Product datasheet

Specifications

PowerLogic P5F30 48-250V 3CT 2Io 4VT 10DI-8DO RSTP Eth RJ45

REL50451

Main

Range Of Product	PowerLogic P5
Product Or Component Type	Protection and control relay
Relay Application	Feeder - directional over current
Product Reference	P5F30-AACB-GABAH-AAEA
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 Digital Inputs (Di)	10
Number Of Digital Outputs (Do)	7 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
Redundancy Communication Port Protocol	RSTP
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 Directional phase overcurrent 67 Earth fault overcurrent 50N/51N Restricted earth fault 64REF Directional earth fault 67N Transient earth fault 67NI Neutral admittance 21YN Earth fault wattmetric 32N 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 Directional active underpower 37P Fault locator 21FL Recloser 79 Negative sequence overcurrent 46 Overvoltage 59 Undervoltage 27 Earth fault overvoltage 59N Underfrequency 81/81N Rate of change of frequency 81R Synchro-check 25 Lockout relay 86 CT supervision 60 VT 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 Phasor diagram of currents or voltages Current 2nd, 15th harmonics with THD Voltage 3-phase Voltage residual Voltage zero sequence Voltage positive sequence Voltage negative sequence Frequency
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/VT 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	Colour LCD 480 x 272 pixels
Number Of Key	7 customizable
Local Signalling	4 x LED 10 x LED tri-colour programmable
Height	176 mm
Width	152 mm
Depth	219 mm
Net Weight	3.5 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)
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	30.0 cm

Package 1 Width	30.0 cm
Package 1 Length	35.0 cm
Package 1 Weight	4.5 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