

Product data sheet

Specifications



universal protection relay,
PowerLogic P3U 3CT 1lo 14DI
11DO 48-230V DI110 2RJ45 RL

REL53131

Main

Range of product	PowerLogic P3
Product or component type	Protection relay
Relay application	Universal
product reference	P3U30-6AAA2BHAB
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 : 1/5 A CT residual current 1 : 100 V/110 V VT voltage 4
Number of sensors	0 temperature sensor(s) 0 arc sensor(s)
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

protection functions	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
	Cold load pick-up 21FL
	Breaker failure 50BF
	Switch ON to fault (SOTF) 50BF
	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) 60
	Negative sequence overcurrent 46
	Overvoltage 59
	Undervoltage 27
	Positive sequence undervoltage 27P
	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 8
	Programmable curve
Arc flash protection	No
measurement functions	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 phase to phase
	Short circuit fault reactance zero sequence
	Earth fault reactance ratio of negative and positive
	Frequency
	Active power 3-phase
	RMS active power positive sequence
	Reactive power negative sequence
	Fault location current positive sequence
	RMS reactive power zero sequence
	Apparent power positive sequence
	RMS apparent power
	Active energy
	Reactive energy
	Earth fault reactance negative sequence
	Cos φ
	Tan φ
	Power angle
	Power factor
	Voltage phasor diagram view
	Frequency ratio of negative and positive
	Current phasor diagram view
	Current 2nd, 15th harmonics with THD
	Voltage 2nd, 15th harmonics with THD
	Condition monitoring CB wear
	Voltage interruption phasor diagram view
	Active power phase to earth
	RMS active power phase to phase
	Reactive power positive sequence
	RMS reactive power ratio of negative and positive
	Condition monitoring CB wear 2nd, 15th harmonics with THD

control functions	Switchgear control and monitoring Programmable switchgear interlocking Local control on single-line diagram Local control with I/O keys Local/remote control 2 function keys Mobile application with Easergy SmartApp Web-server Programmable logic
controllable switchgear devices	4 controlled + 8 displayed
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
Switchgear diagnosis type	CT supervision ANSI code: TCS Trip circuit supervision ANSI code: TCS
Connections - terminals	Screw removable (digital input/output) Pin removable (voltage transformer) Pin removable (current transformer)

Complementary

Operating threshold	110...230 V AC/DC
Time synchronisation protocol	SNTP
Software name	ESetup Easergy Pro: virtual simulation test Easergy SmartApp
Web server	Embedded HTTP server
Display type	LCD 128 x 64 pixels with single line diagram
Number of key	2 customizable
Local signalling	4 LEDs 8 LEDs programmable
Height	169.5 mm
Width	170 mm
Depth	205 mm
Net weight	2.5 kg maximum

Environment

climatic withstand	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
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

Electromagnetic compatibility	Emission tests conforming to IEC/EN 60255-26 ed. 3 Emission tests conforming to CISPR 11 Emission tests 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
Ambient air temperature for operation	-40...65 °C
Ambient air temperature for storage	-40...70 °C
IP degree of protection	IP54 front conforming to IEC 60529
maximum operating altitude	2000 m
Protective treatment	Conformal coating
Relative humidity	0...95 %, without condensation

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	40 cm
Package 1 Width	30 cm
Package 1 Length	30 cm
Package 1 Weight	3.8 kg

Contractual warranty

Warranty (in months)	24
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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

Total lifecycle Carbon footprint	731 kg CO2 eq.
Environmental Disclosure	Product Environmental Profile
Carbon footprint of the manufacturing phase [A1 to A3]	95 kg CO2 eq.
Carbon footprint of the distribution phase [A4]	4 kg CO2 eq.
Carbon footprint of the installation phase [A5]	0.2 kg CO2 eq.
Carbon footprint of the use phase [B2, B3, B4, B6]	624 kg CO2 eq.
Carbon footprint of the end-of-life phase [C1 to C4]	8 kg CO2 eq.

Use Better



Materials and Substances

Packaging made with recycled cardboard	Yes
Packaging without single use plastic	No
SCIP Number	7fd15df9-a702-4a28-ad01-afb36a7b785f
EU RoHS Directive	Compliant By Exemption
REACH Regulation	Reference contains Substances of Very High Concern above the threshold

Use Longer



Lifetime extension

Repair	No
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Use Again



Repack and remanufacture

Recyclability potential, in %	32
End of life manual availability	End of Life Information
Take-back	No
WEEE Label	 The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins