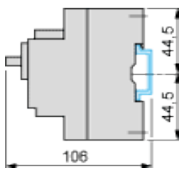
1 Maximum

**GV2AK00**

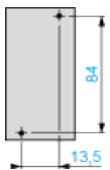


**Mounting**

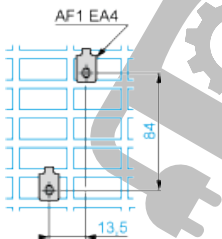
On rail AM1 DE200, AM1 ED200 (35 x 15)



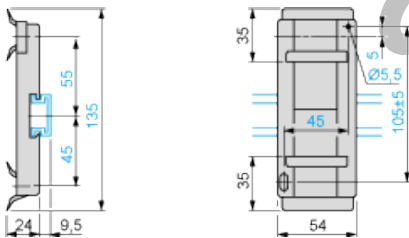
Panel mounted



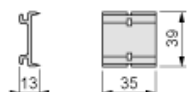
On pre-slotted mounting plate AM1 PA



**Adapter Plate GK2AF01**

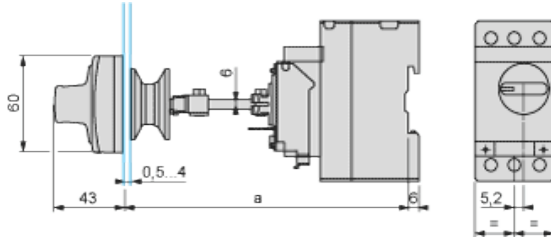


**7.5 mm Height Compensation Plate GV1F03**

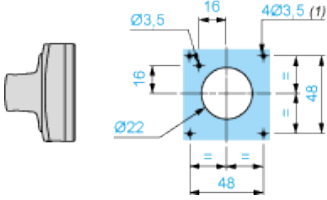


## Mounting

Mounting of External Operator GV2APN01, GV2APN02 or GV2APN04 for Motor Circuit Breakers GV2L

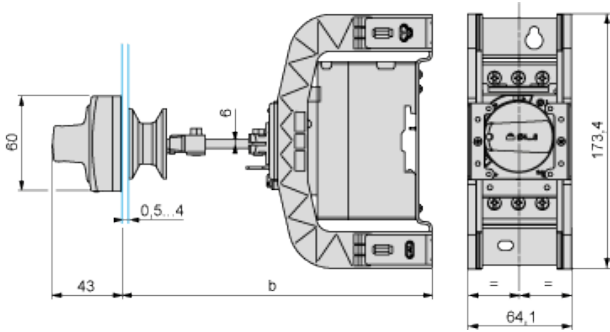


Door cut-out



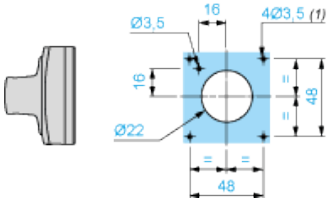
(1) For IP65 only.

Mounting of External Operator GVAPH02 for Motor Circuit Breakers GV2L



|                                 | b       |         |
|---------------------------------|---------|---------|
|                                 | Minimum | Maximum |
| GV2 APN.. + GV APH02            | 151     | 250     |
| GV2 APN.. + GV APH02 + GV APK11 | 250     | 445     |

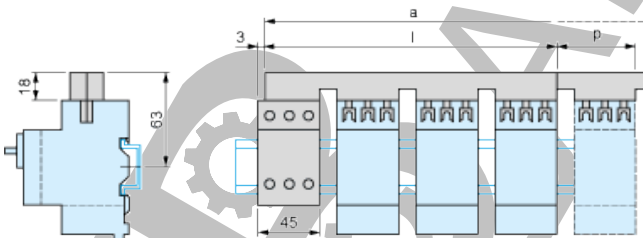
Door cut-out



(1) For IP65 only.

## GV2L and GV2LE

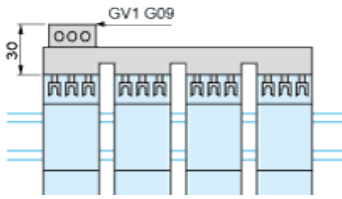
Sets of busbars GV2G445, GV2G454, GV2G472, with terminal block GV2G05



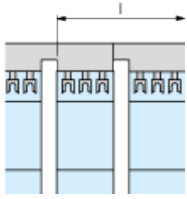
|                     | l   |     | p   |     |
|---------------------|-----|-----|-----|-----|
|                     | 5   | 6   | 7   | 8   |
| GV2G445 (4 x 45 mm) | 179 |     | 45  |     |
| GV2G454 (4 x 54 mm) | 206 |     | 54  |     |
| GV2G472 (4 x 72 mm) | 332 |     | 72  |     |
| Number of tap-offs  | 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

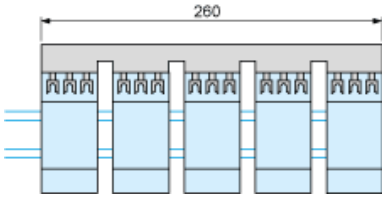


Sets of busbars GV2G245, GV2G254, GV2GR272

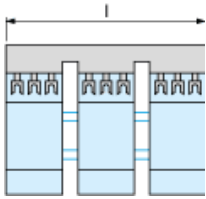


|                     | I   |
|---------------------|-----|
| GV2G245 (2 x 45 mm) | 89  |
| GV2G254 (2 x 54 mm) | 98  |
| GV2G272 (2 x 72 mm) | 116 |

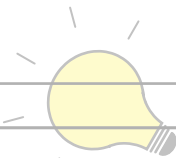
Set of busbars GV2G554



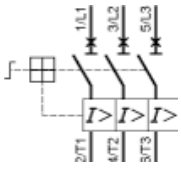
Sets of busbars GV2G345 and GV2G354



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

  
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GV2L••



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