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## Main

Range of product	Easergy P3
Product or component type	Protection relay
Relay application	Universal
Device short name	P3U20-5AAA3ACAA
[Us] rated supply voltage	48...230 V AC/DC
Input type	: 1/5 A CT phase current 3 : 1/5 A CT residual current 1 : 100 V/110 V VT voltage 1
Number of sensors	0 temperature sensor(s) 0 arc sensor(s)
Digital input number	10
Number of outputs	1 watchdog 5
Analogue input number	0
Analogue output number	0
Integrated connection type	USB port 1 front RJ45 2 rear
Communication port protocol	IEC 61850 ed. 1 IEC 61850 ed. 2 IEC 60870-5-101 DNP3 TCP Modbus TCP Ethernet/IP
Cybersecurity	Password protection Port hardening
Protection type	Phase undercurrent 37 Negative sequence overcurrent 46 Broken conductor 46 I2/I1 Excessive starting time, locked rotor 48/51LR Thermal overload protection 49 Phase overcurrent 50/51 Earth fault overcurrent 50N/51N Breaker failure 50BF Switch ON to fault (SOTF) Capacitor bank unbalance 51C Capacitor overvoltage 59C Neutral voltage displacement 59N Motor restart inhibition 66 Directional earth fault 67N Transient earth fault 67NI CT supervision 60 VT supervision 60 H2 detection 68H2 H5 detection 68H5 Recloser 79 Lockout relay 86 Cold load pick-up Programmable stages 99 Programmable curve
Arc flash protection	No

Type of measurement	<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>\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>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>
Control type	<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>
Single line diagram	2 controlled + 4 displayed
Setting	4
Monitoring function	<ul style="list-style-type: none"> <li>Trip circuit supervision 74</li> <li>Circuit breaker monitoring</li> <li>Relay self-monitoring</li> </ul>
Network and machine diagnosis type	<ul style="list-style-type: none"> <li>Event recording</li> <li>Disturbance recording</li> <li>Tripping context</li> </ul>
Switchgear diagnosis type	<ul style="list-style-type: none"> <li>CT supervision</li> <li>Trip circuit supervision ANSI code: TCS</li> </ul>
Connections - terminals	<ul style="list-style-type: none"> <li>Screw removable (digital input/output)</li> <li>Clamp terminal removable (current transformer)</li> <li>Pin removable (voltage transformer)</li> </ul>

### Complementary

Operating threshold	220...230 V AC/DC
Web server	Embedded HTTP server
Software name	EcoStruxure Power Device ESetup Easergy Pro
Number of key	2 customizable
Local signalling	4 LEDs 8 LEDs programmable
Standards	IEC
Height	169.5 Mm
Width	170 Mm
Depth	205 Mm
Net weight	2.5 Kg maximum

## Environment

Electromagnetic compatibility	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
Mechanical robustness	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
Environmental characteristic	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
Ambient air temperature for operation	-40...65 °C
Ambient air temperature for storage	-40...70 °C
IP degree of protection	IP54 conforming to IEC 60529
Relative humidity	0...95 %, without condensation
Operating altitude	2000 m
Protective treatment	Conformal coating

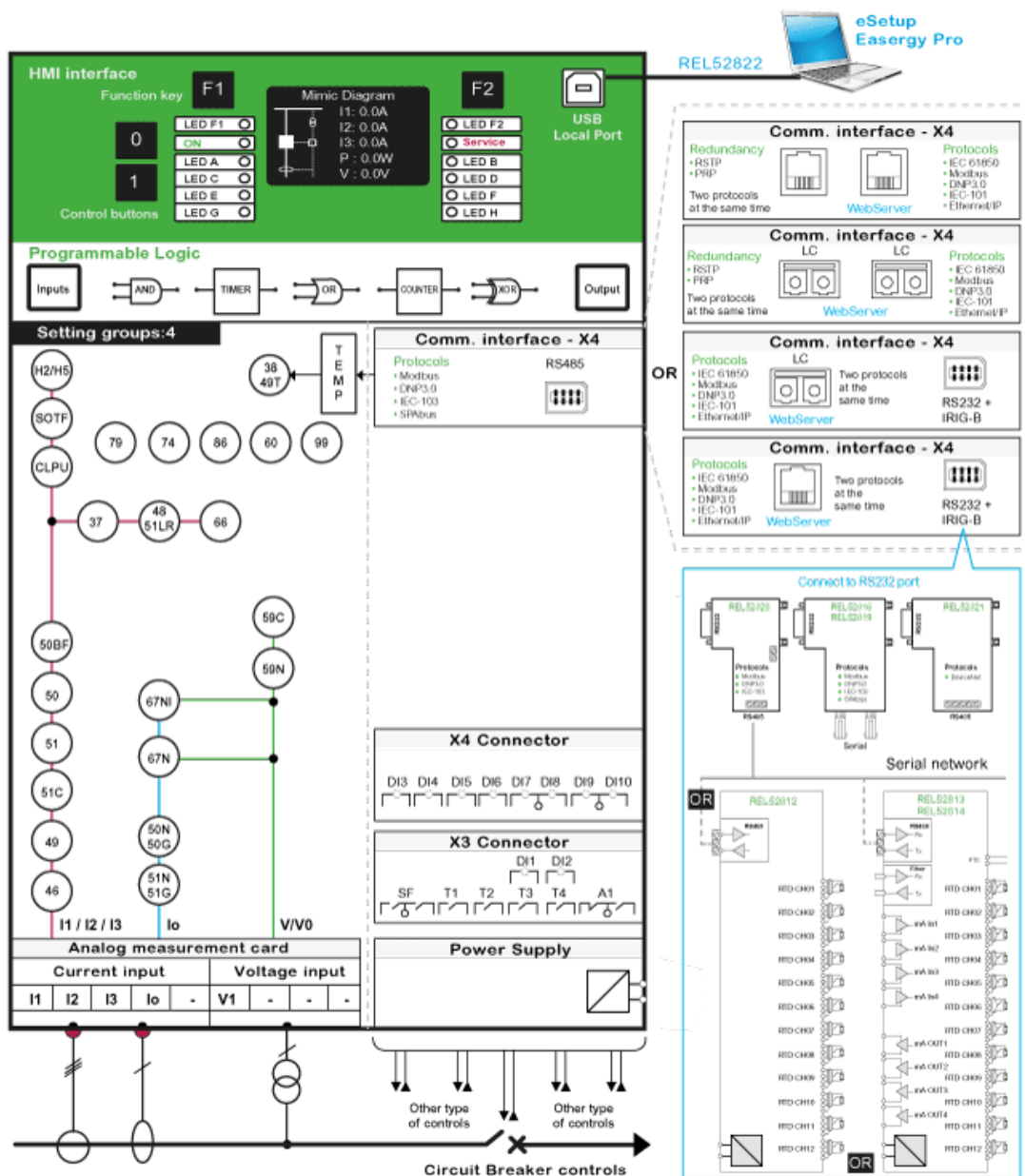
## Offer Sustainability

Sustainable offer status	Green Premium product
REACH Regulation	<a href="#">REACH Declaration</a>
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) <a href="#">EU RoHS Declaration</a>
Mercury free	Yes
RoHS exemption information	<a href="#">Yes</a>
China RoHS Regulation	<a href="#">China RoHS Declaration</a>
Environmental Disclosure	<a href="#">Product Environmental Profile</a>
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

## Contractual warranty

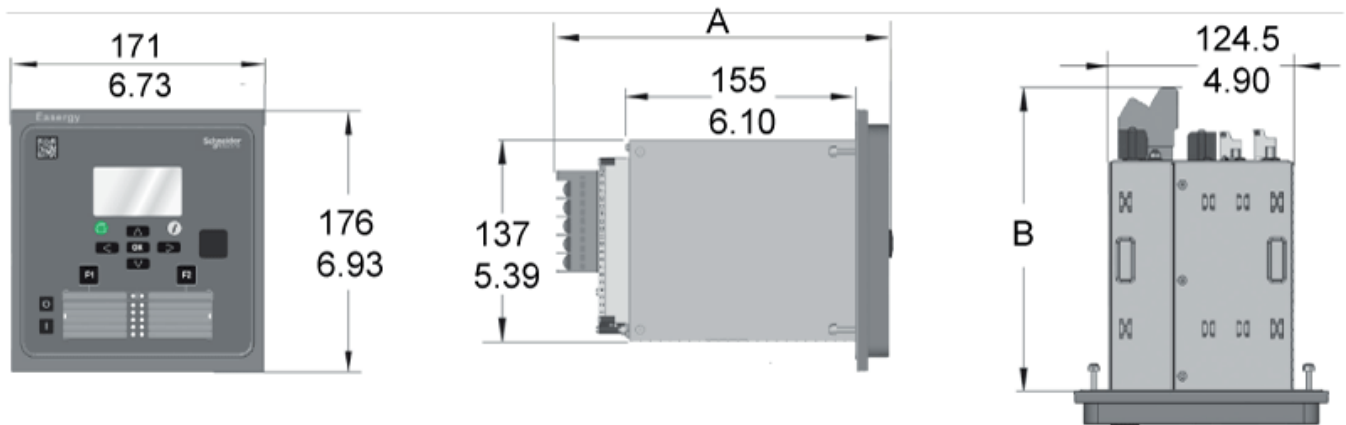
Warranty	Up to 10 years extended warranty (Standard warranty 2 years. Please check with your local SE representative for extended warranty availability and conditions)
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Functional View



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"

Product Life Status : **Commercialised**