Product datasheet

Specifications

Green Premium™

PowerLogic P5U20 24-250V 3CT 2Io 4DI-4DO RSTP Eth RJ45

REL50331

Main

Range Of Product	PowerLogic P5
Product Or Component Type	Protection and control relay
Relay Application	Universal
Product Reference	P5U20-AABA-BABAH-AAEA
Mounting Case Size	20TE
Device Mounting	Flush
Mounting Mode	Withdrawable
Power Supply	24...240 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
Number Of Sensors	0 temperature sensor(s) 0 arc sensor(s)
Number Of Digital Inputs (Di)	4
Number Of Digital Outputs (Do)	3 DO 1 watchdog
Number Of Analogue Inputs	0
Number Of Analogue Outputs	0
Communication Ports	RJ45 2 rear Extension port 1 rear with backup memory USB port 2 front
Communication Protocols	IEC 61850 ed. 1 IEC 61850 ed. 2 DNP3 over ethernet Modbus TCP EtherNet/IP
Cybersecurity	Port hardening Firmware signature Client IP address filter Secured communication with assciated tools Security policy management Role-based access control Security log LDAP RADIUS based user authentication IEC 62442-4-2 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

Protection Functions	Phase overcurrent 50/51 Earth fault overcurrent 50N/51N Capacitor bank unbalance 51C Broken conductor 46 I2/I1 Current unbalance 46 I2/I1 Cold load pick-up Switch ON to fault (SOTF) H2 detection H5 detection Breaker failure 50BF Recloser 79 Thermal overload protection 49 Phase undercurrent 37 Negative sequence overcurrent 46 Excessive starting time, locked rotor 48/51LR Motor restart inhibition 66 Capacitor overvoltage 59C Lockout relay 86 CT supervision 60 Programmable stages 99 Programmable logic Programmable curve
Measurement Functions	Current 3-phase Current zero sequence Current positive sequence Current negative sequence Current ratio of negative and positive Frequency Phasor diagram of currents or voltages Current 2nd, 15th harmonics with THD
Control Functions	Switchgear control and monitoring Programmable switchgear interlocking Local/remote control
Controllable Switchgear Devices	6 controlled + 2 monitored objects
Number Of Setting Groups	4
Monitoring Functions	Trip circuit supervision 74 Circuit breaker monitoring Relay self-monitoring
Logs And Records	Event recording Disturbance recording Tripping context Relay maintenance
Switchgear Diagnosis Type	CT supervision ANSI code: 60 Trip circuit supervision ANSI code: 74
Connections - Terminals	Screw (digital input/output) Ring lugs (analog inputs and outputs)

Complementary

Time Synchronisation Protocol	SNTP
Software Name	EcoStruxure Power Device ESetup Easergy Pro: virtual simulation test
Web Server	Embedded HTTP server
Display Type	LCD 192 x 96 pixels
Number Of Key	1 customizable
Local Signalling	4 x LED 6 x LED tri-colour programmable
Height	176 mm
Width	102 mm
Depth	219 mm
Net Weight	2.5 kg

Environment

Electromagnetic Compatibility	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
Mechanical Robustness	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
Climatic Withstand	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
Ambient Air Temperature For Operation	-40…85 °C (16 h) -40…70 °C (96 h)
Ambient Air Temperature For Storage	-40…85 °C
Ip Degree Of Protection	IP54 conforming to IEC 60529
Relative Humidity	0…93 % at 40 °C, without condensation, 56 days 93…95 % at 25…55 °C, 6 cycles, 12 + 12 hours
Maximum Operating Altitude	2000 m
Protective Treatment	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

Packing Units

Unit Type Of Package 1	PCE
Number Of Units In Package 1	1
Package 1 Height	14.000 cm
Package 1 Width	26.500 cm
Package 1 Length	37.500 cm
Package 1 Weight	2.997 kg
Unit Type Of Package 2	S04
Number Of Units In Package 2	4
Package 2 Height	30 cm
Package 2 Width	40 cm

Package 2 Length	60 cm
Package 2 Weight	12.631 kg
Unit Type Of Package 3	P12
Number Of Units In Package 3	16
Package 3 Height	45.000 cm
Package 3 Width	80.000 cm
Package 3 Length	120.000 cm
Package 3 Weight	62.524 kg

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)

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_2 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

Reach Regulation	REACh Declaration
Eu Rohs Directive	Pro-active compliance (Product out of EU RoHS legal scope)
China Rohs Regulation	China RoHS declaration
Environmental Disclosure	Product Environmental Profile
Weee	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins
Circularity Profile	End of Life Information