

# Product data sheet

Specifications



generator protection relay,  
PowerLogic P3G32 6CT 3Io ringlug  
4VT 6DI 9DO 24-48V DI24V RS485  
RJ45 ANSI

REL53097

Product availability: Non-Stock - Not normally stocked in distribution facility

**Price\*: 5,295.56 USD**

## Main

|                                |  |
|--------------------------------|--|
| Range of Product               | PowerLogic P3  |
| Product or Component Type      | Protection relay   |
| Relay application              | Generator  |
| product reference              | P3G32-DGA1A-AA1FA-BAAAB  |
| Mounting case size             | 30TE   |
| Device mounting                | Flush  |
| Mounting Mode                  | Flush mounting   |
| power supply                   | 24...48 V DC   |
| measuring inputs               | 6 1/5 A CT phase current<br>2 5/1 A CT residual current<br>1 1/0.2 A CT residual current<br>4 100 V/110 V VT voltage   |
| number of Digital Inputs (DI)  | 6  |
| number of analogue inputs      | 0  |
| number of Digital Outputs (DO) | 10 DO<br>1 watchdog  |
| number of analogue outputs     | 0  |
| communication ports            | Front USB port 1<br>Rear RS485 1<br>Rear RJ45 1  |
| communication protocols        | IEC 61850 ed. 1<br>IEC 61850 ed. 2<br>IEC 60870-5-101<br>DNP3 TCP<br>Modbus TCP<br>EtherNet/IP<br>IEC 60870-5-103<br>DNP3<br>Modbus RTU<br>DeviceNet<br>SPAbus |
| Cybersecurity                  | Password protection<br>Port hardening  |

Price is "List Price" and may be subject to a trade discount – check with your local distributor or retailer for actual price.

|                             |  |
|-----------------------------|--|
| <b>protection functions</b> | Underimpedance 21G<br>Overfluxing (V/Hz) 24<br>Synchro-check 25<br>Undervoltage 27<br>Positive sequence undervoltage 27P<br>Directional active underpower 32<br>Field loss (underimpedance) 40<br>Under reactance 21/40<br>Negative sequence overcurrent 46<br>Thermal overload protection 49<br>Earth fault overcurrent 50N/51N<br>Phase overcurrent 50/51<br>Breaker failure 50BF<br>Switch ON to fault (SOTF)<br>Capacitor bank unbalance 51C<br>Voltage-restrained overcurrent 51V<br>Switch ON to fault (SOTF) 81/81N<br>Overvoltage 59<br>Earth fault overvoltage 59N<br>Restricted earth fault 64REF<br>Stator earth fault 64S<br>Directional phase overcurrent 67<br>Directional earth fault 67N<br>Magnetising inrush detection 68F2<br>H5 detection 68H5<br>Pole slip 78PS<br>Underfrequency 81/81N<br>Rate of change of frequency 81R<br>Lockout relay 86<br>Machine differential 87M<br>Programmable stages 99 8<br>Programmable curve<br>Cold load pick-up<br>CT supervision 60<br>VT supervision 60FL<br>Programmable curve 99 8 |
| <b>Arc flash protection</b> | No   |
| <b>Relay Type</b>           | Differential current relay   |

|  |   |
|--|---|
| <b>measurement functions</b>           | <ul style="list-style-type: none"> <li>Current 3-phase</li> <li>Current zero sequence</li> <li>Current positive sequence</li> <li>Current negative sequence</li> <li>Current ratio of negative and positive</li> <li>Voltage phase to earth</li> <li>Voltage phase to phase</li> <li>Voltage zero sequence</li> <li>Voltage positive sequence</li> <li>Voltage negative sequence</li> <li>Voltage ratio of negative and positive</li> <li>Short circuit fault reactance</li> <li>Fault location current</li> <li>Earth fault reactance</li> <li>Frequency</li> <li>Short circuit fault reactance phasor diagram view</li> <li>Active power</li> <li>RMS active power</li> <li>Reactive power</li> <li>Fault location current 3-phase</li> <li>RMS reactive power</li> <li>Apparent power</li> <li>RMS apparent power</li> <li>Active energy</li> <li>Reactive energy</li> <li>Earth fault reactance positive sequence</li> <li>Cos <math>\phi</math></li> <li>Tan <math>\phi</math></li> <li>Power angle</li> <li>Power factor</li> <li>Voltage phasor diagram view</li> <li>Current phasor diagram view</li> <li>Frequency ratio of negative and positive</li> <li>Current 2nd, 15th harmonics with THD</li> <li>Voltage 2nd, 15th harmonics with THD</li> <li>Condition monitoring CB wear</li> <li>Active power phase to earth</li> <li>Voltage interruption</li> <li>RMS active power zero sequence</li> <li>Reactive power positive sequence</li> <li>RMS reactive power negative sequence</li> <li>Apparent power ratio of negative and positive</li> </ul> |
| <b>control functions</b>               | <ul style="list-style-type: none"> <li>Switchgear control and monitoring</li> <li>Programmable switchgear interlocking</li> <li>Local control on single-line diagram</li> <li>Local control with I/O keys</li> <li>Local/remote control</li> <li>2 function keys</li> <li>Mobile application with Easergy SmartApp</li> <li>Web-server</li> <li>Programmable logic</li> </ul>   |
| <b>controllable switchgear devices</b> | 3 controlled + 3 displayed  |
| <b>number of setting groups</b>        | 4   |
| <b>monitoring functions</b>            | <ul style="list-style-type: none"> <li>Trip circuit supervision 74</li> <li>Circuit breaker monitoring</li> <li>Relay self-monitoring</li> </ul>  |
| <b>logs and records</b>                | <ul style="list-style-type: none"> <li>Event recording</li> <li>Disturbance recording</li> <li>Tripping context</li> </ul>  |
| <b>Switchgear diagnosis type</b>       | <ul style="list-style-type: none"> <li>CT supervision TCS</li> <li>Trip circuit supervision TCS</li> </ul>  |
| <b>Connections - terminals</b>         | <ul style="list-style-type: none"> <li>Screw removable (digital input/output)</li> <li>Pin removable (voltage transformer)</li> <li>Ring lugs fixed (current transformer)</li> </ul>  |

## Complementary

|                                      |            |
|--------------------------------------|------------|
| <b>Operating threshold</b>           | 24 V AC/DC |
| <b>Time synchronisation protocol</b> | SNTP       |

|                         |   |
|-------------------------|---|
| <b>Software name</b>    | ESetup Easergy Pro virtual simulation test<br>Easergy SmartApp                          |
| <b>Web server</b>       | Embedded HTTP server  |
| <b>Display type</b>     | LCD 128 x 128 pixels with single line diagram<br>LCD 128 x 128 pixels with ANSI symbols |
| <b>Number of key</b>    | 2 customizable  |
| <b>Local signalling</b> | 2 LEDs<br>16 LEDs programmable  |
| <b>Height</b>           | 6.9 in (176 mm)   |
| <b>Width</b>            | 10.6 in (270 mm)  |
| <b>Depth</b>            | 9.06 in (230 mm)  |
| <b>Net weight</b>       | 9.3 lb(US) (4.2 kg) maximum   |

## Environment

|  |   |
|--|---|
| <b>climatic withstand</b>                    | Exposure to dry heat Bb EN/IEC 60068-2-2<br>Exposure to cold Ad EN/IEC 60068-2-1<br>Exposure to damp heat in service Db EN/IEC 60068-2-30<br>Exposure to damp heat in service Cab EN/IEC 60068-2-78   |
| <b>Mechanical robustness</b>                 | Vibrations class II) IEC 60255-21-1<br>VibrationsFc IEC 60068-2-6<br>Shocks class II) IEC 60255-21-2<br>ShocksEa IEC 60068-2-27<br>Seismic tests method A class II) IEC 60255-21-3  |
| <b>Electromagnetic compatibility</b>         | Emission tests IEC/EN 60255-26 ed. 3<br>Emission tests class A CISPR 11<br>Emission tests class A CISPR 22<br>EMC immunity IEC/EN 60255-26 ed. 3<br>EMC immunity EN/IEC 61000-4-18<br>EMC immunity level 4 EN/IEC 61000-4-2<br>EMC immunity level 3 EN/IEC 61000-4-3<br>EMC immunity level 4 EN/IEC 61000-4-4<br>EMC immunity level 3 EN/IEC 61000-4-5<br>EMC immunity level 3 EN/IEC 61000-4-6<br>EMC immunity EN/IEC 61000-4-8<br>EMC immunity level 5 EN/IEC 61000-4-9<br>EMC immunity EN/IEC 61000-4-29<br>EMC immunity EN/IEC 61000-4-11<br>EMC immunity EN/IEC 61000-4-17<br>EMC immunity IEC 60255-22-1<br>EMC immunity IEC 60255-22-2<br>EMC immunity IEC 60255-22-3<br>EMC immunity IEC 60255-22-4<br>EMC immunity IEC 60255-22-5<br>EMC immunity IEC 60255-22-6<br>EMC immunity IEC 60255-27<br>EMC immunity class III IEC 60255-5<br>EMC immunity EN/IEC 60255-1 |
| <b>Ambient air temperature for operation</b> | -40...149 °F (-40...65 °C)  |
| <b>IP degree of protection</b>               | IP54 front IEC 60529  |
| <b>maximum operating altitude</b>            | 6561.68 ft (2000 m)   |
| <b>Protective treatment</b>                  | Conformal coating   |
| <b>Relative humidity</b>                     | 0...95 %, without condensation  |

## Ordering and shipping details

|                          |               |
|--------------------------|---------------|
| <b>Category</b>          | US1PL1S11405  |
| <b>Discount Schedule</b> | PL1S          |
| <b>GTIN</b>              | 3606487107132 |

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|                      |    |
|----------------------|----|
| <b>Returnability</b> | No |
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|--------------------------|----|
| <b>Country of origin</b> | LV |
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## Packing Units

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|                               |     |
|-------------------------------|-----|
| <b>Unit Type of Package 1</b> | PCE |
|-------------------------------|-----|

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|                                     |   |
|-------------------------------------|---|
| <b>Number of Units in Package 1</b> | 1 |
|-------------------------------------|---|

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|                         |                  |
|-------------------------|------------------|
| <b>Package 1 Height</b> | 15.75 in (40 cm) |
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|------------------------|------------------|
| <b>Package 1 Width</b> | 11.81 in (30 cm) |
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|                         |                  |
|-------------------------|------------------|
| <b>Package 1 Length</b> | 11.81 in (30 cm) |
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|-------------------------|----------------------|
| <b>Package 1 Weight</b> | 11.7 lb(US) (5.3 kg) |
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## Contractual warranty

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| <b>Warranty</b> | Up to 10 years (Standard warranty 2 years. Please check with your local SE representative for extended warranty availability and conditions) |
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## Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

[Environmental Data explained >](#)

[How we assess product sustainability >](#)

### Environmental footprint

[Environmental Disclosure](#)

[Product Environmental Profile](#)

## Use Better

### Materials and Substances

Packaging made with recycled cardboard **No**

Packaging without single use plastic **No**

EU RoHS Directive **Compliant with Exemptions**

REACH Regulation [REACH Declaration](#)

China RoHS Regulation [China RoHS declaration](#)

## Use Again

### Repack and remanufacture

[Circularity Profile](#)

[End of Life Information](#)

WEEE



The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.

Take-back

No

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