

# Product datasheet

Specifications



## PowerLogic™ P5F30 48-250V 3CT 2Io 4VT 10DI-8DO

REL50401

EAN Code: 3606489487881

### Main

Range of product	PowerLogic P5
Product or component type	Protection and control relay
Relay application	Feeder - directional over current
product reference	P5F30-AACB-GAAAA-BAEA
Mounting case size	30TE
Device mounting	Flush
Mounting mode	Withdrawable
power supply	48...250 V DC 100...230 V AC
measuring inputs	: 1/5 A CT phase current 3 : 1/5 A CT residual current 1 : 1 A CT residual current 1 : VT voltage 4
Number of sensors	0 temperature sensor(s) 0 arc sensor(s)
number of Digital Inputs (DI)	10
number of analogue inputs	0
number of Digital Outputs (DO)	7 DO 1 watchdog
number of analogue outputs	0
communication ports	USB port 2 front
communication protocols	-
Cybersecurity	Port hardening Firmware signature Client IP address filter Secured communication with associated tools Security policy management Role-based access control Security log LDAP RADIUS based user authentication 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>Capacitor bank unbalance 51C</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>Fault locator 21FL</li> <li>Recloser 79</li> <li>Negative sequence overcurrent 46</li> <li>Overvoltage 59</li> <li>Undervoltage 27</li> <li>Earth fault overvoltage 59N</li> <li>Underfrequency 81/81N</li> <li>Rate of change of frequency 81R</li> <li>Synchro-check 25</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 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 Exposure to dry heat conforming to IEC 60068-2-2 Exposure to damp heat in service conforming to IEC 60068-2-78 Exposure to damp heat in service conforming to IEC 60068-2-30 Temperature variation conforming to IEC 60068-2-14 Salt mist conforming to IEC 60068-2-52 Influence of corrosion/gas test 2 conforming to IEC 60068-2-60 Influence of corrosion/gas test 4 conforming to IEC 60068-2-60 Influence of corrosion/gas test 2 conforming to IEC 60721-3-3 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 Vibrations conforming to GOST 17516.1 Vibrations conforming to IACS E10 Shocks (level: class 2) conforming to IEC 60255-21-2 Earthquakes (level: class 2) conforming to IEC 60255-21-3
<b>Electromagnetic compatibility</b>	Emission tests class A conforming to CISPR 11 Emission tests class A conforming to CISPR 32 Emission tests conforming to IACS E10 EMC immunity class 4 conforming to IEC 61000-4-2 EMC immunity class 4 conforming to ANSI C37.90.3 EMC immunity level 3 conforming to IEC 61000-4-3 EMC immunity conforming to ANSI C37.90.2 EMC immunity conforming to GOST 32137 EMC immunity conforming to GOST 30804.4.3 EMC immunity conforming to IACS E10 EMC immunity level 5 conforming to IEC 61000-4-8 EMC immunity level 5 conforming to IEC 61000-4-9 EMC immunity level 5 conforming to IEC 61000-4-10 EMC immunity level 3 conforming to IEC 61000-4-6 EMC immunity level 3 conforming to IEC 61000-4-18 EMC immunity conforming to ANSI C37.90.1 EMC immunity conforming to IEC 61000-4-12 EMC immunity conforming to GOST 30804.4.12 EMC immunity level 4 conforming to IEC 61000-4-16 EMC immunity level 4 conforming to IEC 61000-4-4 EMC immunity level 4 conforming to IEC 61000-4-5
<b>Ambient air temperature for operation</b>	-40...85 °C ( 16 h ) -40...70 °C ( 96 h )
<b>Ambient air temperature for storage</b>	-40...85 °C
<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 Conformal coating conforming to IEC 60068-2-60:Ke Conformal coating conforming to IEC 60721-3-3:3C2
<b>Relative humidity</b>	0...93 % at 40 °C, without condensation, 56 days 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

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Package 1 Length	35.0 cm
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Package 1 Weight	4.5 kg
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## Contractual warranty

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Warranty (in months)	24
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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

Total lifecycle Carbon footprint	273 kg CO2 eq.
Carbon footprint of the manufacturing phase [A1 to A3]	171 kg CO2 eq.
Carbon footprint of the distribution phase [A4]	0.6 kg CO2 eq.
Carbon footprint of the installation phase [A5]	0.1 kg CO2 eq.
Carbon footprint of the use phase [B2, B3, B4, B6]	99 kg CO2 eq.
Carbon footprint of the end-of-life phase [C1 to C4]	2 kg CO2 eq.
Environmental Disclosure	<a href="#">Product Environmental Profile</a>

## Use Better



### Materials and Substances

Packaging made with recycled cardboard	Yes
Packaging without single use plastic	No
SCIP Number	7e74021a-7de9-46d1-8b18-7794e721876f
EU RoHS Directive	<a href="#">Compliant By Exemption</a>
REACH Regulation	<a href="#">Reference contains Substances of Very High Concern above the threshold</a>

## Use Longer



### Lifetime extension

Repair	No
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## Use Again



### Repack and remanufacture

Recyclability potential, in %	27
End of life manual availability	<a href="#">End of Life Information</a>
Take-back	No