

# Product datasheet

Specifications



## PowerLogic P3U 3CT 1Io 4VT 16DI 8DO 48-230V DI110V 2LC

REL52010

EAN Code: 3606481357168

### Main

Range of product	PowerLogic P3
Product or component type	Protection relay
Relay application	Universal
product reference	P3U30-5AAA2BDAA
Mounting case size	30TE
power supply	48...230 V AC/DC
measuring inputs	: 1/5 A CT phase current 3 : 1/5 A CT 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)	1 watchdog 8
number of analogue outputs	0
communication ports	USB port 1 front LC 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	Port hardening Password protection

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>Directional earth fault 67N</li> <li>Transient earth fault 67NI</li> <li>Capacitor bank unbalance 51C</li> <li>Broken conductor 46 I2/I1</li> <li>Cold load pick-up</li> <li>Switch ON to fault (SOTF)</li> <li>Breaker failure 50BF</li> <li>Directional active underpower 37P</li> <li>Fault locator 21FL</li> <li>Recloser 79</li> <li>Phase undercurrent 37</li> <li>Excessive starting time, locked rotor 48/51LR</li> <li>Motor restart inhibition 66</li> <li>Capacitor overvoltage 59C</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>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>H2 detection 68H2</li> <li>H5 detection</li> <li>H5 detection 68H5</li> <li>Programmable stages 99</li> <li>Programmable curve</li> </ul>
<b>Arc flash protection</b>	No
<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>Active power</li> <li>RMS active power</li> <li>Reactive power</li> <li>RMS reactive power</li> <li>Apparent power</li> <li>RMS apparent power</li> <li>Active energy</li> <li>Reactive energy</li> <li>Cos <math>\varphi</math></li> <li>Tan <math>\varphi</math></li> <li>Power angle</li> <li>Power factor</li> <li>Voltage phasor diagram view</li> <li>Current phasor diagram view</li> <li>Current 2nd, 15th harmonics with THD</li> <li>Voltage 2nd, 15th harmonics with THD</li> <li>Voltage interruption</li> <li>Condition monitoring CB wear</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>	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/VT supervision ANSI code: 60 CT supervision Trip circuit supervision ANSI code: TCS
<b>Connections - terminals</b>	Screw removable (digital input/output) Pin removable (current transformer) Pin removable (voltage transformer)

## Complementary

<b>Operating threshold</b>	110...230 V AC/DC
<b>Time synchronisation protocol</b>	SNTP
<b>Software name</b>	EcoStruxure Power Device ESetup Easergy Pro
<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>Standards</b>	IEC
<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 Bb 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 Bumps (level: class II) conforming to IEC 60255-21-2 Bumps: Ea conforming to IEC 60068-2-27

<b>Electromagnetic compatibility</b>	Emission tests conforming to IEC/EN 60255-26 ed. 3 Emission tests class A conforming to CISPR 11 Emission tests class A conforming to CISPR 22 EMC immunity conforming to IEC/EN 60255-26 ed. 3 EMC immunity conforming to EN/IEC 61000-4-18 EMC immunity level 4 conforming to EN/IEC 61000-4-2 EMC immunity level 3 conforming to EN/IEC 61000-4-3 EMC immunity level 4 conforming to EN/IEC 61000-4-4 EMC immunity level 3 conforming to EN/IEC 61000-4-5 EMC immunity level 3 conforming to EN/IEC 61000-4-6 EMC immunity conforming to EN/IEC 61000-4-8 EMC immunity level 5 conforming to EN/IEC 61000-4-9 EMC immunity conforming to EN/IEC 61000-4-29 EMC immunity conforming to EN/IEC 61000-4-11 EMC immunity conforming to EN/IEC 61000-4-17
<b>Ambient air temperature for operation</b>	-40...65 °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
<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>	26 cm
<b>Package 1 Width</b>	21.5 cm
<b>Package 1 Length</b>	31.5 cm
<b>Package 1 Weight</b>	3.168 kg

## Contractual warranty

<b>Warranty</b>	Up to 10 years extended warranty (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 **Yes**

Packaging without single use plastic **No**

EU RoHS Directive **Pro-active compliance (Product out of EU RoHS legal scope)**

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

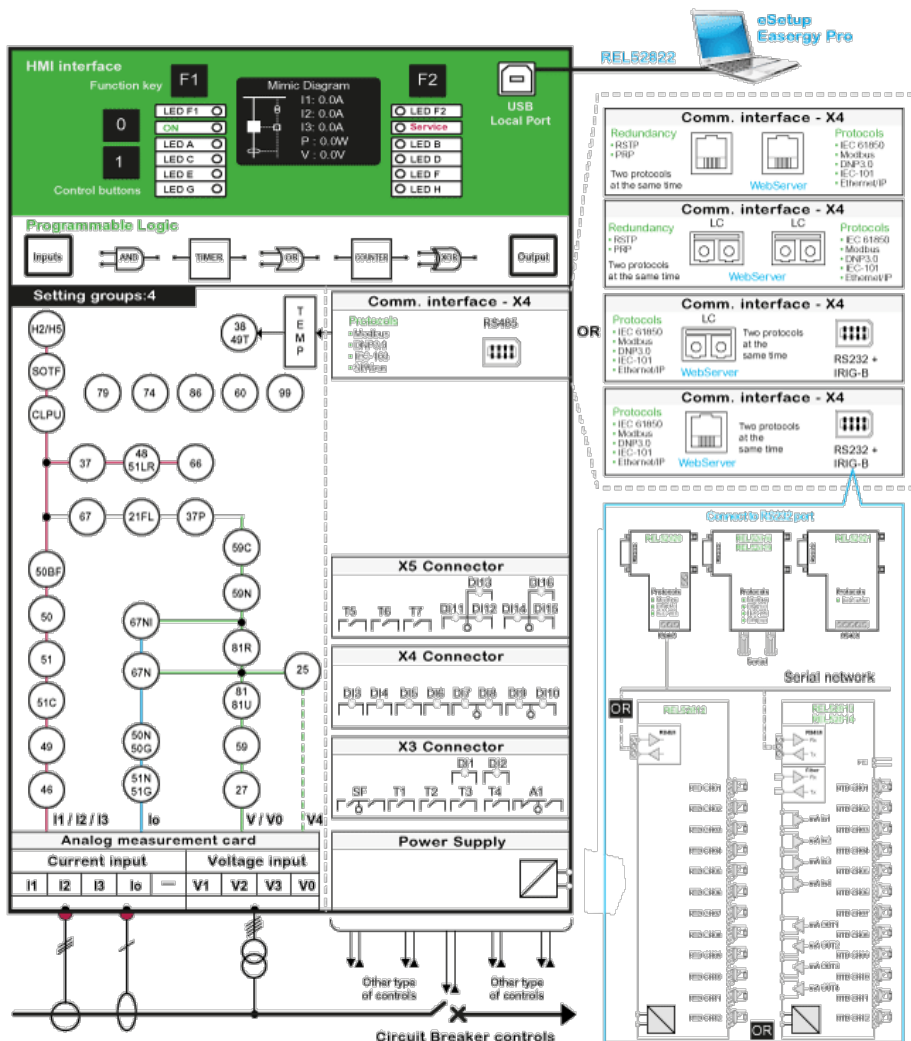
Take-back

No

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Connections and Schema

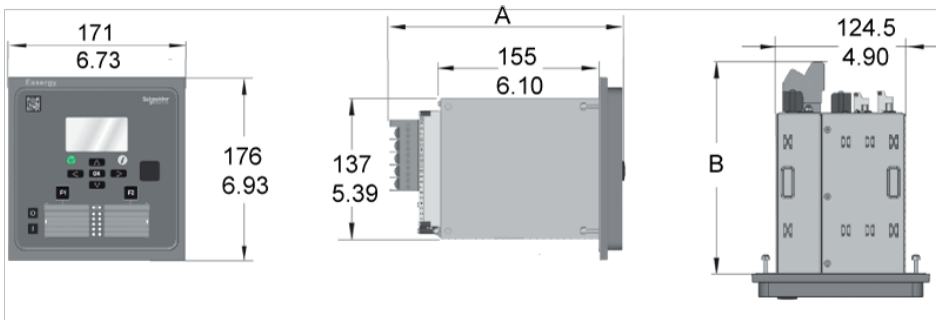
Functional View



Dimensions Drawings

Base Unit Dimensions

mm  
in.



	A	B
With screw connector	214 mm/8.43"	192 mm/7.6"
With ring-lug connector	226 mm/8.90"	204 mm/8.0"