

# Product datasheet

Specifications



## PowerLogic™ P5M30 48-250V 3CT 2Io 4VT 10DI-8DO

REL50407

EAN Code: 3606489487942

### Main

|                                |   |
|--------------------------------|---|
| Range of product               | PowerLogic P5   |
| Product or component type      | Protection and control relay  |
| Relay application              | Motor   |
| product reference              | P5M30-AACB-GAAAA-BAEA   |
| Mounting case size             | 30TE  |
| Device mounting                | Flush   |
| Mounting mode                  | Withdrawable  |
| power supply                   | 48...250 V DC<br>100...230 V AC   |
| measuring inputs               | : 1/5 A CT phase current 3<br>: 1/5 A CT residual current 1<br>: 1 A CT residual current 1<br>: VT voltage 4  |
| Number of sensors              | 0 temperature sensor(s)<br>0 arc sensor(s)  |
| number of Digital Inputs (DI)  | 10  |
| number of analogue inputs      | 0   |
| number of Digital Outputs (DO) | 7 DO<br>1 watchdog  |
| number of analogue outputs     | 0   |
| communication ports            | USB port 2 front  |
| communication protocols        | -   |
| Cybersecurity                  | Port hardening<br>Firmware signature<br>Client IP address filter<br>Secured communication with associated tools<br>Security policy management<br>Role-based access control<br>Security log<br>LDAP<br>RADIUS based user authentication<br>IEC 62443-4-2 SL1 |

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

|  |  |
|--|--|
| <b>protection functions</b>            | <ul style="list-style-type: none"> <li>Phase overcurrent 50/51</li> <li>Directional phase overcurrent 67</li> <li>Earth fault overcurrent 50N/51N</li> <li>Restricted earth fault 64REF</li> <li>Directional earth fault 67N</li> <li>Transient earth fault 67NI</li> <li>Neutral admittance 21YN</li> <li>Earth fault wattmetric 32N</li> <li>Broken conductor 46 I2/I1</li> <li>Current unbalance 46 I2/I1</li> <li>Cold load pick-up</li> <li>Switch ON to fault (SOTF)</li> <li>H2 detection</li> <li>H5 detection</li> <li>Breaker failure 50BF</li> <li>Directional active underpower 37P</li> <li>Phase undercurrent 37</li> <li>Excessive starting time, locked rotor 48/51LR</li> <li>Motor restart inhibition 66</li> <li>Negative sequence overcurrent 46</li> <li>Overvoltage 59</li> <li>Undervoltage 27</li> <li>Positive sequence undervoltage 27P</li> <li>Earth fault overvoltage 59N</li> <li>Underfrequency 81/81N</li> <li>Lockout relay 86</li> <li>CT supervision 60</li> <li>VT supervision 60</li> <li>Programmable stages 99</li> <li>Programmable logic</li> <li>Programmable curve</li> </ul> |
| <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>Phasor diagram of currents or voltages</li> <li>Current 2nd, 15th harmonics with THD</li> <li>Voltage 3-phase</li> <li>Voltage residual</li> <li>Voltage zero sequence</li> <li>Voltage positive sequence</li> <li>Voltage negative sequence</li> <li>Frequency</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/remote control</li> </ul>  |
| <b>controllable switchgear devices</b> | 6 controlled + 2 monitored objects   |
| <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> <li>Relay maintenance</li> </ul>  |
| <b>Switchgear diagnosis type</b>       | <ul style="list-style-type: none"> <li>CT/VT supervision ANSI code: 60</li> <li>Trip circuit supervision ANSI code: 74</li> </ul>  |
| <b>Connections - terminals</b>         | <ul style="list-style-type: none"> <li>Screw (digital input/output)</li> <li>Ring lugs (analog inputs and outputs)</li> </ul>  |

## Complementary

|                      |   |
|----------------------|---|
| <b>Software name</b> | ESetup Easergy Pro: virtual simulation test |
| <b>Display type</b>  | Colour LCD 480 x 272 pixels                 |
| <b>Number of key</b> | 7 customizable                              |

|                         |   |
|-------------------------|---|
| <b>Local signalling</b> | 4 x LED<br>10 x LED tri-colour programmable |
| <b>Height</b>           | 176 mm                                      |
| <b>Width</b>            | 152 mm                                      |
| <b>Depth</b>            | 219 mm                                      |
| <b>Net weight</b>       | 3.5 kg                                      |

## Environment

|  |  |
|--|--|
| <b>climatic withstand</b>                    | Exposure to cold conforming to IEC 60068-2-1<br>Exposure to dry heat conforming to IEC 60068-2-2<br>Exposure to damp heat in service conforming to IEC 60068-2-78<br>Exposure to damp heat in service conforming to IEC 60068-2-60<br>Temperature variation conforming to IEC 60068-2-14<br>Salt mist conforming to IEC 60068-2-52<br>Influence of corrosion/gas test 2 conforming to IEC 60068-2-60<br>Influence of corrosion/gas test 4 conforming to IEC 60068-2-60<br>Influence of corrosion/gas test 2 conforming to IEC 60721-3-3<br>Influence of corrosion/gas test 4 conforming to IEC 60721-3-3   |
| <b>Mechanical robustness</b>                 | Vibrations (level: class 2) conforming to IEC 60255-21-1<br>Vibrations conforming to GOST 17516.1<br>Vibrations conforming to IACS E10<br>Shocks (level: class 2) conforming to IEC 60255-21-2<br>Earthquakes (level: class 2) conforming to IEC 60255-21-3  |
| <b>Electromagnetic compatibility</b>         | Emission tests class A conforming to CISPR 11<br>Emission tests class A conforming to CISPR 32<br>Emission tests conforming to IACS E10<br>EMC immunity class 4 conforming to IEC 61000-4-2<br>EMC immunity class 4 conforming to ANSI C37.90.3<br>EMC immunity level 3 conforming to IEC 61000-4-3<br>EMC immunity conforming to ANSI C37.90.2<br>EMC immunity conforming to GOST 32137<br>EMC immunity conforming to GOST 30804.4.3<br>EMC immunity conforming to IACS E10<br>EMC immunity level 5 conforming to IEC 61000-4-8<br>EMC immunity level 5 conforming to IEC 61000-4-9<br>EMC immunity level 5 conforming to IEC 61000-4-10<br>EMC immunity level 3 conforming to IEC 61000-4-6<br>EMC immunity level 3 conforming to IEC 61000-4-18<br>EMC immunity conforming to ANSI C37.90.1<br>EMC immunity conforming to IEC 61000-4-12<br>EMC immunity conforming to GOST 30804.4.12<br>EMC immunity level 4 conforming to IEC 61000-4-16<br>EMC immunity level 4 conforming to IEC 61000-4-4<br>EMC immunity level 4 conforming to IEC 61000-4-5 |
| <b>Ambient air temperature for operation</b> | -40...85 °C ( 16 h )<br>-40...70 °C ( 96 h )   |
| <b>IP degree of protection</b>               | IP54 conforming to IEC 60529   |
| <b>maximum operating altitude</b>            | 2000 m   |
| <b>Protective treatment</b>                  | Conformal coating conforming to IEC 60068-2-52:Kb/1<br>Conformal coating conforming to IEC 60068-2-60:Ke<br>Conformal coating conforming to IEC 60721-3-3:3C2  |
| <b>Relative humidity</b>                     | 0...93 % at 40 °C, without condensation, 56 days<br>93...95 % at 25...55 °C, 6 cycles, 12 + 12 hours   |

## Packing Units

|                                     |         |
|-------------------------------------|---------|
| <b>Unit Type of Package 1</b>       | PCE     |
| <b>Number of Units in Package 1</b> | 1       |
| <b>Package 1 Height</b>             | 30.0 cm |
| <b>Package 1 Width</b>              | 30.0 cm |
| <b>Package 1 Length</b>             | 35.0 cm |

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Package 1 Weight

4.5 kg

## Contractual warranty

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Warranty

Up to 10 years extended warranty (Standard warranty 2 years. Please check with your local SE representative for extended warranty availability and conditions)

## 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

|   |            |
|---|------------|
| Carbon footprint (kg.eq.CO2 per CR, Total Life cycle) | <b>273</b> |
|---|------------|

|                          |   |
|--------------------------|---|
| Environmental Disclosure | <a href="#">Product Environmental Profile</a> |
|--------------------------|---|

## Use Better

### Materials and Substances

|  |            |
|--|------------|
| Packaging made with recycled cardboard | <b>Yes</b> |
|--|------------|

|                                      |           |
|--------------------------------------|-----------|
| Packaging without single use plastic | <b>No</b> |
|--------------------------------------|-----------|

|                   |   |
|-------------------|---|
| EU RoHS Directive | <b>Pro-active compliance (Product out of EU RoHS legal scope)</b> |
|-------------------|---|

|                  |                                   |
|------------------|-----------------------------------|
| REACH Regulation | <a href="#">REACH Declaration</a> |
|------------------|-----------------------------------|

|                       |  |
|-----------------------|--|
| China RoHS Regulation | <a href="#">China RoHS declaration</a> |
|-----------------------|--|

## Use Again

### Repack and remanufacture

|                     |   |
|---------------------|---|
| 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

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Take-back

No

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