GV4PEM25S
Motor circuit breaker, TeSys GV4, 3P, 25A, Icu 100kA, thermal magnetic multifunction, Everlink terminals

Main
Range TeSys
Product name TeSys GV4
Device short name GV4PEM
Product or component type Multifunction circuit breaker
Device application Motor protection
Protection type Long start
Short-circuit
Overload
Short time short-circuit protection
Phase unbalance
Locked rotor
Phase loss
Jam
Ground fault protection

Utilisation category Category A
Suitability for isolation Yes conforming to IEC 60947-1
Poles description 3P
[Ue] rated operational voltage 690 V AC 50/60 Hz conforming to IEC 60947-2
[In] rated current 25 A
Trip unit technology Thermal-magnetic
Electronic
Magnetic tripping current 425 A
[Isd] short-time pick-up adjustment range 5...13 x Ir
Thermal protection adjustment range 10...25 A
Motor tripping class 10
20
Phase failure sensitivity Yes conforming to IEC 60947-4-1
Breaking capacity Icu 120 kA at 220...240 V AC 50/60 Hz conforming to IEC 60947-2
Icu 100 kA at 380...415 V AC 50/60 Hz conforming to IEC 60947-2
Icu 70 kA at 440 V AC 50/60 Hz conforming to IEC 60947-2
Icu 30 kA at 500 V AC 50/60 Hz conforming to IEC 60947-2
Icu 18 kA at 525 V AC 50/60 Hz conforming to IEC 60947-2
100 kA at 208Y/120 V AC 50/60 Hz conforming to UL 60947
100 kA at 240 V AC 50/60 Hz conforming to UL 60947
65 kA at 480Y/277 V AC 50/60 Hz conforming to UL 60947
Icu 10 kA at 660...690 V AC 50/60 Hz conforming to IEC 60947-2
25 kA at 600Y/347 V AC 50/60 Hz conforming to UL 60947

[Ics] rated service breaking capacity
120 kA at 220...240 V AC 50/60 Hz conforming to IEC 60947-2
100 kA at 380...415 V AC 50/60 Hz conforming to IEC 60947-2
70 kA at 440 V AC 50/60 Hz conforming to IEC 60947-2
30 kA at 500 V AC 50/60 Hz conforming to IEC 60947-2
18 kA at 525 V AC 50/60 Hz conforming to IEC 60947-2
2.5 kA at 660...690 V AC 50/60 Hz conforming to IEC 60947-2

[Uimp] rated impulse withstand voltage
IEC 60947-2 8 kV

[U] rated insulation voltage
800 V conforming to IEC 60947-2

Mechanical durability
40000 cycles

Electrical durability
40000 cycles for AC-3 at 440 V In/2
20000 cycles for AC-3 at 440 V In

Complementary
Motor power kW
7.5 kW at 660...690 V AC 50/60 Hz
5.5 kW at 400...415 V AC 50/60 Hz
7.5 kW at 500 V AC 50/60 Hz
9 kW at 660...690 V AC 50/60 Hz
11 kW at 660...690 V AC 50/60 Hz
7.5 kW at 400...415 V AC 50/60 Hz
9 kW at 400...415 V AC 50/60 Hz
11 kW at 400...415 V AC 50/60 Hz
9 kW at 500 V AC 50/60 Hz
11 kW at 500 V AC 50/60 Hz
15 kW at 500 V AC 50/60 Hz
15 kW at 660...690 V AC 50/60 Hz
18.5 kW at 660...690 V AC 50/60 Hz

Control type
Toggle

Handle padlocking
With a lock accessory

Number of slots
1 slot(s) for alarm switch for fault signalling contact, plug-in
1 slot(s) for voltage release for electrical remote tripping, plug-in
1 slot(s) for auxiliary switch for open/close contact, plug-in

Local signalling
Flashing LED (green) ready:
LED (red) alarm (T° >95%):
Green indicator presence of auxiliary contacts:

Communication port protocol
NFC

Standards
EN/IEC 60947-4-1
EN/IEC 60947-2
CSA C22.2 No 60947-4-1
UL 60947-4-1

Product certifications
IEC
UL
CSA
CCC
EAC
ATEX
EU-RO MR

Quality labels
CE

Mounting mode
By clips
By screws

Mounting support
35 mm symmetrical DIN rail
Plate
75 mm symmetrical DIN rail

Connections - terminals
Top 1 EverLink BTR screw connectors wire size 1.5…70 mm², solid
Top 1 EverLink BTR screw connectors wire size 1.5…50 mm², flexible
Bottom 1 EverLink BTR screw connectors wire size 2.5…95 mm², solid
Bottom 1 EverLink BTR screw connectors wire size 2.5…70 mm², flexible

Connection pitch
27 mm
<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wire stripping length</td>
<td>20 mm</td>
</tr>
<tr>
<td>Tightening torque</td>
<td>9 N.m for 16…95 mm²</td>
</tr>
<tr>
<td></td>
<td>5 N.m for 1.5…10 mm²</td>
</tr>
<tr>
<td>Width</td>
<td>81 mm</td>
</tr>
<tr>
<td>Height</td>
<td>155 mm</td>
</tr>
<tr>
<td>Depth</td>
<td>116 mm</td>
</tr>
<tr>
<td>Net weight</td>
<td>1.45 kg</td>
</tr>
<tr>
<td>Colour</td>
<td>Grey (RAL 7016)</td>
</tr>
</tbody>
</table>

**Environment**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambient air temperature for storage</td>
<td>-50…85 °C</td>
</tr>
<tr>
<td>Ambient air temperature for operation</td>
<td>-25…70 °C</td>
</tr>
<tr>
<td>Operating altitude</td>
<td>0…2000 m without derating</td>
</tr>
<tr>
<td></td>
<td>2000…5000 m with derating</td>
</tr>
<tr>
<td>IP degree of protection</td>
<td>IP40 front face conforming to IEC 60529</td>
</tr>
<tr>
<td>IK degree of protection</td>
<td>IK07 conforming to IEC 62262</td>
</tr>
<tr>
<td>Pollution degree</td>
<td>3 conforming to IEC 60947-1</td>
</tr>
<tr>
<td>Tropicalisation</td>
<td>2 conforming to IEC 68-2</td>
</tr>
<tr>
<td>Mechanical robustness</td>
<td>Vibrations: +/- 1 mm 2…13.2 Hz conforming to IEC 60068-2-6</td>
</tr>
<tr>
<td></td>
<td>Vibrations: 0.7 gn 13.2…100 Hz conforming to IEC 60068-2-6</td>
</tr>
<tr>
<td></td>
<td>Shocks: 15 gn 11 ms conforming to IEC 60068-2-27</td>
</tr>
</tbody>
</table>

**Packing Units**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit Type of Package 1</td>
<td>PCE</td>
</tr>
<tr>
<td>Number of Units in Package 1</td>
<td>1</td>
</tr>
<tr>
<td>Package 1 Weight</td>
<td>1.656 kg</td>
</tr>
<tr>
<td>Package 1 Height</td>
<td>11 cm</td>
</tr>
<tr>
<td>Package 1 width</td>
<td>16.5 cm</td>
</tr>
<tr>
<td>Package 1 Length</td>
<td>22 cm</td>
</tr>
</tbody>
</table>

**Offer Sustainability**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sustainable offer status</td>
<td>Green Premium product</td>
</tr>
<tr>
<td>EU RoHS Directive</td>
<td>Compliant</td>
</tr>
<tr>
<td></td>
<td>EU RoHS Declaration</td>
</tr>
<tr>
<td>Mercury free</td>
<td>Yes</td>
</tr>
<tr>
<td>RoHS exemption information</td>
<td>Yes</td>
</tr>
<tr>
<td>China RoHS Regulation</td>
<td>China RoHS declaration</td>
</tr>
<tr>
<td></td>
<td>Product out of China RoHS scope. Substance declaration for your information</td>
</tr>
<tr>
<td>Environmental Disclosure</td>
<td>Product Environmental Profile</td>
</tr>
<tr>
<td>Circularity Profile</td>
<td>End of Life Information</td>
</tr>
<tr>
<td>WEEE</td>
<td>The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins</td>
</tr>
<tr>
<td>PVC free</td>
<td>Yes</td>
</tr>
<tr>
<td>Halogen content performance</td>
<td>Halogen free plastic parts product</td>
</tr>
</tbody>
</table>

**Contractual warranty**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Warranty</td>
<td>18 months</td>
</tr>
</tbody>
</table>
Thermal-Magnetic Tripping Curves for GV4P, GV4PE, GV4PEM

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

Hot state

<table>
<thead>
<tr>
<th>Class</th>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Class 10</td>
<td>Isd = 5...13x Ir</td>
</tr>
<tr>
<td>2</td>
<td>Class 20</td>
<td>Il = 17 In</td>
</tr>
<tr>
<td>3</td>
<td>Isd = 5...13x Ir</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Il = 17 In</td>
<td></td>
</tr>
</tbody>
</table>
Current Limitation on Short-Circuit for GV4P, GV4PE, GV4PEM (3-Phase 400/415 V)

Dynamic Stress

\[ I_{\text{peak}} = f(\text{prospective} \; I_{\text{sc}}) \text{ at } 1.05 \; U_e = 435 \; V \]
1  Maximum peak current
2  GV4P115
3  GV4P80
4  GV4P50
5  GV4P25
6  GV4P12
7  GV4P07
8  GV4P03
9  GV4P02

Thermal Limit on Short-Circuit for GV4P, GV4PE, GV4PEM

Thermal Limit in kA^2s in the Magnetic Operating Zone

Sum of I^2dt = f (prospective Isc) at 1.05 Ue = 435 V
GV4 with Toggle: GV4LE, GV4PE, GV4PEM

With EverLink® Connector

With Crimp Lug Connector

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.

<table>
<thead>
<tr>
<th>Safety Clearance (mm)</th>
<th>Painted Sheet Metal</th>
<th>Bare Sheet Metal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>No accessory</td>
<td>30</td>
<td>0</td>
</tr>
<tr>
<td>Interphase barriers</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Long terminal shield</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
Magnetic Motor Circuit Breakers
GV4P, GV4PE, GV4PEM