

# Product datasheet

Specifications



## universal protection relay, PowerLogic P3U 3CT CSH 16DI 8DO 48-230V DI220 2RJ45 RL

REL52097

### Main

Range of product	PowerLogic P3
Product or component type	Protection relay
Relay application	Universal
product reference	P3U30-6CAA3BCAA
Mounting case size	30TE
Device mounting	Flush
Mounting mode	Flush mounting
power supply	48...230 V AC/DC
measuring inputs	: 1/5 A CT phase current 3 : CSH residual current 1 : 100 V/110 V VT voltage 4
number of Digital Inputs (DI)	16
number of analogue inputs	0
number of Digital Outputs (DO)	8 DO 1 watchdog
number of analogue outputs	0
communication ports	USB port 1 front RJ45 2 rear
communication protocols	IEC 61850 ed. 1 IEC 61850 ed. 2 IEC 60870-5-101 DNP3 TCP Modbus TCP EtherNet/IP
Redundancy communication port protocol	RSTP PRP
Cybersecurity	Password protection Port hardening

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

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<b>protection functions</b>	Negative sequence overcurrent 47 Phase overcurrent 50/51 Directional phase overcurrent 67 Earth fault overcurrent 50N/51N Directional earth fault 67N Transient earth fault 67NI Capacitor bank unbalance 51C Broken conductor 46 I2/I1 Cold load pick-up H2 detection 68H2 H5 detection 68H5 Breaker failure 50BF Cold load pick-up 51C Switch ON to fault (SOTF) Directional active underpower 37P Fault locator 21FL Recloser 79 Phase undercurrent 37 Excessive starting time, locked rotor 48/51LR Motor restart inhibition 66 Capacitor overvoltage 59C Switch ON to fault (SOTF) 27P Negative sequence overcurrent 46 Overvoltage 59 Undervoltage 27 Positive sequence undervoltage 27P Earth fault overvoltage 59N Vector shift 78V Underfrequency 81/81N Rate of change of frequency 81R Synchro-check 25 Lockout relay 86 CT supervision 60 VT supervision 60 Programmable stages 99 8 Programmable curve 99 8
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<b>Arc flash protection</b>	No
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<b>measurement functions</b>	Current 3-phase Current zero sequence Current positive sequence Current negative sequence Current ratio of negative and positive Voltage phase to earth Voltage phase to phase Voltage zero sequence Voltage positive sequence Voltage negative sequence Voltage ratio of negative and positive Short circuit fault reactance Fault location current Earth fault reactance Frequency Active power Short circuit fault reactance zero sequence RMS active power Reactive power RMS reactive power Apparent power Fault location current negative sequence RMS apparent power Active energy Reactive energy Cos $\varphi$ Tan $\varphi$ Earth fault reactance ratio of negative and positive Power angle Power factor Voltage phasor diagram view Frequency phase to earth Current phasor diagram view Current 2nd, 15th harmonics with THD Voltage 2nd, 15th harmonics with THD Condition monitoring CB wear Active power zero sequence RMS active power positive sequence Reactive power ratio of negative and positive Condition monitoring CB wear phasor diagram view
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<b>control functions</b>	Switchgear control and monitoring Programmable switchgear interlocking Local control on single-line diagram Local control with I/O keys 2 function keys 2 function keys on single-line diagram Mobile application with Easergy SmartApp Web-server Programmable logic
<b>controllable switchgear devices</b>	4 controlled + 8 displayed
<b>number of setting groups</b>	4
<b>monitoring functions</b>	Trip circuit supervision 74 Circuit breaker monitoring Relay self-monitoring
<b>logs and records</b>	Event recording Disturbance recording Tripping context
<b>Switchgear diagnosis type</b>	CT supervision Trip circuit supervision ANSI code: TCS
<b>Connections - terminals</b>	Screw removable (digital input/output) Ring lugs removable (current transformer) Pin removable (voltage transformer)

## Complementary

<b>Operating threshold</b>	220 V AC/DC
<b>Time synchronisation protocol</b>	SNTP
<b>Software name</b>	ESetup Easergy Pro: virtual simulation test Easergy SmartApp
<b>Web server</b>	Embedded HTTP server
<b>Display type</b>	LCD 128 x 64 pixels with single line diagram
<b>Number of key</b>	2 customizable
<b>Local signalling</b>	4 LEDs 8 LEDs programmable
<b>Height</b>	169.5 mm
<b>Width</b>	170 mm
<b>Depth</b>	205 mm
<b>Net weight</b>	2.5 kg maximum

## Environment

<b>climatic withstand</b>	Exposure to dry heat Bd tests conforming to EN/IEC 60068-2-2 Exposure to cold Ad tests conforming to EN/IEC 60068-2-1 Exposure to damp heat in service Db tests conforming to EN/IEC 60068-2-30 Exposure to damp heat in service Cab tests conforming to EN/IEC 60068-2-78
<b>Mechanical robustness</b>	Vibrations (level: class II) conforming to IEC 60255-21-1 Vibrations: Fc conforming to IEC 60068-2-6 Shocks (level: class II) conforming to IEC 60255-21-2 Shocks: Ea conforming to IEC 60068-2-27 Seismic tests method A (level: class II) conforming to IEC 60255-21-3

<b>Electromagnetic compatibility</b>	<p>Emission tests conforming to IEC/EN 60255-26 ed. 3</p> <p>Emission tests class A conforming to CISPR 11</p> <p>Emission tests class A conforming to CISPR 22</p> <p>EMC immunity conforming to IEC/EN 60255-26 ed. 3</p> <p>EMC immunity conforming to EN/IEC 61000-4-18</p> <p>EMC immunity class A conforming to IEC/EN 60255-26 ed. 3</p> <p>EMC immunity conforming to IEC 60255-22-1</p> <p>EMC immunity level 4 conforming to EN/IEC 61000-4-2</p> <p>EMC immunity conforming to IEC 60255-22-2</p> <p>EMC immunity level 3 conforming to EN/IEC 61000-4-3</p> <p>EMC immunity level 4 conforming to EN/IEC 61000-4-4</p> <p>EMC immunity conforming to IEC 60255-22-4</p> <p>EMC immunity level 3 conforming to EN/IEC 61000-4-5</p> <p>EMC immunity class III conforming to IEC 60255-22-2</p> <p>EMC immunity conforming to IEC 60255-22-5</p> <p>EMC immunity level 3 conforming to EN/IEC 61000-4-6</p> <p>EMC immunity conforming to EN/IEC 61000-4-8</p> <p>EMC immunity level 5 conforming to EN/IEC 61000-4-9</p> <p>EMC immunity level 3 conforming to EN/IEC 61000-4-3 ed. 3</p> <p>EMC immunity conforming to EN/IEC 61000-4-29</p> <p>EMC immunity conforming to EN/IEC 61000-4-11</p> <p>EMC immunity conforming to EN/IEC 61000-4-17</p> <p>EMC immunity conforming to IEC 60255-27</p> <p>EMC immunity level 3 conforming to EN/IEC 61000-4-8</p>
<b>Ambient air temperature for operation</b>	-40...65 °C
<b>IP degree of protection</b>	IP54 front
<b>maximum operating altitude</b>	2000 m
<b>Protective treatment</b>	Conformal coating
<b>Relative humidity</b>	0...95 %, without condensation

## Packing Units

<b>Unit Type of Package 1</b>	PCE
<b>Number of Units in Package 1</b>	1
<b>Package 1 Height</b>	29.0 cm
<b>Package 1 Width</b>	30.0 cm
<b>Package 1 Length</b>	40.0 cm
<b>Package 1 Weight</b>	3.51 kg

## Contractual warranty

<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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## Sustainability

**Green Premium™ label** is Schneider Electric's commitment to delivering products with best-in-class environmental performance. Green Premium promises compliance with the latest regulations, transparency on environmental impacts, as well as circular and low-CO<sub>2</sub> products.

**Guide to assessing product sustainability** is a white paper that clarifies global eco-label standards and how to interpret environmental declarations.

[Learn more about Green Premium >](#)

[Guide to assess a product's sustainability >](#)



Transparency RoHS/REACH

## Well-being performance

 **Rohs Exemption Information** [Yes](#)

## Certifications & Standards

<b>Reach Regulation</b>	<a href="#">REACH Declaration</a>
<b>Eu Rohs Directive</b>	Compliant with Exemptions
<b>China Rohs Regulation</b>	<a href="#">China RoHS declaration</a>
<b>Environmental Disclosure</b>	<a href="#">Product Environmental Profile</a>
<b>Weee</b>	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins
<b>Circularity Profile</b>	<a href="#">End of Life Information</a>